Form 3160-3
(June 2015)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HOBBS OCD
JAN 31 2020
RECEIVED

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
4H 327081

2. Name of Operator
CAZA OPERATING LLC (249099)

9. API Well No.
30-025-46826

3a. Address
200 N. Loraine Street, Suite 1550 Midland TX 79701

3b. Phone No. *(include area code)*
(432)682-7424

10. Field and Pool, or Exploratory (97983)
LEA BONE SPRING SOUTH / WC-025 G

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface NENW / 210 FNL / 2173 FWL / LAT 32.6090156 / LONG -103.4810192
At proposed prod. zone SENW / 2310 FNL / 2105 FWL / LAT 32.588611 / LONG -103.481208

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*
13 miles

12. County or Parish
LEA

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
190 feet

16. No of acres in lease
322.32

17. Spacing Unit dedicated to this well
240

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
50 feet

19. Proposed Depth
10536 feet / 18126 feet

20. BLM/BIA Bond No. in file
FED: NMB000471

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3695 feet

22. Approximate date work will start*
03/15/2019

23. Estimated duration
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	11/05/2018
Title: VP Operations		
Approved by *(Signature)* (Electronic Submission)	Name *(Printed/Typed)* Cody Layton / Ph: (575)234-5959	Date 01/29/2020
Title: Assistant Field Manager Lands & Minerals	Office: 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.

ECP Rec 01/31/2020

APPROVED WITH CONDITIONS

Approval Date: 01/29/2020

Kz 02/01/2020

SL

(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: NENW / 210 FNL / 2173 FWL / TWSP: 20S / RANGE: 35E / SECTION: 5 / LAT: 32.6090156 / LONG: -103.4810192 (TVD: 0 feet, MD: 0 feet)
   PPP: NENW / 332 FNL / 2117 FWL / TWSP: 20S / RANGE: 35E / SECTION: 5 / LAT: 32.609461 / LONG: -103.4811961 (TVD: 10177 feet, MD: 10193 feet)
   PPP: NENW / 0 FNL / 2120 FWL / TWSP: 20S / RANGE: 35E / SECTION: 8 / LAT: 32.602336 / LONG: -103.481246 (TVD: 10492 feet, MD: 12903 feet)
   BHL: SENW / 2310 FNL / 2105 FWL / TWSP: 20S / RANGE: 35E / SECTION: 8 / LAT: 32.588611 / LONG: -103.481208 (TVD: 10536 feet, MD: 18126 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**
LEASE NO.:	**NMNM-132945**
WELL NAME & NO.:	**Eagle Claw 5-8 Fed Com 4H**
SURFACE HOLE FOOTAGE:	**0190' FNL & 2123' FWL**
BOTTOM HOLE FOOTAGE	**2310' FNL & 2105' FWL Sec. 08, T.20 S., R.35 E.**
LOCATION:	**Section 05, 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	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☑ COM	☐ Unit

A. HYDROGEN SULFIDE

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

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1953** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

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

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing, which shall be set at approximately **5700'**, is:

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

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

    - Cement to surface as proposed. Operator shall provide method of verification.

C. PRESSURE CONTROL

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

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

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

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

- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

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)

☒ 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.

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 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.

3. 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.

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

5. 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.

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

B. PRESSURE CONTROL

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

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. 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).

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

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

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

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

C. WASTE MATERIAL AND FLUIDS

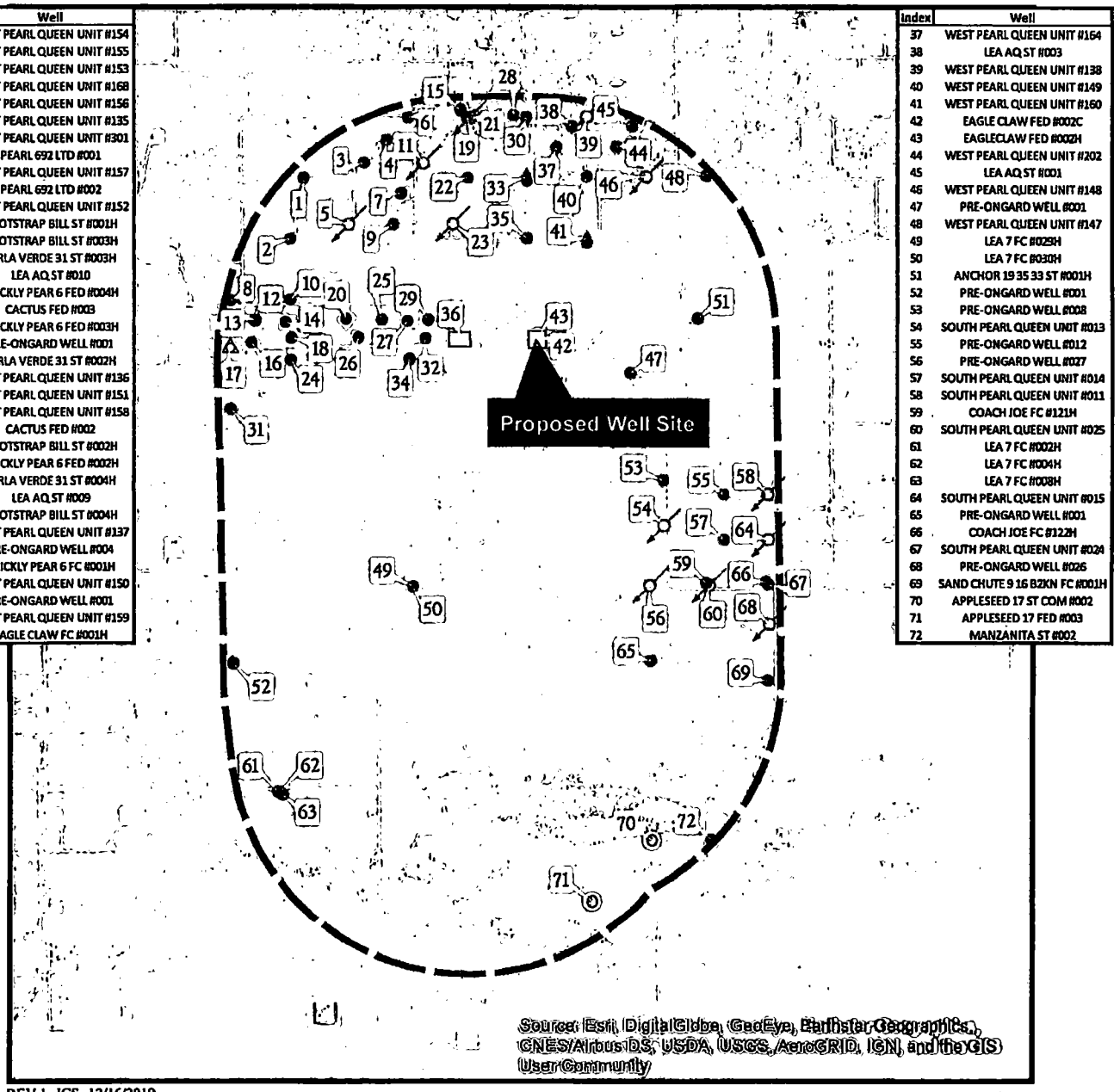
All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location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

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

JAM 112219

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.



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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
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36	EAGLE CLAW FC #001H

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42	EAGLE CLAW FED #002C
43	EAGLECLAW FED #002H
44	WEST PEARL QUEEN UNIT #202
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46	WEST PEARL QUEEN UNIT #148
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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:
RSQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4046_001

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.

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58	SOUTH PEARL QUEEN UNIT #011
59	COACH JOE FC #121H
60	SOUTH PEARL QUEEN UNIT #025
61	LEA 7 FC #002H
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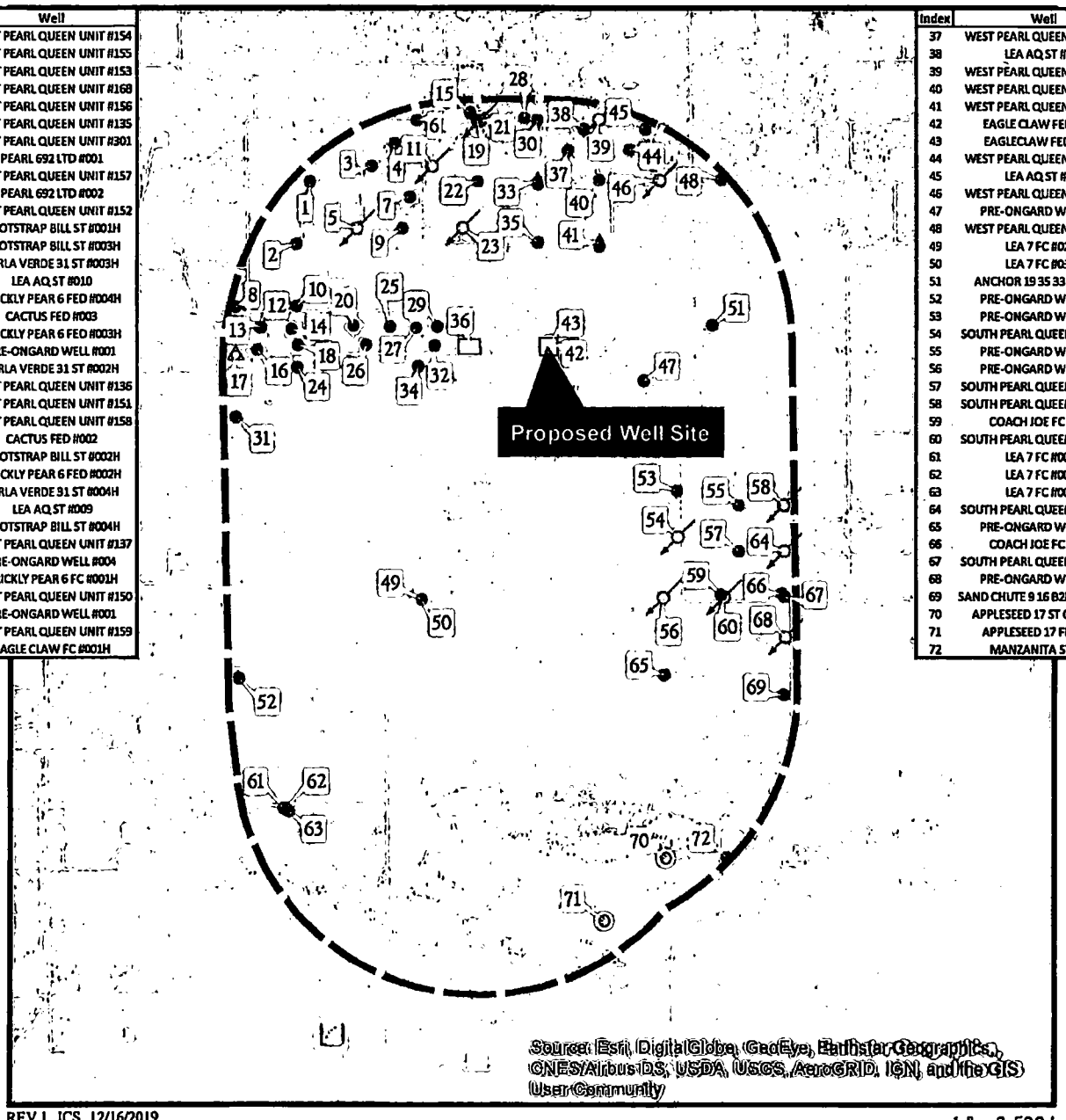

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CO2 Cancelled

CO2, Plugged

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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

