Form 3160-3
(June 2015)

OCD – HOBBS
10/07/2020
RECEIVED

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM101608

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.
MONTERA FEDERAL COM
[329748]
701H

2. Name of Operator
COG OPERATING LLC [229137]

9. API Well No. 30-025-47843

3a. Address
600 West Illinois Ave, Midland, TX 79701

3b. Phone No. *(include area code)*
(432) 683-7443

10. Field and Pool, or Exploratory
Wildcat/WOLFCAMP [17980]

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SWSW / 275 FSL / 400 FWL / LAT 32.138399 / LONG -103.362641
At proposed prod. zone NWSW / 2590 FSL / 330 FWL / LAT 32.159266 / LONG -103.362846

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 10/T25S/R35E/NMP

14. Distance in miles and direction from nearest town or post office*
9 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)
275 feet

16. No of acres in lease
1600

17. Spacing Unit dedicated to this well
240.0

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

19. Proposed Depth
12356 feet / 19967 feet

20. BLM/BIA Bond No. in file
FED: NMB000215

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3227 feet

22. Approximate date work will start*
10/01/2020

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)

Name *(Printed/Typed)*
MAYTE REYES / Ph: (432) 683-7443

Date
03/11/2020

Title
Regulatory Analyst

Approved by *(Signature)*
(Electronic Submission)

Name *(Printed/Typed)*
Cody Layton / Ph: (575) 234-5959

Date
09/28/2020

Title
Assistant Field Manager Lands & Minerals

Office
Carlsbad Field Office

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

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

GCP Rec 10/07/2020

SL

APPROVED WITH CONDITIONS

KZ 10/19/2020

Approval Date: 09/28/2020

(Continued on page 2)

*(Instructions on page 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.

(Continued on page 3)

Additional Operator Remarks

Location of Well

0. SHL: SWSW / 275 FSL / 400 FWL / TWSP: 25S / RANGE: 35E / SECTION: 10 / LAT: 32.138399 / LONG: -103.362641 (TVD: 0 feet, MD: 0 feet)

PPP: SWSW / 100 FSL / 330 FWL / TWSP: 25S / RANGE: 35E / SECTION: 10 / LAT: 32.137918 / LONG: -103.362868 (TVD: 8398 feet, MD: 8400 feet)

BHL: NWSW / 2590 FSL / 330 FWL / TWSP: 25S / RANGE: 35E / SECTION: 3 / LAT: 32.159266 / LONG: -103.362846 (TVD: 12356 feet, MD: 19967 feet)

BLM Point of Contact

Name: Deborah Ham

Title: Legal Landlaw Examiner

Phone: (575) 234-5965

Email: dham@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
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG Operating LLC
LEASE NO.:	Lease Number NMNM101608
COUNTY:	Lea

Wells: Montera Federal Com 601H
Surface Hole Location: 275' FSL & 430' FWL, Section 10, T. 25 S., R. 35 E.
Bottom Hole Location: 2590' FSL & 770' FWL, Section 3, T. 25 S, R 35 E.

Montera Federal Com 701H
Surface Hole Location: 275' FSL & 400' FWL, Section 10, T. 25 S., R. 35 E.
Bottom Hole Location: 2590' FSL & 330' FWL, Section 3, T. 25 S, R 35 E.

Montera Fed 10 M CTB Location: 645' FSL & 430' FWL, Section 10. T25S. R35E

TABLE OF CONTENTS

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

OR

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

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

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

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

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

IV. NOXIOUS WEEDS

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

SPECIAL REQUIREMENT(S)

Watershed:
The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The topsoil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

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

BURIED/SURFACE LINE(S):
When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present.

The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

ELECTRIC LINE(S):
Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.

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

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

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

VRM IV:

Above-ground structures including meter housing that are not subject to safety requirements are painted a flat non-reflective paint color, Shale Green from the BLM Standard Environmental Color Chart (CC-001: June 2008).

Short-term mitigation measures include painting all above-ground structures that are not subject to safety requirements (including meter housing) Shale Green, which is a flat non-reflective paint color listed in the BLM Standard Environmental Color Chart (CC-001: June 2013). Long-term mitigation measures include the removal of wells and associated infrastructure following abandonment (end of cost-effective production). Previously impacted areas will be reclaimed by removing structures and caliche pads, returning disturbed areas to natural grade, and revegetating with an approved BLM seed mixture; thereby eliminating visual impacts.

V. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

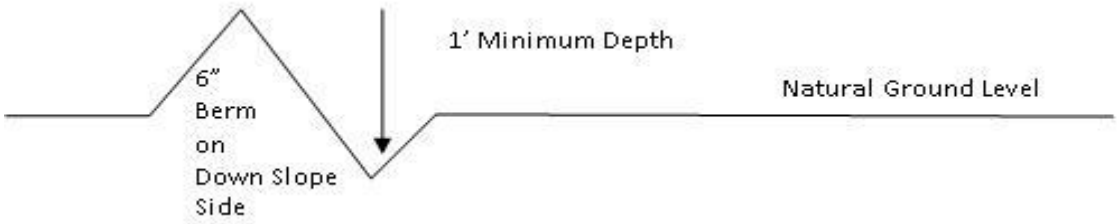
Ditching
Ditching shall be required on both sides of the road.

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

Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

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

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

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

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

Construction Steps

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

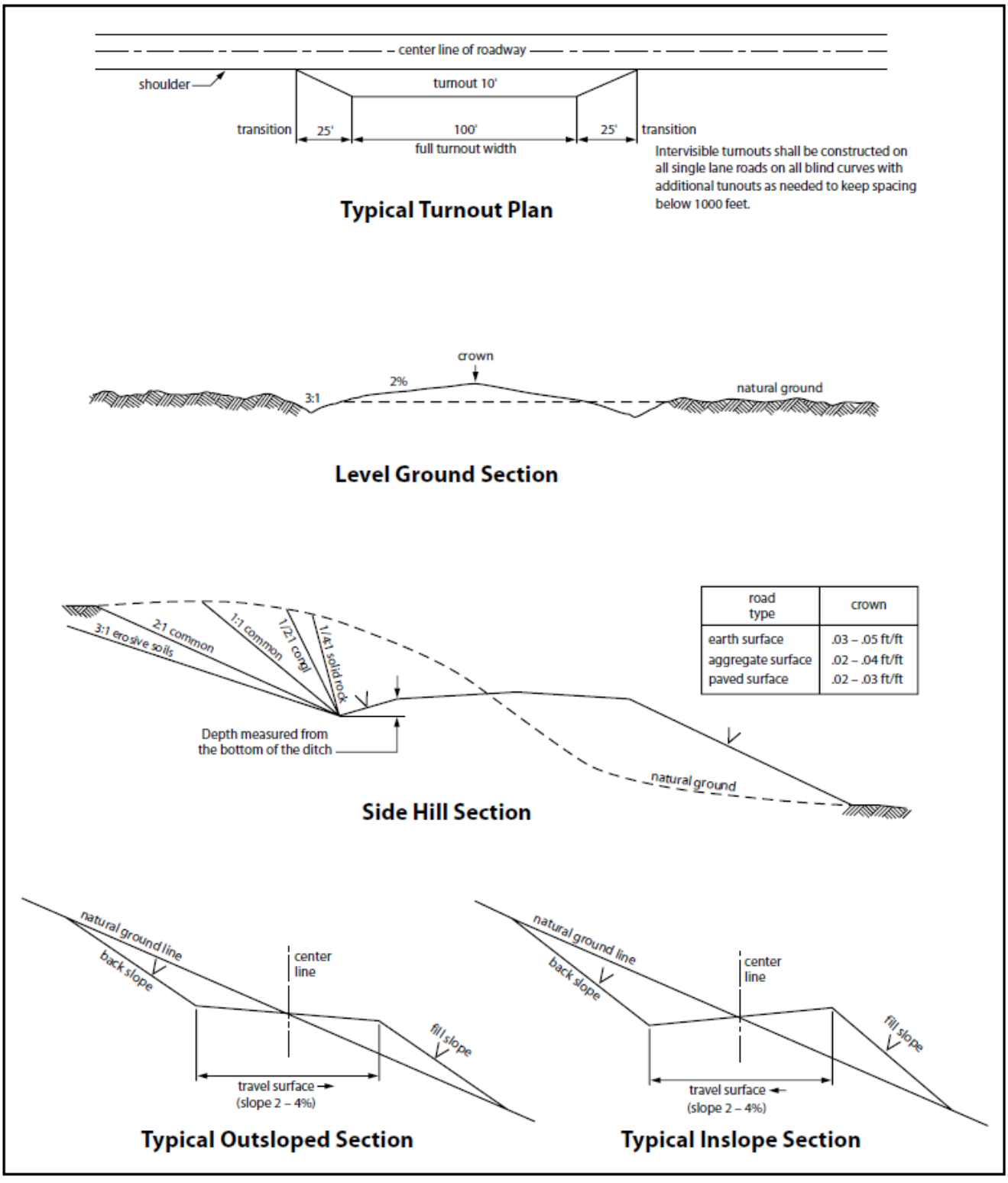


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VI. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures
The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone*.) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures
Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation*.)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

() seed mixture 1	( ) seed mixture 3
(X) seed mixture 2	() seed mixture 4
( ) seed mixture 2/LPC	( ) Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

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

OR

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

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See Stipulation 17 for more information.

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

17. The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall

immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

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

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

20. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

B. ELECTRIC LINES

- Smaller powerlines will be routed around sinkholes and other karst features to avoid or lessen the possibility of encountering near surface voids and to minimize changes to runoff or possible leaks and spills from entering karst systems. Larger powerlines will adjust their pole spacing to avoid cave and karst features.
- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage channels, cave passages, or voids are penetrated during construction.
- No further construction will be done until clearance has been issued by the Authorized Officer.
- Special restoration stipulations or realignment may be required.

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the

facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

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

OR

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

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See Stipulation 11 for more information.

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

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

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

13. Special Stipulations:
For reclamation remove poles, lines, transformer, etc. and dispose of properly.
Fill in any holes from the poles removed.

VII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

VIII. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

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

Seed Mixture 2, for Sandy Sites

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

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

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

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

*Pounds of pure live seed:

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

PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**COG Operating LLC**
LEASE NO.:	**NMNM101608**
WELL NAME & NO.:	**Montera Federal Com 701H**
SURFACE HOLE FOOTAGE:	**275' FSL & 400' FWL**
BOTTOM HOLE FOOTAGE	**2590' FSL & 330' FWL**
LOCATION:	**Section 20, T 25S, R 35E, NMPM**
COUNTY:	**Lea County, New Mexico**

H2S	◉ Yes	○ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
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

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

B. CASING

1. The **10-3/4"** surface casing shall be set at approximately **1170'** (or a minimum of 25' into the Rustler Anhydrite and above the salt) and cemented to surface.
   a. **If cement does not circulate to 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 **6 hours** after pumping cement, ideally between 8-10 hours after.
   b. WOC time for a primary cement job will be a minimum of **8 hours** or **500 psi** compressive strength, whichever is greater. This is to include the lead cement.
   c. If cement falls back, remedial cementing will be done prior to drilling out the shoe.
   d. WOC time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 psi compressive strength, whichever is greater.

2. The **7-5/8"** intermediate casing shall be cemented to surface.
   a. **If cement does not circulate to surface,** see B.1.a, c & d.
3. The **5"** production casing shall be cemented with at least **200' tie-back** into the previous casing. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. 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.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **10,000 (10M)** psi. **Variance approved to use a 5M annular. This annular must be tested to 70% of its rated pressure (5000 psi).**
3. 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.

D. SPECIAL REQUIREMENTS

1. 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.
   a. The well sign on location shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

DR 09/28/2020

GENERAL REQUIREMENTS

1. The BLM is to be notified in advance for a representative to witness:
   a. Spudding the well (minimum of 24 hours)
   b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
   c. BOP/BOPE tests (minimum of 4 hours)

      ☒ Eddy County: Call the Carlsbad Field Office, (575) 361-2822

      ☒ Lea County: Call the Hobbs Field Station, (575) 393-3612
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
   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:
      i. Notify the BLM when moving in and removing the Spudder Rig.
      ii. 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.
      iii. BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
4. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be available upon request. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the

following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well-specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On the portion of well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. If the operator has proposed a multi-bowl wellhead assembly in the APD, it must meet or exceed the pressure rating of the BOP system. Additionally, the following requirements must be met:
    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in Onshore Order 2 III.A.2.i must be followed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the BOP/BOPE tests.
    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
    b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test which can be initiated immediately after bumping the plug (only applies to single-stage cement jobs).
    c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be made available upon request.
    d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
    e. The 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. This test shall be performed prior

to the test at full stack pressure.

f. BOP/BOPE must be tested 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

1. 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

1. 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.
2. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

APD ID: 10400055032
Submission Date: 03/11/2020
Operator Name: COG OPERATING LLC
Federal/Indian APD: FED
Well Name: MONTERA FEDERAL COM
Well Number: 701H
Well Type: OIL WELL
Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Application

Section 1 - General

APD ID: 10400055032
Tie to previous NOS?
Submission Date: 03/11/2020
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: NMNM101608
Lease Acres: 1600
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:

Operator Name: COG OPERATING LLC

Well Name: MONTERA FEDERAL COM **Well Number:** 701H

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: MONTERA FEDERAL COM **Well Number:** 701H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** Wildcat **Pool Name:** WOLFCAMP

Is the proposed well in an area containing other mineral resources? USEABLE WATER,OIL

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:** MONTERA FEDERAL COM **Number:** 601H, 701H

Well Class: HORIZONTAL **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: 9 Miles **Distance to nearest well:** 30 FT **Distance to lease line:** 275 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: COG_Montera_701H_C102_20200311123658.pdf

Well work start Date: 10/01/2020 **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	275	FSL	400	FWL	25S	35E	10	Aliquot SWSW	32.138399	-103.362641	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 101608	3227	0	0	Y
KOP Leg #1	275	FSL	400	FWL	25S	35E	10	Aliquot SWSW	32.138399	-103.362641	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 101608	3227	0	0	Y

Operator Name: COG OPERATING LLC

Well Name: MONTERA FEDERAL COM **Well Number:** 701H

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 #1-1	100	FSL	330	FWL	25S	35E	10	Aliquot SWSW	32.137918	-103.362868	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 101608	-5171	8400	8398	Y
EXIT Leg #1	2540	FSL	330	FWL	25S	35E	3	Aliquot NWSW	32.159129	-103.362846	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-9088	19900	12315	Y
BHL Leg #1	2590	FSL	330	FWL	25S	35E	3	Aliquot NWSW	32.159266	-103.362846	LEA	NEW MEXICO	NEW MEXICO	F	FEE	-9129	19967	12356	Y

Drilling Plan

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
685493	UNKNOWN	3227	0	0	LIMESTONE	NONE	N
685494	RUSTLER	2499	728	728	LIMESTONE	NONE	N
685495	TOP SALT	2154	1073	1073	SALT	NONE	N
685496	BOTTOM SALT	-1634	4861	4861	ANHYDRITE	NONE	N
685497	LAMAR	-2029	5256	5256	LIMESTONE	NATURAL GAS, OIL	N
685500	BELL CANYON	-2078	5305	5305	SILTSTONE	NONE	N
685508	CHERRY CANYON	-3001	6228	6228	SILTSTONE	NATURAL GAS, OIL	N
685509	BRUSHY CANYON	-4500	7727	7727	SILTSTONE	NATURAL GAS, OIL	N
685498	BONE SPRING LIME	-5759	8986	8986	SANDSTONE	NATURAL GAS, OIL	N
685510	---	-6190	9417	9417	SILTSTONE	NATURAL GAS, OIL	N
685511	---	-6621	9848	9848	SILTSTONE	NATURAL GAS, OIL	N

Operator Name: COG OPERATING LLC

Well Name: MONTERA FEDERAL COM **Well Number:** 701H

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
685505	BONE SPRING 1ST	-7052	10279	10279	HALITE	NATURAL GAS, OIL	N
685506	BONE SPRING 2ND	-7554	10781	10781	SANDSTONE	NATURAL GAS, OIL	N
685507	BONE SPRING 3RD	-8661	11888	11888	SANDSTONE	NATURAL GAS, OIL	N
685499	WOLFCAMP	-9029	12256	12256	SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 10M **Rating Depth:** 12356

Equipment: Accessories to 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: Request a 5M annular variance on a 10M system. (5M variance attached in section 8). A variance is requested for the use of a flexible choke line from the BOP to the 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 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.
Choke Diagram Attachment:

COG_Montera_701H_10M_Choke_20200311124806.pdf

BOP Diagram Attachment:

COG_Montera_701H_10M_BOP_20200311124813.pdf

COG_Montera_701H_Flex_Hose_20200311124820.pdf

Pressure Rating (PSI): 5M **Rating Depth:** 11640

Equipment: Annular, Blind Ram, Pipe Ram. Other accessories to 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 the 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 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.
Choke Diagram Attachment:

COG_Montera_701H_5M_Choke_20200311124845.pdf

BOP Diagram Attachment:

COG_Montera_701H_5M_BOP_20200311124855.pdf

COG_Montera_701H_Flex_Hose_20200311124901.pdf

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	1170	0	1170	3227	2057	1170	N-80	45.5	OTHER - BTC	4.61	1.67	DRY	19.54	DRY	201
2	INTERMEDIATE	8.75	7.625	NEW	API	Y	0	8500	0	11640	-9411	-8413	8500	HCP-110	29.7	OTHER - TL-FJ	1.29	1.11	DRY	2.72	DRY	1.
3	PRODUCTION	6.75	5.0	NEW	API	Y	0	19967	0	12356	-9411	-9129	19967	P-110	18	OTHER - BTC	1.81	1.86	DRY	3.28	DRY	3.

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

COG_Montera_701H_Casing_Prog_20200311125159.pdf

Casing Attachments

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

COG_Montera_701H_Casing_Prog_20200311124957.pdf

Casing Design Assumptions and Worksheet(s):

COG_Montera_701H_Casing_Prog_20200311125031.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

COG_Montera_701H_Casing_Prog_20200311125117.pdf

Casing Design Assumptions and Worksheet(s):

COG_Montera_701H_Casing_Prog_20200311125131.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		0	1170	558	1.75	13.5	976	50	Class C	4% Gel + 1% CaCl2
SURFACE	Tail		0	1170	250	1.34	14.8	335	50	Class C	2% CaCl2
INTERMEDIATE	Lead		0	11640	840	3.3	10.3	2772	50	Halliburton tunded light	As needed
INTERMEDIATE	Tail		0	11640	250	1.35	14.8	337	50	Tail: Class H	As needed

Operator Name: COG OPERATING LLC

Well Name: MONTERA FEDERAL COM **Well Number:** 701H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		8000	19967	531	2	12.7	1062	35	Lead: 50:50:10 H BLEND	As needed
PRODUCTION	Tail		8000	19967	1080	1.24	14.4	1339	35	Tail: 50:50:2 Class H Blend.	As needed

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
0	1170	OTHER : FW Gel	8.6	8.8							FW Gel
1170	11640	OTHER : Diesel Brine Emulsion	8.4	9							Diesel Brine Emulsion
11640	19967	OIL-BASED MUD	9.6	12.5							OBM

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: 8035 **Anticipated Surface Pressure:** 5316

Anticipated Bottom Hole Temperature(F): 180

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

COG_Montera_701H_H2S_Schem_20200311125637.pdf

COG_Montera_701H_H2S_SUP_20200311125643.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

COG_Montera_701H_AC_RPT_20200311125656.pdf

COG_Montera_701H_Directional_Plan_20200311125701.pdf

Other proposed operations facets description:

Drilling Program attached.
Cementing Plan attached.
Gas Capture Plan attached.

Other proposed operations facets attachment:

COG_Montera_701H_Drilling_Prog_20200311125718.pdf

COG_Montera_701H_GCP_20200311125723.pdf

COG_Montera_701H_Cement_Prog_20200311125727.pdf

Other Variance attachment:

COG_5M_Variance_Well_Plan_20190211080830.pdf

Operator Name: COG OPERATING LLC

Well Name: MONTERA FEDERAL COM **Well Number:** 701H

SUPO

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

COG_Montera_701H_Existing_Road_20200311125746.pdf

Existing Road Purpose: ACCESS **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

COG_Montera_701H_Road_Plats_Maps_20200311125806.pdf

New road type: TWO-TRACK

Length: 958 Feet **Width (ft.):** 30

Max slope (%): 33 **Max grade (%):** 1

Army Corp of Engineers (ACOE) permit required? N

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

New road access plan or profile prepared? N

New road access plan attachment:

Access road engineering design? N

Access road engineering design attachment:

Turnout? N

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Blading

Access other construction information: No turnouts are planned. Re-routing access road around proposed well location.

Access miscellaneous information:

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: None necessary.

Road Drainage Control Structures (DCS) description: None needed.

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

COG_Montera_701H_1_Mile_Data_20200311125900.pdf

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: The Montera Federal 10 M CTB is located in section 10. T25S. R35E. This CTB will be built to accommodate the Montera Federal Com #601H and #701H. We plan to install (1) buried 4 FP 601HT production flowline from each wellhead to the inlet manifold of the proposed CTB (2 lines total); the route for these flowlines will follow the flowlines route as shown in the diagram below. We will install (2) buried 4 gas lines for gas lift supply from the CTB to each well pad (2 lines total); the route for the gas lift lines will follow the gas lift route as shown in the attached layout.

Production Facilities map:

COG_Montera_701H_CTB_Flowlines_Powerlines_20200311125923.pdf

Montera_Federal_10_M_CTB___Facility_Layout_20200311125931.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: OTHER

Describe type: Fresh Water

Water source use type: SURFACE CASING

STIMULATION

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: PIPELINE

Source land ownership: PRIVATE

Source transportation land ownership: PRIVATE

Water source volume (barrels): 450000 **Source volume (acre-feet):** 58.001892

Source volume (gal): 18900000

Water source type: OTHER

Describe type: Brine water

Water source use type: INTERMEDIATE/PRODUCTION CASING

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Water source transport method: TRUCKING

Source land ownership: COMMERCIAL

Source transportation land ownership: COMMERCIAL

Water source volume (barrels): 30000 **Source volume (acre-feet):** 3.866793

Source volume (gal): 1260000

Water source and transportation map:

COG_Montera_701H_Brine_H2O_20200311130012.pdf

COG_Montera_701H_Fresh_H2O_20200311130101.pdf

Water source comments: Fresh water will be obtained from the Fez Frac Pond located in Section 8. T25S, R35E. Brine water will be obtained from the Malaga II Brine station in Section 12. T23S. R28E.

New water well? N

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Using any construction materials: YES

Construction Materials description: Caliche will be obtained from the actual well site if available. If not available onsite, caliche will be obtained from Quail Ranch LLC (CONCHO) caliche pit located in Section 6, T24S, R35 Phone # (432) 221-0342.

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drilling fluids and produced oil and water during drilling and completion operations

Amount of waste: 6000 barrels

Waste disposal frequency : One Time Only

Safe containment description: All drilling waste will be stored safely and disposed of properly

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: Trucked to an approved disposal facility

Waste type: SEWAGE

Waste content description: Human waste and gray water

Amount of waste: 250 gallons

Waste disposal frequency : Weekly

Safe containment description: Waste will be properly contained and disposed of properly at a state approved disposal facility

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: Trucked to an approved disposal facility

Waste type: GARBAGE

Waste content description: Garbage and trash produced during drilling and completion operations

Amount of waste: 125 pounds

Waste disposal frequency : Weekly

Safe containment description: Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** COMMERCIAL

Disposal type description:

Disposal location description: Trucked to an approved disposal facility

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit? NO

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? Y

Description of cuttings location Roll off cuttings containers on tracks

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: N

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

COG_Montera_701H_Layout_20200311130128.pdf

Comments:

Operator Name: COG OPERATING LLC

Well Name: MONTERA FEDERAL COM **Well Number:** 701H

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** MONTERA FEDERAL COM

Multiple Well Pad Number: 601H, 701H

Recontouring attachment:

COG_Montera_701H_Reclamation_20200311130145.pdf

Drainage/Erosion control construction: Immediately following construction, straw waddles will be placed as necessary at the well site to reduce sediment impacts to fragile/sensitive soils.
Drainage/Erosion control reclamation: West 50'

Well pad proposed disturbance (acres): 3.67
Road proposed disturbance (acres): 0.31
Powerline proposed disturbance (acres): 1.03
Pipeline proposed disturbance (acres): 0.4
Other proposed disturbance (acres): 3.67
Total proposed disturbance: 9.08

Well pad interim reclamation (acres): 0.06
Road interim reclamation (acres): 0.31
Powerline interim reclamation (acres): 1.03
Pipeline interim reclamation (acres): 0.4
Other interim reclamation (acres): 3.67
Total interim reclamation: 5.47

Well pad long term disturbance (acres): 2.81
Road long term disturbance (acres): 0.31
Powerline long term disturbance (acres): 1.03
Pipeline long term disturbance (acres): 0.4
Other long term disturbance (acres): 3.67
Total long term disturbance: 8.22

Disturbance Comments:

Reconstruction method: New construction of pad.

Topsoil redistribution: West 50'

Soil treatment: None

Existing Vegetation at the well pad: Shinnery Oak/Mesquite grassland

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Shinnery Oak/Mesquite grassland

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Shinnery Oak/Mesquite grassland

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: N/A

Existing Vegetation Community at other disturbances attachment:

Non native seed used? N

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? N

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? N

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? N

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: N/A

Weed treatment plan attachment:

Monitoring plan description: N/A

Monitoring plan attachment:

Success standards: N/A

Pit closure description: N/A

Pit closure attachment:

COG_Montera_701H_Closed_Loop_20200311130202.pdf

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Fee Owner: Tap Rock NM10 Minerals, LLC **Fee Owner Address:** 602 Park Point Drive, Suite 200

Phone: (720)772-5090 **Email:**

Surface use plan certification: NO

Surface use plan certification document:

Surface access agreement or bond: AGREEMENT

Surface Access Agreement Need description: A special warranty deed was signed on January 23rd 2020.

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Section 12 - Other Information

Right of Way needed? N **Use APD as ROW?**

ROW Type(s):

ROW Applications

SUPO Additional Information: SUP Attached.

Use a previously conducted onsite? Y

Previous Onsite information: On-site was done by Gerald Herrera (COG); Zane Kirsch (BLM); on January 22th, 2020.

Other SUPO Attachment

COG_Montera_701H_SUP_20200311141756.pdf
COG_Montera_701H_C102_20200311141803.pdf
COG_Montera_701H_Road_Plats_Maps_20200311141812.pdf
COG_Montera_701H_Existing_Road_20200311141822.pdf
COG_Montera_701H_CTB_Flowlines_Powerlines_20200311141847.pdf
Montera_Federal_10_M_CTB___Facility_Layout_20200311141855.pdf

PWD

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

Bond Info

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB000215

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Operator Name: COG OPERATING LLC

Well Name: MONTERA FEDERAL COM **Well Number:** 701H

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

Operator Certification

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: MAYTE REYES **Signed on:** 07/10/2019

Title: Regulatory Analyst

Street Address: 2208 West Main Street

City: Artesia **State:** NM **Zip:** 88210

Phone: (575)748-6940

Email address: MREYES1@CONCHO.COM

Field Representative

Representative Name: Gerald Herrera

Street Address: 2208 West Main Street

City: Artesia **State:** NM **Zip:** 88210

Phone: (575)748-6940

Email address: gherrera@concho.com

Payment Info

Operator Name: COG OPERATING LLC

Well Name: MONTERA FEDERAL COM **Well Number:** 701H

Payment

APD Fee Payment Method: PAY.GOV

pay.gov Tracking ID: 26O5AKBH

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) 748-1283 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

OCD - HOBBS
10/07/2020
RECEIVED

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

DOGIE DRAW;WOLFCAMP

API Number	Pool Code	Pool Name
30-025 30-025-47843	17980	~~XXXXXXXXXXXXXX~~ Wildcat;Wolfcamp

Property Code	Property Name	Well Number
329748	MONTERA FEDERAL COM	701H

OGRID No.	Operator Name	Elevation
229137	COG OPERATING, LLC	3227.0'

Surface Location

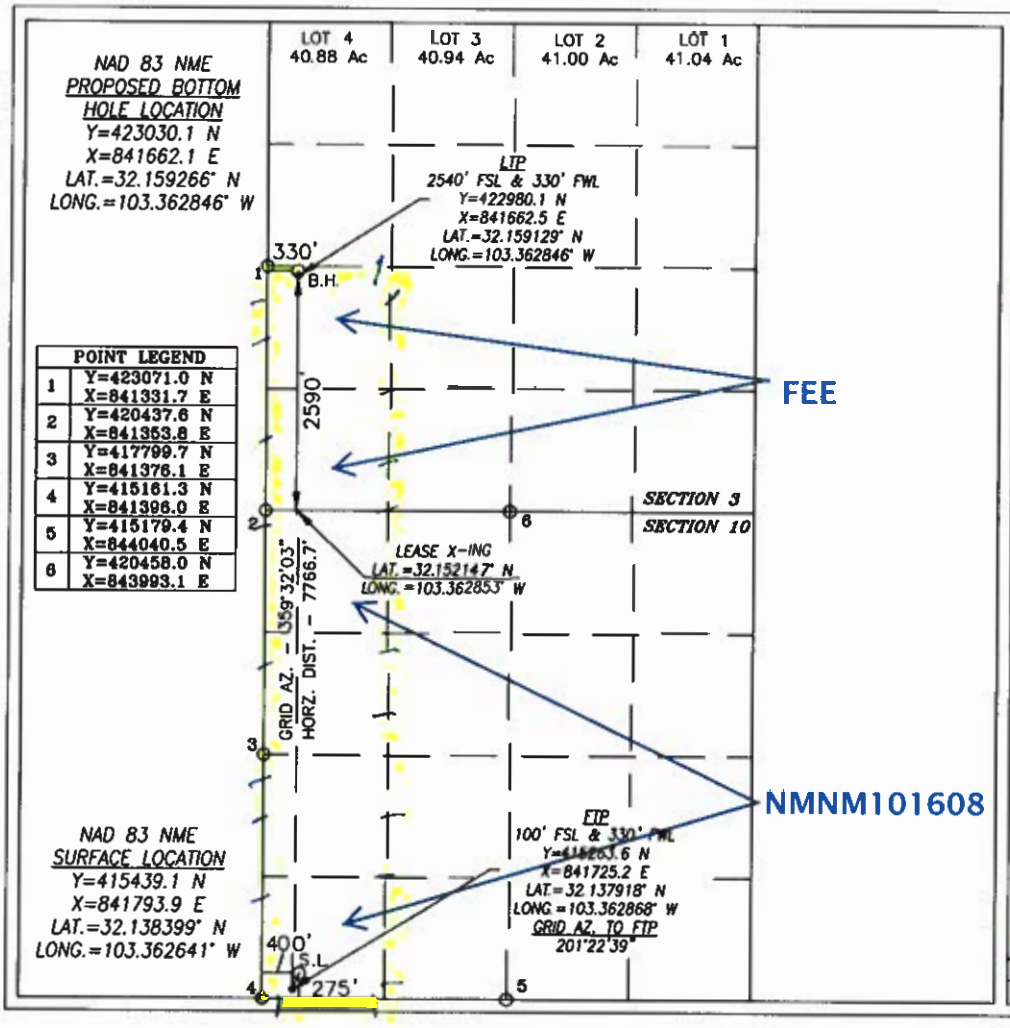
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	10	25-S	35-E		275	SOUTH	400	WEST	LEA

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
L	3	25-S	35-E		2590	SOUTH	330	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
240			

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



POINT LEGEND	
1	Y=423071.0 N X=841331.7 E
2	Y=420437.6 N X=841353.8 E
3	Y=417799.7 N X=841376.1 E
4	Y=415161.3 N X=841396.0 E
5	Y=415179.4 N X=844040.5 E
6	Y=420458.0 N X=843993.1 E

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 3-11-2020
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.

