STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

APPLICATIONS OF COG OPERATING LLC FOR COMPULSORY POOLING AND APPROVAL OF NON-STANDARD SPACING UNIT, LEA COUNTY, NEW MEXICO.

CASE NOS. 24320-24321

CIMAREX ENERGY CO.'S MOTION TO DISMISS COG OPERATING LLC'S APPLICATIONS FOR COMPULSORY POOLING AND APPROVAL OF NON-STANDARD SPACING UNIT

Cimarex Energy Co. ("Cimarex") respectfully submits this Motion to Dismiss COG Operating LLC's ("COG") Applications for Compulsory Pooling and Approval of Non-Standard Spacing Unit in Cases 24320-24321 (the "Macho Nacho applications"). COG's Macho Nacho applications contradict clear precedent by the Oil Conservation Commission, will negatively impair Cimarex's correlative rights by seeking to pool acreage that Cimarex controls and has already begun to develop under a Joint Operating Agreement, which is binding on COG. COG's Macho Nacho applications must be dismissed to allow Cimarex and COG the opportunity to each develop its own acreage. In addition, COG's Macho Nacho applications are deficient because COG failed to comply with Division rules governing overlapping spacing units in addition to being prematurely filed. For these reasons. COG's Macho Nacho applications must be dismissed.

I. BACKGROUND

Cimarex is the designated operator[1] of all of the lands located in Section 6, Township 24 South, Range 33, East, Lea County, New Mexico under a October 1, 1996 Joint Operating Agreement ("JOA").[2] *See* Affidavit of Cayla Gorski attached as Exhibit A, ¶¶ 4-7, and Attachment

[1] Cimarex is the successor in interest to Parker & Parsley Development, L.P, named as operator under the JOA.

[2] JOA's "facilitate development and conservation of resources by allowing operators to develop their acreage without the necessity of a pooling proceeding." *See* Order R-21416-A. A JOA is an agreement by which mineral interest

1 (excerpts of the JOA) thereto. Cimarex became the designated operator in 2011. *See* Gorski Aff. ¶ 6. Cimarex acquired its 50% interest in the Section 6 lands, which included operatorship under the JOA, for the purpose of fully developing Section 6 as part of its Tres Equis development. *See* Gorski Aff. ¶ 6. Under the JOA, Cimarex is the designated operator of all of the lands in Section 6 and has drilled five wells in Section 6 under the JOA, which Cimarex refers to as its Tres Equis wells. *See* Gorski Aff. ¶¶ 9-10. Cimarex intends to fully develop the Tres Equis Acreage under the JOA, and Cimarex's development plans are based on extensive experience in wells in the immediate vicinity of the Tres Equis development area. *See* Gorski Aff, ¶ 10-12.

Cimarex and COG (along with its parent company ConocoPhillips Company (collectively "COG")) each own 50% undivided interest in the JOA acreage, which grants to Cimarex the "*full control of all operations* on the Contract Area as permitted and required by, and within the limits of this agreement." *See* JOA Article V.A (emphasis added). COG acquired its interest in the Section 6 lands in 2023, subject to the JOA and with full knowledge that Cimarex was not only the exclusive operator but had already drilled 5 wells under the JOA. *See* Gorski Aff. ¶ 8.

As operator of 100% of the lands in Section 6, Cimarex does not need to file compulsory pooling applications to develop the Tres Equis Acreage. Instead, Cimarex only needs to submit well proposals to COG as provided for in Article VI of the JOA and obtain approved permits to drill from the Division. COG is attempting to use the extraordinary compulsory power of the Division to welsh on its contractual obligations under the JOA and improperly appropriate Cimarex's development rights under the JOA. COG's Macho Nacho applications seek to force pool Cimarex's interests in Section 6 into spacing units that also include Section 7, where COG owns 100%. COG even appears to have not complied with the Division's rules when it filed certain

owners contractually, and voluntarily, agree on how to explore, develop, and produce oil and gas on lands subject to the JOA.

of its Macho Nacho Bone Spring applications for permits to drill (APDs).[3] Cimarex should have the opportunity to develop acreage it controls. Cimarex should be allowed to develop Section 6, as it is planning to do, and COG can develop Section 7. Doing so allows COG to develop its acreage in a manner that does not impair Cimarex's correlative rights, which is consistent with both Commission and Division precedent.

II. ARGUMENT

COG's Macho Nacho applications must be dismissed for two reasons. First, the Macho Nacho applications seek to "pool over" Cimarex's JOA Acreage, which Cimarex has the right to and intends to continue to develop. Put another way, COG seeks to extinguish Cimarex's operating rights under the JOA and impair Cimarex's correlative rights in violation of the Oil and Gas Act and Commission and Division precedent. Second, COG's Macho Nacho Bone Spring application does not seek approval of overlapping spacing units; yet, Cimarex is the designated operator of 5 existing wells in Section 6, which COG proposes to overlap. As a result, COG's Macho Nacho Bone Spring application is deficient and must be dismissed and refiled.

A. COG's Macho Nacho Applications Improperly Seek to Preclude Cimarex from Developing Acreage Cimarex Controls and Intends to Develop

The Oil and Gas Act requires that the Division

> shall, so far as it is practicable to do so, afford to the owner of each property in a pool the opportunity to produce his just and equitable share of the oil or gas, or both, in the pool, being an amount, so far as can be practically determined, and so far as such can be practicably obtained without waste, substantially in the proportion that the quantity of the recoverable oil or gas, or both, under such

[3] COG's proposed Macho Nacho Bone Spring spacing unit will overlap existing Cimarex Bone Spring spacing units. Division Rule 19.15.15.12(B)(1) requires an operator to "furnish written notification" of its intent to operate a well within a spacing unit containing existing wells operated by another operator "prior to filing the application for permit to drill." The rule further requires an operator to submit with its APD application either a statement that at least 20 days before filing the APD application the applicant sent notices to the parties or submit written waivers. *Id.* 19.15.15.12(B)(3). COG's APD applications do not contain the statement required by Rule 19.15.15.12(B(3)). *See* Exhibit B. As previously discussed, COG also improperly filed its APD for its W/2 Eata Fajita wells, which it has now withdrawn.

> property bears to the total recoverable oil or gas, or both, in the pool, and for this purpose to use his just and equitable share of the reservoir energy.

NMSA 1978, § 70-2-17(A). The basis of the Division's power is "founded on the duty to prevent waste and to protect correlative rights." *Cont'l Oil Co. v. Oil Conservation Comm'n*, 1962-NMSC-062, ¶ 11, 373 P.2d 809. Here, Cimarex is requesting that COG's Macho Nacho applications be denied precisely so that Cimarex, the designated operator of 100% of the lands in Section 6, is afforded the opportunity to produce its just and equitable share of the oil or gas under Section 6. COG's Macho Nacho applications, however, seek to improperly eliminate this statutory protection and avoid this statutory mandate.

Despite Cimarex being the designated operator under the JOA, which is binding on COG, COG is seeking to use the Division's extraordinary power of compulsory pooling to deprive Cimarex of its rights under the JOA, including operatorship of the Tres Equis Acreage, as well as Cimarex's right to develop acreage it controls. The Oil Conservation Commission has rejected a similar attempt to pool over a JOA, and instead, ruled in favor of a designated operator under a JOA, in part, because doing so "protect[ed] correlative rights by presenting the best opportunity for each party to develop its own acreage." *See Marathon Oil Permian LLC*, Order R-21416-A (Sept. 17, 2020).[4]

Commission Order R-21416-A arose out of factual circumstances very similar to those present here.[5] Marathon sought to pool acreage that was committed to a JOA for which BTA was the designated operator. BTA objected and in its prehearing statement before the Commission argued:

> Pursuant to a Joint Operating Agreement ("JOA"), BTA is the operator of the acreage comprising the N/2 of Section 7 and the NW/4 of Section 8, Township 23

[4] *See also Novo Oil & Gas Northern Delaware, LLC*, Order R-21420-A (Sept. 17, 2020).
[5] The Division granted Marathon's applications, BTA sought de novo review, and on de novo review, the Commission denied Marathon's applications in favor of BTA.

> South, Range 29 East (the "Ochoa Acreage"). BTA acquired its interest in the Ochoa Acreage before Marathon acquired its interest in the proposed horizontal spacing units that are the subject of its applications. BTA plans to fully develop the Ochoa Acreage, controls 100% of the interest in its Ochoa Acreage, does not need to file a pooling application to develop the acreage, and is ready to commence development. Because Marathon's proposed well locations directly conflict with BTA's ongoing development plan for the Ochoa Acreage, the granting of Marathon's applications would impair BTA's correlative rights. Granting Marathon's applications would also render BTA's JOA meaningless, which is inconsistent with New Mexico's preference for voluntary agreements.

BTA Pre-Hearing Statement, Case Nos. 20865 and 20866, at 3 (filed August 6, 2020). BTA, represented by the same counsel as COG in these cases, also argued that the Division has "rejected attempts to preclude operators that held 100% of the working interest in their units from developing their acreage." *Id.* at 2 (citing Case Nos. 20410 and 20298).[6]

The same is true here: Pursuant to the JOA, Cimarex is the operator of the lands in Section 6, has already undertaken development of those lands under the JOA, and COG is bound by the JOA. Cimarex acquired its interest in the Tres Equis Acreage before COG acquired its interest in Section 6. Cimarex plans to fully develop the Tres Equis Acreage, controls 100% of the interest in its Tres Equis Acreage, does not need to file a pooling application to develop the acreage, and is ready to commence development. Because COG's proposed well locations directly conflict with Cimarex's ongoing development plan for the Tres Equis Acreage, the granting of COG's Macho Nacho applications will impair Cimarex's correlative rights. Granting COG's Macho Nacho applications would also render Cimarex's JOA meaningless, which is inconsistent with New Mexico's preference for voluntary agreements.

[6] At the Commission hearing, counsel for BTA also argued: "With respect to BTA's JOA, it should be honored and enforced. Marathon's application seeks to pool acreage in the N/2 of Section that BTA controls under a joint operating agreement that governs approximately 480 acres which is BTA's Ochoa acreage. The New Mexico law and prior Division decisions support a finding that BTA's JOA should be honored, and BTA should be permitted to proceed with development of its Ochoa acreage. BTA acquired the JOA specifically for the purpose of controlling and operating acreage. It controls 100 percent of the interest and its operating rates are valuable to it." Commission Hearing Transcript, p. 12, lines 14-25; *see also* BTA's Post-hearing Brief to the Division, available at https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafeadmin/cf/20200204/20865_02_04_2020_02_39_42.pdf

The Commission ruled in favor of BTA and denied Marathon's applications, in part because doing so "protect[ed] correlative rights by presenting the best opportunity for each party to develop its own acreage." *See Marathon Oil Permian LLC*, Order R-21416-A. The same outcome is warranted here.

The Division has interpreted Commission Order R-21416-A as a "directive to determine which proposal presents the best opportunity for each party to develop its own acreage." *See* Order No. R-22205, ¶ 25 (July 25, 2022) (internal quotation marks omitted). In Order R-22205, the Division denied Devon Energy Production Company's applications and granted Cimarex's applications, reasoning: "If the Cimarex applications are approved, each applicant would have the opportunity to develop two mile wells in units where they control a large majority of the working interest." *Id.* The Division concluded: "[T]he Cimarex applications prevent waste and protect correlative rights by presenting the best opportunity for each party to develop its own acreage. Each party will be left in control of units where they have the significant majority, or almost the entirety of the working interest control." *Id.* ¶ 27; *see also* Order R-22204, ¶ 23 (July 25, 2022) ("In the current Cimarex and Chevron cases, the Commission's analysis favors the Chevron plan. If the Chevron applications are approved, Cimarex would still be able to develop one mile wells in Section 8. If the Cimarex applications were approved, Chevron would be unable to develop sections 17 and 20."); *accord* Order R-21198, ¶ 13 (denying COG's applications when Mewbourne Oil Company opposed based on its working interest in Section 6 that would allow it to produce its own acreage and concluding, in part, "[a]n evaluation of the mineral interest ownership held by each party at the time the application was heard supports independent development by Mewbourne of Section 6, and by COG of Sections 7 and 18.").

In sum, Commission and Division precedent direct the Division to determine what development plan "presents the best opportunity for each party to develop its own acreage." Order R-22205, ¶ 25. Here, the answer is clear—Cimarex should be allowed to develop its own acreage, *i.e.*, Section 6, leaving COG with the opportunity to develop its own acreage, *i.e.*, Section 7. The result of this outcome is that each party will have control of units where they have 100% working interest control. Conversely, if COG's applications are granted, Cimarex would be precluded from fully developing Section 6.