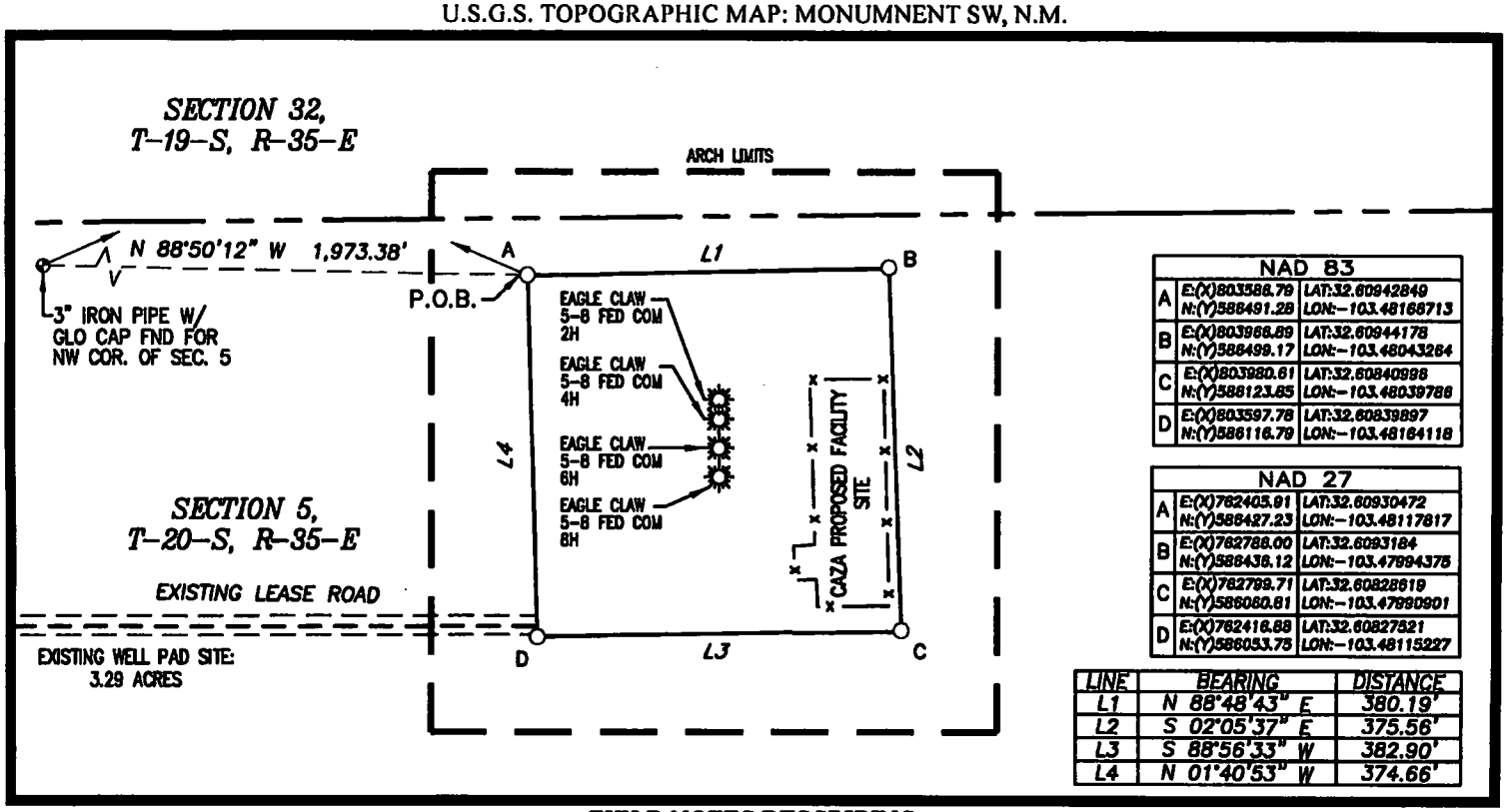
SHEET 1 OF 5

PREPARED BY:
RSQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4046_001

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.

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



NAD 83		
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B	E:(X)803968.89 N:(Y)588499.17	LAT:32.60944178 LON:-103.48043264
C	E:(X)803980.61 N:(Y)588123.65	LAT:32.60840998 LON:-103.48039788
D	E:(X)803597.78 N:(Y)588116.79	LAT:32.60839897 LON:-103.48164118

NAD 27		
A	E:(X)762405.91 N:(Y)588427.23	LAT:32.60930472 LON:-103.48117817
B	E:(X)762788.00 N:(Y)588436.12	LAT:32.6093184 LON:-103.47994375
C	E:(X)762799.71 N:(Y)588060.61	LAT:32.60828619 LON:-103.47990901
D	E:(X)762416.88 N:(Y)588053.75	LAT:32.60827521 LON:-103.48115227

LINE	BEARING	DISTANCE
L1	N 88°48'43" E	380.19'
L2	S 02°05'37" E	375.56'
L3	S 88°56'33" W	382.90'
L4	N 01°40'53" W	374.66'

FIELD NOTES DESCRIBING

A tract of land being 3.29 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 88°50'12" W a distance of 1,973.38 feet.

THENCE
N 88°48'43" E a distance of 380.19 feet to the Northeast corner of this tract,
S 02°05'37" E a distance of 375.56 feet to the Southeast corner of this tract,
S 88°56'33" W a distance of 382.90 feet to the Southwest corner of this tract and
N 01°40'53" W a distance of 374.66 feet to the *POINT OF BEGINNING.*

The total area of the herein described tract contains 3.29 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

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_001

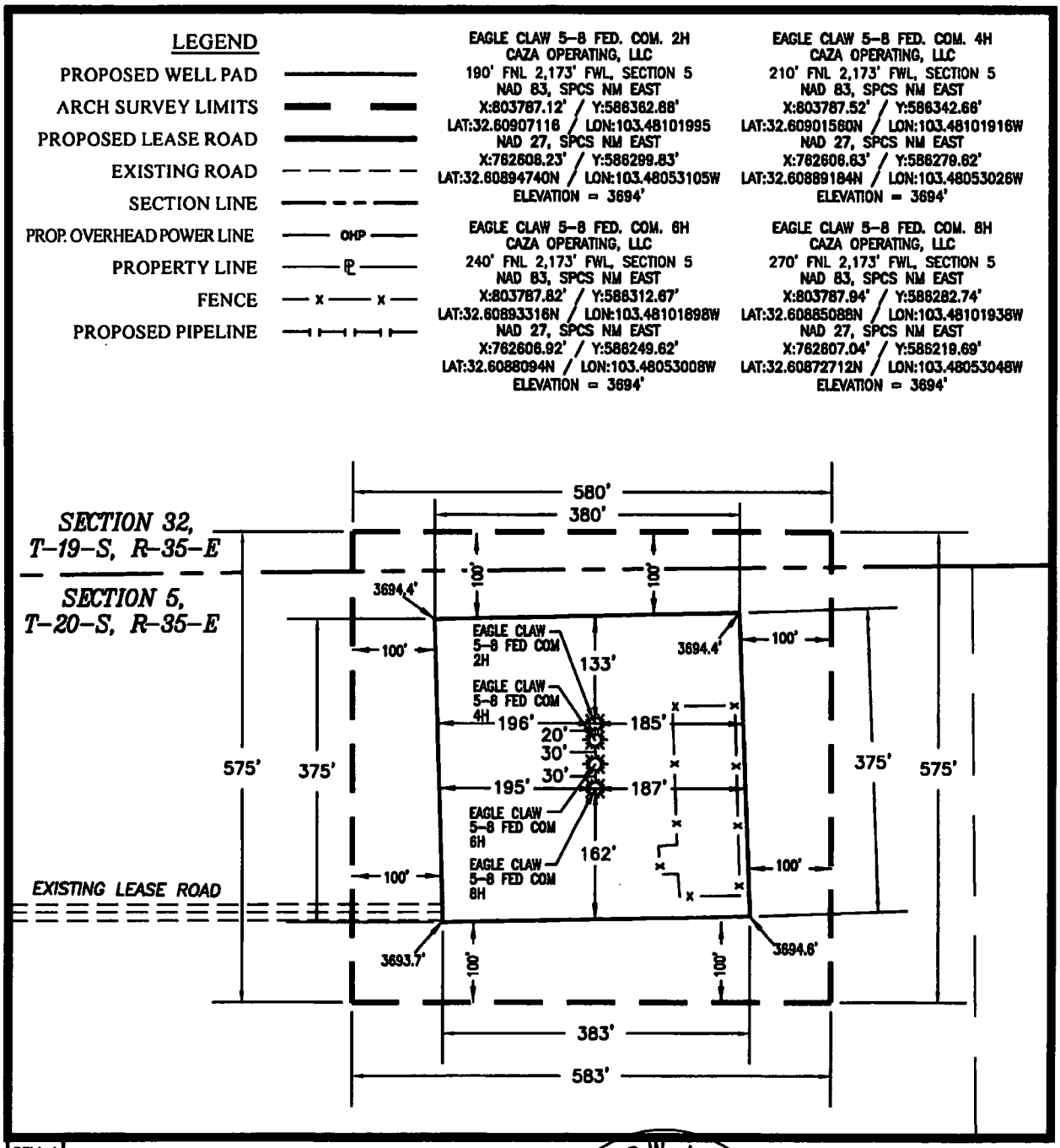
REV.	DATE	DESCRIPTION	BY	CHKD
1		ADDED EXISTING WELL PAD		

SHEET 2 OF 5
DRAWN BY: MB
DATE: 12/01/2019
CHECKED BY: MWS

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

WELL LOCATION PLAT

EAGLE CLAW 5-8 FEDERAL
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: MONUMENT SW, N.M.



REV. 1

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'

DECEMBER 17, 2019

DAVID W. MYERS 11403

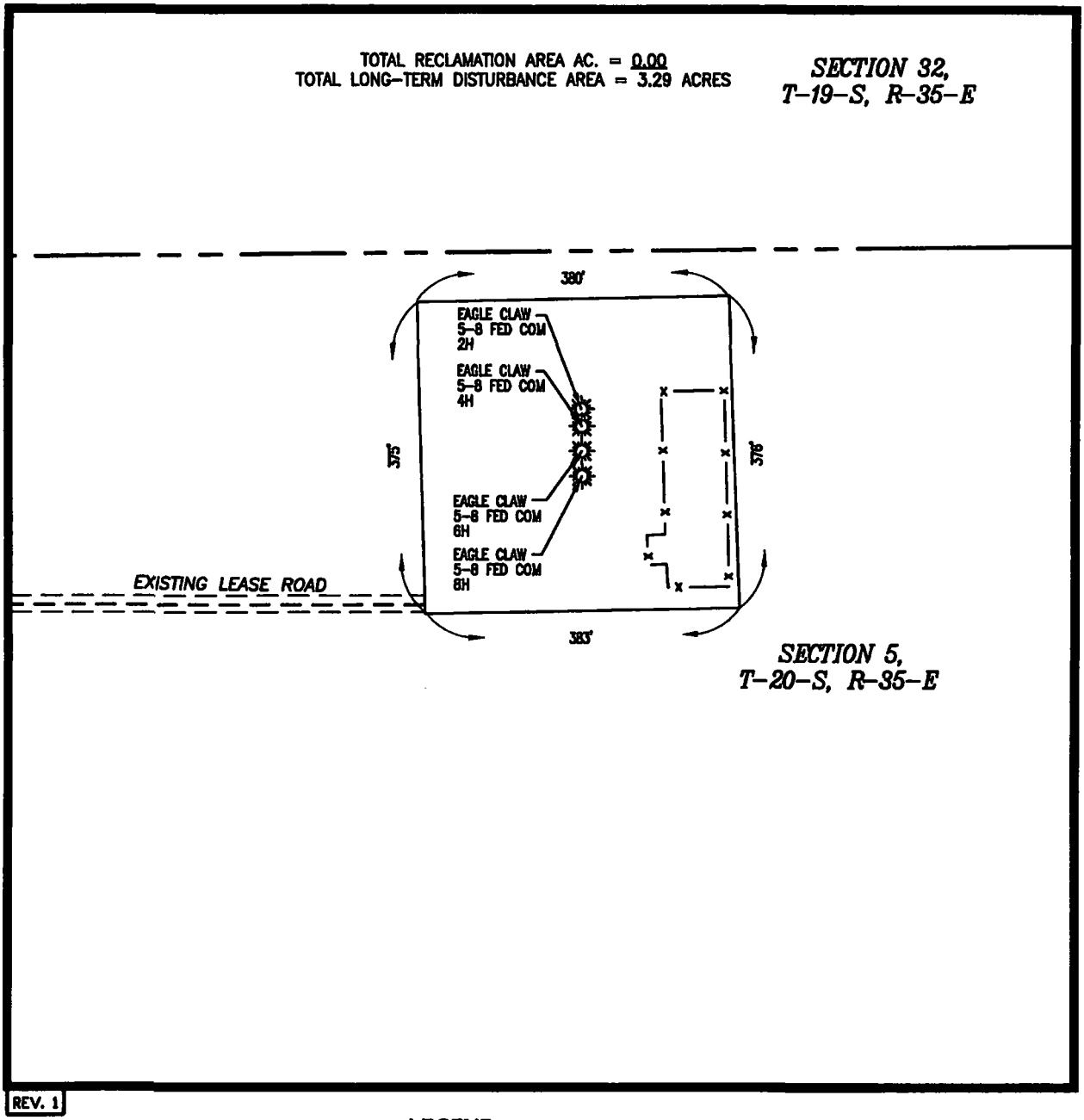
DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

SHEET 3 OF 5

PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4046_001

INTERIM RECLAMATION (IR) PLAT

EAGLE CLAW 5-8 FEDERAL
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: MONUMENT SW, N.M.