JANUARY 21, 2020
Date of Survey

Signature & Seal of Professional Surveyor

CHAD L. HARCROW
NEW MEXICO
17777
LICENSED PROFESSIONAL SURVEYOR

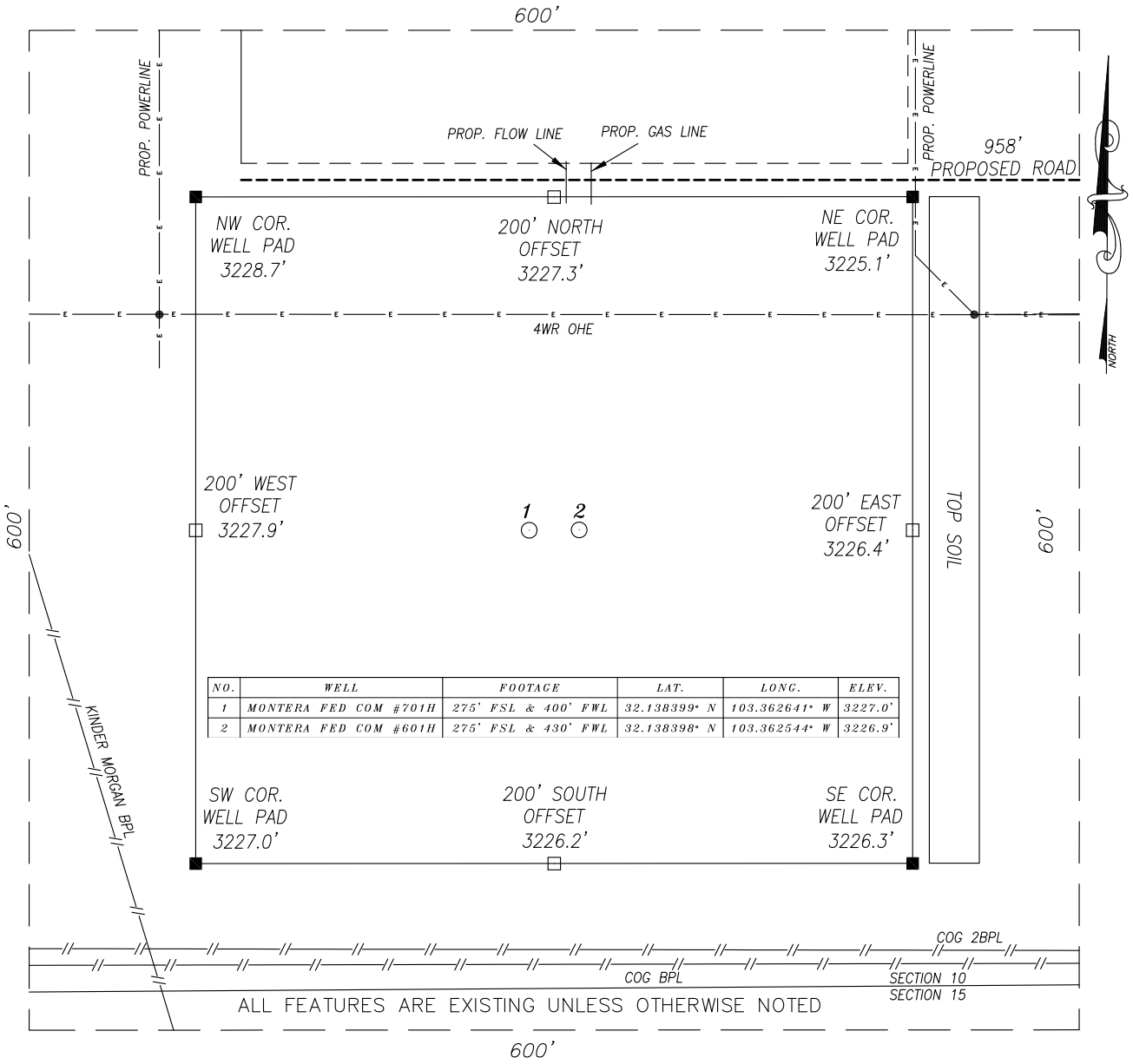
Chad Harcrow 1/30/20

Certificate No. CHAD HARCROW 17777

W.O. # 19-2278 DRAWN BY: AH

SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, N.M.P.M.,

LEA COUNTY NEW MEXICO



NO.	WELL	FOOTAGE	LAT.	LONG.	ELEV.
1	MONTERA FED COM #701H	275' FSL & 400' FWL	32.138399° N	103.362641° W	3227.0'
2	MONTERA FED COM #601H	275' FSL & 430' FWL	32.138398° N	103.362544° W	3226.9'

DIRECTIONS TO LOCATION

HEADING SOUTHEAST ON HIGHWAY 128, TURN RIGHT (SOUTH) APROX. 0.6 MILES PAST MM 41 AND GO APPROX 1.4 MILES; THEN TURN LEFT (EAST) AND GO APPROX. 0.3 MILES; THEN TURN RIGHT (SOUTH) AND GO APPROX 0.3 MILES TO THE PROPOSED ROAD. PROPOSED WELLS LIE APPROX. 785 FEET SOUTHSOUTHWEST.

COORDINATES ARE NAD 83 NME AND ELEVATIONS ARE NAVD 88

CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

CHAD HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 1/30/20

CHAD HARCROW N.M.P.S. NO. 17777 DATE

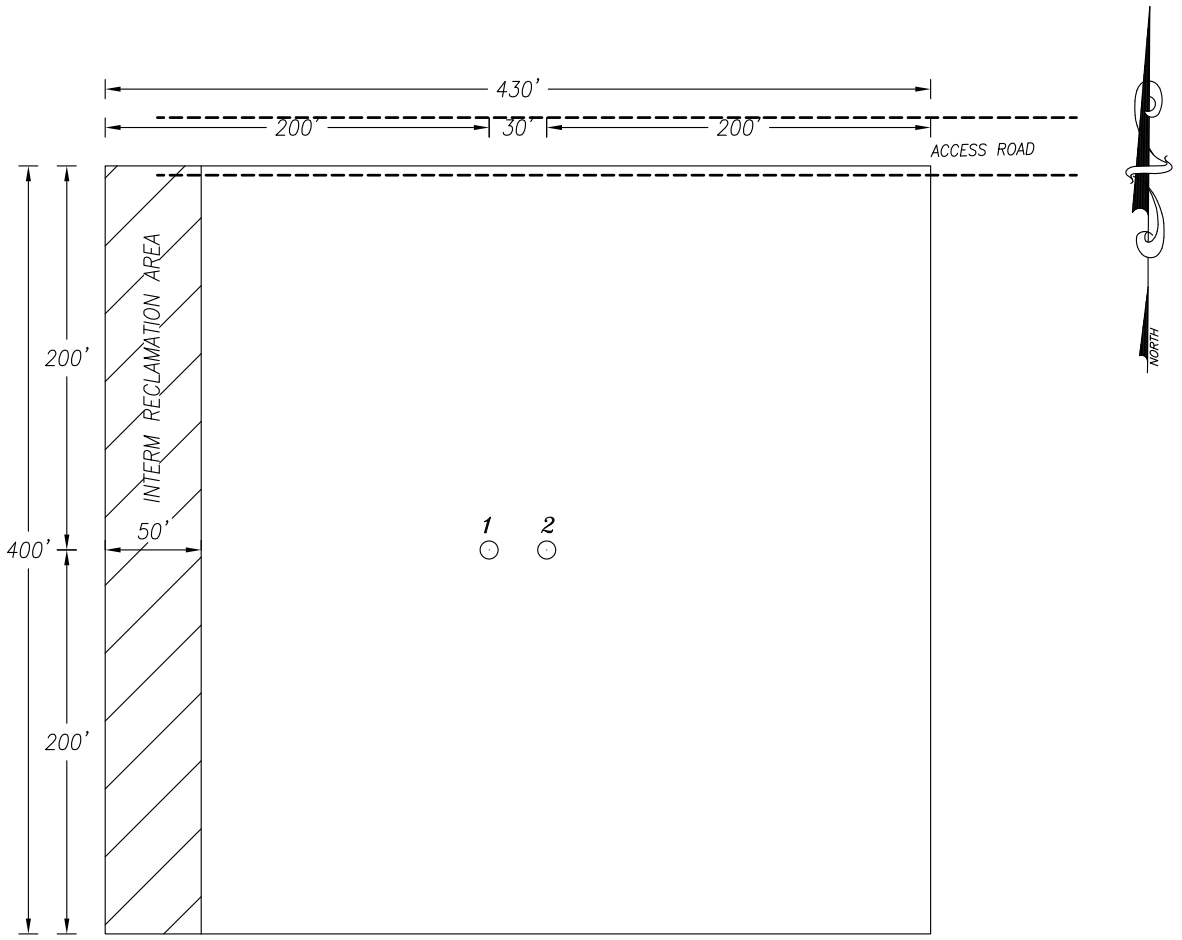
HARCROW SURVEYING, LLC
2316 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

100 0 100 200 Feet

Scale: 1"=100'

COG OPERATING, LLC		
SURVEY DATE: JANUARY 21, 2020		600S
DRAFTING DATE: JANUARY 27, 2020		PAGE: 1 OF 1
APPROVED BY: CH	DRAWN BY: AH	FILE: 19-2278

RECLAMATION AND FACILITY DIAGRAM – PRODUCTION FACILITIES DIAGRAM
COG OPERATING, LLC
SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.

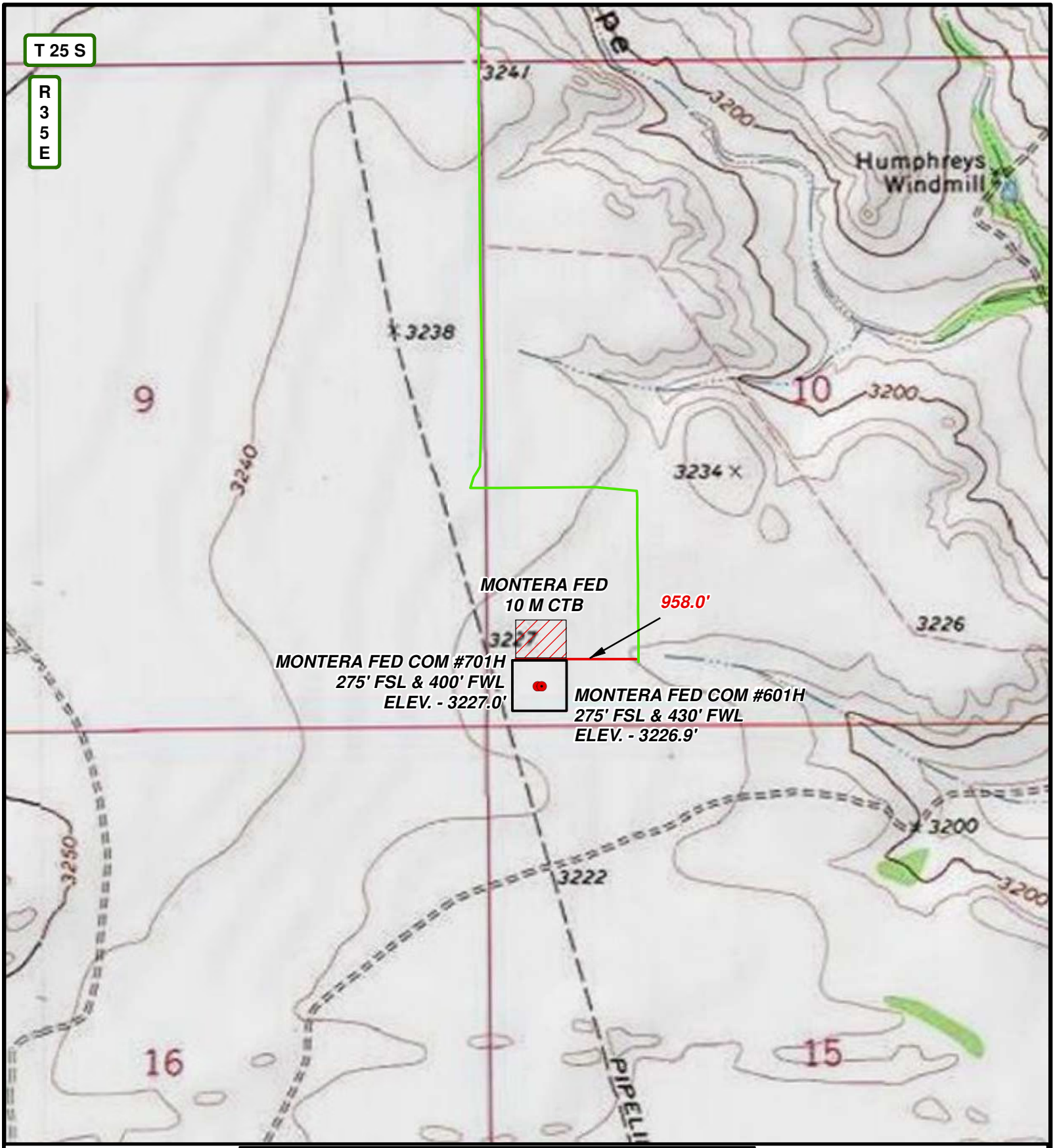


NO.	WELL	FOOTAGE	LAT.	LONG.	ELEV.
1	MONTERA FED COM #701H	275' FSL & 400' FWL	32.138399° N	103.362641° W	3227.0'
2	MONTERA FED COM #601H	275' FSL & 430' FWL	32.138398° N	103.362544° W	3226.9'

HARCROW SURVEYING, LLC
2316 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

100 0 100 200 Feet
Scale: 1"=100'

COG OPERATING, LLC	
SURVEY DATE: JANUARY 21, 2020	RECLAMATION
DRAFTING DATE: JAN. 27, 2020	PAGE: 1 OF 1
APPROVED BY: CH / DRAWN BY: AH	FILE: 19-2278



LEGEND

- WELL
- WELLPAD
- TANK BATTERY
- EXISTING ROAD
- PROPOSED ROAD

MONTERA FEDERAL COM

SEC: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO		COUNTY: LEA
W.O. # 19-2278	LEASE: MONTERA	SURVEY: N.M.P.M

0 1,500 FEET

0 0.075 0.15 0.3 Miles

1 IN = 1,000 FT

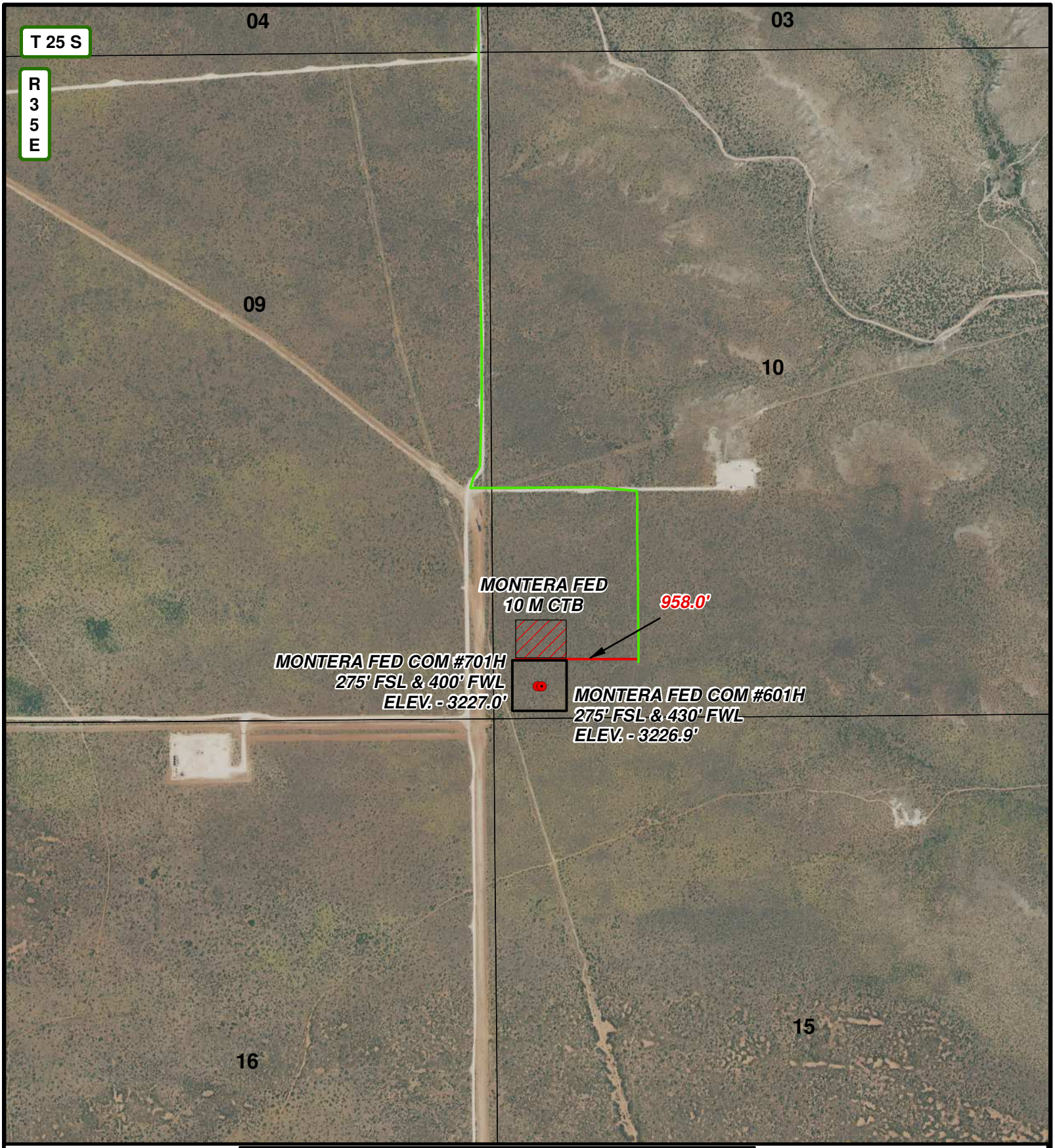
LOCATION MAP | TOPO | 01/27/2020 | W.N.

N

CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com



LEGEND

- WELL
- WELLPAD
- TANK BATTERY
- EXISTING ROAD
- PROPOSED ROAD

MONTERA FEDERAL COM

SEC: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO		COUNTY: LEA
W.O. # 19-2278	LEASE: MONTERA	SURVEY: N.M.P.M

0 1,500 FEET

0 0.075 0.15 0.3 Miles

1 IN = 1,000 FT

LOCATION MAP | IMAGERY | 01/27/2020 | W.N.

N

CONCHO

COG OPERATING, LLC

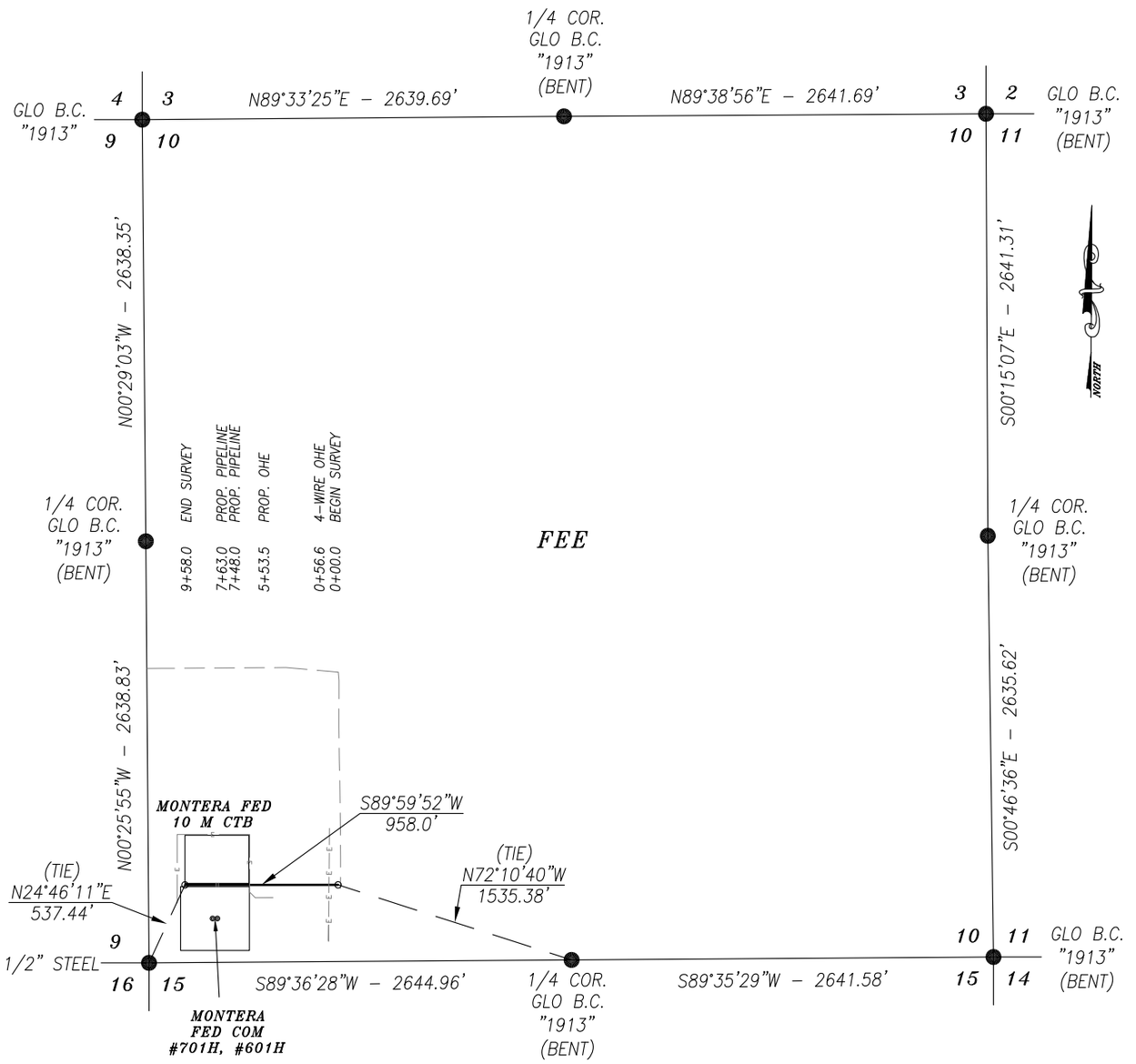
HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

ROAD PLAT
COG OPERATING, LLC

AN ACCESS ROAD FOR THE "MONTERA FED COM #701H, #601H" WELLPAD & "MONTERA FED 10 M CTB" IN

SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO.



DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE AND 958.0 FEET OR 58.06 RODS OR 0.181 MILES IN LENGTH CROSSING FEE LAND IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

BASIS OF BEARING:
BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

HARCROW SURVEYING, LLC
2316 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

1000 0 1000 2000 FEET
SCALE: 1"=1000'

CERTIFICATION
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

CHAD L. HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 1/31/20
CHAD HARCROW N.M.P.S. NO. 17777 DATE

COG OPERATING, LLC

SURVEY OF A PROPOSED ROAD LOCATED IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, NMPM, LEA COUNTY, NEW MEXICO

SURVEY DATE: JAN. 21, 2020	ROAD
DRAFTING DATE: JAN. 27, 2020	PAGE 1 OF 0
APPROVED BY: CH / DRAWN BY: WN	FILE: 20-148

LEGEND

- WELL
- WELLPAD
- ACCESS ROAD
- EXIST. ROAD

MONTERA FEDERAL COM ACCESS ROAD

SECTION: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO	COUNTY: LEA	SURVEY: N.M.P.M
W.O. # 20-148		LEASE: MONTERA

0 1,000 FEET

0 0.0375 0.075 0.15 Miles

1 IN = 500 FT

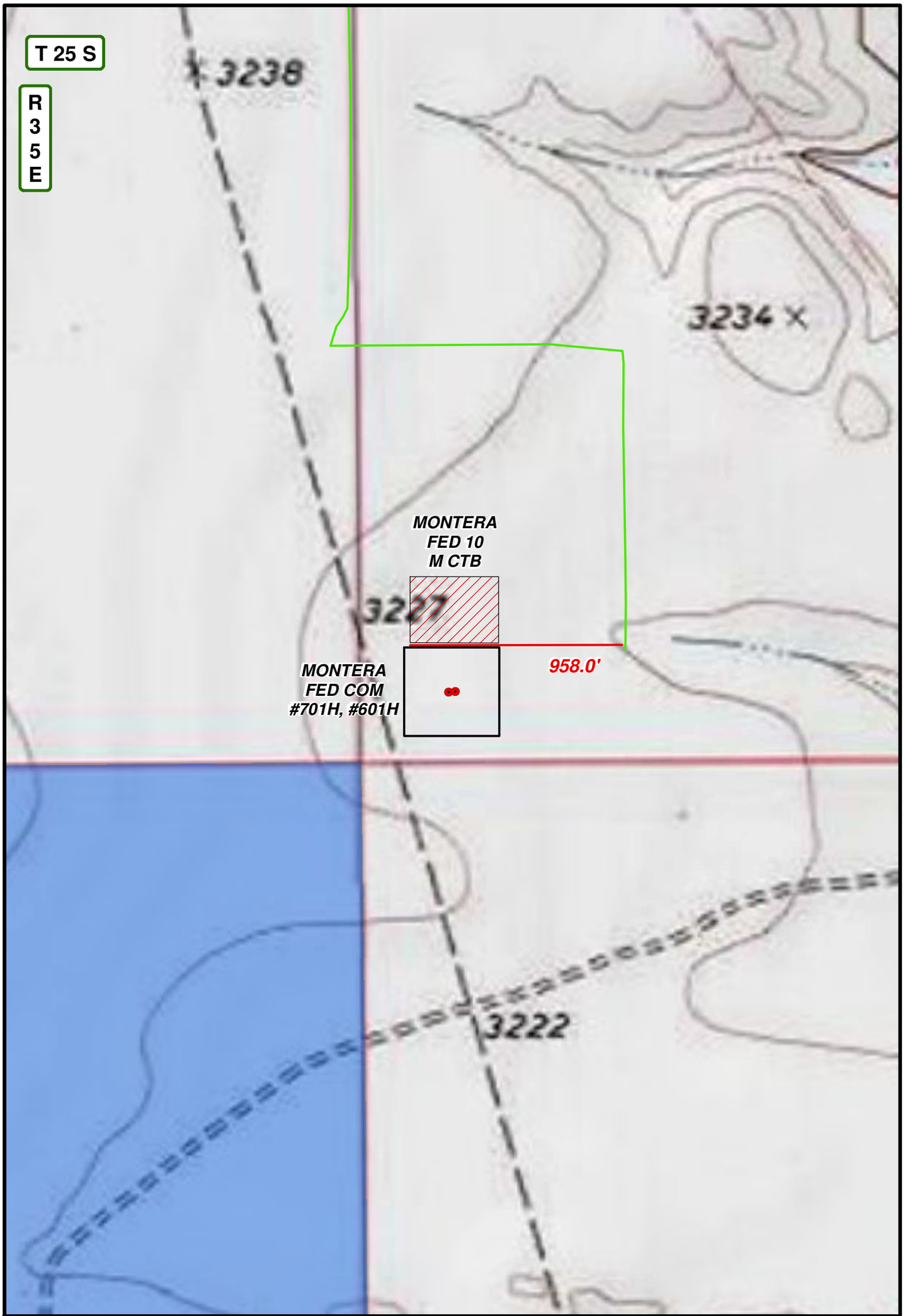
ACCESS ROAD MAP | IMAGERY | 1/27/2020 | W.N.

N

CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com



LEGEND

- WELL
- WELLPAD
- ACCESS ROAD
- EXIST. ROAD
- PRIVATE
- STATE OF NM
- US BLM

MONTERA FEDERAL COM ACCESS ROAD

SECTION: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO	COUNTY: LEA	SURVEY: N.M.P.M
W.O. # 20-148		LEASE: MONTERA

0 1,000 FEET

0 0.0375 0.075 0.15 Miles

1 IN = 500 FT

ACCESS ROAD MAP | LAND STATUS | 1/27/2020 | W.N.

N

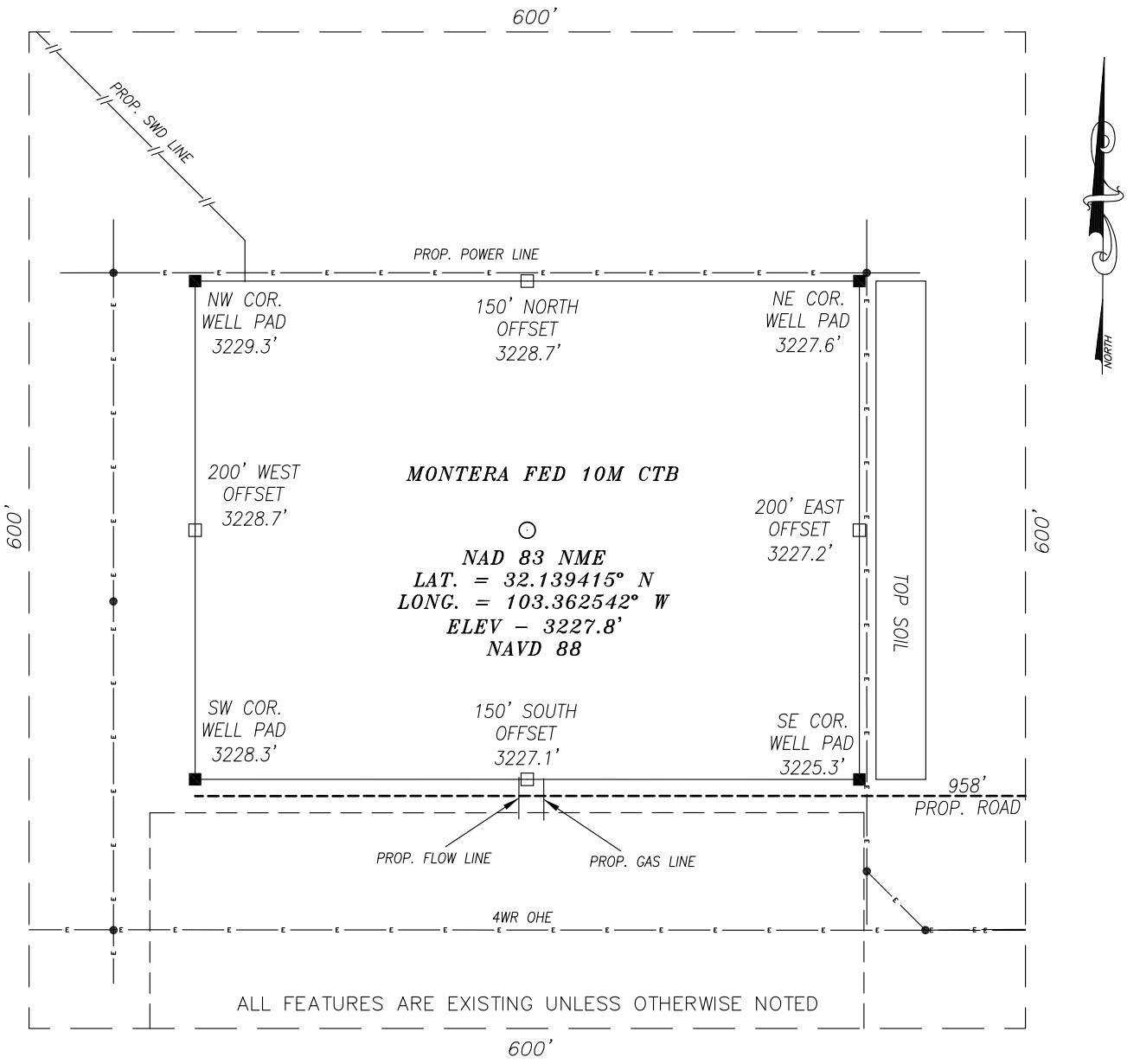
CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, N.M.P.M.,

LEA COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

HEADING SOUTHEAST ON HIGHWAY 128, TURN RIGHT (SOUTH) APPROX. 0.6 MILES PAST MM 41 AND GO APPROX 1.4 MILES; THEN TURN LEFT (EAST) AND GO APPROX. 0.3 MILES; THEN TURN RIGHT (SOUTH) AND GO APPROX 0.3 MILES TO THE PROPOSED ROAD. PROPOSED WELLS LIE APPROX. 780 FEET WEST.

HARCROW SURVEYING, LLC
2316 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

100 0 100 200 Feet

Scale: 1"=100'

CERTIFICATION

I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

CHAD HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 1/30/20

CHAD HARCROW N.M.P.S. NO. 17777 DATE

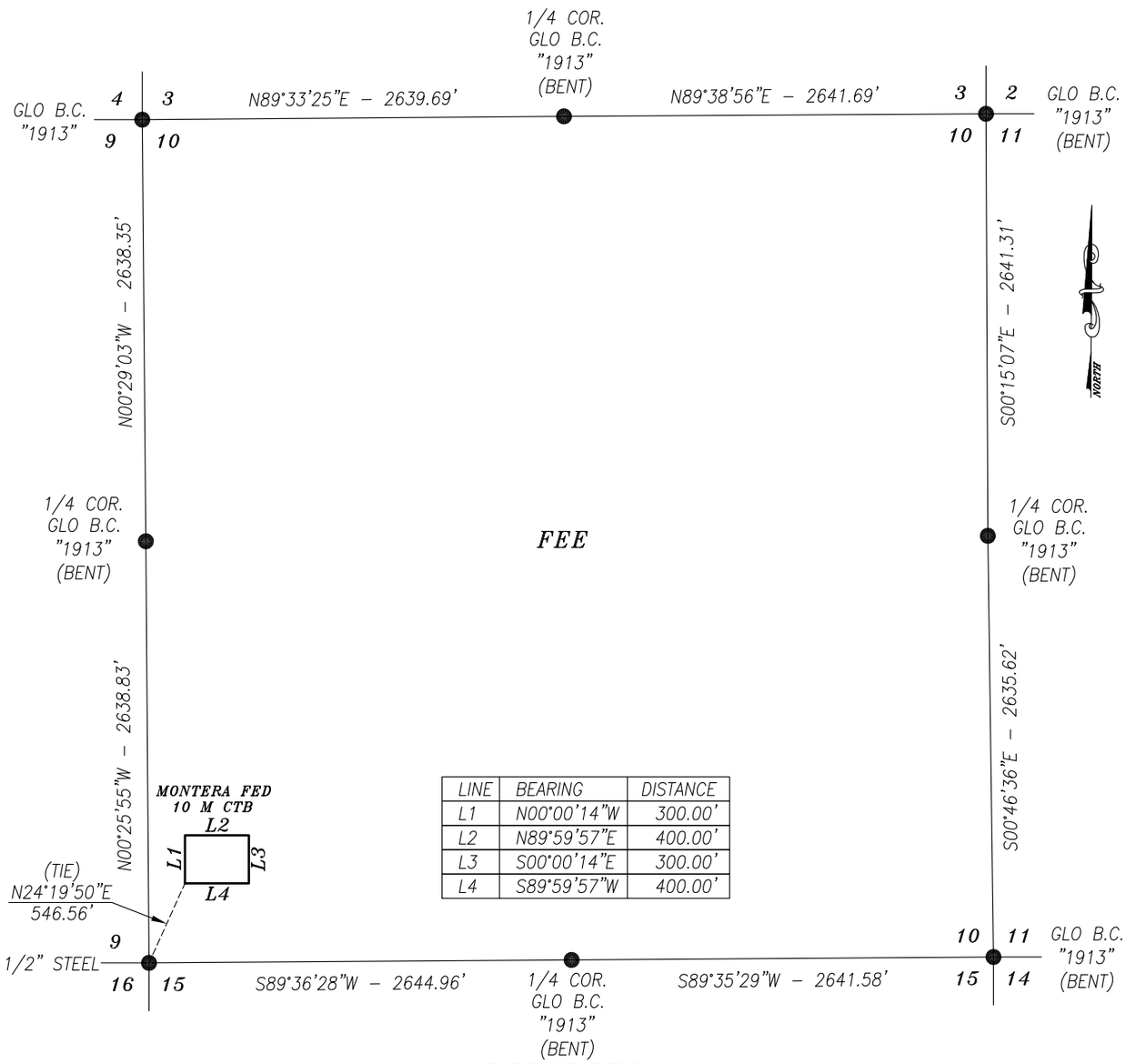
COG OPERATING, LLC

MONTERA FED 10M CTB
LOCATED 645 FEET FROM THE SOUTH LINE
AND 430 FEET FROM THE WEST LINE OF SECTION 10,
TOWNSHIP 25 SOUTH, RANGE 35 EAST, N.M.P.M.,
COUNTY, NEW MEXICO

SURVEY DATE: JANUARY 21, 2020	600S
DRAFTING DATE: JAN. 27 2020	PAGE: 1 OF 1
APPROVED BY: CH / DRAWN BY: AH	FILE: 19-2280

SITE EASEMENT PLAT
COG OPERATING, LLC

A SITE EASEMENT PLAT FOR THE "MONTERA FED 10 M CTB" IN
SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



LINE	BEARING	DISTANCE
L1	N00°00'14"W	300.00'
L2	N89°59'57"E	400.00'
L3	S00°00'14"E	300.00'
L4	S89°59'57"W	400.00'

DESCRIPTION

A PROPOSED PAD LOCATED WITHIN USA LAND IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, NMPM, LEA COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF THE PROPOSED PAD, WHICH LIES N24°19'50"E 546.56 FEET FROM THE SOUTHWEST CORNER OF SAID SECTION; THEN N00°00'14"W 300.00 FEET; THEN N89°59'57"E 400.00 FEET; THEN S00°00'14"E 300.00 FEET; THEN S89°59'57"W 400.00 FEET TO THE POINT OF BEGINNING.
SAID PAD CONTAINS 2.755 ACRES.