COG will likely argue that the Division need not rule on this motion until after the contested hearing based on COG's likely position that the Division needs to weigh other factors before deciding whether to grant or deny COG's applications.[7] However, the Division need not weigh those other factors because it is clear that COG's applications, if granted, run afoul of the Commission's directive that the Division should determine which proposal presents the best opportunity *for each party to develop its own acreage*. COG's Macho Nacho applications improperly impair Cimarex's opportunity to develop acreage over which it has control pursuant to the JOA, which Cimarex is committed to doing. This is not a circumstance where an operator has no plans to develop its acreage—Cimarex has already drilled five wells on this acreage and intends to drill more. If Cimarex had no plans to develop its acreage, the Division may need to evaluate the other factors, but under the circumstances presented here, the other factors are irrelevant[8] and the Division need not expend its resources on a contested hearing.

[7] *See* Order R-22205, ¶¶ 13-14, identifying factors Division reviews in assessing competing development plans, and then finding "[n]o other factor is decisive." *Id.* ¶ 25; *see also id.* ¶ 23 (noting that the Commission's decision in R-21416-A did not "rely on the relative strength of the well proposals (location, density, length, etc.).").

[8] If the Division denies Cimarex's motion, Cimarex will present evidence at the hearing demonstrating that the Division's factors weigh in Cimarex's favor and against COG.

B. Additional Reasons Support Dismissal

COG's attempt to divest Cimarex of its development rights in contravention of its contractual obligations through force pooling is reason enough to deny COG's Macho Nacho applications. But, there are additional reasons that support dismissal.

COG's Macho Nacho Bone Spring application in Case No. 24320 does not seek approval of an overlapping spacing unit, which is required under these circumstances. It is undisputed that Cimarex operates five Bone Spring wells in Section 6. Because COG is seeking to drill wells within Cimarex's existing spacing units, COG's proposed Macho Nacho Bone Spring spacing unit will overlap with Cimarex's existing spacing units. The Division's rules allow overlapping spacing units, but the rules require that an operator that seeks to drill a well within an existing well's spacing unit notify the existing well's operator and if the existing well's operator objects, the issue of whether to approve the overlapping spacing unit must be decided at hearing. *See* Rule 19.15.15.12(B) and Rule 19.15.16.15.B(9)(b). When COG sent Cimarex its proposals for the Macho Nacho wells, Cimarex objected. As a result, COG should have, but did not, include in its application for Case No. 24320 a request that OCD approve COG's proposed overlapping spacing unit. Because COG's Macho Nacho Bone Spring application (Case 24320) does not seek approval of an overlapping spacing unit, that application must be dismissed and refiled.

COG will likely argue "no harm no foul" because Cimarex knows of COG's intent to overlap Cimarex's existing spacing units. However, that argument is misplaced because COG, knowing that Cimarex objects to COG's development plans, must seek an approval of the overlapping spacing unit from the Division, which is outside the scope of what COG requested in its application. COG's application in Case No. 24320 is incomplete, and under the Division's

Material Deficiency policy, issued in June 2020,[9] COG's application should be denied and dismissed.

As discussed at the May 16 status conference, COG's Macho Nacho applications were prematurely filed in violation of Order R-13155, which requires an applicant to send proposal letters at least thirty days prior to filing a compulsory pooling application, in the absence of extenuating circumstances. COG mailed its Macho Nacho proposal letters to Cimarex's correct address on February 12, 2024. COG filed its Macho Nacho applications on March 4, 2024, and requested an April 4, 2024 hearing date. COG's proposal letters were not "ripe" until March 13, 2024, and, as a result, COG should have, but did not, file its applications after March 13, 2024, which would have placed them on the May 2 docket. COG followed the timelines in Order R-13155 for its neighboring Eata Fajita wells. COG has not identified any reason why it failed to comply with Order R-13155's 30-day requirement for the Macho Nacho applications, yet complied with that requirement for the Eata Fajita wells it proposed to Cimarex at the same time. While a continuance was the remedy under Order R-13155, COG's actions, in the aggregate, warrant dismissal.

III. CONCLUSION

COG's Macho Nacho applications are an improper attempt to utilize the Division's pooling authority to circumvent COG's contractual obligations under the JOA, depriving Cimarex of its operating rights and impairing Cimarex's correlative rights. COG's applications must be

[9] In a different case, COG's counsel advanced the Division's Material Deficiency guidance as a reason to dismiss a competing application when that application requested approval of an overlapping spacing unit but did not identify the unit. *See* Spur Energy Partners LLC's Motion to Dismiss at p. 5 (Case No. 24093), available at https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20231218/24093_12_18_2023_09_40_26.pdf, and Reply in Support of Spur Energy Partners LLC's Motion to Dismiss, at p. 5-6, and Exhibit A, available at https://ocdimage.emnrd.nm.gov/Imaging/FileStore/santafe/cf/20240103/24093_01_03_2024_03_04_42.pdf. Here, COG's application in Case No. 23420 does not even request approval of an overlapping spacing unit. The Division denied Spur's motion to dismiss, and under different circumstances, the same outcome might be warranted here. However, the deficiencies in COG's applications and COG's actions, when viewed as a whole, warrant dismissal.

dismissed in order to allow each party the best opportunity to develop its own acreage. Given the Commission's directive to the Division to make this determination, there is no need to expend the Division's resources on a contested hearing.

Respectfully submitted,

MODRALL, SPERLING, ROEHL, HARRIS
& SISK, P.A.

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served on counsel of record by electronic mail on May 24, 2024:

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STATE OF NEW MEXICO
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APPLICATIONS OF COG OPERATING LLC FOR COMPULSORY POOLING AND APPROVAL OF NON-STANDARD SPACING UNIT, LEA COUNTY, NEW MEXICO.

CASE NOS. 24320-24321

SELF-AFFIRMED DECLARATION OF CAYLA GORSKI
IN SUPPORT OF CIMAREX ENERGY CO.'S MOTION TO DISMISS

Cayla Gorski states and declares as follows:

1. I am over the age of twenty-one (21) years of age and I am fully competent to make this Affidavit.

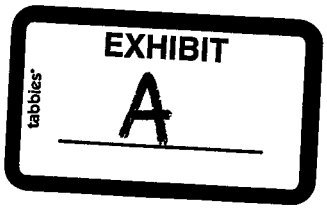
2. I am employed as a landman with Coterra Energy Inc. ("Coterra") and Cimarex Energy Co. ("Cimarex") is a subsidiary of Coterra.

3. This Affidavit is based upon my personal knowledge and my review of records available to me as they are kept in the ordinary course of business.

4. Parker & Parsley Development L.P. was the Operator under the October 1, 1996, Joint Operating Agreement (the "JOA"), covering all of Section 6, Township 24 South, Range 33 East (and additional lands that are no longer covered). *See* October 1, 1996 JOA excerpts attached as Attachment 1.

5. Through various transfers, Cimarex is now the designated Operator under the JOA.

6. Cimarex acquired its 50% interest in the Section 6 lands and became the designated operator under the JOA in 2011.



7. Cimarex acquired its 50% interest in the Section 6 lands, which included operatorship under the JOA for the purpose of fully developing Section 6 as part of its Tres Equis development.

8. Through various transfers, COG Operating LLC and ConocoPhillips Company (collectively "COG") are now the successors in interest to the designated Non-Operator under the JOA. COG acquired its 50% interest in the Section 6 lands in February 2023. *See* Excerpts of Assignment from Tap Rock to COG, Schedule B-3 and B-4 (identifying JOA as a contract being assigned to COG and identifying Cimarex as the Section 6 wells "Operator"), attached as Attachment 2.

9. As designated Operator under the JOA, Cimarex is entitled to and has proposed and drilled wells pursuant to the JOA.

10. Cimarex has proposed and drilled the following wells:

Well Name:	API:	Original Operator:	Legal Description:	Current Status:	Agrmt. Proposed Under:
TRES EQUIS STATE 2	30-025-40183	[215099] CIMAREX ENERGY CO.	Section 6, T24S/R33E	Active	Proposed pursuant to 1996 OA
TRES EQUIS STATE 3H	30-025-40320	[215099] CIMAREX ENERGY CO.	Section 6, T24S/R33E	Active	Proposed pursuant to 1996 OA
TRES EQUIS STATE 4H	30-025-40341	[215099] CIMAREX ENERGY CO.	Section 6, T24S/R33E	Active	Proposed pursuant to 1996 OA
TRES EQUIS STATE 5	30-025-40449	[215099] CIMAREX ENERGY CO.	Section 6, T24S/R33E	Active	Proposed pursuant to 1996 OA
TRES EQUIS STATE 6H	30-025-43506	[215099] CIMAREX ENERGY CO.	Section 6, T24S/R33E	Active	Proposed pursuant to 1996 OA

11. Cimarex has definite plans to drill additional wells in Section 6, under the JOA.

12. Cimarex has informed COG of Cimarex's plan to drill additional wells in Section 6. As Operator under the JOA, Cimarex does not need to force pool COG or any other working interest owners.

13. After COG sent Cimarex COG's Macho Nacho proposals, I sent an email to COG's landman objecting to the proposals and discussing Cimarex's plan to develop Section 6.

14. I consider that email an objection to the COG's attempt to create an overlapping spacing unit.

15. When COG's counsel sent Cimarex notice letters regarding the Macho Nacho pooling cases, COG's counsel included a second letter regarding the overlapping spacing units. As discussed above, I had informed COG of Cimarex's opposition to COG's development plan, which necessarily includes COG's plan to propose spacing units that overlap Cimarex's existing spacing units.

16. I attest that the foregoing is true and correct.

[Signature page follows]

I attest under penalty of perjury under the laws of the State of New Mexico that the information provided herein is correct and complete to the best of my knowledge and belief.

Dated: May 24, 2024

Cayla Gorski

A.A.P.L. FORM 610-1982

MODEL FORM OPERATING AGREEMENT

OPERATING AGREEMENT

DATED

October 1, 19 96,

OPERATOR (Gruy Management PARKER & PARSLEY DEVELOPMENT L.P.)

CONTRACT AREA All of Sections 6 and 7, T-24-S, R-33-E and all of Section 31, T-23-S, R-33-E

COUNTY OR PARISH OF Lea STATE OF New Mexico

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A.A.P.L. FORM 610 - MODEL FORM OPERATING AGREEMENT - 1982

OPERATING AGREEMENT

THIS AGREEMENT, entered into by and between Parker & Parsley Development L.P. hereinafter referred to as "Operator", and the signatory party or parties other than Operator, sometimes hereinafter referred to individually herein as "Non-Operator", and collectively as "Non-Operators".

WITNESSETH:

WHEREAS, the parties to this agreement are owners of oil and gas leases and/or oil and gas interests in the land identified in Exhibit "A", and the parties hereto have reached an agreement to explore and develop these leases and/or oil and gas interests for the production of oil and gas to the extent and as hereinafter provided.

NOW, THEREFORE, it is agreed as follows:

ARTICLE I.
DEFINITIONS

As used in this agreement, the following words and terms shall have the meanings here ascribed to them:

A. The term "oil and gas" shall mean oil, gas, casinghead gas, gas condensate, and all other liquid or gaseous hydrocarbons and other marketable substances produced therewith, unless an intent to limit the inclusiveness of this term is specifically stated.

B. The terms "oil and gas lease", "lease" and "leasehold" shall mean the oil and gas leases covering tracts of land lying within the Contract Area which are owned by the parties to this agreement.

C. The term "oil and gas interests" shall mean unleased fee and mineral interests in tracts of land lying within the Contract Area which are owned by parties to this agreement.

D. The term "Contract Area" shall mean all of the lands, oil and gas leasehold interests and oil and gas interests intended to be developed and operated for oil and gas purposes under this agreement. Such lands, oil and gas leasehold interests and oil and gas interests are described in Exhibit "A".

E. The term "drilling unit" shall mean the area fixed for the drilling of one well by order or rule of any state or federal body having authority. If a drilling unit is not fixed by any such rule or order, a drilling unit shall be the drilling unit as established by the pattern of drilling in the Contract Area or as fixed by express agreement of the Drilling Parties.

F. The term "drillsite" shall mean the oil and gas lease or interest on which a proposed well is to be located.

G. The terms "Drilling Party" and "Consenting Party" shall mean a party who agrees to join in and pay its share of the cost of any operation conducted under the provisions of this agreement.

H. The terms "Non-Drilling Party" and "Non-Consenting Party" shall mean a party who elects not to participate in a proposed operation.

Unless the context otherwise clearly indicates, words used in the singular include the plural, the plural includes the singular, and the neuter gender includes the masculine and the feminine.

ARTICLE II.
EXHIBITS

The following exhibits, as indicated below and attached hereto, are incorporated in and made a part hereof:

☒ A. Exhibit "A", shall include the following information:
(1) Identification of lands subject to this agreement,
(2) Restrictions, if any, as to depths, formations, or substances,
(3) Percentages or fractional interests of parties to this agreement,
(4) Oil and gas leases and/or oil and gas interests subject to this agreement,
(5) Addresses of parties for notice purposes.