LEGEND

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

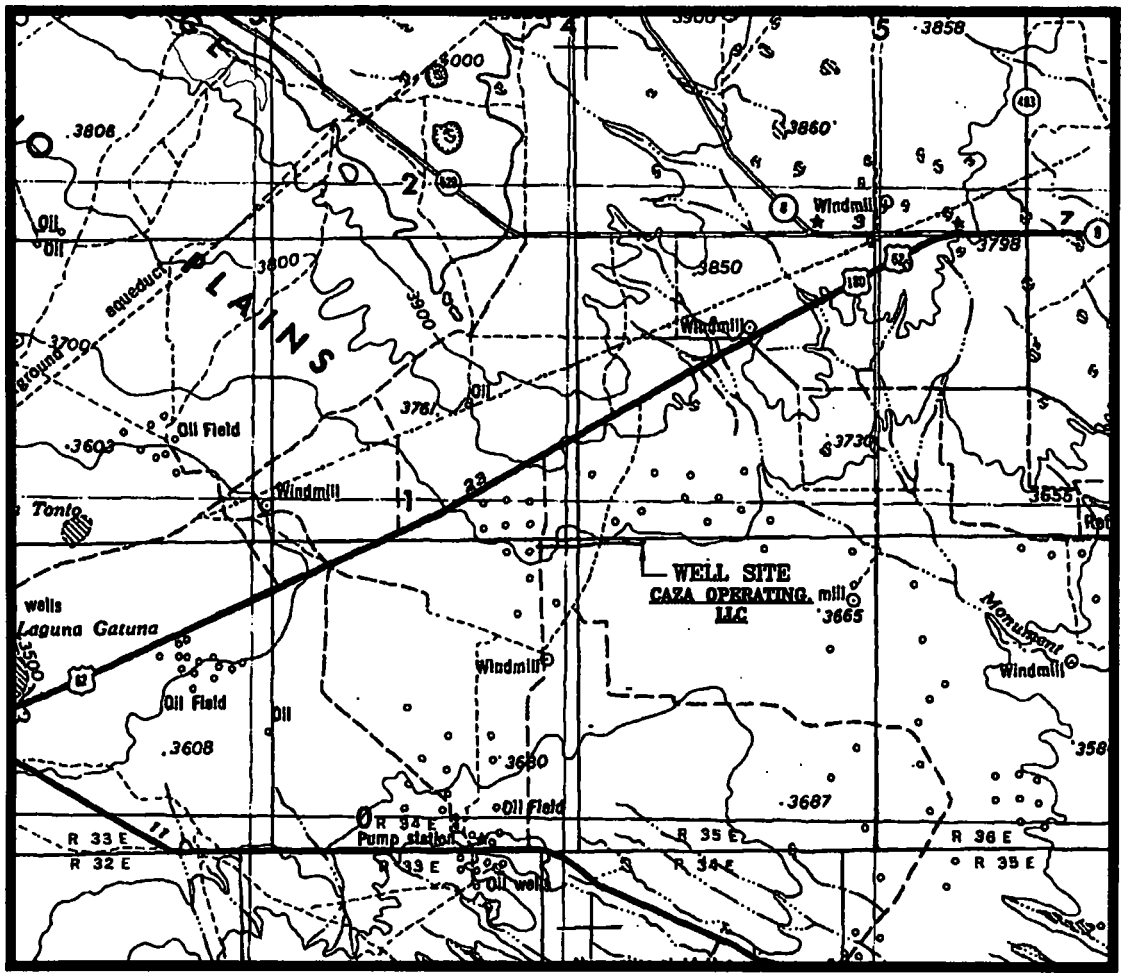
100' 0' 100' 200'
SCALE: 1" = 200'

SHEET 4 OF 5

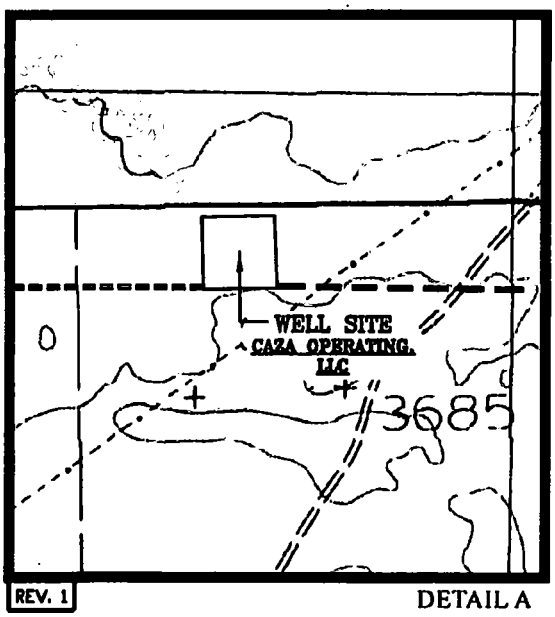
PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4046_001

VICINITY AND EXISTING ROADS MAP

EAGLE CLAW 5-8 FEDERAL
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: MONUMENT SW, N.M.



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



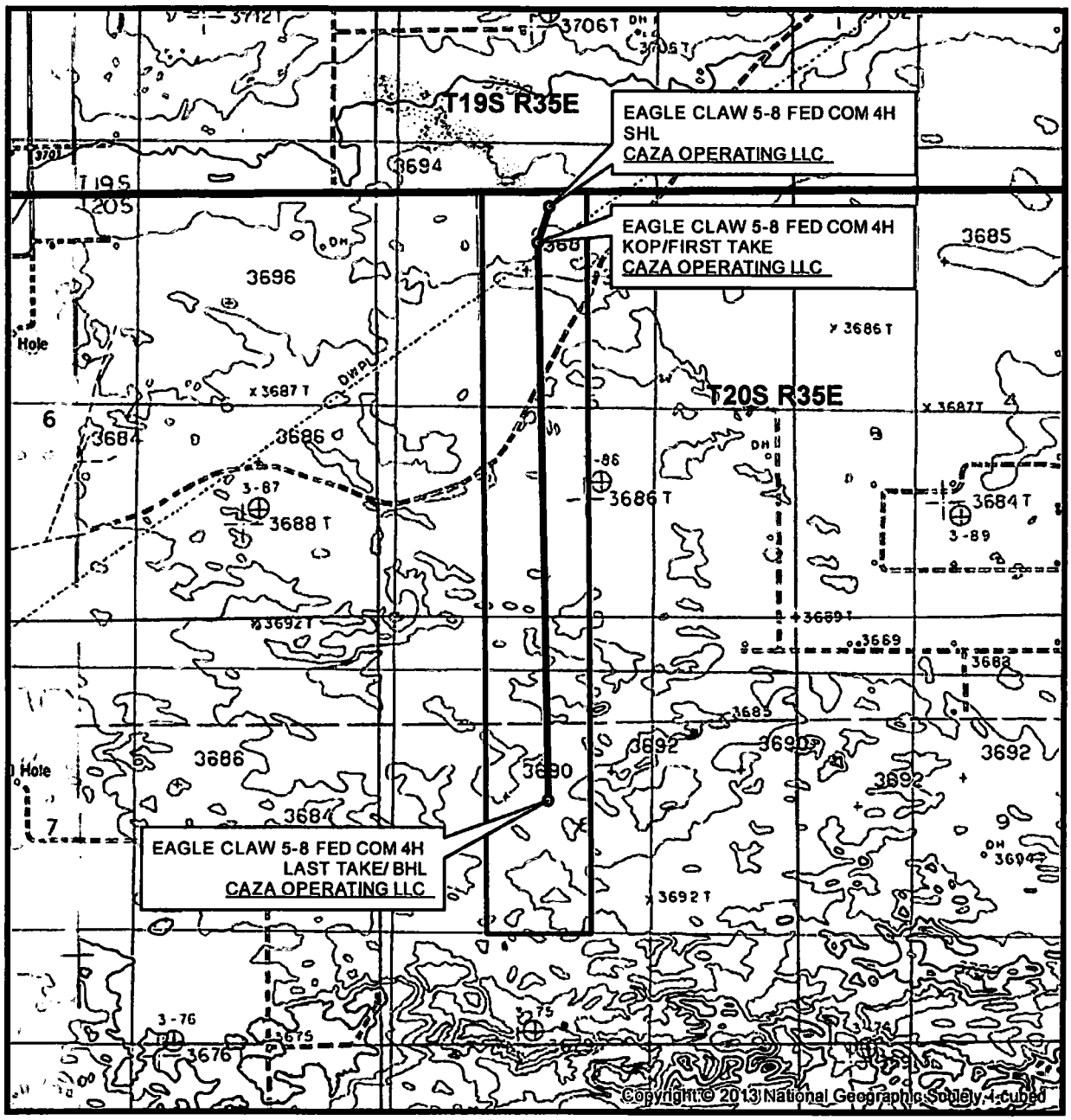
REV. 1

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 CHALICE ROAD AND CONTINUE SOUTH FOR APPROXIMATELY 1 MILE. TURN LEFT ONTO A CHALICE ROAD AND CONTINUE EAST FOR 0.4 MILES, ENTERING THE SOUTHWEST CORNER OF THE EAGLE CLAW 5-8 FED. COM. 2H,4H,6H, AND 8H WELL PAD.

PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4048.001

LOCATION VERIFICATION MAP



SEC. 5 TWP. 20-S RGE. 35-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: CAZA OPERATING LLC
DESCRIPTION: 210' FNL & 2173' FWL
ELEVATION: 3694'
LEASE: EAGLE CLAW 5-8 FED COM
U.S.G.S. TOPOGRAPHIC MAP: MONUMENT SW, NM.