BASIS OF BEARING:
BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

CERTIFICATION
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

CHAD L. HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 1/30/20
CHAD HARCROW N.M.P.S. NO. 17777 DATE

HARCROW SURVEYING, LLC
2316 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

1000 0 1000 2000 FEET
SCALE: 1"=1000'

COG OPERATING, LLC

SURVEY OF A PROPOSED PAD LOCATED IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, NMPM, LEA COUNTY, NEW MEXICO

SURVEY DATE: JAN. 21, 2020	CTB
DRAFTING DATE: JAN. 27, 2020	PAGE 1 OF 0
APPROVED BY: CH / DRAWN BY: AH	FILE: 19-2280

LEGEND

- WELL
- WELLPAD
- ACCESS ROAD
- EXIST. ROAD

MONTERA FEDERAL 10 M CTB

SECTION: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO	COUNTY: LEA	SURVEY: N.M.P.M
W.O. # 19-2280		LEASE: MONTERA

0 1,000 FEET

0 0.0375 0.075 0.15 Miles

1 IN = 500 FT

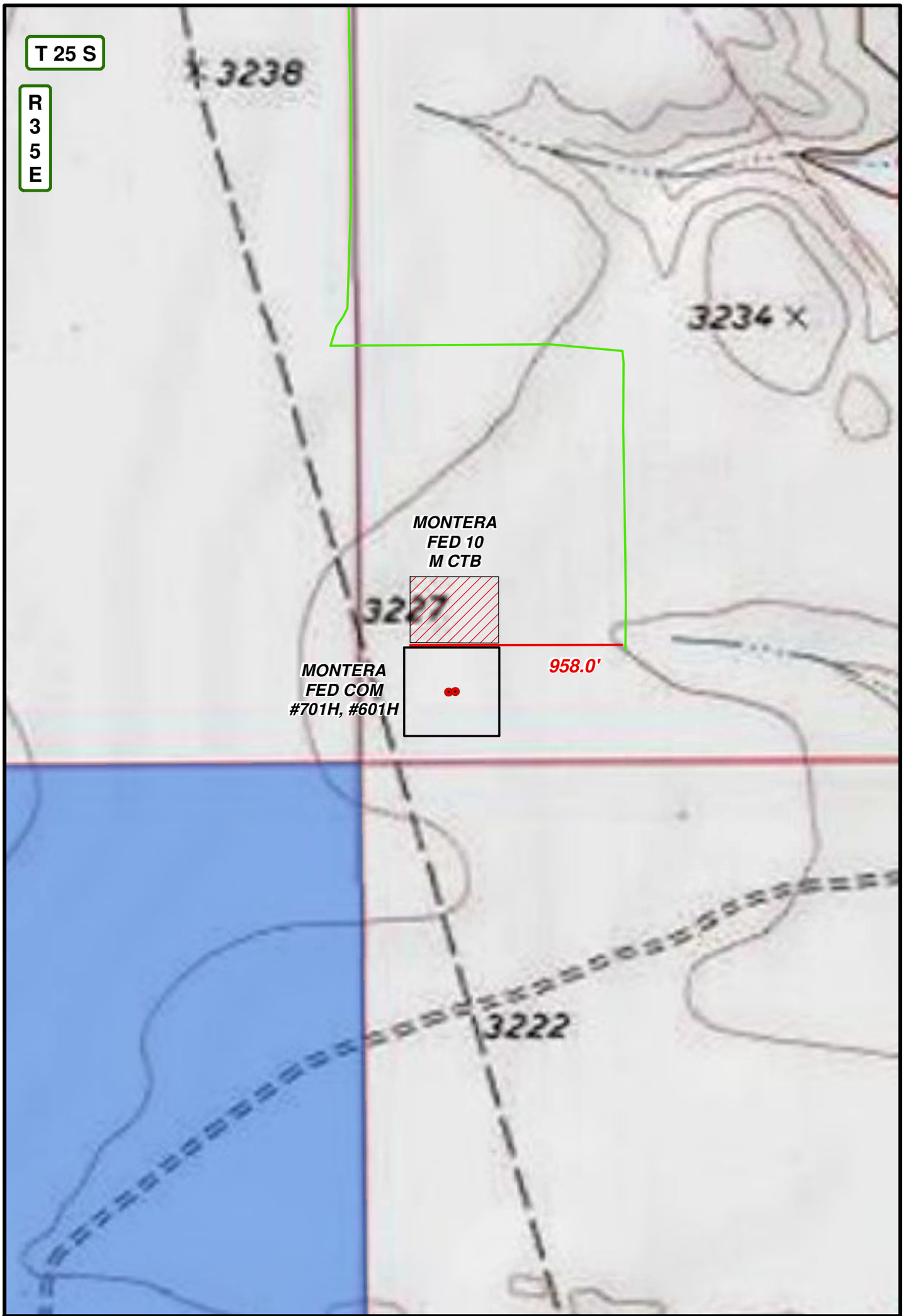
LOCATION MAP IMAGERY 1/27/2020 W.N.

N

CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com



LEGEND

- WELL
- WELLPAD
- ACCESS ROAD
- EXIST. ROAD
- PRIVATE
- STATE OF NM
- US BLM

MONTERA FEDERAL 10 M CTB

SECTION: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO	COUNTY: LEA	SURVEY: N.M.P.M
W.O. # 19-2280		LEASE: MONTERA

0 1,000 FEET

0 0.0375 0.075 0.15 Miles

1 IN = 500 FT

LOCATION MAP | LAND STATUS | 1/27/2020 | W.N.

N

CONCHO

COG OPERATING, LLC

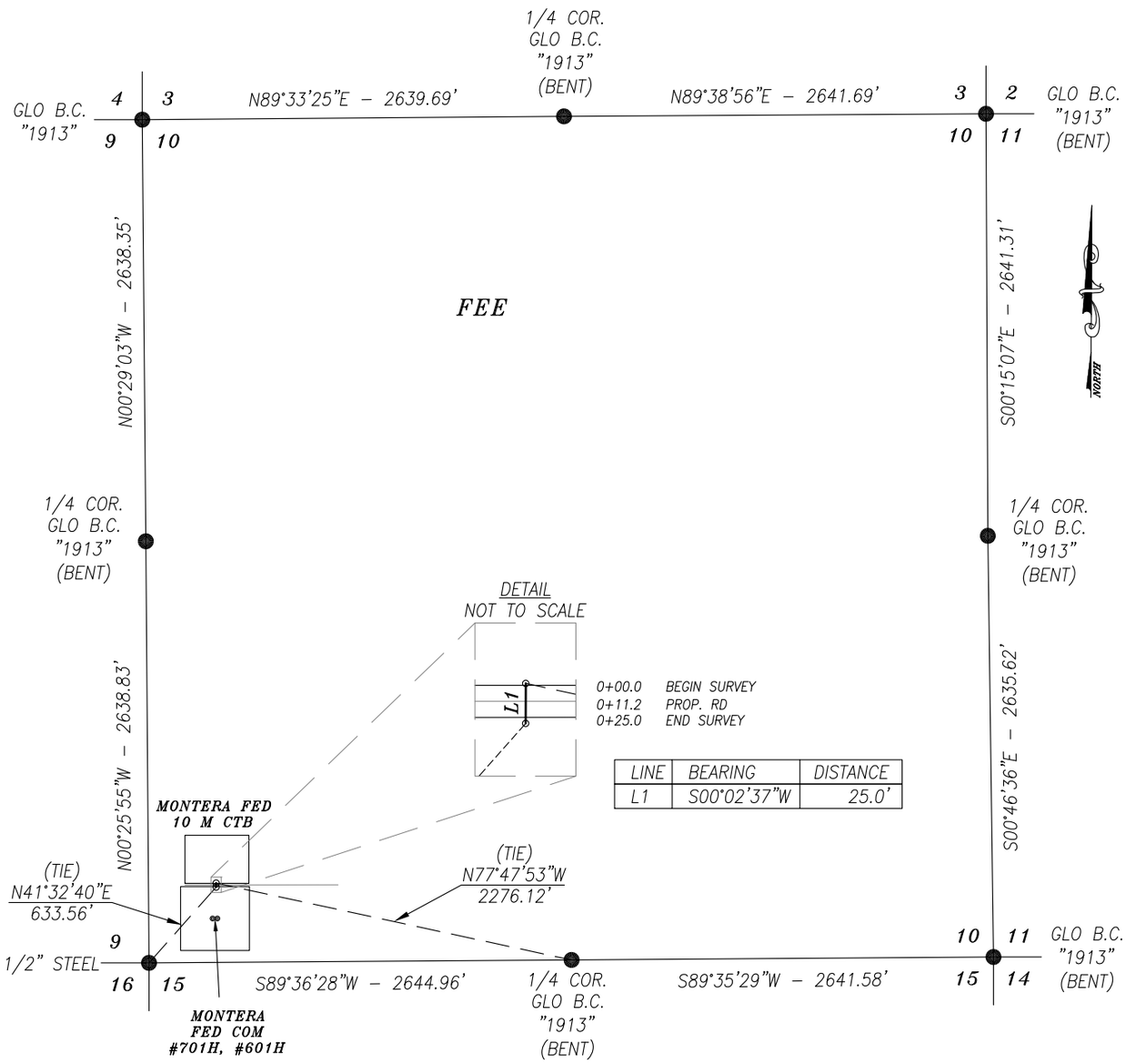
HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

PIPELINE PLAT
COG OPERATING, LLC

A FLOW LINE FROM THE "MONTERA FED COM #701H, #601H" WELLPAD TO THE "MONTERA FED 10 M CTB" IN

SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO.



DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE AND 25.0 FEET OR 1.52 RODS OR 0.005 MILES IN LENGTH CROSSING FEE LAND IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

BASIS OF BEARING:
BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

HARCROW SURVEYING, LLC
2316 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

1000 0 1000 2000 FEET
SCALE: 1"=1000'

CERTIFICATION
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

CHAD L. HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 1/31/20
CHAD HARCROW N.M.P.S. NO. 17777 DATE

COG OPERATING, LLC

SURVEY OF A PROPOSED FLOW LINE LOCATED IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, NMPM, LEA COUNTY, NEW MEXICO

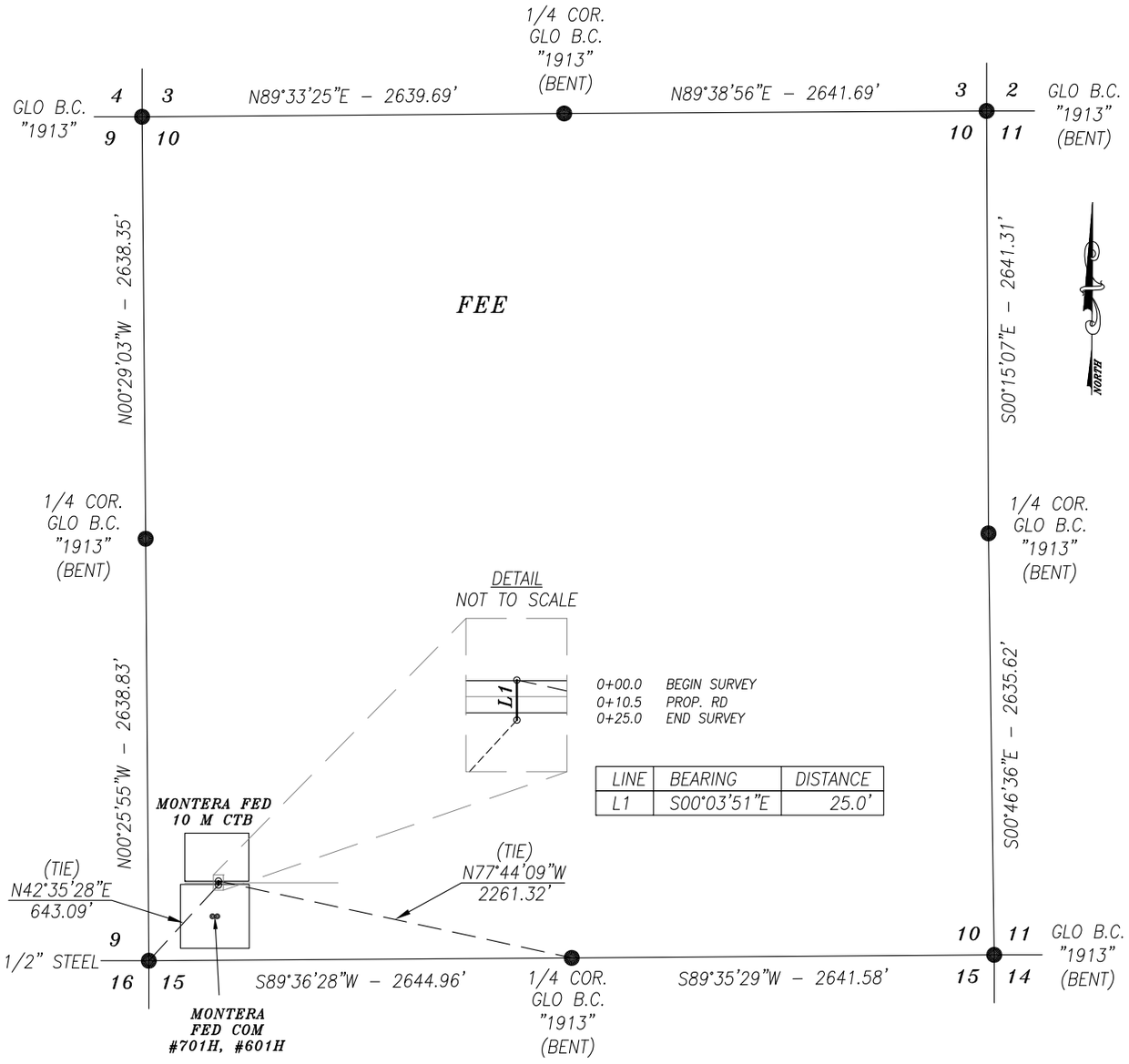
SURVEY DATE: JAN. 21, 2020	FLOW LINE
DRAFTING DATE: JAN. 27, 2020	PAGE 1 OF 0
APPROVED BY: CH / DRAWN BY: AH	FILE: 20-145

PIPELINE PLAT
COG OPERATING, LLC

AN GAS LINE FROM THE "MONTERA FED COM #701H, #601H" WELLPAD TO THE "MONTERA FED 10 M CTB" IN

SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO.



DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE AND 25.0 FEET OR 1.52 RODS OR 0.005 MILES IN LENGTH CROSSING FEE LAND IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

BASIS OF BEARING:
BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

CERTIFICATION
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

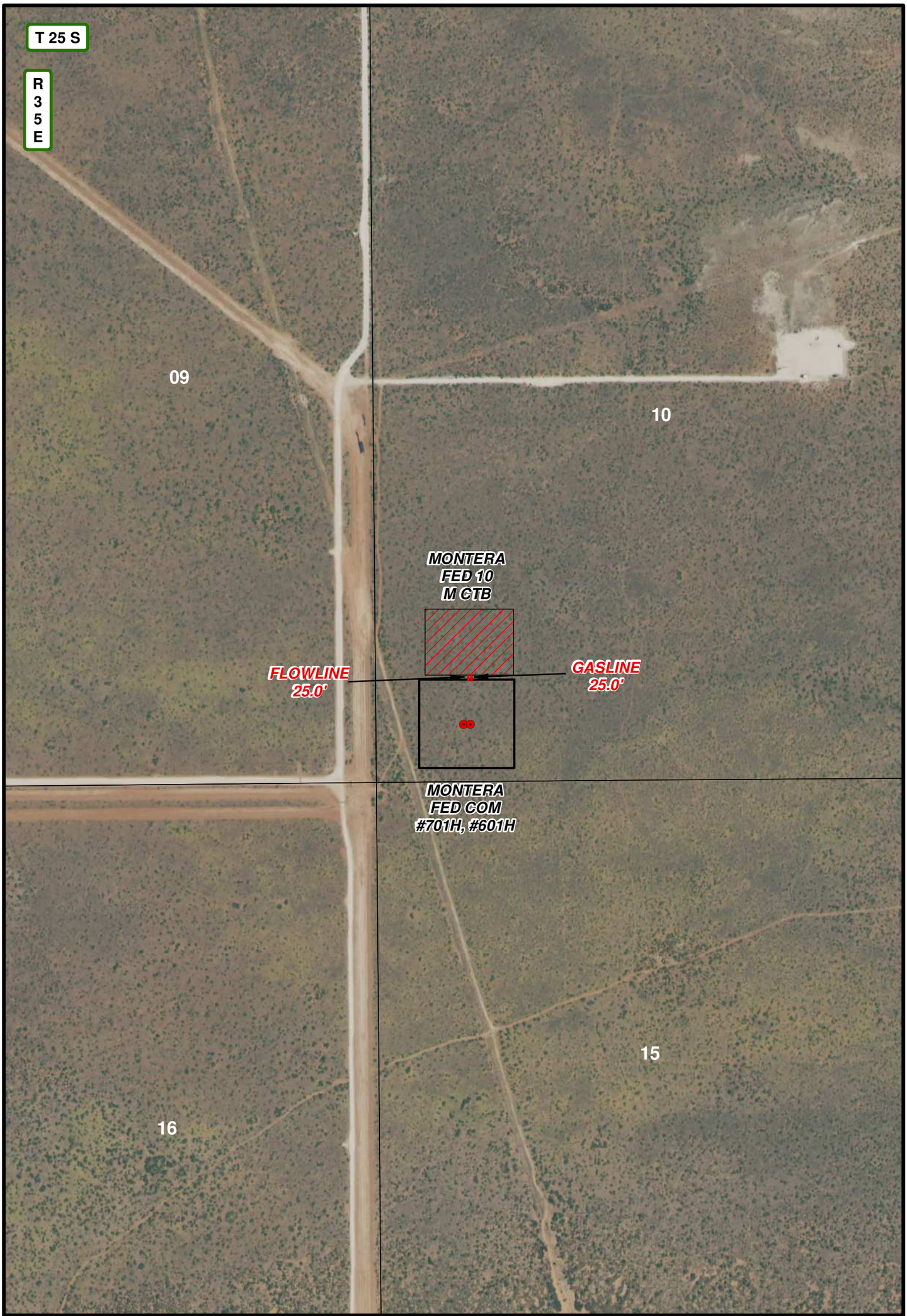
CHAD L. HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 1/31/20
CHAD HARCROW N.M.P.S. NO. 17777 DATE

HARCROW SURVEYING, LLC
2316 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

1000 0 1000 2000 FEET
SCALE: 1"=1000'

COG OPERATING, LLC	
SURVEY OF A PROPOSED GAS LINE LOCATED IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, NMPM, LEA COUNTY, NEW MEXICO	
SURVEY DATE: JAN. 21, 2020	GAS LINE
DRAFTING DATE: JAN. 27, 2020	PAGE 1 OF 0
APPROVED BY: CH / DRAWN BY: AH	FILE: 20-144



LEGEND

- WELL
- WELLPAD
- PIPELINE

MONTERA FEDERAL COM GASLINE & FLOWLINE

SECTION: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO	COUNTY: LEA	SURVEY: N.M.P.M
W.O. # 20-144		LEASE: MONTERA

0 1,000 FEET

0 0.03250.065 0.13 Miles

1 IN = 500 FT

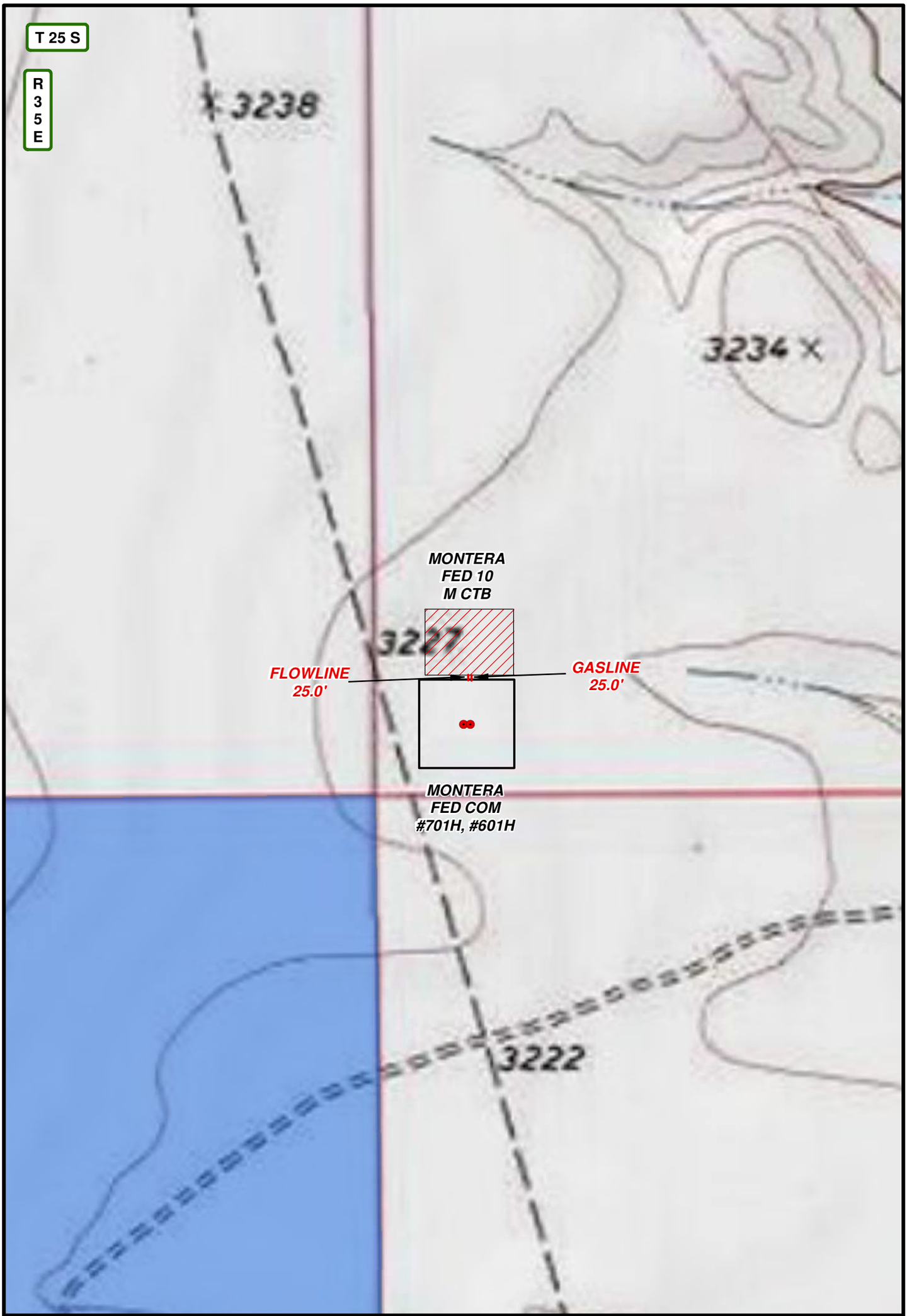
PIPELINE OVERVIEW | IMAGERY | 1/27/2020 | W.N.

N

CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com



LEGEND

- WELL
- WELLPAD
- PIPELINE
- PRIVATE
- STATE OF NM
- US BLM

MONTERA FEDERAL COM GASLINE & FLOWLINE

SECTION: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO	COUNTY: LEA	SURVEY: N.M.P.M
W.O. # 20-144		LEASE: MONTERA

0 1,000 FEET

0 0.03250.065 0.13 Miles

1 IN = 500 FT

PIPELINE OVERVIEW | LAND STATUS | 1/27/2020 | W.N.

N

CONCHO

COG OPERATING, LLC

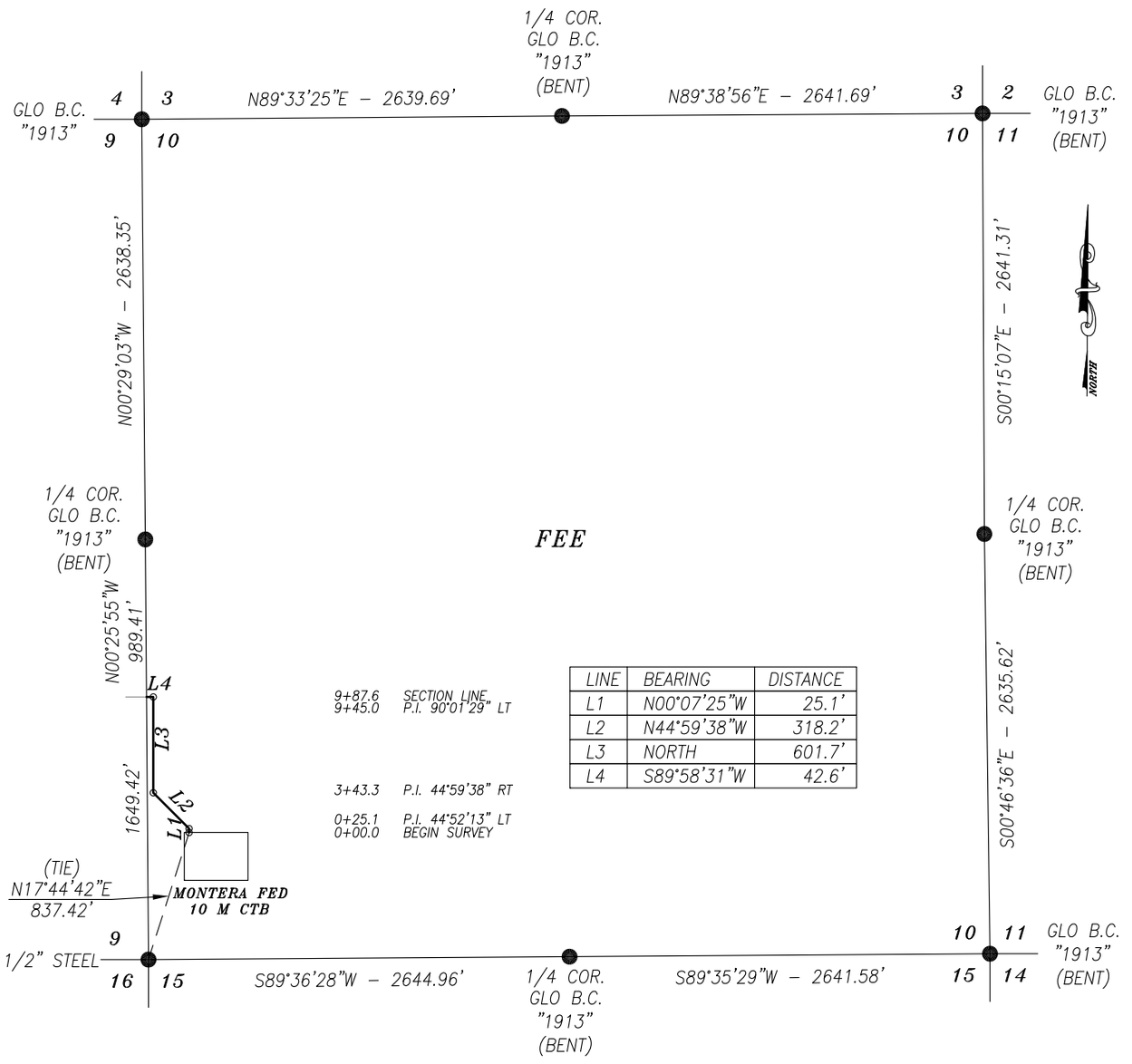
HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

PIPELINE PLAT
COG OPERATING, LLC

AN SWD LINE FOR THE "MONTERA FED 10 M CTB" IN

SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO.



LINE	BEARING	DISTANCE
L1	N00°07'25"W	25.1'
L2	N44°59'38"W	318.2'
L3	NORTH	601.7'
L4	S89°58'31"W	42.6'

DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE AND 987.6 FEET OR 59.85 RODS OR 0.187 MILES IN LENGTH CROSSING FEE LAND IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

BASIS OF BEARING:
BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

CERTIFICATION
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

CHAD L. HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 1/31/20

CHAD HARCROW N.M.P.S. NO. 17777 DATE

HARCROW SURVEYING, LLC
2316 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

1000 0 1000 2000 FEET

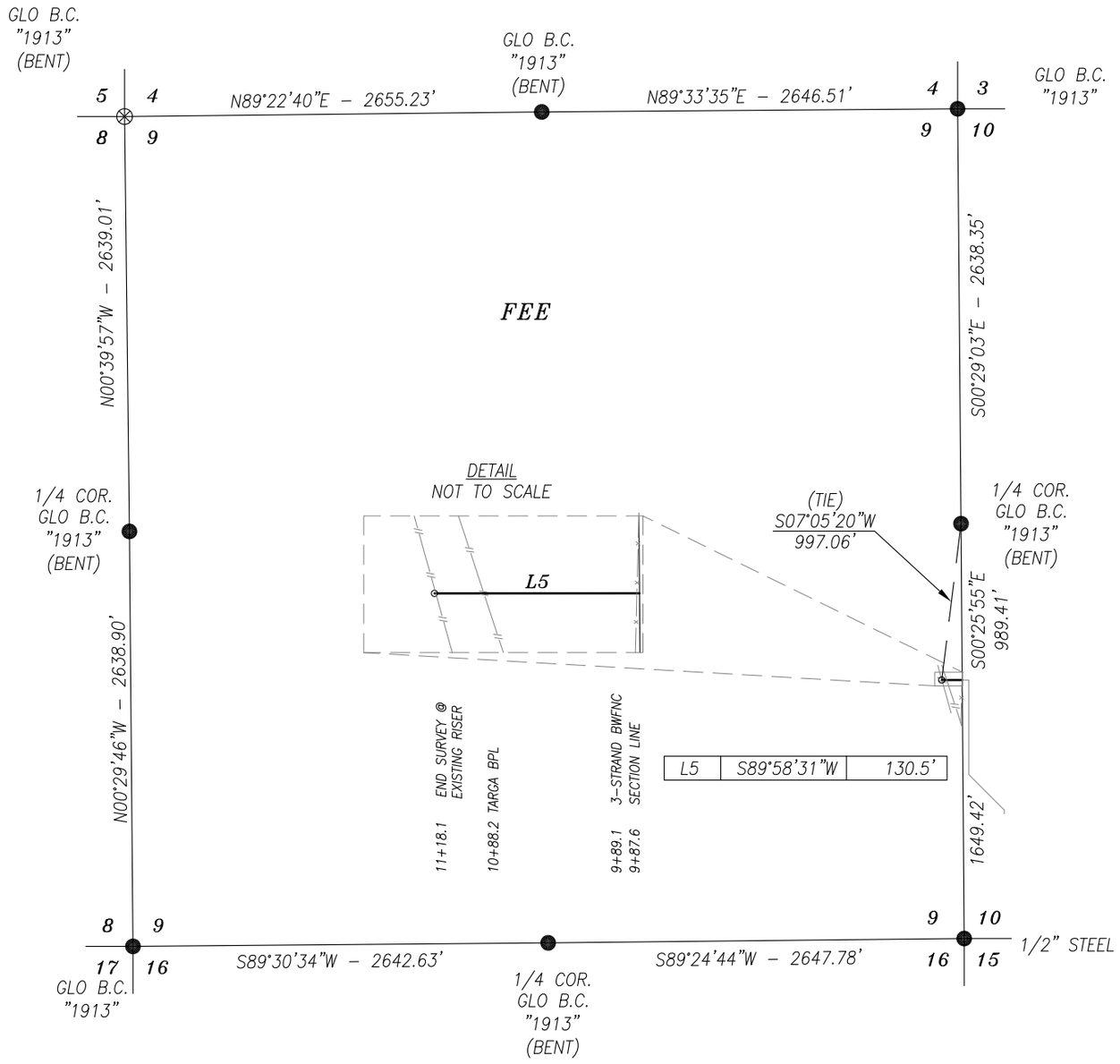
SCALE: 1"=1000'

COG OPERATING, LLC

SURVEY OF A PROPOSED SWD LINE LOCATED IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, NMPM, LEA COUNTY, NEW MEXICO

SURVEY DATE: JAN. 21, 2020	SWD LINE
DRAFTING DATE: JAN. 27, 2020	PAGE 1 OF 2
APPROVED BY: CH / DRAWN BY: AH	FILE: 20-146

PIPELINE PLAT
COG OPERATING, LLC
AN SWD LINE FOR THE "MONTERA FED 10 M CTB" IN
SECTION 9, TOWNSHIP 25 SOUTH, RANGE 35 EAST, N.M.P.M.,
LEA COUNTY, NEW MEXICO.



DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE AND 130.5 FEET OR 7.91 RODS OR 0.025 MILES IN LENGTH CROSSING FEE LAND IN SECTION 9, TOWNSHIP 25 SOUTH, RANGE 35 EAST, LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

BASIS OF BEARING:
BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

CERTIFICATION
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

CHAD L. HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 1/31/20
CHAD HARCROW N.M.P.S. NO. 17777 DATE

HARCROW SURVEYING, LLC
2316 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

1000 0 1000 2000 FEET
SCALE: 1"=1000'

COG OPERATING, LLC

SURVEY OF A PROPOSED SWD LINE LOCATED IN SECTION 9, TOWNSHIP 25 SOUTH, RANGE 35 EAST, NMPM, LEA COUNTY, NEW MEXICO

SURVEY DATE: JAN. 21, 2020	SWD LINE
DRAFTING DATE: JAN. 27, 2020	PAGE 2 OF 2
APPROVED BY: CH / DRAWN BY: AH	FILE: 20-146

LEGEND

- EXIST. PIPELINE
- TANK BATTERY
- PROP. PIPELINE

MONTERA FEDERAL COM SWD LINE

SECTION: 9 & 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO	COUNTY: LEA	SURVEY: N.M.P.M
W.O. # 20-146		LEASE: MONTERA

0 1,000 FEET

0 0.03250.065 0.13 Miles

1 IN = 500 FT

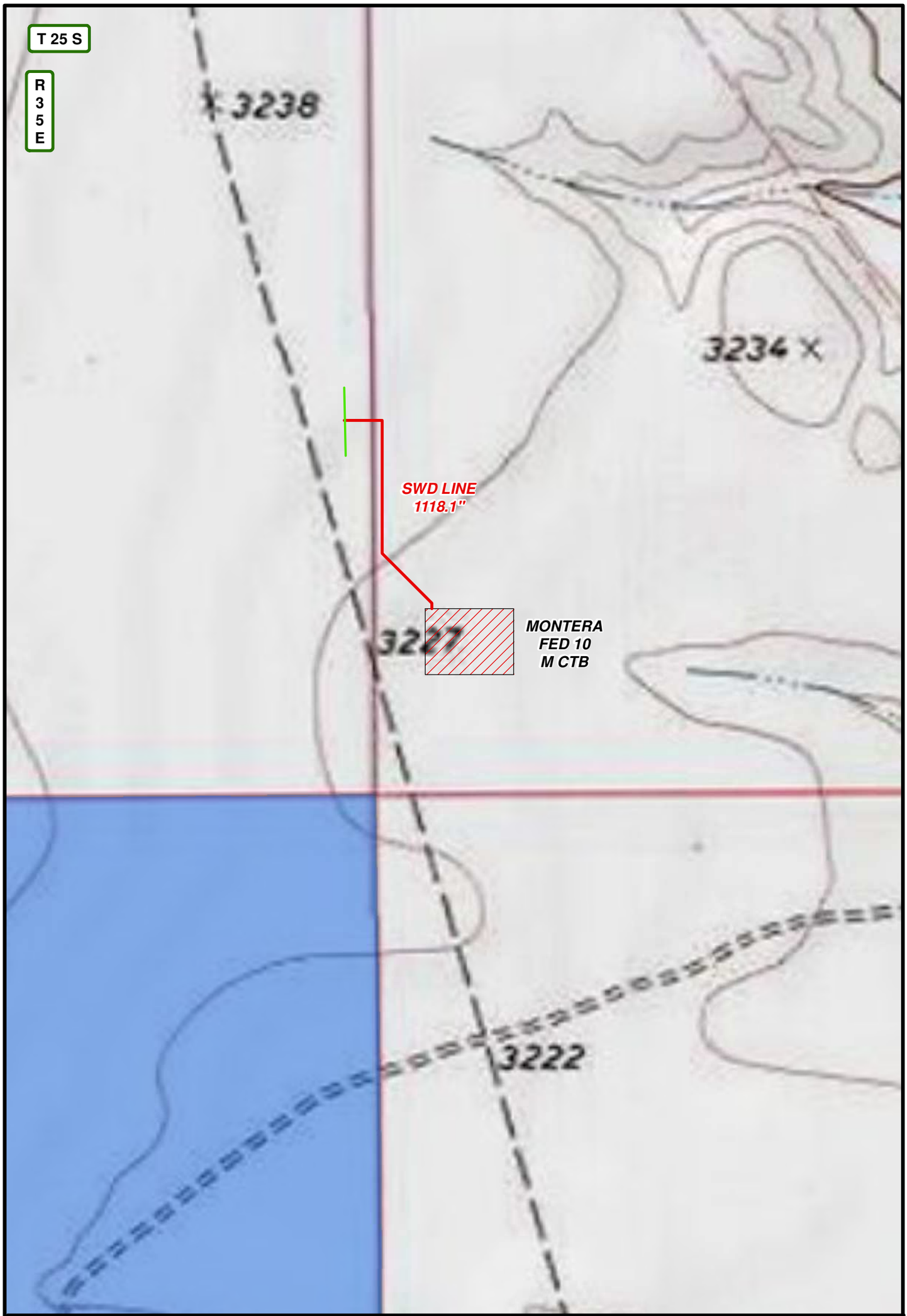
PIPELINE OVERVIEW | IMAGERY | 1/27/2020 | W.N.

N

CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com



LEGEND

- EXIST. PIPELINE
- TANK BATTERY
- PROP. PIPELINE
- PRIVATE
- STATE OF NM
- US BLM

MONTERA FEDERAL COM SWD LINE

SECTION: 9 & 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO	COUNTY: LEA	SURVEY: N.M.P.M
W.O. # 20-146		LEASE: MONTERA

0 1,000 FEET

0 0.03250.065 0.13 Miles

1 IN = 500 FT

PIPELINE OVERVIEW | LAND STATUS | 1/27/2020 | W.N.

N

CONCHO

COG OPERATING, LLC

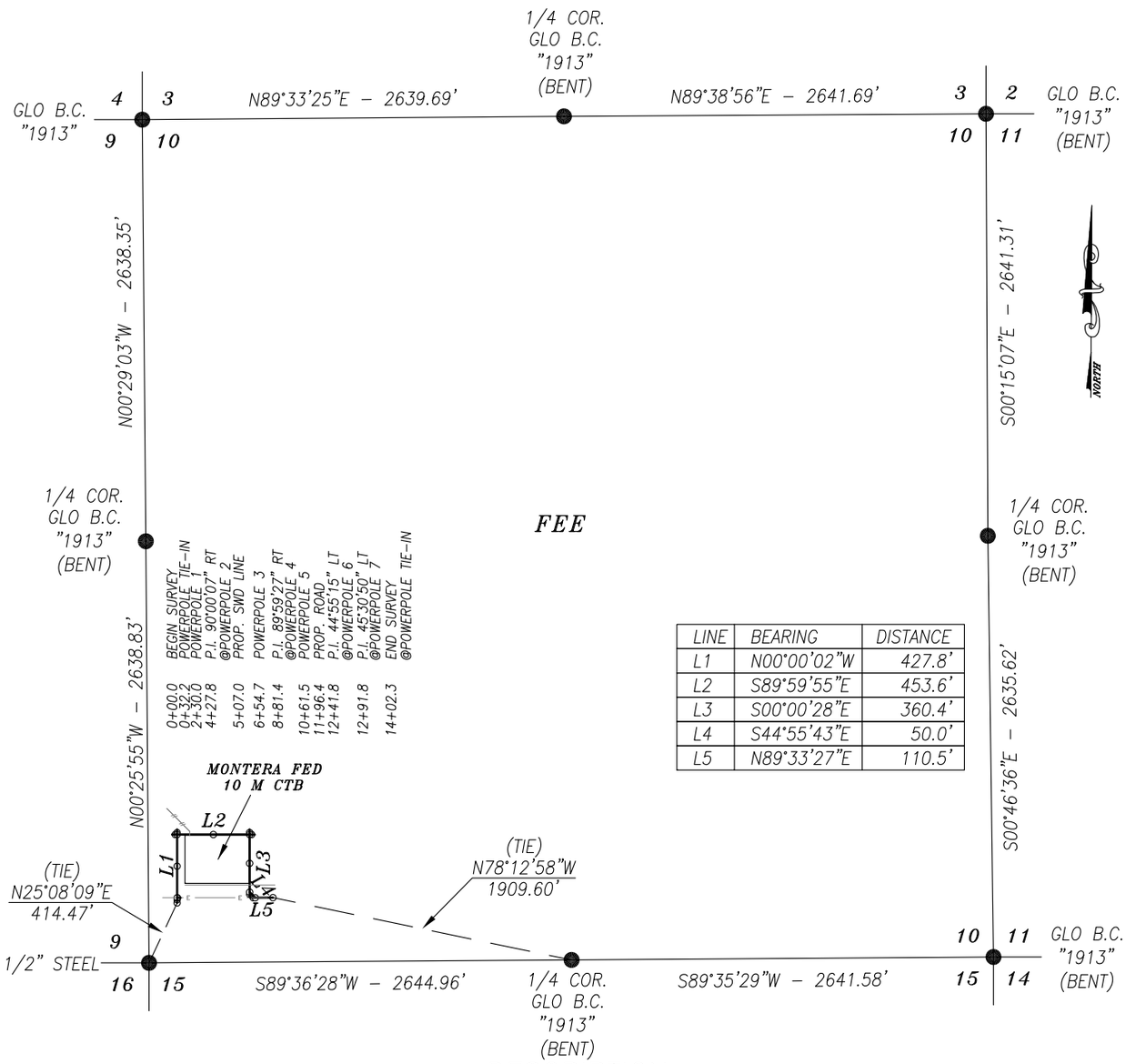
HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

POWER LINE PLAT
COG OPERATING, LLC

A POWER LINE FOR THE "MONTERA FED 10 M CTB" IN

SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, N.M.P.M.,

LEA COUNTY, NEW MEXICO.



LINE	BEARING	DISTANCE
L1	N00°00'02"W	427.8'
L2	S89°59'55"E	453.6'
L3	S00°00'28"E	360.4'
L4	S44°55'43"E	50.0'
L5	N89°33'27"E	110.5'

DESCRIPTION

A STRIP OF LAND 30.0 FEET WIDE AND 1492.3 FEET OR 90.44 RODS OR 0.283 MILES IN LENGTH CROSSING FEE LAND IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, LEA COUNTY, NEW MEXICO AND BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY.

BEING 15.0 FEET LEFT AND 15.0 FEET RIGHT OF THE ABOVE PLATTED CENTERLINE SURVEY 17 FEET NORTH AND WEST AT POLE 2; 17 FEET NORTH AND EAST AT POLE 4; 11 FEET SOUTH AT POLE 6; 11 FEET WEST AT POLE 7; WHICH HAVE BEEN ACCOUNTED FOR IN FOOTAGES, RODS, AND MILES

BASIS OF BEARING:
BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

HARCROW SURVEYING, LLC
2316 W. MAIN ST, ARTESIA, N.M. 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

1000 0 1000 2000 FEET
SCALE: 1"=1000'

CERTIFICATION
I, CHAD HARCROW, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

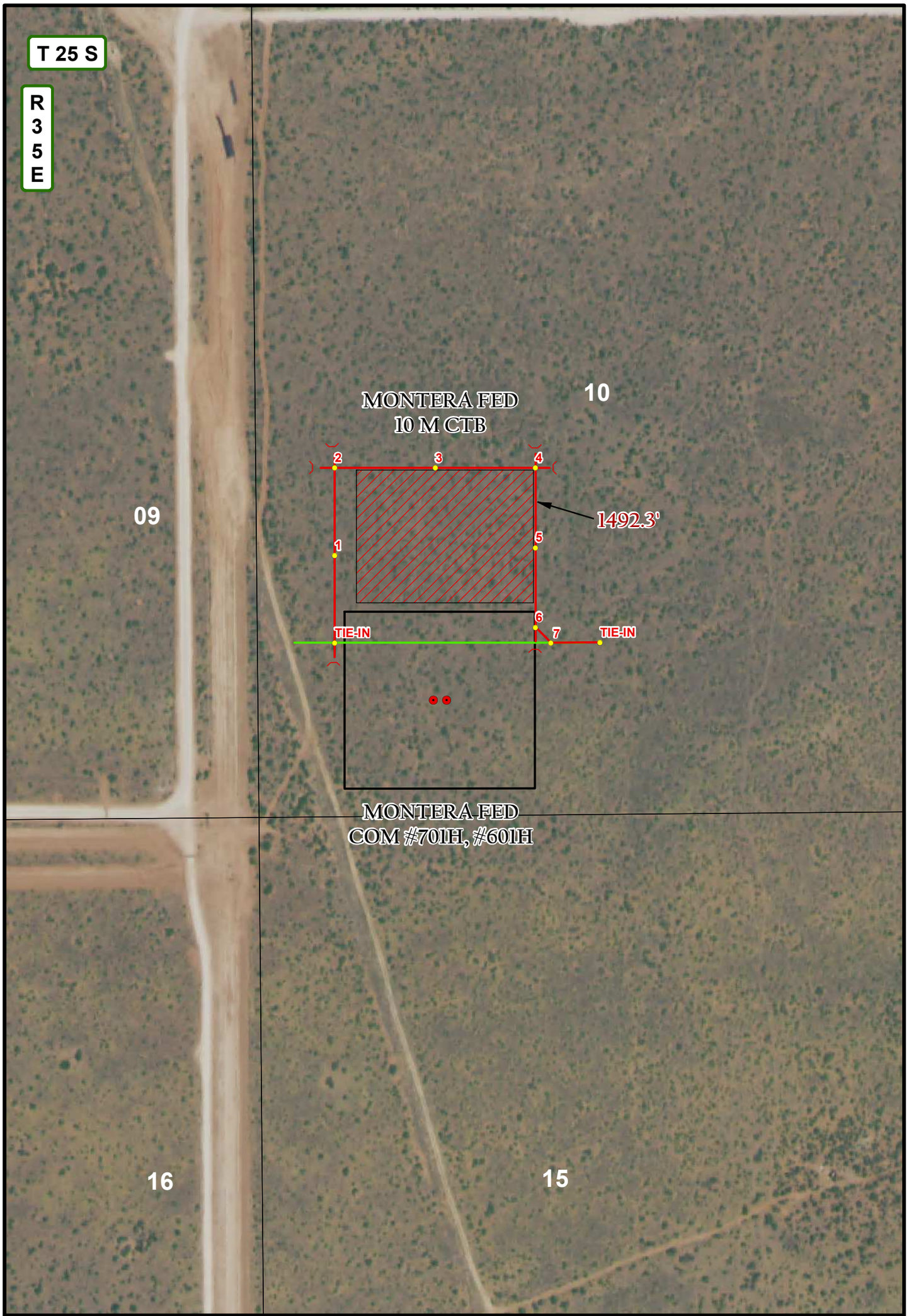
CHAD L. HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 1/31/20
CHAD HARCROW N.M.P.S. NO. 17777 DATE

COG OPERATING, LLC

SURVEY OF A PROPOSED POWER LINE LOCATED IN SECTION 10, TOWNSHIP 25 SOUTH, RANGE 35 EAST, NMPM, LEA COUNTY, NEW MEXICO

SURVEY DATE: JAN. 21, 2020	POWER LINE
DRAFTING DATE: JAN. 28, 2020	PAGE 1 OF 1
APPROVED BY: CH / DRAWN BY: AH	FILE: 20-147



LEGEND

- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD

MONTERA FEDERAL POWERLINE

SECTION: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO	COUNTY: LEA	SURVEY: N.M.P.M
W.O. # 20-147		LEASE: MONTERA

0 0.025 0.05 0.1 Miles

1 IN = 250 FT

POWERLINE OVERVIEW	IMAGERY	1/28/2020	D.S.

N

CONCHO

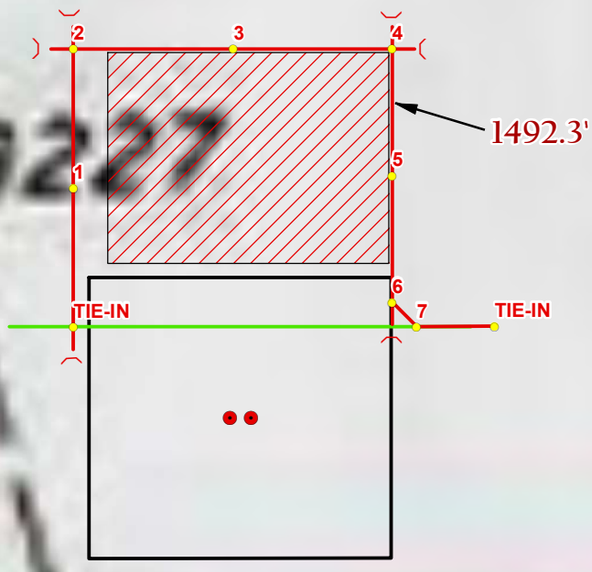
COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

T 25 S

R 3 5 E

MONTERA FED
10 M CTB



MONTERA FED
COM #701H, #601H

LEGEND

- ANCHOR
- POWERPOLE
- EXISTING LINE
- PROP. POWERLINE
- WELL
- WELLPAD
- PRIVATE
- STATE OF NM
- US BLM

MONTERA FEDERAL POWERLINE

SECTION: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO	COUNTY: LEA	SURVEY: N.M.P.M
W.O. # 20-147		LEASE: MONTERA

0 0.025 0.05 0.1 Miles

1 IN = 250 FT

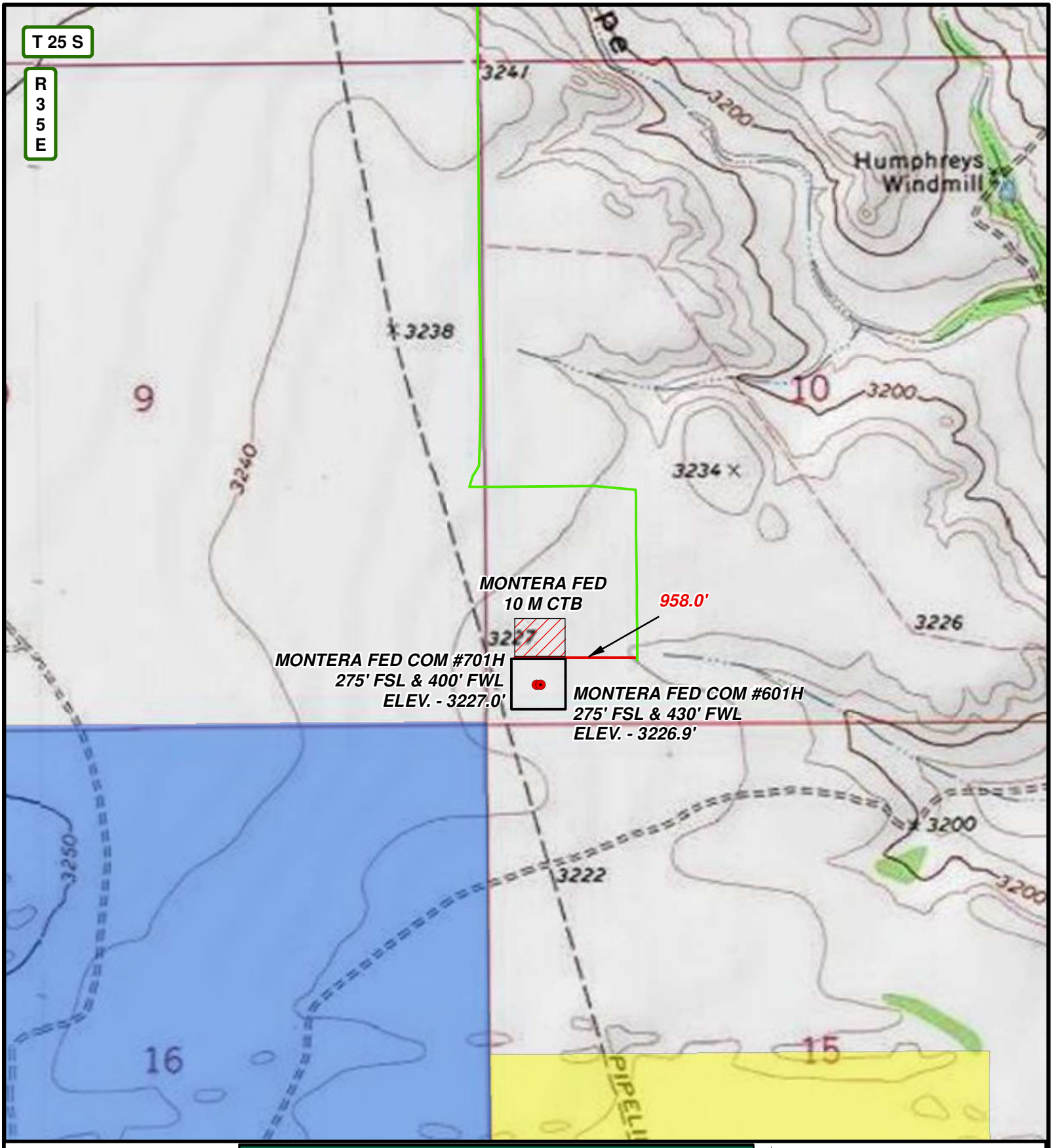
POWERLINE OVERVIEW	LAND STATUS	1/28/2020	D.S.

N

CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com



LEGEND

- WELL
- WELLPAD
- TANK BATTERY
- EXISTING ROAD
- PROPOSED ROAD
- PRIVATE
- STATE OF NM
- US BLM

MONTERA FEDERAL COM

SEC: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO		COUNTY: LEA
W.O. # 19-2278	LEASE: MONTERA	SURVEY: N.M.P.M

0 1,500 FEET

0 0.075 0.15 0.3 Miles

1 IN = 1,000 FT

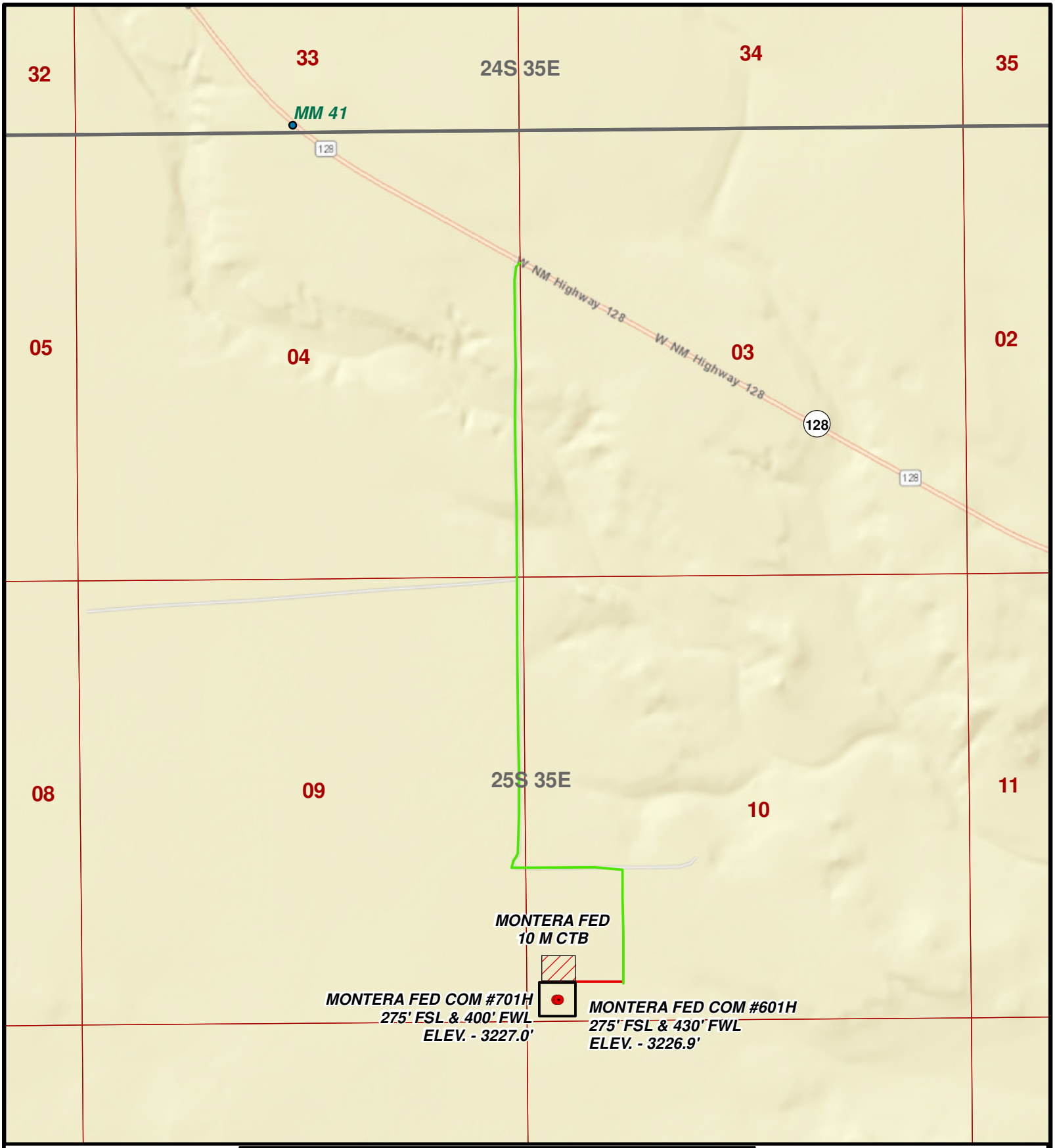
LOCATION MAP | LAND STATUS | 01/27/2020 | W.N.

N

CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com



LEGEND

- WELL
- WELLPAD
- TANK BATTERY
- EXISTING ROAD
- PROPOSED ROAD

MONTERA FEDERAL COM

SEC: 10	TOWNSHIP: 25 S.	RANGE: 35 E.
STATE: NEW MEXICO		COUNTY: LEA
W.O. # 19-2278	LEASE: MONTERA	SURVEY: N.M.P.M

0 1,500 3,000 FEET

0 0.125 0.25 0.5 Miles

1 IN = 1,500 FT

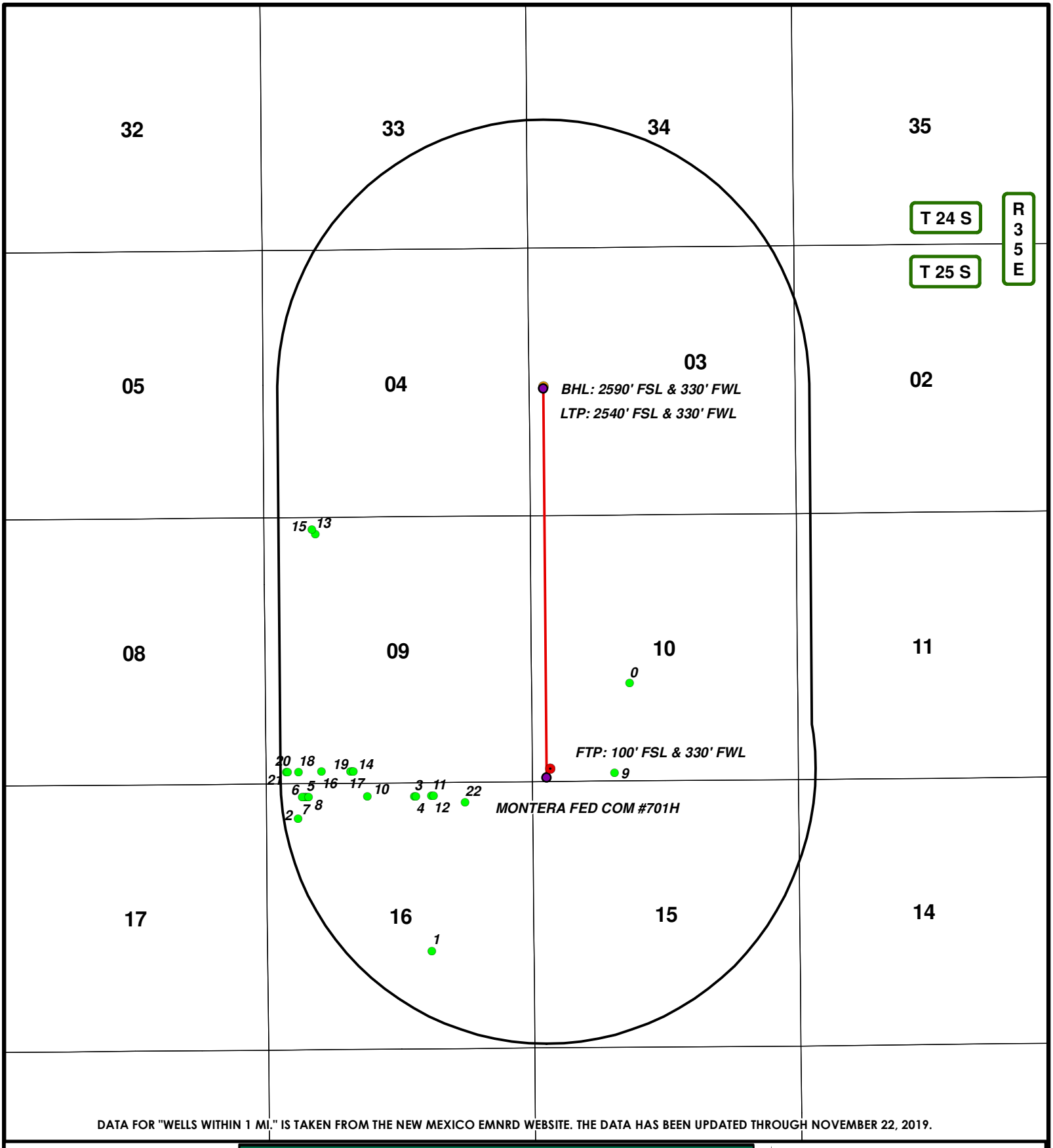
LOCATION MAP | VICINITY | 01/27/2020 | W.N.

N

CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com



DATA FOR "WELLS WITHIN 1 MI." IS TAKEN FROM THE NEW MEXICO EMNRD WEBSITE. THE DATA HAS BEEN UPDATED THROUGH NOVEMBER 22, 2019.

