Form 3160-3
(June 2015)

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FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM132945

6. If Indian, Allotee or Tribe Name

1a. Type of work: [✓] DRILL [ ] REENTER

1b. Type of Well: [✓] Oil Well [ ] Gas Well [ ] Other

1c. Type of Completion: [ ] Hydraulic Fracturing [✓] Single Zone [ ] Multiple Zone

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
EAGLECLAW 5-8 FED COM
5H (327081)

2. Name of Operator
CAZA OPERATING LLC (249099)

9. API Well No.
30-025-46829

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
200 N. Loraine Street, Suite 1550 Midland TX 79701	(432)682-7424	BONE SPRING / WC-025 G-08 S203506C (97983)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NWNW / 240 FNL / 467 FWL / LAT 32.6089246 / LONG -103.4865592

At proposed prod. zone SWNW / 2380 FNL / 855 FWL / LAT 32.58842 / LONG -103.485265

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 5 / T20S / R35E / NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
13 miles	LEA	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
240 feet	322.32	240

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
280 feet	9680 feet / 16717 feet	FED: NMB000471

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3695 feet	01/08/2019	30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Tony B Sam / Ph: (432)682-7424	11/10/2018

Title
VP Operations

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	01/29/2020

Title	Office
Assistant Field Manager Lands & Minerals	CARLSBAD

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

GCP Rec 01/31/2020

KZ 01/29/2020

APPROVED WITH CONDITIONS

Approval Date: 01/29/2020

(Continued on page 2)

*(Instructions on page 2)

(2)

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160
PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.
ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.
EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

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Additional Operator Remarks

Location of Well

1. SHL: NWNW / 240 FNL / 467 FWL / TWSP: 20S / RANGE: 35E / SECTION: 5 / LAT: 32.6089246 / LONG: -103.4865592 (TVD: 0 feet, MD: 0 feet)
   PPP: NWNW / 0 FNL / 840 FWL / TWSP: 20S / RANGE: 35E / SECTION: 8 / LAT: 32.595058 / LONG: -103.485273 (TVD: 9688 feet, MD: 14801 feet)
   PPP: NWNW / 310 FNL / 870 FWL / TWSP: 20S / RANGE: 35E / SECTION: 5 / LAT: 32.609105 / LONG: -103.485241 (TVD: 9576 feet, MD: 9656 feet)
   BHL: SWNW / 2380 FNL / 855 FWL / TWSP: 20S / RANGE: 35E / SECTION: 8 / LAT: 32.58842 / LONG: -103.485265 (TVD: 9680 feet, MD: 16717 feet)

BLM Point of Contact

Name: Priscilla Perez
Title: Legal Instruments Examiner
Phone: 5752345934
Email: pperez@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Caza Operating LLC
WELL NAME & NO.:	Eagleclaw 5-8 Fed Com 3H
SURFACE HOLE FOOTAGE:	190'/N & 417'/W
BOTTOM HOLE FOOTAGE	2310'/N & 420'/W
LOCATION:	Section 5, T.20 S., R.35 E., NMPM
COUNTY:	Lea County, New Mexico

COA

H2S	(•) Yes	( ) No	
Potash	(•) None	( ) Secretary	( ) R-111-P
Cave/Karst Potential	(•) Low	( ) Medium	( ) High
Cave/Karst Potential	( ) Critical		
Variance	( ) None	(•) Flex Hose	( ) Other
Wellhead	( ) Conventional	( ) Multibowl	(•) Both
Other	[ ] 4 String Area	[x] Capitan Reef	[ ] WIPP
Other	[ ] Fluid Filled	[ ] Cement Squeeze	[ ] Pilot Hole
Special Requirements	[ ] Water Disposal	[x] COM	[ ] Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the Yates-Seven Rivers 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.

B. CASING

Primary Casing Design/Alternate Casing Design:

1. The **20** inch conductor casing shall be set at approximately 120 feet 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 **13-3/8** inch surface casing shall be set at approximately 2000 feet (a minimum of 25 feet (Lea County) 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.

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

   Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

   a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

   b. Second stage above DV tool:

      - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

❖ In Capitan Reef Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

- Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

- Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

4. The minimum required fill of cement behind the 6 inch production casing is:

   - Cement should tie-back at least **50 feet** on top of Capitan Reef top. 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 cave/karst or potash.

C. PRESSURE CONTROL

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

2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

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

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.

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)

☒ 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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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: The flex line must meet the requirements of API 16C. 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, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

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

OPERATOR'S NAME:	Caza Operating LLC
LEASE NO.:	NMNM132945
LOCATION:	T20S R35E S5
COUNTY:	Lea County, NM

Wells:

Eagleclaw 5-8 Federal Com 3H
Surface Hole Location: 190' FNL & 417' FWL, Section 5, T. 20 S., R. 35 E.
Bottom Hole Location: 2310' FNL & 420' FWL, Section 8, T. 20 S., R. 35 E.

Eagleclaw 5-8 Federal Com 5H
Surface Hole Location: 240' FNL & 267' FWL, Section 5, T. 20 S., R. 35 E.
Bottom Hole Location: 2380' FNL & 855' FWL, Section 8, T. 20 S., R. 35 E.

Eagleclaw 5-8 Federal Com 7H
Surface Hole Location: 190' FNL & 267' FWL, Section 5, T. 20 S., R. 35 E.
Bottom Hole Location: 2385' FNL & 968' FWL, Section 8, T. 20 S., R. 35 E.

TABLE OF CONTENTS

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

☐ **Interim Reclamation**
☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

OR

If the entire project is covered under the Permian Basin Programmatic Agreement (cultural resources only):

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a

Notice to Proceed is issued by the BLM. See information below discussing NAGPRA.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

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

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)

Watershed:
The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). 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 integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

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

Timing Limitation Exceptions:
The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

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.

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

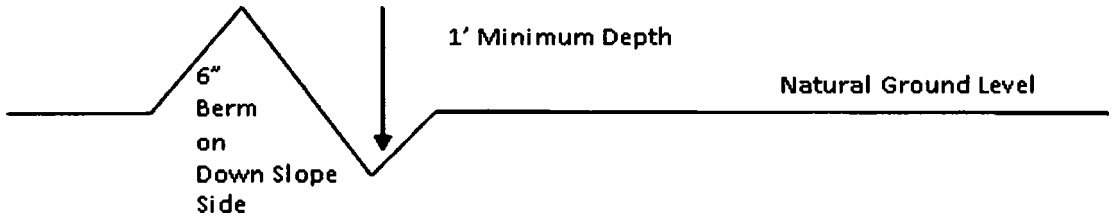
Ditching shall be required on both sides of the road.

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

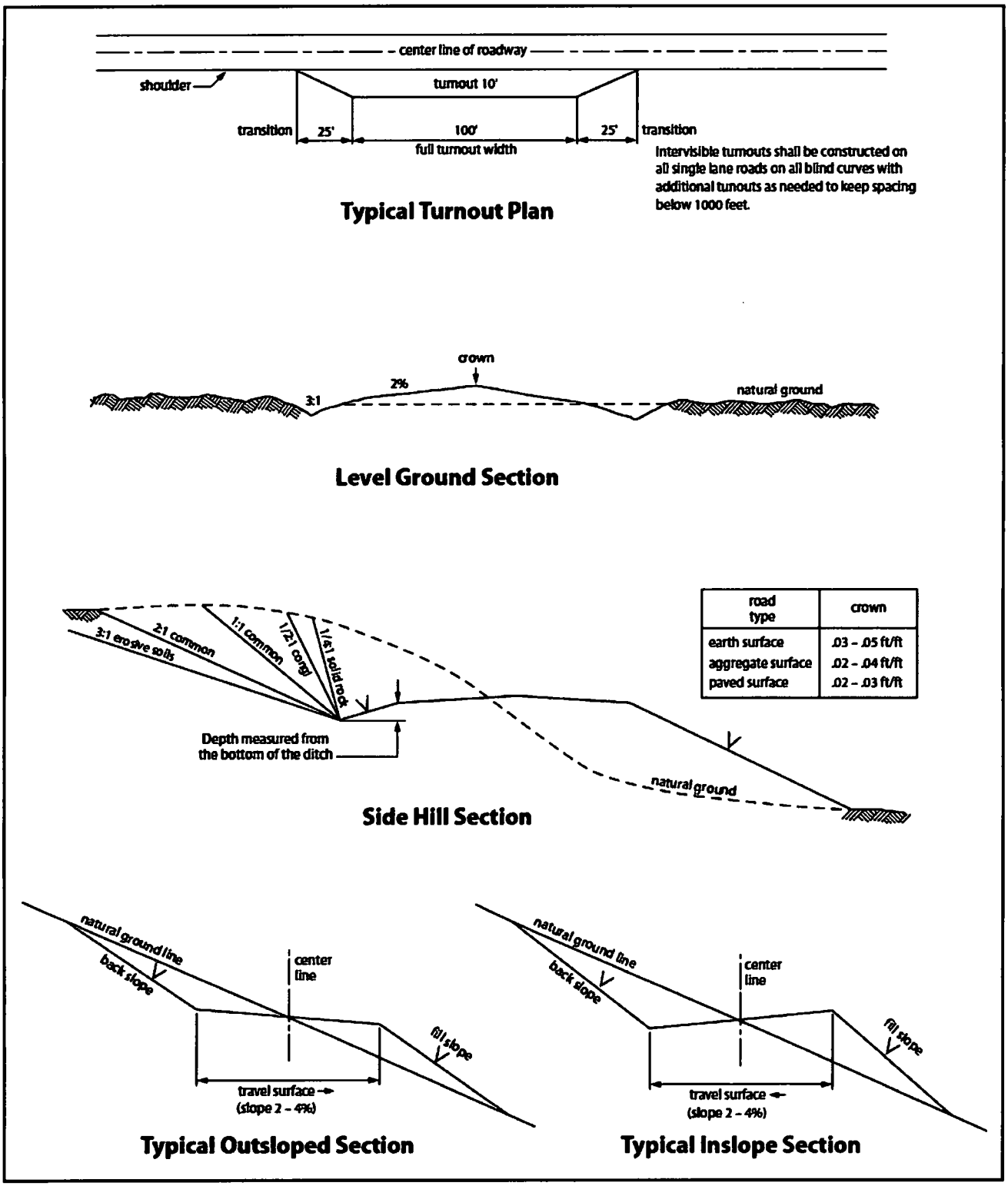


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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.

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).

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

Seed Mixture 2, for Sandy Sites

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

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

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

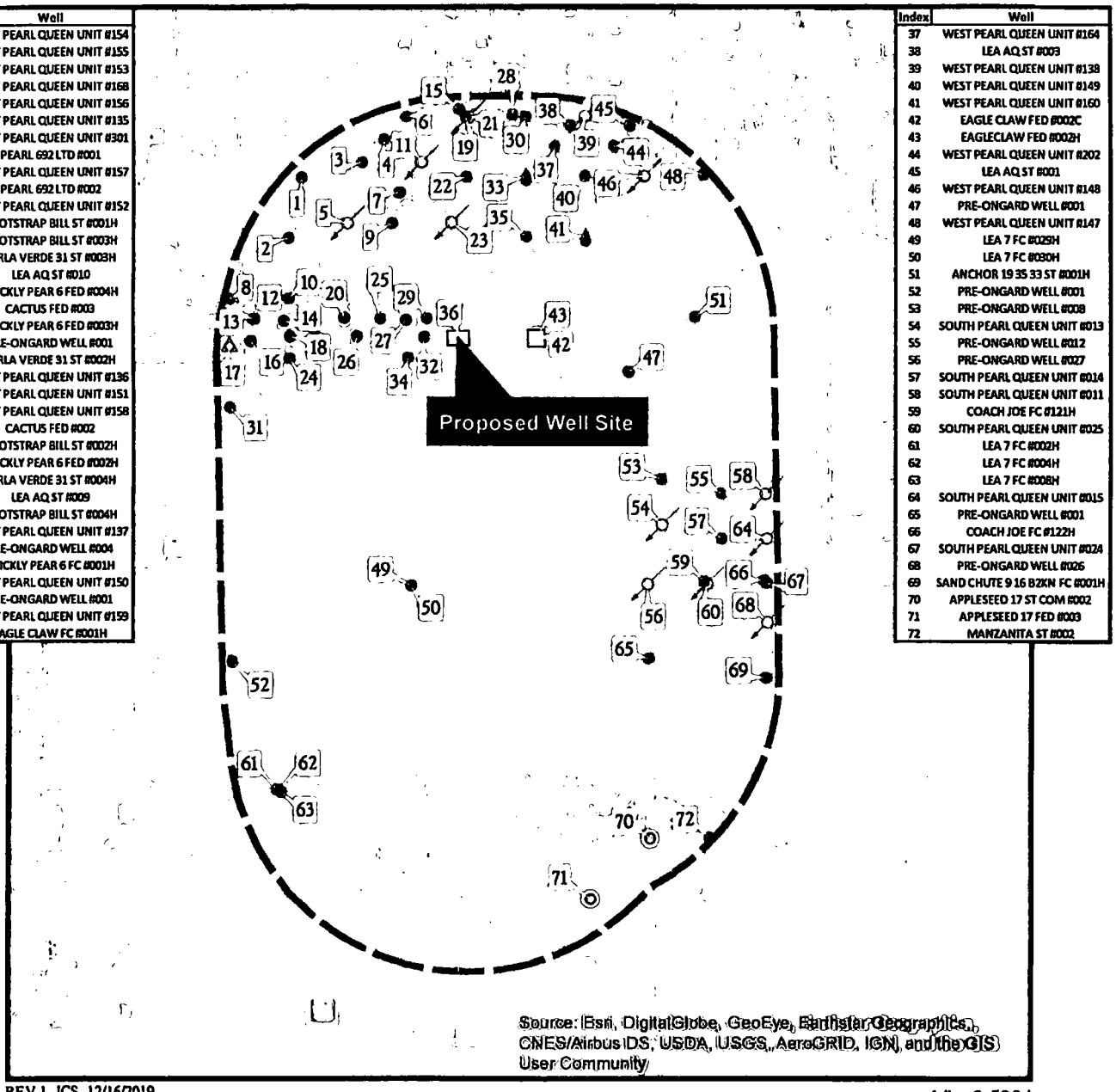
Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

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

ONE-MILE RADIUS MAP

EAGLE CLAW 5-8 FED COM
SEC. 5 TWP. 20-S RGE. 35-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: MARATHON OIL PERMIAN LLC
U.S.G.S. TOPOGRAPHIC MAP: MONUMENT SW, NM.