~~☒ B. Exhibit "B", Form of Lease.~~

☒ C. Exhibit "C", Accounting Procedure.

☒ D. Exhibit "D", Insurance.

☒ E. Exhibit "E", Gas Balancing Agreement.

☒ F. Exhibit "F", Non-Discrimination and Certification of Non-Segregated Facilities.

~~☐ G. Exhibit "G", Tax Partnership.~~

If any provision of any exhibit, except Exhibits "E" ~~and "G"~~, is inconsistent with any provision contained in the body of this agreement, the provisions in the body of this agreement shall prevail.

ARTICLE III.
INTERESTS OF PARTIES

A. Oil and Gas Interests:

If any party owns an oil and gas interest in the Contract Area, that interest shall be treated for all purposes of this agreement and during the term hereof as if it were covered by the form of oil and gas lease attached hereto as Exhibit "B", and the owner thereof shall be deemed to own both the royalty interest reserved in such lease and the interest of the lessee thereunder.

B. Interests of Parties in Costs and Production:

Unless changed by other provisions, all costs and liabilities incurred in operations under this agreement shall be borne and paid, and all equipment and materials acquired in operations on the Contract Area shall be owned, by the parties as their interests are set forth in Exhibit "A". In the same manner, the parties shall also own all production of oil and gas from the Contract Area subject to the payment of royalties to the extent of __________ * __________ which shall be borne as hereinafter set forth.

Regardless of which party has contributed the lease(s) and/or oil and gas interest(s) hereto on which royalty is due and payable, each party entitled to receive a share of production of oil and gas from the Contract Area shall bear and shall pay or deliver, or cause to be paid or delivered, to the extent of its interest in such production, the royalty amount stipulated hereinabove and shall hold the other parties free from any liability therefor. No party shall ever be responsible, however, on a price basis higher than the price received by such party, to any other party's lessor or royalty owner, and if any such other party's lessor or royalty owner should demand and receive settlement on a higher price basis, the party contributing the affected lease shall bear the additional royalty burden attributable to such higher price.

Nothing contained in this Article III.B. shall be deemed an assignment or cross-assignment of interests covered hereby.

C. Excess Royalties, Overriding Royalties and Other Payments:

Unless changed by other provisions, if the interest of any party in any lease covered hereby is subject to any royalty, overriding royalty, production payment or other burden on production in excess of the amounts stipulated in Article III.B., such party so burdened shall assume and alone bear all such excess obligations and shall indemnify and hold the other parties hereto harmless from any and all claims and demands for payment asserted by owners of such excess burden.

D. Subsequently Created Interests:

If any party should hereafter create an overriding royalty, production payment or other burden payable out of production attributable to its working interest hereunder, or if such a burden existed prior to this agreement and is not set forth in Exhibit "A", or was not disclosed in writing to all other parties prior to the execution of this agreement by all parties, or is not a jointly acknowledged and accepted obligation of all parties (any such interest being hereinafter referred to as "subsequently created interest" irrespective of the timing of its creation and the party out of whose working interest the subsequently created interest is derived being hereinafter referred to as "burdened party"), and:

1. If the burdened party is required under this agreement to assign or relinquish to any other party, or parties, all or a portion of its working interest and/or the production attributable thereto, said other party, or parties, shall receive said assignment and/or production free and clear of said subsequently created interest and the burdened party shall indemnify and save said other party, or parties, harmless from any and all claims and demands for payment asserted by owners of the subsequently created interest; and,

2. If the burdened party fails to pay, when due, its share of expenses chargeable hereunder, all provisions of Article VII.B. shall be enforceable against the subsequently created interest in the same manner as they are enforceable against the working interest of the burdened party.

ARTICLE IV.
TITLES

A. Title Examination:

Title examination shall be made on the drillsite of any proposed well prior to commencement of drilling operations or, if the Drilling Parties so request, title examination shall be made on the leases and/or oil and gas interests included, or planned to be included, in the drilling unit around such well. The opinion will include the ownership of the working interest, minerals, royalty, overriding royalty and production payments under the applicable leases. At the time a well is proposed, each party contributing leases and/or oil and gas interests to the drillsite, or to be included in such drilling unit, shall furnish to Operator all abstracts (including federal lease status reports), title opinions, title papers and curative material in its possession free of charge. All such information not in the possession of or made available to Operator by the parties, but necessary for the examination of the title, shall be obtained by Operator. Operator shall cause title to be examined by attorneys on its staff or by outside attorneys. Copies of all title opinions shall be furnished to each party hereto. The cost incurred by Operator in this title program shall be borne as follows:

~~☐ Option No. 1: Costs incurred by Operator in procuring abstracts and title examination (including preliminary, supplemental, shut-in gas royalty opinions and division order title opinions) shall be a part of the administrative overhead as provided in Exhibit "C", and shall not be a direct charge, whether performed by Operator's staff attorneys or by outside attorneys.~~

* burdens of record as of the date of this Agreement (for leases and oil and gas interests subject to this Agreement on the date hereof) and burdens of record and burdens necessary to the acquisition of any lease or oil and gas interest subject to this Agreement (for leases and oil and gas interests that become subject to this Agreement after the date hereof), all of

ARTICLE IV
continued

☒ Option No. 2: Costs incurred by Operator in procuring abstracts and fees paid outside attorneys for title examination (including preliminary, supplemental, shut-in gas royalty opinions and division order title opinions) shall be borne by the Drilling Parties in the proportion that the interest of each Drilling Party bears to the total interest of all Drilling Parties as such interests appear in Exhibit "A". Operator shall make no charge for services rendered by its staff attorneys or other personnel in the performance of the above functions.

Each party shall be responsible for securing curative matter and pooling amendments or agreements required in connection with leases or oil and gas interests contributed by such party. Operator shall be responsible for the preparation and recording of pooling designations or declarations as well as the conduct of hearings before governmental agencies for the securing of spacing or pooling orders. This shall not prevent any party from appearing on its own behalf at any such hearing.

No well shall be drilled on the Contract Area until after (1) the title to the drillsite or drilling unit has been examined as above provided, and (2) the title has been approved by the examining attorney or title has been accepted by all of the parties who are to participate in the drilling of the well.

B. Loss of Title:

1. ~~Failure of Title: Should any oil and gas interest or lease, or interest therein, be lost through failure of title, which loss results in a~~ reduction of interest from that shown on Exhibit "A", the party contributing the affected lease or interest shall have ninety (90) days from final determination of title failure to acquire a new lease or other instrument curing the entirety of the title failure, which acquisition will not be subject to Article VIII.B., and failing to do so, this agreement, nevertheless, shall continue in force as to all remaining oil and gas leases and interests; and,

(a) The party whose oil and gas lease or interest is affected by the title failure shall bear alone the entire loss and it shall not be entitled to recover from Operator or the other parties any development or operating costs which it may have theretofore paid or incurred, but there shall be no additional liability on its part to the other parties hereto by reason of such title failure;

(b) There shall be no retroactive adjustment of expenses incurred or revenues received from the operation of the interest which has been lost, but the interests of the parties shall be revised on an acreage basis, as of the time it is determined finally that title failure has occurred, so that the interest of the party whose lease or interest is affected by the title failure will thereafter be reduced in the Contract Area by the amount of the interest lost;

(c) If the proportionate interest of the other parties hereto in any producing well theretofore drilled on the Contract Area is increased by reason of the title failure, the party whose title has failed shall receive the proceeds attributable to the increase in such interest (less costs and burdens attributable thereto) until it has been reimbursed for unrecovered costs paid by it in connection with such well;

(d) Should any person not a party to this agreement, who is determined to be the owner of any interest in the title which has failed, pay in any manner any part of the cost of operation, development, or equipment, such amount shall be paid to the party or parties who bore the costs which are so refunded;

(e) Any liability to account to a third party for prior production of oil and gas which arises by reason of title failure shall be borne by the party or parties whose title failed in the same proportions in which they shared in such prior production; and,

(f) No charge shall be made to the joint account for legal expenses, fees or salaries, in connection with the defense of the interest claimed by any party hereto, it being the intention of the parties hereto that each shall defend title to its interest and bear all expenses in connection therewith.

2. Loss by Non-Payment or Erroneous Payment of Amount Due: If, through mistake or oversight, any rental, shut-in well payment, minimum royalty or royalty payment, is not paid or is erroneously paid, and as a result a lease or interest therein terminates, there shall be no monetary liability against the party who failed to make such payment. Unless the party who failed to make the required payment secures a new lease covering the same interest within ninety (90) days from the discovery of the failure to make proper payment, which acquisition will not be subject to Article VIII.B., the interests of the parties shall be revised on an acreage basis, effective as of the date of termination of the lease involved, and the party who failed to make proper payment will no longer be credited with an interest in the Contract Area on account of ownership of the lease or interest which has terminated. In the event the party who failed to make the required payment shall not have been fully reimbursed, at the time of the loss, from the proceeds of the sale of oil and gas attributable to the lost interest, calculated on an acreage basis, for the development and operating costs theretofore paid on account of such interest, it shall be reimbursed for unrecovered actual costs theretofore paid by it (but not for its share of the cost of any dry hole previously drilled or wells previously abandoned) from so much of the following as is necessary to effect reimbursement:

(a) Proceeds of oil and gas, less operating expenses, theretofore accrued to the credit of the lost interest, on an acreage basis, up to the amount of unrecovered costs;

(b) Proceeds, less operating expenses, thereafter accrued attributable to the lost interest on an acreage basis, of that portion of oil and gas thereafter produced and marketed (excluding production from any wells thereafter drilled) which, in the absence of such lease termination, would be attributable to the lost interest on an acreage basis, up to the amount of unrecovered costs, the proceeds of said portion of the oil and gas to be contributed by the other parties in proportion to their respective interests; and,

(c) Any monies, up to the amount of unrecovered costs, that may be paid by any party who is, or becomes, the owner of the interest lost, for the privilege of participating in the Contract Area or becoming a party to this agreement.

3. Other Losses: All losses incurred, ~~other than those set forth in Articles VI.B.1. and VI.B.2. above~~, shall be joint losses and shall be borne by all parties in proportion to their interests. There shall be no readjustment of interests in the remaining portion of the Contract Area.

ARTICLE V.
OPERATOR

A. Designation and Responsibilities of Operator:

Parker & Parsley Development L.P. shall be the Operator of the Contract Area, and shall conduct and direct and have full control of all operations on the Contract Area as permitted and required by, and within the limits of, this agreement. It shall conduct all such operations in a good and workmanlike manner, but it shall have no liability as Operator to the other parties for losses sustained or liabilities incurred, except such as may result from gross negligence or willful misconduct.

B. Resignation or Removal of Operator and Selection of Successor:

1. Resignation or Removal of Operator: Operator may resign at any time by giving written notice thereof to Non-Operators. If Operator terminates its legal existence, no longer owns an interest hereunder in the Contract Area, or is no longer capable of serving as Operator, Operator shall be deemed to have resigned without any action by Non-Operators, except the selection of a successor. Operator may be removed if it fails or refuses to carry out its duties hereunder, or becomes insolvent, bankrupt or is placed in receivership, by the affirmative vote of two (2) or more Non-Operators owning a majority interest based on ownership as shown on Exhibit "A" remaining after excluding the voting interest of Operator. Such resignation or removal shall not become effective until 7:00 o'clock A.M. on the first day of the calendar month following the expiration of ninety (90) days after the giving of notice of resignation by Operator or action by the Non-Operators to remove Operator, unless a successor Operator has been selected and assumes the duties of Operator at an earlier date. Operator, after effective date of resignation or removal, shall be bound by the terms hereof as a Non-Operator. A change of a corporate name or structure of Operator or transfer of Operator's interest to any single subsidiary, parent or successor corporation shall not be the basis for removal of Operator.

2. Selection of Successor Operator: Upon the resignation or removal of Operator, a successor Operator shall be selected by the parties. The successor Operator shall be selected from the parties owning an interest in the Contract Area at the time such successor Operator is selected. The successor Operator shall be selected by the affirmative vote of two (2) or more parties owning a majority interest based on ownership as shown on Exhibit "A"; provided, however, if an Operator which has been removed fails to vote or votes only to succeed itself, the successor Operator shall be selected by the affirmative vote of two (2) or more parties owning a majority interest based on ownership as shown on Exhibit "A" remaining after excluding the voting interest of the Operator that was removed.

C. Employees:

The number of employees used by Operator in conducting operations hereunder, their selection, and the hours of labor and the compensation for services performed shall be determined by Operator, and all such employees shall be the employees of Operator.

D. Drilling Contracts:

All wells drilled on the Contract Area shall be drilled on a competitive contract basis at the usual rates prevailing in the area. If it so desires, Operator may employ its own tools and equipment in the drilling of wells, but its charges therefor shall not exceed the prevailing rates in the area and the rate of such charges shall be agreed upon by the parties in writing before drilling operations are commenced, and such work shall be performed by Operator under the same terms and conditions as are customary and usual in the area in contracts of independent contractors who are doing work of a similar nature.