LEGEND

- WELL
- BOTTOMHOLE
- WELLS WITHIN 1 MI.
- 1 MI. BUFFER

MONTERA FEDERAL COM #701H

SEC: 10	TWP: 25 S.	RGE: 35 E.	ELEV: 3227.0'
STATE: NEW MEXICO	COUNTY: LEA		275' FSL & 400' FWL
W.O. # 19-2278	LEASE: MONTERA		SURVEY: N.M.P.M

0 2,500 5,000 FEET

0 0.2 0.4 0.8 Miles

1 IN = 2,500 FT

1 MILE MAP | 01/27/2020 | W.N.

N

CONCHO

COG OPERATING, LLC

HARCROW SURVEYING, LLC.
2316 W. MAIN ST, ARTESIA, NM 88210
PH: (575) 746-2158
c.harcrow@harcrowsurveying.com

MONTERA FEDERAL COM #701H 1 MILE DATA (19-2278)

FID	WELL_NAME	OPERATOR	API	SECTION	TOWNSHIP	RANGE	FTG_NS	NS_CD	FTG_EW	EW_CD	LATITUDE	LONGITUDE	COMPL_STAT
0	OXY BANANA GIRL FEDERAL 002	ROBERT E. LANDRETH	3002535322	10	25.0S	35E	1980	S	1980	W	32.143033	-103.357475	Active
1	RAINBOW 16 STATE 001	ROBERT E. LANDRETH	3002539719	16	25.0S	35E	1980	S	1980	E	32.128546	-103.370342	Plugged
2	RAINBOW 16 STATE 002	ROBERT E. LANDRETH	3002539720	16	25.0S	35E	660	N	660	W	32.135799	-103.378855	Plugged
3	WHEATFIELD 16 STATE 701H	EOG RESOURCES INC	3002542520	16	25.0S	35E	230	N	2300	E	32.136974	-103.371375	Unknown
4	WHEATFIELD 16 STATE 702H	EOG RESOURCES INC	3002542787	16	25.0S	35E	230	N	2270	E	32.136974	-103.371278	Unknown
5	WHITE FALCON 16 STATE COM 023H	COG OPERATING LLC	3002543699	16	25.0S	35E	226	N	812	W	32.13699	-103.378299	Unknown
6	WHITE FALCON 16 STATE 013H	COG OPERATING LLC	3002543698	16	25.0S	35E	226	N	772	W	32.13699	-103.378429	Unknown
7	WHITE FALCON 16 STATE COM 024H	COG OPERATING LLC	3002543700	16	25.0S	35E	226	N	732	W	32.136991	-103.378559	Unknown
8	WHITE FALCON 16 STATE COM 012H	COG OPERATING LLC	3002543697	16	25.0S	35E	226	N	852	W	32.13699	-103.378169	Unknown
9	MONTERA FEDERAL 023H	COG OPERATING LLC	3002543924	10	25.0S	35E	190	S	1650	W	32.138149	-103.358492	Unknown
10	WHITE FALCON 16 FEDERAL COM 021H	COG OPERATING LLC	3002543931	16	25.0S	35E	226	N	2020	W	32.13699	-103.374378	Unknown
11	WHITE FALCON 16 FEDERAL COM 011H	COG OPERATING LLC	3002543930	16	25.0S	35E	226	N	1980	E	32.13701	-103.370273	Unknown
12	WHITE FALCON 16 FEDERAL COM 022H	COG OPERATING LLC	3002543932	16	25.0S	35E	226	N	1940	E	32.13701	-103.370143	Unknown
13	FEZ FEDERAL COM 603H	COG OPERATING LLC	3002545276	9	25.0S	35E	280	N	1055	W	32.151336	-103.377571	Unknown
14	FEZ FEDERAL COM 701H	COG OPERATING LLC	3002545277	9	25.0S	35E	280	S	1720	W	32.138376	-103.375357	Unknown
15	FEZ FEDERAL COM 703H	COG OPERATING LLC	3002545279	9	25.0S	35E	200	N	990	W	32.151554	-103.377783	Unknown
16	FEZ FEDERAL COM 702H	COG OPERATING LLC	3002545278	9	25.0S	35E	280	S	1115	W	32.138379	-103.377321	Unknown
17	FEZ FEDERAL COM 602H	COG OPERATING LLC	3002545275	9	25.0S	35E	280	S	1690	W	32.138375	-103.375454	Unknown
18	FEZ FEDERAL COM 704H	COG OPERATING LLC	3002545280	9	25.0S	35E	280	S	660	W	32.138382	-103.378798	Unknown
19	FEZ FEDERAL COM 601H	COG OPERATING LLC	3002545274	9	25.0S	35E	280	S	1750	W	32.138376	-103.375259	Unknown
20	FEZ FEDERAL COM 705H	COG OPERATING LLC	3002545337	9	25.0S	35E	280	S	420	W	32.138384	-103.379577	Unknown
21	FEZ FEDERAL COM 604H	COG OPERATING LLC	3002545331	9	25.0S	35E	280	S	450	W	32.138384	-103.37948	Unknown
22	SCREECH STATE SWD 001	SOLARIS WATER MIDSTREAM, LLC	3002545346	16	25.0S	35E	370	N	1317	E	32.136625	-103.36812	Unknown

COG Operating, LLC - Montera Federal Com 701H

1. Geologic Formations

TVD of target	12,356'	Pilot hole depth	NA
MD at TD:	19,967'	Deepest expected fresh water:	207'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	728	Water	
Top of Salt	1073	Salt	
Base of Salt	4861	Salt	
Lamar	5256	Salt Water	
Bell Canyon	5305	Salt Water	
Cherry Canyon	6228	Oil/Gas	
Brushy Canyon	7727	Oil/Gas	
Bone Spring Lime	8986	Oil/Gas	
M. Avalon Shale	9417	Oil/Gas	
L. Avalon Shale	9848	Oil/Gas	
1st Bone Spring Sand	10279	Oil/Gas	
2nd Bone Spring Sand	10781	Oil/Gas	
3rd Bone Spring Sand	11888	Oil/Gas	
Wolfcamp	12256	Target Oil/Gas	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight	Grade	Conn.	SF	SF Burst	SF	SF
	From	To		(lbs)			Collapse		Body	Joint
14.75"	0	1170	10.75"	45.5	N80	BTC	4.61	1.67	19.54	20.61
9.875"	0	8500	7.625"	29.7	HCL80	BTC	1.56	1.08	2.88	2.90
8.750"	8500	11640	7.625"	29.7	HCP110	TL-FJ	1.29	1.11	2.72	1.90
6.75"	0	11440	5.5"	23	P110	BTC	1.81	1.86	3.28	3.26
6.75"	11440	19,967	5"	18	P110	BTC	1.81	1.86	3.28	3.26
				BLM Minimum Safety Factor			1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing.to mitigate collapse. Surface burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface and
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

The 5" casing will be run back 200' into the intermediate casing to ensure the coupling OD clearance is greater than .422" for the cement bond tie in.

COG Operating, LLC - Montera Federal Com 701H

	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.	Y
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 3rd 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 2nd 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_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	558	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl2
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl2
Intermed.	840	10.3	3.3	22	24	Halliburton tunded light
	250	14.8	1.35	6.6	8	Tail: Class H
Prod	531	12.7	2	10.7	72	Lead: 50:50:10 H Blend
	1080	14.4	1.24	5.7	19	Tail: 50:50:2 Class H Blend

If losses are encountered in the intermediate section a DV/ECP tool will be run ~50' above the Lamar Lime top, cement will be adjusted accordingly if this contingency is necessary.

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%
Intermediate	0’	50%
Production	8,000'	35% OH in Lateral (KOP to EOL)

COG Operating, LLC - Montera Federal Com 701H

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:
9-7/8”	13-5/8”	5M	Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
6-3/4”	13-5/8”	10M	5M Annular	x	5000psi
			Blind Ram	x	10000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		

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 valve (inside BOP) 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.

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	9-5/8" Int shoe	Brine Diesel Emulsion	8.4 - 9	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9.6 - 12.5	35-45	<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.
Y	No 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	8035 psi at 12356' TVD
Abnormal Temperature	NO 180 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?

x	H2S Plan.
x	BOP & Choke Schematics.
x	Directional Plan

NORTHERN DELAWARE BASIN

LEA COUNTY, NM
BULLDOG
MONTERA FEDERAL COM 701H

OWB

Plan: PWP1

Standard Survey Report

18 February, 2020

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Well:	MONTERA FEDERAL COM 701H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	edm

Project	LEA COUNTY, NM		
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	MONTERA FEDERAL COM 701H				
Well Position	**+N/-S**	0.0 usft	**Northing:**	415,380.70 usft	**Latitude:**	32° 8' 17.781 N
	+E/-W	0.0 usft	**Easting:**	800,607.30 usft	**Longitude:**	103° 21' 43.833 W
Position Uncertainty		3.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,227.0 usft

Wellbore	OWB				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	2/18/2020	6.56	59.98	47,635.46442118

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 (°)**
	0.0	0.0	0.0	359.01

Survey Tool Program **Date** 2/18/2020

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	19,966.3	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:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Well:	MONTERA FEDERAL COM 701H	**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
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
5,600.0	2.00	196.22	5,600.0	-1.7	-0.5	-1.7	2.00	2.00	0.00
5,604.0	2.08	196.22	5,604.0	-1.8	-0.5	-1.8	2.00	2.00	0.00

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Well:	MONTERA FEDERAL COM 701H	**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)
Start 6262.2 hold at 5604.0 MD									
5,700.0	2.08	196.22	5,699.9	-5.2	-1.5	-5.1	0.00	0.00	0.00
5,800.0	2.08	196.22	5,799.8	-8.6	-2.5	-8.6	0.00	0.00	0.00
5,900.0	2.08	196.22	5,899.8	-12.1	-3.5	-12.1	0.00	0.00	0.00
6,000.0	2.08	196.22	5,999.7	-15.6	-4.5	-15.5	0.00	0.00	0.00
6,100.0	2.08	196.22	6,099.7	-19.1	-5.6	-19.0	0.00	0.00	0.00
6,200.0	2.08	196.22	6,199.6	-22.6	-6.6	-22.5	0.00	0.00	0.00
6,300.0	2.08	196.22	6,299.5	-26.1	-7.6	-25.9	0.00	0.00	0.00
6,400.0	2.08	196.22	6,399.5	-29.5	-8.6	-29.4	0.00	0.00	0.00
6,500.0	2.08	196.22	6,499.4	-33.0	-9.6	-32.9	0.00	0.00	0.00
6,600.0	2.08	196.22	6,599.3	-36.5	-10.6	-36.3	0.00	0.00	0.00
6,700.0	2.08	196.22	6,699.3	-40.0	-11.6	-39.8	0.00	0.00	0.00
6,800.0	2.08	196.22	6,799.2	-43.5	-12.6	-43.3	0.00	0.00	0.00
6,900.0	2.08	196.22	6,899.1	-47.0	-13.7	-46.7	0.00	0.00	0.00
7,000.0	2.08	196.22	6,999.1	-50.5	-14.7	-50.2	0.00	0.00	0.00
7,100.0	2.08	196.22	7,099.0	-53.9	-15.7	-53.7	0.00	0.00	0.00
7,200.0	2.08	196.22	7,198.9	-57.4	-16.7	-57.1	0.00	0.00	0.00
7,300.0	2.08	196.22	7,298.9	-60.9	-17.7	-60.6	0.00	0.00	0.00
7,400.0	2.08	196.22	7,398.8	-64.4	-18.7	-64.1	0.00	0.00	0.00
7,500.0	2.08	196.22	7,498.7	-67.9	-19.7	-67.5	0.00	0.00	0.00
7,600.0	2.08	196.22	7,598.7	-71.4	-20.8	-71.0	0.00	0.00	0.00
7,700.0	2.08	196.22	7,698.6	-74.8	-21.8	-74.5	0.00	0.00	0.00
7,800.0	2.08	196.22	7,798.5	-78.3	-22.8	-77.9	0.00	0.00	0.00
7,900.0	2.08	196.22	7,898.5	-81.8	-23.8	-81.4	0.00	0.00	0.00
8,000.0	2.08	196.22	7,998.4	-85.3	-24.8	-84.9	0.00	0.00	0.00
8,100.0	2.08	196.22	8,098.3	-88.8	-25.8	-88.3	0.00	0.00	0.00
8,200.0	2.08	196.22	8,198.3	-92.3	-26.8	-91.8	0.00	0.00	0.00
8,300.0	2.08	196.22	8,298.2	-95.7	-27.9	-95.3	0.00	0.00	0.00
8,400.0	2.08	196.22	8,398.1	-99.2	-28.9	-98.7	0.00	0.00	0.00
8,500.0	2.08	196.22	8,498.1	-102.7	-29.9	-102.2	0.00	0.00	0.00
8,600.0	2.08	196.22	8,598.0	-106.2	-30.9	-105.6	0.00	0.00	0.00
8,700.0	2.08	196.22	8,697.9	-109.7	-31.9	-109.1	0.00	0.00	0.00
8,800.0	2.08	196.22	8,797.9	-113.2	-32.9	-112.6	0.00	0.00	0.00
8,900.0	2.08	196.22	8,897.8	-116.7	-33.9	-116.0	0.00	0.00	0.00
9,000.0	2.08	196.22	8,997.7	-120.1	-34.9	-119.5	0.00	0.00	0.00
9,100.0	2.08	196.22	9,097.7	-123.6	-36.0	-123.0	0.00	0.00	0.00
9,200.0	2.08	196.22	9,197.6	-127.1	-37.0	-126.4	0.00	0.00	0.00
9,300.0	2.08	196.22	9,297.5	-130.6	-38.0	-129.9	0.00	0.00	0.00
9,400.0	2.08	196.22	9,397.5	-134.1	-39.0	-133.4	0.00	0.00	0.00
9,500.0	2.08	196.22	9,497.4	-137.6	-40.0	-136.8	0.00	0.00	0.00
9,600.0	2.08	196.22	9,597.3	-141.0	-41.0	-140.3	0.00	0.00	0.00
9,700.0	2.08	196.22	9,697.3	-144.5	-42.0	-143.8	0.00	0.00	0.00
9,800.0	2.08	196.22	9,797.2	-148.0	-43.1	-147.2	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Well:	MONTERA FEDERAL COM 701H	**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	2.08	196.22	9,897.1	-151.5	-44.1	-150.7	0.00	0.00	0.00
10,000.0	2.08	196.22	9,997.1	-155.0	-45.1	-154.2	0.00	0.00	0.00
10,100.0	2.08	196.22	10,097.0	-158.5	-46.1	-157.6	0.00	0.00	0.00
10,200.0	2.08	196.22	10,197.0	-161.9	-47.1	-161.1	0.00	0.00	0.00
10,300.0	2.08	196.22	10,296.9	-165.4	-48.1	-164.6	0.00	0.00	0.00
10,400.0	2.08	196.22	10,396.8	-168.9	-49.1	-168.0	0.00	0.00	0.00
10,500.0	2.08	196.22	10,496.8	-172.4	-50.2	-171.5	0.00	0.00	0.00
10,600.0	2.08	196.22	10,596.7	-175.9	-51.2	-175.0	0.00	0.00	0.00
10,700.0	2.08	196.22	10,696.6	-179.4	-52.2	-178.4	0.00	0.00	0.00
10,800.0	2.08	196.22	10,796.6	-182.9	-53.2	-181.9	0.00	0.00	0.00
10,900.0	2.08	196.22	10,896.5	-186.3	-54.2	-185.4	0.00	0.00	0.00
11,000.0	2.08	196.22	10,996.4	-189.8	-55.2	-188.8	0.00	0.00	0.00
11,100.0	2.08	196.22	11,096.4	-193.3	-56.2	-192.3	0.00	0.00	0.00
11,200.0	2.08	196.22	11,196.3	-196.8	-57.2	-195.8	0.00	0.00	0.00
11,300.0	2.08	196.22	11,296.2	-200.3	-58.3	-199.2	0.00	0.00	0.00
11,400.0	2.08	196.22	11,396.2	-203.8	-59.3	-202.7	0.00	0.00	0.00
11,500.0	2.08	196.22	11,496.1	-207.2	-60.3	-206.2	0.00	0.00	0.00
11,600.0	2.08	196.22	11,596.0	-210.7	-61.3	-209.6	0.00	0.00	0.00
11,700.0	2.08	196.22	11,696.0	-214.2	-62.3	-213.1	0.00	0.00	0.00
11,800.0	2.08	196.22	11,795.9	-217.7	-63.3	-216.6	0.00	0.00	0.00
11,866.1	2.08	196.22	11,862.0	-220.0	-64.0	-218.9	0.00	0.00	0.00
Start DLS 12.00 TFO 163.31									
11,900.0	2.15	343.46	11,895.8	-220.0	-64.4	-218.8	12.00	0.22	434.93
12,000.0	14.08	357.16	11,994.7	-206.0	-65.5	-204.8	12.00	11.93	13.70
12,100.0	26.08	358.32	12,088.4	-171.7	-66.7	-170.5	12.00	11.99	1.16
12,200.0	38.07	358.78	12,173.0	-118.7	-68.1	-117.5	12.00	12.00	0.46
12,300.0	50.07	359.04	12,244.7	-49.3	-69.4	-48.1	12.00	12.00	0.26
12,400.0	62.07	359.22	12,300.4	33.5	-70.6	34.7	12.00	12.00	0.18
12,500.0	74.07	359.37	12,337.7	126.1	-71.7	127.3	12.00	12.00	0.15
12,600.0	86.07	359.50	12,354.9	224.4	-72.7	225.6	12.00	12.00	0.13
12,635.4	90.32	359.54	12,356.0	259.8	-73.0	261.0	12.00	12.00	0.13
Start 7331.4 hold at 12635.4 MD									
12,700.0	90.32	359.54	12,355.7	324.4	-73.5	325.6	0.00	0.00	0.00
12,800.0	90.32	359.54	12,355.1	424.4	-74.3	425.6	0.00	0.00	0.00
12,900.0	90.32	359.54	12,354.5	524.4	-75.1	525.6	0.00	0.00	0.00
13,000.0	90.32	359.54	12,354.0	624.4	-75.9	625.6	0.00	0.00	0.00
13,100.0	90.32	359.54	12,353.4	724.4	-76.7	725.6	0.00	0.00	0.00
13,200.0	90.32	359.54	12,352.9	824.3	-77.5	825.6	0.00	0.00	0.00
13,300.0	90.32	359.54	12,352.3	924.3	-78.3	925.6	0.00	0.00	0.00
13,400.0	90.32	359.54	12,351.7	1,024.3	-79.1	1,025.6	0.00	0.00	0.00
13,500.0	90.32	359.54	12,351.2	1,124.3	-79.9	1,125.5	0.00	0.00	0.00
13,600.0	90.32	359.54	12,350.6	1,224.3	-80.7	1,225.5	0.00	0.00	0.00
13,700.0	90.32	359.54	12,350.1	1,324.3	-81.5	1,325.5	0.00	0.00	0.00
13,800.0	90.32	359.54	12,349.5	1,424.3	-82.3	1,425.5	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Well:	MONTERA FEDERAL COM 701H	**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)
13,900.0	90.32	359.54	12,349.0	1,524.3	-83.1	1,525.5	0.00	0.00	0.00
14,000.0	90.32	359.54	12,348.4	1,624.3	-83.9	1,625.5	0.00	0.00	0.00
14,100.0	90.32	359.54	12,347.8	1,724.3	-84.7	1,725.5	0.00	0.00	0.00
14,200.0	90.32	359.54	12,347.3	1,824.3	-85.5	1,825.5	0.00	0.00	0.00
14,300.0	90.32	359.54	12,346.7	1,924.3	-86.3	1,925.5	0.00	0.00	0.00
14,400.0	90.32	359.54	12,346.2	2,024.3	-87.1	2,025.5	0.00	0.00	0.00
14,500.0	90.32	359.54	12,345.6	2,124.3	-87.9	2,125.5	0.00	0.00	0.00
14,600.0	90.32	359.54	12,345.0	2,224.3	-88.7	2,225.5	0.00	0.00	0.00
14,700.0	90.32	359.54	12,344.5	2,324.3	-89.5	2,325.5	0.00	0.00	0.00
14,800.0	90.32	359.54	12,343.9	2,424.3	-90.3	2,425.5	0.00	0.00	0.00
14,900.0	90.32	359.54	12,343.4	2,524.3	-91.1	2,525.5	0.00	0.00	0.00
15,000.0	90.32	359.54	12,342.8	2,624.3	-91.9	2,625.5	0.00	0.00	0.00
15,100.0	90.32	359.54	12,342.2	2,724.3	-92.7	2,725.5	0.00	0.00	0.00
15,200.0	90.32	359.54	12,341.7	2,824.3	-93.5	2,825.4	0.00	0.00	0.00
15,300.0	90.32	359.54	12,341.1	2,924.2	-94.3	2,925.4	0.00	0.00	0.00
15,400.0	90.32	359.54	12,340.6	3,024.2	-95.1	3,025.4	0.00	0.00	0.00
15,500.0	90.32	359.54	12,340.0	3,124.2	-95.9	3,125.4	0.00	0.00	0.00
15,600.0	90.32	359.54	12,339.4	3,224.2	-96.7	3,225.4	0.00	0.00	0.00
15,700.0	90.32	359.54	12,338.9	3,324.2	-97.5	3,325.4	0.00	0.00	0.00
15,800.0	90.32	359.54	12,338.3	3,424.2	-98.3	3,425.4	0.00	0.00	0.00
15,900.0	90.32	359.54	12,337.8	3,524.2	-99.1	3,525.4	0.00	0.00	0.00
16,000.0	90.32	359.54	12,337.2	3,624.2	-99.9	3,625.4	0.00	0.00	0.00
16,100.0	90.32	359.54	12,336.6	3,724.2	-100.7	3,725.4	0.00	0.00	0.00
16,200.0	90.32	359.54	12,336.1	3,824.2	-101.5	3,825.4	0.00	0.00	0.00
16,300.0	90.32	359.54	12,335.5	3,924.2	-102.3	3,925.4	0.00	0.00	0.00
16,400.0	90.32	359.54	12,335.0	4,024.2	-103.1	4,025.4	0.00	0.00	0.00
16,500.0	90.32	359.54	12,334.4	4,124.2	-103.9	4,125.4	0.00	0.00	0.00
16,600.0	90.32	359.54	12,333.8	4,224.2	-104.7	4,225.4	0.00	0.00	0.00
16,700.0	90.32	359.54	12,333.3	4,324.2	-105.5	4,325.4	0.00	0.00	0.00
16,800.0	90.32	359.54	12,332.7	4,424.2	-106.3	4,425.4	0.00	0.00	0.00
16,900.0	90.32	359.54	12,332.2	4,524.2	-107.1	4,525.3	0.00	0.00	0.00
17,000.0	90.32	359.54	12,331.6	4,624.2	-107.9	4,625.3	0.00	0.00	0.00
17,100.0	90.32	359.54	12,331.0	4,724.2	-108.7	4,725.3	0.00	0.00	0.00
17,200.0	90.32	359.54	12,330.5	4,824.2	-109.5	4,825.3	0.00	0.00	0.00
17,300.0	90.32	359.54	12,329.9	4,924.2	-110.3	4,925.3	0.00	0.00	0.00
17,400.0	90.32	359.54	12,329.4	5,024.1	-111.1	5,025.3	0.00	0.00	0.00
17,500.0	90.32	359.54	12,328.8	5,124.1	-111.9	5,125.3	0.00	0.00	0.00
17,600.0	90.32	359.54	12,328.2	5,224.1	-112.7	5,225.3	0.00	0.00	0.00
17,700.0	90.32	359.54	12,327.7	5,324.1	-113.5	5,325.3	0.00	0.00	0.00
17,800.0	90.32	359.54	12,327.1	5,424.1	-114.3	5,425.3	0.00	0.00	0.00
17,900.0	90.32	359.54	12,326.6	5,524.1	-115.1	5,525.3	0.00	0.00	0.00
18,000.0	90.32	359.54	12,326.0	5,624.1	-115.9	5,625.3	0.00	0.00	0.00
18,100.0	90.32	359.54	12,325.4	5,724.1	-116.7	5,725.3	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Well:	MONTERA FEDERAL COM 701H	**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)
18,200.0	90.32	359.54	12,324.9	5,824.1	-117.5	5,825.3	0.00	0.00	0.00
18,300.0	90.32	359.54	12,324.3	5,924.1	-118.3	5,925.3	0.00	0.00	0.00
18,400.0	90.32	359.54	12,323.8	6,024.1	-119.1	6,025.3	0.00	0.00	0.00
18,500.0	90.32	359.54	12,323.2	6,124.1	-119.9	6,125.3	0.00	0.00	0.00
18,600.0	90.32	359.54	12,322.6	6,224.1	-120.7	6,225.2	0.00	0.00	0.00
18,700.0	90.32	359.54	12,322.1	6,324.1	-121.5	6,325.2	0.00	0.00	0.00
18,800.0	90.32	359.54	12,321.5	6,424.1	-122.3	6,425.2	0.00	0.00	0.00
18,900.0	90.32	359.54	12,321.0	6,524.1	-123.1	6,525.2	0.00	0.00	0.00
19,000.0	90.32	359.54	12,320.4	6,624.1	-123.9	6,625.2	0.00	0.00	0.00
19,100.0	90.32	359.54	12,319.9	6,724.1	-124.7	6,725.2	0.00	0.00	0.00
19,200.0	90.32	359.54	12,319.3	6,824.1	-125.5	6,825.2	0.00	0.00	0.00
19,300.0	90.32	359.54	12,318.7	6,924.1	-126.3	6,925.2	0.00	0.00	0.00
19,400.0	90.32	359.54	12,318.2	7,024.1	-127.1	7,025.2	0.00	0.00	0.00
19,500.0	90.32	359.54	12,317.6	7,124.0	-127.9	7,125.2	0.00	0.00	0.00
19,600.0	90.32	359.54	12,317.1	7,224.0	-128.7	7,225.2	0.00	0.00	0.00
19,700.0	90.32	359.54	12,316.5	7,324.0	-129.5	7,325.2	0.00	0.00	0.00
19,800.0	90.32	359.54	12,315.9	7,424.0	-130.3	7,425.2	0.00	0.00	0.00
19,900.0	90.32	359.54	12,315.4	7,524.0	-131.1	7,525.2	0.00	0.00	0.00
19,966.8	90.32	359.54	12,315.0	7,590.8	-131.6	7,591.9	0.00	0.00	0.00
TD at 19966.8									

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
PBHL (MONTERA FE - plan hits target center - Rectangle (sides W100.0 H7,767.0 D20.0)	0.32	179.54	12,315.0	7,590.8	-131.6	422,971.50	800,475.70	32° 9' 32.904 N	103° 21' 44.567 W
LTP (MONTERA FED - plan misses target center by 16.8usft at 19900.0usft MD (12315.4 TVD, 7524.0 N, -131.1 E) - Point	0.00	0.00	12,315.0	7,540.8	-131.2	422,921.50	800,476.10	32° 9' 32.409 N	103° 21' 44.568 W
FTP (MONTERA FED - plan misses target center by 167.3usft at 12292.2usft MD (12239.6 TVD, -55.3 N, -69.3 E) - Circle (radius 50.0)	0.00	0.00	12,356.0	-175.5	-68.7	415,205.20	800,538.60	32° 8' 16.050 N	103° 21' 44.650 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
5500	5500	0	0	Start Build 2.00
5604	5604	-2	-1	Start 6262.2 hold at 5604.0 MD
11,866	11,862	-220	-64	Start DLS 12.00 TFO 163.31
12,635	12,356	260	-73	Start 7331.4 hold at 12635.4 MD
19,967	12,315	7591	-132	TD at 19966.8

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Well:	MONTERA FEDERAL COM 701H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	edm

Checked By: _____ Approved By: _____ Date: _____

CONCHO

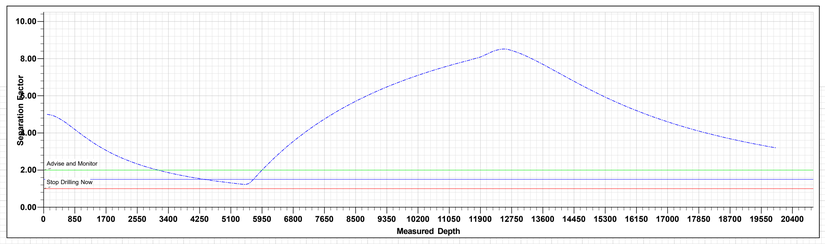
Project:	LEA COUNTY, NM
Site:	BULLDOG
Well:	MONTERA FEDERAL COM 701H
Wellbore:	OWB
Design:	PWP1
GL:	3227.0
KB=30' @ 3257.0usft (SCAN QUEST)	

WELL DETAILS: MONTERA FEDERAL COM 701H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	415380.70	800607.30	32° 8' 17.781 N	103° 21' 43.833 W

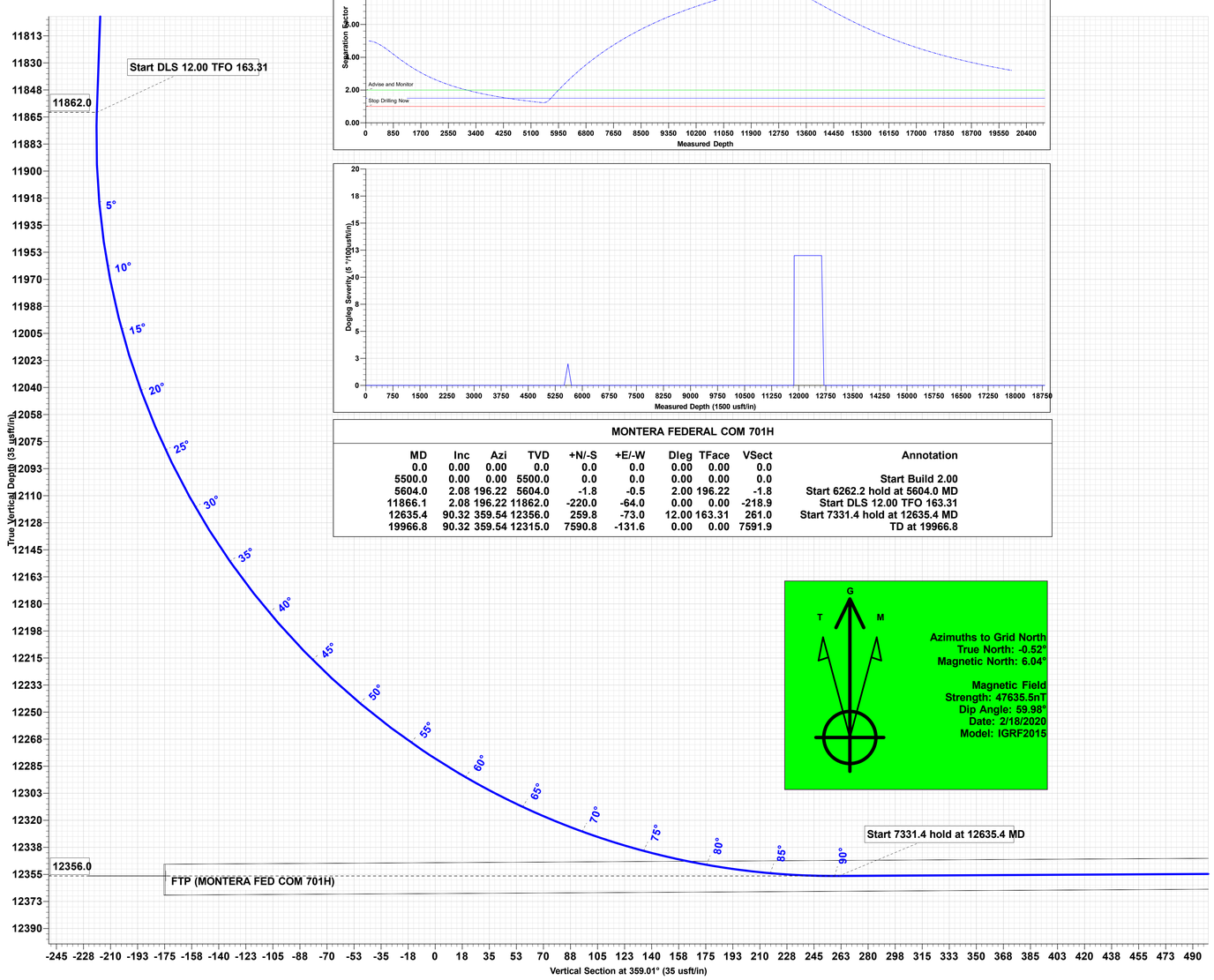
DESIGN TARGET DETAILS

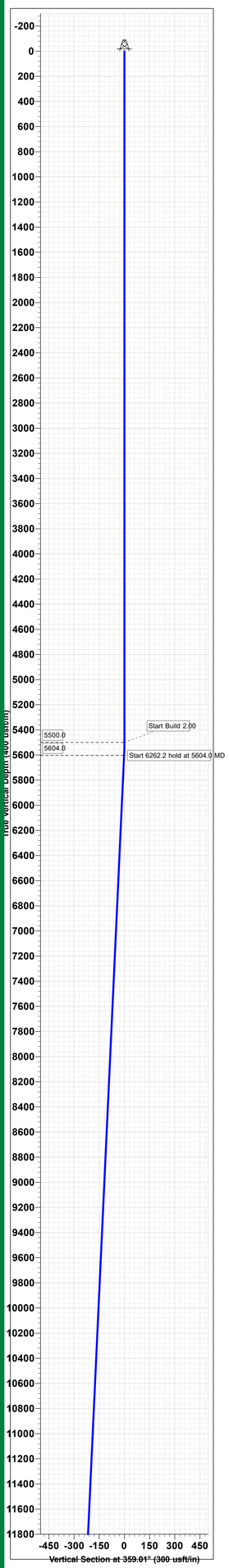
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LTP (MONTERA FED COM 701H)	12315.0	7540.8	-131.2	422921.50	800476.10	32° 9' 32.409 N	103° 21' 44.568 W
PBHL (MONTERA FED COM 701H)	12315.0	7590.8	-131.6	422971.50	800475.70	32° 9' 32.904 N	103° 21' 44.567 W
FTP (MONTERA FED COM 701H)	12356.0	-175.5	-68.7	415205.20	800538.60	32° 8' 16.050 N	103° 21' 44.650 W