Index	Well
1	WEST PEARL QUEEN UNIT #154
2	WEST PEARL QUEEN UNIT #155
3	WEST PEARL QUEEN UNIT #153
4	WEST PEARL QUEEN UNIT #168
5	WEST PEARL QUEEN UNIT #156
6	WEST PEARL QUEEN UNIT #135
7	WEST PEARL QUEEN UNIT #301
8	PEARL 692 LTD #001
9	WEST PEARL QUEEN UNIT #157
10	PEARL 692 LTD #002
11	WEST PEARL QUEEN UNIT #152
12	BOOTSTRAP BILL ST #001H
13	BOOTSTRAP BILL ST #003H
14	PERLA VERDE 31 ST #003H
15	LEA AQ ST #010
16	PRICKLY PEAR 6 FED #004H
17	CACTUS FED #003
18	PRICKLY PEAR 6 FED #003H
19	PRE-ONGARD WELL #001
20	PERLA VERDE 31 ST #002H
21	WEST PEARL QUEEN UNIT #136
22	WEST PEARL QUEEN UNIT #151
23	WEST PEARL QUEEN UNIT #158
24	CACTUS FED #002
25	BOOTSTRAP BILL ST #002H
26	PRICKLY PEAR 6 FED #002H
27	PERLA VERDE 31 ST #004H
28	LEA AQ ST #009
29	BOOTSTRAP BILL ST #004H
30	WEST PEARL QUEEN UNIT #137
31	PRE-ONGARD WELL #004
32	PRICKLY PEAR 6 FC #001H
33	WEST PEARL QUEEN UNIT #150
34	PRE-ONGARD WELL #001
35	WEST PEARL QUEEN UNIT #159
36	EAGLE CLAW FC #001H

Index	Well
37	WEST PEARL QUEEN UNIT #164
38	LEA AQ ST #003
39	WEST PEARL QUEEN UNIT #138
40	WEST PEARL QUEEN UNIT #149
41	WEST PEARL QUEEN UNIT #160
42	EAGLE CLAW FED #002C
43	EAGLECLAW FED #002H
44	WEST PEARL QUEEN UNIT #202
45	LEA AQ ST #001
46	WEST PEARL QUEEN UNIT #148
47	PRE-ONGARD WELL #001
48	WEST PEARL QUEEN UNIT #147
49	LEA 7 FC #029H
50	LEA 7 FC #030H
51	ANCHOR 19 35 33 ST #001H
52	PRE-ONGARD WELL #001
53	PRE-ONGARD WELL #008
54	SOUTH PEARL QUEEN UNIT #013
55	PRE-ONGARD WELL #012
56	PRE-ONGARD WELL #027
57	SOUTH PEARL QUEEN UNIT #014
58	SOUTH PEARL QUEEN UNIT #011
59	COACH JOE FC #121H
60	SOUTH PEARL QUEEN UNIT #025
61	LEA 7 FC #002H
62	LEA 7 FC #004H
63	LEA 7 FC #008H
64	SOUTH PEARL QUEEN UNIT #015
65	PRE-ONGARD WELL #001
66	COACH JOE FC #122H
67	SOUTH PEARL QUEEN UNIT #024
68	PRE-ONGARD WELL #026
69	SAND CHUTE 9 16 B2KN FC #001H
70	APPLESEED 17 ST COM #002
71	APPLESEED 17 FED #003
72	MANZANITA ST #002

REV 1 JCS 12/16/2019

1 " = 3,500 '

Proposed Well Pad

Arch Survey Limits

Section Line

CO2 Active

CO2 Cancelled

CO2, Plugged

Gas, Active

Gas, Cancelled

Gas, New

Gas, Plugged

Gas, Abandoned

Injection, Active

Injection, New

Injection, Plugged

Salt Water Injection, Cancelled

Injection, Abandoned

Oil, Active

Oil, Cancelled

Oil, New

Oil, Plugged

Oil, Abondoned

Salt Water Injection, Active

Salt Water Injection, New

Salt Water Injection, Plugged

Water, Active

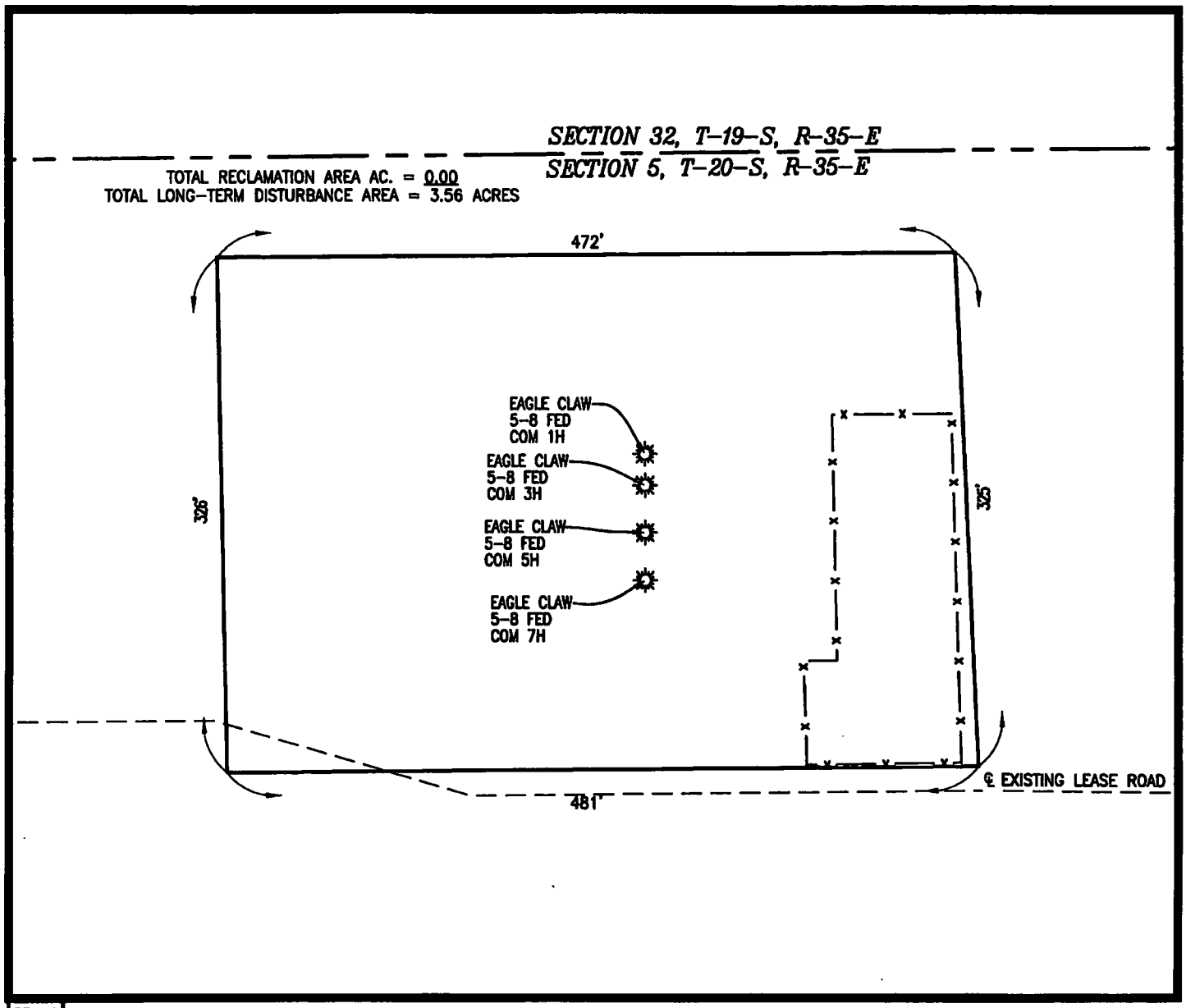
Water, Plugged

SHEET 1 OF 5

PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4046_002

INTERIM RECLAMATION (IR) PLAT

EAGLE CLAW 5-8 FED COM
SEC. 5 TWP. 20-S RGE. 35-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: CAZA OPERATING, LLC
U.S.G.S. TOPOGRAPHIC MAP: MONUMNENT SW, N.M.



REV. 1

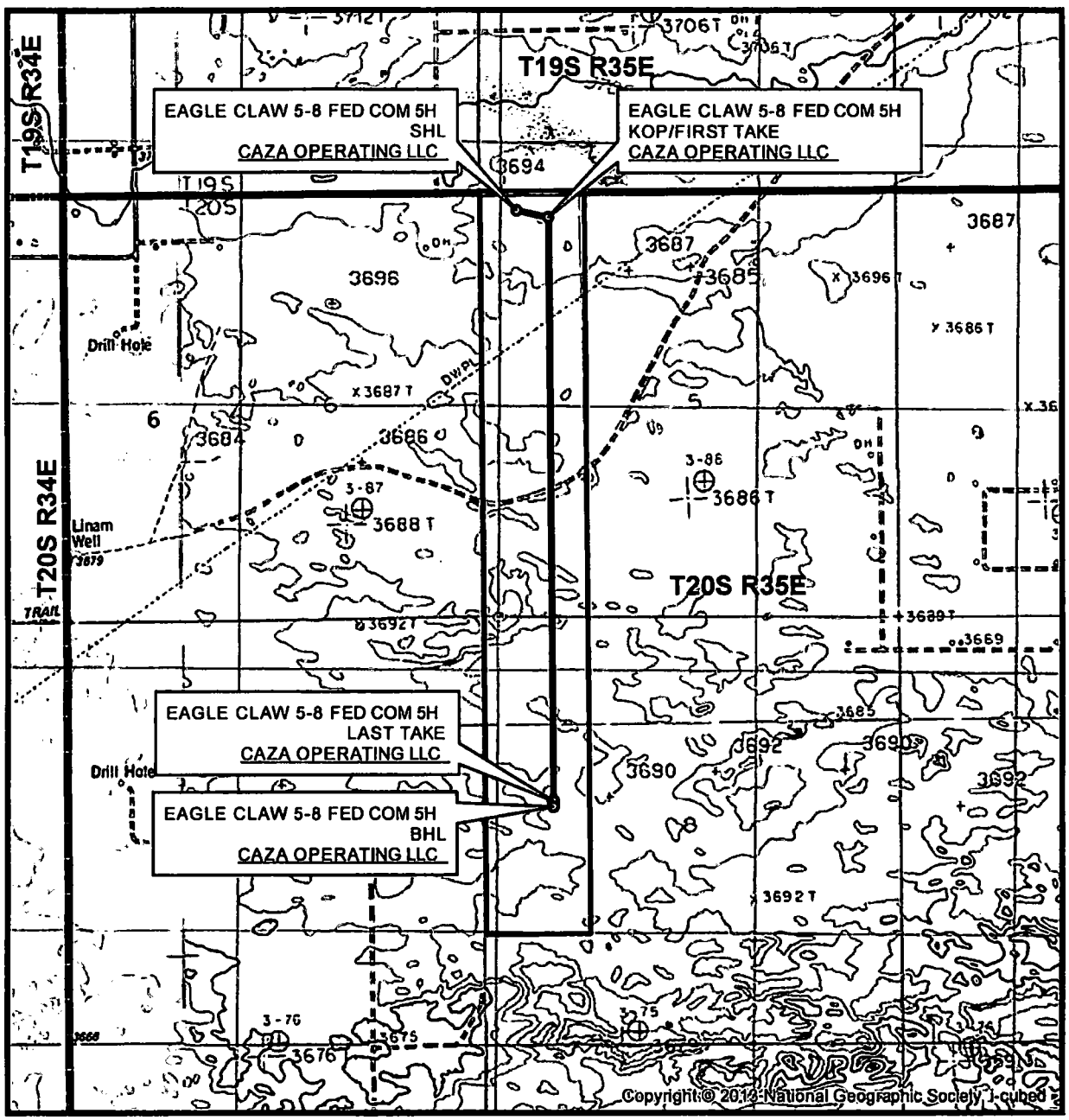
LEGEND

PROPOSED WELL PAD
PROPOSED LEASE ROAD
EXISTING LEASE ROAD
SECTION LINE
PROPOSED PIPELINE
ARCH LIMITS
EXISTING WATER LINE — W —
PROPOSED OVERHEAD POWER — OHP —

50' 0' 50' 100'
SCALE: 1" = 100'

PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4032_001

LOCATION VERIFICATION MAP



SEC. 5 TWP. 20-S RGE. 35-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: CAZA OPERATING LLC
DESCRIPTION: 240' FNL & 467' FWL
ELEVATION: 3695'
LEASE: EAGLE CLAW 5-8 FED COM
U.S.G.S. TOPOGRAPHIC MAP: MONUMENT SW, NM.

1 " = 2,000 '
CONTOUR INTERVAL = 10'

R-SQUARED GLOBAL LLC

SHEET 2 OF 3

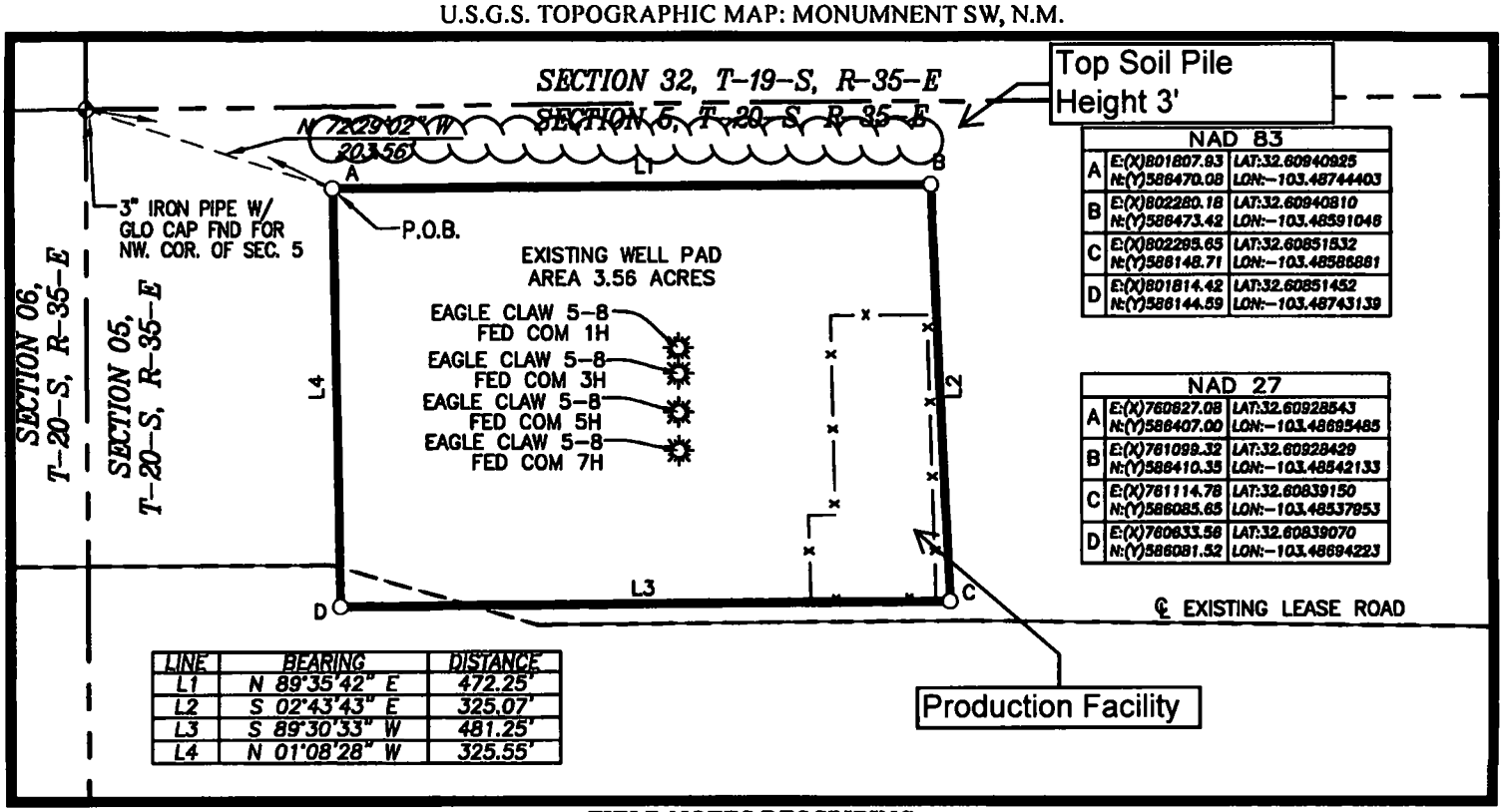
PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE

JOB No. R4048_002_C

WELL PAD PLAT

EAGLE CLAW 5-8 FED COM
SEC. 5 TWP. 20-S RGE. 35-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: CAZA OPERATING, LLC
U.S.G.S. TOPOGRAPHIC MAP: MONUMNENT SW, N.M.

