

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
APPLICATION FOR PERMIT TO DRILL OR REENTER

| | | |
|---|--|--|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other 1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone | | 5. Lease Serial No. NMNM012559 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. TATER SALAD FEDERAL COM 903H 9. API Well No. 30 015 47750 |
| 2. Name of Operator COG OPERATING LLC 3a. Address 600 West Illinois Ave, Midland, TX 79701 3b. Phone No. (include area code) (432) 683-7443 | | 10. Field and Pool, or Exploratory PURPLE SAGE/Wolfcamp 11. Sec., T. R. M. or Blk. and Survey or Area SEC 24/T26S/R28E/NMP |
| 4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NENE / 225 FNL / 1120 FEL / LAT 32.034748 / LONG -104.035814 At proposed prod. zone NWNE / 200 FNL / 2190 FEL / LAT 32.052796 / LONG -104.039216 | | 12. County or Parish EDDY 13. State NM |
| 14. Distance in miles and direction from nearest town or post office* 15 miles | | 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 200 feet 16. No of acres in lease 1400 17. Spacing Unit dedicated to this well 640.0 |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 30 feet 19. Proposed Depth 10615 feet / 20777 feet 20. BLM/BIA Bond No. in file FED: NMB000215 | | 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 2913 feet 22. Approximate date work will start* 12/01/2020 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 (Electronic Submission) Title Regulatory Analyst | Name (Printed/Typed) MAYTE REYES / Ph: (432) 683-7443 | Date 06/08/2020 |
| Approved by (Signature) (Electronic Submission) Title Assistant Field Manager Lands & Minerals | Name (Printed/Typed) Cody Layton / Ph: (575) 234-5959 Office Carlsbad Field Office | Date 10/21/2020 |

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.

Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

- Will require a directional survey with the C-104 SL

(Continued on page 2)

APPROVED WITH CONDITIONS

Approval Date: 10/21/2020

Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string

KP 12/1/2020 GEO Review

*(Instructions on page 2)

Entered - KMS NMOCD

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 748-1263 Fax: (575) 748-9720

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

| | | |
|-----------------------------------|---|--|
| API Number 30-015 47750 | Pool Code 98220 | Pool Name Purple Sage; Wolfcamp, Gas |
| Property Code 329866 | Property Name TATER SALAD FEDERAL COM | Well Number 903H |
| OGRID No. 229137 | Operator Name COG OPERATING, LLC | Elevation 2913.1' |

Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| A | 24 | 26-S | 28-E | | 225 | NORTH | 1120 | EAST | EDDY |

Bottom Hole Location If Different From Surface

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| B | 12 | 26-S | 28-E | | 200 | NORTH | 2190 | EAST | EDDY |

| | | | |
|-------------------------------|-----------------|--------------------|-----------|
| Dedicated Acres 640 | Joint or Infill | Consolidation Code | Order No. |
|-------------------------------|-----------------|--------------------|-----------|

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

NMNM012559

NAD 83 NME
PROPOSED BOTTOM
HOLE LOCATION
Y=387070.9 N
X=632447.4 E
LAT.=32.063796° N
LONG.=104.039216° W

FEE

NMNM012559

| POINT | LEGEND |
|-------|------------------------------|
| 1 | Y=387265.6 N X=632000.1 E |
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SURFACE LOCATION
Y=376506.9 N
X=633530.3 E
LAT.=32.034748° N
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NMNM117119

330' FNL & 2190' FEL
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LONG.=104.039243° W

LEASE X-ING
LAT.=32.046266° N
LONG.=104.039250° W

510' FSL & 2190' FEL
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X=632458.5 E
LAT.=32.035384° N
LONG.=104.039271° W
GRID AZ. TO FTP
282°01'25"

LEASE X-ING
LAT.=32.034881° N
LONG.=104.036535° W

SECTION 12
SECTION 13
SECTION 13
SECTION 24

GRID AZ. - 359°56'18"
HORZ. DIST. - 10335.7'

200'
2190'
225'
1120'

S.U.

OPERATOR CERTIFICATION

I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Mayte Reyes
Signature Date
Mayte Reyes
Printed Name
mreyes1@concho.com
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

APRIL 13, 2020
Date of Survey

Signature & Seal of Professional Surveyor

CHAD L. HARCROW
NEW MEXICO
LICENSED PROFESSIONAL SURVEYOR
17777

Chad Harcrow
Signature
4/21/20
Certificate No. **CHAD HARCROW 17777**
W.O. # 20-585 DRAWN BY: DS

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| Dedicated Acres | Joint or Infill | Consolidation Code | Order No. |
|-----------------|-----------------|--------------------|-----------|
| 640 | | | |

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Signature Mayte Reyes Date 4-2-2020

Printed Name Mayte Reyes

E-mail Address mreyes1@concho.com

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Signature & Seal of Professional Surveyor

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Chad Harcrow 4/21/20

Certificate No. CHAD HARCROW 17777

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Signature Mayte Reyes Date 4-2-2020

Printed Name Mayte Reyes

E-mail Address mreyes1@concho.com

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Signature & Seal of Professional Surveyor

CHAD L. HARCROW
NEW MEXICO
17777
LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 4/21/20

Certificate No. CHAD HARCROW 17777

W.O. # 20-585 DRAWN BY: DS

PECOS DISTRICT

DRILLING CONDITIONS OF APPROVAL

| | |
|------------------------------|--|
| OPERATOR'S NAME: | COG Operating, LLC |
| LEASE NO.: | NMNM-012559 |
| WELL NAME & NO.: | Tater Salad Federal Com 903H |
| SURFACE HOLE FOOTAGE: | 0225' FNL & 1120' FEL |
| BOTTOM HOLE FOOTAGE: | 0200' FNL & 2190' FEL Sec. 12, T.26 S., R.28 E. |
| LOCATION: | Section 24, T.26 S., R.28 E., NMPM |
| COUNTY: | Eddy County, New Mexico |

COA

| | | | |
|----------------------|---|--|-------------------------------------|
| H2S | <input type="radio"/> Yes | <input checked="" type="radio"/> No | |
| Potash | <input checked="" type="radio"/> None | <input type="radio"/> Secretary | <input type="radio"/> R-111-P |
| Cave/Karst Potential | <input type="radio"/> Low | <input checked="" type="radio"/> Medium | <input type="radio"/> High |
| Cave/Karst Potential | <input type="radio"/> Critical | | |
| Variance | <input type="radio"/> None | <input checked="" type="radio"/> Flex Hose | <input type="radio"/> Other |
| Wellhead | <input checked="" type="radio"/> Conventional | <input type="radio"/> Multibowl | <input type="radio"/> Both |
| Other | <input type="checkbox"/> 4 String Area | <input type="checkbox"/> Capitan Reef | <input type="checkbox"/> WIPP |
| Other | <input type="checkbox"/> Fluid Filled | <input type="checkbox"/> Cement Squeeze | <input type="checkbox"/> Pilot Hole |
| Special Requirements | <input type="checkbox"/> Water Disposal | <input checked="" type="checkbox"/> COM | <input type="checkbox"/> Unit |

Medium Cave/Karst

Possibility of water flows in the Salado and Castile.

Possibility of lost circulation in the Rustler, Salado, and Delaware.

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 **10-3/4** inch surface casing shall be set at approximately **250** feet (a minimum of 70 feet (Eddy 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.
2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.
 - ❖ In Medium Cave/Karst 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.
3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **5000 (5M)** psi.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, 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

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 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 integrity 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.
- g. 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.

JAM 10152020



APD ID: 10400057771

Submission Date: 06/08/2020

Highlighted data
reflects the most
recent changes

Operator Name: COG OPERATING LLC

Well Name: TATER SALAD FEDERAL COM

Well Number: 903H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

APD ID: 10400057771

Tie to previous NOS? N

Submission Date: 06/08/2020

BLM Office: CARLSBAD

User: MAYTE REYES

Title: Regulatory Analyst

Federal/Indian APD: FED

Is the first lease penetrated for production Federal or Indian? FED

Lease number: NMNM012559

Lease Acres: 1400

Surface access agreement in place?

Allotted?