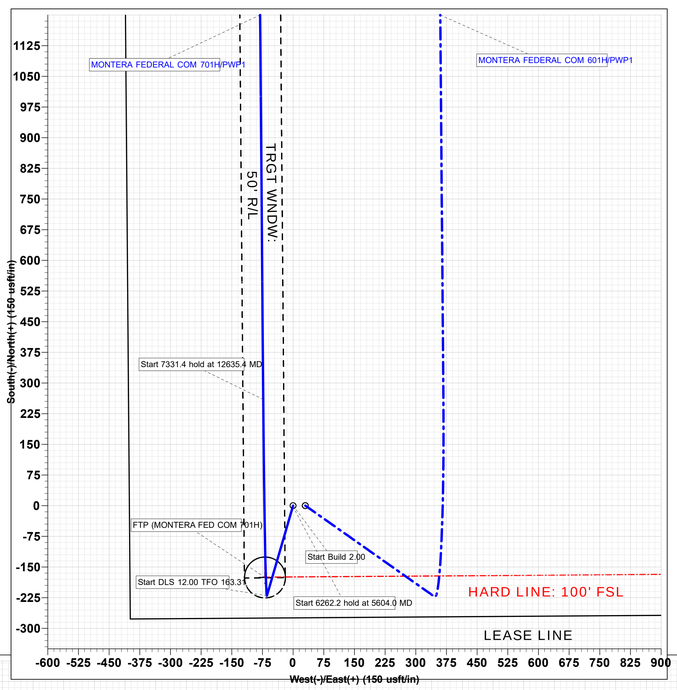


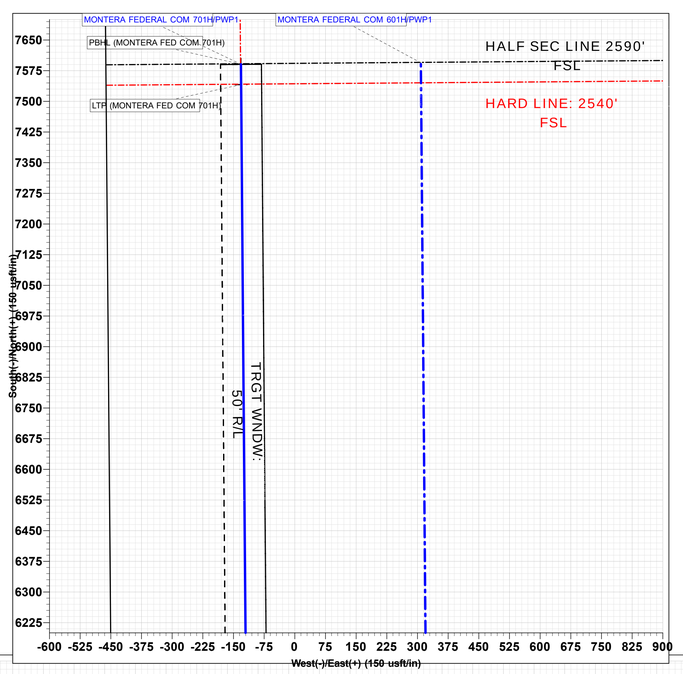
MONTERA FEDERAL COM 701H

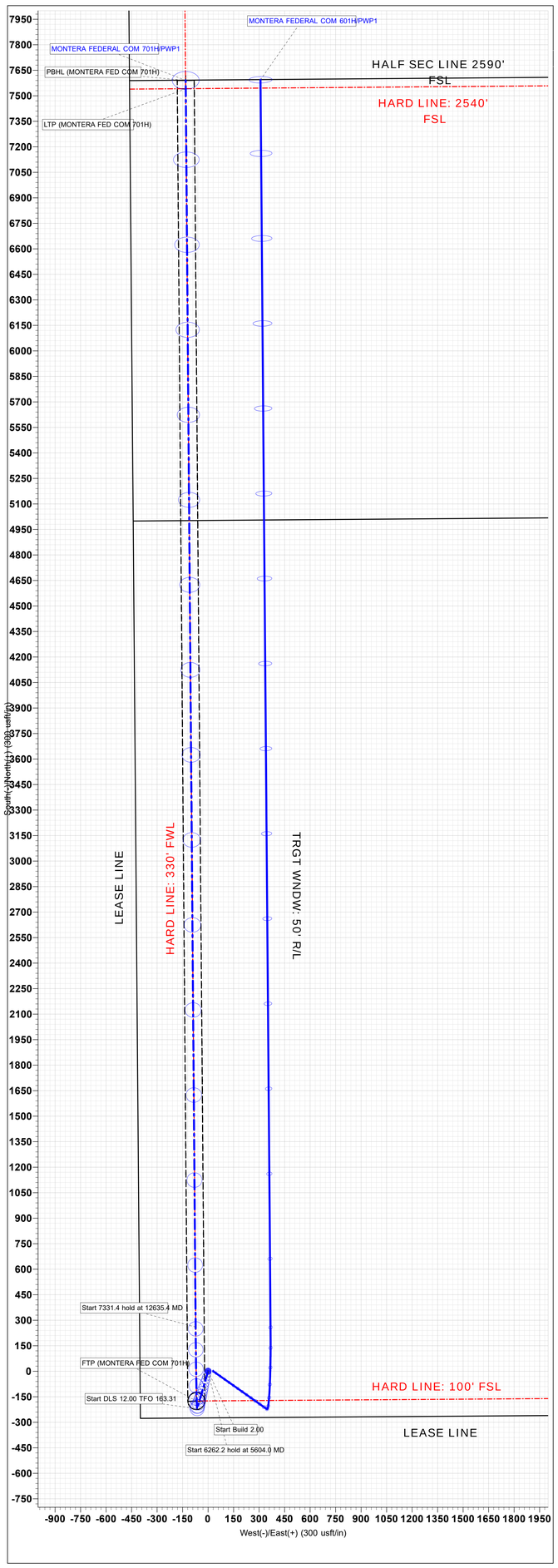
MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
5500.0	0.00	0.00	5500.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
5604.0	2.08	196.22	5604.0	-1.8	-0.5	2.00	196.22	-1.8	Start 6262.2 hold at 5604.0 MD
11866.1	2.08	196.22	11862.0	-220.0	-64.0	0.00	0.00	-218.9	Start DLS 12.00 TFO 163.31
12635.4	90.32	359.54	12356.0	259.8	-73.0	12.00	163.31	261.0	Start 7331.4 hold at 12635.4 MD
19966.8	90.32	359.54	12315.0	7590.8	-131.6	0.00	0.00	7591.9	TD at 19966.8

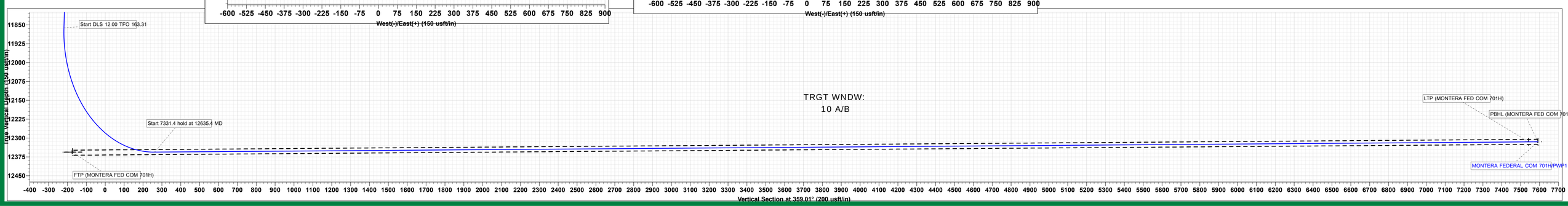












NORTHERN DELAWARE BASIN

LEA COUNTY, NM
BULLDOG
MONTERA FEDERAL COM 701H

OWB
PWP1

Anticollision Report

18 February, 2020

Concho Resources LLC

Anticollision Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Reference Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	MONTERA FEDERAL COM 701H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	edm
Reference Design:	PWP1	**Offset TVD Reference:**	Offset Datum

Reference PWP1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.0 usft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 2/18/2020

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	19,966.3	PWP1 (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
BULLDOG						
MONTERA FEDERAL COM 601H - OWB - PWP1	5,500.0	5,500.0	30.0	5.5	1.222	Shut in Produces, CC, ES

Offset Design BULLDOG - MONTERA FEDERAL COM 601H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-Standard Keeper 104, 11669-MWD+IFR1+FDIR — **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	89.62	0.2	30.0	30.0				
100.0	100.0	100.0	100.0	3.0	3.0	89.62	0.2	30.0	30.0	24.0	6.00	4.998	
200.0	200.0	200.0	200.0	3.0	3.0	89.62	0.2	30.0	30.0	24.0	6.04	4.967	
300.0	300.0	300.0	300.0	3.1	3.0	89.62	0.2	30.0	30.0	23.9	6.12	4.902	
400.0	400.0	400.0	400.0	3.2	3.0	89.62	0.2	30.0	30.0	23.8	6.24	4.807	
500.0	500.0	500.0	500.0	3.4	3.1	89.62	0.2	30.0	30.0	23.6	6.40	4.690	
600.0	600.0	600.0	600.0	3.6	3.1	89.62	0.2	30.0	30.0	23.4	6.58	4.557	
700.0	700.0	700.0	700.0	3.8	3.1	89.62	0.2	30.0	30.0	23.2	6.80	4.413	
800.0	800.0	800.0	800.0	4.0	3.2	89.62	0.2	30.0	30.0	23.0	7.04	4.264	
900.0	900.0	900.0	900.0	4.2	3.2	89.62	0.2	30.0	30.0	22.7	7.29	4.113	
1,000.0	1,000.0	1,000.0	1,000.0	4.5	3.2	89.62	0.2	30.0	30.0	22.4	7.57	3.964	
1,100.0	1,100.0	1,100.0	1,100.0	4.8	3.3	89.62	0.2	30.0	30.0	22.1	7.86	3.818	
1,200.0	1,200.0	1,200.0	1,200.0	5.1	3.4	89.62	0.2	30.0	30.0	21.8	8.16	3.677	
1,300.0	1,300.0	1,300.0	1,300.0	5.3	3.4	89.62	0.2	30.0	30.0	21.5	8.47	3.542	
1,400.0	1,400.0	1,400.0	1,400.0	5.6	3.5	89.62	0.2	30.0	30.0	21.2	8.79	3.413	
1,500.0	1,500.0	1,500.0	1,500.0	6.0	3.5	89.62	0.2	30.0	30.0	20.9	9.12	3.290	
1,600.0	1,600.0	1,600.0	1,600.0	6.3	3.6	89.62	0.2	30.0	30.0	20.5	9.45	3.174	
1,700.0	1,700.0	1,700.0	1,700.0	6.6	3.7	89.62	0.2	30.0	30.0	20.2	9.79	3.063	
1,800.0	1,800.0	1,800.0	1,800.0	6.9	3.8	89.62	0.2	30.0	30.0	19.9	10.14	2.958	
1,900.0	1,900.0	1,900.0	1,900.0	7.2	3.9	89.62	0.2	30.0	30.0	19.5	10.49	2.859	
2,000.0	2,000.0	2,000.0	2,000.0	7.6	3.9	89.62	0.2	30.0	30.0	19.2	10.85	2.766	
2,100.0	2,100.0	2,100.0	2,100.0	7.9	4.0	89.62	0.2	30.0	30.0	18.8	11.21	2.677	
2,200.0	2,200.0	2,200.0	2,200.0	8.2	4.1	89.62	0.2	30.0	30.0	18.4	11.57	2.593	
2,300.0	2,300.0	2,300.0	2,300.0	8.6	4.2	89.62	0.2	30.0	30.0	18.1	11.94	2.513	
2,400.0	2,400.0	2,400.0	2,400.0	8.9	4.3	89.62	0.2	30.0	30.0	17.7	12.31	2.438	
2,500.0	2,500.0	2,500.0	2,500.0	9.2	4.4	89.62	0.2	30.0	30.0	17.3	12.68	2.366	

Concho Resources LLC

Anticollision Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Reference Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	MONTERA FEDERAL COM 701H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	edm
Reference Design:	PWP1	**Offset TVD Reference:**	Offset Datum

Offset Design BULLDOG - MONTERA FEDERAL COM 601H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-Standard Keeper 104, 11669-MWD+IFR1+FDIR — **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,600.0	2,600.0	2,600.0	2,600.0	9.6	4.5	89.62	0.2	30.0	30.0	16.9	13.05	2.298	
2,700.0	2,700.0	2,700.0	2,700.0	9.9	4.6	89.62	0.2	30.0	30.0	16.6	13.43	2.234	
2,800.0	2,800.0	2,800.0	2,800.0	10.3	4.7	89.62	0.2	30.0	30.0	16.2	13.81	2.173	
2,900.0	2,900.0	2,900.0	2,900.0	10.6	4.8	89.62	0.2	30.0	30.0	15.8	14.19	2.114	
3,000.0	3,000.0	3,000.0	3,000.0	10.9	4.9	89.62	0.2	30.0	30.0	15.4	14.57	2.059	
3,100.0	3,100.0	3,100.0	3,100.0	11.3	5.0	89.62	0.2	30.0	30.0	15.0	14.96	2.006	
3,200.0	3,200.0	3,200.0	3,200.0	11.6	5.1	89.62	0.2	30.0	30.0	14.7	15.35	1.955	Advise and Monitor
3,300.0	3,300.0	3,300.0	3,300.0	12.0	5.2	89.62	0.2	30.0	30.0	14.3	15.73	1.907	Advise and Monitor
3,400.0	3,400.0	3,400.0	3,400.0	12.3	5.3	89.62	0.2	30.0	30.0	13.9	16.12	1.861	Advise and Monitor
3,500.0	3,500.0	3,500.0	3,500.0	12.7	5.4	89.62	0.2	30.0	30.0	13.5	16.51	1.817	Advise and Monitor
3,600.0	3,600.0	3,600.0	3,600.0	13.0	5.5	89.62	0.2	30.0	30.0	13.1	16.91	1.774	Advise and Monitor
3,700.0	3,700.0	3,700.0	3,700.0	13.4	5.7	89.62	0.2	30.0	30.0	12.7	17.30	1.734	Advise and Monitor
3,800.0	3,800.0	3,800.0	3,800.0	13.7	5.8	89.62	0.2	30.0	30.0	12.3	17.70	1.695	Advise and Monitor
3,900.0	3,900.0	3,900.0	3,900.0	14.1	5.9	89.62	0.2	30.0	30.0	11.9	18.09	1.658	Advise and Monitor
4,000.0	4,000.0	4,000.0	4,000.0	14.4	6.0	89.62	0.2	30.0	30.0	11.5	18.49	1.623	Advise and Monitor
4,100.0	4,100.0	4,100.0	4,100.0	14.8	6.1	89.62	0.2	30.0	30.0	11.1	18.89	1.588	Advise and Monitor
4,200.0	4,200.0	4,200.0	4,200.0	15.1	6.2	89.62	0.2	30.0	30.0	10.7	19.29	1.556	Advise and Monitor
4,300.0	4,300.0	4,300.0	4,300.0	15.5	6.3	89.62	0.2	30.0	30.0	10.3	19.69	1.524	Advise and Monitor
4,400.0	4,400.0	4,400.0	4,400.0	15.8	6.5	89.62	0.2	30.0	30.0	9.9	20.09	1.493	Shut in Produces
4,500.0	4,500.0	4,500.0	4,500.0	16.2	6.6	89.62	0.2	30.0	30.0	9.5	20.49	1.464	Shut in Produces
4,600.0	4,600.0	4,600.0	4,600.0	16.5	6.7	89.62	0.2	30.0	30.0	9.1	20.89	1.436	Shut in Produces
4,700.0	4,700.0	4,700.0	4,700.0	16.9	6.8	89.62	0.2	30.0	30.0	8.7	21.30	1.409	Shut in Produces
4,800.0	4,800.0	4,800.0	4,800.0	17.2	6.9	89.62	0.2	30.0	30.0	8.3	21.70	1.382	Shut in Produces
4,900.0	4,900.0	4,900.0	4,900.0	17.6	7.0	89.62	0.2	30.0	30.0	7.9	22.11	1.357	Shut in Produces
5,000.0	5,000.0	5,000.0	5,000.0	17.9	7.2	89.62	0.2	30.0	30.0	7.5	22.51	1.333	Shut in Produces
5,100.0	5,100.0	5,100.0	5,100.0	18.3	7.3	89.62	0.2	30.0	30.0	7.1	22.92	1.309	Shut in Produces
5,200.0	5,200.0	5,200.0	5,200.0	18.7	7.4	89.62	0.2	30.0	30.0	6.7	23.33	1.286	Shut in Produces
5,300.0	5,300.0	5,300.0	5,300.0	19.0	7.5	89.62	0.2	30.0	30.0	6.3	23.73	1.264	Shut in Produces
5,400.0	5,400.0	5,400.0	5,400.0	19.4	7.6	89.62	0.2	30.0	30.0	5.9	24.14	1.243	Shut in Produces
5,500.0	5,500.0	5,500.0	5,500.0	19.7	7.8	89.62	0.2	30.0	30.0	5.5	24.55	1.222	Shut in Produces, CC, ES, SF
5,604.0	5,604.0	5,603.1	5,603.0	20.1	7.8	-107.84	-0.9	31.5	32.1	7.1	24.96	1.285	Shut in Produces
5,700.0	5,699.9	5,698.2	5,698.1	20.4	7.8	-108.33	-3.7	35.6	37.1	11.8	25.32	1.467	Shut in Produces
5,800.0	5,799.8	5,798.0	5,797.7	20.7	7.8	-107.83	-7.3	40.7	43.3	17.6	25.69	1.685	Advise and Monitor
5,900.0	5,899.8	5,897.8	5,897.3	21.0	7.8	-107.45	-11.0	45.8	49.4	23.4	26.07	1.896	Advise and Monitor
6,000.0	5,999.7	5,997.6	5,996.9	21.3	7.8	-107.16	-14.6	51.0	55.6	29.1	26.46	2.102	
6,100.0	6,099.7	6,097.4	6,096.5	21.7	7.8	-106.92	-18.2	56.1	61.8	34.9	26.84	2.301	
6,200.0	6,199.6	6,197.3	6,196.1	22.0	7.8	-106.73	-21.8	61.3	67.9	40.7	27.23	2.494	
6,300.0	6,299.5	6,297.1	6,295.7	22.3	7.8	-106.57	-25.5	66.4	74.1	46.5	27.62	2.682	
6,400.0	6,399.5	6,396.9	6,395.3	22.6	7.8	-106.43	-29.1	71.5	80.2	52.2	28.02	2.864	
6,500.0	6,499.4	6,496.7	6,494.9	23.0	7.8	-106.32	-32.7	76.7	86.4	58.0	28.41	3.041	
6,600.0	6,599.3	6,596.5	6,594.6	23.3	7.8	-106.22	-36.3	81.8	92.6	63.8	28.81	3.213	
6,700.0	6,699.3	6,696.3	6,694.2	23.6	7.8	-106.13	-40.0	87.0	98.7	69.5	29.21	3.380	
6,800.0	6,799.2	6,796.1	6,793.8	24.0	7.8	-106.05	-43.6	92.1	104.9	75.3	29.62	3.542	
6,900.0	6,899.1	6,895.9	6,893.4	24.3	7.8	-105.98	-47.2	97.2	111.1	81.0	30.02	3.699	
7,000.0	6,999.1	6,995.7	6,993.0	24.6	7.9	-105.92	-50.8	102.4	117.2	86.8	30.43	3.852	
7,100.0	7,099.0	7,095.5	7,092.6	25.0	7.9	-105.86	-54.5	107.5	123.4	92.5	30.84	4.001	
7,200.0	7,198.9	7,195.4	7,192.2	25.3	7.9	-105.81	-58.1	112.7	129.5	98.3	31.25	4.145	
7,300.0	7,298.9	7,295.2	7,291.8	25.6	7.9	-105.77	-61.7	117.8	135.7	104.0	31.67	4.286	
7,400.0	7,398.8	7,395.0	7,391.4	26.0	7.9	-105.72	-65.3	122.9	141.9	109.8	32.08	4.422	
7,500.0	7,498.7	7,494.8	7,491.1	26.3	8.0	-105.69	-69.0	128.1	148.0	115.5	32.50	4.555	
7,600.0	7,598.7	7,594.6	7,590.7	26.6	8.0	-105.65	-72.6	133.2	154.2	121.3	32.92	4.684	
7,700.0	7,698.6	7,694.4	7,690.3	27.0	8.0	-105.62	-76.2	138.4	160.4	127.0	33.34	4.810	

Concho Resources LLC

Anticollision Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Reference Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	MONTERA FEDERAL COM 701H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	edm
Reference Design:	PWP1	**Offset TVD Reference:**	Offset Datum

Offset Design BULLDOG - MONTERA FEDERAL COM 601H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-Standard Keeper 104, 11669-MWD+IFR1+FDIR — **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,800.0	7,798.5	7,794.2	7,789.9	27.3	8.1	-105.59	-79.8	143.5	166.5	132.8	33.76	4.932	
7,900.0	7,898.5	7,894.0	7,889.5	27.6	8.1	-105.56	-83.5	148.6	172.7	138.5	34.19	5.052	
8,000.0	7,998.4	7,993.8	7,989.1	28.0	8.1	-105.53	-87.1	153.8	178.9	144.2	34.61	5.168	
8,100.0	8,098.3	8,093.6	8,088.7	28.3	8.2	-105.51	-90.7	158.9	185.0	150.0	35.04	5.280	
8,200.0	8,198.3	8,193.5	8,188.3	28.7	8.2	-105.49	-94.3	164.1	191.2	155.7	35.47	5.391	
8,300.0	8,298.2	8,293.3	8,288.0	29.0	8.3	-105.46	-98.0	169.2	197.3	161.4	35.90	5.498	
8,400.0	8,398.1	8,393.1	8,387.6	29.3	8.3	-105.44	-101.6	174.4	203.5	167.2	36.33	5.602	
8,500.0	8,498.1	8,492.9	8,487.2	29.7	8.4	-105.43	-105.2	179.5	209.7	172.9	36.76	5.704	
8,600.0	8,598.0	8,592.7	8,586.8	30.0	8.4	-105.41	-108.8	184.6	215.8	178.6	37.19	5.803	
8,700.0	8,697.9	8,692.5	8,686.4	30.4	8.5	-105.39	-112.5	189.8	222.0	184.4	37.63	5.900	
8,800.0	8,797.9	8,792.3	8,786.0	30.7	8.5	-105.38	-116.1	194.9	228.2	190.1	38.06	5.994	
8,900.0	8,897.8	8,892.1	8,885.6	31.1	8.6	-105.36	-119.7	200.1	234.3	195.8	38.50	6.086	
9,000.0	8,997.7	8,991.9	8,985.2	31.4	8.6	-105.35	-123.3	205.2	240.5	201.6	38.94	6.176	
9,100.0	9,097.7	9,091.7	9,084.8	31.7	8.7	-105.33	-126.9	210.3	246.7	207.3	39.38	6.264	
9,200.0	9,197.6	9,191.6	9,184.5	32.1	8.8	-105.32	-130.6	215.5	252.8	213.0	39.82	6.350	
9,300.0	9,297.5	9,291.4	9,284.1	32.4	8.8	-105.31	-134.2	220.6	259.0	218.7	40.26	6.433	
9,400.0	9,397.5	9,391.2	9,383.7	32.8	8.9	-105.30	-137.8	225.8	265.1	224.4	40.70	6.515	
9,500.0	9,497.4	9,491.0	9,483.3	33.1	9.0	-105.28	-141.4	230.9	271.3	230.2	41.14	6.594	
9,600.0	9,597.3	9,590.8	9,582.9	33.5	9.0	-105.27	-145.1	236.0	277.5	235.9	41.59	6.672	
9,700.0	9,697.3	9,690.6	9,682.5	33.8	9.1	-105.26	-148.7	241.2	283.6	241.6	42.03	6.748	
9,800.0	9,797.2	9,790.4	9,782.1	34.2	9.2	-105.25	-152.3	246.3	289.8	247.3	42.48	6.823	
9,900.0	9,897.1	9,890.2	9,881.7	34.5	9.3	-105.24	-155.9	251.5	296.0	253.0	42.92	6.895	
10,000.0	9,997.1	9,990.0	9,981.3	34.9	9.3	-105.23	-159.6	256.6	302.1	258.8	43.37	6.966	
10,100.0	10,097.0	10,089.8	10,081.0	35.2	9.4	-105.23	-163.2	261.7	308.3	264.5	43.82	7.036	
10,200.0	10,197.0	10,189.7	10,180.6	35.5	9.5	-105.22	-166.8	266.9	314.5	270.2	44.27	7.104	
10,300.0	10,296.9	10,289.5	10,280.2	35.9	9.6	-105.21	-170.4	272.0	320.6	275.9	44.72	7.170	
10,400.0	10,396.8	10,389.3	10,379.8	36.2	9.6	-105.20	-174.1	277.2	326.8	281.6	45.17	7.235	
10,500.0	10,496.8	10,489.1	10,479.4	36.6	9.7	-105.19	-177.7	282.3	333.0	287.3	45.62	7.299	
10,600.0	10,596.7	10,588.9	10,579.0	36.9	9.8	-105.19	-181.3	287.4	339.1	293.0	46.07	7.361	
10,700.0	10,696.6	10,688.7	10,678.6	37.3	9.9	-105.18	-184.9	292.6	345.3	298.8	46.52	7.422	
10,800.0	10,796.6	10,788.5	10,778.2	37.6	10.0	-105.17	-188.6	297.7	351.4	304.5	46.97	7.482	
10,900.0	10,896.5	10,888.3	10,877.8	38.0	10.1	-105.17	-192.2	302.9	357.6	310.2	47.43	7.540	
11,000.0	10,996.4	10,988.1	10,977.5	38.3	10.1	-105.16	-195.8	308.0	363.8	315.9	47.88	7.598	
11,100.0	11,096.4	11,087.9	11,077.1	38.7	10.2	-105.16	-199.4	313.1	369.9	321.6	48.33	7.654	
11,200.0	11,196.3	11,187.7	11,176.7	39.0	10.3	-105.15	-203.1	318.3	376.1	327.3	48.79	7.709	
11,300.0	11,296.2	11,287.6	11,276.3	39.4	10.4	-105.14	-206.7	323.4	382.3	333.0	49.25	7.762	
11,400.0	11,396.2	11,387.4	11,375.9	39.7	10.5	-105.14	-210.3	328.6	388.4	338.7	49.70	7.815	
11,500.0	11,496.1	11,487.2	11,475.5	40.1	10.6	-105.13	-213.9	333.7	394.6	344.4	50.16	7.867	
11,600.0	11,596.0	11,587.0	11,575.1	40.4	10.7	-105.13	-217.6	338.8	400.8	350.1	50.62	7.918	
11,700.0	11,696.0	11,686.8	11,674.7	40.8	10.8	-105.12	-221.2	344.0	406.9	355.9	51.03	7.974	
11,800.0	11,795.9	11,787.6	11,775.3	41.1	10.8	-105.67	-220.8	349.1	413.0	361.6	51.41	8.033	
11,866.1	11,862.0	11,852.4	11,839.2	41.4	10.8	-107.41	-210.5	352.3	417.1	365.4	51.70	8.068	
11,875.0	11,870.8	11,860.8	11,847.3	41.4	10.8	-123.81	-208.5	352.7	417.7	365.9	51.74	8.073	
11,900.0	11,895.8	11,884.3	11,870.0	41.5	10.8	103.97	-202.2	353.9	419.4	367.5	51.84	8.089	
11,925.0	11,920.8	11,907.6	11,892.0	41.6	10.8	93.59	-194.9	354.9	421.2	369.3	51.95	8.108	
11,950.0	11,945.6	11,930.5	11,913.4	41.7	10.8	90.11	-186.6	356.0	423.1	371.0	52.05	8.128	
11,975.0	11,970.3	11,953.3	11,934.1	41.7	10.8	87.99	-177.4	357.0	425.1	372.9	52.16	8.150	
12,000.0	11,994.7	11,975.0	11,953.6	41.8	10.9	86.41	-167.7	357.9	427.1	374.8	52.26	8.173	
12,025.0	12,018.7	11,998.0	11,973.6	41.9	10.9	85.03	-156.5	358.8	429.2	376.8	52.36	8.196	
12,050.0	12,042.4	12,020.0	11,992.3	42.0	10.9	83.83	-144.9	359.7	431.3	378.8	52.47	8.220	
12,075.0	12,065.7	12,041.9	12,010.3	42.1	10.9	82.74	-132.5	360.5	433.4	380.8	52.57	8.244	
12,100.0	12,088.4	12,063.5	12,027.5	42.1	10.9	81.72	-119.4	361.3	435.5	382.8	52.68	8.267	

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Reference Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	MONTERA FEDERAL COM 701H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	edm
Reference Design:	PWP1	**Offset TVD Reference:**	Offset Datum

Offset Design BULLDOG - MONTERA FEDERAL COM 601H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-Standard Keeper 104, 11669-MWD+IFR1+FDIR — **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,125.0	12,110.6	12,085.0	12,044.0	42.2	10.9	80.78	-105.7	362.0	437.7	384.9	52.79	8.291	
12,150.0	12,132.1	12,106.3	12,059.8	42.3	11.0	79.89	-91.3	362.7	439.8	386.9	52.89	8.314	
12,175.0	12,152.9	12,127.5	12,074.8	42.4	11.0	79.05	-76.4	363.4	441.9	388.9	53.00	8.336	
12,200.0	12,173.0	12,150.0	12,090.0	42.4	11.0	78.23	-59.8	364.0	443.9	390.8	53.12	8.358	
12,225.0	12,192.3	12,169.4	12,102.4	42.5	11.0	77.52	-45.0	364.6	445.9	392.7	53.23	8.378	
12,250.0	12,210.7	12,190.1	12,115.1	42.6	11.0	76.82	-28.6	365.1	447.9	394.6	53.34	8.398	
12,275.0	12,228.2	12,210.8	12,126.9	42.6	11.1	76.16	-11.7	365.6	449.8	396.3	53.44	8.416	
12,300.0	12,244.7	12,231.3	12,138.0	42.7	11.1	75.55	5.6	366.0	451.6	398.1	53.55	8.433	
12,325.0	12,260.2	12,250.0	12,147.4	42.7	11.1	75.01	21.7	366.4	453.3	399.7	53.66	8.449	
12,350.0	12,274.7	12,272.0	12,157.7	42.8	11.2	74.46	41.2	366.7	455.0	401.2	53.76	8.463	
12,375.0	12,288.1	12,292.3	12,166.4	42.8	11.2	73.97	59.5	367.0	456.5	402.6	53.86	8.475	
12,400.0	12,300.4	12,312.5	12,174.2	42.9	11.2	73.53	78.1	367.3	457.9	403.9	53.96	8.486	
12,425.0	12,311.5	12,332.6	12,181.3	42.9	11.2	73.13	97.0	367.5	459.2	405.2	54.05	8.496	
12,450.0	12,321.5	12,352.6	12,187.5	43.0	11.3	72.77	116.0	367.7	460.4	406.2	54.14	8.503	
12,475.0	12,330.2	12,375.0	12,193.5	43.0	11.3	72.44	137.6	367.8	461.4	407.2	54.23	8.509	
12,500.0	12,337.7	12,392.6	12,197.5	43.0	11.4	72.18	154.7	367.9	462.4	408.0	54.31	8.514	
12,525.0	12,343.9	12,412.5	12,201.2	43.1	11.4	71.95	174.2	367.9	463.1	408.7	54.38	8.516	
12,550.0	12,348.9	12,432.4	12,204.2	43.1	11.4	71.76	193.9	367.9	463.8	409.3	54.46	8.516	
12,575.0	12,352.5	12,450.0	12,206.1	43.1	11.5	71.62	211.4	367.9	464.3	409.7	54.51	8.516	
12,600.0	12,354.9	12,472.0	12,207.6	43.1	11.5	71.51	233.4	367.8	464.6	410.0	54.58	8.511	
12,625.0	12,356.0	12,491.8	12,208.0	43.2	11.6	71.44	253.2	367.7	464.8	410.1	54.64	8.506	
12,635.4	12,356.0	12,501.1	12,208.0	43.2	11.6	71.43	262.5	367.6	464.8	410.1	54.67	8.502	
12,700.0	12,355.7	12,565.7	12,207.6	43.2	11.7	71.43	327.1	367.1	464.8	409.9	54.89	8.468	
12,800.0	12,355.1	12,665.7	12,207.0	43.3	12.1	71.42	427.1	366.3	464.8	409.5	55.28	8.408	
12,900.0	12,354.5	12,765.7	12,206.5	43.4	12.4	71.42	527.0	365.5	464.8	409.1	55.74	8.339	
13,000.0	12,354.0	12,865.7	12,205.9	43.5	12.8	71.42	627.0	364.7	464.8	408.6	56.25	8.263	
13,100.0	12,353.4	12,965.7	12,205.3	43.7	13.3	71.41	727.0	363.8	464.8	408.0	56.83	8.180	
13,200.0	12,352.9	13,065.7	12,204.7	43.8	13.8	71.41	827.0	363.0	464.8	407.4	57.45	8.091	
13,300.0	12,352.3	13,165.7	12,204.1	44.0	14.3	71.41	927.0	362.2	464.8	406.7	58.13	7.997	
13,400.0	12,351.7	13,265.7	12,203.5	44.2	14.9	71.40	1,027.0	361.4	464.8	406.0	58.85	7.899	
13,500.0	12,351.2	13,365.7	12,202.9	44.4	15.5	71.40	1,127.0	360.6	464.8	405.2	59.61	7.798	
13,600.0	12,350.6	13,465.7	12,202.3	44.6	16.2	71.40	1,227.0	359.8	464.8	404.4	60.41	7.694	
13,700.0	12,350.1	13,565.7	12,201.8	44.8	16.8	71.39	1,327.0	359.0	464.8	403.6	61.26	7.588	
13,800.0	12,349.5	13,665.7	12,201.2	45.1	17.5	71.39	1,427.0	358.2	464.8	402.7	62.13	7.481	
13,900.0	12,349.0	13,765.7	12,200.6	45.3	18.2	71.39	1,527.0	357.4	464.8	401.8	63.05	7.373	
14,000.0	12,348.4	13,865.7	12,200.0	45.6	18.9	71.38	1,627.0	356.6	464.8	400.8	63.99	7.264	
14,100.0	12,347.8	13,965.7	12,199.4	45.9	19.6	71.38	1,727.0	355.8	464.8	399.9	64.96	7.156	
14,200.0	12,347.3	14,065.7	12,198.8	46.2	20.3	71.38	1,827.0	355.0	464.8	398.9	65.96	7.048	
14,300.0	12,346.7	14,165.7	12,198.2	46.5	21.0	71.37	1,927.0	354.2	464.8	397.8	66.98	6.940	
14,400.0	12,346.2	14,265.7	12,197.7	46.9	21.8	71.37	2,027.0	353.4	464.8	396.8	68.03	6.833	
14,500.0	12,345.6	14,365.7	12,197.1	47.2	22.6	71.37	2,127.0	352.5	464.8	395.7	69.10	6.727	
14,600.0	12,345.0	14,465.7	12,196.5	47.6	23.3	71.36	2,227.0	351.7	464.8	394.6	70.20	6.622	
14,700.0	12,344.5	14,565.7	12,195.9	48.0	24.1	71.36	2,327.0	350.9	464.8	393.5	71.31	6.518	
14,800.0	12,343.9	14,665.7	12,195.3	48.4	24.9	71.36	2,427.0	350.1	464.8	392.4	72.45	6.416	
14,900.0	12,343.4	14,765.7	12,194.7	48.8	25.6	71.35	2,526.9	349.3	464.8	391.2	73.60	6.316	
15,000.0	12,342.8	14,865.7	12,194.1	49.2	26.4	71.35	2,626.9	348.5	464.8	390.1	74.77	6.217	
15,100.0	12,342.2	14,965.7	12,193.5	49.6	27.2	71.34	2,726.9	347.7	464.8	388.9	75.96	6.119	
15,200.0	12,341.7	15,065.7	12,193.0	50.0	28.0	71.34	2,826.9	346.9	464.8	387.7	77.17	6.024	
15,300.0	12,341.1	15,165.7	12,192.4	50.5	28.8	71.34	2,926.9	346.1	464.8	386.4	78.39	5.930	
15,400.0	12,340.6	15,265.7	12,191.8	50.9	29.6	71.33	3,026.9	345.3	464.8	385.2	79.63	5.838	
15,500.0	12,340.0	15,365.7	12,191.2	51.4	30.4	71.33	3,126.9	344.5	464.8	384.0	80.88	5.747	
15,600.0	12,339.4	15,465.7	12,190.6	51.9	31.2	71.33	3,226.9	343.7	464.8	382.7	82.15	5.659	