75' 0' 75' 150'
SCALE: 1" = 150'



NAD 83		
A	E:(X)801807.93 N:(Y)586470.08	LAT:32.60940925 LON:-103.48744403
B	E:(X)802280.18 N:(Y)586473.42	LAT:32.60940810 LON:-103.48591046
C	E:(X)802295.65 N:(Y)586148.71	LAT:32.60851532 LON:-103.48586881
D	E:(X)801814.42 N:(Y)586144.59	LAT:32.60851452 LON:-103.48743139

NAD 27		
A	E:(X)760827.08 N:(Y)586407.00	LAT:32.60928543 LON:-103.48695485
B	E:(X)761099.32 N:(Y)586410.35	LAT:32.60928429 LON:-103.48842133
C	E:(X)761114.78 N:(Y)586085.65	LAT:32.60839150 LON:-103.48537953
D	E:(X)760833.58 N:(Y)586081.52	LAT:32.60839070 LON:-103.48694223

LINE	BEARING	DISTANCE
L1	N 89°35'42" E	472.25'
L2	S 02°43'43" E	325.07'
L3	S 89°30'33" W	481.25'
L4	N 01°08'28" W	325.55'

FIELD NOTES DESCRIBING

A tract of land being 3.56 acres. Said tract being located in Section 5, Township 20 South, Range 35 East, New Mexico Principal Meridian, Lea County, New Mexico.

Being more particularly described by metes and bounds as follows:

BEGINNING at a point from which a 3 inch iron pipe with a GLO cap found for the Northwest corner of said Section 5 bears N 72°29'02" W a distance of 203.56 feet.

THENCE
N 89°35'42" E a distance of 472.25 feet to the Northeast corner of this tract,
S 02°43'43" E a distance of 325.07 feet to the Southeast corner of this tract,
S 89°30'33" W a distance of 481.25 feet to the Southwest corner of this tract and
N 01°08'28" W a distance of 325.55 feet to the *POINT OF BEGINNING.*

The total area of the herein described tract contains 3.56 acres of land.

All bearings and coordinates refer to NAD 83, New Mexico State Plane Coordinate System, East Zone, U.S. Survey Feet. (All bearings, distances, coordinates and areas are based on grid measurements utilizing a combined scale factor of 0.99981205, convergence of 0.44922778°.)

Title information furnished by Caza Operating, LLC.

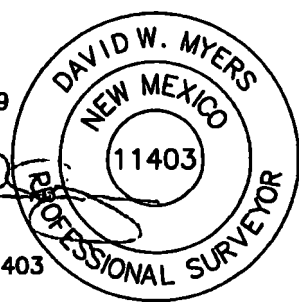
Reference accompanying Certificate of Survey prepared in conjunction with this legal description for easement.

STATE OF NEW MEXICO
COUNTY OF LEA

I, David W. Myers, New Mexico Professional Surveyor No. 11403, do hereby certify that this easement survey plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey; that this survey meets the minimum standards for surveying in New Mexico; and that it is true and correct to the best of my knowledge and belief. I further certify that this survey is not a land division or subdivision as defined in the New Mexico Subdivision Act and that this instrument is an easement survey plat crossing an existing tract or tracts.

DECEMBER 17, 2019

DAVID W. MYERS 11403



Caza Petroleum

PLAT FOR A SURFACE SITE ON THE PROPERTY OF

L & K RANCH LLC

LEA COUNTY, NEW MEXICO

REV.	DATE	DESCRIPTION	BY	CHKD
1	12/17/19	ADDED EXISTING WELL PAD	JMT	MWS

BASIS OF BEARING
ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS AND DISTANCES ARE GRID MEASUREMENTS.)

LEGEND P.O.B. POINT OF BEGINNING — R4046_002

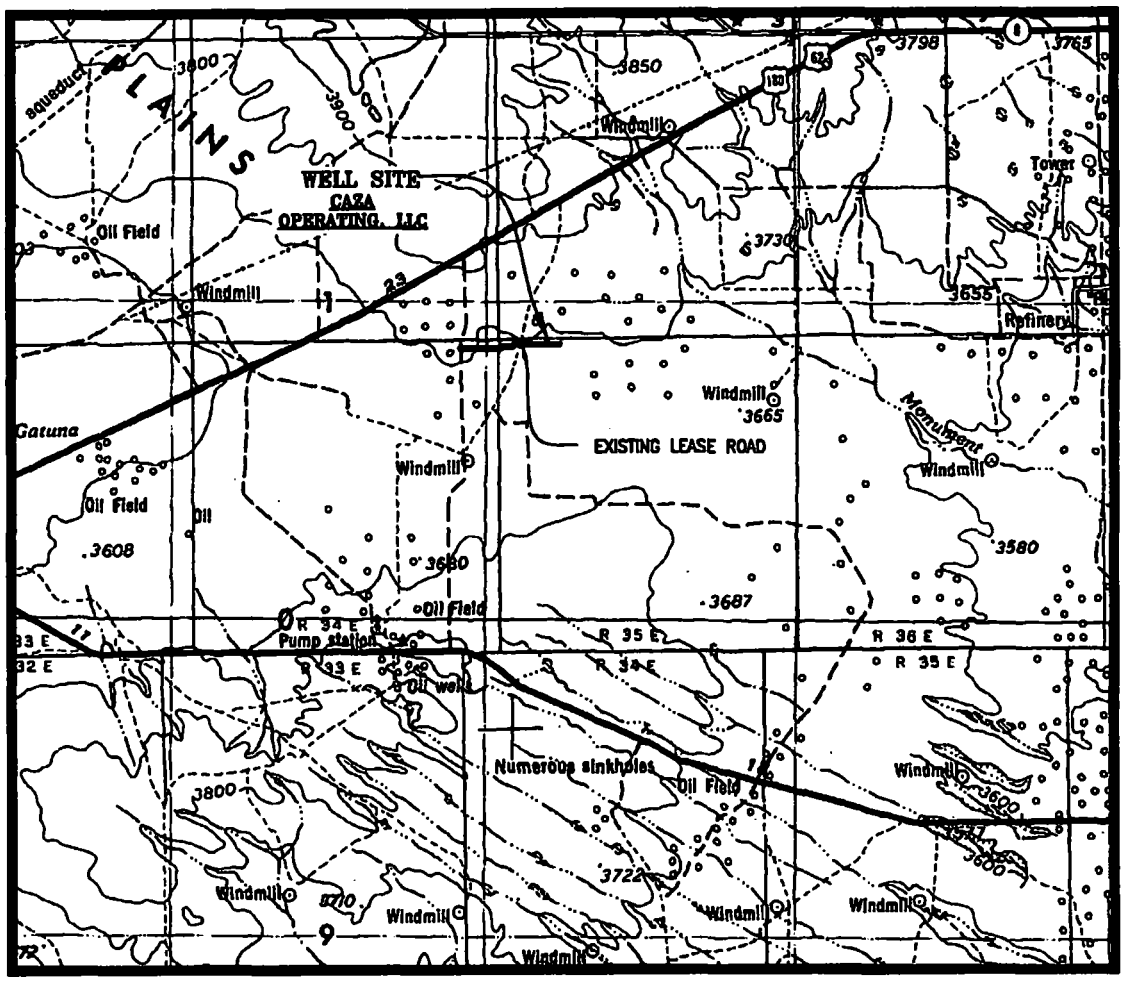
EXISTING ROAD
PROPOSED ROAD
SURFACE SITE EDGE
OHP PROP. OVERHEAD POWER
MONUMENT
WELL
ARCH LIMITS
FENCE
SECTION LINE
PROPERTY LINE
PROP. PIPELINE

SHEET 2 OF 5
DRAWN BY: DEF
DATE: 12/10/2019
CHECKED BY: MWS

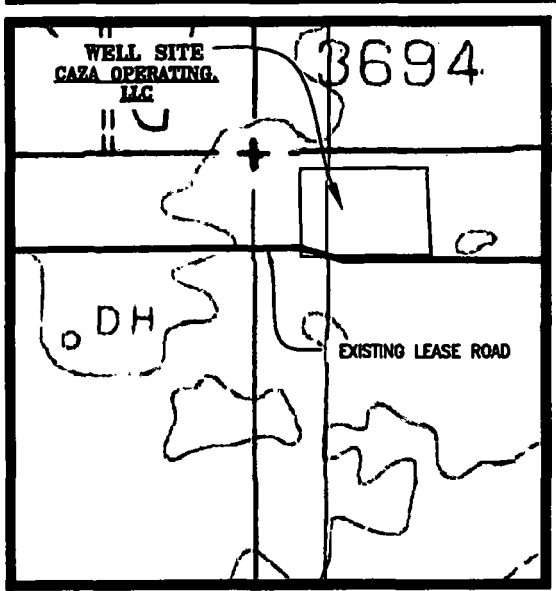
1309 LOUISVILLE AVE.
MONROE, LA 71201
(318) 323-6900
FAX (318) 362-0084

VICINITY AND EXISTING ROADS MAP

EAGLE CLAW 5-8 FED COM
SEC. 5 TWP. 20-S RGE. 35-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: CAZA OPERATING, LLC
U.S.G.S. TOPOGRAPHIC MAP: MONUMNENT SW, N.M.



SCALE: 1" = 20,000'
CONTOUR INTERVAL = 100'



REV. 1

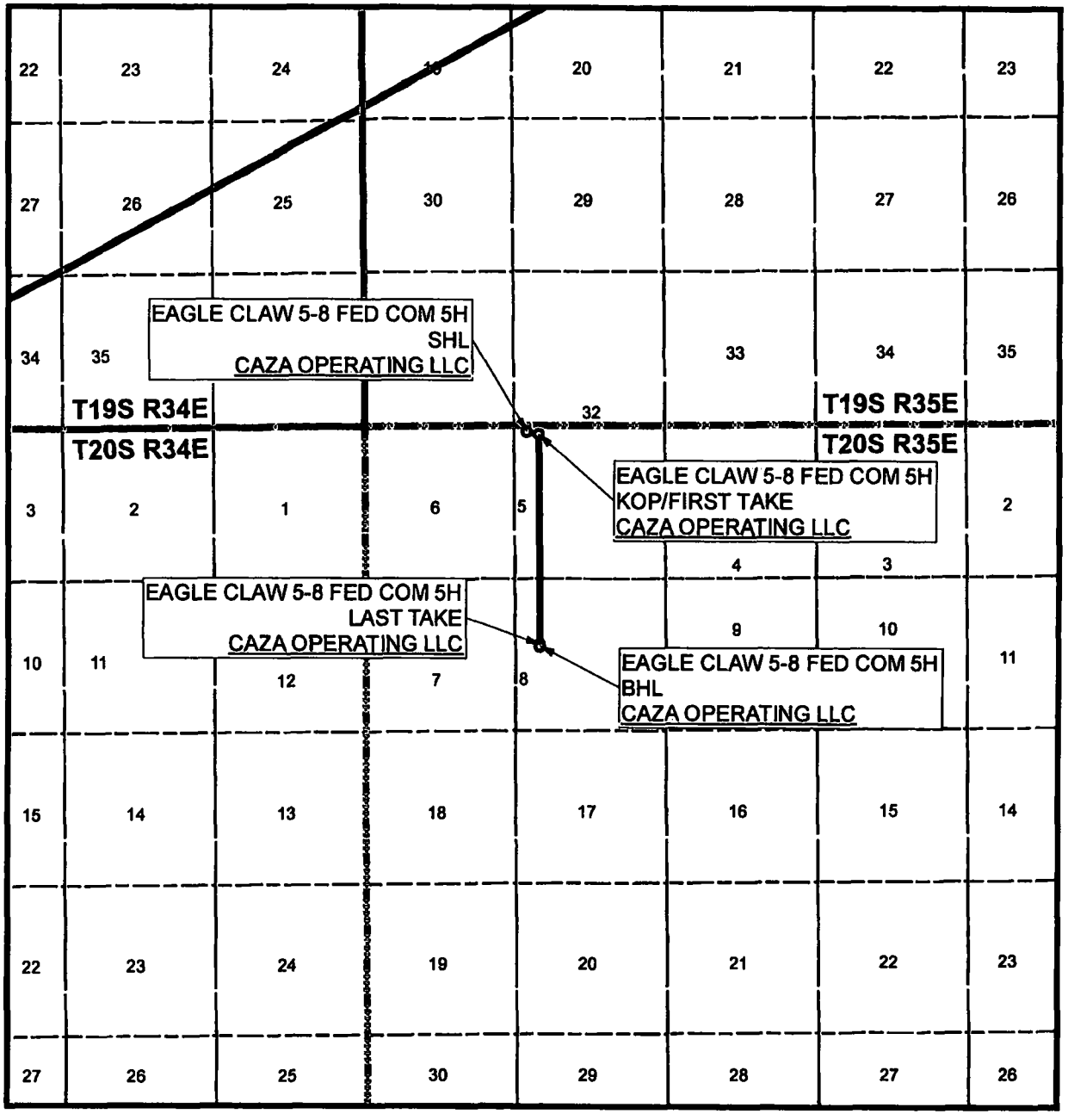
DETAIL A
N.T.S.

DIRECTIONS TO LOCATION:

FROM THE INTERSECTION OF EAST MARLAND BLVD. AND SOUTH DAL PASO STREET, GO WEST ON HOBBS HWY FOR APPROXIMATELY 21.5 MILES, TURN LEFT AND GO SOUTH ON WILLOW TREE ROAD FOR APPROXIMATELY 1.92 MILES; TURN LEFT ONTO A CALICHE ROAD AND CONTINUE SOUTH FOR APPROXIMATELY 1 MILE. TURN LEFT ONTO A CALICHE ROAD AND CONTINUE EAST FOR 0.13 MILES, ENTERING THE SOUTHWEST CORNER OF THE EAGLE CLAW 5-8 FED COM 1H, 3H, 5H, AND 7H WELL PAD.

PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4048_002

VICINITY MAP



SEC. 5 TWP. 20-S RGE. 35-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: CAZA OPERATING LLC
DESCRIPTION: 240' FNL & 467' FWL
ELEVATION: 3695'
LEASE: EAGLE CLAW 5-8 FED COM
U.S.G.S. TOPOGRAPHIC MAP: MONUMENT SW, NM.

1 " = 1 MILE

SHEET 3 OF 3

PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE

JOB No. R4048_002_C

WELL LOCATION PLAT

EAGLE CLAW 5-8 FED COM
SEC. 5 TWP. 20-S RGE. 35-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: CAZA OPERATING, LLC
U.S.G.S. TOPOGRAPHIC MAP: MONUMNENT SW, N.M.