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

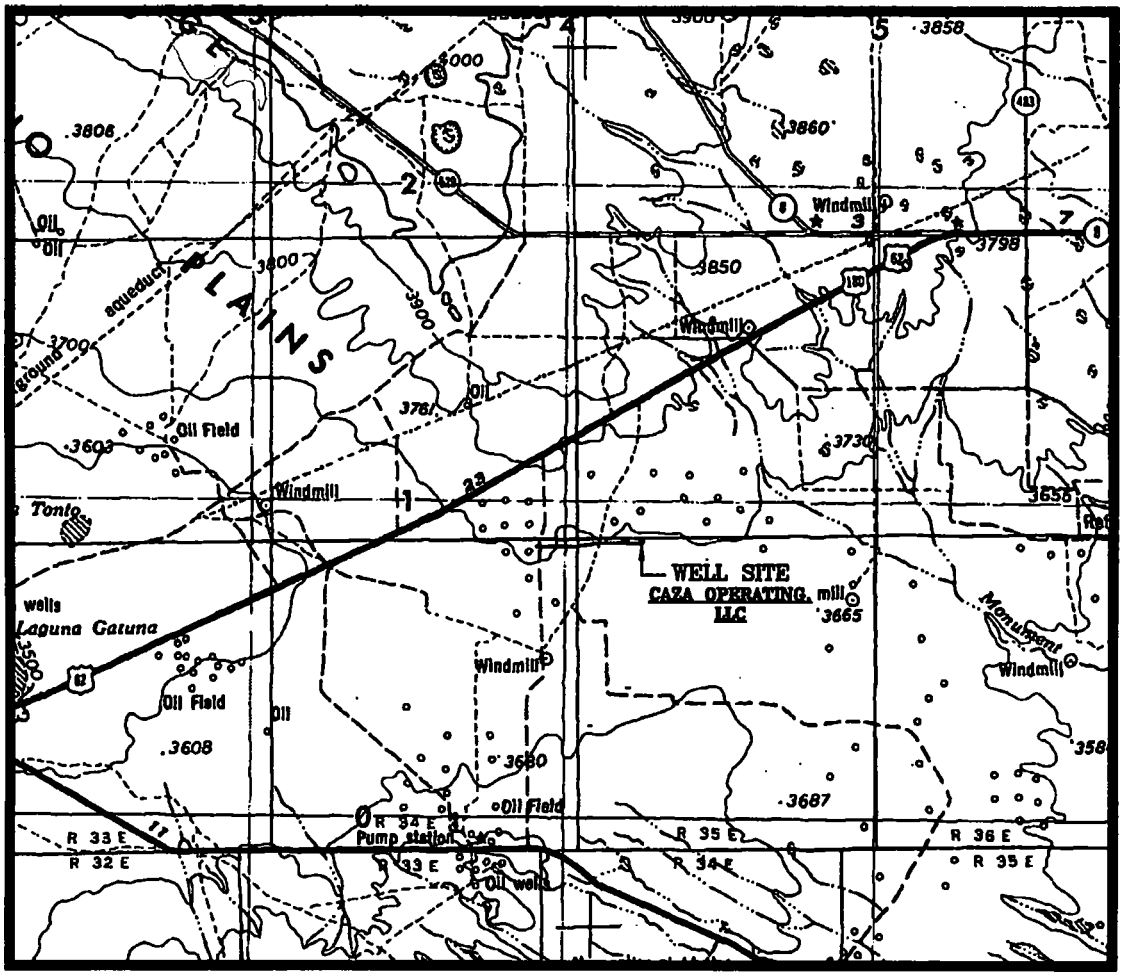
R-SQUARED GLOBAL LLC

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

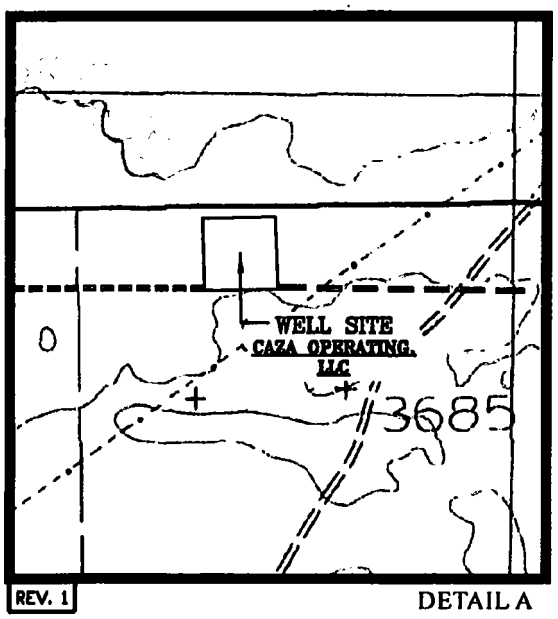
JOB No. R4048_001_B

VICINITY AND EXISTING ROADS MAP

EAGLE CLAW 5-8 FEDERAL
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: MONUMENT SW, N.M.



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



REV. 1

DETAIL A
N.T.S.

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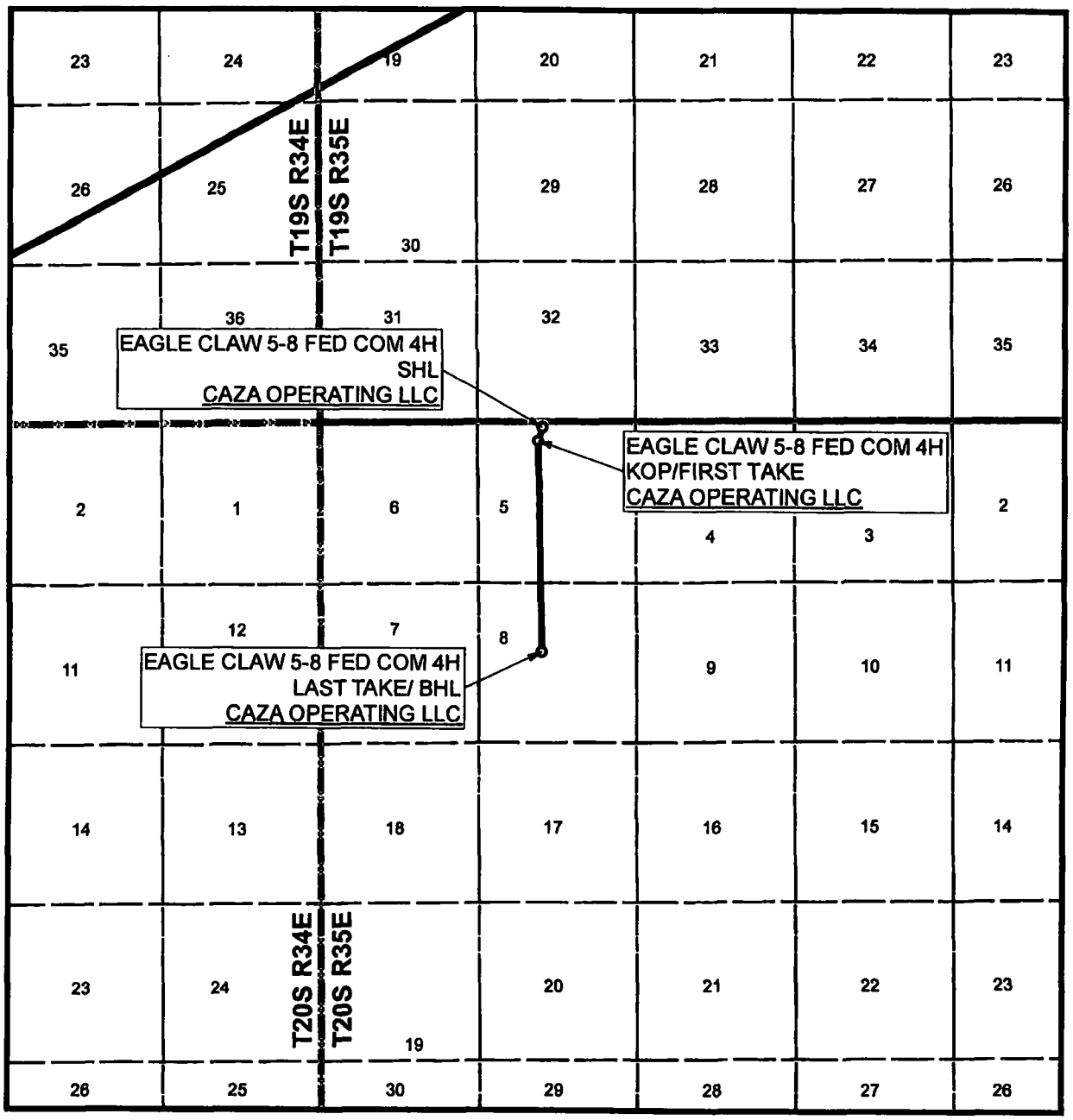
FROM THE INTERSECTION OF EAST MARLAND BLVD. AND SOUTH DAL PASO STREET, GO WEST ON HOBBS HWY FOR APPROXIMATELY 21.5 MILES, TURN LEFT AND GO SOUTH ON WILLOW TREE ROAD FOR APPROXIMATELY 1.92 MILES; TURN LEFT ONTO A CHALICE ROAD AND CONTINUE SOUTH FOR APPROXIMATELY 1 MILE. TURN LEFT ONTO A CHALICE ROAD AND CONTINUE EAST FOR 0.4 MILES, ENTERING THE SOUTHWEST CORNER OF THE EAGLE CLAW 5-8 FED. COM. 2H,4H,6H, AND 8H WELL PAD.

PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4048.001

VICINITY MAP



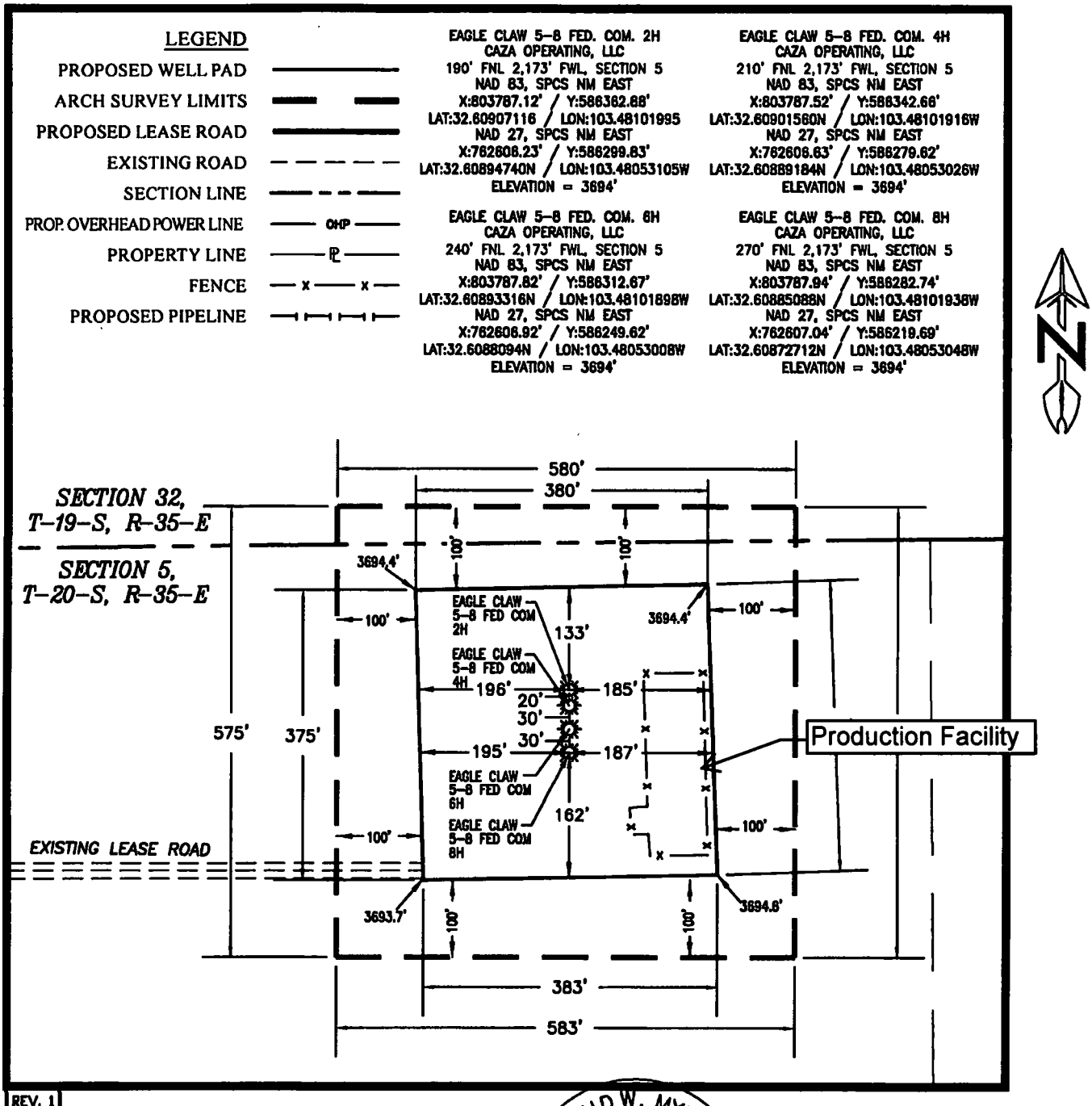
SEC. 5 TWP. 20-S RGE. 35-E
SURVEY: N.M.P.M.
COUNTY: LEA
OPERATOR: CAZA OPERATING LLC
DESCRIPTION: 210' FNL & 2173' FWL
ELEVATION: 3694'
LEASE: EAGLE CLAW 5-8 FED COM
U.S.G.S. TOPOGRAPHIC MAP: MONUMENT SW, NM.