Reservation:

Agreement in place? NO

Federal or Indian agreement:

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO

APD Operator: COG OPERATING LLC

Operator letter of designation:

Operator Info

Operator Organization Name: COG OPERATING LLC

Operator Address: 600 West Illinois Ave

Zip: 79701

Operator PO Box:

Operator City: Midland

State: TX

Operator Phone: (432)683-7443

Operator Internet Address: RODOM@CONCHO.COM

Section 2 - Well Information

Well in Master Development Plan? NO

Master Development Plan name:

Well in Master SUPO? NO

Master SUPO name:

Well in Master Drilling Plan? NO

Master Drilling Plan name:

Well Name: TATER SALAD FEDERAL COM

Well Number: 903H

Well API Number:

Field/Pool or Exploratory? Field and Pool

Field Name: PURPLE SAGE

Pool Name: Wolfcamp

Is the proposed well in an area containing other mineral resources? POTASH

Operator Name: COG OPERATING LLC

Well Name: TATER SALAD FEDERAL COM

Well Number: 903H

Is the proposed well in an area containing other mineral resources? POTASH

Is the proposed well in a Helium production area? N

Use Existing Well Pad? N

New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name:

Number: 901H, 902H and 903H

Well Class: HORIZONTAL

TATER SALAD FEDERAL COM

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: EXPLORATORY (WILDCAT)

Describe sub-type:

Distance to town: 15 Miles

Distance to nearest well: 30 FT

Distance to lease line: 200 FT

Reservoir well spacing assigned across Measurement: 640 Acres

Well plat: COG_Tater_Salad_903H_C102_20200608071105.pdf

Well work start Date: 12/01/2020

Duration: 30 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

Reference Datum: GROUND LEVEL

| Wellbore | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD | Will this well produce from this lease? |
|--------------|---------|--------------|---------|--------------|------|-------|---------|-------------------|-----------|-------------|--------|-------------|-------------|------------|--------------|-----------|-------|-------|---|
| SHL Leg #1 | 225 | FNL | 1120 | FEL | 26S | 28E | 24 | Aliquot NENE | 32.034748 | -104.035814 | EDD Y | NEW MEXI CO | NEW MEXI CO | F | NMNM 012559 | 2913 | 0 | 0 | Y |
| KOP Leg #1 | 225 | FNL | 1120 | FEL | 26S | 28E | 24 | Aliquot NENE | 32.034748 | -104.035814 | EDD Y | NEW MEXI CO | NEW MEXI CO | F | NMNM 012559 | 2913 | 0 | 0 | Y |
| PPP Leg #1-1 | 10 | FSL | 2190 | FEL | 26S | 28E | 13 | Aliquot SWSE | 32.035384 | -104.039271 | EDD Y | NEW MEXI CO | NEW MEXI CO | F | NMNM 012559 | -7557 | 10601 | 10470 | Y |

Operator Name: COG OPERATING LLC

Well Name: TATER SALAD FEDERAL COM

Well Number: 903H

| Wellbore | NS-Foot | NS Indicator | EW-Foot | EW Indicator | Twsp | Range | Section | Aliquot/Lot/Tract | Latitude | Longitude | County | State | Meridian | Lease Type | Lease Number | Elevation | MD | TVD | Will this well produce from this lease? |
|--------------|---------|--------------|---------|--------------|------|-------|---------|-------------------|-----------|--------------|--------|------------|------------|------------|--------------|-----------|-------|-------|---|
| PPP Leg #1-2 | 2639 | FNL | 2190 | FEL | 26S | 28E | 13 | Aliquot SWNE | 32.046266 | - 104.03925 | EDD Y | NEW MEXICO | NEW MEXICO | F | NMNM 117119 | - 7643 | 13100 | 10556 | Y |
| PPP Leg #1-3 | 1 | FSL | 2190 | FEL | 26S | 28E | 12 | Aliquot SWSE | 32.049875 | - 104.039243 | EDD Y | NEW MEXICO | NEW MEXICO | F | NMNM 117119 | - 7664 | 15750 | 10577 | Y |
| EXIT Leg #1 | 330 | FNL | 2190 | FEL | 26S | 28E | 12 | Aliquot NWNE | 32.063439 | - 104.039217 | EDD Y | NEW MEXICO | NEW MEXICO | F | NMNM 012559 | - 7701 | 20646 | 10614 | Y |
| BHL Leg #1 | 200 | FNL | 2190 | FEL | 26S | 28E | 12 | Aliquot NWNE | 32.052796 | - 104.039216 | EDD Y | NEW MEXICO | NEW MEXICO | F | NMNM 012559 | - 7702 | 20777 | 10615 | Y |



APD ID: 10400057771

Submission Date: 06/08/2020

Highlighted data
reflects the most
recent changes

Operator Name: COG OPERATING LLC

Well Name: TATER SALAD FEDERAL COM

Well Number: 903H

[Show Final Text](#)

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

| Formation ID | Formation Name | Elevation | True Vertical Depth | Measured Depth | Lithologies | Mineral Resources | Producing Formation |
|--------------|------------------|-----------|---------------------|----------------|-------------|-------------------|---------------------|
| 753433 | --- | 2913 | 0 | 0 | ALLUVIUM | NONE | N |
| 753437 | RUSTLER | 2453 | 460 | 460 | ALLUVIUM | NONE | N |
| 753438 | TOP SALT | 2323 | 590 | 590 | SALT | NONE | N |
| 753439 | BASE OF SALT | 448 | 2465 | 2465 | ANHYDRITE | NONE | N |
| 753444 | LAMAR | 248 | 2665 | 2665 | LIMESTONE | NONE | N |
| 753445 | BELL CANYON | 213 | 2700 | 2700 | LIMESTONE | NONE | N |
| 753440 | CHERRY CANYON | -627 | 3540 | 3540 | SANDSTONE | NATURAL GAS, OIL | N |
| 753446 | BRUSHY CANYON | -1877 | 4790 | 4790 | SANDSTONE | NATURAL GAS, OIL | N |
| 753441 | BONE SPRING LIME | -3452 | 6365 | 6365 | SHALE | NATURAL GAS, OIL | N |
| 753442 | BONE SPRING 1ST | -4377 | 7290 | 7290 | SANDSTONE | NATURAL GAS, OIL | N |
| 753436 | BONE SPRING 3RD | -6202 | 9115 | 9115 | SANDSTONE | NATURAL GAS, OIL | N |
| 753447 | WOLFCAMP | -6452 | 9365 | 9365 | SILTSTONE | NATURAL GAS, OIL | N |
| 753448 | WOLFCAMP | -6952 | 9865 | 9865 | SILTSTONE | NATURAL GAS, OIL | N |
| 753450 | WOLFCAMP | -7277 | 10190 | 10190 | SILTSTONE | NATURAL GAS, OIL | N |
| 753451 | WOLFCAMP | -7577 | 10490 | 10490 | SILTSTONE | NATURAL GAS, OIL | Y |

Section 2 - Blowout Prevention

Operator Name: COG OPERATING LLC

Well Name: TATER SALAD FEDERAL COM

Well Number: 903H

Pressure Rating (PSI): 3M

Rating Depth: 9900

Equipment: Annular. The BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

Requesting Variance? NO

Variance request: A variance is requested for the use of a flexible choke line from the BOP to choke manifold. See attached for specs and hydrostatic test chart.

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all of the components installed will be functional and tested.

Choke Diagram Attachment:

COG_Tater_Salad_903H_3M_Choke_20200608072653.pdf

BOP Diagram Attachment:

COG_Tater_Salad_903H_3M_BOP_20200608072700.pdf

COG_Tater_Salad_903H_Flex_Hose_20200608072710.pdf

Pressure Rating (PSI): 5M

Rating Depth: 10615

Equipment: Annular. The BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP to choke manifold. See attached for specs and hydrostatic test chart.

Testing Procedure: BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all of the components installed will be functional and tested.

Choke Diagram Attachment:

COG_Tater_Salad_903H_5M_Choke_20200608072604.pdf

BOP Diagram Attachment:

COG_Tater_Salad_903H_5M_BOP_20200608072611.pdf

COG_Tater_Salad_903H_Flex_Hose_20200608072618.pdf

Operator Name: COG OPERATING LLC

Well Name: TATER SALAD FEDERAL COM

Well Number: 903H

Section 3 - Casing

| Casing ID | String Type | Hole Size | Csg Size | Condition | Standard | Tapered String | Top Set MD | Bottom Set MD | Top Set TVD | Bottom Set TVD | Top Set MSL | Bottom Set MSL | Calculated casing length MD | Grade | Weight | Joint Type | Collapse SF | Burst SF | Joint SF Type | Joint SF | Body SF Type | Body SF |
|-----------|--------------|-----------|----------|-----------|----------|----------------|------------|---------------|-------------|----------------|-------------|----------------|-----------------------------|--------|--------|-------------|-------------|----------|---------------|----------|--------------|---------|
| 1 | SURFACE | 14.75 | 10.75 | NEW | API | N | 0 | 575 | 0 | 575 | 2913 | 2338 | 575 | J-55 | 45.5 | ST&C | 8.131 | 16.0 | DRY | 18.84 | DRY | 18.84 |
| 2 | INTERMEDIATE | 9.875 | 7.625 | NEW | API | N | 0 | 9900 | 0 | 9700 | -6907 | -6787 | 9900 | HCL-80 | 29.7 | OTHER - BTC | 1.79 | 1.33 | DRY | 2.45 | DRY | 2.45 |
| 3 | PRODUCTION | 6.75 | 5.5 | NEW | API | Y | 0 | 20777 | 0 | 10615 | -6907 | -7702 | 20777 | P-110 | 23 | OTHER - SF | 2.2 | 2.61 | DRY | 2.91 | DRY | 2.91 |

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

COG_Tater_Salad_903H_Casing_Prog_20200608072929.pdf

Operator Name: COG OPERATING LLC

Well Name: TATER SALAD FEDERAL COM

Well Number: 903H

Casing Attachments

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

COG_Tater_Salad_903H_Casing_Prog_20200608073032.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