LEGEND

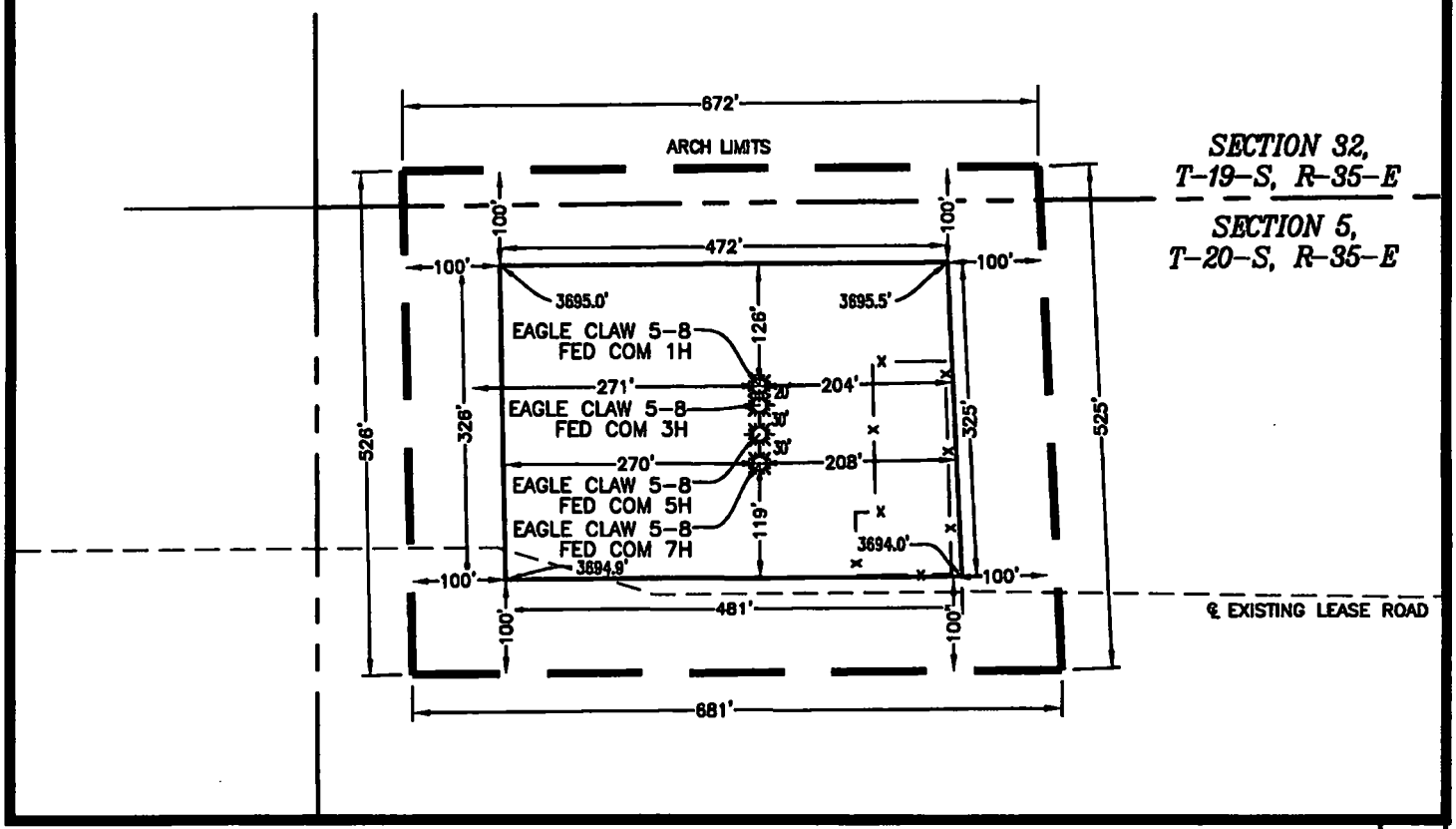
PROPOSED WELL PAD
ARCH SURVEY LIMITS
PROPOSED LEASE ROAD
EXISTING ROAD
SECTION LINE
PROP. OVERHEAD POWER LINE — OHP —
PROPERTY LINE — ℄ —
FENCE — x — x —
PROPOSED PIPELINE

EAGLE CLAW 5-8 FED COM 1H
CAZA OPERATING, LLC
190' FNL 467' FWL, SECTION 5
NAD 83, SPCS NM EAST
X:802081.59' / Y:586345.94'
LAT:32.60906207N / LON:103.48655861W
NAD 27, SPCS NM EAST
X:760900.73' / Y:586282.87'
LAT:32.60893826N / LON:103.48606947W
ELEVATION = 3695'

EAGLE CLAW 5-8 FED COM 3H
CAZA OPERATING, LLC
210' FNL 467' FWL, SECTION 5
NAD 83, SPCS NM EAST
X:802081.67' / Y:586325.94'
LAT:32.60900710N / LON:103.48655886W
NAD 27, SPCS NM EAST
X:760900.82' / Y:586262.87'
LAT:32.60888329N / LON:103.48606972W
ELEVATION = 3695'

EAGLE CLAW 5-8 FED COM 5H
CAZA OPERATING, LLC
240' FNL 467' FWL, SECTION 5
NAD 83, SPCS NM EAST
X:802081.80' / Y:586285.94'
LAT:32.60892464N / LON:103.48655923W
NAD 27, SPCS NM EAST
X:760900.94' / Y:586232.87'
LAT:32.60880083N / LON:103.48607010W
ELEVATION = 3695'

EAGLE CLAW 5-8 FED COM 7H
CAZA OPERATING, LLC
270' FNL 467' FWL, SECTION 5
NAD 83, SPCS NM EAST
X:802081.92' / Y:586265.94'
LAT:32.60884219N / LON:103.48655960W
NAD 27, SPCS NM EAST
X:760901.06' / Y:586202.87'
LAT:32.60871837N / LON:103.48607047W
ELEVATION = 3695'



REV. 1

DECEMBER 17, 2019

DAVID W. MYERS 11403

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

NOTE:
THIS IS NOT A BOUNDARY SURVEY, APPARENT PROPERTY CORNERS AND PROPERTY LINES ARE SHOWN FOR INFORMATION ONLY. BOUNDARY DATA SHOWN IS FROM STATE OF NEW MEXICO OIL CONSERVATION DIVISION FORM C-102 INCLUDED IN THIS SUBMITTAL.

100' 0' 100' 200'
SCALE: 1" = 200'

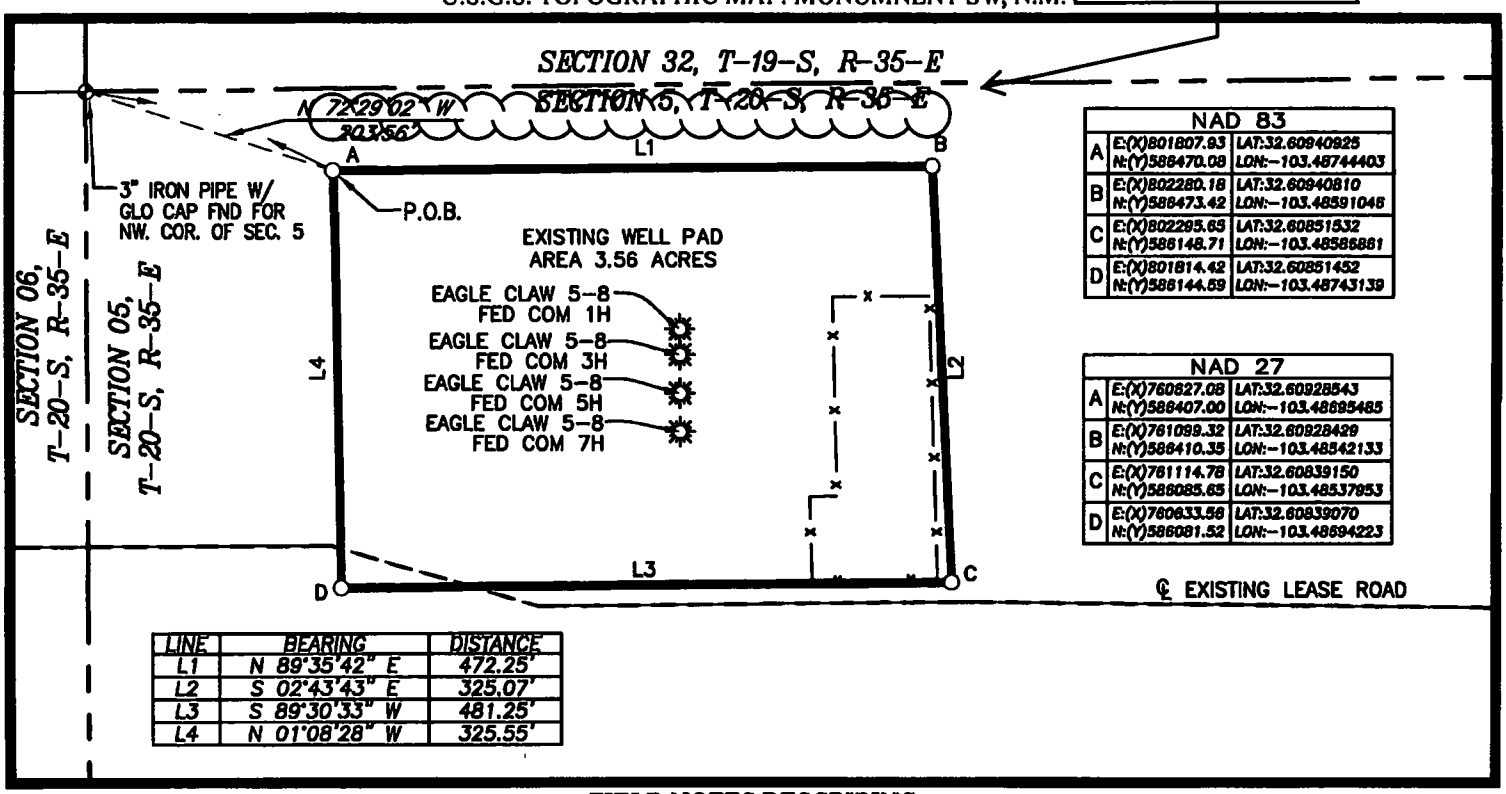
PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4046_002

WELL PAD PLAT

EAGLE CLAW 5-8 FED COM
SEC. 5 TWP. 20-S RGE. 35-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: CAZA OPERATING, LLC
U.S.G.S. TOPOGRAPHIC MAP: MONUMNENT SW, N.M.

75' 0' 75' 150'
SCALE: 1" = 150'

Top Soil Pile
Height 3'



NAD 83		
A	E:(X)801807.93 N:(Y)586470.08	LAT:32.60940925 LON:-103.48744403
B	E:(X)802280.18 N:(Y)586473.42	LAT:32.60940810 LON:-103.48591046
C	E:(X)802295.65 N:(Y)586148.71	LAT:32.60851532 LON:-103.48586881
D	E:(X)801814.42 N:(Y)586144.59	LAT:32.60851452 LON:-103.48743139

NAD 27		
A	E:(X)760827.08 N:(Y)586407.00	LAT:32.60928543 LON:-103.48695485
B	E:(X)761099.32 N:(Y)586410.35	LAT:32.60928429 LON:-103.48542133
C	E:(X)761114.78 N:(Y)586085.65	LAT:32.60839150 LON:-103.48537953
D	E:(X)760833.56 N:(Y)586081.52	LAT:32.60839070 LON:-103.48694223

LINE	BEARING	DISTANCE
L1	N 89°35'42" E	472.25'
L2	S 02°43'43" E	325.07'
L3	S 89°30'33" W	481.25'
L4	N 01°08'28" W	325.55'

FIELD NOTES DESCRIBING

A tract of land being 3.56 acres. Said tract being located in Section 5, Township 20 South, Range 35 East, New Mexico Principal Meridian, Lea County, New Mexico.

Being more particularly described by metes and bounds as follows:

BEGINNING at a point from which a 3 inch iron pipe with a GLO cap found for the Northwest corner of said Section 5 bears N 72°29'02" W a distance of 203.56 feet.

THENCE
N 89°35'42" E a distance of 472.25 feet to the Northeast corner of this tract,
S 02°43'43" E a distance of 325.07 feet to the Southeast corner of this tract,
S 89°30'33" W a distance of 481.25 feet to the Southwest corner of this tract and
N 01°08'28" W a distance of 325.55 feet to the *POINT OF BEGINNING.*

The total area of the herein described tract contains 3.56 acres of land.

All bearings and coordinates refer to NAD 83, New Mexico State Plane Coordinate System, East Zone, U.S. Survey Feet. (All bearings, distances, coordinates and areas are based on grid measurements utilizing a combined scale factor of 0.99981205, convergence of 0.44922778°.)

Title information furnished by Caza Operating, LLC.

Reference accompanying Certificate of Survey prepared in conjunction with this legal description for easement.

STATE OF NEW MEXICO
COUNTY OF LEA

I, David W. Myers, New Mexico Professional Surveyor No. 11403, do hereby certify that this easement survey plat and the actual survey on the ground upon which it is based were performed by me or under my direct supervision; that I am responsible for this survey; that this survey meets the minimum standards for surveying in New Mexico; and that it is true and correct to the best of my knowledge and belief. I further certify that this survey is not a land division or subdivision as defined in the New Mexico Subdivision Act and that this instrument is an easement survey plat crossing an existing tract or tracts.

DECEMBER 17, 2019

DAVID W. MYERS 11403

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

Caza Petroleum

PLAT FOR A SURFACE SITE ON THE PROPERTY OF

L & K RANCH LLC

LEA COUNTY, NEW MEXICO

REV.	DATE	DESCRIPTION	BY	CHKD
1	12/17/19	ADDED EXISTING WELL PAD	JMT	MWS

BASIS OF BEARING
ALL BEARINGS AND COORDINATES REFER TO NAD 83, NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET. (ALL BEARINGS AND DISTANCES ARE GRID MEASUREMENTS.)

LEGEND P.O.B. POINT OF BEGINNING
EXISTING ROAD
PROPOSED ROAD
SURFACE SITE EDGE
OHP PROP. OVERHEAD POWER
MONUMENT
WELL
ARCH LIMITS
FENCE
SECTION LINE
PROPERTY LINE
PROP. PIPELINE

R4046_002

SHEET 2 OF 5
DRAWN BY: DEF
DATE: 12/10/2019
CHECKED BY: MWS

1309 LOUISVILLE AVE.
MONROE, LA 71201
(318) 323-6900
FAX (318) 362-0064

Operator	Caza Operating LLC
Well Name & No.	Eagleclaw 5H
County	Lea
Location (S/T/R/Ali)	
Lease Number	
ATS or EC #	APD### or EC###

Colors:
Choose casings
Fill in, if applicable

Name	
Date	
Version	

Remarks	

Type of Casing	Size of Hole (in)	Size of Casing (in)	Weight per Foot (lbs/ft)	Grade	Yield	Coupling #:	Top (ft)	Bottom (MD) (ft)	Setting Depth (TVD) (TVD of entire string) (ft)	Min Mud Weight (ppg)	Max Mud Weight (ppg)	ID	Drift ID	Cplg OD
Surface	17.500	13.375	54.50	j	55	stc	0	2000	2000	8.40	8.90	12.6150	12.4900	14.3750
Int 1	12.250	9.625	40.00	hci	80	btc	0	5535	5521	9.20	10.00	8.8350	8.7500	10.6250
Int 1 Taper 1														
<Choose Casing>														
Prod 1	8.750	6.000	24.50	p	110	btc	0	16717	9680	9.20	10.00	5.2000	5.0750	6.8750
<Choose Casing>														
<Choose Casing>														

Cement

Surface			Int 1			Prod 1			<Choose Casing>			<Choose Casing>		
TOC	0		TOC	0		TOC	0		TOC			TOC		
DV Depth			DV Depth	3900		DV Depth			DV Depth			DV Depth		
	Sacks	Yield (ft3/sx)			Yield (ft3/sx)		Sacks	Yield (ft3/sx)		Sacks	Yield (ft3/sx)		Sacks	Yield (ft3/sx)
Lead	1230	1.93	Lead	335	2.13	Lead 1	1650	2.38	Lead 1			Lead 1		
Tail	309	1.35	Tail	232	1.35	Tail 1	2200	1.62	Tail 1			Tail 1		
DV Lead			DV Lead	1140	2.13	DV Lead			DV Lead			DV Lead		
DV Tail			DV Tail	150	1.35	DV Tail			DV Tail			DV Tail		
Cmt Added	2791.05	cuft	Cement Added	1026.8 / 2630.7	cuft	Cement Added	7491.00	cuft	Cement Added	#N/A	cuft	Cement Added	#N/A	cuft
Cmt Req.	1389	cuft	Cement Req.	512.1 / 1320.4	cuft	Cement Req.	3743	cuft	Cement Req.	0	cuft	Cement Req.	0	cuft
Excess	100.9%		Excess	100.5% / 99.2%		Excess	100.11%		Excess	#N/A		Excess	#N/A	