1 " = 1 MILE

PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4048_001_B

WELL LOCATION PLAT

EAGLE CLAW 5-8 FEDERAL
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: MONUMENT SW, N.M.



REV. 1

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

DECEMBER 17, 2019

DAVID W. MYERS NEW MEXICO 11403 PROFESSIONAL SURVEYOR

DAVID W. MYERS 11403

SHEET 3 OF 5

PREPARED BY:
E-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4046_001

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.

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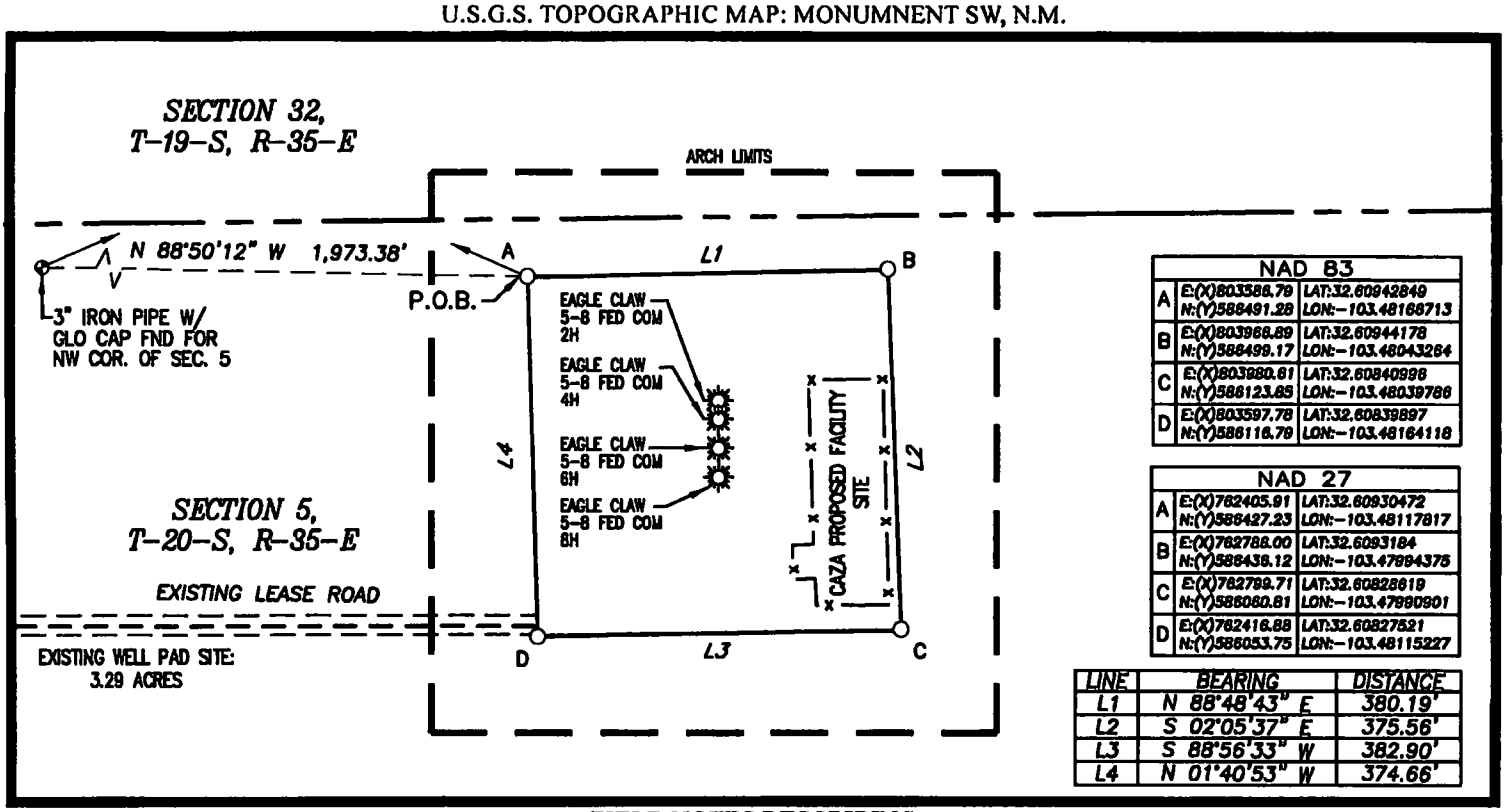

NAD 83		
A	E:(X)803586.79 N:(Y)588491.28	LAT:32.60942849 LON:-103.48166713
B	E:(X)803966.89 N:(Y)588499.17	LAT:32.60944178 LON:-103.48043264
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D	E:(X)803597.78 N:(Y)588116.79	LAT:32.60839897 LON:-103.48164118

NAD 27		
A	E:(X)762405.91 N:(Y)588427.23	LAT:32.60930472 LON:-103.48117817
B	E:(X)762788.00 N:(Y)588438.12	LAT:32.6093184 LON:-103.47994375
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D	E:(X)762416.88 N:(Y)588053.75	LAT:32.60827521 LON:-103.48115227

LINE	BEARING	DISTANCE
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L2	S 02°05'37" E	375.56'
L3	S 88°56'33" W	382.90'
L4	N 01°40'53" W	374.66'

FIELD NOTES DESCRIBING

A tract of land being 3.29 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:

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THENCE
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S 02°05'37" E a distance of 375.56 feet to the Southeast corner of this tract,
S 88°56'33" W a distance of 382.90 feet to the Southwest corner of this tract and
N 01°40'53" W a distance of 374.66 feet to the *POINT OF BEGINNING.*

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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		ADDED EXISTING WELL PAD		

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_001

SHEET 2 OF 5
DRAWN BY: MB
DATE: 12/01/2019
CHECKED BY: MWS

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

Operator	Caza Operating LLC
Well Name & No.	Eaglebow 1H
County	Lea
Location (S/T/R/All)	
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	hcl	80	btc	0	5560	5560	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	18126	10536	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	340	2.13	Lead 1	1930	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	1037.4 / 2630.7	cuft	Cement Added	8157.40	cuft	Cement Added	#N/A	cuft	Cement Added	#N/A	cuft
Cmt Req.	1389	cuft	Cement Req.	519.9 / 1320.4	cuft	Cement Req.	4055	cuft	Cement Req.	0	cuft	Cement Req.	0	cuft
Excess	100.9%		Excess	99.5% / 99.2%		Excess	101.15%		Excess	#N/A		Excess	#N/A	

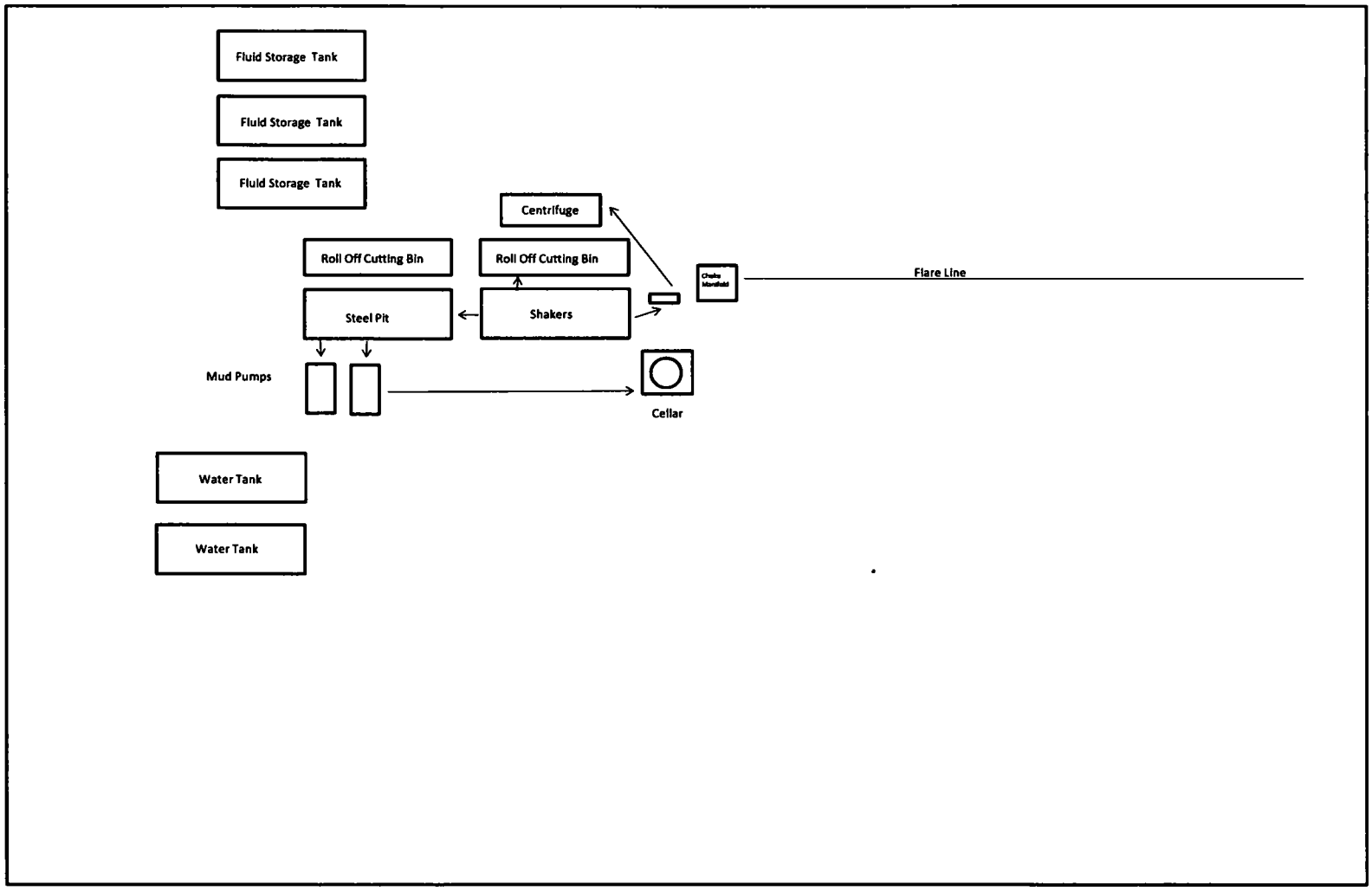
Clearances	In Hole	In Surface	In Int 1	In Int 1 Taper 1		In Prod 1		
Surface								
Int 1								
Int 1 Taper 1								
Prod 1				No Overlap	No Overlap			

Safety Factors	Joint/Body	Collapse	Burst	Alt Burst
Surface	4.72	1.22		1.64
Int 1	4.12	1.46	1.05	1.82
Int 1 Taper 1				
Prod 1	3.11	2.09	2.35	4.08

BOP Requirements After the Shoe

Surface		Int 1		Prod 1	
Max. Surf. Pressure	1665 psi	Max. Surf. Pressure	3155 psi	Max. Surf. Pressur	psi
BOP Required	2M System	BOP Required	5M 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 4H
Site: Eagleclaw 5-8 Fed Com 4H
Well: Eagleclaw 5-8 Fed Com 4H
Wellbore: Eagleclaw 5-8 Fed Com 4H
Design: 181104 Eagleclaw 5-8 Fed Com 4H