ARTICLE VI.
DRILLING AND DEVELOPMENT

A. Initial Well:

On or before the 31st day of December, 19 96, Operator shall commence the drilling of a well for oil and gas at the following location:

1980' FEL & 1980' FSL of Section 6, T-24-S, R-33-E, Lea County, New Mexico.

and shall thereafter continue the drilling of the well with due diligence to test the 3rd Bone Spring formation at approximately 12,500'

unless granite or other practically impenetrable substance or condition in the hole, which renders further drilling impractical, is encountered at a lesser depth, or unless all parties agree to complete or abandon the well at a lesser depth.

Operator shall make reasonable tests of all formations encountered during drilling which give indication of containing oil and gas in quantities sufficient to test, unless this agreement shall be limited in its application to a specific formation or formations, in which event Operator shall be required to test only the formation or formations to which this agreement may apply.

ARTICLE VI
continued

~~If, in Operator's judgment, the well will not produce oil or gas in paying quantities, and it wishes to plug and abandon the well as a dry hole, the provisions of Article VI.C.1. shall thereafter apply.~~

B. Subsequent Operations:

1. Proposed Operations: Should any party hereto desire to drill any well on the Contract Area other than the well provided for in Article VI.A., or to rework, deepen or plug back a dry hole drilled at the joint expense of all parties or a well jointly owned by all the parties and not then producing in paying quantities, the party desiring to drill, rework, deepen or plug back such a well shall give the other parties written notice of the proposed operation, specifying the work to be performed, the location, proposed depth, objective formation and the estimated cost of the operation. The parties receiving such a notice shall have thirty (30) days after receipt of the notice within which to notify the party wishing to do the work whether they elect to participate in the cost of the proposed operation. If a drilling rig is on location, notice of a proposal to rework, plug back or drill deeper may be given by telephone and the response period shall be limited to forty-eight (48) hours, exclusive of Saturday, Sunday and legal holidays. Failure of a party receiving such notice to reply within the period above fixed shall constitute an election by that party not to participate in the cost of the proposed operation. Any notice or response given by telephone shall be promptly confirmed in writing.

If all parties elect to participate in such a proposed operation, Operator shall, within ninety (90) days after expiration of the notice period of thirty (30) days (or as promptly as possible after the expiration of the forty-eight (48) hour period when a drilling rig is on location, as the case may be), actually commence the proposed operation and complete it with due diligence at the risk and expense of all parties hereto; provided, however, said commencement date may be extended upon written notice of same by Operator to the other parties, for a period of up to thirty (30) additional days if, in the sole opinion of Operator, such additional time is reasonably necessary to obtain permits from governmental authorities, surface rights (including rights-of-way) or appropriate drilling equipment, or to complete title examination or curative matter required for title approval or acceptance. Notwithstanding the force majeure provisions of Article XI, if the actual operation has not been commenced within the time provided (including any extension thereof as specifically permitted herein) and if any party hereto still desires to conduct said operation, written notice proposing same must be resubmitted to the other parties in accordance with the provisions hereof as if no prior proposal had been made.

2. Operations by Less than All Parties: If any party receiving such notice as provided in Article VI.B.1. or VII.D.1. (Option No. 2) elects not to participate in the proposed operation, then, in order to be entitled to the benefits of this Article, the party or parties giving the notice and such other parties as shall elect to participate in the operation shall, within ninety (90) days after the expiration of the notice period of thirty (30) days (or as promptly as possible after the expiration of the forty-eight (48) hour period when a drilling rig is on location, as the case may be) actually commence the proposed operation and complete it with due diligence. Operator shall perform all work for the account of the Consenting Parties; provided, however, if no drilling rig or other equipment is on location, and if Operator is a Non-Consenting Party, the Consenting Parties shall either: (a) request Operator to perform the work required by such proposed operation for the account of the Consenting Parties, or (b) designate one (1) of the Consenting Parties as Operator to perform such work. Consenting Parties, when conducting operations on the Contract Area pursuant to this Article VI.B.2., shall comply with all terms and conditions of this agreement.

If less than all parties approve any proposed operation, the proposing party, immediately after the expiration of the applicable notice period, shall advise the Consenting Parties of the total interest of the parties approving such operation and its recommendation as to whether the Consenting Parties should proceed with the operation as proposed. Each Consenting Party, within forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays) after receipt of such notice, shall advise the proposing party of its desire to (a) limit participation to such party's interest as shown on Exhibit "A" or (b) carry its proportionate part of Non-Consenting Parties' interests, and failure to advise the proposing party shall be deemed an election under (a). In the event a drilling rig is on location, the time permitted for such a response shall not exceed a total of forty-eight (48) hours (inclusive of Saturday, Sunday and legal holidays). The proposing party, at its election, may withdraw such proposal if there is insufficient participation and shall promptly notify all parties of such decision.

The entire cost and risk of conducting such operations shall be borne by the Consenting Parties in the proportions they have elected to bear same under the terms of the preceding paragraph. Consenting Parties shall keep the leasehold estates involved in such operations free and clear of all liens and encumbrances of every kind created by or arising from the operations of the Consenting Parties. If such an operation results in a dry hole, the Consenting Parties shall plug and abandon the well and restore the surface location at their sole cost, risk and expense. If any well drilled, reworked, deepened or plugged back under the provisions of this Article results in a producer of oil and/or gas in paying quantities, the Consenting Parties shall complete and equip the well to produce at their sole cost and risk,

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ARTICLE VI
continued

and the well shall then be turned over to Operator and shall be operated by it at the expense and for the account of the Consenting Parties. Upon commencement of operations for the drilling, reworking, deepening or plugging back of any such well by Consenting Parties in accordance with the provisions of this Article, each Non-Consenting Party shall be deemed to have relinquished to Consenting Parties, and the Consenting Parties shall own and be entitled to receive, in proportion to their respective interests, all of such Non-Consenting Party's interest in the well and share of production therefrom until the proceeds of the sale of such share, calculated at the well, or market value thereof if such share is not sold, (after deducting production taxes, excise taxes, royalty, overriding royalty and other interests not excepted by Article III.D. payable out of or measured by the production from such well accruing with respect to such interest until it reverts) shall equal the total of the following:

(a) 200% of each such Non-Consenting Party's share of the cost of any newly acquired surface equipment beyond the wellhead connections (including, but not limited to, stock tanks, separators, treaters, pumping equipment and piping), plus 200%* of each such Non-Consenting Party's share of the cost of operation of the well commencing with first production and continuing until each such Non-Consenting Party's relinquished interest shall revert to it under other provisions of this Article, it being agreed that each Non-Consenting Party's share of such costs and equipment will be that interest which would have been chargeable to such Non-Consenting Party had it participated in the well from the beginning of the operations; and

(b) 400 % of that portion of the costs and expenses of drilling, reworking, deepening, plugging back, testing and completing, after deducting any cash contributions received under Article VIII.C., and 400 % of that portion of the cost of newly acquired equipment in the well (to and including the wellhead connections), which would have been chargeable to such Non-Consenting Party if it had participated therein.

*200%

An election not to participate in the drilling or the deepening of a well shall be deemed an election not to participate in any reworking or plugging back operation proposed in such a well, or portion thereof, to which the initial Non-Consent election applied that is conducted at any time prior to full recovery by the Consenting Parties of the Non-Consenting Party's recoupment account. Any such reworking or plugging back operation conducted during the recoupment period shall be deemed part of the cost of operation of said well and there shall be added to the sums to be recouped by the Consenting Parties one hundred percent (100%) of that portion of the costs of the reworking or plugging back operation which would have been chargeable to such Non-Consenting Party had it participated therein. If such a reworking or plugging back operation is proposed during such recoupment period, the provisions of this Article VI.B. shall be applicable as between said Consenting Parties in said well.

During the period of time Consenting Parties are entitled to receive Non-Consenting Party's share of production, or the proceeds therefrom, Consenting Parties shall be responsible for the payment of all production, severance, excise, gathering and other taxes, and all royalty, overriding royalty and other burdens applicable to Non-Consenting Party's share of production not excepted by Article III.D.

In the case of any reworking, plugging back or deeper drilling operation, the Consenting Parties shall be permitted to use, free of cost, all casing, tubing and other equipment in the well, but the ownership of all such equipment shall remain unchanged; and upon abandonment of a well after such reworking, plugging back or deeper drilling, the Consenting Parties shall account for all such equipment to the owners thereof, with each party receiving its proportionate part in kind or in value, less cost of salvage.

Within sixty (60) days after the completion of any operation under this Article, the party conducting the operations for the Consenting Parties shall furnish each Non-Consenting Party with an inventory of the equipment in and connected to the well, and an itemized statement of the cost of drilling, deepening, plugging back, testing, completing, and equipping the well for production; or, at its option, the operating party, in lieu of an itemized statement of such costs of operation, may submit a detailed statement of monthly billings. Each month thereafter, during the time the Consenting Parties are being reimbursed as provided above, the party conducting the operations for the Consenting Parties shall furnish the Non-Consenting Parties with an itemized statement of all costs and liabilities incurred in the operation of the well, together with a statement of the quantity of oil and gas produced from it and the amount of proceeds realized from the sale of the well's working interest production during the preceding month. In determining the quantity of oil and gas produced during any month, Consenting Parties shall use industry accepted methods such as, but not limited to, metering or periodic well tests. Any amount realized from the sale or other disposition of equipment newly acquired in connection with any such operation which would have been owned by a Non-Consenting Party had it participated therein shall be credited against the total unreturned costs of the work done and of the equipment purchased in determining when the interest of such Non-Consenting Party shall revert to it as above provided; and if there is a credit balance, it shall be paid to such Non-Consenting Party.

ARTICLE VI
continued

If and when the Consenting Parties recover from a Non-Consenting Party's relinquished interest the amounts provided for above, the relinquished interests of such Non-Consenting Party shall automatically revert to it, and, from and after such reversion, such Non-Consenting Party shall own the same interest in such well, the material and equipment in or pertaining thereto, and the production therefrom as such Non-Consenting Party would have been entitled to had it participated in the drilling, reworking, deepening or plugging back of said well. Thereafter, such Non-Consenting Party shall be charged with and shall pay its proportionate part of the further costs of the operation of said well in accordance with the terms of this agreement and the Accounting Procedure attached hereto.

Notwithstanding the provisions of this Article VI.B.2., it is agreed that without the mutual consent of all parties, no wells shall be completed in or produced from a source of supply from which a well located elsewhere on the Contract Area is producing, unless such well conforms to the then-existing well spacing pattern for such source of supply.

The provisions of this Article shall have no application whatsoever to the drilling of the initial well described in Article VI.A. except (a) as to Article VII.D.1. (Option No. 2), if selected, or (b) as to the reworking, deepening and plugging back of such initial well after it has been drilled to the depth specified in Article VI.A. if it shall thereafter prove to be a dry hole or, if initially completed for production, ceases to produce in paying quantities.

3. Stand-By Time: When a well which has been drilled or deepened has reached its authorized depth and all tests have been completed, and the results thereof furnished to the parties, stand-by costs incurred pending response to a party's notice proposing a reworking, deepening, plugging back or completing operation in such a well shall be charged and borne as part of the drilling or deepening operation just completed. Stand-by costs subsequent to all parties responding, or expiration of the response time permitted, whichever first occurs, and prior to agreement as to the participating interests of all Consenting Parties pursuant to the terms of the second grammatical paragraph of Article VI.B.2, shall be charged to and borne as part of the proposed operation, but if the proposal is subsequently withdrawn because of insufficient participation, such stand-by costs shall be allocated between the Consenting Parties in the proportion each Consenting Party's interest as shown on Exhibit "A" bears to the total interest as shown on Exhibit "A" of all Consenting Parties.

4. Sidetracking: Except as hereinafter provided, those provisions of this agreement applicable to a "deepening" operation shall also be applicable to any proposal to directionally control and intentionally deviate a well from vertical so as to change the bottom hole location (herein called "sidetracking"), unless done to straighten the hole or to drill around junk in the hole or because of other mechanical difficulties. Any party having the right to participate in a proposed sidetracking operation that does not own an interest in the affected well bore at the time of the notice shall, upon electing to participate, tender to the well bore owners its proportionate share (equal to its interest in the sidetracking operation) of the value of that portion of the existing well bore to be utilized as follows:

(a) If the proposal is for sidetracking an existing dry hole, reimbursement shall be on the basis of the actual costs incurred in the initial drilling of the well down to the depth at which the sidetracking operation is initiated.

(b) If the proposal is for sidetracking a well which has previously produced, reimbursement shall be on the basis of the well's salvable materials and equipment down to the depth at which the sidetracking operation is initiated, determined in accordance with the provisions of Exhibit "C", less the estimated cost of salvaging and the estimated cost of plugging and abandoning.