COG_Tater_Salad_903H_Casing_Prog_20200608073108.pdf

Casing Design Assumptions and Worksheet(s):

COG_Tater_Salad_903H_Casing_Prog_20200608073136.pdf

Section 4 - Cement

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|--------------|-----------|------------------|--------|-----------|--------------|-------|---------|-------|---------|-----------------------|--------------|
| SURFACE | Lead | 1 | 0 | 575 | 160 | 1.75 | 13.5 | 280 | 50 | Class C | 4% Gel |
| SURFACE | Tail | | 0 | 575 | 250 | 1.34 | 14.8 | 335 | 50 | C | 2% CaCl2 |
| INTERMEDIATE | Lead | 1 | 0 | 9900 | 1400 | 2.8 | 11 | 3920 | 50 | NeoCem | No additives |
| INTERMEDIATE | Tail | | 0 | 9900 | 300 | 1.1 | 16.4 | 330 | 50 | Class H | No additives |
| PRODUCTION | Lead | 1 | 9400 | 2077 7 | 750 | 2 | 12.7 | 1500 | 35 | Lead: 35:65:6 H Blend | No additives |

Operator Name: COG OPERATING LLC

Well Name: TATER SALAD FEDERAL COM

Well Number: 903H

| String Type | Lead/Tail | Stage Tool Depth | Top MD | Bottom MD | Quantity(sx) | Yield | Density | Cu Ft | Excess% | Cement type | Additives |
|-------------|-----------|------------------|--------|-----------|--------------|-------|---------|-------|---------|--------------------------------|--------------|
| PRODUCTION | Tail | | 9400 | 2077 7 | 1200 | 1.24 | 14.4 | 1488 | 35 | Tail: 50:50:2 Class H Blend | No additives |

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times

Describe the mud monitoring system utilized: PVT/Pason/Visual Monitoring

Circulating Medium Table

| Top Depth | Bottom Depth | Mud Type | Min Weight (lbs/gal) | Max Weight (lbs/gal) | Density (lbs/cu ft) | Gel Strength (lbs/100 sqft) | PH | Viscosity (CP) | Salinity (ppm) | Filtration (cc) | Additional Characteristics |
|-----------|--------------|-------------------------------|----------------------|----------------------|---------------------|-----------------------------|----|----------------|----------------|-----------------|----------------------------|
| 575 | 9900 | OTHER : Brine Diesel Emulsion | 8.6 | 9.4 | | | | | | | Brine Diesel Emulsion |
| 9900 | 2077 7 | OIL-BASED MUD | 10.5 | 12 | | | | | | | OBM |
| 0 | 575 | OTHER : Fresh water gel | 8.4 | 8.6 | | | | | | | |

Operator Name: COG OPERATING LLC

Well Name: TATER SALAD FEDERAL COM

Well Number: 903H

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

None planned

List of open and cased hole logs run in the well:

COMPENSATED NEUTRON LOG,GAMMA RAY LOG,

Coring operation description for the well:

None planned

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 6625

Anticipated Surface Pressure: 4289

Anticipated Bottom Hole Temperature(F): 165

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geohazards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

COG_Tater_Salad_903H_H2S_Schem_20200608073437.pdf

COG_Tater_Salad_903H_H2S_SUP_20200608073444.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

COG_Tater_Salad_903H_AC_RPT_20200608073506.pdf

COG_Tater_Salad_903H_DirectionaI_Plan_20200608073513.pdf

Other proposed operations facets description:

Drilling Program.

Cement Program.

GCP.

Other proposed operations facets attachment:

COG_Tater_Salad_903H_Cement_Prog_20200608073529.pdf

COG_Tater_Salad_903H_Drilling_Prog_20200608073538.pdf

COG_Tater_Salad_903H_GCP_20200608073544.pdf

5.500_23.00__0.415__P110_RY_USS_TALON_HTQ_RD5.900_Data_Sheet_07_21_2020_20200930140549.pdf

Other Variance attachment:

EMERGENCY CALL LIST

| | <u>OFFICE</u> | <u>MOBILE</u> |
|--------------------------|----------------------|----------------------|
| COG OPERATING LLC OFFICE | 575-748-6940 | |
| SETH WILD | 432-683-7443 | 432-528-3633 |
| WALTER ROYE | 575-748-6940 | 432-934-1886 |

EMERGENCY RESPONSE NUMBERS

| | <u>OFFICE</u> |
|--|----------------------|
| STATE POLICE | 575-748-9718 |
| EDDY COUNTY SHERIFF | 575-746-2701 |
| EMERGENCY MEDICAL SERVICES (AMBULANCE) | 911 or 575-746-2701 |
| EDDY COUNTY EMERGENCY MANAGEMENT (HARRY BURGESS) | 575-887-9511 |
| STATE EMERGENCY RESPONSE CENTER (SERC) | 575-476-9620 |
| CARLSBAD POLICE DEPARTMENT | 575-885-2111 |
| CARLSBAD FIRE DEPARTMENT | 575-885-3125 |
| NEW MEXICO OIL CONSERVATION DIVISION | 575-748-1283 |
| INDIAN FIRE & SAFETY | 800-530-8693 |
| HALLIBURTON SERVICES | 800-844-8451 |

DELAWARE BASIN WEST

ATLAS PROSPECT (NM-E)

TATER SALAD & MOMBA FED (ATLAS 2628)

TATER SALAD FED COM 903H

OWB

Plan: PWP1

Standard Survey Report

20 May, 2020

Concho Resources LLC

Survey Report

| | | | |
|------------------|--------------------------------------|-------------------------------------|----------------------------------|
| Company: | DELAWARE BASIN WEST | Local Co-ordinate Reference: | Well TATER SALAD FED COM 903H |
| Project: | ATLAS PROSPECT (NM-E) | TVD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Site: | TATER SALAD & MOMBA FED (ATLAS 2628) | MD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Well: | TATER SALAD FED COM 903H | North Reference: | Grid |
| Wellbore: | OWB | Survey Calculation Method: | Minimum Curvature |
| Design: | PWP1 | Database: | edm |

| | | | |
|--------------------|--------------------------------------|----------------------|----------------|
| Project | ATLAS PROSPECT (NM-E) | | |
| Map System: | US State Plane 1927 (Exact solution) | System Datum: | Mean Sea Level |
| Geo Datum: | NAD 1927 (NADCON CONUS) | | |
| Map Zone: | New Mexico East 3001 | | |

| | | | | | |
|-----------------------------|--------------------------|----------|----------------------------|-----------------|-----------------------------------|
| Well | TATER SALAD FED COM 903H | | | | |
| Well Position | +N/-S | 0.0 usft | Northing: | 376,449.50 usft | Latitude: 32° 2' 4.647 N |
| | +E/-W | 0.0 usft | Easting: | 592,345.00 usft | Longitude: 104° 2' 7.187 W |
| Position Uncertainty | | 3.0 usft | Wellhead Elevation: | usft | Ground Level: 2,913.1 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OWB | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2015 | 3/24/2020 | 6.85 | 59.78 | 47,496.77681472 |

| | | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|--|
| Design | PWP1 | | | | |
| Audit Notes: | | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.0 | |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) | |
| | 10,615.0 | 0.0 | 0.0 | 354.15 | |

| | | | | | |
|----------------------------|------------------|--------------------------|---------------------|------------------------------------|--|
| Survey Tool Program | Date | 5/20/2020 | | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description | |
| 0.0 | 10,020.0 | PWP1 (OWB) | Standard Keeper 104 | Standard Wireline Keeper ver 1.0.4 | |
| 10,020.0 | 20,775.9 | PWP1 (OWB) | MWD+IFR1+FDIR | OWSG MWD + IFR1 + FDIR Correction | |

| | | | | | | | | | | |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| Planned Survey | | | | | | | | | | |
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 600.0 | 0.00 | 0.00 | 600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 700.0 | 0.00 | 0.00 | 700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 800.0 | 0.00 | 0.00 | 800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 900.0 | 0.00 | 0.00 | 900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 1,000.0 | 0.00 | 0.00 | 1,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 1,100.0 | 0.00 | 0.00 | 1,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 1,200.0 | 0.00 | 0.00 | 1,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 1,300.0 | 0.00 | 0.00 | 1,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |
| 1,400.0 | 0.00 | 0.00 | 1,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | |

Concho Resources LLC

Survey Report

| | | | |
|------------------|--------------------------------------|-------------------------------------|----------------------------------|
| Company: | DELAWARE BASIN WEST | Local Co-ordinate Reference: | Well TATER SALAD FED COM 903H |
| Project: | ATLAS PROSPECT (NM-E) | TVD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Site: | TATER SALAD & MOMBA FED (ATLAS 2628) | MD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Well: | TATER SALAD FED COM 903H | North Reference: | Grid |
| Wellbore: | OWB | Survey Calculation Method: | Minimum Curvature |
| Design: | PWP1 | Database: | edm |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 1,500.0 | 0.00 | 0.00 | 1,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 0.00 | 0.00 | 1,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 0.00 | 0.00 | 1,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 0.00 | 0.00 | 1,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,900.0 | 0.00 | 0.00 | 1,900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 0.00 | 0.00 | 2,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 0.00 | 0.00 | 2,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 0.00 | 0.00 | 2,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 0.00 | 0.00 | 2,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 0.00 | 0.00 | 2,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 0.00 | 0.00 | 2,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| Start Build 2.00 | | | | | | | | | |
| 2,600.0 | 2.00 | 293.00 | 2,600.0 | 0.7 | -1.6 | 0.8 | 2.00 | 2.00 | 0.00 |
| 2,700.0 | 4.00 | 293.00 | 2,699.8 | 2.7 | -6.4 | 3.4 | 2.00 | 2.00 | 0.00 |
| 2,715.0 | 4.30 | 293.00 | 2,714.8 | 3.2 | -7.4 | 3.9 | 2.00 | 2.00 | 0.00 |
| Start 7305.9 hold at 2715.0 MD | | | | | | | | | |
| 2,800.0 | 4.30 | 293.00 | 2,799.6 | 5.6 | -13.3 | 7.0 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 4.30 | 293.00 | 2,899.3 | 8.6 | -20.2 | 10.6 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 4.30 | 293.00 | 2,999.0 | 11.5 | -27.1 | 14.2 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 4.30 | 293.00 | 3,098.7 | 14.4 | -34.0 | 17.8 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 4.30 | 293.00 | 3,198.4 | 17.4 | -40.9 | 21.4 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 4.30 | 293.00 | 3,298.2 | 20.3 | -47.8 | 25.1 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 4.30 | 293.00 | 3,397.9 | 23.2 | -54.7 | 28.7 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 4.30 | 293.00 | 3,497.6 | 26.1 | -61.6 | 32.3 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 4.30 | 293.00 | 3,597.3 | 29.1 | -68.5 | 35.9 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 4.30 | 293.00 | 3,697.0 | 32.0 | -75.4 | 39.5 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 4.30 | 293.00 | 3,796.7 | 34.9 | -82.3 | 43.1 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 4.30 | 293.00 | 3,896.5 | 37.9 | -89.2 | 46.8 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 4.30 | 293.00 | 3,996.2 | 40.8 | -96.1 | 50.4 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 4.30 | 293.00 | 4,095.9 | 43.7 | -103.0 | 54.0 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 4.30 | 293.00 | 4,195.6 | 46.7 | -109.9 | 57.6 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 4.30 | 293.00 | 4,295.3 | 49.6 | -116.8 | 61.2 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 4.30 | 293.00 | 4,395.1 | 52.5 | -123.7 | 64.9 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 4.30 | 293.00 | 4,494.8 | 55.4 | -130.6 | 68.5 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 4.30 | 293.00 | 4,594.5 | 58.4 | -137.5 | 72.1 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 4.30 | 293.00 | 4,694.2 | 61.3 | -144.4 | 75.7 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 4.30 | 293.00 | 4,793.9 | 64.2 | -151.3 | 79.3 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 4.30 | 293.00 | 4,893.6 | 67.2 | -158.2 | 82.9 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 4.30 | 293.00 | 4,993.4 | 70.1 | -165.1 | 86.6 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 4.30 | 293.00 | 5,093.1 | 73.0 | -172.0 | 90.2 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 4.30 | 293.00 | 5,192.8 | 76.0 | -178.9 | 93.8 | 0.00 | 0.00 | 0.00 |
| 5,300.0 | 4.30 | 293.00 | 5,292.5 | 78.9 | -185.8 | 97.4 | 0.00 | 0.00 | 0.00 |
| 5,400.0 | 4.30 | 293.00 | 5,392.2 | 81.8 | -192.7 | 101.0 | 0.00 | 0.00 | 0.00 |

Concho Resources LLC

Survey Report

| | | | |
|------------------|--------------------------------------|-------------------------------------|----------------------------------|
| Company: | DELAWARE BASIN WEST | Local Co-ordinate Reference: | Well TATER SALAD FED COM 903H |
| Project: | ATLAS PROSPECT (NM-E) | TVD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Site: | TATER SALAD & MOMBA FED (ATLAS 2628) | MD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Well: | TATER SALAD FED COM 903H | North Reference: | Grid |
| Wellbore: | OWB | Survey Calculation Method: | Minimum Curvature |
| Design: | PWP1 | Database: | edm |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 5,500.0 | 4.30 | 293.00 | 5,492.0 | 84.7 | -199.6 | 104.7 | 0.00 | 0.00 | 0.00 |
| 5,600.0 | 4.30 | 293.00 | 5,591.7 | 87.7 | -206.5 | 108.3 | 0.00 | 0.00 | 0.00 |
| 5,700.0 | 4.30 | 293.00 | 5,691.4 | 90.6 | -213.4 | 111.9 | 0.00 | 0.00 | 0.00 |
| 5,800.0 | 4.30 | 293.00 | 5,791.1 | 93.5 | -220.3 | 115.5 | 0.00 | 0.00 | 0.00 |
| 5,900.0 | 4.30 | 293.00 | 5,890.8 | 96.5 | -227.2 | 119.1 | 0.00 | 0.00 | 0.00 |
| 6,000.0 | 4.30 | 293.00 | 5,990.6 | 99.4 | -234.1 | 122.7 | 0.00 | 0.00 | 0.00 |
| 6,100.0 | 4.30 | 293.00 | 6,090.3 | 102.3 | -241.0 | 126.4 | 0.00 | 0.00 | 0.00 |
| 6,200.0 | 4.30 | 293.00 | 6,190.0 | 105.2 | -248.0 | 130.0 | 0.00 | 0.00 | 0.00 |
| 6,300.0 | 4.30 | 293.00 | 6,289.7 | 108.2 | -254.9 | 133.6 | 0.00 | 0.00 | 0.00 |
| 6,400.0 | 4.30 | 293.00 | 6,389.4 | 111.1 | -261.8 | 137.2 | 0.00 | 0.00 | 0.00 |
| 6,500.0 | 4.30 | 293.00 | 6,489.1 | 114.0 | -268.7 | 140.8 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 4.30 | 293.00 | 6,588.9 | 117.0 | -275.6 | 144.5 | 0.00 | 0.00 | 0.00 |
| 6,700.0 | 4.30 | 293.00 | 6,688.6 | 119.9 | -282.5 | 148.1 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 4.30 | 293.00 | 6,788.3 | 122.8 | -289.4 | 151.7 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 4.30 | 293.00 | 6,888.0 | 125.8 | -296.3 | 155.3 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 4.30 | 293.00 | 6,987.7 | 128.7 | -303.2 | 158.9 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 4.30 | 293.00 | 7,087.5 | 131.6 | -310.1 | 162.5 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 4.30 | 293.00 | 7,187.2 | 134.5 | -317.0 | 166.2 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 4.30 | 293.00 | 7,286.9 | 137.5 | -323.9 | 169.8 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 4.30 | 293.00 | 7,386.6 | 140.4 | -330.8 | 173.4 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 4.30 | 293.00 | 7,486.3 | 143.3 | -337.7 | 177.0 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 4.30 | 293.00 | 7,586.0 | 146.3 | -344.6 | 180.6 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 4.30 | 293.00 | 7,685.8 | 149.2 | -351.5 | 184.2 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 4.30 | 293.00 | 7,785.5 | 152.1 | -358.4 | 187.9 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 4.30 | 293.00 | 7,885.2 | 155.1 | -365.3 | 191.5 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 4.30 | 293.00 | 7,984.9 | 158.0 | -372.2 | 195.1 | 0.00 | 0.00 | 0.00 |
| 8,100.0 | 4.30 | 293.00 | 8,084.6 | 160.9 | -379.1 | 198.7 | 0.00 | 0.00 | 0.00 |
| 8,200.0 | 4.30 | 293.00 | 8,184.4 | 163.8 | -386.0 | 202.3 | 0.00 | 0.00 | 0.00 |
| 8,300.0 | 4.30 | 293.00 | 8,284.1 | 166.8 | -392.9 | 206.0 | 0.00 | 0.00 | 0.00 |
| 8,400.0 | 4.30 | 293.00 | 8,383.8 | 169.7 | -399.8 | 209.6 | 0.00 | 0.00 | 0.00 |
| 8,500.0 | 4.30 | 293.00 | 8,483.5 | 172.6 | -406.7 | 213.2 | 0.00 | 0.00 | 0.00 |
| 8,600.0 | 4.30 | 293.00 | 8,583.2 | 175.6 | -413.6 | 216.8 | 0.00 | 0.00 | 0.00 |
| 8,700.0 | 4.30 | 293.00 | 8,683.0 | 178.5 | -420.5 | 220.4 | 0.00 | 0.00 | 0.00 |
| 8,800.0 | 4.30 | 293.00 | 8,782.7 | 181.4 | -427.4 | 224.0 | 0.00 | 0.00 | 0.00 |
| 8,900.0 | 4.30 | 293.00 | 8,882.4 | 184.3 | -434.3 | 227.7 | 0.00 | 0.00 | 0.00 |
| 9,000.0 | 4.30 | 293.00 | 8,982.1 | 187.3 | -441.2 | 231.3 | 0.00 | 0.00 | 0.00 |
| 9,100.0 | 4.30 | 293.00 | 9,081.8 | 190.2 | -448.1 | 234.9 | 0.00 | 0.00 | 0.00 |
| 9,200.0 | 4.30 | 293.00 | 9,181.5 | 193.1 | -455.0 | 238.5 | 0.00 | 0.00 | 0.00 |
| 9,300.0 | 4.30 | 293.00 | 9,281.3 | 196.1 | -461.9 | 242.1 | 0.00 | 0.00 | 0.00 |
| 9,400.0 | 4.30 | 293.00 | 9,381.0 | 199.0 | -468.8 | 245.8 | 0.00 | 0.00 | 0.00 |
| 9,500.0 | 4.30 | 293.00 | 9,480.7 | 201.9 | -475.7 | 249.4 | 0.00 | 0.00 | 0.00 |
| 9,600.0 | 4.30 | 293.00 | 9,580.4 | 204.9 | -482.6 | 253.0 | 0.00 | 0.00 | 0.00 |
| 9,700.0 | 4.30 | 293.00 | 9,680.1 | 207.8 | -489.5 | 256.6 | 0.00 | 0.00 | 0.00 |
| 9,800.0 | 4.30 | 293.00 | 9,779.9 | 210.7 | -496.4 | 260.2 | 0.00 | 0.00 | 0.00 |