Caza Petroleum

T M

Azimuths to Grid North
True North: -0.46°
Magnetic North: 6.19°

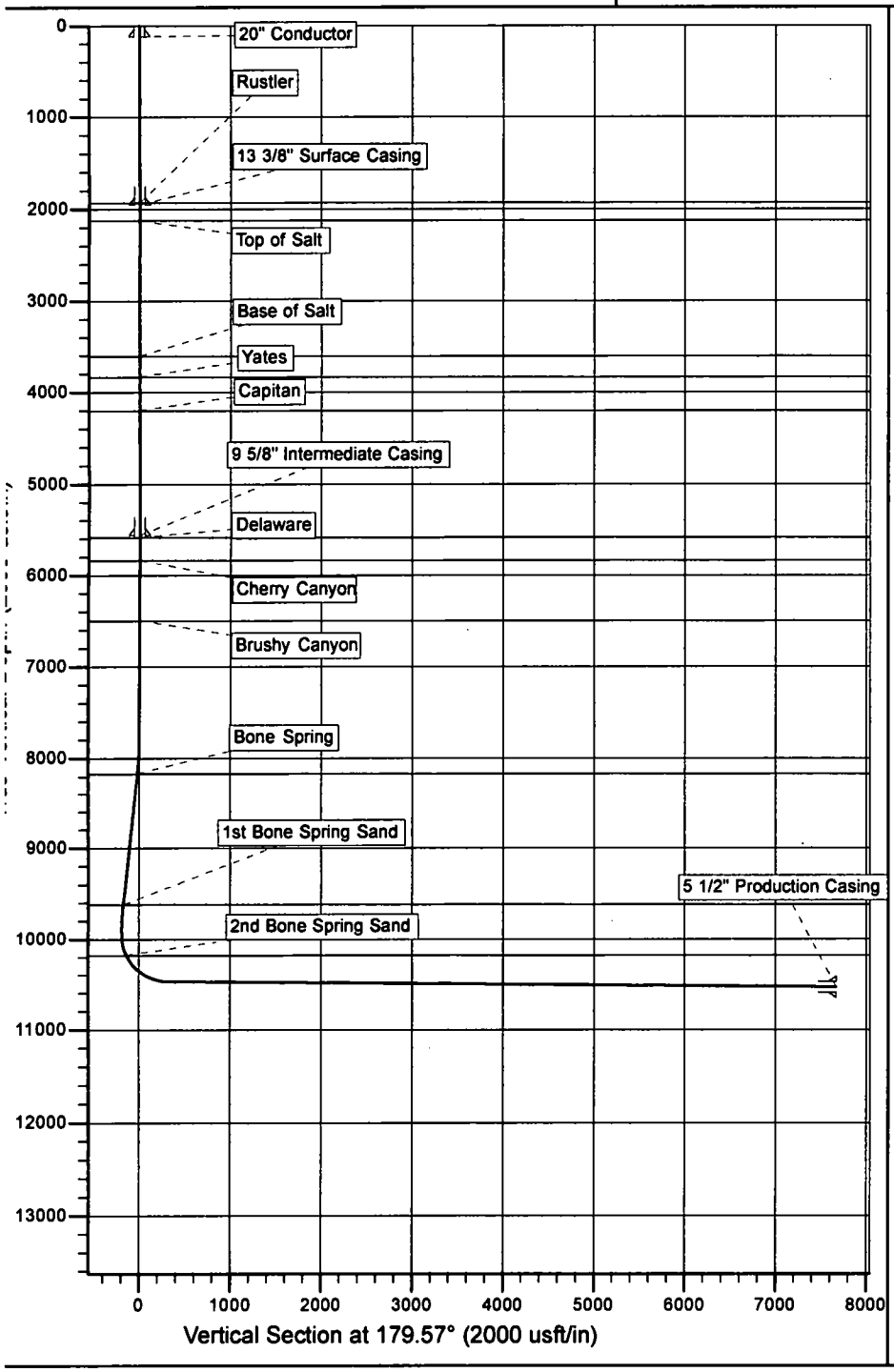
Magnetic Field
Strength: 48113.8snT
Dip Angle: 60.36°
Date: 11/4/2018
Model: IGRF2010

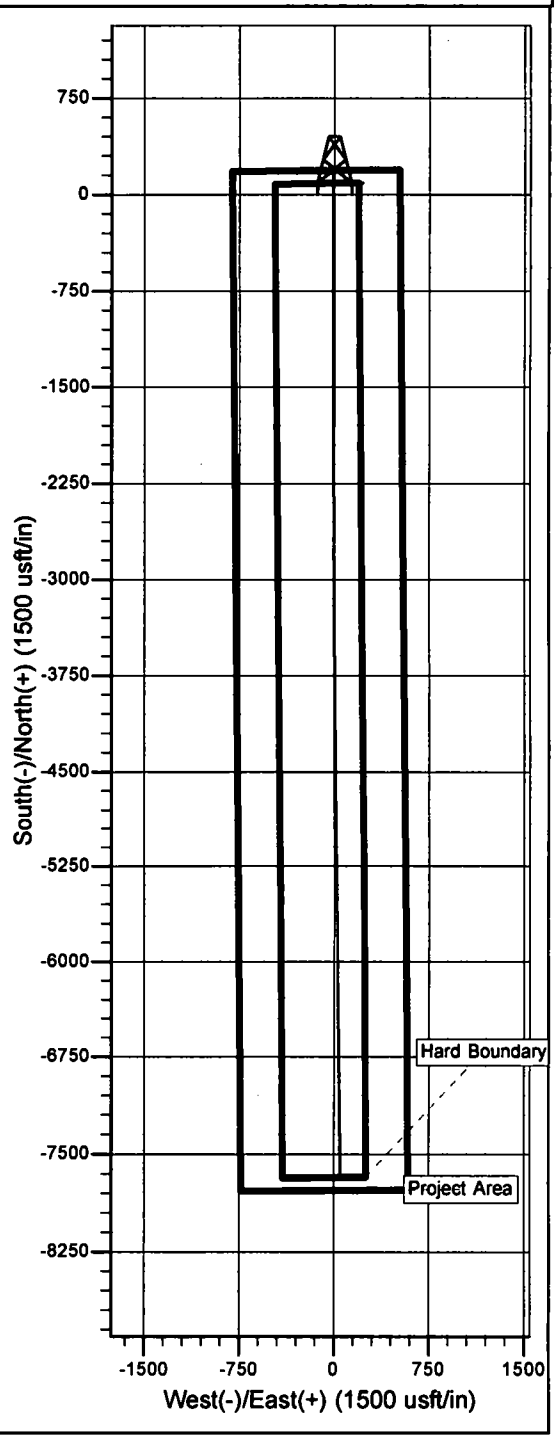
CASING DETAILS

TVD	MD	Name	Size
120.0	120.0	20" Conductor	20
1953.0	1953.0	13 3/8" Surface Casing	13-3/8
5560.0	5560.0	9 5/8" Intermediate Casing	9-5/8
10536.4	18126.0	5 1/2" Production Casing	5-1/2

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
1928.0	1928.0	Rustler	0.00	
2124.0	2124.0	Top of Salt	0.00	
3602.0	3602.0	Base of Salt	0.00	
3830.0	3830.0	Yates	0.00	
4198.0	4198.0	Capitan	0.00	
5585.0	5585.0	Delaware	0.00	
5835.0	5835.0	Cherry Canyon	0.00	
6494.0	6494.0	Brushy Canyon	0.00	
8165.0	8165.7	Bone Spring	0.00	
9616.0	9624.7	1st Bone Spring Sand	0.00	
10177.0	10193.1	2nd Bone Spring Sand	0.00	





Caza Petroleum

Caza Operating LLC

Eagleclaw 5-8 Fed Com 4H
Eagleclaw 5-8 Fed Com 4H
Eagleclaw 5-8 Fed Com 4H
Eagleclaw 5-8 Fed Com 4H

Plan: 181104 Eagleclaw 5-8 Fed Com 4H

Morcor Standard Plan

04 November, 2018

MORCOR ENGINEERING

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 4H
Project:	Eagleclaw 5-8 Fed Com 4H	**TVD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 4H	**MD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 4H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 4H	**Survey Calculation Method:**	Minimum Curvature
Design:	181104 Eagleclaw 5-8 Fed Com 4H	**Database:**	EDM 5000.1 Single User Db

Project Eagleclaw 5-8 Fed Com 4H

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 4H

Site Position:		**Northing:**	586,362.06 usft	**Latitude:**	32° 36' 32.652 N
From:	Lat/Long	**Easting:**	803,738.45 usft	**Longitude:**	103° 28' 52.241 W
Position Uncertainty:	1.0 usft	**Slot Radius:**	17-1/2 "	**Grid Convergence:**	0.46 °

Well Eagleclaw 5-8 Fed Com 4H

Well Position	**+N/-S**	0.0 usft	**Northing:**	586,362.06 usft	**Latitude:**	32° 36' 32.652 N
	+E/-W	0.0 usft	**Easting:**	803,738.45 usft	**Longitude:**	103° 28' 52.241 W
Position Uncertainty		1.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,694.0 usft

Wellbore Eagleclaw 5-8 Fed Com 4H

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	11/4/2018	6.65	60.36	48,114

Design 181104 Eagleclaw 5-8 Fed Com 4H

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	179.57

Survey Tool Program **Date** 11/4/2018

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
0.0	18,126.0	181104 Eagleclaw 5-8 Fed Com 4H (Eagle	MWD	MWD - Standard

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 4H
Project:	Eagleclaw 5-8 Fed Com 4H	**TVD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 4H	**MD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 4H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 4H	**Survey Calculation Method:**	Minimum Curvature
Design:	181104 Eagleclaw 5-8 Fed Com 4H	**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	-3,716.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
100.0	0.00	358.00	100.0	-3,616.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
120.0	0.00	358.00	120.0	-3,596.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
20" Conductor										
200.0	0.00	358.00	200.0	-3,516.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
300.0	0.00	358.00	300.0	-3,416.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
400.0	0.00	358.00	400.0	-3,316.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
500.0	0.00	358.00	500.0	-3,216.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
600.0	0.00	358.00	600.0	-3,116.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
700.0	0.00	358.00	700.0	-3,016.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
800.0	0.00	358.00	800.0	-2,916.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
900.0	0.00	358.00	900.0	-2,816.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
1,000.0	0.00	358.00	1,000.0	-2,716.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
1,100.0	0.00	358.00	1,100.0	-2,616.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
1,200.0	0.00	358.00	1,200.0	-2,516.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
1,300.0	0.00	358.00	1,300.0	-2,416.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
1,400.0	0.00	358.00	1,400.0	-2,316.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
1,500.0	0.00	358.00	1,500.0	-2,216.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
1,600.0	0.00	358.00	1,600.0	-2,116.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
1,700.0	0.00	358.00	1,700.0	-2,016.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
1,800.0	0.00	358.00	1,800.0	-1,916.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
1,900.0	0.00	358.00	1,900.0	-1,816.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
1,928.0	0.00	358.00	1,928.0	-1,788.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
Rustler										
1,953.0	0.00	358.00	1,953.0	-1,763.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
13 3/8" Surface Casing										
2,000.0	0.00	358.00	2,000.0	-1,716.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
2,100.0	0.00	358.00	2,100.0	-1,616.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 4H
Project:	Eagleclaw 5-8 Fed Com 4H	**TVD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 4H	**MD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 4H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 4H	**Survey Calculation Method:**	Minimum Curvature
Design:	181104 Eagleclaw 5-8 Fed Com 4H	**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)
2,124.0	0.00	358.00	2,124.0	-1,592.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
Top of Salt										
2,200.0	0.00	358.00	2,200.0	-1,516.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
2,300.0	0.00	358.00	2,300.0	-1,416.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
2,400.0	0.00	358.00	2,400.0	-1,316.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
2,500.0	0.00	358.00	2,500.0	-1,216.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
2,600.0	0.00	358.00	2,600.0	-1,116.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
2,700.0	0.00	358.00	2,700.0	-1,016.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
2,800.0	0.00	358.00	2,800.0	-916.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
2,900.0	0.00	358.00	2,900.0	-816.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
3,000.0	0.00	358.00	3,000.0	-716.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
3,100.0	0.00	358.00	3,100.0	-616.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
3,200.0	0.00	358.00	3,200.0	-516.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
3,300.0	0.00	358.00	3,300.0	-416.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
3,400.0	0.00	358.00	3,400.0	-316.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
3,500.0	0.00	358.00	3,500.0	-216.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
3,600.0	0.00	358.00	3,600.0	-116.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
3,602.0	0.00	358.00	3,602.0	-114.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
Base of Salt										
3,700.0	0.00	358.00	3,700.0	-16.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
3,800.0	0.00	358.00	3,800.0	84.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
3,830.0	0.00	358.00	3,830.0	114.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
Yates										
3,900.0	0.00	358.00	3,900.0	184.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
4,000.0	0.00	358.00	4,000.0	284.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
4,100.0	0.00	358.00	4,100.0	384.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
4,198.0	0.00	358.00	4,198.0	482.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
Capitan										