In the event that notice for a sidetracking operation is given while the drilling rig to be utilized is on location, the response period shall be limited to forty-eight (48) hours, exclusive of Saturday, Sunday and legal holidays; provided, however, any party may request and receive up to eight (8) additional days after expiration of the forty-eight (48) hours within which to respond by paying for all stand-by time incurred during such extended response period. If more than one party elects to take such additional time to respond to the notice, stand-by costs shall be allocated between the parties taking additional time to respond on a day-to-day basis in the proportion each electing party's interest as shown on Exhibit "A" bears to the total interest as shown on Exhibit "A" of all the electing parties. In all other instances the response period to a proposal for sidetracking shall be limited to thirty (30) days.

C. TAKING PRODUCTION IN KIND:

Each party shall have the right to take in kind or separately dispose of its proportionate share of all oil and gas produced from the Contract Area, exclusive of production which may be used in development and producing operations and in preparing and treating oil and gas for marketing purposes and production unavoidably lost. Any extra expenditure incurred in the taking in kind or separate disposition by any party of its proportionate share of the production shall be borne by such party. Any party taking its share of production in kind shall be

ARTICLE VI
continued

required to pay for only its proportionate share of such part of Operator's surface facilities which it uses.

Each party shall execute such division orders and contracts as may be necessary for the sale of its interest in production from the Contract Area, and, except as provided in Article VII.B., shall be entitled to receive payment directly from the purchaser thereof for its share of all production.

In the event any party shall fail to make the arrangements necessary to take in kind or separately dispose of its proportionate share of the oil produced from the Contract Area, Operator shall have the right, subject to the revocation at will by the party owning it, but not the obligation, to purchase such oil or sell it to others at any time and from time to time, for the account of the non-taking party at the best price obtainable in the area for such production. Any such purchase or sale by Operator shall be subject always to the right of the owner of the production to exercise at any time its right to take in kind, or separately dispose of, its share of all oil not previously delivered to a purchaser. Any purchase or sale by Operator of any other party's share of oil shall be only for such reasonable periods of time as are consistent with the minimum needs of the industry under the particular circumstances, but in no event for a period in excess of one (1) year.

In the event one or more parties' separate disposition of its share of the gas causes split-stream deliveries to separate pipelines and/or deliveries which on a day-to-day basis for any reason are not exactly equal to a party's respective proportionate share of total gas sales to be allocated to it, the balancing or accounting between the respective accounts of the parties shall be in accordance with any gas balancing agreement between the parties hereto, whether such an agreement is attached as Exhibit "E", or is a separate agreement.

D. Access to Contract Area and Information:

Each party shall have access to the Contract Area at all reasonable times, at its sole cost and risk to inspect or observe operations, and shall have access at reasonable times to information pertaining to the development or operation thereof, including Operator's books and records relating thereto. Operator, upon request, shall furnish each of the other parties with copies of all forms or reports filed with governmental agencies, daily drilling reports, well logs, tank tables, daily gauge and run tickets and reports of stock on hand at the first of each month, and shall make available samples of any cores or cuttings taken from any well drilled on the Contract Area. The cost of gathering and furnishing information to Non-Operator, other than that specified above, shall be charged to the Non-Operator that requests the information.

E. Abandonment of Wells:

1. Abandonment of Dry Holes: Except for any well drilled or deepened pursuant to Article VI.B.2., any well which has been drilled or deepened under the terms of this agreement and is proposed to be completed as a dry hole shall not be plugged and abandoned without the consent of all parties. Should Operator, after diligent effort, be unable to contact any party, or should any party fail to reply within forty-eight (48) hours (exclusive of Saturday, Sunday and legal holidays) after receipt of notice of the proposal to plug and abandon such well, such party shall be deemed to have consented to the proposed abandonment. All such wells shall be plugged and abandoned in accordance with applicable regulations and at the cost, risk and expense of the parties who participated in the cost of drilling or deepening such well. Any party who objects to plugging and abandoning such well shall have the right to take over the well and conduct further operations in search of oil and/or gas subject to the provisions of Article VI.B.

2. Abandonment of Wells that have Produced: Except for any well in which a Non-Consent operation has been conducted hereunder for which the Consenting Parties have not been fully reimbursed as herein provided, any well which has been completed as a producer shall not be plugged and abandoned without the consent of all parties. If all parties consent to such abandonment, the well shall be plugged and abandoned in accordance with applicable regulations and at the cost, risk and expense of all the parties hereto. If, within thirty (30) days after receipt of notice of the proposed abandonment of any well, all parties do not agree to the abandonment of such well, those wishing to continue its operation from the interval(s) of the formation(s) then open to production shall tender to each of the other parties its proportionate share of the value of the well's salvable material and equipment, determined in accordance with the provisions of Exhibit "C", less the estimated cost of salvaging and the estimated cost of plugging and abandoning. Each abandoning party shall assign the non-abandoning parties, without warranty, express or implied, as to title or as to quantity, or fitness for use of the equipment and material, all of its interest in the well and related equipment, together with its interest in the leasehold estate as to, but only as to, the interval or intervals of the formation or formations then open to production. If the interest of the abandoning party is or includes an oil and gas interest, such party shall execute and deliver to the non-abandoning party or parties an oil and gas lease, limited to the interval or intervals of the formation or formations then open to production, for a term of one (1) year and so long thereafter as oil and/or gas is produced from the interval or intervals of the formation or formations covered thereby, such lease to be on the form attached as Exhibit

ARTICLE XVI.
MISCELLANEOUS

This agreement shall be binding upon and shall inure to the benefit of the parties hereto and to their respective heirs, devisees, legal representatives, successors and assigns.

This instrument may be executed in any number of counterparts, each of which shall be considered an original for all purposes.

IN WITNESS WHEREOF, this agreement shall be effective as of 1st day of October, 19 96.

OPERATOR

PARKER & PARSLEY DEVELOPMENT L.P.
By: Parker & Parsley Petroleum USA, Inc., General Partner

By: _____
Buddy J. Knight, Vice President

NON-OPERATORS

ENSERCH EXPLORATION, INC.

By: _____
JEFFREY B. CAMP
REGIONAL DIRECTOR

ARTICLE XVI.
MISCELLANEOUS

This agreement shall be binding upon and shall inure to the benefit of the parties hereto and to their respective heirs, devisees, legal representatives, successors and assigns.

This instrument may be executed in any number of counterparts, each of which shall be considered an original for all purposes.

IN WITNESS WHEREOF, this agreement shall be effective as of 1st day of October 19 96.

OPERATOR

PARKER & PARSLEY DEVELOPMENT L.P.
By: Parker & Parsley Petroleum USA, Inc., General Partner

By: _____
Buddy J. Knight, Vice President

NON-OPERATORS

FILE COPY
Approved by

ENSERCH EXPLORATION, INC.

By: _____
JEFFREY B. CAMP
REGIONAL DIRECTOR

EXHIBIT "A"

Attached to and made a part of that certain Operating Agreement dated October 1, 1996, between Parker & Parsley Development L.P. and Enserch Exploration, Inc.

I. **IDENTIFICATION OF LANDS:**

All of Sections 6 and 7, T-24-S, R-33-E and all of Section 31, T-23-S, R-33-E, Lea County, New Mexico

II. **OIL AND GAS LEASE:**

Lease No.:	V-4854
Lessor:	State of New Mexico
Lessee:	Parker & Parsley Development L.P.
Date:	May 1, 1996
Description:	All of Section 6, T-24-S, R-33-E, Lea County, New Mexico

Lease No.:	V-4855
Lessor:	State of New Mexico
Lessee:	Enserch Exploration, Inc.
Date:	
Description:	All of Section 7, T-24-S, R-33-E, Lea County, New Mexico

Lease No.:	V-4907
Lessor:	State of New Mexico
Lessee:	Enserch Exploration, Inc.
Date:	July 1, 1996
Description:	All of Section 31, T-23-S, R-33-E, Lea County, New Mexico

III. **WORKING INTEREST PERCENTAGES:**

Parker & Parsley Development L.P. — 50%
P. O. Box 3178
Midland, Texas 79702
Attn: Steven K. Owen
Telephone: (915) 571-1476
(915) 571-5052

Enserch Exploration, Inc. — 50%
4849 Greenville Ave., Suite 1200
Dallas, Texas 75206
Attn: Jerry R. Anderson
Telephone: (214) 987-6370
(214) 987-6464

LEA COUNTY, NM
KEITH MANES, COUNTY CLERK
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02/17/2023 09:42 AM
BY CARRIE SANDOVAL

ASSIGNMENT AND CONVEYANCE

This Assignment and Conveyance ("**Assignment**") is dated February 16, 2023 ("**Execution Date**"), and is between Tap Rock Resources II LLC, a Delaware limited liability company, Tap Rock Minerals II, LLC, a Delaware limited liability company (collectively, "**Tap Rock**") and COG Operating LLC, a Delaware limited liability company and ConocoPhillips Company, a Delaware corporation (collectively, "**Assignee**"). The mailing address for Assignee is 600 W. Illinois Avenue, Midland, TX 79701.

For valuable consideration, Tap Rock and Assignee agree as follows:

1. **Assignment, Sale, and Conveyance.** Subject to the terms of this Assignment and the Exchange Agreement, Tap Rock hereby assigns, sells, and conveys the Property to Assignee (in the proportions of an undivided 93% to COG Operating LLC and an undivided 7% to ConocoPhillips Company), **TO HAVE AND TO HOLD** the Property unto Assignee, in the proportions described herein, its successors and assigns, forever, Tap Rock warrants and agrees to defend title to the Leases against all Third-Party Claims arising by, through and under Tap Rock, but not otherwise. To the extent transferable, this Assignment is made with full substitution and subrogation of Assignee in and to all covenants, representations, and warranties which Tap Rock has or may have against its predecessors in title (excluding any Affiliate of Tap Rock).

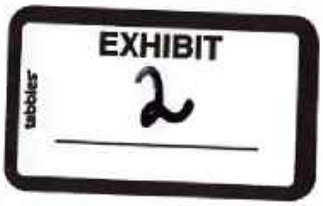
2. **Disclaimers**. Except as set out in Article 1 (Assignment Sale and Conveyance):

   2.1 **DISCLAIMER OF TITLE WARRANTY.** This Assignment is subject to all Permitted Liens and is made without any warranty as to title or covenant against encumbrances (whether express, statutory, or implied, under any Law or in equity). Nothing in the exhibits, schedules, or in the Assignment is a Statement by Tap Rock about Tap Rock's ownership interest in the Property. Tap Rock disclaims any Statement about any Person's failure to maintain any portion of any portion of any Lease included in the Property in effect at any time.

   2.2 **DISCLAIMER OF MERCHANTABILITY.** Tap Rock disclaims any Statement about the condition or merchantability of the Property.

   2.3 **DISCLAIMER OF FITNESS FOR PARTICULAR PURPOSE.** Tap Rock disclaims any Statement about the fitness of the Property for a particular purpose.

   2.4 **ASSIGNEE'S DISCLAIMER OF RELIANCE.** Except for any Representation made by Tap Rock, in accepting this Assignment, Assignee disclaims that it is relying on or has relied on any Statement that may have been made by any Person.



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3. **AS IS, WHERE IS**. Each Party acknowledges that it has been given the opportunity to inspect the Property. Assignee unconditionally and irrevocably accepts the Property **AS IS, WHERE IS**, and **WITH ALL FAULTS**, and in its present condition and state of repair, except as set out in Article 1 (Assignment Sale and Conveyance).

4. **Hazards**. Assignee acknowledges that (i) Tap Rock has informed Assignee that any portion of the Property may have levels of NORM above background levels and may contain asbestos and lead, (ii) health hazards may exist as to Ownership because of those NORM levels and the existence of asbestos and lead, and (iii) each Person in Assignee Group may need to follow safety procedures when handling any portion of the Property.

5. **Assumed and Retained Obligations.** By accepting this Assignment, Assignee (i) assumes responsibility for and shall perform the Assumed Obligations and (ii) acknowledges that it is bound by the Leases, Surface Interests, and Contracts. Tap Rock shall perform all Tap Rock Retained Obligations.

6. **Governing Agreement.** This Assignment is delivered under, and Assignee accepts this Assignment subject to the Exchange Agreement. Except for Article 5 (Dispute Resolution) of the Exchange Agreement, the terms of the Exchange Agreement are incorporated by reference into this Assignment to the extent provided for in the Exchange Agreement. If any provision of this Assignment conflicts with any provision of the Exchange Agreement, the Exchange Agreement will prevail. Nothing in Section 7 (Dispute Resolution), conflicts with the Exchange Agreement nor will be considered to waive either Party's rights under Article 5 (Dispute Resolution) of the Exchange Agreement. Except as set out in the Exchange Agreement, all provisions of the Exchange Agreement will survive the delivery of this Assignment and will not be merged into or superseded by this Assignment.