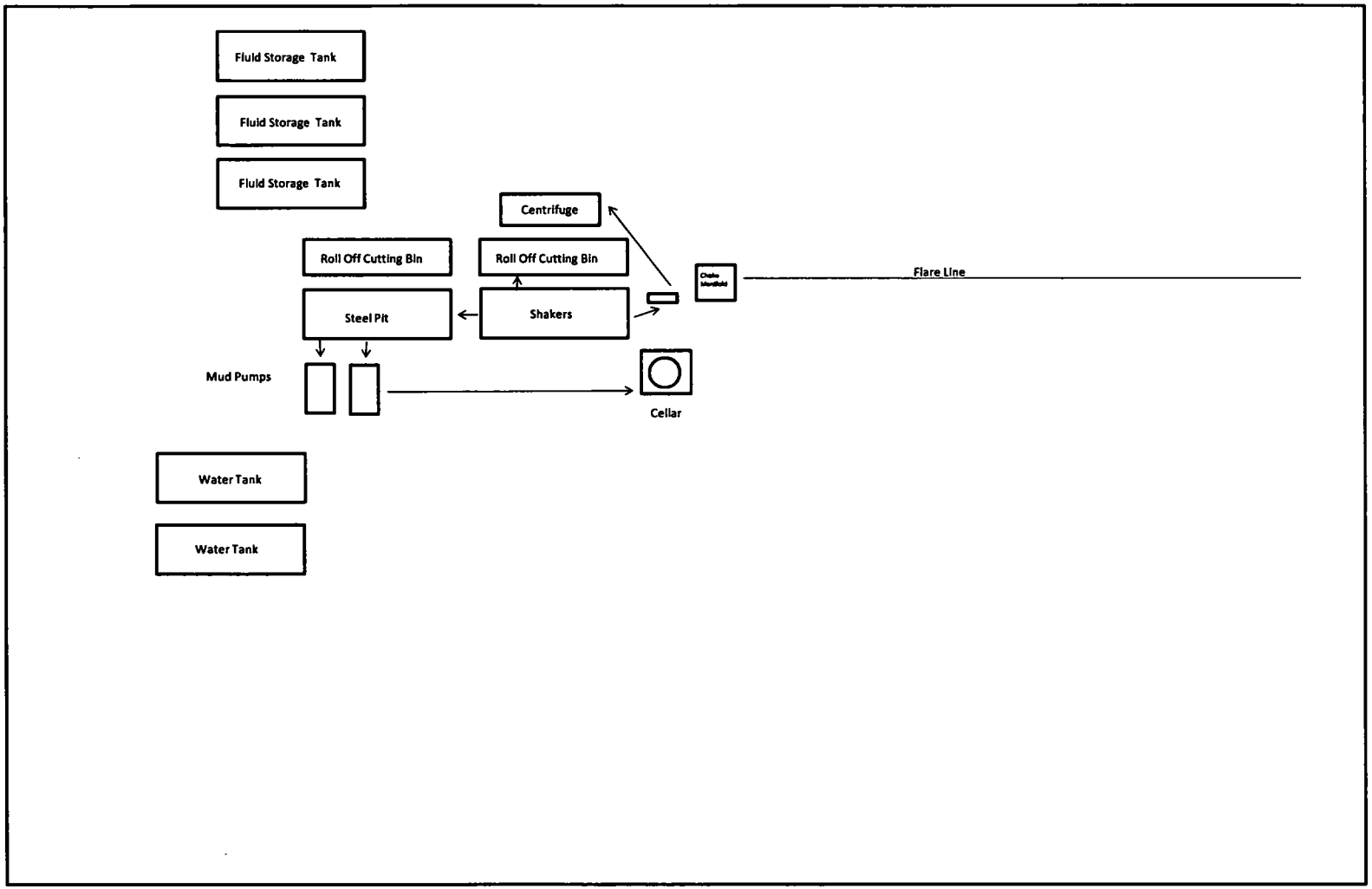
Clearances	In Hole	In Surface	In Int 1	In Int 1 Taper 1		In Prod 1		
Surface								
Int 1								
Int 1 Taper 1								
Prod 1				No Overlap	No Overlap			

Safety Factors	Joint/Body	Collapse	Burst	Alt Burst
Surface	4.72	1.22		1.65
Int 1	4.15	1.47	1.14	1.98
Int 1 Taper 1				
Prod 1	3.38	2.27	2.56	4.44

BOP Requirements After the Shoe

Surface		Int 1		Prod 1	
Max. Surf. Pressure	1653 psi	Max. Surf. Pressure	2899 psi	Max. Surf. Pressur	psi
BOP Required	2M System	BOP Required	3M System	BOP Required	System
<Choose Casing>					
Max. Surf. Pressure	psi				
BOP Required	System				

Closed Loop Diagram Design Plan



Design Plan, Operating Plan and Maintenance Plan, and Closure Plan for the OCD form C-144

Design Plan:

Fluid and cuttings coming from drilling operations will pass over the shale shaker with the cuttings going to the haul off bin and the cleaned fluid returning to the working steel pits.

Equipment Includes:

1-670bbl steel working pit
2-100bbl steel working suction pits
2-500bbl steel tanks
2-20yd^3 steel haul off bins
2-pumps (HHF-1600)
2-Shale shakers
1-Centrifuge
1-Desilter/Desander

Operating and Maintenance Plan:

Inspection to occur every tour for proper operation of system and individual components. If any problems are found they will be repaired and/or corrected immediately.

Closure Plan:

All haul off bins containing cuttings will be removed from location and hauled to R-360 (NM-01-0006) disposal site located 30 miles east of Carlsbad.

Project: Eagleclaw 5-8 Fed Com 5H
Site: Eagleclaw 5-8 Fed Com 5H
Well: Eagleclaw 5-8 Fed Com 5H
Wellbore: Eagleclaw 5-8 Fed Com 5H
Design: 181106 Eagleclaw 5-8 Fed Com 5H

Caza Petroleum

Azimuths to Grid North
True North: -0.46°
Magnetic North: 6.20°

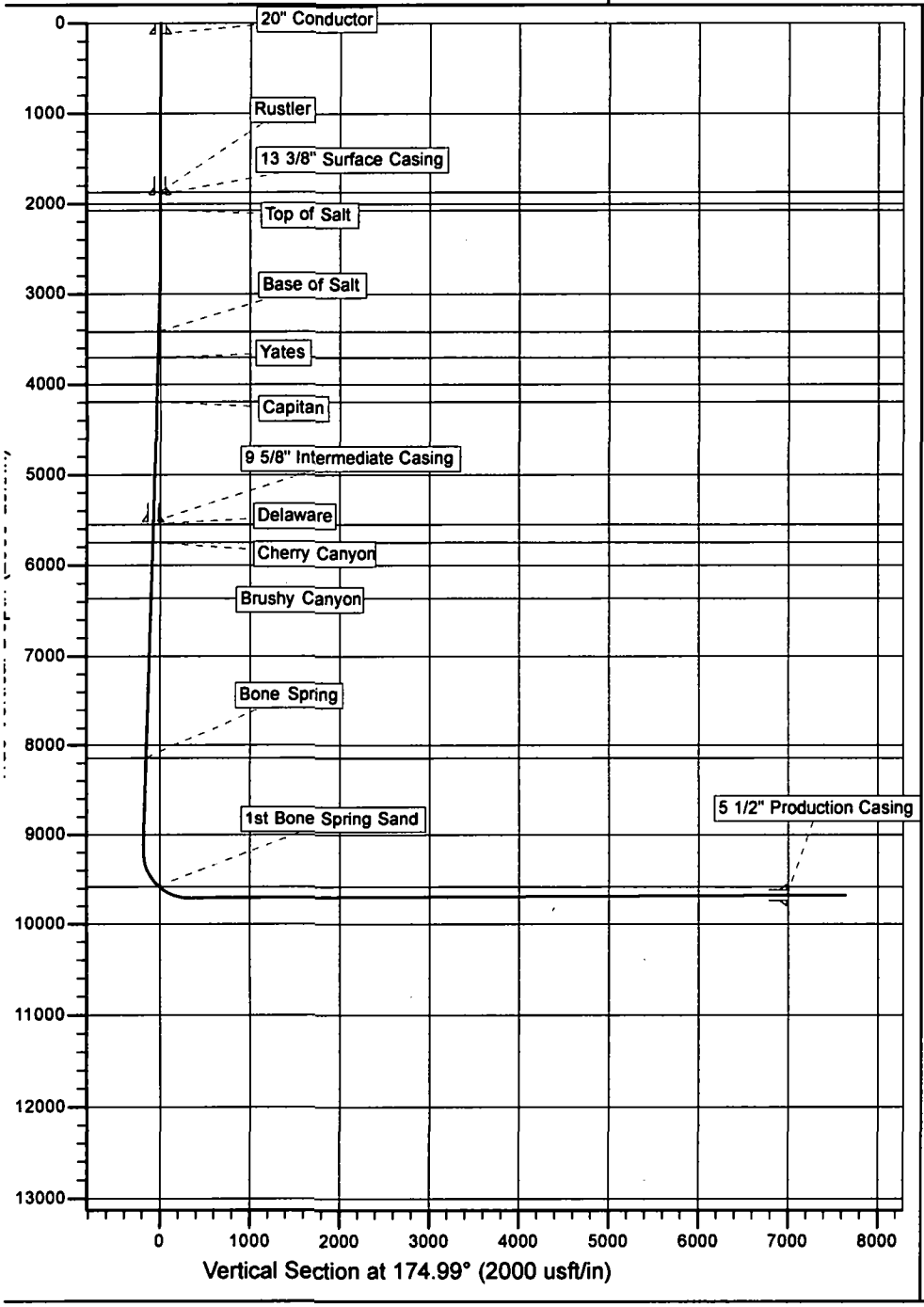
Magnetic Field
Strength: 48112.6snT
Dip Angle: 60.36°
Date: 11/6/2018
Model: IGRF2010

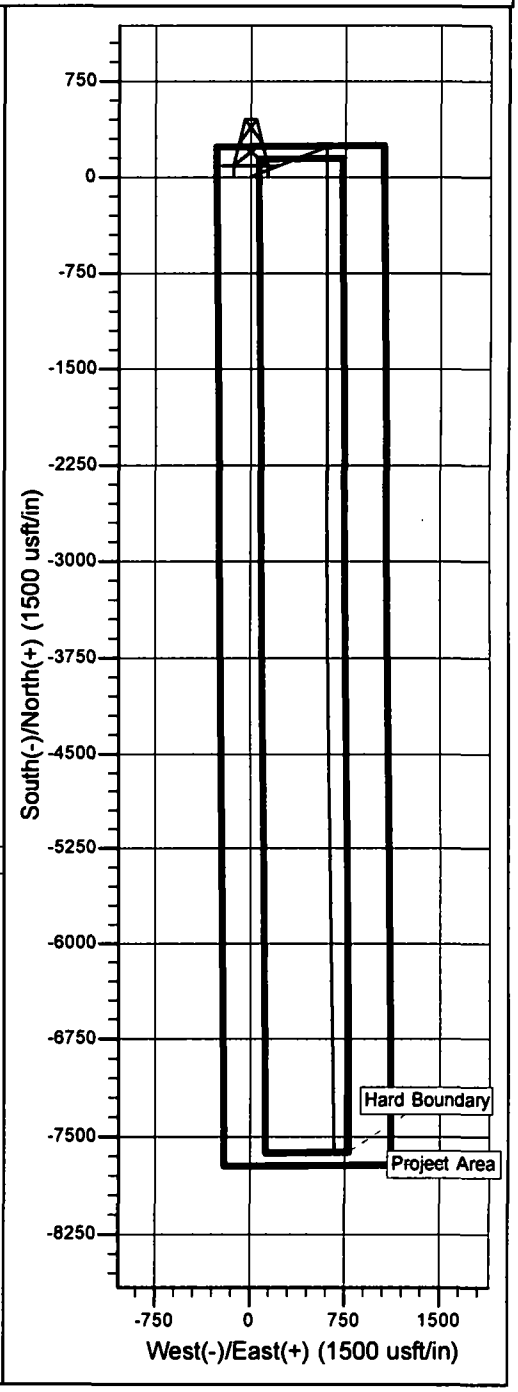
CASING DETAILS

TVD	MD	Name	Size
120.0	120.0	20" Conductor	20
1896.0	1896.0	13 3/8" Surface Casing	13-3/8
5521.0	5535.3	9 5/8" Intermediate Casing	9-5/8
9679.5	16717.0	5 1/2" Production Casing	5-1/2

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
1871.0	1871.0	Rustler	0.00	
2071.0	2071.0	Top of Salt	0.00	
3416.0	3418.7	Base of Salt	0.00	
3701.0	3705.2	Yates	0.00	
4191.0	4197.9	Capitan	0.00	
5546.0	5560.4	Delaware	0.00	
5746.0	5761.5	Cherry Canyon	0.00	
6361.0	6379.9	Brushy Canyon	0.00	
8140.0	8168.7	Bone Spring	0.00	
9576.0	9656.1	1st Bone Spring Sand	0.00	





Caza Petroleum

Caza Operating LLC

Eagleclaw 5-8 Fed Com 5H
Eagleclaw 5-8 Fed Com 5H
Eagleclaw 5-8 Fed Com 5H
Eagleclaw 5-8 Fed Com 5H

Plan: 181106 Eagleclaw 5-8 Fed Com 5H

Morcor Standard Plan

07 March, 2019

[redacted]

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Project Eagleclaw 5-8 Fed Com 5H

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

Site Eagleclaw 5-8 Fed Com 5H

Site Position:		**Northing:**	586,294.12 usft	**Latitude:**	32° 36' 32.126 N
From:	Lat/Long	**Easting:**	801,883.25 usft	**Longitude:**	103° 29' 13.934 W
Position Uncertainty:	1.0 usft	**Slot Radius:**	17-1/2 "	**Grid Convergence:**	0.46 °

Well Eagleclaw 5-8 Fed Com 5H

Well Position	**+N/-S**	0.0 usft	**Northing:**	586,294.12 usft	**Latitude:**	32° 36' 32.126 N
	+E/-W	0.0 usft	**Easting:**	801,883.25 usft	**Longitude:**	103° 29' 13.934 W
Position Uncertainty		1.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,695.0 usft

Wellbore Eagleclaw 5-8 Fed Com 5H

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	11/6/2018	6.65	60.36	48,113

Design 181106 Eagleclaw 5-8 Fed Com 5H

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	174.99

Survey Tool Program **Date** 3/7/2019

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0.0	17,379.0	181106 Eagleclaw 5-8 Fed Com 5H (Eagle	MWD	MWD - Standard