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 4H
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Site:	Eagleclaw 5-8 Fed Com 4H	**MD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 4H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 4H	**Survey Calculation Method:**	Minimum Curvature
Design:	181104 Eagleclaw 5-8 Fed Com 4H	**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)
4,200.0	0.00	358.00	4,200.0	484.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
4,300.0	0.00	358.00	4,300.0	584.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
4,400.0	0.00	358.00	4,400.0	684.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
4,500.0	0.00	358.00	4,500.0	784.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
4,600.0	0.00	358.00	4,600.0	884.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
4,700.0	0.00	358.00	4,700.0	984.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
4,800.0	0.00	358.00	4,800.0	1,084.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
4,900.0	0.00	358.00	4,900.0	1,184.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
5,000.0	0.00	358.00	5,000.0	1,284.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
5,100.0	0.00	358.00	5,100.0	1,384.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
5,200.0	0.00	358.00	5,200.0	1,484.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
5,300.0	0.00	358.00	5,300.0	1,584.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
5,400.0	0.00	358.00	5,400.0	1,684.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
5,500.0	0.00	358.00	5,500.0	1,784.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
5,560.0	0.00	358.00	5,560.0	1,844.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
9 5/8" Intermediate Casing										
5,585.0	0.00	358.00	5,585.0	1,869.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
Delaware										
5,600.0	0.00	358.00	5,600.0	1,884.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
5,700.0	0.00	358.00	5,700.0	1,984.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
5,800.0	0.00	358.00	5,800.0	2,084.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
5,835.0	0.00	358.00	5,835.0	2,119.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
Cherry Canyon										
5,900.0	0.00	358.00	5,900.0	2,184.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
6,000.0	0.00	358.00	6,000.0	2,284.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
6,100.0	0.00	358.00	6,100.0	2,384.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
6,200.0	0.00	358.00	6,200.0	2,484.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 4H
Project:	Eagleclaw 5-8 Fed Com 4H	**TVD Reference:**	WELL @ 3716.0usft (Original Well Elev)
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Well:	Eagleclaw 5-8 Fed Com 4H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 4H	**Survey Calculation Method:**	Minimum Curvature
Design:	181104 Eagleclaw 5-8 Fed Com 4H	**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)
6,300.0	0.00	358.00	6,300.0	2,584.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
6,400.0	0.00	358.00	6,400.0	2,684.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
6,494.0	0.00	358.00	6,494.0	2,778.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
Brushy Canyon										
6,500.0	0.00	358.00	6,500.0	2,784.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
6,600.0	0.00	358.00	6,600.0	2,884.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
6,700.0	0.00	358.00	6,700.0	2,984.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
6,800.0	0.00	358.00	6,800.0	3,084.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
6,900.0	0.00	358.00	6,900.0	3,184.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
7,000.0	0.00	358.00	7,000.0	3,284.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
7,100.0	0.00	358.00	7,100.0	3,384.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
7,200.0	0.00	358.00	7,200.0	3,484.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
7,300.0	0.00	358.00	7,300.0	3,584.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
7,400.0	0.00	358.00	7,400.0	3,684.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
7,500.0	0.00	358.00	7,500.0	3,784.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
7,600.0	0.00	358.00	7,600.0	3,884.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
7,700.0	0.00	358.00	7,700.0	3,984.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
7,800.0	0.00	358.00	7,800.0	4,084.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
7,900.0	0.00	358.00	7,900.0	4,184.0	0.0	0.0	803,738.45	586,362.06	0.00	0.00
Start Build 3.00										
8,000.0	3.00	358.00	8,000.0	4,284.0	2.6	-0.1	803,738.36	586,364.68	-2.62	3.00
8,100.0	6.00	358.00	8,099.6	4,383.6	10.5	-0.4	803,738.09	586,372.52	-10.46	3.00
Start 1600.0 hold at 8100.0 MD										
8,165.7	6.00	358.00	8,165.0	4,449.0	17.3	-0.6	803,737.85	586,379.39	-17.33	0.00
Bone Spring										
8,200.0	6.00	358.00	8,199.1	4,483.1	20.9	-0.7	803,737.72	586,382.97	-20.91	0.00
8,300.0	6.00	358.00	8,298.5	4,582.5	31.3	-1.1	803,737.36	586,393.41	-31.36	0.00

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 4H
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Site:	Eagleclaw 5-8 Fed Com 4H	**MD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 4H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 4H	**Survey Calculation Method:**	Minimum Curvature
Design:	181104 Eagleclaw 5-8 Fed Com 4H	**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)
8,400.0	6.00	358.00	8,398.0	4,682.0	41.8	-1.5	803,736.99	586,403.86	-41.81	0.00
8,500.0	6.00	358.00	8,497.4	4,781.4	52.2	-1.8	803,736.63	586,414.30	-52.25	0.00
8,600.0	6.00	358.00	8,596.9	4,880.9	62.7	-2.2	803,736.26	586,424.75	-62.70	0.00
8,700.0	6.00	358.00	8,696.3	4,980.3	73.1	-2.6	803,735.90	586,435.20	-73.15	0.00
8,800.0	6.00	358.00	8,795.8	5,079.8	83.6	-2.9	803,735.53	586,445.64	-83.60	0.00
8,900.0	6.00	358.00	8,895.3	5,179.3	94.0	-3.3	803,735.17	586,456.09	-94.05	0.00
9,000.0	6.00	358.00	8,994.7	5,278.7	104.5	-3.6	803,734.80	586,466.54	-104.50	0.00
9,100.0	6.00	358.00	9,094.2	5,378.2	114.9	-4.0	803,734.44	586,476.98	-114.95	0.00
9,200.0	6.00	358.00	9,193.6	5,477.6	125.4	-4.4	803,734.07	586,487.43	-125.40	0.00
9,300.0	6.00	358.00	9,293.1	5,577.1	135.8	-4.7	803,733.71	586,497.88	-135.85	0.00
9,400.0	6.00	358.00	9,392.5	5,676.5	146.3	-5.1	803,733.34	586,508.32	-146.29	0.00
9,500.0	6.00	358.00	9,492.0	5,776.0	156.7	-5.5	803,732.98	586,518.77	-156.74	0.00
9,600.0	6.00	358.00	9,591.4	5,875.4	167.2	-5.8	803,732.61	586,529.22	-167.19	0.00
9,624.7	6.00	358.00	9,616.0	5,900.0	169.7	-5.9	803,732.52	586,531.80	-169.78	0.00
1st Bone Spring Sand										
9,700.0	6.00	358.00	9,690.9	5,974.9	177.6	-6.2	803,732.25	586,539.66	-177.64	0.00
Start Drop -3.00										
9,800.0	3.00	358.00	9,790.6	6,074.6	185.4	-6.5	803,731.98	586,547.50	-185.48	3.00
9,900.0	0.00	0.00	9,890.5	6,174.5	188.1	-6.6	803,731.88	586,550.12	-188.10	3.00
Start 76.0 hold at 9900.0 MD										
9,976.0	0.00	180.00	9,966.5	6,250.5	188.1	-6.6	803,731.88	586,550.12	-188.10	0.00
Start Build 11.30										
10,000.0	2.71	180.00	9,990.5	6,274.5	187.5	-6.6	803,731.88	586,549.55	-187.53	11.30
10,100.0	14.01	180.00	10,089.3	6,373.3	173.0	-6.6	803,731.88	586,535.03	-173.01	11.30
10,193.1	24.53	180.00	10,177.0	6,461.0	142.3	-6.6	803,731.88	586,504.35	-142.34	11.30
2nd Bone Spring Sand										
10,200.0	25.32	180.00	10,183.3	6,467.3	139.4	-6.6	803,731.88	586,501.43	-139.41	11.30
10,300.0	36.62	180.00	10,268.9	6,552.9	88.0	-6.6	803,731.88	586,450.06	-88.04	11.30

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 4H
Project:	Eagleclaw 5-8 Fed Com 4H	**TVD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 4H	**MD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 4H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 4H	**Survey Calculation Method:**	Minimum Curvature
Design:	181104 Eagleclaw 5-8 Fed Com 4H	**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)
10,400.0	47.92	180.00	10,342.8	6,626.8	20.8	-6.6	803,731.88	586,382.91	-20.89	11.30
10,500.0	59.22	180.00	10,402.1	6,686.1	-59.5	-6.6	803,731.88	586,302.58	59.43	11.30
10,600.0	70.52	180.00	10,444.5	6,728.5	-149.9	-6.6	803,731.88	586,212.19	149.82	11.30
10,700.0	81.82	180.00	10,468.3	6,752.3	-246.8	-6.6	803,731.88	586,115.25	246.76	11.30
10,768.0	89.51	180.00	10,473.4	6,757.4	-314.6	-6.6	803,731.88	586,047.49	314.51	11.30
Start Turn -0.01										
10,800.0	89.51	180.00	10,473.7	6,757.7	-346.6	-6.6	803,731.89	586,015.49	346.51	0.01
10,900.0	89.51	179.98	10,474.6	6,758.6	-446.6	-6.5	803,731.91	585,915.50	446.51	0.01
11,000.0	89.51	179.97	10,475.4	6,759.4	-546.6	-6.5	803,731.95	585,815.50	546.50	0.01
11,100.0	89.51	179.95	10,476.3	6,760.3	-646.6	-6.4	803,732.02	585,715.50	646.49	0.01
11,200.0	89.51	179.94	10,477.1	6,761.1	-746.6	-6.3	803,732.11	585,615.51	746.49	0.01
11,300.0	89.51	179.93	10,478.0	6,762.0	-846.6	-6.2	803,732.22	585,515.51	846.48	0.01
11,400.0	89.51	179.91	10,478.9	6,762.9	-946.5	-6.1	803,732.36	585,415.51	946.48	0.01
11,500.0	89.51	179.90	10,479.7	6,763.7	-1,046.5	-5.9	803,732.52	585,315.52	1,046.47	0.01
11,600.0	89.51	179.89	10,480.6	6,764.6	-1,146.5	-5.7	803,732.71	585,215.52	1,146.47	0.01
11,700.0	89.51	179.87	10,481.4	6,765.4	-1,246.5	-5.5	803,732.91	585,115.53	1,246.46	0.01
11,800.0	89.51	179.86	10,482.3	6,766.3	-1,346.5	-5.3	803,733.15	585,015.53	1,346.46	0.01
11,900.0	89.51	179.85	10,483.1	6,767.1	-1,446.5	-5.0	803,733.40	584,915.53	1,446.45	0.01
12,000.0	89.51	179.83	10,484.0	6,768.0	-1,546.5	-4.8	803,733.68	584,815.54	1,546.45	0.01
12,100.0	89.51	179.82	10,484.8	6,768.8	-1,646.5	-4.5	803,733.99	584,715.54	1,646.44	0.01
12,200.0	89.51	179.81	10,485.7	6,769.7	-1,746.5	-4.1	803,734.32	584,615.55	1,746.44	0.01
12,300.0	89.51	179.79	10,486.6	6,770.6	-1,846.5	-3.8	803,734.67	584,515.55	1,846.43	0.01
12,400.0	89.51	179.78	10,487.4	6,771.4	-1,946.5	-3.4	803,735.04	584,415.56	1,946.43	0.01
12,500.0	89.51	179.76	10,488.3	6,772.3	-2,046.5	-3.0	803,735.44	584,315.56	2,046.42	0.01
12,600.0	89.51	179.75	10,489.1	6,773.1	-2,146.5	-2.6	803,735.86	584,215.56	2,146.42	0.01
12,700.0	89.51	179.74	10,490.0	6,774.0	-2,246.5	-2.1	803,736.31	584,115.57	2,246.41	0.01
12,800.0	89.51	179.72	10,490.8	6,774.8	-2,346.5	-1.7	803,736.78	584,015.57	2,346.41	0.01