7. **Dispute Resolution.**

   7.1 **Governing Law.** This Assignment will be construed, interpreted, governed, and enforced exclusively under the Law of the state in which the applicable portion of the Property is located, without giving effect to any conflict-of-law rule or principle that might direct the application of any Law of another jurisdiction.

   7.2 **Arbitration**. Except for any Property Dispute, if one or both Parties believe that any Claim related to this Assignment is not resolvable between the Parties, that Claim will be exclusively resolved under Article 5 (Dispute Resolution) of the Exchange Agreement and the term *Agreement Dispute* (as defined in the Exchange Agreement) will be considered modified accordingly for purposes of that Claim.

   7.3 **WAIVER OF JURY TRIAL. As to any Property Dispute, each Party waives all rights to trial by jury in any Claim related to this Assignment.**

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8. **Miscellaneous.**

8.1 **Definitions and Interpretation.** Capitalized terms not defined in the Appendix have the meanings given to those terms in the Exchange Agreement.

8.2 **Attachments.** The Appendix and the following schedules are attached and made a part of this Assignment for all purposes:

Property Schedule	
Schedule B-1	Leases
Schedule B-2	Surface Interests
Schedule B-3	Contracts
Schedule B-4	Wells
Schedule B-5	Imbalances

8.3 **Interpretation.** Section 9.2 (Interpretation) of the Exchange Agreement applies to the interpretation of this Assignment. Without limiting the preceding sentence, no portion of the Excluded Property is included in the Property or in any individual component of the Property.

8.4 **Fully Integrated Agreement.** Except any other written agreement that the Parties may execute concurrently with or after the execution of this Assignment, this Assignment and the Exchange Agreement constitute the fully integrated agreement between the Parties as to the assignment, sale, and conveyance of the Property to Assignee, and supersede all written or oral, in each case, negotiations, discussions, arrangements, agreements, and understandings between the Parties as to the assignment, conveyance, and sale of the Property to Assignee.

8.5 **Amendment.** The Parties may only amend this Assignment in writing, and that writing must be identified as an amendment to this Assignment and must be executed by each Party's authorized representative.

8.6 **Third-Party Beneficiaries.** Except for any Indemnified Person under Article 4 (Remedies) of the Exchange Agreement, nothing in this Assignment confers on any Person any Remedies under this Assignment or constitutes any Person a Third-Party beneficiary of this Assignment.

8.7 **Severability.** If any Arbitrator or Governmental Authority finds any provision of this Assignment to be unenforceable, that provision will be modified as necessary to make it enforceable. If that provision cannot be modified to make it enforceable, it will be considered deleted and the remainder of this Assignment will continue in force.

8.8 **Subrogation of Warranties.** To the extent transferable, Tap Rock gives and grants to Assignee, its successors and assigns, full power and right of substitution and subrogation in and to all covenants made and warranties (including warranties of title) given with respect to any portion of the Property by any

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preceding owner, vendor, or other Person, excluding Tap Rock or any of its Affiliates.

8.9 **Covenants Running with the Land.** The provisions of this Assignment, and any covenants to be performed by Assignee after the Execution Date under the Exchange Agreement, are covenants running with the land and bind and inure to the benefit and burden of Tap Rock and Assignee, and their respective successors and assignees. If Assignee assigns any portion of the Property, Assignee shall notify Tap Rock of that assignment as set out in Section 9.5 (Communications) of the Exchange Agreement.

8.10 **Counterparts.** The Parties may execute this Assignment in counterparts, each of which will constitute an original but all of which will constitute one assignment.

[Remainder of this page is left blank, signatures follow.]

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BY CARRIE SANDOVAL

Tap Rock and Assignee are executing this Assignment on the Execution Date.

COG Operating LLC

By: Steven R. Ellington
Its: Attorney-in-fact

Tap Rock Resources II LLC

By: Ryan London
Its: Chief Executive Officer

ConocoPhillips Company

By: Steven R. Ellington
Its: Attorney-in-fact

Tap Rock Minerals II, LLC

By: Ryan London
Its: Chief Executive Officer

LEA COUNTY, NM
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Its: Attorney-in-fact

Tap Rock Minerals II, LLC

By: Ryan London
Its: Chief Executive Officer

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APPENDIX

Assignment and Conveyance
Execution Date February 16, 2023
Tap Rock Resources II LLC, Tap Rock Minerals II, LLC, and COG Operating LLC, et al.

DEFINITIONS

Components of Property

"**Contract**" means any contract described in Schedule B-3 (Contracts), to the extent that such contract is applicable to any Lease, Unit, Well, or Surface Interest.

"**Equipment**" means any facilities, flow lines, pipelines, gathering systems, compressors, well pads, tank batteries, air emissions capture and control equipment, machinery, appurtenances, communications equipment (including cellular towers and supervisory control and data acquisition systems), improvements, pits, fixtures, tools, abandoned property, junk, and all other personal property and all other personal property located on any Lease, Surface Interest, Unit, or Well on the Execution Date.

"**Imbalance**" any imbalance related to Hydrocarbons attributable to the Property, calculated as of the Effective Time, occurring when (i) any co-owner has taken a share of total production that is disproportionate to its ownership interest in that production (including associated make-up or cash settlement rights) or (ii) Tap Rock or any of its Affiliates delivers a different volume of Hydrocarbons attributable to the Property than it sold to a Third Party.

"**Lease**" means, except for the Excluded Property, any oil, gas, or mineral lease described in Schedule B-1 (Leases), but only to the extent that lease covers and includes the lands and depths described in Schedule B-1 (Leases).

"**Permit**" means, except for Excluded Property, any transferable permit issued by any Governmental Authority and held by Tap Rock, that in Tap Rock's reasonable opinion is necessary for Ownership.

"**Property**" means, except for the Excluded Property, all of Tap Rock's right, title, and interest in and to (including all privileges and Obligations appurtenant to) all of the following:

(a) Leases,

(b) Surface Interests;

(c) Contracts;

(d) Wells;

(e) Units;

(f) Permits; and

(g) Imbalances.

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BY CARRIE SANDOVAL

"**Record**" means, except for any Excluded Property and any record that is generally available to the public, any electronic record in Tap Rock's possession to the extent that record is attributable to any portion of the Assigned Property.

"**Surface Interest**" means, except for the Excluded Property, any easement, right-of-way, license, access permit, water right, surface lease, surface use agreement, or similar right, Obligation, or interest, in each case, to the extent applicable to or used in connection with Ownership, including those set out in Schedule B-2 (Surface Interests).

"**Unit**" means any unit, pooled, or communitized area that includes any portion of a Lease.

"**Well**" means any oil, gas, or condensate well, water source well, water injection well, or water disposal well set out in Schedule B-4 (Wells).

SCHEDULE B-3

Assignment and Conveyance
Execution Date February 16, 2023
Tap Rock Resources II LLC, Tap Rock Minerals II, LLC, and COG Operating LLC, et al.

CONTRACTS

Tap Rock Contracts:
Joint Operating Agreement dated October 1, 1996, by and between Parker & Parsley Development L.P. as Operator, and Enserch Exploration Inc., as Non-Operator, covering All of Section 6, Township 24 South, Range 33 East, Lea County, New Mexico, containing 640 acres, more or less

SCHEDULE B-1

Assignment and Conveyance
Execution Date February 15, 2023
Tap Rock Resources II LLC, Tap Rock Minerals II, LLC, and COG Operating LLC, et al.

WELLS

Tap Rock Wells								
Well Name	API	Operator	Legal Description	Section	Township	Range	State	V/H
Tres Equis State #4	30-025-40341	Cimarex Energy Co	E/2E/2	6	24S	33E	New Mexico	H
Tres Equis State #6H	30-025-43506	Cimarex Energy Co	W/2E/2	6	24S	33E	New Mexico	H
Tres Equis State #5H	30-025-40449	Cimarex Energy Co.	W/2E/2	6	24S	33E	New Mexico	H
Tres Equis State #2	30-025-40183	Cimarex Energy Co	E/2W/2	6	24S	33E	New Mexico	H
Tres Equis State #3H	30-025-40320	Cimarex Energy Co.	W/2W/2	6	24S	33E	New Mexico	H

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) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011

Permit 357260

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	229137
	3. API Number 30-025-52426

4. Property Code	5. Property Name	6. Well No.
335192	MACHO NACHO STATE COM	601H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
O	7	24S	33E	O	635	S	2050	E	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	6	24S	33E	1	50	N	330	E	Lea

9. Pool Information

TRIPLE X;BONE SPRING, WEST	96674

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3574
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	22692	Bone Spring		1/16/2024
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☐ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.75	10.75	45.5	1575	1000	
Int1	9.875	7.625	29.7	11750	1010	
Prod	6.75	5.5	23	22692	1600	

Casing/Cement Program: Additional Comments

Drill 14-3/4" hole to ~1,575' with fresh water. Run 10-3/4" 45.5# J-55 BTC casing to TD and cement to surface in one stage (preset). Drill 9-7/8" x 8-3/4" (taper at ~8,000' MD) vertical hole to ~11,750' with saturated brine. Run 7-5/8" 29.7# L80-IC BTC (0'-8,000') / P110 W513 (8,000'-11,750') casing to TD and cement to surface in one stage. Drill 6-3/4" curve and lateral to ~22,692' with OBM. Run 5-1/2" 23# P-110-CY TXP BTC (0'-11,250') / P110-CY W441 (11,250'-22,692') casing to TD and cement to surface in one stage.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	10000	10000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.** Signature:		**OIL CONSERVATION DIVISION**	
Printed Name:	Electronically filed by Robyn Russell	Approved By:	Paul F Kautz
Title:	Supervisor Delaware Regulatory	Title:	Geologist
Email Address:	robyn.m.russell@conocophillips.com	Approved Date:	1/12/2024 Expiration Date: 1/12/2026
Date:	1/9/2024 Phone: 432-685-4385	Conditions of Approval Attached	

Exhibit B

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-	96674	Triple X; Bone Spring, West

Property Code	Property Name	Well Number
	MACHO NACHO STATE COM	601H

OGRID No.	Operator Name	Elevation
229137	COG OPERATING, LLC	3574.3'

Surface Location

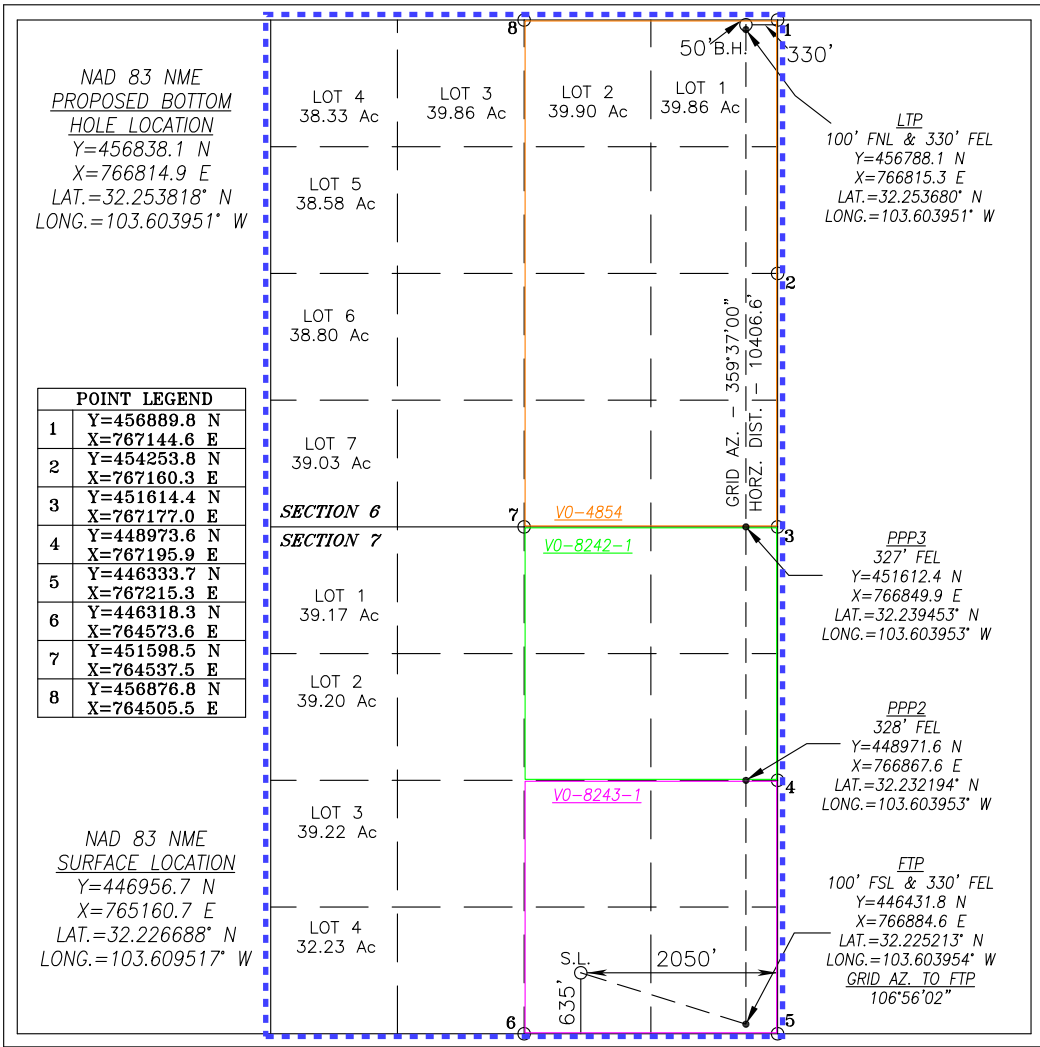
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	7	24-S	33-E		635	SOUTH	2050	EAST	LEA

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
1	6	24-S	33-E		50	NORTH	330	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
1268.12			

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=456889.8 N X=767144.6 E
2	Y=454253.8 N X=767160.3 E
3	Y=451614.4 N X=767177.0 E
4	Y=448973.6 N X=767195.9 E
5	Y=446333.7 N X=767215.3 E
6	Y=446318.3 N X=764573.6 E
7	Y=451598.5 N X=764537.5 E
8	Y=456876.8 N X=764505.5 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 1/4/2024
Signature Date

Mayte Reyes
Printed Name

mayte.x.reyes@cop.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.