Concho Resources LLC

Survey Report

| | | | |
|------------------|--------------------------------------|-------------------------------------|----------------------------------|
| Company: | DELAWARE BASIN WEST | Local Co-ordinate Reference: | Well TATER SALAD FED COM 903H |
| Project: | ATLAS PROSPECT (NM-E) | TVD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Site: | TATER SALAD & MOMBA FED (ATLAS 2628) | MD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Well: | TATER SALAD FED COM 903H | North Reference: | Grid |
| Wellbore: | OWB | Survey Calculation Method: | Minimum Curvature |
| Design: | PWP1 | Database: | edm |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|--|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,900.0 | 4.30 | 293.00 | 9,879.6 | 213.6 | -503.3 | 263.8 | 0.00 | 0.00 | 0.00 |
| 10,000.0 | 4.30 | 293.00 | 9,979.3 | 216.6 | -510.2 | 267.5 | 0.00 | 0.00 | 0.00 |
| 10,020.9 | 4.30 | 293.00 | 10,000.1 | 217.2 | -511.7 | 268.2 | 0.00 | 0.00 | 0.00 |
| Start DLS 10.00 TFO 41.10 | | | | | | | | | |
| 10,100.0 | 11.50 | 319.99 | 10,078.5 | 224.4 | -519.5 | 276.2 | 10.00 | 9.10 | 34.11 |
| 10,200.0 | 21.34 | 326.76 | 10,174.3 | 247.3 | -535.9 | 300.7 | 10.00 | 9.83 | 6.77 |
| 10,300.0 | 31.27 | 329.36 | 10,263.8 | 285.0 | -559.2 | 340.5 | 10.00 | 9.94 | 2.60 |
| 10,400.0 | 41.24 | 330.79 | 10,344.3 | 336.2 | -588.5 | 394.4 | 10.00 | 9.96 | 1.43 |
| 10,500.0 | 51.21 | 331.75 | 10,413.4 | 399.4 | -623.2 | 460.9 | 10.00 | 9.98 | 0.95 |
| 10,600.0 | 61.19 | 332.47 | 10,469.0 | 472.8 | -662.0 | 537.8 | 10.00 | 9.98 | 0.72 |
| 10,700.0 | 71.18 | 333.06 | 10,509.3 | 554.1 | -703.8 | 622.9 | 10.00 | 9.99 | 0.59 |
| 10,800.0 | 81.17 | 333.58 | 10,533.2 | 640.7 | -747.3 | 713.6 | 10.00 | 9.99 | 0.52 |
| 10,884.1 | 89.57 | 334.00 | 10,540.0 | 715.9 | -784.3 | 792.1 | 10.00 | 9.99 | 0.50 |
| Start DLS 2.00 TFO 90.11 | | | | | | | | | |
| 10,900.0 | 89.57 | 334.32 | 10,540.1 | 730.2 | -791.2 | 807.0 | 2.00 | 0.00 | 2.00 |
| 11,000.0 | 89.57 | 336.32 | 10,540.8 | 821.0 | -833.0 | 901.7 | 2.00 | 0.00 | 2.00 |
| 11,100.0 | 89.56 | 338.32 | 10,541.6 | 913.3 | -871.5 | 997.4 | 2.00 | 0.00 | 2.00 |
| 11,200.0 | 89.56 | 340.32 | 10,542.4 | 1,006.8 | -906.8 | 1,094.0 | 2.00 | 0.00 | 2.00 |
| 11,300.0 | 89.56 | 342.32 | 10,543.1 | 1,101.6 | -938.9 | 1,191.5 | 2.00 | 0.00 | 2.00 |
| 11,400.0 | 89.56 | 344.32 | 10,543.9 | 1,197.3 | -967.6 | 1,289.7 | 2.00 | 0.00 | 2.00 |
| 11,500.0 | 89.56 | 346.32 | 10,544.7 | 1,294.1 | -992.9 | 1,388.5 | 2.00 | 0.00 | 2.00 |
| 11,600.0 | 89.56 | 348.32 | 10,545.5 | 1,391.6 | -1,014.9 | 1,487.8 | 2.00 | 0.00 | 2.00 |
| 11,700.0 | 89.56 | 350.32 | 10,546.2 | 1,489.9 | -1,033.4 | 1,587.5 | 2.00 | 0.00 | 2.00 |
| 11,800.0 | 89.56 | 352.32 | 10,547.0 | 1,588.7 | -1,048.5 | 1,687.3 | 2.00 | 0.00 | 2.00 |
| 11,900.0 | 89.56 | 354.32 | 10,547.8 | 1,688.0 | -1,060.1 | 1,787.3 | 2.00 | 0.00 | 2.00 |
| 12,000.0 | 89.56 | 356.32 | 10,548.5 | 1,787.7 | -1,068.3 | 1,887.3 | 2.00 | 0.00 | 2.00 |
| 12,100.0 | 89.56 | 358.32 | 10,549.3 | 1,887.6 | -1,073.0 | 1,987.1 | 2.00 | 0.00 | 2.00 |
| 12,181.3 | 89.57 | 359.94 | 10,549.9 | 1,968.9 | -1,074.2 | 2,068.1 | 2.00 | 0.00 | 2.00 |
| Start 8595.2 hold at 12181.3 MD | | | | | | | | | |
| 12,200.0 | 89.57 | 359.94 | 10,550.1 | 1,987.6 | -1,074.2 | 2,086.7 | 0.00 | 0.00 | 0.00 |
| 12,300.0 | 89.57 | 359.94 | 10,550.8 | 2,087.6 | -1,074.3 | 2,186.2 | 0.00 | 0.00 | 0.00 |
| 12,400.0 | 89.57 | 359.94 | 10,551.6 | 2,187.6 | -1,074.4 | 2,285.7 | 0.00 | 0.00 | 0.00 |
| 12,500.0 | 89.57 | 359.94 | 10,552.3 | 2,287.5 | -1,074.5 | 2,385.2 | 0.00 | 0.00 | 0.00 |
| 12,600.0 | 89.57 | 359.94 | 10,553.1 | 2,387.5 | -1,074.6 | 2,484.7 | 0.00 | 0.00 | 0.00 |
| 12,700.0 | 89.57 | 359.94 | 10,553.8 | 2,487.5 | -1,074.7 | 2,584.1 | 0.00 | 0.00 | 0.00 |
| 12,800.0 | 89.57 | 359.94 | 10,554.6 | 2,587.5 | -1,074.8 | 2,683.6 | 0.00 | 0.00 | 0.00 |
| 12,900.0 | 89.57 | 359.94 | 10,555.4 | 2,687.5 | -1,074.9 | 2,783.1 | 0.00 | 0.00 | 0.00 |
| 13,000.0 | 89.57 | 359.94 | 10,556.1 | 2,787.5 | -1,075.0 | 2,882.6 | 0.00 | 0.00 | 0.00 |
| 13,100.0 | 89.57 | 359.94 | 10,556.9 | 2,887.5 | -1,075.1 | 2,982.1 | 0.00 | 0.00 | 0.00 |
| 13,200.0 | 89.57 | 359.94 | 10,557.6 | 2,987.5 | -1,075.2 | 3,081.6 | 0.00 | 0.00 | 0.00 |
| 13,300.0 | 89.57 | 359.94 | 10,558.4 | 3,087.5 | -1,075.3 | 3,181.1 | 0.00 | 0.00 | 0.00 |
| 13,400.0 | 89.57 | 359.94 | 10,559.1 | 3,187.5 | -1,075.4 | 3,280.6 | 0.00 | 0.00 | 0.00 |
| 13,500.0 | 89.57 | 359.94 | 10,559.9 | 3,287.5 | -1,075.5 | 3,380.0 | 0.00 | 0.00 | 0.00 |