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
0.0	0.00	0.00	0.0	-3,717.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
50.0	0.00	0.00	50.0	-3,667.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
100.0	0.00	68.70	100.0	-3,617.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
120.0	0.00	68.70	120.0	-3,597.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
20" Conductor										
150.0	0.00	68.70	150.0	-3,567.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
200.0	0.00	68.70	200.0	-3,517.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
250.0	0.00	68.70	250.0	-3,467.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
300.0	0.00	68.70	300.0	-3,417.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
350.0	0.00	68.70	350.0	-3,367.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
400.0	0.00	68.70	400.0	-3,317.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
450.0	0.00	68.70	450.0	-3,267.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
500.0	0.00	68.70	500.0	-3,217.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
550.0	0.00	68.70	550.0	-3,167.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
600.0	0.00	68.70	600.0	-3,117.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
650.0	0.00	68.70	650.0	-3,067.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
700.0	0.00	68.70	700.0	-3,017.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
750.0	0.00	68.70	750.0	-2,967.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
800.0	0.00	68.70	800.0	-2,917.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
850.0	0.00	68.70	850.0	-2,867.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
900.0	0.00	68.70	900.0	-2,817.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
950.0	0.00	68.70	950.0	-2,767.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,000.0	0.00	68.70	1,000.0	-2,717.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,050.0	0.00	68.70	1,050.0	-2,667.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,100.0	0.00	68.70	1,100.0	-2,617.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,150.0	0.00	68.70	1,150.0	-2,567.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,200.0	0.00	68.70	1,200.0	-2,517.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
1,250.0	0.00	68.70	1,250.0	-2,467.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,300.0	0.00	68.70	1,300.0	-2,417.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,350.0	0.00	68.70	1,350.0	-2,367.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,400.0	0.00	68.70	1,400.0	-2,317.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,450.0	0.00	68.70	1,450.0	-2,267.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,500.0	0.00	68.70	1,500.0	-2,217.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,550.0	0.00	68.70	1,550.0	-2,167.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,600.0	0.00	68.70	1,600.0	-2,117.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,650.0	0.00	68.70	1,650.0	-2,067.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,700.0	0.00	68.70	1,700.0	-2,017.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,750.0	0.00	68.70	1,750.0	-1,967.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,800.0	0.00	68.70	1,800.0	-1,917.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,850.0	0.00	68.70	1,850.0	-1,867.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,871.0	0.00	68.70	1,871.0	-1,846.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
Rustler										
1,896.0	0.00	68.70	1,896.0	-1,821.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
13 3/8" Surface Casing										
1,900.0	0.00	68.70	1,900.0	-1,817.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
1,950.0	0.00	68.70	1,950.0	-1,767.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,000.0	0.00	68.70	2,000.0	-1,717.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,050.0	0.00	68.70	2,050.0	-1,667.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,071.0	0.00	68.70	2,071.0	-1,646.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
Top of Salt										
2,100.0	0.00	68.70	2,100.0	-1,617.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,150.0	0.00	68.70	2,150.0	-1,567.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,200.0	0.00	68.70	2,200.0	-1,517.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,250.0	0.00	68.70	2,250.0	-1,467.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
2,300.0	0.00	68.70	2,300.0	-1,417.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,350.0	0.00	68.70	2,350.0	-1,367.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,400.0	0.00	68.70	2,400.0	-1,317.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,450.0	0.00	68.70	2,450.0	-1,267.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,500.0	0.00	68.70	2,500.0	-1,217.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,550.0	0.00	68.70	2,550.0	-1,167.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,600.0	0.00	68.70	2,600.0	-1,117.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,650.0	0.00	68.70	2,650.0	-1,067.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,700.0	0.00	68.70	2,700.0	-1,017.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,750.0	0.00	68.70	2,750.0	-967.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
2,800.0	0.00	68.70	2,800.0	-917.0	0.0	0.0	801,883.25	586,294.12	0.00	0.00
Start Build 3.00										
2,850.0	1.50	68.70	2,850.0	-867.0	0.2	0.6	801,883.86	586,294.36	-0.18	3.00
2,900.0	3.00	68.70	2,900.0	-817.0	1.0	2.4	801,885.69	586,295.07	-0.73	3.00
2,950.0	4.50	68.70	2,949.8	-767.2	2.1	5.5	801,888.74	586,296.26	-1.65	3.00
3,000.0	6.00	68.70	2,999.6	-717.4	3.8	9.7	801,893.00	586,297.92	-2.93	3.00
Start 6000.0 hold at 3000.0 MD										
3,050.0	6.00	68.70	3,049.4	-667.6	5.7	14.6	801,897.87	586,299.82	-4.40	0.00
3,100.0	6.00	68.70	3,099.1	-617.9	7.6	19.5	801,902.74	586,301.72	-5.87	0.00
3,150.0	6.00	68.70	3,148.8	-568.2	9.5	24.4	801,907.61	586,303.62	-7.33	0.00
3,200.0	6.00	68.70	3,198.5	-518.5	11.4	29.2	801,912.48	586,305.52	-8.80	0.00
3,250.0	6.00	68.70	3,248.3	-468.7	13.3	34.1	801,917.35	586,307.42	-10.26	0.00
3,300.0	6.00	68.70	3,298.0	-419.0	15.2	39.0	801,922.22	586,309.32	-11.73	0.00
3,350.0	6.00	68.70	3,347.7	-369.3	17.1	43.8	801,927.09	586,311.21	-13.20	0.00
3,400.0	6.00	68.70	3,397.4	-319.6	19.0	48.7	801,931.96	586,313.11	-14.66	0.00
3,418.7	6.00	68.70	3,416.0	-301.0	19.7	50.5	801,933.77	586,313.82	-15.21	0.00
Base of Salt										
3,450.0	6.00	68.70	3,447.2	-269.8	20.9	53.6	801,936.83	586,315.01	-16.13	0.00

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
3,500.0	6.00	68.70	3,496.9	-220.1	22.8	58.4	801,941.70	586,316.91	-17.59	0.00
3,550.0	6.00	68.70	3,546.6	-170.4	24.7	63.3	801,946.56	586,318.81	-19.06	0.00
3,600.0	6.00	68.70	3,596.3	-120.7	26.6	68.2	801,951.43	586,320.71	-20.53	0.00
3,650.0	6.00	68.70	3,646.1	-70.9	28.5	73.1	801,956.30	586,322.60	-21.99	0.00
3,700.0	6.00	68.70	3,695.8	-21.2	30.4	77.9	801,961.17	586,324.50	-23.46	0.00
3,705.2	6.00	68.70	3,701.0	-16.0	30.6	78.4	801,961.68	586,324.70	-23.61	0.00
Yates										
3,750.0	6.00	68.70	3,745.5	28.5	32.3	82.8	801,966.04	586,326.40	-24.92	0.00
3,800.0	6.00	68.70	3,795.3	78.3	34.2	87.7	801,970.91	586,328.30	-26.39	0.00
3,850.0	6.00	68.70	3,845.0	128.0	36.1	92.5	801,975.78	586,330.20	-27.86	0.00
3,900.0	6.00	68.70	3,894.7	177.7	38.0	97.4	801,980.65	586,332.10	-29.32	0.00
3,950.0	6.00	68.70	3,944.4	227.4	39.9	102.3	801,985.52	586,334.00	-30.79	0.00
4,000.0	6.00	68.70	3,994.2	277.2	41.8	107.1	801,990.39	586,335.89	-32.25	0.00
4,050.0	6.00	68.70	4,043.9	326.9	43.7	112.0	801,995.26	586,337.79	-33.72	0.00
4,100.0	6.00	68.70	4,093.6	376.6	45.6	116.9	802,000.13	586,339.69	-35.19	0.00
4,150.0	6.00	68.70	4,143.3	426.3	47.5	121.7	802,005.00	586,341.59	-36.65	0.00
4,197.9	6.00	68.70	4,191.0	474.0	49.3	126.4	802,009.67	586,343.41	-38.06	0.00
Capitan										
4,200.0	6.00	68.70	4,193.1	476.1	49.4	126.6	802,009.87	586,343.49	-38.12	0.00
4,250.0	6.00	68.70	4,242.8	525.8	51.3	131.5	802,014.74	586,345.39	-39.58	0.00
4,300.0	6.00	68.70	4,292.5	575.5	53.2	136.4	802,019.61	586,347.29	-41.05	0.00
4,350.0	6.00	68.70	4,342.2	625.2	55.1	141.2	802,024.48	586,349.18	-42.52	0.00
4,400.0	6.00	68.70	4,392.0	675.0	57.0	146.1	802,029.35	586,351.08	-43.98	0.00
4,450.0	6.00	68.70	4,441.7	724.7	58.9	151.0	802,034.21	586,352.98	-45.45	0.00
4,500.0	6.00	68.70	4,491.4	774.4	60.8	155.8	802,039.08	586,354.88	-46.91	0.00
4,550.0	6.00	68.70	4,541.1	824.1	62.7	160.7	802,043.95	586,356.78	-48.38	0.00
4,600.0	6.00	68.70	4,590.9	873.9	64.6	165.6	802,048.82	586,358.68	-49.85	0.00

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
4,650.0	6.00	68.70	4,640.6	923.6	66.5	170.4	802,053.69	586,360.57	-51.31	0.00
4,700.0	6.00	68.70	4,690.3	973.3	68.3	175.3	802,058.56	586,362.47	-52.78	0.00
4,750.0	6.00	68.70	4,740.0	1,023.0	70.2	180.2	802,063.43	586,364.37	-54.24	0.00
4,800.0	6.00	68.70	4,789.8	1,072.8	72.1	185.0	802,068.30	586,366.27	-55.71	0.00
4,850.0	6.00	68.70	4,839.5	1,122.5	74.0	189.9	802,073.17	586,368.17	-57.17	0.00
4,900.0	6.00	68.70	4,889.2	1,172.2	75.9	194.8	802,078.04	586,370.07	-58.64	0.00
4,950.0	6.00	68.70	4,939.0	1,222.0	77.8	199.7	802,082.91	586,371.97	-60.11	0.00
5,000.0	6.00	68.70	4,988.7	1,271.7	79.7	204.5	802,087.78	586,373.86	-61.57	0.00
5,050.0	6.00	68.70	5,038.4	1,321.4	81.6	209.4	802,092.65	586,375.76	-63.04	0.00
5,100.0	6.00	68.70	5,088.1	1,371.1	83.5	214.3	802,097.52	586,377.66	-64.50	0.00
5,150.0	6.00	68.70	5,137.9	1,420.9	85.4	219.1	802,102.39	586,379.56	-65.97	0.00
5,200.0	6.00	68.70	5,187.6	1,470.6	87.3	224.0	802,107.26	586,381.46	-67.44	0.00
5,250.0	6.00	68.70	5,237.3	1,520.3	89.2	228.9	802,112.13	586,383.36	-68.90	0.00
5,300.0	6.00	68.70	5,287.0	1,570.0	91.1	233.7	802,116.99	586,385.26	-70.37	0.00
5,350.0	6.00	68.70	5,336.8	1,619.8	93.0	238.6	802,121.86	586,387.15	-71.83	0.00
5,400.0	6.00	68.70	5,386.5	1,669.5	94.9	243.5	802,126.73	586,389.05	-73.30	0.00
5,450.0	6.00	68.70	5,436.2	1,719.2	96.8	248.3	802,131.60	586,390.95	-74.77	0.00
5,500.0	6.00	68.70	5,485.9	1,768.9	98.7	253.2	802,136.47	586,392.85	-76.23	0.00
5,535.3	6.00	68.70	5,521.0	1,804.0	100.1	256.7	802,139.91	586,394.19	-77.27	0.00
9 5/8" Intermediate Casing										
5,550.0	6.00	68.70	5,535.7	1,818.7	100.6	258.1	802,141.34	586,394.75	-77.70	0.00
5,560.4	6.00	68.70	5,546.0	1,829.0	101.0	259.1	802,142.35	586,395.14	-78.00	0.00
Delaware										
5,600.0	6.00	68.70	5,585.4	1,868.4	102.5	263.0	802,146.21	586,396.65	-79.16	0.00
5,650.0	6.00	68.70	5,635.1	1,918.1	104.4	267.8	802,151.08	586,398.55	-80.63	0.00
5,700.0	6.00	68.70	5,684.8	1,967.8	106.3	272.7	802,155.95	586,400.44	-82.10	0.00
5,750.0	6.00	68.70	5,734.6	2,017.6	108.2	277.6	802,160.82	586,402.34	-83.56	0.00

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
5,761.5	6.00	68.70	5,746.0	2,029.0	108.7	278.7	802,161.94	586,402.78	-83.90	0.00
Cherry Canyon										
5,800.0	6.00	68.70	5,784.3	2,067.3	110.1	282.4	802,165.69	586,404.24	-85.03	0.00
5,850.0	6.00	68.70	5,834.0	2,117.0	112.0	287.3	802,170.56	586,406.14	-86.49	0.00
5,900.0	6.00	68.70	5,883.7	2,166.7	113.9	292.2	802,175.43	586,408.04	-87.96	0.00
5,950.0	6.00	68.70	5,933.5	2,216.5	115.8	297.0	802,180.30	586,409.94	-89.43	0.00
6,000.0	6.00	68.70	5,983.2	2,266.2	117.7	301.9	802,185.17	586,411.83	-90.89	0.00
6,050.0	6.00	68.70	6,032.9	2,315.9	119.6	306.8	802,190.04	586,413.73	-92.36	0.00
6,100.0	6.00	68.70	6,082.7	2,365.7	121.5	311.7	802,194.91	586,415.63	-93.82	0.00
6,150.0	6.00	68.70	6,132.4	2,415.4	123.4	316.5	802,199.77	586,417.53	-95.29	0.00
6,200.0	6.00	68.70	6,182.1	2,465.1	125.3	321.4	802,204.64	586,419.43	-96.76	0.00
6,250.0	6.00	68.70	6,231.8	2,514.8	127.2	326.3	802,209.51	586,421.33	-98.22	0.00
6,300.0	6.00	68.70	6,281.6	2,564.6	129.1	331.1	802,214.38	586,423.23	-99.69	0.00
6,350.0	6.00	68.70	6,331.3	2,614.3	131.0	336.0	802,219.25	586,425.12	-101.15	0.00
6,379.9	6.00	68.70	6,361.0	2,644.0	132.1	338.9	802,222.16	586,426.26	-102.03	0.00
Brushy Canyon										
6,400.0	6.00	68.70	6,381.0	2,664.0	132.9	340.9	802,224.12	586,427.02	-102.62	0.00
6,450.0	6.00	68.70	6,430.7	2,713.7	134.8	345.7	802,228.99	586,428.92	-104.09	0.00
6,500.0	6.00	68.70	6,480.5	2,763.5	136.7	350.6	802,233.86	586,430.82	-105.55	0.00
6,550.0	6.00	68.70	6,530.2	2,813.2	138.6	355.5	802,238.73	586,432.72	-107.02	0.00
6,600.0	6.00	68.70	6,579.9	2,862.9	140.5	360.3	802,243.60	586,434.62	-108.48	0.00
6,650.0	6.00	68.70	6,629.6	2,912.6	142.4	365.2	802,248.47	586,436.52	-109.95	0.00
6,700.0	6.00	68.70	6,679.4	2,962.4	144.3	370.1	802,253.34	586,438.41	-111.42	0.00
6,750.0	6.00	68.70	6,729.1	3,012.1	146.2	375.0	802,258.21	586,440.31	-112.88	0.00
6,800.0	6.00	68.70	6,778.8	3,061.8	148.1	379.8	802,263.08	586,442.21	-114.35	0.00
6,850.0	6.00	68.70	6,828.5	3,111.5	150.0	384.7	802,267.95	586,444.11	-115.81	0.00
6,900.0	6.00	68.70	6,878.3	3,161.3	151.9	389.6	802,272.82	586,446.01	-117.28	0.00