AUGUST 9, 2023
Date of Survey

Signature & Seal of Professional Surveyor

CHAD L. HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 8/22/23

Certificate No. CHAD HARCROW 17777

W.O. # 23-615 DRAWN BY: WN

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) 476-3470 Fax:(505) 476-3462

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

Form APD Conditions

Permit 357260

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	30-025-52426
	Well: MACHO NACHO STATE COM #601H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Pit construction and closure must satisfy all requirements of your approved plan
pkautz	If using a pit for drilling and completion operations, must have an approved pit from prior to spudding the well
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	Will require administrative order for non-standard spacing unit

DELAWARE BASIN EAST

LEA COUNTY SOUTHEAST
MACHO NACHO STATE PROJECT (BULLDOG 2433)
MACHO NACHO STATE COM #601H

OWB

Plan: PWP0

Standard Planning Report

13 December, 2023

ConocoPhillips
Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #601H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #601H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project LEA COUNTY SOUTHEAST

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		

Site MACHO NACHO STATE PROJECT (BULLDOG 2433)

Site Position:		**Northing:**	398,637.10 usft	**Latitude:**	32° 5' 36.820 N
From:	Map	**Easting:**	741,887.40 usft	**Longitude:**	103° 33' 8.116 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well MACHO NACHO STATE COM #601H

Well Position	**+N/-S**	0.0 usft	**Northing:**	446,897.80 usft	**Latitude:**	32° 13' 35.629 N
	+E/-W	0.0 usft	**Easting:**	723,976.50 usft	**Longitude:**	103° 36' 32.536 W
Position Uncertainty		3.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,574.3 usft
Grid Convergence:		0.39 °				

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	9/1/2022	6.44	59.84	47,562.17651094

Design PWP0

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	9.51

Plan Survey Tool Program **Date** 12/13/2023

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	22,692.0	PWP0 (OWB)	r.5 MWD+IFR1+MS OWSG MWD + IFR1 + Multi-St	

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Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #601H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #601H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,200.2	14.00	108.44	2,193.3	-26.9	80.8	2.00	2.00	0.00	108.44	
8,652.2	14.00	108.44	8,453.4	-520.9	1,561.9	0.00	0.00	0.00	0.00	
10,052.6	0.00	0.00	9,840.0	-574.8	1,723.5	1.00	-1.00	0.00	180.00	
11,963.1	0.00	0.00	11,750.5	-574.8	1,723.5	0.00	0.00	0.00	0.00	
12,713.1	90.00	359.62	12,228.0	-97.3	1,720.4	12.00	12.00	-0.05	359.62	
22,692.0	90.00	359.62	12,228.0	9,881.3	1,654.7	0.00	0.00	0.00	0.00	PBHL (MACHO NACH

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Planning Report

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Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #601H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,600.0	2.00	108.44	1,600.0	-0.6	1.7	-0.3	2.00	2.00	0.00
1,700.0	4.00	108.44	1,699.8	-2.2	6.6	-1.1	2.00	2.00	0.00
1,800.0	6.00	108.44	1,799.5	-5.0	14.9	-2.4	2.00	2.00	0.00
1,900.0	8.00	108.44	1,898.7	-8.8	26.4	-4.3	2.00	2.00	0.00
2,000.0	10.00	108.44	1,997.5	-13.8	41.3	-6.8	2.00	2.00	0.00
2,100.0	12.00	108.44	2,095.6	-19.8	59.4	-9.7	2.00	2.00	0.00
2,200.0	14.00	108.44	2,193.1	-26.9	80.7	-13.2	2.00	2.00	0.00
2,200.2	14.00	108.44	2,193.3	-26.9	80.8	-13.2	2.00	2.00	0.00
Start 6451.9 hold at 2200.2 MD									
2,300.0	14.00	108.44	2,290.1	-34.6	103.7	-17.0	0.00	0.00	0.00
2,400.0	14.00	108.44	2,387.1	-42.2	126.6	-20.7	0.00	0.00	0.00
2,500.0	14.00	108.44	2,484.1	-49.9	149.6	-24.5	0.00	0.00	0.00
2,600.0	14.00	108.44	2,581.2	-57.5	172.6	-28.3	0.00	0.00	0.00
2,700.0	14.00	108.44	2,678.2	-65.2	195.5	-32.0	0.00	0.00	0.00
2,800.0	14.00	108.44	2,775.2	-72.9	218.5	-35.8	0.00	0.00	0.00
2,900.0	14.00	108.44	2,872.2	-80.5	241.4	-39.5	0.00	0.00	0.00
3,000.0	14.00	108.44	2,969.3	-88.2	264.4	-43.3	0.00	0.00	0.00
3,100.0	14.00	108.44	3,066.3	-95.8	287.3	-47.1	0.00	0.00	0.00
3,200.0	14.00	108.44	3,163.3	-103.5	310.3	-50.8	0.00	0.00	0.00
3,300.0	14.00	108.44	3,260.4	-111.1	333.3	-54.6	0.00	0.00	0.00
3,400.0	14.00	108.44	3,357.4	-118.8	356.2	-58.3	0.00	0.00	0.00
3,500.0	14.00	108.44	3,454.4	-126.5	379.2	-62.1	0.00	0.00	0.00
3,600.0	14.00	108.44	3,551.4	-134.1	402.1	-65.9	0.00	0.00	0.00
3,700.0	14.00	108.44	3,648.5	-141.8	425.1	-69.6	0.00	0.00	0.00
3,800.0	14.00	108.44	3,745.5	-149.4	448.0	-73.4	0.00	0.00	0.00
3,900.0	14.00	108.44	3,842.5	-157.1	471.0	-77.1	0.00	0.00	0.00
4,000.0	14.00	108.44	3,939.6	-164.7	493.9	-80.9	0.00	0.00	0.00
4,100.0	14.00	108.44	4,036.6	-172.4	516.9	-84.7	0.00	0.00	0.00
4,200.0	14.00	108.44	4,133.6	-180.0	539.9	-88.4	0.00	0.00	0.00
4,300.0	14.00	108.44	4,230.6	-187.7	562.8	-92.2	0.00	0.00	0.00
4,400.0	14.00	108.44	4,327.7	-195.4	585.8	-95.9	0.00	0.00	0.00
4,500.0	14.00	108.44	4,424.7	-203.0	608.7	-99.7	0.00	0.00	0.00
4,600.0	14.00	108.44	4,521.7	-210.7	631.7	-103.5	0.00	0.00	0.00
4,700.0	14.00	108.44	4,618.7	-218.3	654.6	-107.2	0.00	0.00	0.00
4,800.0	14.00	108.44	4,715.8	-226.0	677.6	-111.0	0.00	0.00	0.00
4,900.0	14.00	108.44	4,812.8	-233.6	700.6	-114.7	0.00	0.00	0.00

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Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #601H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #601H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.0	14.00	108.44	4,909.8	-241.3	723.5	-118.5	0.00	0.00	0.00
5,100.0	14.00	108.44	5,006.9	-249.0	746.5	-122.2	0.00	0.00	0.00
5,200.0	14.00	108.44	5,103.9	-256.6	769.4	-126.0	0.00	0.00	0.00
5,300.0	14.00	108.44	5,200.9	-264.3	792.4	-129.8	0.00	0.00	0.00
5,400.0	14.00	108.44	5,297.9	-271.9	815.3	-133.5	0.00	0.00	0.00
5,500.0	14.00	108.44	5,395.0	-279.6	838.3	-137.3	0.00	0.00	0.00
5,600.0	14.00	108.44	5,492.0	-287.2	861.3	-141.0	0.00	0.00	0.00
5,700.0	14.00	108.44	5,589.0	-294.9	884.2	-144.8	0.00	0.00	0.00
5,800.0	14.00	108.44	5,686.0	-302.5	907.2	-148.6	0.00	0.00	0.00
5,900.0	14.00	108.44	5,783.1	-310.2	930.1	-152.3	0.00	0.00	0.00
6,000.0	14.00	108.44	5,880.1	-317.9	953.1	-156.1	0.00	0.00	0.00
6,100.0	14.00	108.44	5,977.1	-325.5	976.0	-159.8	0.00	0.00	0.00
6,200.0	14.00	108.44	6,074.2	-333.2	999.0	-163.6	0.00	0.00	0.00
6,300.0	14.00	108.44	6,171.2	-340.8	1,022.0	-167.4	0.00	0.00	0.00
6,400.0	14.00	108.44	6,268.2	-348.5	1,044.9	-171.1	0.00	0.00	0.00
6,500.0	14.00	108.44	6,365.2	-356.1	1,067.9	-174.9	0.00	0.00	0.00
6,600.0	14.00	108.44	6,462.3	-363.8	1,090.8	-178.6	0.00	0.00	0.00
6,700.0	14.00	108.44	6,559.3	-371.5	1,113.8	-182.4	0.00	0.00	0.00
6,800.0	14.00	108.44	6,656.3	-379.1	1,136.7	-186.2	0.00	0.00	0.00
6,900.0	14.00	108.44	6,753.4	-386.8	1,159.7	-189.9	0.00	0.00	0.00
7,000.0	14.00	108.44	6,850.4	-394.4	1,182.7	-193.7	0.00	0.00	0.00
7,100.0	14.00	108.44	6,947.4	-402.1	1,205.6	-197.4	0.00	0.00	0.00
7,200.0	14.00	108.44	7,044.4	-409.7	1,228.6	-201.2	0.00	0.00	0.00
7,300.0	14.00	108.44	7,141.5	-417.4	1,251.5	-205.0	0.00	0.00	0.00
7,400.0	14.00	108.44	7,238.5	-425.0	1,274.5	-208.7	0.00	0.00	0.00
7,500.0	14.00	108.44	7,335.5	-432.7	1,297.4	-212.5	0.00	0.00	0.00
7,600.0	14.00	108.44	7,432.5	-440.4	1,320.4	-216.2	0.00	0.00	0.00
7,700.0	14.00	108.44	7,529.6	-448.0	1,343.4	-220.0	0.00	0.00	0.00
7,800.0	14.00	108.44	7,626.6	-455.7	1,366.3	-223.8	0.00	0.00	0.00
7,900.0	14.00	108.44	7,723.6	-463.3	1,389.3	-227.5	0.00	0.00	0.00
8,000.0	14.00	108.44	7,820.7	-471.0	1,412.2	-231.3	0.00	0.00	0.00
8,100.0	14.00	108.44	7,917.7	-478.6	1,435.2	-235.0	0.00	0.00	0.00
8,200.0	14.00	108.44	8,014.7	-486.3	1,458.1	-238.8	0.00	0.00	0.00
8,300.0	14.00	108.44	8,111.7	-494.0	1,481.1	-242.6	0.00	0.00	0.00
8,400.0	14.00	108.44	8,208.8	-501.6	1,504.1	-246.3	0.00	0.00	0.00
8,500.0	14.00	108.44	8,305.8	-509.3	1,527.0	-250.1	0.00	0.00	0.00
8,600.0	14.00	108.44	8,402.8	-516.9	1,550.0	-253.8	0.00	0.00	0.00
8,652.2	14.00	108.44	8,453.4	-520.9	1,561.9	-255.8	0.00	0.00	0.00
Start Drop -1.00									
8,700.0	13.53	108.44	8,499.9	-524.5	1,572.7	-257.6	1.00	-1.00	0.00
8,800.0	12.53	108.44	8,597.3	-531.7	1,594.1	-261.1	1.00	-1.00	0.00
8,900.0	11.53	108.44	8,695.1	-538.2	1,613.9	-264.3	1.00	-1.00	0.00
9,000.0	10.53	108.44	8,793.3	-544.3	1,632.0	-267.3	1.00	-1.00	0.00
9,100.0	9.53	108.44	8,891.8	-549.8	1,648.5	-270.0	1.00	-1.00	0.00
9,200.0	8.53	108.44	8,990.5	-554.8	1,663.4	-272.4	1.00	-1.00	0.00
9,300.0	7.53	108.44	9,089.5	-559.2	1,676.7	-274.6	1.00	-1.00	0.00
9,400.0	6.53	108.44	9,188.8	-563.1	1,688.3	-276.5	1.00	-1.00	0.00
9,500.0	5.53	108.44	9,288.2	-566.4	1,698.2	-278.1	1.00	-1.00	0.00
9,600.0	4.53	108.44	9,387.8	-569.1	1,706.5	-279.5	1.00	-1.00	0.00
9,700.0	3.53	108.44	9,487.6	-571.4	1,713.2	-280.6	1.00	-1.00	0.00
9,800.0	2.53	108.44	9,587.5	-573.0	1,718.2	-281.4	1.00	-1.00	0.00
9,900.0	1.53	108.44	9,687.4	-574.2	1,721.6	-281.9	1.00	-1.00	0.00
10,000.0	0.53	108.44	9,787.4	-574.7	1,723.3	-282.2	1.00	-1.00	0.00