Concho Resources LLC

Survey Report

| | | | |
|------------------|--------------------------------------|-------------------------------------|----------------------------------|
| Company: | DELAWARE BASIN WEST | Local Co-ordinate Reference: | Well TATER SALAD FED COM 903H |
| Project: | ATLAS PROSPECT (NM-E) | TVD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Site: | TATER SALAD & MOMBA FED (ATLAS 2628) | MD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Well: | TATER SALAD FED COM 903H | North Reference: | Grid |
| Wellbore: | OWB | Survey Calculation Method: | Minimum Curvature |
| Design: | PWP1 | Database: | edm |

| Planned Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 13,600.0 | 89.57 | 359.94 | 10,560.7 | 3,387.5 | -1,075.6 | 3,479.5 | 0.00 | 0.00 | 0.00 |
| 13,700.0 | 89.57 | 359.94 | 10,561.4 | 3,487.5 | -1,075.7 | 3,579.0 | 0.00 | 0.00 | 0.00 |
| 13,800.0 | 89.57 | 359.94 | 10,562.2 | 3,587.5 | -1,075.8 | 3,678.5 | 0.00 | 0.00 | 0.00 |
| 13,900.0 | 89.57 | 359.94 | 10,562.9 | 3,687.5 | -1,075.9 | 3,778.0 | 0.00 | 0.00 | 0.00 |
| 14,000.0 | 89.57 | 359.94 | 10,563.7 | 3,787.5 | -1,076.0 | 3,877.5 | 0.00 | 0.00 | 0.00 |
| 14,100.0 | 89.57 | 359.94 | 10,564.4 | 3,887.5 | -1,076.1 | 3,977.0 | 0.00 | 0.00 | 0.00 |
| 14,200.0 | 89.57 | 359.94 | 10,565.2 | 3,987.5 | -1,076.2 | 4,076.4 | 0.00 | 0.00 | 0.00 |
| 14,300.0 | 89.57 | 359.94 | 10,566.0 | 4,087.5 | -1,076.3 | 4,175.9 | 0.00 | 0.00 | 0.00 |
| 14,400.0 | 89.57 | 359.94 | 10,566.7 | 4,187.5 | -1,076.4 | 4,275.4 | 0.00 | 0.00 | 0.00 |
| 14,500.0 | 89.57 | 359.94 | 10,567.5 | 4,287.5 | -1,076.5 | 4,374.9 | 0.00 | 0.00 | 0.00 |
| 14,600.0 | 89.57 | 359.94 | 10,568.2 | 4,387.5 | -1,076.6 | 4,474.4 | 0.00 | 0.00 | 0.00 |
| 14,700.0 | 89.57 | 359.94 | 10,569.0 | 4,487.5 | -1,076.7 | 4,573.9 | 0.00 | 0.00 | 0.00 |
| 14,800.0 | 89.57 | 359.94 | 10,569.7 | 4,587.5 | -1,076.8 | 4,673.4 | 0.00 | 0.00 | 0.00 |
| 14,900.0 | 89.57 | 359.94 | 10,570.5 | 4,687.5 | -1,076.9 | 4,772.8 | 0.00 | 0.00 | 0.00 |
| 15,000.0 | 89.57 | 359.94 | 10,571.3 | 4,787.5 | -1,077.0 | 4,872.3 | 0.00 | 0.00 | 0.00 |
| 15,100.0 | 89.57 | 359.94 | 10,572.0 | 4,887.5 | -1,077.1 | 4,971.8 | 0.00 | 0.00 | 0.00 |
| 15,200.0 | 89.57 | 359.94 | 10,572.8 | 4,987.5 | -1,077.2 | 5,071.3 | 0.00 | 0.00 | 0.00 |
| 15,300.0 | 89.57 | 359.94 | 10,573.5 | 5,087.5 | -1,077.3 | 5,170.8 | 0.00 | 0.00 | 0.00 |
| 15,400.0 | 89.57 | 359.94 | 10,574.3 | 5,187.5 | -1,077.4 | 5,270.3 | 0.00 | 0.00 | 0.00 |
| 15,500.0 | 89.57 | 359.94 | 10,575.0 | 5,287.5 | -1,077.5 | 5,369.8 | 0.00 | 0.00 | 0.00 |
| 15,600.0 | 89.57 | 359.94 | 10,575.8 | 5,387.5 | -1,077.6 | 5,469.2 | 0.00 | 0.00 | 0.00 |
| 15,700.0 | 89.57 | 359.94 | 10,576.6 | 5,487.5 | -1,077.6 | 5,568.7 | 0.00 | 0.00 | 0.00 |
| 15,800.0 | 89.57 | 359.94 | 10,577.3 | 5,587.5 | -1,077.7 | 5,668.2 | 0.00 | 0.00 | 0.00 |
| 15,900.0 | 89.57 | 359.94 | 10,578.1 | 5,687.4 | -1,077.8 | 5,767.7 | 0.00 | 0.00 | 0.00 |
| 16,000.0 | 89.57 | 359.94 | 10,578.8 | 5,787.4 | -1,077.9 | 5,867.2 | 0.00 | 0.00 | 0.00 |
| 16,100.0 | 89.57 | 359.94 | 10,579.6 | 5,887.4 | -1,078.0 | 5,966.7 | 0.00 | 0.00 | 0.00 |
| 16,200.0 | 89.57 | 359.94 | 10,580.3 | 5,987.4 | -1,078.1 | 6,066.2 | 0.00 | 0.00 | 0.00 |
| 16,300.0 | 89.57 | 359.94 | 10,581.1 | 6,087.4 | -1,078.2 | 6,165.6 | 0.00 | 0.00 | 0.00 |
| 16,400.0 | 89.57 | 359.94 | 10,581.9 | 6,187.4 | -1,078.3 | 6,265.1 | 0.00 | 0.00 | 0.00 |
| 16,500.0 | 89.57 | 359.94 | 10,582.6 | 6,287.4 | -1,078.4 | 6,364.6 | 0.00 | 0.00 | 0.00 |
| 16,600.0 | 89.57 | 359.94 | 10,583.4 | 6,387.4 | -1,078.5 | 6,464.1 | 0.00 | 0.00 | 0.00 |
| 16,700.0 | 89.57 | 359.94 | 10,584.1 | 6,487.4 | -1,078.6 | 6,563.6 | 0.00 | 0.00 | 0.00 |
| 16,800.0 | 89.57 | 359.94 | 10,584.9 | 6,587.4 | -1,078.7 | 6,663.1 | 0.00 | 0.00 | 0.00 |
| 16,900.0 | 89.57 | 359.94 | 10,585.6 | 6,687.4 | -1,078.8 | 6,762.6 | 0.00 | 0.00 | 0.00 |
| 17,000.0 | 89.57 | 359.94 | 10,586.4 | 6,787.4 | -1,078.9 | 6,862.0 | 0.00 | 0.00 | 0.00 |
| 17,100.0 | 89.57 | 359.94 | 10,587.2 | 6,887.4 | -1,079.0 | 6,961.5 | 0.00 | 0.00 | 0.00 |
| 17,200.0 | 89.57 | 359.94 | 10,587.9 | 6,987.4 | -1,079.1 | 7,061.0 | 0.00 | 0.00 | 0.00 |
| 17,300.0 | 89.57 | 359.94 | 10,588.7 | 7,087.4 | -1,079.2 | 7,160.5 | 0.00 | 0.00 | 0.00 |
| 17,400.0 | 89.57 | 359.94 | 10,589.4 | 7,187.4 | -1,079.3 | 7,260.0 | 0.00 | 0.00 | 0.00 |
| 17,500.0 | 89.57 | 359.94 | 10,590.2 | 7,287.4 | -1,079.4 | 7,359.5 | 0.00 | 0.00 | 0.00 |
| 17,600.0 | 89.57 | 359.94 | 10,590.9 | 7,387.4 | -1,079.5 | 7,459.0 | 0.00 | 0.00 | 0.00 |
| 17,700.0 | 89.57 | 359.94 | 10,591.7 | 7,487.4 | -1,079.6 | 7,558.4 | 0.00 | 0.00 | 0.00 |
| 17,800.0 | 89.57 | 359.94 | 10,592.5 | 7,587.4 | -1,079.7 | 7,657.9 | 0.00 | 0.00 | 0.00 |
| 17,900.0 | 89.57 | 359.94 | 10,593.2 | 7,687.4 | -1,079.8 | 7,757.4 | 0.00 | 0.00 | 0.00 |