Concho Resources LLC

Anticollision Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Reference Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	MONTERA FEDERAL COM 701H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	edm
Reference Design:	PWP1	**Offset TVD Reference:**	Offset Datum

Offset Design BULLDOG - MONTERA FEDERAL COM 601H - OWB - PWP1 — **Offset Site Error:** 0.0 usft

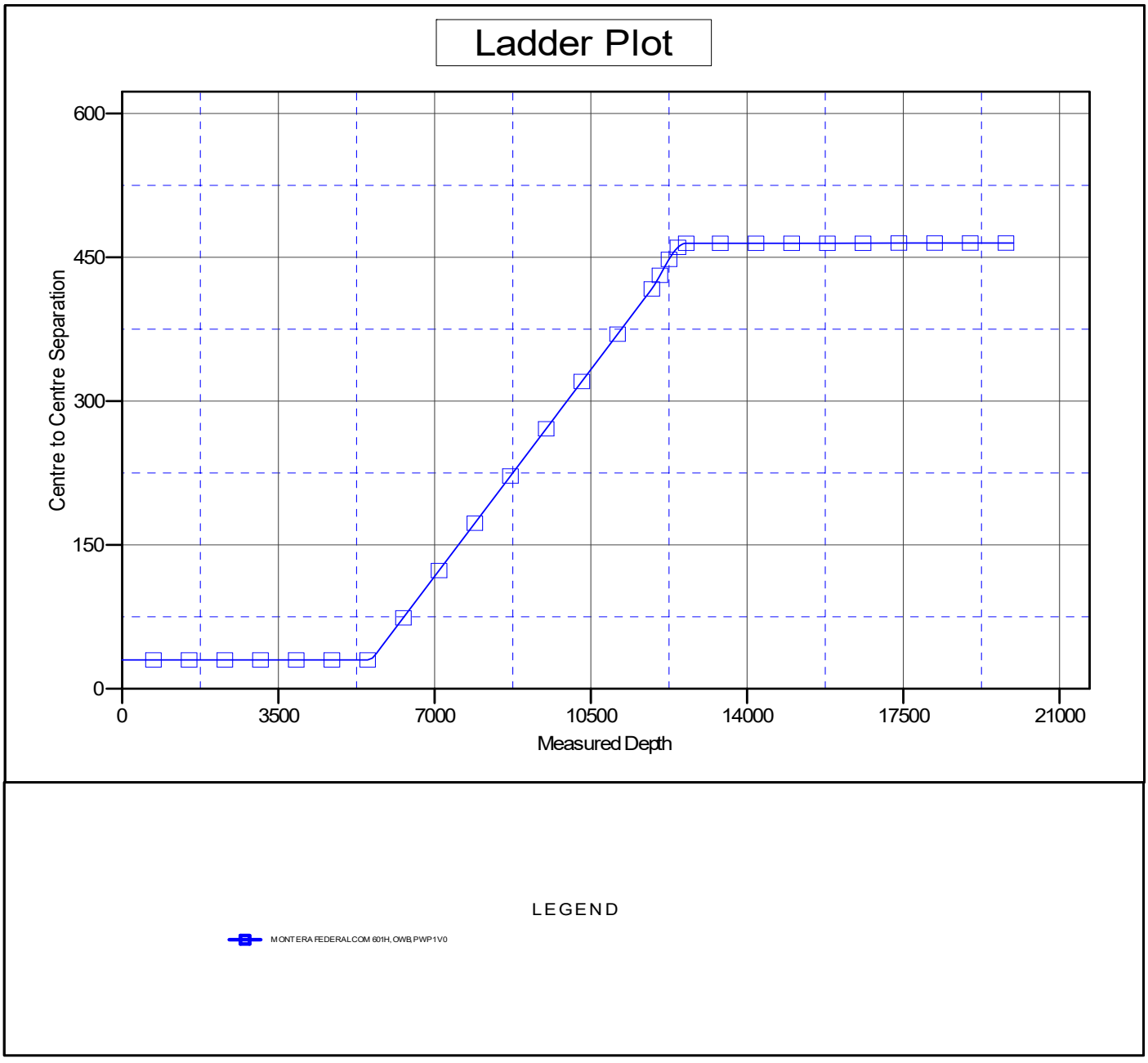
Survey Program: 0-Standard Keeper 104, 11669-MWD+IFR1+FDIR — **Offset Well Error:** 3.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,700.0	12,338.9	15,565.7	12,190.0	52.4	32.1	71.32	3,326.9	342.9	464.8	381.4	83.43	5.572	
15,800.0	12,338.3	15,665.7	12,189.4	52.9	32.9	71.32	3,426.9	342.0	464.8	380.1	84.72	5.487	
15,900.0	12,337.8	15,765.7	12,188.9	53.4	33.7	71.32	3,526.9	341.2	464.8	378.8	86.02	5.404	
16,000.0	12,337.2	15,865.7	12,188.3	53.9	34.5	71.31	3,626.9	340.4	464.8	377.5	87.34	5.322	
16,100.0	12,336.6	15,965.7	12,187.7	54.4	35.3	71.31	3,726.9	339.6	464.8	376.2	88.67	5.243	
16,200.0	12,336.1	16,065.7	12,187.1	54.9	36.2	71.31	3,826.9	338.8	464.8	374.8	90.01	5.165	
16,300.0	12,335.5	16,165.7	12,186.5	55.5	37.0	71.30	3,926.9	338.0	464.8	373.5	91.36	5.088	
16,400.0	12,335.0	16,265.7	12,185.9	56.0	37.8	71.30	4,026.9	337.2	464.8	372.1	92.72	5.014	
16,500.0	12,334.4	16,365.7	12,185.3	56.6	38.6	71.30	4,126.9	336.4	464.8	370.8	94.09	4.941	
16,600.0	12,333.8	16,465.7	12,184.8	57.1	39.5	71.29	4,226.9	335.6	464.8	369.4	95.46	4.869	
16,700.0	12,333.3	16,565.7	12,184.2	57.7	40.3	71.29	4,326.9	334.8	464.8	368.0	96.85	4.800	
16,800.0	12,332.7	16,665.7	12,183.6	58.3	41.1	71.29	4,426.9	334.0	464.9	366.6	98.25	4.731	
16,900.0	12,332.2	16,765.7	12,183.0	58.9	42.0	71.28	4,526.8	333.2	464.9	365.2	99.65	4.665	
17,000.0	12,331.6	16,865.7	12,182.4	59.5	42.8	71.28	4,626.8	332.4	464.9	363.8	101.07	4.599	
17,100.0	12,331.0	16,965.7	12,181.8	60.1	43.7	71.28	4,726.8	331.6	464.9	362.4	102.49	4.536	
17,200.0	12,330.5	17,065.7	12,181.2	60.7	44.5	71.27	4,826.8	330.7	464.9	360.9	103.92	4.473	
17,300.0	12,329.9	17,165.7	12,180.6	61.3	45.3	71.27	4,926.8	329.9	464.9	359.5	105.35	4.412	
17,400.0	12,329.4	17,265.7	12,180.1	61.9	46.2	71.27	5,026.8	329.1	464.9	358.1	106.80	4.353	
17,500.0	12,328.8	17,365.7	12,179.5	62.5	47.0	71.26	5,126.8	328.3	464.9	356.6	108.25	4.294	
17,600.0	12,328.2	17,465.7	12,178.9	63.2	47.9	71.26	5,226.8	327.5	464.9	355.2	109.71	4.237	
17,700.0	12,327.7	17,565.7	12,178.3	63.8	48.7	71.25	5,326.8	326.7	464.9	353.7	111.17	4.182	
17,800.0	12,327.1	17,665.7	12,177.7	64.4	49.5	71.25	5,426.8	325.9	464.9	352.2	112.64	4.127	
17,900.0	12,326.6	17,765.7	12,177.1	65.1	50.4	71.25	5,526.8	325.1	464.9	350.7	114.11	4.074	
18,000.0	12,326.0	17,865.7	12,176.5	65.7	51.2	71.24	5,626.8	324.3	464.9	349.3	115.60	4.021	
18,100.0	12,325.4	17,965.7	12,176.0	66.4	52.1	71.24	5,726.8	323.5	464.9	347.8	117.08	3.970	
18,200.0	12,324.9	18,065.7	12,175.4	67.0	52.9	71.24	5,826.8	322.7	464.9	346.3	118.57	3.920	
18,300.0	12,324.3	18,165.7	12,174.8	67.7	53.8	71.23	5,926.8	321.9	464.9	344.8	120.07	3.872	
18,400.0	12,323.8	18,265.7	12,174.2	68.4	54.6	71.23	6,026.8	321.1	464.9	343.3	121.57	3.824	
18,500.0	12,323.2	18,365.7	12,173.6	69.1	55.5	71.23	6,126.8	320.2	464.9	341.8	123.08	3.777	
18,600.0	12,322.6	18,465.7	12,173.0	69.7	56.3	71.22	6,226.8	319.4	464.9	340.3	124.59	3.731	
18,700.0	12,322.1	18,565.7	12,172.4	70.4	57.2	71.22	6,326.8	318.6	464.9	338.8	126.11	3.686	
18,800.0	12,321.5	18,665.7	12,171.8	71.1	58.0	71.22	6,426.8	317.8	464.9	337.2	127.63	3.642	
18,900.0	12,321.0	18,765.7	12,171.3	71.8	58.9	71.21	6,526.7	317.0	464.9	335.7	129.16	3.599	
19,000.0	12,320.4	18,865.7	12,170.7	72.5	59.7	71.21	6,626.7	316.2	464.9	334.2	130.69	3.557	
19,100.0	12,319.9	18,965.7	12,170.1	73.2	60.6	71.21	6,726.7	315.4	464.9	332.6	132.22	3.516	
19,200.0	12,319.3	19,065.7	12,169.5	73.9	61.4	71.20	6,826.7	314.6	464.9	331.1	133.76	3.475	
19,300.0	12,318.7	19,165.7	12,168.9	74.6	62.3	71.20	6,926.7	313.8	464.9	329.6	135.30	3.436	
19,400.0	12,318.2	19,265.7	12,168.3	75.3	63.1	71.20	7,026.7	313.0	464.9	328.0	136.85	3.397	
19,500.0	12,317.6	19,365.7	12,167.7	76.0	64.0	71.19	7,126.7	312.2	464.9	326.5	138.40	3.359	
19,600.0	12,317.1	19,465.7	12,167.2	76.7	64.8	71.19	7,226.7	311.4	464.9	324.9	139.95	3.322	
19,700.0	12,316.5	19,565.7	12,166.6	77.4	65.7	71.19	7,326.7	310.6	464.9	323.4	141.50	3.285	
19,800.0	12,315.9	19,665.7	12,166.0	78.1	66.5	71.18	7,426.7	309.8	464.9	321.8	143.06	3.249	
19,900.0	12,315.4	19,765.7	12,165.4	78.9	67.4	71.18	7,526.7	308.9	464.9	320.3	144.62	3.214	
19,966.8	12,315.0	19,832.5	12,165.0	79.2	67.9	71.18	7,593.5	308.4	464.9	319.4	145.52	3.195	

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Reference Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	MONTERA FEDERAL COM 701H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	edm
Reference Design:	PWP1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB=30' @ 3257.0usft (SCAN QUEST
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: MONTERA FEDERAL COM 701H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.52°

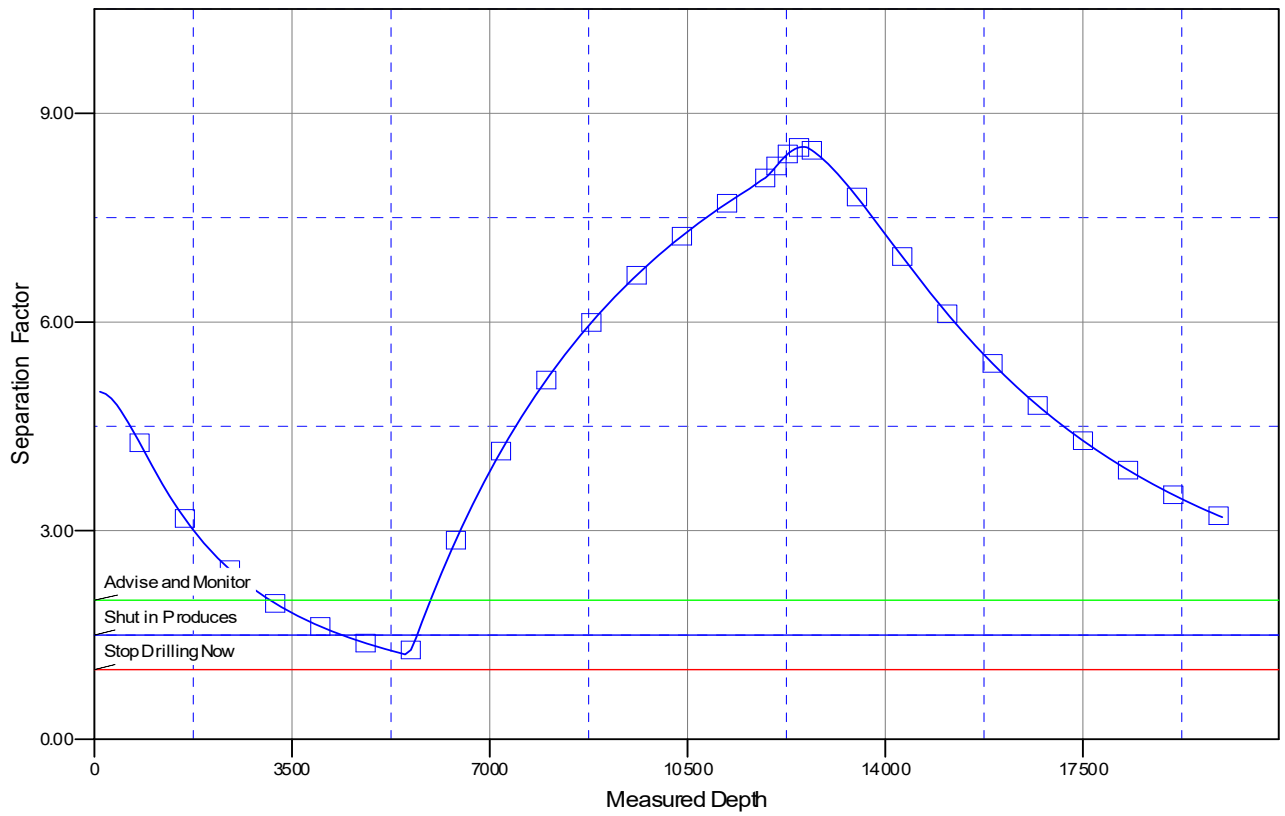


Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well MONTERA FEDERAL COM 701H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Reference Site:	BULLDOG	**MD Reference:**	KB=30' @ 3257.0usft (SCAN QUEST)
Site Error:	0.0 usft	**North Reference:**	Grid
Reference Well:	MONTERA FEDERAL COM 701H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	3.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OWB	**Database:**	edm
Reference Design:	PWP1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB=30' @ 3257.0usft (SCAN QUEST
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: MONTERA FEDERAL COM 701H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Grid Convergence at Surface is: 0.52°

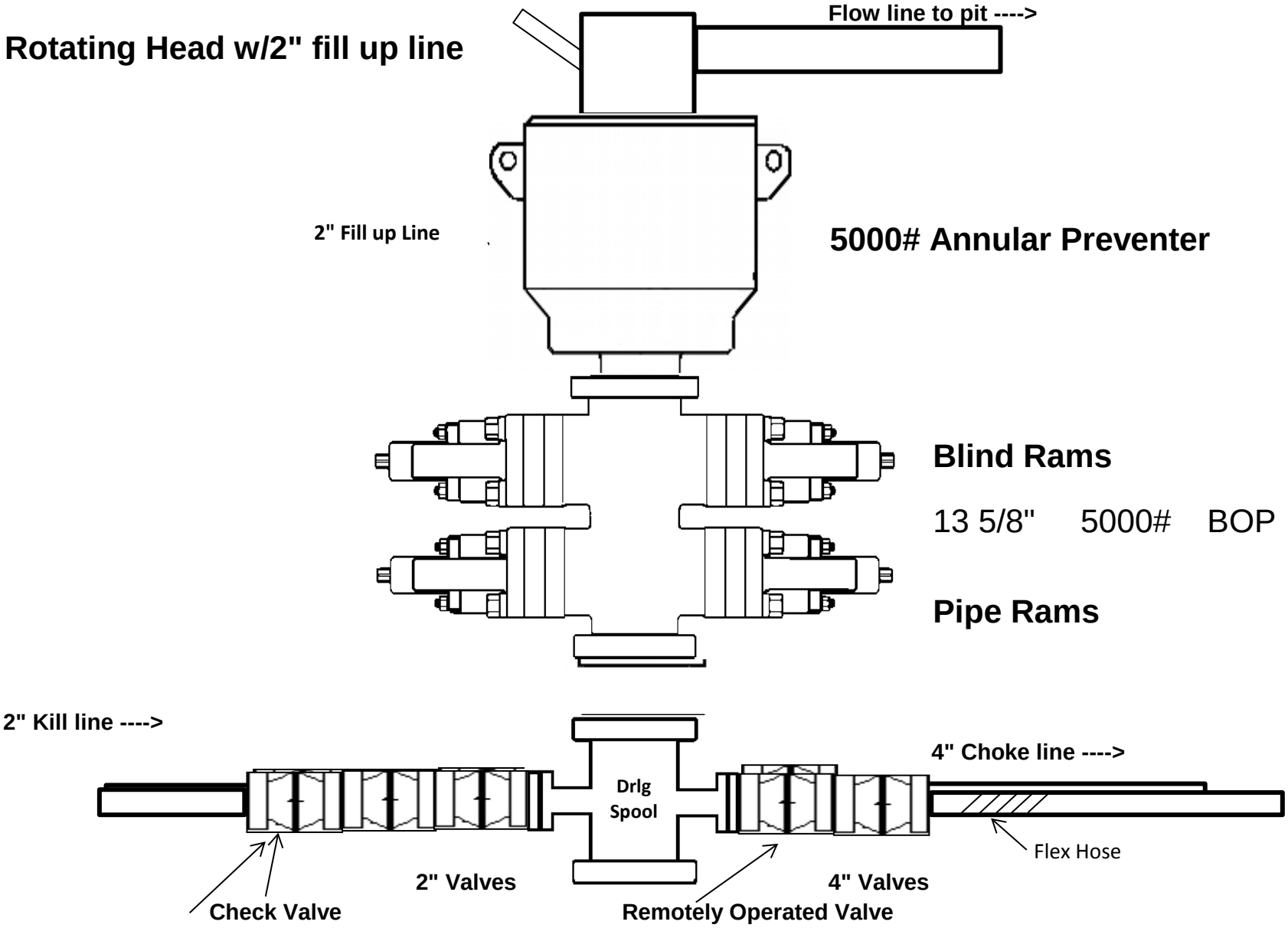
Separation Factor Plot



LEGEND

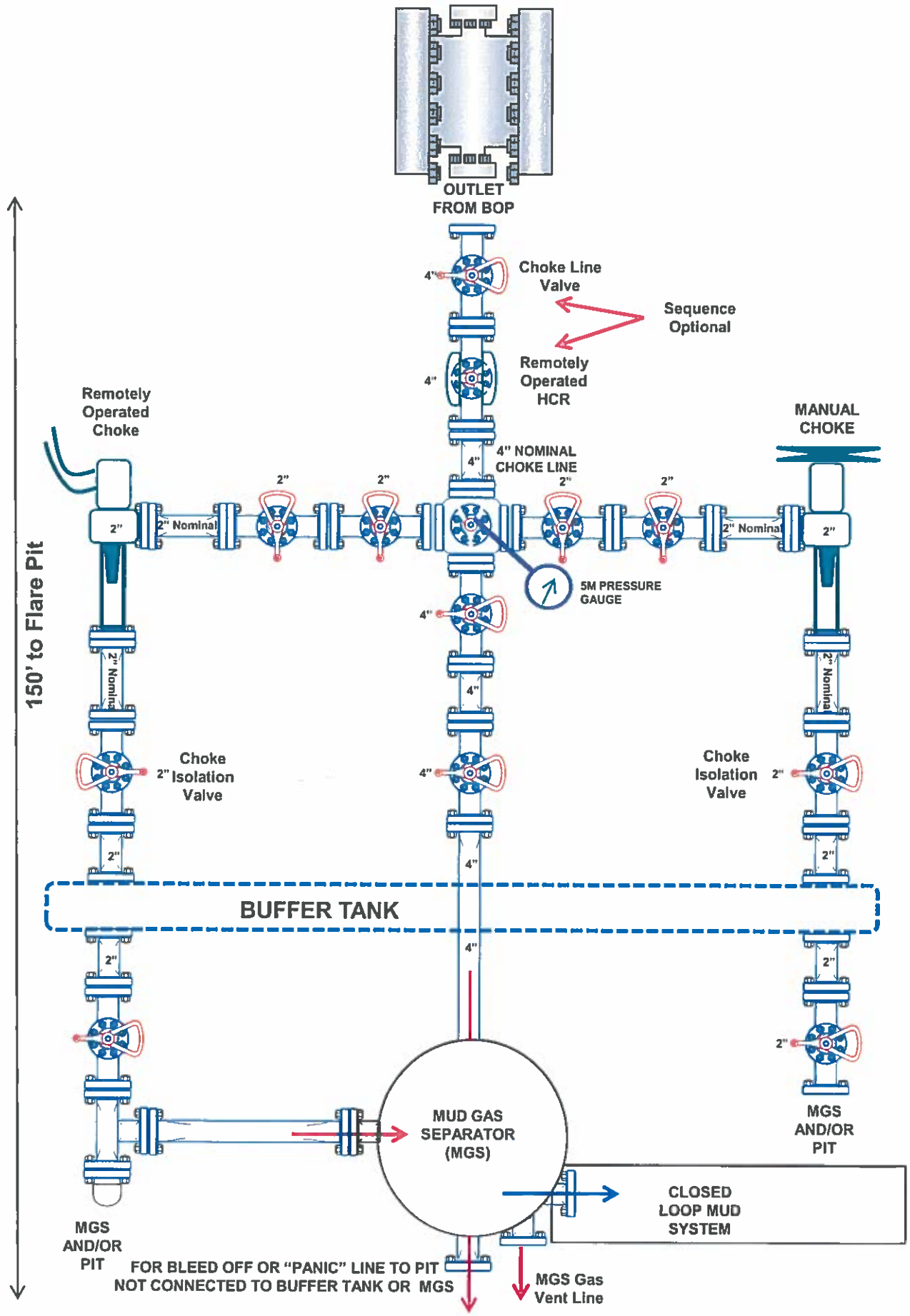
MONTERA FEDERAL COM 601H, OWB, PWP1 V0

5,000 psi BOP Schematic



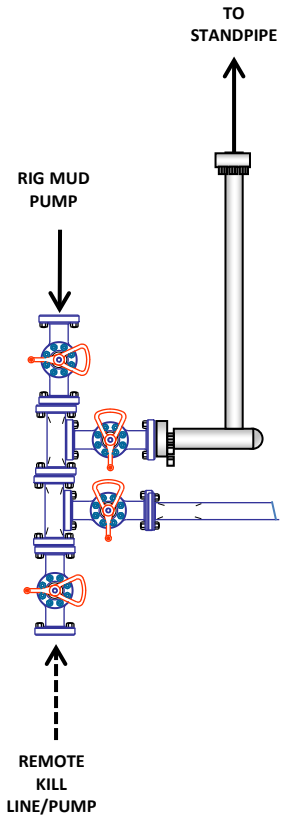
`

5M Choke Manifold Equipment (WITH MGS + CLOSED LOOP)

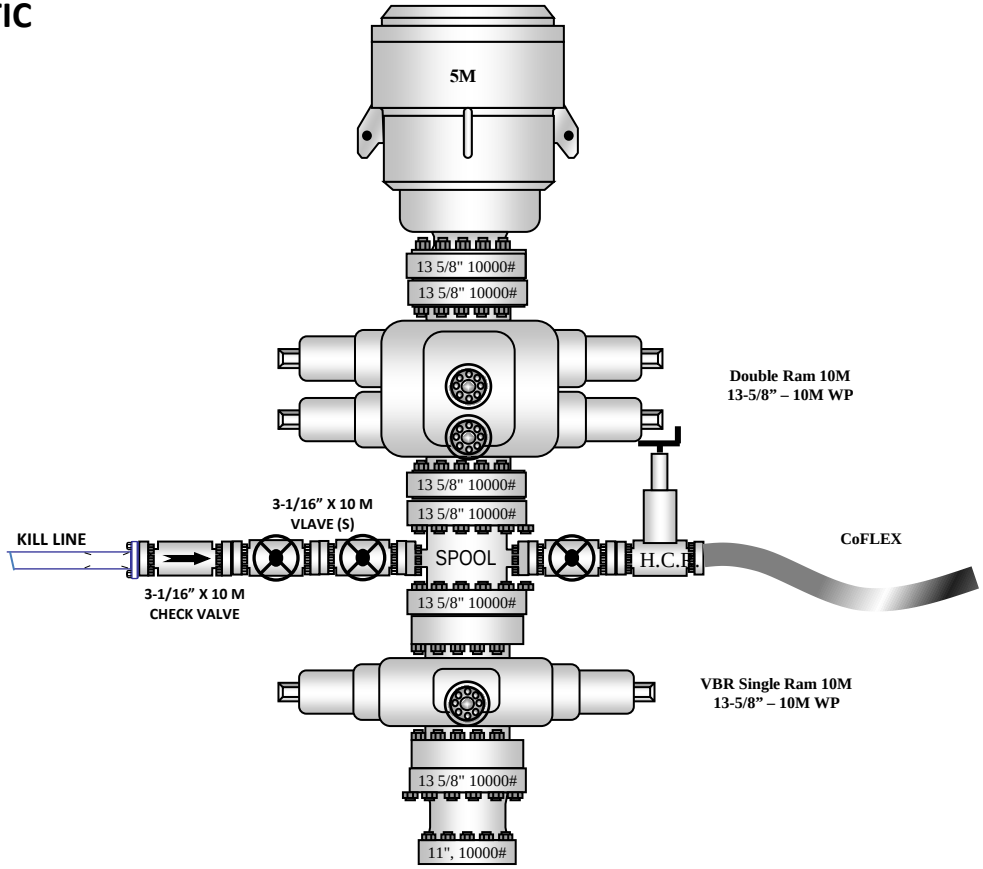


10M BOP Stack

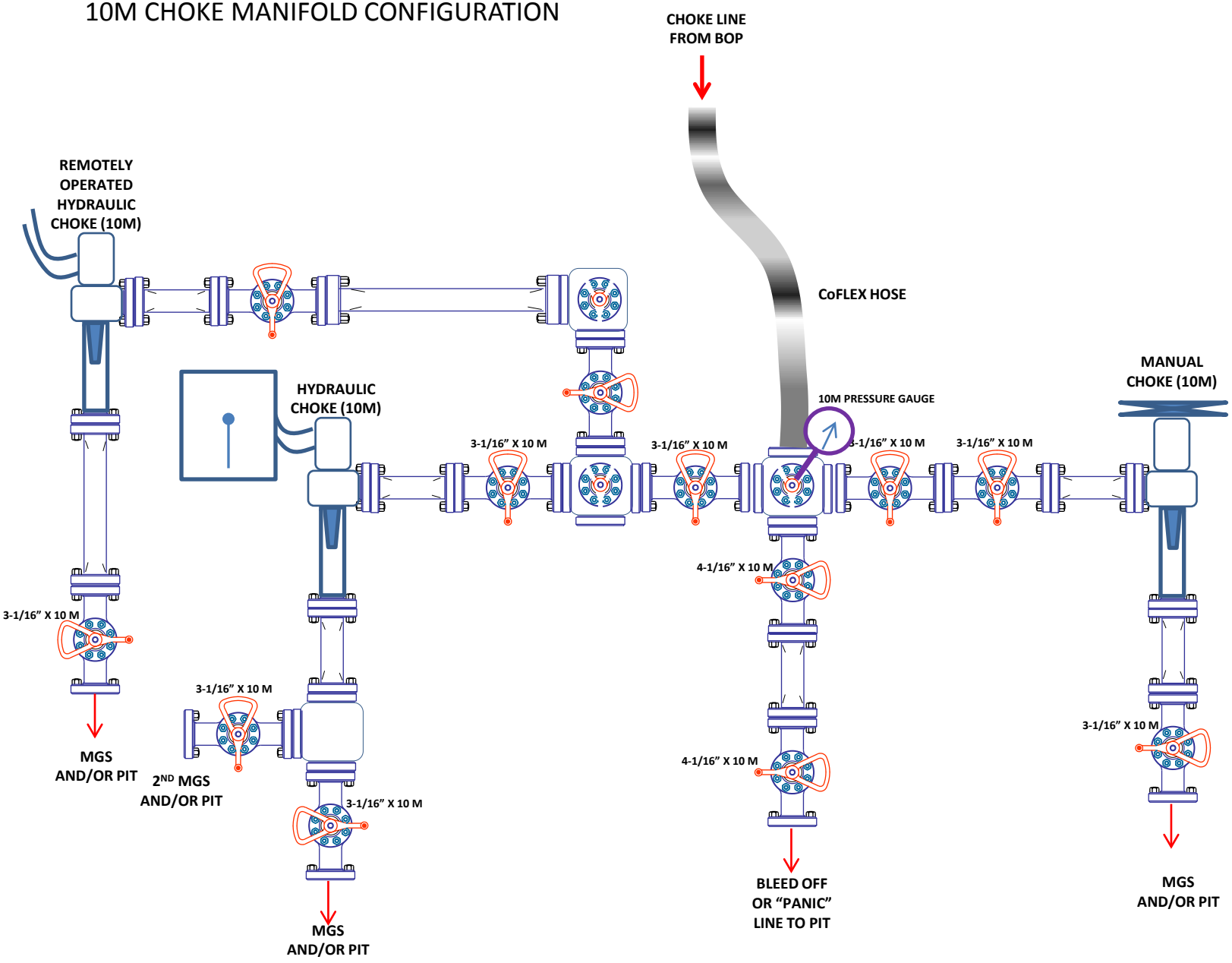
10M REMOTE KILL SCHEMATIC



10M BOP Stack
(5M Annular)



10M CHOKE MANIFOLD CONFIGURATION



Continental

ContiTech

QUALITY CONTROL	No.: QC-DB- 351 / 2016
	Page : 1 / 88
Hose No.: 72879	Revision : 0
	Date: 05. September 2016.
	Prepared by :
	Appr. by:

CHOKE AND KILL HOSE

id.: 3" 69 MPa x 13,72 m (45 ft)

DATA BOOK

Purchaser: SCANDRILL

Purchaser Order No.: 143799

ContiTech Rubber Order No.: 543951

ContiTech Oil & Marine Corp. Order No.: 4500795683 COM880841

NOT DESIGNED FOR WELL TESTING

ContiTech Rubber Industrial Kft. | Budapesti út 10. H-6728 Szeged | H-6701 P.O.Box 152 Szeged, Hungary
Phone: +36 62 566 737 | Fax: +36 62 566 738 | e-mail: info@fluid.contitech.hu | Internet: www.contitech-rubber.hu; www.contitech.hu
The Court of Csongrád County as Registry Court | Registry Court No: Cg.06-09-002502 | EU VAT No: HU11087209
Bank data Commerzbank Zrt., Budapest | 14220108-26830003

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

CERT. N°: 1050

PURCHASER:	ContiTech Oil & Marine Corp.			P.O. N°:	4500795683
CONTITECH RUBBER order N°:	543951	HOSE TYPE:	3" ID	Choke and Kill Hose	
HOSE SERIAL N°:	72879	NOMINAL / ACTUAL LENGTH:		13,72 m / 13,80 m	
W.P. 69,0 MPa 10000 psi		T.P. 103,5 MPa 15000 psi		Duration: 60 min.	