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 4H
Project:	Eagleclaw 5-8 Fed Com 4H	**TVD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 4H	**MD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 4H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 4H	**Survey Calculation Method:**	Minimum Curvature
Design:	181104 Eagleclaw 5-8 Fed Com 4H	**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)
12,900.0	89.51	179.71	10,491.7	6,775.7	-2,446.5	-1.2	803,737.28	583,915.58	2,446.41	0.01
13,000.0	89.51	179.70	10,492.5	6,776.5	-2,546.5	-0.7	803,737.79	583,815.58	2,546.40	0.01
13,100.0	89.51	179.68	10,493.4	6,777.4	-2,646.5	-0.1	803,738.33	583,715.59	2,646.40	0.01
13,200.0	89.51	179.67	10,494.2	6,778.2	-2,746.5	0.4	803,738.90	583,615.59	2,746.40	0.01
13,300.0	89.51	179.66	10,495.1	6,779.1	-2,846.5	1.0	803,739.49	583,515.60	2,846.39	0.01
13,400.0	89.51	179.64	10,496.0	6,780.0	-2,946.5	1.6	803,740.10	583,415.60	2,946.39	0.01
13,500.0	89.51	179.63	10,496.8	6,780.8	-3,046.5	2.3	803,740.74	583,315.61	3,046.38	0.01
13,600.0	89.51	179.62	10,497.7	6,781.7	-3,146.4	2.9	803,741.40	583,215.62	3,146.38	0.01
13,700.0	89.51	179.60	10,498.5	6,782.5	-3,246.4	3.6	803,742.08	583,115.62	3,246.38	0.01
13,800.0	89.51	179.59	10,499.4	6,783.4	-3,346.4	4.3	803,742.79	583,015.63	3,346.37	0.01
13,900.0	89.51	179.57	10,500.2	6,784.2	-3,446.4	5.1	803,743.52	582,915.63	3,446.37	0.01
14,000.0	89.51	179.56	10,501.1	6,785.1	-3,546.4	5.8	803,744.27	582,815.64	3,546.37	0.01
14,100.0	89.51	179.55	10,501.9	6,785.9	-3,646.4	6.6	803,745.05	582,715.65	3,646.36	0.01
14,200.0	89.51	179.53	10,502.8	6,786.8	-3,746.4	7.4	803,745.85	582,615.65	3,746.36	0.01
14,300.0	89.51	179.52	10,503.7	6,787.7	-3,846.4	8.2	803,746.68	582,515.66	3,846.35	0.01
14,400.0	89.51	179.51	10,504.5	6,788.5	-3,946.4	9.1	803,747.53	582,415.67	3,946.35	0.01
14,500.0	89.51	179.49	10,505.4	6,789.4	-4,046.4	10.0	803,748.40	582,315.68	4,046.35	0.01
14,600.0	89.51	179.48	10,506.2	6,790.2	-4,146.4	10.8	803,749.30	582,215.68	4,146.34	0.01
14,700.0	89.51	179.47	10,507.1	6,791.1	-4,246.4	11.8	803,750.22	582,115.69	4,246.34	0.01
14,800.0	89.51	179.45	10,507.9	6,791.9	-4,346.4	12.7	803,751.16	582,015.70	4,346.34	0.01
14,900.0	89.51	179.44	10,508.8	6,792.8	-4,446.4	13.7	803,752.13	581,915.71	4,446.33	0.01
15,000.0	89.51	179.42	10,509.6	6,793.6	-4,546.3	14.7	803,753.12	581,815.72	4,546.33	0.01
15,100.0	89.51	179.41	10,510.5	6,794.5	-4,646.3	15.7	803,754.14	581,715.73	4,646.32	0.01
15,200.0	89.51	179.40	10,511.4	6,795.4	-4,746.3	16.7	803,755.18	581,615.74	4,746.32	0.01
15,300.0	89.51	179.38	10,512.2	6,796.2	-4,846.3	17.8	803,756.24	581,515.74	4,846.32	0.01
15,400.0	89.51	179.37	10,513.1	6,797.1	-4,946.3	18.9	803,757.33	581,415.75	4,946.31	0.01
15,500.0	89.51	179.36	10,513.9	6,797.9	-5,046.3	20.0	803,758.44	581,315.76	5,046.31	0.01

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 4H
Project:	Eagleclaw 5-8 Fed Com 4H	**TVD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 4H	**MD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 4H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 4H	**Survey Calculation Method:**	Minimum Curvature
Design:	181104 Eagleclaw 5-8 Fed Com 4H	**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)
15,600.0	89.51	179.34	10,514.8	6,798.8	-5,146.3	21.1	803,759.57	581,215.77	5,146.30	0.01
15,700.0	89.51	179.33	10,515.6	6,799.6	-5,246.3	22.3	803,760.73	581,115.78	5,246.30	0.01
15,800.0	89.51	179.32	10,516.5	6,800.5	-5,346.3	23.5	803,761.91	581,015.79	5,346.29	0.01
15,900.0	89.51	179.30	10,517.3	6,801.3	-5,446.3	24.7	803,763.12	580,915.81	5,446.29	0.01
16,000.0	89.51	179.29	10,518.2	6,802.2	-5,546.2	25.9	803,764.35	580,815.82	5,546.28	0.01
16,100.0	89.51	179.28	10,519.0	6,803.0	-5,646.2	27.1	803,765.60	580,715.83	5,646.28	0.01
16,200.0	89.51	179.26	10,519.9	6,803.9	-5,746.2	28.4	803,766.88	580,615.84	5,746.27	0.01
16,300.0	89.51	179.25	10,520.8	6,804.8	-5,846.2	29.7	803,768.18	580,515.85	5,846.27	0.01
16,400.0	89.51	179.23	10,521.6	6,805.6	-5,946.2	31.1	803,769.50	580,415.86	5,946.26	0.01
16,500.0	89.51	179.22	10,522.5	6,806.5	-6,046.2	32.4	803,770.85	580,315.88	6,046.26	0.01
16,600.0	89.51	179.21	10,523.3	6,807.3	-6,146.2	33.8	803,772.22	580,215.89	6,146.25	0.01
16,700.0	89.51	179.19	10,524.2	6,808.2	-6,246.2	35.2	803,773.62	580,115.90	6,246.25	0.01
16,800.0	89.51	179.18	10,525.0	6,809.0	-6,346.1	36.6	803,775.03	580,015.92	6,346.24	0.01
16,900.0	89.51	179.17	10,525.9	6,809.9	-6,446.1	38.0	803,776.48	579,915.93	6,446.24	0.01
17,000.0	89.51	179.15	10,526.7	6,810.7	-6,546.1	39.5	803,777.94	579,815.95	6,546.23	0.01
17,100.0	89.51	179.14	10,527.6	6,811.6	-6,646.1	41.0	803,779.43	579,715.96	6,646.22	0.01
17,200.0	89.51	179.13	10,528.5	6,812.5	-6,746.1	42.5	803,780.95	579,615.98	6,746.22	0.01
17,300.0	89.51	179.11	10,529.3	6,813.3	-6,846.1	44.0	803,782.48	579,515.99	6,846.21	0.01
17,400.0	89.51	179.10	10,530.2	6,814.2	-6,946.1	45.6	803,784.05	579,416.01	6,946.20	0.01
17,500.0	89.51	179.09	10,531.0	6,815.0	-7,046.0	47.2	803,785.63	579,316.02	7,046.20	0.01
17,600.0	89.51	179.07	10,531.9	6,815.9	-7,146.0	48.8	803,787.24	579,216.04	7,146.19	0.01
17,700.0	89.51	179.06	10,532.7	6,816.7	-7,246.0	50.4	803,788.87	579,116.06	7,246.18	0.01
17,800.0	89.51	179.04	10,533.6	6,817.6	-7,346.0	52.1	803,790.53	579,016.07	7,346.17	0.01
17,900.0	89.51	179.03	10,534.4	6,818.4	-7,446.0	53.8	803,792.21	578,916.09	7,446.16	0.01
18,000.0	89.51	179.02	10,535.3	6,819.3	-7,546.0	55.5	803,793.91	578,816.11	7,546.16	0.01
18,100.0	89.51	179.00	10,536.2	6,820.2	-7,645.9	57.2	803,795.64	578,716.13	7,646.15	0.01

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 4H
Project:	Eagleclaw 5-8 Fed Com 4H	**TVD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 4H	**MD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 4H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 4H	**Survey Calculation Method:**	Minimum Curvature
Design:	181104 Eagleclaw 5-8 Fed Com 4H	**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)
18,126.0	89.51	179.00	10,536.4	6,820.4	-7,671.9	57.6	803,796.09	578,690.13	7,672.15	0.01

TD at 18126.0 - 5 1/2" Production Casing

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
18,126.0	10,536.4	5 1/2" Production Casing	5-1/2	8-3/4
1,953.0	1,953.0	13 3/8" Surface Casing	13-3/8	17-1/2
120.0	120.0	20" Conductor	20	26
5,560.0	5,560.0	9 5/8" Intermediate Casing	9-5/8	12-1/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,602.0	3,602.0	Base of Salt		0.00	
4,198.0	4,198.0	Capitan		0.00	
9,624.7	9,616.0	1st Bone Spring Sand		0.00	
10,193.1	10,177.0	2nd Bone Spring Sand		0.00	
1,928.0	1,928.0	Rustler		0.00	
2,124.0	2,124.0	Top of Salt		0.00	
5,585.0	5,585.0	Delaware		0.00	
8,165.7	8,165.0	Bone Spring		0.00	
3,830.0	3,830.0	Yates		0.00	
6,494.0	6,494.0	Brushy Canyon		0.00	
5,835.0	5,835.0	Cherry Canyon		0.00	

Company:	Caza Operating LLC	**Local Co-ordinate Reference:**	Well Eagleclaw 5-8 Fed Com 4H
Project:	Eagleclaw 5-8 Fed Com 4H	**TVD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Site:	Eagleclaw 5-8 Fed Com 4H	**MD Reference:**	WELL @ 3716.0usft (Original Well Elev)
Well:	Eagleclaw 5-8 Fed Com 4H	**North Reference:**	Grid
Wellbore:	Eagleclaw 5-8 Fed Com 4H	**Survey Calculation Method:**	Minimum Curvature
Design:	181104 Eagleclaw 5-8 Fed Com 4H	**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
7,900.0	7,900.0	0.0	0.0	Start Build 3.00
8,100.0	8,099.6	10.5	-0.4	Start 1600.0 hold at 8100.0 MD
9,700.0	9,690.9	177.6	-6.2	Start Drop -3.00
9,900.0	9,890.5	188.1	-6.6	Start 76.0 hold at 9900.0 MD
9,976.0	9,966.5	188.1	-6.6	Start Build 11.30
10,768.0	10,473.4	-314.6	-6.6	Start Turn -0.01
18,126.0	10,536.4	-7,671.9	57.6	TD at 18126.0

Checked By: _____ Approved By: _____ Date: _____