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
6,950.0	6.00	68.70	6,928.0	3,211.0	153.8	394.4	802,277.69	586,447.91	-118.74	0.00
7,000.0	6.00	68.70	6,977.7	3,260.7	155.7	399.3	802,282.55	586,449.80	-120.21	0.00
7,050.0	6.00	68.70	7,027.4	3,310.4	157.6	404.2	802,287.42	586,451.70	-121.68	0.00
7,100.0	6.00	68.70	7,077.2	3,360.2	159.5	409.0	802,292.29	586,453.60	-123.14	0.00
7,150.0	6.00	68.70	7,126.9	3,409.9	161.4	413.9	802,297.16	586,455.50	-124.61	0.00
7,200.0	6.00	68.70	7,176.6	3,459.6	163.3	418.8	802,302.03	586,457.40	-126.07	0.00
7,250.0	6.00	68.70	7,226.4	3,509.4	165.2	423.6	802,306.90	586,459.30	-127.54	0.00
7,300.0	6.00	68.70	7,276.1	3,559.1	167.1	428.5	802,311.77	586,461.20	-129.01	0.00
7,350.0	6.00	68.70	7,325.8	3,608.8	169.0	433.4	802,316.64	586,463.09	-130.47	0.00
7,400.0	6.00	68.70	7,375.5	3,658.5	170.9	438.3	802,321.51	586,464.99	-131.94	0.00
7,450.0	6.00	68.70	7,425.3	3,708.3	172.8	443.1	802,326.38	586,466.89	-133.40	0.00
7,500.0	6.00	68.70	7,475.0	3,758.0	174.7	448.0	802,331.25	586,468.79	-134.87	0.00
7,550.0	6.00	68.70	7,524.7	3,807.7	176.6	452.9	802,336.12	586,470.69	-136.34	0.00
7,600.0	6.00	68.70	7,574.4	3,857.4	178.5	457.7	802,340.99	586,472.59	-137.80	0.00
7,650.0	6.00	68.70	7,624.2	3,907.2	180.4	462.6	802,345.86	586,474.49	-139.27	0.00
7,700.0	6.00	68.70	7,673.9	3,956.9	182.3	467.5	802,350.73	586,476.38	-140.73	0.00
7,750.0	6.00	68.70	7,723.6	4,006.6	184.2	472.3	802,355.60	586,478.28	-142.20	0.00
7,800.0	6.00	68.70	7,773.3	4,056.3	186.1	477.2	802,360.47	586,480.18	-143.67	0.00
7,850.0	6.00	68.70	7,823.1	4,106.1	188.0	482.1	802,365.33	586,482.08	-145.13	0.00
7,900.0	6.00	68.70	7,872.8	4,155.8	189.9	487.0	802,370.20	586,483.98	-146.60	0.00
7,950.0	6.00	68.70	7,922.5	4,205.5	191.8	491.8	802,375.07	586,485.88	-148.06	0.00
8,000.0	6.00	68.70	7,972.2	4,255.2	193.7	496.7	802,379.94	586,487.77	-149.53	0.00
8,050.0	6.00	68.70	8,022.0	4,305.0	195.5	501.6	802,384.81	586,489.67	-151.00	0.00
8,100.0	6.00	68.70	8,071.7	4,354.7	197.4	506.4	802,389.68	586,491.57	-152.46	0.00
8,150.0	6.00	68.70	8,121.4	4,404.4	199.3	511.3	802,394.55	586,493.47	-153.93	0.00
8,168.7	6.00	68.70	8,140.0	4,423.0	200.1	513.1	802,396.37	586,494.18	-154.48	0.00

Bone Spring

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
8,200.0	6.00	68.70	8,171.1	4,454.1	201.2	516.2	802,399.42	586,495.37	-155.39	0.00
8,250.0	6.00	68.70	8,220.9	4,503.9	203.1	521.0	802,404.29	586,497.27	-156.86	0.00
8,300.0	6.00	68.70	8,270.6	4,553.6	205.0	525.9	802,409.16	586,499.17	-158.33	0.00
8,350.0	6.00	68.70	8,320.3	4,603.3	206.9	530.8	802,414.03	586,501.06	-159.79	0.00
8,400.0	6.00	68.70	8,370.1	4,653.1	208.8	535.6	802,418.90	586,502.96	-161.26	0.00
8,450.0	6.00	68.70	8,419.8	4,702.8	210.7	540.5	802,423.77	586,504.86	-162.72	0.00
8,500.0	6.00	68.70	8,469.5	4,752.5	212.6	545.4	802,428.64	586,506.76	-164.19	0.00
8,550.0	6.00	68.70	8,519.2	4,802.2	214.5	550.3	802,433.51	586,508.66	-165.66	0.00
8,600.0	6.00	68.70	8,569.0	4,852.0	216.4	555.1	802,438.38	586,510.56	-167.12	0.00
8,650.0	6.00	68.70	8,618.7	4,901.7	218.3	560.0	802,443.25	586,512.46	-168.59	0.00
8,700.0	6.00	68.70	8,668.4	4,951.4	220.2	564.9	802,448.11	586,514.35	-170.05	0.00
8,750.0	6.00	68.70	8,718.1	5,001.1	222.1	569.7	802,452.98	586,516.25	-171.52	0.00
8,800.0	6.00	68.70	8,767.9	5,050.9	224.0	574.6	802,457.85	586,518.15	-172.99	0.00
8,850.0	6.00	68.70	8,817.6	5,100.6	225.9	579.5	802,462.72	586,520.05	-174.45	0.00
8,900.0	6.00	68.70	8,867.3	5,150.3	227.8	584.3	802,467.59	586,521.95	-175.92	0.00
8,950.0	6.00	68.70	8,917.0	5,200.0	229.7	589.2	802,472.46	586,523.85	-177.38	0.00
9,000.0	6.00	68.70	8,966.8	5,249.8	231.6	594.1	802,477.33	586,525.74	-178.85	0.00
Start Drop -3.00										
9,050.0	4.50	68.70	9,016.6	5,299.6	233.3	598.3	802,481.59	586,527.41	-180.13	3.00
9,100.0	3.00	68.70	9,066.4	5,349.4	234.5	601.4	802,484.64	586,528.59	-181.05	3.00
9,150.0	1.50	68.70	9,116.4	5,399.4	235.2	603.2	802,486.47	586,529.31	-181.60	3.00
9,200.0	0.00	0.00	9,166.4	5,449.4	235.4	603.8	802,487.08	586,529.55	-181.78	3.00
Start 35.0 hold at 9200.0 MD										
9,235.0	0.00	180.00	9,201.4	5,484.4	235.4	603.8	802,487.08	586,529.55	-181.78	0.00
Start Build 11.27										
9,250.0	1.69	180.00	9,216.4	5,499.4	235.2	603.8	802,487.08	586,529.32	-181.56	11.27
9,300.0	7.32	180.00	9,266.2	5,549.2	231.3	603.8	802,487.08	586,525.40	-177.65	11.27

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
9,350.0	12.96	180.00	9,315.4	5,598.4	222.5	603.8	802,487.08	586,516.60	-168.88	11.27
9,400.0	18.59	180.00	9,363.5	5,646.5	208.9	603.8	802,487.08	586,503.01	-155.35	11.27
9,450.0	24.23	180.00	9,410.1	5,693.1	190.6	603.8	802,487.08	586,484.76	-137.17	11.27
9,500.0	29.86	180.00	9,454.6	5,737.6	167.9	603.8	802,487.08	586,462.04	-114.53	11.27
9,550.0	35.50	180.00	9,496.6	5,779.6	140.9	603.8	802,487.08	586,435.05	-87.65	11.27
9,600.0	41.13	180.00	9,535.9	5,818.9	109.9	603.8	802,487.08	586,404.07	-56.79	11.27
9,650.0	46.76	180.00	9,571.8	5,854.8	75.3	603.8	802,487.08	586,369.38	-22.23	11.27
9,656.1	47.45	180.00	9,576.0	5,859.0	70.8	603.8	802,487.08	586,364.90	-17.77	11.27
1st Bone Spring Sand										
9,700.0	52.40	180.00	9,604.2	5,887.2	37.2	603.8	802,487.08	586,331.33	15.67	11.27
9,750.0	58.03	180.00	9,632.8	5,915.8	-3.8	603.8	802,487.08	586,290.28	56.56	11.27
9,800.0	63.67	180.00	9,657.1	5,940.1	-47.5	603.8	802,487.08	586,246.63	100.05	11.27
9,850.0	69.30	180.00	9,677.0	5,960.0	-93.3	603.8	802,487.08	586,200.80	145.70	11.27
9,900.0	74.93	180.00	9,692.4	5,975.4	-140.9	603.8	802,487.08	586,153.24	193.08	11.27
9,950.0	80.57	180.00	9,703.0	5,986.0	-189.7	603.8	802,487.08	586,104.40	241.74	11.27
10,000.0	86.20	180.00	9,708.7	5,991.7	-239.4	603.8	802,487.08	586,054.75	291.20	11.27
10,036.0	90.26	180.00	9,709.9	5,992.9	-275.3	603.8	802,487.08	586,018.77	327.04	11.27
Start Turn -0.01										
10,050.0	90.26	180.00	9,709.8	5,992.8	-289.3	603.8	802,487.08	586,004.77	340.98	0.01
10,100.0	90.26	179.99	9,709.6	5,992.6	-339.3	603.8	802,487.08	585,954.78	390.79	0.01
10,150.0	90.26	179.98	9,709.3	5,992.3	-389.3	603.8	802,487.09	585,904.78	440.60	0.01
10,200.0	90.26	179.98	9,709.1	5,992.1	-439.3	603.9	802,487.11	585,854.78	490.41	0.01
10,250.0	90.26	179.97	9,708.9	5,991.9	-489.3	603.9	802,487.13	585,804.78	540.22	0.01
10,300.0	90.26	179.96	9,708.7	5,991.7	-539.3	603.9	802,487.16	585,754.78	590.03	0.01
10,350.0	90.26	179.96	9,708.4	5,991.4	-589.3	603.9	802,487.20	585,704.78	639.84	0.01
10,400.0	90.26	179.95	9,708.2	5,991.2	-639.3	604.0	802,487.24	585,654.78	689.65	0.01
10,450.0	90.26	179.94	9,708.0	5,991.0	-689.3	604.0	802,487.28	585,604.78	739.47	0.01

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
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Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
10,500.0	90.26	179.94	9,707.8	5,990.8	-739.3	604.1	802,487.33	585,554.78	789.28	0.01
10,550.0	90.26	179.93	9,707.5	5,990.5	-789.3	604.1	802,487.39	585,504.78	839.09	0.01
10,600.0	90.26	179.92	9,707.3	5,990.3	-839.3	604.2	802,487.46	585,454.78	888.91	0.01
10,650.0	90.26	179.92	9,707.1	5,990.1	-889.3	604.3	802,487.53	585,404.78	938.72	0.01
10,700.0	90.26	179.91	9,706.8	5,989.8	-939.3	604.3	802,487.60	585,354.78	988.54	0.01
10,750.0	90.26	179.90	9,706.6	5,989.6	-989.3	604.4	802,487.68	585,304.78	1,038.35	0.01
10,800.0	90.26	179.90	9,706.4	5,989.4	-1,039.3	604.5	802,487.77	585,254.78	1,088.17	0.01
10,850.0	90.26	179.89	9,706.2	5,989.2	-1,089.3	604.6	802,487.87	585,204.78	1,137.98	0.01
10,900.0	90.26	179.88	9,705.9	5,988.9	-1,139.3	604.7	802,487.97	585,154.78	1,187.80	0.01
10,950.0	90.26	179.88	9,705.7	5,988.7	-1,189.3	604.8	802,488.07	585,104.78	1,237.62	0.01
11,000.0	90.26	179.87	9,705.5	5,988.5	-1,239.3	604.9	802,488.18	585,054.79	1,287.44	0.01
11,050.0	90.26	179.86	9,705.3	5,988.3	-1,289.3	605.0	802,488.30	585,004.79	1,337.26	0.01
11,100.0	90.26	179.86	9,705.0	5,988.0	-1,339.3	605.2	802,488.42	584,954.79	1,387.07	0.01
11,150.0	90.26	179.85	9,704.8	5,987.8	-1,389.3	605.3	802,488.55	584,904.79	1,436.89	0.01
11,200.0	90.26	179.84	9,704.6	5,987.6	-1,439.3	605.4	802,488.69	584,854.79	1,486.71	0.01
11,250.0	90.26	179.83	9,704.3	5,987.3	-1,489.3	605.6	802,488.83	584,804.79	1,536.53	0.01
11,300.0	90.26	179.83	9,704.1	5,987.1	-1,539.3	605.7	802,488.98	584,754.79	1,586.36	0.01
11,350.0	90.26	179.82	9,703.9	5,986.9	-1,589.3	605.9	802,489.13	584,704.79	1,636.18	0.01
11,400.0	90.26	179.81	9,703.7	5,986.7	-1,639.3	606.0	802,489.29	584,654.79	1,686.00	0.01
11,450.0	90.26	179.81	9,703.4	5,986.4	-1,689.3	606.2	802,489.45	584,604.79	1,735.82	0.01
11,500.0	90.26	179.80	9,703.2	5,986.2	-1,739.3	606.4	802,489.63	584,554.79	1,785.65	0.01
11,550.0	90.26	179.79	9,703.0	5,986.0	-1,789.3	606.5	802,489.80	584,504.79	1,835.47	0.01
11,600.0	90.26	179.79	9,702.8	5,985.8	-1,839.3	606.7	802,489.99	584,454.79	1,885.29	0.01
11,650.0	90.26	179.78	9,702.5	5,985.5	-1,889.3	606.9	802,490.17	584,404.80	1,935.12	0.01
11,700.0	90.26	179.77	9,702.3	5,985.3	-1,939.3	607.1	802,490.37	584,354.80	1,984.94	0.01
11,750.0	90.26	179.77	9,702.1	5,985.1	-1,989.3	607.3	802,490.57	584,304.80	2,034.77	0.01
11,800.0	90.26	179.76	9,701.9	5,984.9	-2,039.3	607.5	802,490.78	584,254.80	2,084.59	0.01

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
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Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
11,850.0	90.26	179.75	9,701.6	5,984.6	-2,089.3	607.7	802,490.99	584,204.80	2,134.42	0.01
11,900.0	90.26	179.75	9,701.4	5,984.4	-2,139.3	608.0	802,491.21	584,154.80	2,184.25	0.01
11,950.0	90.26	179.74	9,701.2	5,984.2	-2,189.3	608.2	802,491.43	584,104.80	2,234.08	0.01
12,000.0	90.26	179.73	9,700.9	5,983.9	-2,239.3	608.4	802,491.66	584,054.80	2,283.90	0.01
12,050.0	90.26	179.73	9,700.7	5,983.7	-2,289.3	608.6	802,491.90	584,004.80	2,333.73	0.01
12,100.0	90.26	179.72	9,700.5	5,983.5	-2,339.3	608.9	802,492.14	583,954.80	2,383.56	0.01
12,150.0	90.26	179.71	9,700.3	5,983.3	-2,389.3	609.1	802,492.39	583,904.81	2,433.39	0.01
12,200.0	90.26	179.71	9,700.0	5,983.0	-2,439.3	609.4	802,492.64	583,854.81	2,483.22	0.01
12,250.0	90.26	179.70	9,699.8	5,982.8	-2,489.3	609.7	802,492.90	583,804.81	2,533.05	0.01
12,300.0	90.26	179.69	9,699.6	5,982.6	-2,539.3	609.9	802,493.17	583,754.81	2,582.88	0.01
12,350.0	90.26	179.68	9,699.4	5,982.4	-2,589.3	610.2	802,493.44	583,704.81	2,632.71	0.01
12,400.0	90.26	179.68	9,699.1	5,982.1	-2,639.3	610.5	802,493.72	583,654.81	2,682.54	0.01
12,450.0	90.26	179.67	9,698.9	5,981.9	-2,689.3	610.8	802,494.00	583,604.81	2,732.38	0.01
12,500.0	90.26	179.66	9,698.7	5,981.7	-2,739.3	611.0	802,494.29	583,554.81	2,782.21	0.01
12,550.0	90.26	179.66	9,698.5	5,981.5	-2,789.3	611.3	802,494.59	583,504.82	2,832.04	0.01
12,600.0	90.26	179.65	9,698.2	5,981.2	-2,839.3	611.6	802,494.89	583,454.82	2,881.88	0.01
12,650.0	90.26	179.64	9,698.0	5,981.0	-2,889.3	611.9	802,495.20	583,404.82	2,931.71	0.01
12,700.0	90.26	179.64	9,697.8	5,980.8	-2,939.3	612.3	802,495.51	583,354.82	2,981.55	0.01
12,750.0	90.26	179.63	9,697.5	5,980.5	-2,989.3	612.6	802,495.83	583,304.82	3,031.38	0.01
12,800.0	90.26	179.62	9,697.3	5,980.3	-3,039.3	612.9	802,496.16	583,254.82	3,081.22	0.01
12,850.0	90.26	179.62	9,697.1	5,980.1	-3,089.3	613.2	802,496.49	583,204.82	3,131.05	0.01
12,900.0	90.26	179.61	9,696.9	5,979.9	-3,139.3	613.6	802,496.83	583,154.83	3,180.89	0.01
12,950.0	90.26	179.60	9,696.6	5,979.6	-3,189.3	613.9	802,497.17	583,104.83	3,230.73	0.01
13,000.0	90.26	179.60	9,696.4	5,979.4	-3,239.3	614.3	802,497.52	583,054.83	3,280.57	0.01
13,050.0	90.26	179.59	9,696.2	5,979.2	-3,289.3	614.6	802,497.87	583,004.83	3,330.40	0.01
13,100.0	90.26	179.58	9,696.0	5,979.0	-3,339.3	615.0	802,498.24	582,954.83	3,380.24	0.01
13,150.0	90.26	179.58	9,695.7	5,978.7	-3,389.3	615.3	802,498.60	582,904.83	3,430.08	0.01