Pressure test with water at ambient temperature

See attachment (1 page)

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	2587	AISI 4130	J5251
3 1/16" 10K API Swivel Flange end		AISI 4130	036809
Hub		AISI 4130	J6433
3" coupling with	2584	AISI 4130	J5251
3 1/16" 10K API b.w. Flange end		AISI 4130	62580

Not Designed For Well Testing

API Spec 16 C 2nd Edition– FSL2

Temperature rate:"B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
30. August 2016.		ContiTech Rubber Industrial Kft. Quality Control Dept.

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE
No: 1050

CONTITECH RUBBER Industrial Kft.	No: QC-DB- 351 / 2016
	Page: 6 / 88

1/1

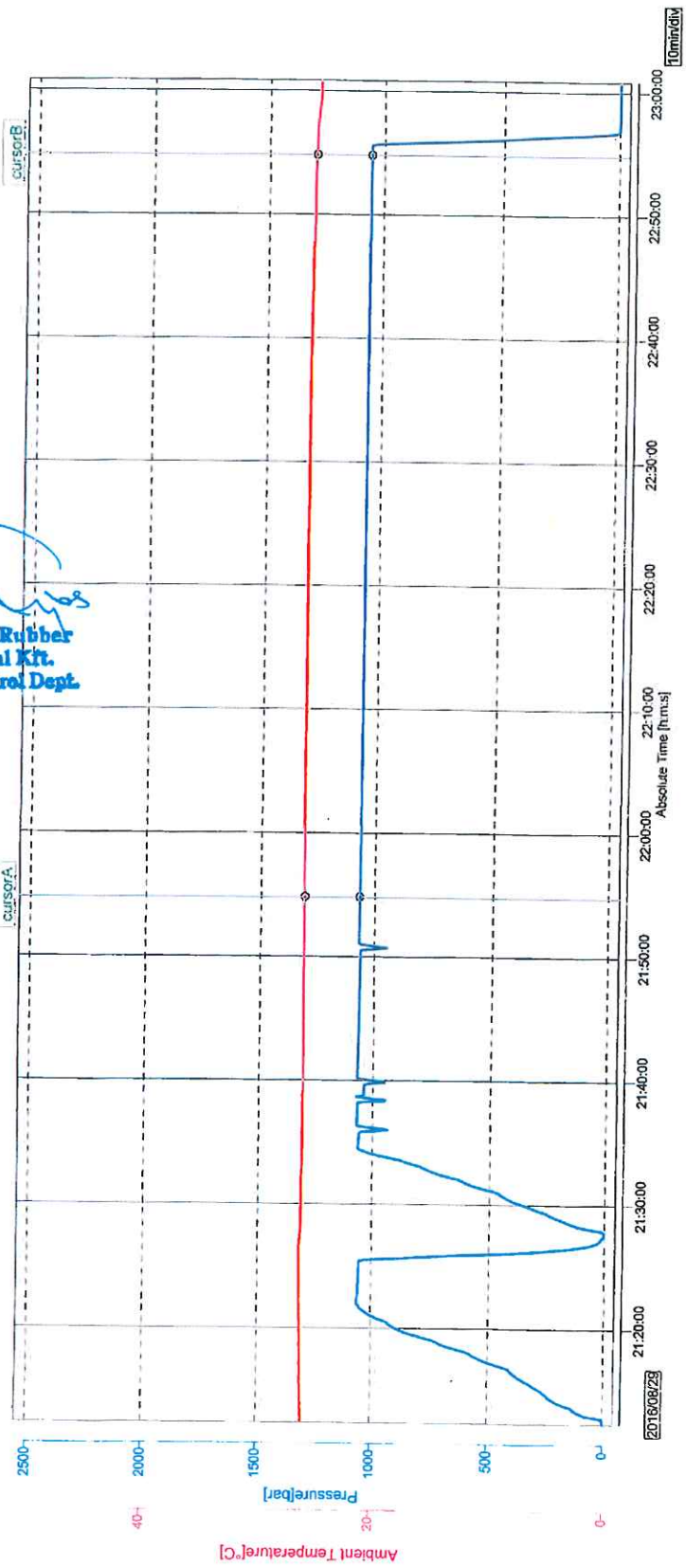
File Name : 014986_72879.GEV,...,014996_72879.GEV
File Message : 72879
Device Type : GX10
Serial No. : S5P606399
Data Count : 1302

Sampling Int. : 5.000 sec
Start Time : 2016/08/29 21:12:25.000
Stop Time : 2016/08/29 23:00:50.000

Print Group : Press-Temp
Print Range : 2016/08/29 21:12:25.000 - 2016/08/29 23:00:50.000
Comment : 142056635

	Cursor A	Cursor B	Difference
Data No.	509	1229	720
Absolute Time	2016/08/29 21:54:50.000	2016/08/29 22:54:50.000	01:00:00.000
Tag Comment	Value A	Value B	Value B-A
Pressure[bar]	1068.16	1054.43	-13.73
Ambient Temperature[°C]	26.17	25.88	-0.29

ContiTech Rubber
Industrial Kft.
Quality Control Dept.
(1)



Hose Data Sheet

CRI Order No.	543951
Customer	ContiTech Oil & Marine Corp.
Customer Order No	4500795683 COM880841
Item No.	1
Hose Type	Flexible Hose
Standard	**API SPEC 16C 2ND EDITION FSL2**
Inside dia in inches	3
Length	45 ft
Type of coupling one end	FLANGE 3.1/16" 10K API SPEC 6A TYPE 6BX, BUTT WELDED, BX154ST.ST. LINED R.GR. SOUR
Type of coupling other end	FLANGE 3.1/16" 10K API SPEC 17D SV SWIVEL FLANGE, BX154 ST.ST. LINED R.GR. SOUR
H2S service NACE MR0175	Yes
Working Pressure	10 000 psi
Design Pressure	10 000 psi
Test Pressure	15 000 psi
Safety Factor	2,25
Marking	CONTINENTAL CONTITECH
Cover	NOT FIRE RESISTANT
Outside protection	St.steel outer wrap
Internal stripwound tube	No
Lining	OIL + GAS RESISTANT SOUR
Safety clamp	Yes
Lifting collar	Yes
Element C	Yes
Safety chain	Yes
Safety wire rope	No
Max.design temperature [°C]	100
Min.design temperature [°C]	-20
Min. Bend Radius operating [m]	0,90
Min. Bend Radius storage [m]	0,90
Electrical continuity	The Hose is electrically continuous
Type of packing	WOODEN CRATE ISPM-15

ContiTech Rubber
Industrial Kft.
QC 2

Continental

ContiTech Fluid Technology

ContiTech Oil & Marine Corp. # 11535 Brittmoore Park Dr., Houston, TX 77041-6916 USA

ScanDrill Inc.
9395 HWY 2767
TYLER TX 75708

Delivery Note

Document No.	**83352143**
Document Date	**10/05/2016**
Customer Number	15483
Customer VAT No.	
Supplier Number	
N° EORI:	FR41027953300021
Purchase Order No.	143799
Purchase Order Date	07/01/2016
Sales Order Number	880841
Sales Order Date	07/05/2016
Unloading Point	

Transport-Details - Shipping

Conditions

Shipping Conditions	0 days
Inco Terms	EXW Houston, TX Ex Works

Weights (Gross / Net)

Total Weight	2,323 LB
Net Weight	1,643 LB

Buyer: Joe Ward
E-mail: jward@scandrill.com
Tel: 903.597.5368

Payment Terms:
50% Due at order Placement
50% Due Prior to Dispatch

Rev 01 - 092116 - Sales Tax added to the order.

Item	Material/Description	Quantity	Weight
10	HCK3FA45IPSIVS 3" x 45ft, Choke and Kill Hose, WP 10K End A: 3.1/16" 10K Flange, API Spec. 6A Type 6BX, Butt Welded, BX154 Stainless Steel 316 Lined Ring Groove - Sour End B: 3.1/16" 10K Flange, API Spec 17D SV Swivel Flange, BX154 Stainless Steel 316 Lined Ring Groove - Sour Standard: API SPEC 16C 2ND EDITION FSL2 - Monogrammed Working Pressure: 10000 psi Test Pressure: 15000 psi Fire Rated: No Armoured: Yes - Stainless Steel 316L Interlock Design Temperature: -20 to 100°C High Temperature Exposure / Survival @ 177 Deg C (internal in a kick situation) As Per API 16C B.12.5!	1 PC	1,643 LB

Continental

ContiTech Fluid Technology

Conditions		**Delivery Note**	
Shipping Conditions	0 days	Document No.	83352143
Inco Terms	EXW Houston, TX Ex Works	Document Date	10/05/2016
		Page 2 of 3	

Brand Name: Continental ContiTech

serial no:72879

Supplied with:
2 x Safety Clamps
2 x Lifting Collars Double Eyed
2 x Safety Chains c/w Shackles Each End x 8ft

Packing to ISPM-15 Heat Treated
Packing type: Wooden Crate,
Gross weight: 1056 kg / 2323 lbs
Dimensions: 2870 x 640 x 2800 mm (L x W x H)
113 x 25.2 x 110.2 inch
To be handled/shipped in a vertical position

HTS# 4009.42.0050
ECCN: EAR99
COO: Hungary

20	00TAX-SALES SALES TAX %8.25	1	PC	0	LB

Buyer: Joe Ward
E-mail: jward@scandrill.com
Tel: 903.597.5368

Payment Terms:
50% Due at order Placement
50% Due Prior to Dispatch

Rev 01 - 092116 - Sales Tax added to the order.

Order/Item 880841/20 07/05/2016
Customer's PO no./item 143799

Inner packages

Continental

ContiTech Fluid Technology

Conditions		**Delivery Note**	
Shipping Conditions	0 days	Document No.	83352143
Inco Terms	EXW Houston, TX Ex Works	Document Date	10/05/2016
		Page 3 of 3	

Quantity	Packaging	Material	Charge
1	113 X 25.2 X 110.2 INCH -Wooden crate	HCK3FA45IPSIVS	1

Package number 118448718

(1) Ship-to party
ScanDrill Inc.
9395 HWY 2767
TYLER TX 75708

(2) Unloading point - storage location - usage

(3) Delivery note no.
83352143

(4) Vendor address (short name, plant, ZIP, city)
ContiTech Oil & Marine Corp.
11535 Brittmoore Park Drive
Houston TX 77041-6916

(8) Supplier ref. no.

(9) Quantity
SN: 72879

(5) Net weight
1,643 LB

(6) Gross weight
2,323 LB

(7) Number of packages
1

(10) Description of delivery, service

(12) ContiTech Sales order no.

(13) Packing date
10/07/16

(14) Engineering change status

(15) Package no.
118448718

(16) Customer PO no.
143799

Material label VDA 4902 Vers. 4

Sender/Vendor

Vendor-no.

ContiTech Oil & Marine Corp.
11535 Brittmoore Park Drive
77041-6916 Houston

Loading point 3301 / CT O&M Corp Houston

Sending-/loading-ref.number 31127221

Recipient Cust.-no. 15483

ScanDrill Inc.
9395 HWY 2767
TYLER TX 75708
USA

Deliv.-/Uploading point

Recipient

Sender no. at shipping carrier

Freight Order

Date 10-05-2016

Relation-no.

Shipping carrier

Carrier-no.

Phone

Fax

Sender comment for the shipping carrier

Incoming date

Incoming time

Delivery-note-no. Packaging number	Quan.	Packaging	S	Contents	Net-weight LB	Gross-weight LB
Delivery(ies): 83352143	1	113 X 25.2 X 110.2 INCH		3" x 45ft, Choke and Kill Hose, WP 10K	1643	1,054
118448718				SALES TAX %8.25		
Total:	1	Volume / working widht approx		Total:	1643	1,054

Prepayment of charges
Ex Works

Sales order no. / PO no.

SO: 880841 / PO: 143799

Cust. order number 143799 Accnt assgmnt

Means of transp. no.

Truck code

Disp. type Truck (Subco

Driver's confirmation of reception

Shipment above complete and in
Taken over in correct state.

Date Time Signature

Acknowlgmnt of receipt of the gds recipient:

Shipment above complete and in
Received in correct state.

Company stamp/signature

Vendor-no.

Sending-/Loading-Ref.number

Sender/Vendor

Vendor-no.

ContiTech Oil & Marine Corp.
11535 Brittmoore Park Drive
77041-6916 Houston

Loading point 3301 / CT O&M Corp Houston

Sending-/loading-ref.number 31127221

Recipient Cust.-no. 15483

ScanDrill Inc.
9395 HWY 2767
TYLER TX 75708
USA

Deliv.-/Uploading point

Recipient

Sender no. at shipping carrier

Freight Order

Date 10-05-2016

Relation-no.

Shipping carrier

Carrier-no.

Phone

Fax

Sender comment for the shipping carrier

Incoming date

Incoming time

Delivery-note-no. / Packaging number	Quan.	Packaging	S	Contents	Net-weight LB	Gross-weight LB
Delivery(ies): 83352143	1	113 X 25.2 X 110.2 INCH		3" x 45ft, Choke and Kill Hose, WP 10K	1643	1,054
118448718				SALES TAX %8.25		
Total:	1	Volume / working widht approx		Total:	1643	1,054

Prepayment of charges
Ex Works

Sales order no. / PO no.

SO: 880841 / PO: 143799

Cust. order number 143799

Accnt assgmnt

Means of transp. no.

Truck code

Disp. type Truck (Subco

Acknowlgmnt of receipt of the gds recipient:

Shipment above complete and in
Received in correct state.

Company stamp/signature

Driver's confirmation of reception

Shipment above complete and in
Taken over in correct state.

Date Time Signature

Vendor-no.

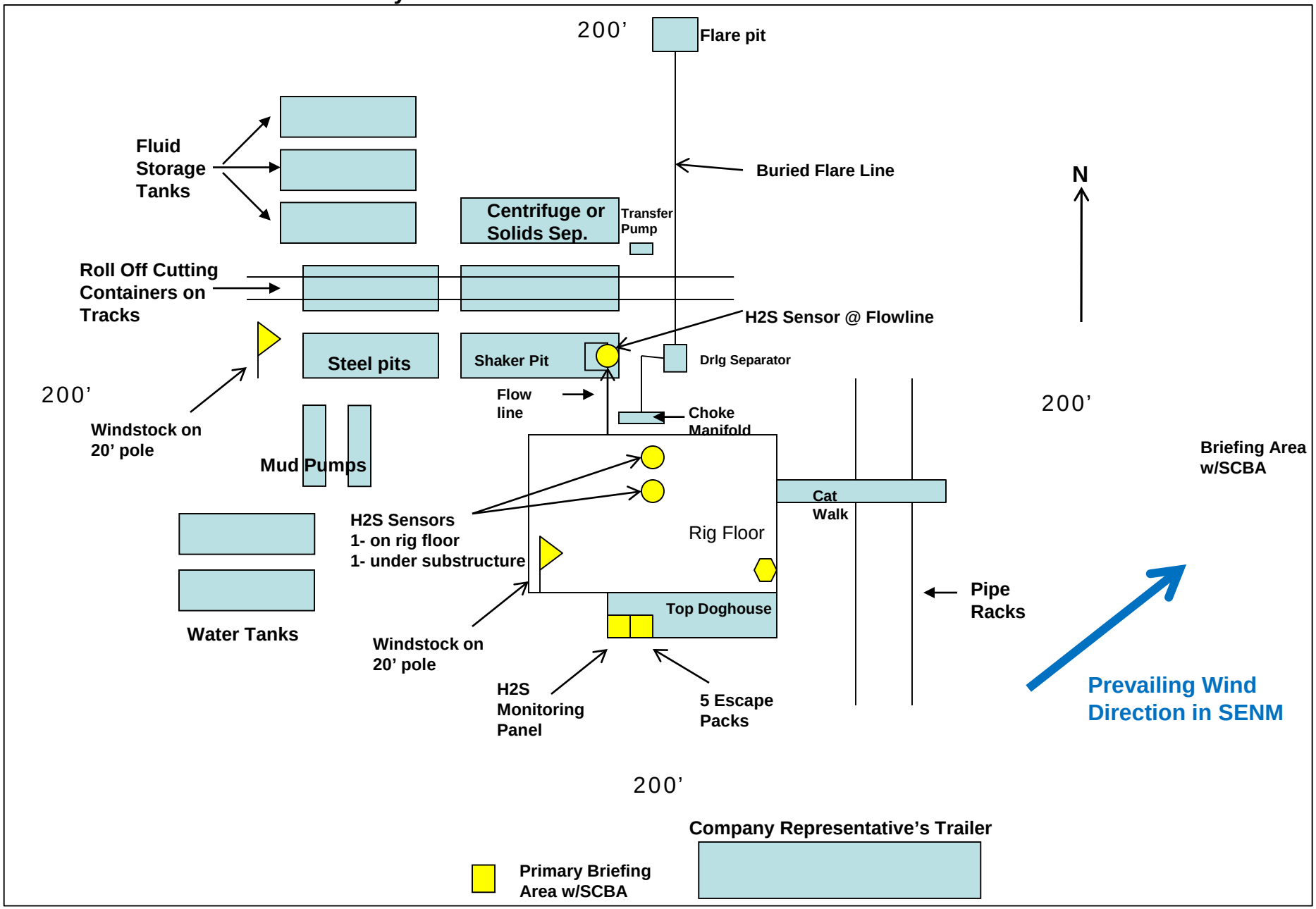
Sending-/Loading-Ref.number

Secondary egress

COG Operating LLC
H_2S Equipment Schematic
Terrain: Shinnery sand hills.

Well pad will be 400' x 400' with cellar in center of pad

Location Entry Condition Sign



COG OPERATING LLC
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

a. The hazards and characteristics of hydrogen sulfide (H_2S).
b. The proper use and maintenance of personal protective equipment and life support systems.
c. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
d. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

a. The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
b. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
c. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500 feet) and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

2. H_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S. If H2S greater than 100 ppm is encountered in the gas stream we will shut in and install H2S equipment.

a. Well Control Equipment:
   Flare line.
   Choke manifold with remotely operated choke.
   Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
   Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.

b. Protective equipment for essential personnel:
Mark II Surviveair 30-minute units located in the dog house and at briefing areas.

c. H2S detection and monitoring equipment:
2 - portable H2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.

d. Visual warning systems:
Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.

e. Mud Program:
The mud program has been designed to minimize the volume of H2S circulated to the surface.

f. Metallurgy:
All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

g. Communication:
Company vehicles equipped with cellular telephone.

COG OPERATING LLC has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore, we do not believe that an H2S contingency plan is necessary.

W A R N I N G

YOU ARE ENTERING AN H_2S AREA
AUTHORIZED PERSONNEL ONLY

1. ***BEARDS OR CONTACT LENSES NOT ALLOWED***
2. ***HARD HATS REQUIRED***
3. ***SMOKING IN DESIGNATED AREAS ONLY***
4. ***BE WIND CONSCIOUS AT ALL TIMES***
5. ***CK WITH COG OPERATING LLC FOREMAN AT MAIN OFFICE***

COG OPERATING LLC

1-575-748-6940

EMERGENCY CALL LIST

	OFFICE	MOBILE
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

	OFFICE
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

COG Operating LLC

Rig Plat & Closed Loop Equipment Diagram

Well pad will be 400' X 400' with cellar in center of pad

Flare Lines will be from both Choke Manifold & Separator to edge of location.

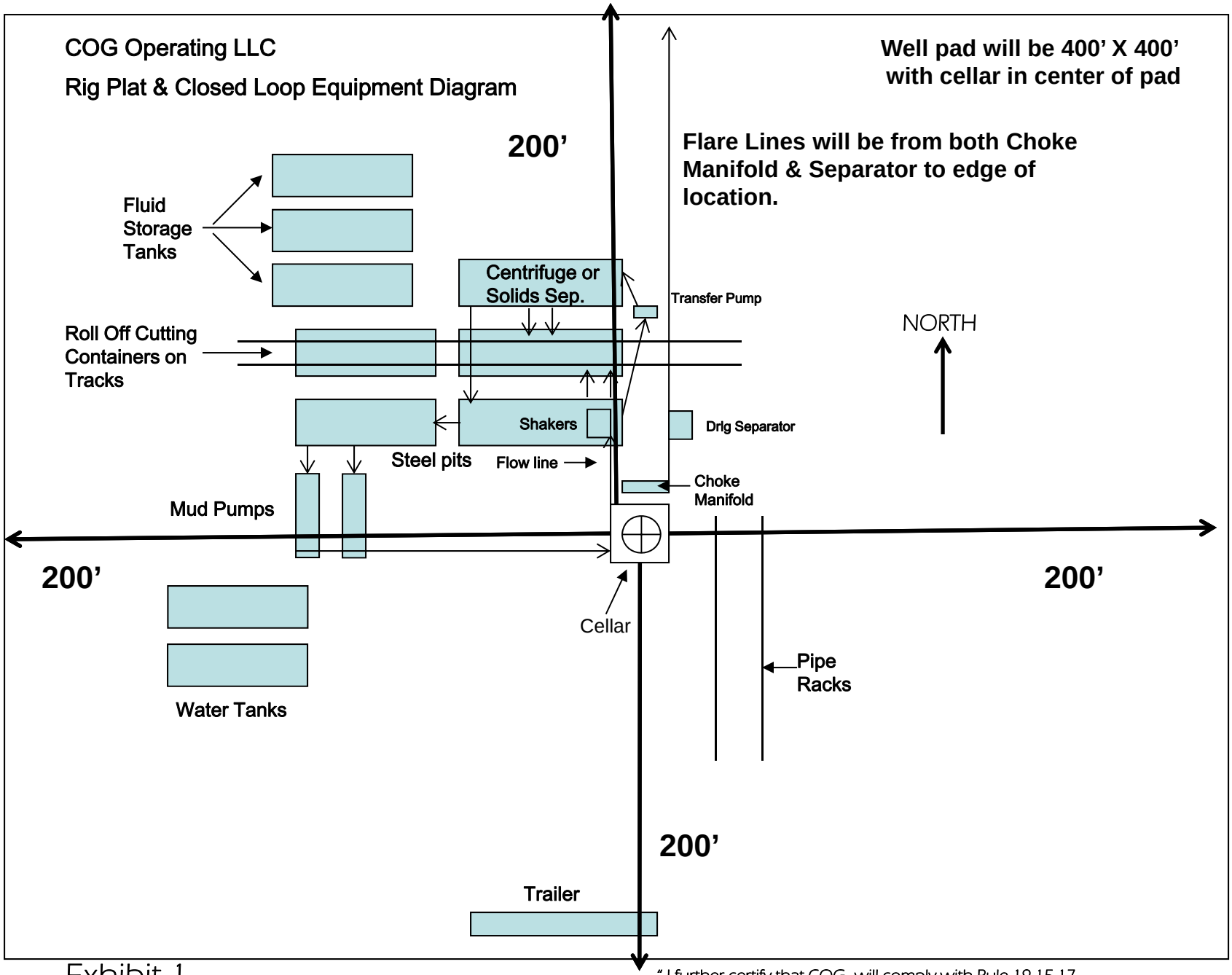


Exhibit 1

" I further certify that COG will comply with Rule 19.15.17 NMAC by using a Closed Loop System."

Surface Use & Operating Plan

Montera Federal Com #701H

- Surface Owner: Tap Rock NM10 Minerals, LLC. 602 Park Point Drive, Suite 200. Golden, Colorado 80401
- Bureau of Land Management
- New Road: 958'
- Flow Line: 25'
- Gas Line: 25'
- SWD Line: 1118.1'
- Power Line: 1492.3'
- Tank Battery Facilities: Will utilize the Montera Federal 10 M CTB located in Section 10. T25S. R35E.
- Well Pad: Dual. Montera Federal Com 601H and 701H share a well pad.

Well Site Information

- V Door: East
- Topsoil: East
- Interim Reclamation: West

Attachments

- C102
- Closed Loop System
- Layout
- CTB Layout and Flowlines
- Brine H20
- Fresh H2O
- Existing Roads
- 1Mile Map and Data
- Maps and Plats
- Well Site Layout
- Reclamation

Notes

Onsite: On-site was done by Gerald Herrera (COG); Zane Kirsch (BLM); on January 22th, 2020.

SURFACE USE AND OPERATING PLAN

1. Existing & Proposed Access Roads

A. The well site survey and elevation plat for the proposed well is attached with this application. It was staked by Harcrow Surveying, Artesia, NM.

B. All roads to the location are shown on the maps and road plats. The existing lease roads are illustrated and are adequate for travel during drilling and production operations. Upgrading existing roads prior to drilling the well will be done where necessary. The road route to the well site is depicted in well layout map. The road shown in the well layout will be used to access the well.

C. Directions to location: See 600 x 600 plat

D. Based on current road maintenance performed on other roads serving existing wells, we anticipate maintaining the lease roads leading to the proposed well pad at least once a year on dry conditions and twice a year in wetter conditions.

2. Proposed Access Road:

The Location Verification Map shows that 958' of new road will be required for this location. If any road is required, it will be constructed as follows:

The maximum width of the running surface will be 14'. The road will be crowned, ditched and constructed of 6" rolled and compacted caliche. Ditches will be at 3:1 slope and 4 feet wide. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns.

A. The average grade will be less than 1%.

B. No turnouts are planned.

C. No cattleguard, culvert, gates, low water crossings or fence cuts are necessary.

D. Surfacing material will consist of native caliche. Caliche will be obtained from the actual well site if available. If not available onsite, caliche will be obtained from Quail Ranch LLC., Tomahawk caliche pit located in Section 6, T25S, R35E. 600 West Illinois Avenue. Midland, TX 79701. Phone (432) 221-0342.

3. Location of Existing Well:

The One-Mile Radius Map shows existing wells within a one-mile radius of the proposed wellbore.

4. Location of Existing and/or Proposed Facilities:

A. COG Operating LLC does not operate an oil production facility on this lease.

1) The Montera Federal 10 M CTB is located in section 10. T25S. R35E. This CTB will be built to accommodate the Montera Federal Com #601H and #701H. We plan to install (1) buried 4" FP 601HT production flowline from each wellhead to the inlet manifold of the proposed CTB (2 lines total); the route for these flowlines will follow the "flowlines" route as shown in the diagram below. We will install (2) buried 4" gas lines for gas lift supply from the CTB to each well pad (2 lines total); the route for the gas lift lines will follow the "gas lift" route as shown in the attached layout.

2) The tank battery and facilities including all flow lines and piping will be installed according to API specifications.

3) Any additional caliche will be obtained from the actual well site. If caliche does not exist or is not plentiful from the well site, caliche will be obtained from Quail Ranch LLC., Tomahawk caliche pit located in Section 6, T25S, R35E. 600 West Illinois Avenue. Midland, TX 79701. Phone (432) 221-0342. Any additional construction materials will be purchased from contractors.

4) It will be necessary to run electric power if this well is productive. Power will be provided by Xcel Energy and they will submit a separate plan and ROW for service to the well location.

5) If the well is productive, rehabilitation plans will include the following:

- The original topsoil from the well site will be returned to the location, and the site will be re-contoured as close as possible to the original site.

5. Location and Type of Water Supply:

The well will be drilled with combination brine and fresh water mud system as outlined in the drilling program. Fresh water will be obtained from the Fez Frac Pond located in Section 8. T25S. R35E. Brine water will be obtained from the Malaga II Brine station in Section 12. T23S. R28E., or if necessary commercial water stations in the area and hauled to location by transport truck over the existing and proposed access roads shown in road maps. If a commercial fresh water source is nearby, fast line may be laid along existing road ROW's and fresh water pumped to the well. No water well will be drilled on the location.

6. Source of Construction Materials and Location "Turn-Over" Procedure:

Obtaining caliche: One primary way of obtaining caliche to build locations and roads will be by "turning over" the location. This means, caliche will be obtained from the actual well site. Amount will vary for each pad. The procedure below has been approved by BLM personnel:

A. The top 6 inches of topsoil is pushed off and stockpiled along the side of the location.

B. An approximate 160' X 160' area is used within the proposed well site to remove caliche.

C. Subsoil is removed and stockpiled within the surveyed well pad.

D. When caliche is found, material will be stock piled within the pad site to build the location and road.

E. Then subsoil is pushed back in the hole and caliche is spread accordingly across entire location and road.

F. Once well is drilled, the stock piled top soil will be used for interim reclamation and spread along areas where caliche is picked up and the location size is reduced.

G. Neither caliche, nor subsoil will be stock piled outside of the well pad. Topsoil will be stockpiled along the edge of the pad as depicted in the Well Site Layout or survey plat.

In the event that no caliche is found onsite, the caliche will be caliche will be obtained from Quail Ranch LLC., Tomahawk caliche pit located in Section 6, T25S, R35E. 600 West Illinois Avenue. Midland, TX 79701. Phone (432) 221-0342.

H. Methods of Handling Water Disposal:

A. The well will be drilled utilizing a closed loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to R360's disposal site.

B. Drilling fluids will be contained in steel mud pits.

C. Water produced from the well during completion will be held temporarily in steel tanks and then taken to an NMOCD approved commercial disposal facility.

D. It is anticipated that the disposal of produced water will be trucked to the turquoise 30 Federal 1 SWD Section 30, T24S, R32E., or Gold Coast 26 Federal SWD #1 Section 26, T24S, R32E. Might also be trucked to unspecified commercial SWD wells in this area.

E. Garbage and trash produced during drilling or completion operations will be collected in a trash bin and hauled to an approved landfill. No toxic waste or hazardous chemicals will be produced by this operation.

F. Human waste and grey water will need to be properly contained and disposed of. Proper disposal and elimination of waste and grey water may include but are not limited to portable septic systems and/or portable waste gathering systems (i.e. portable toilets).

G. After the rig is moved out and the well is either completed or abandoned, all waste materials will be cleaned up within 30 days. In the event of a dry hole only a dry hole marker will remain.

7. Ancillary Facilities:

No airstrip, campsite or other facilities will be built as a result of the operation on this well.

8. Well Site Layout:

A. The drill pad layout, with elevations staked by Harcrow Surveying, is shown in the Elevation Plat. Dimensions of the pad and pits are shown on the Rig Layout. V door direction is East. Topsoil, if available, will be stockpiled per BLM specifications. Because the pad is almost level no major cuts will be required.

B. The Rig Layout Closed-Loop exhibit shows the proposed orientation of closed loop system and access road. No permanent living facilities are planned, but a temporary foreman/toolpusher's trailer will be on location during the drilling operations.

9. Plans for Restoration of the Surface:

A. Interim Reclamation will take place after the well has been completed. The pad will be downsized by reclaiming the areas not needed for production operations. The portions of the pad that are not needed for production operations will be re-contoured to its original state as much as possible. The caliche that is removed will be reused to either build another pad site or for road repairs within the lease. The stockpiled topsoil will then be spread out reclaimed area and reseeded with a BLM approved seed mixture. In the event that the well must be worked over or maintained, it may be necessary to drive, park, and/or operate machinery on reclaimed land. This area will be repaired or reclaimed after work is complete.

10. Sedimentation and Erosion Control

Immediately following construction, straw waddles will be placed as necessary at the well site to reduce sediment impacts to fragile/sensitive soils.

B. Final Reclamation: Upon plugging and abandoning the well all caliche for well pad and lease road will be removed and surface will be recountoured to reflect its surroundings as much as possible. Caliche will be recycled for road repair or reused for another well pad within the lease. If any topsoil remains, it will be spread out and the area will be re-seeded with a BLM approved mixture and re-vegetated as per BLM orders. When required by BLM, the well pad site will be restored to match pre-construction grades.

11. Surface Ownership:

The surface is owned by the Tap Rock NM10 Minerals, LLC. 602 Park Point Drive, Suite 200. Golden, Colorado 80401. The surface is multiple uses with the primary uses of the region for grazing of livestock and the production of oil and gas. The surface owner was notified before staking this well.

A. The proposed road routes and surface location will be restored as directed by the BLM.

12. Other Information:

A. The area around the well site is grassland and the topsoil is sandy. The vegetation is moderately sparse with native prairie grasses, some mesquite and shinnery oak. No wildlife was observed but it is likely that mule deer, rabbits, coyotes and rodents traverse the area.

B. There is no permanent or live water in the immediate area.

C. There are no dwellings within 2 miles of this location.

D. If needed, a Cultural Resources Examination is being prepared by Boone Arch Services of NM, LLC., 2030 North Canal, Carlsbad, New Mexico, 88220, phone number 575-885-1352 and the results will be forwarded to your office in the near future. Otherwise, **COG will be participating in the Permian Basin MOA Program.**

13. Bond Coverage:

Bond Coverage is Statewide Bonds # NMB000740 and NMB000215

14. Lessee's and Operator's Representative:

The COG Operating LLC representative responsible for assuring compliance with the surface use plan is as follows:

Seth Wild
Drilling Superintendent
COG Operating LLC
One Concho Center
600 W Illinois Ave
Midland, TX 79701
(432) 221-0414 (office)
(432) 525-3633(cell)

Ray Peterson
Drilling Manager
COG Operating LLC
One Concho Center
600 W Illinois Ave
Midland, TX 79701
Phone (432) 685-4304 (office)
(432) 818-2254 (business)

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

OCD – HOBBS
10/07/2020
RECEIVED

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

Date: **2/19/2020**

☒ Original
☐ Amended - Reason for Amendment:

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

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete 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
Montera Federal Com #701H	**30-025-47843**	**M-10-25S-35E**	**275' FSL & 400' FWL**	**1,952 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 **Versado** and will be connected to **Eunice** **low**/high pressure gathering system located in **Lea County, N.M.**. 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 **Versado** 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 **Versado** have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at **Eunice** Processing Plant located in **Sec 3- T22S-R37E Lea County, N.M.**. 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