Concho Resources LLC

Survey Report

| | | | |
|------------------|--------------------------------------|-------------------------------------|----------------------------------|
| Company: | DELAWARE BASIN WEST | Local Co-ordinate Reference: | Well TATER SALAD FED COM 903H |
| Project: | ATLAS PROSPECT (NM-E) | TVD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Site: | TATER SALAD & MOMBA FED (ATLAS 2628) | MD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Well: | TATER SALAD FED COM 903H | North Reference: | Grid |
| Wellbore: | OWB | Survey Calculation Method: | Minimum Curvature |
| Design: | PWP1 | Database: | edm |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 18,000.0 | 89.57 | 359.94 | 10,594.0 | 7,787.4 | -1,079.9 | 7,856.9 | 0.00 | 0.00 | 0.00 |
| 18,100.0 | 89.57 | 359.94 | 10,594.7 | 7,887.4 | -1,080.0 | 7,956.4 | 0.00 | 0.00 | 0.00 |
| 18,200.0 | 89.57 | 359.94 | 10,595.5 | 7,987.4 | -1,080.1 | 8,055.9 | 0.00 | 0.00 | 0.00 |
| 18,300.0 | 89.57 | 359.94 | 10,596.2 | 8,087.4 | -1,080.2 | 8,155.4 | 0.00 | 0.00 | 0.00 |
| 18,400.0 | 89.57 | 359.94 | 10,597.0 | 8,187.4 | -1,080.3 | 8,254.9 | 0.00 | 0.00 | 0.00 |
| 18,500.0 | 89.57 | 359.94 | 10,597.8 | 8,287.4 | -1,080.4 | 8,354.3 | 0.00 | 0.00 | 0.00 |
| 18,600.0 | 89.57 | 359.94 | 10,598.5 | 8,387.4 | -1,080.5 | 8,453.8 | 0.00 | 0.00 | 0.00 |
| 18,700.0 | 89.57 | 359.94 | 10,599.3 | 8,487.4 | -1,080.6 | 8,553.3 | 0.00 | 0.00 | 0.00 |
| 18,800.0 | 89.57 | 359.94 | 10,600.0 | 8,587.4 | -1,080.7 | 8,652.8 | 0.00 | 0.00 | 0.00 |
| 18,900.0 | 89.57 | 359.94 | 10,600.8 | 8,687.4 | -1,080.8 | 8,752.3 | 0.00 | 0.00 | 0.00 |
| 19,000.0 | 89.57 | 359.94 | 10,601.5 | 8,787.4 | -1,080.9 | 8,851.8 | 0.00 | 0.00 | 0.00 |
| 19,100.0 | 89.57 | 359.94 | 10,602.3 | 8,887.4 | -1,081.0 | 8,951.3 | 0.00 | 0.00 | 0.00 |
| 19,200.0 | 89.57 | 359.94 | 10,603.1 | 8,987.4 | -1,081.1 | 9,050.7 | 0.00 | 0.00 | 0.00 |
| 19,300.0 | 89.57 | 359.94 | 10,603.8 | 9,087.4 | -1,081.2 | 9,150.2 | 0.00 | 0.00 | 0.00 |
| 19,400.0 | 89.57 | 359.94 | 10,604.6 | 9,187.3 | -1,081.3 | 9,249.7 | 0.00 | 0.00 | 0.00 |
| 19,500.0 | 89.57 | 359.94 | 10,605.3 | 9,287.3 | -1,081.4 | 9,349.2 | 0.00 | 0.00 | 0.00 |
| 19,600.0 | 89.57 | 359.94 | 10,606.1 | 9,387.3 | -1,081.5 | 9,448.7 | 0.00 | 0.00 | 0.00 |
| 19,700.0 | 89.57 | 359.94 | 10,606.8 | 9,487.3 | -1,081.6 | 9,548.2 | 0.00 | 0.00 | 0.00 |
| 19,800.0 | 89.57 | 359.94 | 10,607.6 | 9,587.3 | -1,081.6 | 9,647.7 | 0.00 | 0.00 | 0.00 |
| 19,900.0 | 89.57 | 359.94 | 10,608.4 | 9,687.3 | -1,081.7 | 9,747.1 | 0.00 | 0.00 | 0.00 |
| 20,000.0 | 89.57 | 359.94 | 10,609.1 | 9,787.3 | -1,081.8 | 9,846.6 | 0.00 | 0.00 | 0.00 |
| 20,100.0 | 89.57 | 359.94 | 10,609.9 | 9,887.3 | -1,081.9 | 9,946.1 | 0.00 | 0.00 | 0.00 |
| 20,200.0 | 89.57 | 359.94 | 10,610.6 | 9,987.3 | -1,082.0 | 10,045.6 | 0.00 | 0.00 | 0.00 |
| 20,300.0 | 89.57 | 359.94 | 10,611.4 | 10,087.3 | -1,082.1 | 10,145.1 | 0.00 | 0.00 | 0.00 |
| 20,400.0 | 89.57 | 359.94 | 10,612.1 | 10,187.3 | -1,082.2 | 10,244.6 | 0.00 | 0.00 | 0.00 |
| 20,500.0 | 89.57 | 359.94 | 10,612.9 | 10,287.3 | -1,082.3 | 10,344.1 | 0.00 | 0.00 | 0.00 |
| 20,600.0 | 89.57 | 359.94 | 10,613.7 | 10,387.3 | -1,082.4 | 10,443.5 | 0.00 | 0.00 | 0.00 |
| 20,700.0 | 89.57 | 359.94 | 10,614.4 | 10,487.3 | -1,082.5 | 10,543.0 | 0.00 | 0.00 | 0.00 |
| 20,776.5 | 89.57 | 359.94 | 10,615.0 | 10,563.8 | -1,082.6 | 10,619.1 | 0.00 | 0.00 | 0.00 |
| TD at 20776.5 | | | | | | | | | |

Concho Resources LLC

Survey Report

| | | | |
|------------------|--------------------------------------|-------------------------------------|----------------------------------|
| Company: | DELAWARE BASIN WEST | Local Co-ordinate Reference: | Well TATER SALAD FED COM 903H |
| Project: | ATLAS PROSPECT (NM-E) | TVD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Site: | TATER SALAD & MOMBA FED (ATLAS 2628) | MD Reference: | KB=27' @ 2940.1usft (Nabors 893) |
| Well: | TATER SALAD FED COM 903H | North Reference: | Grid |
| Wellbore: | OWB | Survey Calculation Method: | Minimum Curvature |
| Design: | PWP1 | Database: | edm |

Design Targets

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|-----------------|------------------|
| FTP (TATER SALAD F - plan misses target center by 482.4usft at 10601.3usft MD (10469.6 TVD, 473.8 N, -662.5 E) - Circle (radius 50.0) | 0.00 | 0.00 | 10,540.0 | 228.3 | -1,071.7 | 376,677.80 | 591,273.30 | 32° 2' 6.935 N | 104° 2' 19.630 W |
| LTP (TATER SALAD F - plan misses target center by 1.0usft at 20646.5usft MD (10614.0 TVD, 10433.8 N, -1082.5 E) - Point | 0.00 | 0.00 | 10,615.0 | 10,433.8 | -1,082.5 | 386,883.30 | 591,262.50 | 32° 3' 47.934 N | 104° 2' 19.432 W |
| PBHL (TATER SALAD - plan hits target center - Rectangle (sides W100.0 H10,335.5 D20.0) | -0.43 | 179.94 | 10,615.0 | 10,563.8 | -1,082.6 | 387,013.30 | 591,262.40 | 32° 3' 49.221 N | 104° 2' 19.429 W |

Plan Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
|-----------------------------|-----------------------------|-------------------|-----------------|---------------------------------|
| | | +N/-S (usft) | +E/-W (usft) | |
| 2500 | 2500 | 0 | 0 | Start Build 2.00 |
| 2715 | 2715 | 3 | -7 | Start 7305.9 hold at 2715.0 MD |
| 10,021 | 10,000 | 217 | -512 | Start DLS 10.00 TFO 41.10 |
| 10,884 | 10,540 | 716 | -784 | Start DLS 2.00 TFO 90.11 |
| 12,181 | 10,550 | 1969 | -1074 | Start 8595.2 hold at 12181.3 MD |
| 20,776 | 10,615 | 10,564 | -1083 | TD at 20776.5 |

Checked By: _____ Approved By: _____ Date: _____

Cementing Program

| Casing | # Sks | Wt. lb/ gal | Yld ft3/ sack | H ₂ O gal/sk | 500# Comp. Strength (hours) | Slurry Description |
|----------|-------|----------------|------------------|-------------------------|-----------------------------------|--------------------------------------|
| Surf. | 160 | 13.5 | 1.75 | 9 | 12 | Lead: Class C + 4% Gel |
| | 250 | 14.8 | 1.34 | 6.34 | 8 | Tail: Class C + 2% CaCl ₂ |
| Inter. | 1400 | 11 | 2.8 | 19 | 48 | Lead: NeoCem |
| | 300 | 16.4 | 1.1 | 5 | 8 | Tail: Class H |
| 5.5 Prod | 750 | 12.7 | 2 | 10.6 | 16 | Lead: 35:65:6 H Blend |
| | 1200 | 14.4 | 1.24 | 5.7 | 19 | Tail: 50:50:2 Class H Blend |

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

| Casing String | TOC | % Excess |
|------------------------------|--------|----------|
| Surface | 0' | 50% |
| 1 st Intermediate | 0' | 50% |
| Production | 9,400' | 35% |