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
13,200.0	90.26	179.57	9,695.5	5,978.5	-3,439.3	615.7	802,498.98	582,854.84	3,479.92	0.01
13,250.0	90.26	179.56	9,695.3	5,978.3	-3,489.3	616.1	802,499.35	582,804.84	3,529.76	0.01
13,300.0	90.26	179.56	9,695.0	5,978.0	-3,539.3	616.5	802,499.74	582,754.84	3,579.60	0.01
13,350.0	90.26	179.55	9,694.8	5,977.8	-3,589.3	616.9	802,500.13	582,704.84	3,629.44	0.01
13,400.0	90.26	179.54	9,694.6	5,977.6	-3,639.3	617.3	802,500.53	582,654.84	3,679.28	0.01
13,450.0	90.26	179.54	9,694.4	5,977.4	-3,689.3	617.7	802,500.93	582,604.85	3,729.13	0.01
13,500.0	90.26	179.53	9,694.1	5,977.1	-3,739.3	618.1	802,501.34	582,554.85	3,778.97	0.01
13,550.0	90.26	179.52	9,693.9	5,976.9	-3,789.3	618.5	802,501.75	582,504.85	3,828.81	0.01
13,600.0	90.26	179.51	9,693.7	5,976.7	-3,839.3	618.9	802,502.17	582,454.85	3,878.66	0.01
13,650.0	90.26	179.51	9,693.5	5,976.5	-3,889.3	619.3	802,502.60	582,404.86	3,928.50	0.01
13,700.0	90.26	179.50	9,693.2	5,976.2	-3,939.3	619.8	802,503.03	582,354.86	3,978.34	0.01
13,750.0	90.26	179.49	9,693.0	5,976.0	-3,989.3	620.2	802,503.47	582,304.86	4,028.19	0.01
13,800.0	90.26	179.49	9,692.8	5,975.8	-4,039.3	620.7	802,503.92	582,254.86	4,078.03	0.01
13,850.0	90.26	179.48	9,692.6	5,975.6	-4,089.3	621.1	802,504.37	582,204.87	4,127.88	0.01
13,900.0	90.26	179.47	9,692.3	5,975.3	-4,139.3	621.6	802,504.82	582,154.87	4,177.73	0.01
13,950.0	90.26	179.47	9,692.1	5,975.1	-4,189.3	622.0	802,505.28	582,104.87	4,227.57	0.01
14,000.0	90.26	179.46	9,691.9	5,974.9	-4,239.2	622.5	802,505.75	582,054.87	4,277.42	0.01
14,050.0	90.26	179.45	9,691.6	5,974.6	-4,289.2	623.0	802,506.23	582,004.88	4,327.27	0.01
14,100.0	90.26	179.45	9,691.4	5,974.4	-4,339.2	623.5	802,506.71	581,954.88	4,377.11	0.01
14,150.0	90.26	179.44	9,691.2	5,974.2	-4,389.2	623.9	802,507.19	581,904.88	4,426.96	0.01
14,200.0	90.26	179.43	9,691.0	5,974.0	-4,439.2	624.4	802,507.68	581,854.89	4,476.81	0.01
14,250.0	90.26	179.43	9,690.7	5,973.7	-4,489.2	624.9	802,508.18	581,804.89	4,526.66	0.01
14,300.0	90.26	179.42	9,690.5	5,973.5	-4,539.2	625.4	802,508.69	581,754.89	4,576.51	0.01
14,350.0	90.26	179.41	9,690.3	5,973.3	-4,589.2	625.9	802,509.20	581,704.89	4,626.36	0.01
14,400.0	90.26	179.41	9,690.1	5,973.1	-4,639.2	626.5	802,509.71	581,654.90	4,676.21	0.01
14,450.0	90.26	179.40	9,689.8	5,972.8	-4,689.2	627.0	802,510.23	581,604.90	4,726.06	0.01
14,500.0	90.26	179.39	9,689.6	5,972.6	-4,739.2	627.5	802,510.76	581,554.90	4,775.92	0.01

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
14,550.0	90.26	179.39	9,689.4	5,972.4	-4,789.2	628.0	802,511.29	581,504.91	4,825.77	0.01
14,600.0	90.26	179.38	9,689.1	5,972.1	-4,839.2	628.6	802,511.83	581,454.91	4,875.62	0.01
14,650.0	90.26	179.37	9,688.9	5,971.9	-4,889.2	629.1	802,512.38	581,404.91	4,925.47	0.01
14,700.0	90.26	179.36	9,688.7	5,971.7	-4,939.2	629.7	802,512.93	581,354.92	4,975.33	0.01
14,750.0	90.26	179.36	9,688.5	5,971.5	-4,989.2	630.2	802,513.49	581,304.92	5,025.18	0.01
14,800.0	90.26	179.35	9,688.2	5,971.2	-5,039.2	630.8	802,514.05	581,254.93	5,075.04	0.01
14,850.0	90.26	179.34	9,688.0	5,971.0	-5,089.2	631.4	802,514.62	581,204.93	5,124.89	0.01
14,900.0	90.26	179.34	9,687.8	5,970.8	-5,139.2	631.9	802,515.19	581,154.93	5,174.75	0.01
14,950.0	90.26	179.33	9,687.6	5,970.6	-5,189.2	632.5	802,515.78	581,104.94	5,224.60	0.01
15,000.0	90.26	179.32	9,687.3	5,970.3	-5,239.2	633.1	802,516.36	581,054.94	5,274.46	0.01
15,050.0	90.26	179.32	9,687.1	5,970.1	-5,289.2	633.7	802,516.96	581,004.94	5,324.31	0.01
15,100.0	90.26	179.31	9,686.9	5,969.9	-5,339.2	634.3	802,517.55	580,954.95	5,374.17	0.01
15,150.0	90.26	179.30	9,686.7	5,969.7	-5,389.2	634.9	802,518.16	580,904.95	5,424.03	0.01
15,200.0	90.26	179.30	9,686.4	5,969.4	-5,439.2	635.5	802,518.77	580,854.96	5,473.89	0.01
15,250.0	90.26	179.29	9,686.2	5,969.2	-5,489.2	636.1	802,519.39	580,804.96	5,523.75	0.01
15,300.0	90.26	179.28	9,686.0	5,969.0	-5,539.2	636.8	802,520.01	580,754.97	5,573.60	0.01
15,350.0	90.26	179.28	9,685.7	5,968.7	-5,589.2	637.4	802,520.64	580,704.97	5,623.46	0.01
15,400.0	90.26	179.27	9,685.5	5,968.5	-5,639.1	638.0	802,521.27	580,654.98	5,673.32	0.01
15,450.0	90.26	179.26	9,685.3	5,968.3	-5,689.1	638.7	802,521.91	580,604.98	5,723.18	0.01
15,500.0	90.26	179.26	9,685.1	5,968.1	-5,739.1	639.3	802,522.56	580,554.98	5,773.04	0.01
15,550.0	90.26	179.25	9,684.8	5,967.8	-5,789.1	640.0	802,523.21	580,504.99	5,822.91	0.01
15,600.0	90.26	179.24	9,684.6	5,967.6	-5,839.1	640.6	802,523.87	580,454.99	5,872.77	0.01
15,650.0	90.26	179.24	9,684.4	5,967.4	-5,889.1	641.3	802,524.53	580,405.00	5,922.63	0.01
15,700.0	90.26	179.23	9,684.2	5,967.2	-5,939.1	641.9	802,525.20	580,355.00	5,972.49	0.01
15,750.0	90.26	179.22	9,683.9	5,966.9	-5,989.1	642.6	802,525.88	580,305.01	6,022.35	0.01
15,800.0	90.26	179.22	9,683.7	5,966.7	-6,039.1	643.3	802,526.56	580,255.01	6,072.22	0.01
15,850.0	90.26	179.21	9,683.5	5,966.5	-6,089.1	644.0	802,527.25	580,205.02	6,122.08	0.01

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
15,900.0	90.26	179.20	9,683.2	5,966.2	-6,139.1	644.7	802,527.94	580,155.02	6,171.95	0.01
15,950.0	90.26	179.19	9,683.0	5,966.0	-6,189.1	645.4	802,528.64	580,105.03	6,221.81	0.01
16,000.0	90.26	179.19	9,682.8	5,965.8	-6,239.1	646.1	802,529.35	580,055.04	6,271.68	0.01
16,050.0	90.26	179.18	9,682.6	5,965.6	-6,289.1	646.8	802,530.06	580,005.04	6,321.54	0.01
16,100.0	90.26	179.17	9,682.3	5,965.3	-6,339.1	647.5	802,530.78	579,955.05	6,371.41	0.01
16,150.0	90.26	179.17	9,682.1	5,965.1	-6,389.1	648.2	802,531.50	579,905.05	6,421.27	0.01
16,200.0	90.26	179.16	9,681.9	5,964.9	-6,439.1	649.0	802,532.23	579,855.06	6,471.14	0.01
16,250.0	90.26	179.15	9,681.7	5,964.7	-6,489.1	649.7	802,532.97	579,805.06	6,521.01	0.01
16,300.0	90.26	179.15	9,681.4	5,964.4	-6,539.1	650.5	802,533.71	579,755.07	6,570.88	0.01
16,350.0	90.26	179.14	9,681.2	5,964.2	-6,589.0	651.2	802,534.46	579,705.08	6,620.74	0.01
16,400.0	90.26	179.13	9,681.0	5,964.0	-6,639.0	652.0	802,535.21	579,655.08	6,670.61	0.01
16,450.0	90.26	179.13	9,680.8	5,963.8	-6,689.0	652.7	802,535.97	579,605.09	6,720.48	0.01
16,500.0	90.26	179.12	9,680.5	5,963.5	-6,739.0	653.5	802,536.73	579,555.10	6,770.35	0.01
16,550.0	90.26	179.11	9,680.3	5,963.3	-6,789.0	654.3	802,537.50	579,505.10	6,820.22	0.01
16,600.0	90.26	179.11	9,680.1	5,963.1	-6,839.0	655.0	802,538.28	579,455.11	6,870.09	0.01
16,650.0	90.26	179.10	9,679.8	5,962.8	-6,889.0	655.8	802,539.06	579,405.12	6,919.96	0.01
16,700.0	90.26	179.09	9,679.6	5,962.6	-6,939.0	656.6	802,539.85	579,355.12	6,969.83	0.01
16,717.0	90.26	179.09	9,679.5	5,962.5	-6,956.0	656.9	802,540.12	579,338.12	6,986.79	0.01
TD at 16717.0 - 5 1/2" Production Casing										
16,750.0	90.26	179.09	9,679.4	5,962.4	-6,989.0	657.4	802,540.65	579,305.13	7,019.70	0.01
16,800.0	90.26	179.08	9,679.2	5,962.2	-7,039.0	658.2	802,541.45	579,255.14	7,069.58	0.01
16,850.0	90.26	179.07	9,678.9	5,961.9	-7,089.0	659.0	802,542.26	579,205.14	7,119.45	0.01
16,900.0	90.26	179.07	9,678.7	5,961.7	-7,139.0	659.8	802,543.07	579,155.15	7,169.32	0.01
16,950.0	90.26	179.06	9,678.5	5,961.5	-7,189.0	660.6	802,543.89	579,105.16	7,219.19	0.01
17,000.0	90.26	179.05	9,678.3	5,961.3	-7,239.0	661.5	802,544.71	579,055.16	7,269.07	0.01
17,050.0	90.26	179.04	9,678.0	5,961.0	-7,289.0	662.3	802,545.54	579,005.17	7,318.94	0.01
17,100.0	90.26	179.04	9,677.8	5,960.8	-7,338.9	663.1	802,546.38	578,955.18	7,368.82	0.01

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	**TVD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	**MD Reference:**	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	**Survey Calculation Method:**	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	**Database:**	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Easting (usft)	Northing (usft)	V. Sec (usft)	DLeg (°/100usft)
17,150.0	90.26	179.03	9,677.6	5,960.6	-7,388.9	664.0	802,547.22	578,905.19	7,418.69	0.01
17,200.0	90.26	179.02	9,677.3	5,960.3	-7,438.9	664.8	802,548.07	578,855.19	7,468.57	0.01
17,250.0	90.26	179.02	9,677.1	5,960.1	-7,488.9	665.7	802,548.92	578,805.20	7,518.44	0.01
17,300.0	90.26	179.01	9,676.9	5,959.9	-7,538.9	666.5	802,549.78	578,755.21	7,568.32	0.01
17,350.0	90.26	179.00	9,676.7	5,959.7	-7,588.9	667.4	802,550.65	578,705.22	7,618.20	0.01
17,379.0	90.26	179.00	9,676.5	5,959.5	-7,617.9	667.9	802,551.16	578,676.22	7,647.12	0.01

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
16,717.0	9,679.5	5 1/2" Production Casing	5-1/2	8-3/4
5,535.3	5,521.0	9 5/8" Intermediate Casing	9-5/8	12-1/4
120.0	120.0	20" Conductor	20	26
1,896.0	1,896.0	13 3/8" Surface Casing	13-3/8	17-1/2

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,560.4	5,546.0	Delaware		0.00	
9,656.1	9,576.0	1st Bone Spring Sand		0.00	
3,418.7	3,416.0	Base of Salt		0.00	
1,871.0	1,871.0	Rustler		0.00	
4,197.9	4,191.0	Capitan		0.00	
2,071.0	2,071.0	Top of Salt		0.00	
6,379.9	6,361.0	Brushy Canyon		0.00	
5,761.5	5,746.0	Cherry Canyon		0.00	
3,705.2	3,701.0	Yates		0.00	
8,168.7	8,140.0	Bone Spring		0.00	

Company:	Caza Operating LLC	Local Co-ordinate Reference:	Well Eagleclaw 5-8 Fed Com 5H
Project:	Eagleclaw 5-8 Fed Com 5H	TVD Reference:	WELL @ 3717.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 5H	MD Reference:	WELL @ 3717.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 5H	North Reference:	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 5H	Survey Calculation Method:	Minimum Curvature
Design:	181106 Eagleclaw 5-8 Fed Com 5H	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
2,800.0	2,800.0	0.0	0.0	Start Build 3.00
3,000.0	2,999.6	3.8	9.7	Start 6000.0 hold at 3000.0 MD
9,000.0	8,966.8	231.6	594.1	Start Drop -3.00
9,200.0	9,166.4	235.4	603.8	Start 35.0 hold at 9200.0 MD
9,235.0	9,201.4	235.4	603.8	Start Build 11.27
10,036.0	9,709.9	-275.3	603.8	Start Turn -0.01
16,717.0	9,679.5	-6,955.9	662.1	TD at 16717.0

Checked By: _____ Approved By: _____ Date: _____