COG Operating, LLC - Tater Salad Federal Com 903H

1. Geologic Formations

| | | | |
|---------------|-------------|-------------------------------|------|
| TVD of target | 10,615' EOL | Pilot hole depth | NA |
| MD at TD: | 20,777' | Deepest expected fresh water: | 175' |

| Formation | Depth (TVD) from KB | Water/Mineral Bearing/ Target Zone? | Hazards* |
|----------------------|------------------------|--|----------|
| Quaternary Fill | Surface | Water | |
| Rustler | 460 | Water | |
| Top of Salt | 590 | Salt | |
| Base of Salt | 2465 | Salt | |
| Lamar | 2665 | Salt Water | |
| Bell Canyon | 2700 | Salt Water | |
| Cherry Canyon | 3540 | Oil/Gas | |
| Brushy Canyon | 4790 | Oil/Gas | |
| Bone Spring Lime | 6365 | Oil/Gas | |
| 1st Bone Spring Sand | 7290 | Oil/Gas | |
| 3rd Bone Spring Sand | 9115 | Oil/Gas | |
| Wolfcamp | 9365 | Oil/Gas | |
| Wolfcamp B | 9865 | Oil/Gas | |
| Wolfcamp C | 10190 | Oil/Gas | |
| Wolfcamp D | 10490 | Target Oil/Gas | |

2. Casing Program

| Hole Size | Casing Interval | | Csg. Size | Weight (lbs) | Grade | Conn. | SF Collapse | SF Burst | SF Tension |
|---------------------------|-----------------|--------|-----------|-----------------|-------|-------|----------------|----------|--------------------|
| | From | To | | | | | | | |
| 14.75 | 0 | 575 | 10.75 | 45.5 | J55 | STC | 8.13 | 16.01 | 18.84 |
| 9.875 | 0 | 9900 | 7.625 | 29.7 | HCL80 | BTC | 1.79 | 1.33 | 2.45 |
| 6.75 | 0 | 9700 | 5.5" | 23 | P110 | BTC | 2.31 | 2.61 | 2.99 |
| 6.75 | 9700 | 20,777 | 5.5" | 23 | P110 | SF | 2.20 | 2.61 | 2.91 |
| BLM Minimum Safety Factor | | | | | | | 1.125 | 1 | 1.6 Dry 1.8 Wet |

Intermediate casing will be kept at least 1/3 full while running casing to mitigate collapse. Intermediate burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

| | |
|--|--------|
| | Y or N |
| Is casing new? If used, attach certification as required in Onshore Order #1 | Y |
| Does casing meet API specifications? If no, attach casing specification sheet. | Y |
| Is premium or uncommon casing planned? If yes attach casing specification sheet. | N |
| Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria). | Y |
| Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing? | Y |
| | |
| Is well located within Capitan Reef? | N |
| If yes, does production casing cement tie back a minimum of 50' above the Reef? | |
| Is well within the designated 4 string boundary? | |
| | |
| Is well located in SOPA but not in R-111-P? | N |
| If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing? | |
| | |
| Is well located in R-111-P and SOPA? | N |
| If yes, are the first three strings cemented to surface? | |
| Is 2 nd string set 100' to 600' below the base of salt? | |
| | |
| Is well located in high Cave/Karst? | N |
| If yes, are there two strings cemented to surface? | |
| (For 2 string wells) If yes, is there a contingency casing if lost circulation occurs? | |
| | |
| Is well located in critical Cave/Karst? | N |
| If yes, are there three strings cemented to surface? | |

3. Cementing Program

| Casing | # Sks | Wt. lb/ gal | Yld ft3/ sack | H ₂ O gal/sk | 500# Comp. Strength (hours) | Slurry Description |
|----------|-------|----------------|------------------|-------------------------|-----------------------------------|--------------------------------------|
| Surf. | 160 | 13.5 | 1.75 | 9 | 12 | Lead: Class C + 4% Gel |
| | 250 | 14.8 | 1.34 | 6.34 | 8 | Tail: Class C + 2% CaCl ₂ |
| Inter. | 1400 | 11 | 2.8 | 19 | 48 | Lead: NeoCem |
| | 300 | 16.4 | 1.1 | 5 | 8 | Tail: Class H |
| 5.5 Prod | 750 | 12.7 | 2 | 10.6 | 16 | Lead: 35:65:6 H Blend |
| | 1200 | 14.4 | 1.24 | 5.7 | 19 | Tail: 50:50:2 Class H Blend |

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

| Casing String | TOC | % Excess |
|------------------------------|--------|----------|
| Surface | 0' | 50% |
| 1 st Intermediate | 0' | 50% |
| Production | 9,400' | 35% |

4. Pressure Control Equipment

| | |
|---|---|
| N | A variance is requested for the use of a diverter on the surface casing. See attached for schematic. |
|---|---|

| BOP installed and tested before drilling which hole? | Size? | Min. Required WP | Type | x | Tested to: |
|--|---------|------------------|------------|---|------------|
| 12-1/4" | 13-5/8" | 3M | Annular | x | 2500 psi |
| | | | Blind Ram | | 3M |
| | | | Pipe Ram | x | |
| | | | Double Ram | x | |
| | | | Other* | | |
| 8 1/2" | 13-5/8" | 5M | 5M Annular | x | 2500 psi |
| | | | Blind Ram | | 5M |
| | | | Pipe Ram | x | |
| | | | Double Ram | x | |
| | | | Other* | | |

BOP and BOPE will be installed per Onshore Order #2 requirements prior to drilling below the surface casing and will be rated to the above pressure rating or greater, see attached diagrams. Required safety valves, with appropriate wrenches and subs for the drill string being utilized, will be in the open position and accessible on the rig floor. BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valves (inside BOP and full-opening valve) with appropriate wrenches and choke lines and choke manifold. See attached schematics.

| | |
|---|---|
| Y | Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or 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. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i. |
| Y | A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart. |
| N | Are anchors required by manufacturer? |
| Y | A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. |

May 20, 2020

4

COG Operating, LLC - Tater Salad Federal Com 903H

5. Mud Program

| Depth | | Type | Weight (ppg) | Viscosity | Water Loss |
|----------|------------|-------------------|--------------|-----------|------------|
| From | To | | | | |
| 0 | Surf. Shoe | FW Gel | 8.4 - 8.6 | 28-29 | N/C |
| Surf csg | Int shoe | Diesel Brine Emul | 8.6 - 9.4 | 30-40 | N/C |
| Int shoe | Lateral TD | OBM | 10.5 - 12 | 30-40 | 20 |

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

| | |
|---|-----------------------------|
| What will be used to monitor the loss or gain of fluid? | PVT/Pason/Visual Monitoring |
|---|-----------------------------|

6. Logging and Testing Procedures

| Logging, Coring and Testing. | |
|------------------------------|---|
| Y | Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM. |
| N | Are Logs are planned based on well control or offset log information. |
| N | Drill stem test? If yes, explain. |
| N | Coring? If yes, explain. |

| Additional logs planned | | Interval |
|-------------------------|-------------|---|
| N | Resistivity | Pilot Hole TD to ICP |
| N | Density | Pilot Hole TD to ICP |
| Y | CBL | Production casing (If cement not circulated to surface) |
| Y | Mud log | Intermediate shoe to TD |
| N | PEX | |

7. Drilling Conditions

| Condition | Specify what type and where? |
|----------------------------|------------------------------|
| BH Pressure at deepest TVD | 6625 psi at 10615' TVD |
| Abnormal Temperature | NO 165 Deg. F. |

No abnormal pressure or temperature conditions are anticipated. Sufficient mud materials to maintain mud properties and weight increase requirements will be kept on location at all times.

Sufficient supplies of Paper/LCM for periodic sweeps to control seepage and losses will be maintained on location.

Hydrogen Sulfide (H₂S) monitors will be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N H₂S is present

Y H₂S Plan attached

8. Other Facets of Operation

| | |
|---|----------------------------|
| Y | Is it a walking operation? |
| Y | Is casing pre-set? |
| Y | Multi-Bowl Wellhead |

| | |
|---|-------------------------|
| x | H ₂ S Plan. |
| x | BOP & Choke Schematics. |
| x | Directional Plan |
| | 5M Annular Variance |

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

Date: 5/28/2020

☒ Original

Operator & OGRID No.: COG Operating LLC, OGRID 229137

☐ Amended - Reason for Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

| Well Name | API | Well Location (ULSTR) | Footages | Expected MCF/D | Flared or Vented | Comments |
|-------------------------------------|----------------|-----------------------|---------------------------------|-------------------|------------------|--------------------------------------|
| Tater Salad Federal Com 903H | 30-015- | A-24-26S-28E | 225' FNL & 1120' FEL | 7,995 MCFD | | Gas will connect on well pad. |

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to ETC and will be connected to Red Bluff low/high pressure gathering system located in Culberson County, Texas. It will require approximately 0' of pipeline on lease to connect the facility to low/high pressure gathering system. COG Operating LLC provides (periodically) to ETC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, COG Operating LLC and ETC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Red Bluff Processing Plant located in Sec 35-Blk 57-T2 Culberson, Texas. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Gas Transporter system at that time. Based on current information, it is Operator's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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