ConocoPhillips

Planning Report

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Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #601H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
10,052.6	0.00	0.00	9,840.0	-574.8	1,723.5	-282.3	1.00	-1.00	0.00
Start 1910.5 hold at 10052.6 MD									
10,100.0	0.00	0.00	9,887.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
10,200.0	0.00	0.00	9,987.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
10,300.0	0.00	0.00	10,087.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
10,400.0	0.00	0.00	10,187.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
10,500.0	0.00	0.00	10,287.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
10,600.0	0.00	0.00	10,387.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
10,700.0	0.00	0.00	10,487.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
10,800.0	0.00	0.00	10,587.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
10,900.0	0.00	0.00	10,687.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
11,000.0	0.00	0.00	10,787.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
11,100.0	0.00	0.00	10,887.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
11,200.0	0.00	0.00	10,987.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
11,300.0	0.00	0.00	11,087.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
11,400.0	0.00	0.00	11,187.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
11,500.0	0.00	0.00	11,287.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
11,600.0	0.00	0.00	11,387.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
11,700.0	0.00	0.00	11,487.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
11,800.0	0.00	0.00	11,587.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
11,900.0	0.00	0.00	11,687.4	-574.8	1,723.5	-282.3	0.00	0.00	0.00
11,963.1	0.00	0.00	11,750.5	-574.8	1,723.5	-282.3	0.00	0.00	0.00
Start DLS 12.00 TFO 359.62									
12,000.0	4.42	359.62	11,787.3	-573.4	1,723.5	-280.9	12.00	12.00	0.00
12,100.0	16.42	359.62	11,885.5	-555.3	1,723.4	-263.1	12.00	12.00	0.00
12,200.0	28.42	359.62	11,977.8	-517.2	1,723.1	-225.6	12.00	12.00	0.00
12,300.0	40.42	359.62	12,060.1	-460.8	1,722.7	-170.0	12.00	12.00	0.00
12,369.5	48.76	359.62	12,109.6	-412.1	1,722.4	-121.9	12.00	12.00	0.00
FTP (MACHO NACHO STATE COM #601H)									
12,400.0	52.42	359.62	12,128.9	-388.5	1,722.3	-98.7	12.00	12.00	0.00
12,500.0	64.42	359.62	12,181.2	-303.5	1,721.7	-14.9	12.00	12.00	0.00
12,600.0	76.42	359.62	12,214.6	-209.4	1,721.1	77.7	12.00	12.00	0.00
12,700.0	88.42	359.62	12,227.8	-110.5	1,720.4	175.2	12.00	12.00	0.00
12,713.1	90.00	359.62	12,228.0	-97.3	1,720.4	188.1	12.00	12.00	0.00
Start 9978.9 hold at 12713.1 MD									
12,800.0	90.00	359.62	12,228.0	-10.5	1,719.8	273.7	0.00	0.00	0.00
12,900.0	90.00	359.62	12,228.0	89.5	1,719.1	372.2	0.00	0.00	0.00
13,000.0	90.00	359.62	12,228.0	189.5	1,718.5	470.7	0.00	0.00	0.00
13,100.0	90.00	359.62	12,228.0	289.5	1,717.8	569.3	0.00	0.00	0.00
13,200.0	90.00	359.62	12,228.0	389.5	1,717.2	667.8	0.00	0.00	0.00
13,300.0	90.00	359.62	12,228.0	489.5	1,716.5	766.3	0.00	0.00	0.00
13,400.0	90.00	359.62	12,228.0	589.5	1,715.8	864.8	0.00	0.00	0.00
13,500.0	90.00	359.62	12,228.0	689.5	1,715.2	963.3	0.00	0.00	0.00
13,600.0	90.00	359.62	12,228.0	789.5	1,714.5	1,061.8	0.00	0.00	0.00
13,700.0	90.00	359.62	12,228.0	889.5	1,713.9	1,160.3	0.00	0.00	0.00
13,800.0	90.00	359.62	12,228.0	989.5	1,713.2	1,258.9	0.00	0.00	0.00
13,900.0	90.00	359.62	12,228.0	1,089.5	1,712.5	1,357.4	0.00	0.00	0.00
14,000.0	90.00	359.62	12,228.0	1,189.5	1,711.9	1,455.9	0.00	0.00	0.00
14,100.0	90.00	359.62	12,228.0	1,289.5	1,711.2	1,554.4	0.00	0.00	0.00
14,200.0	90.00	359.62	12,228.0	1,389.5	1,710.6	1,652.9	0.00	0.00	0.00
14,300.0	90.00	359.62	12,228.0	1,489.5	1,709.9	1,751.4	0.00	0.00	0.00
14,400.0	90.00	359.62	12,228.0	1,589.5	1,709.3	1,850.0	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #601H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #601H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
14,500.0	90.00	359.62	12,228.0	1,689.5	1,708.6	1,948.5	0.00	0.00	0.00
14,600.0	90.00	359.62	12,228.0	1,789.5	1,707.9	2,047.0	0.00	0.00	0.00
14,700.0	90.00	359.62	12,228.0	1,889.5	1,707.3	2,145.5	0.00	0.00	0.00
14,800.0	90.00	359.62	12,228.0	1,989.5	1,706.6	2,244.0	0.00	0.00	0.00
14,900.0	90.00	359.62	12,228.0	2,089.5	1,706.0	2,342.5	0.00	0.00	0.00
15,000.0	90.00	359.62	12,228.0	2,189.5	1,705.3	2,441.1	0.00	0.00	0.00
15,100.0	90.00	359.62	12,228.0	2,289.5	1,704.7	2,539.6	0.00	0.00	0.00
15,200.0	90.00	359.62	12,228.0	2,389.5	1,704.0	2,638.1	0.00	0.00	0.00
15,300.0	90.00	359.62	12,228.0	2,489.5	1,703.3	2,736.6	0.00	0.00	0.00
15,400.0	90.00	359.62	12,228.0	2,589.5	1,702.7	2,835.1	0.00	0.00	0.00
15,500.0	90.00	359.62	12,228.0	2,689.5	1,702.0	2,933.6	0.00	0.00	0.00
15,600.0	90.00	359.62	12,228.0	2,789.5	1,701.4	3,032.1	0.00	0.00	0.00
15,700.0	90.00	359.62	12,228.0	2,889.5	1,700.7	3,130.7	0.00	0.00	0.00
15,800.0	90.00	359.62	12,228.0	2,989.5	1,700.0	3,229.2	0.00	0.00	0.00
15,900.0	90.00	359.62	12,228.0	3,089.5	1,699.4	3,327.7	0.00	0.00	0.00
16,000.0	90.00	359.62	12,228.0	3,189.5	1,698.7	3,426.2	0.00	0.00	0.00
16,100.0	90.00	359.62	12,228.0	3,289.5	1,698.1	3,524.7	0.00	0.00	0.00
16,200.0	90.00	359.62	12,228.0	3,389.4	1,697.4	3,623.2	0.00	0.00	0.00
16,300.0	90.00	359.62	12,228.0	3,489.4	1,696.8	3,721.8	0.00	0.00	0.00
16,400.0	90.00	359.62	12,228.0	3,589.4	1,696.1	3,820.3	0.00	0.00	0.00
16,500.0	90.00	359.62	12,228.0	3,689.4	1,695.4	3,918.8	0.00	0.00	0.00
16,600.0	90.00	359.62	12,228.0	3,789.4	1,694.8	4,017.3	0.00	0.00	0.00
16,700.0	90.00	359.62	12,228.0	3,889.4	1,694.1	4,115.8	0.00	0.00	0.00
16,800.0	90.00	359.62	12,228.0	3,989.4	1,693.5	4,214.3	0.00	0.00	0.00
16,900.0	90.00	359.62	12,228.0	4,089.4	1,692.8	4,312.9	0.00	0.00	0.00
17,000.0	90.00	359.62	12,228.0	4,189.4	1,692.2	4,411.4	0.00	0.00	0.00
17,100.0	90.00	359.62	12,228.0	4,289.4	1,691.5	4,509.9	0.00	0.00	0.00
17,200.0	90.00	359.62	12,228.0	4,389.4	1,690.8	4,608.4	0.00	0.00	0.00
17,300.0	90.00	359.62	12,228.0	4,489.4	1,690.2	4,706.9	0.00	0.00	0.00
17,400.0	90.00	359.62	12,228.0	4,589.4	1,689.5	4,805.4	0.00	0.00	0.00
17,500.0	90.00	359.62	12,228.0	4,689.4	1,688.9	4,904.0	0.00	0.00	0.00
17,600.0	90.00	359.62	12,228.0	4,789.4	1,688.2	5,002.5	0.00	0.00	0.00
17,700.0	90.00	359.62	12,228.0	4,889.4	1,687.5	5,101.0	0.00	0.00	0.00
17,800.0	90.00	359.62	12,228.0	4,989.4	1,686.9	5,199.5	0.00	0.00	0.00
17,900.0	90.00	359.62	12,228.0	5,089.4	1,686.2	5,298.0	0.00	0.00	0.00
18,000.0	90.00	359.62	12,228.0	5,189.4	1,685.6	5,396.5	0.00	0.00	0.00
18,100.0	90.00	359.62	12,228.0	5,289.4	1,684.9	5,495.0	0.00	0.00	0.00
18,200.0	90.00	359.62	12,228.0	5,389.4	1,684.3	5,593.6	0.00	0.00	0.00
18,300.0	90.00	359.62	12,228.0	5,489.4	1,683.6	5,692.1	0.00	0.00	0.00
18,400.0	90.00	359.62	12,228.0	5,589.4	1,682.9	5,790.6	0.00	0.00	0.00
18,500.0	90.00	359.62	12,228.0	5,689.4	1,682.3	5,889.1	0.00	0.00	0.00
18,600.0	90.00	359.62	12,228.0	5,789.4	1,681.6	5,987.6	0.00	0.00	0.00
18,700.0	90.00	359.62	12,228.0	5,889.4	1,681.0	6,086.1	0.00	0.00	0.00
18,800.0	90.00	359.62	12,228.0	5,989.4	1,680.3	6,184.7	0.00	0.00	0.00
18,900.0	90.00	359.62	12,228.0	6,089.4	1,679.7	6,283.2	0.00	0.00	0.00
19,000.0	90.00	359.62	12,228.0	6,189.4	1,679.0	6,381.7	0.00	0.00	0.00
19,100.0	90.00	359.62	12,228.0	6,289.4	1,678.3	6,480.2	0.00	0.00	0.00
19,200.0	90.00	359.62	12,228.0	6,389.4	1,677.7	6,578.7	0.00	0.00	0.00
19,300.0	90.00	359.62	12,228.0	6,489.4	1,677.0	6,677.2	0.00	0.00	0.00
19,400.0	90.00	359.62	12,228.0	6,589.4	1,676.4	6,775.8	0.00	0.00	0.00
19,500.0	90.00	359.62	12,228.0	6,689.4	1,675.7	6,874.3	0.00	0.00	0.00
19,600.0	90.00	359.62	12,228.0	6,789.4	1,675.0	6,972.8	0.00	0.00	0.00
19,700.0	90.00	359.62	12,228.0	6,889.4	1,674.4	7,071.3	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #601H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #601H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
19,800.0	90.00	359.62	12,228.0	6,989.4	1,673.7	7,169.8	0.00	0.00	0.00
19,900.0	90.00	359.62	12,228.0	7,089.4	1,673.1	7,268.3	0.00	0.00	0.00
20,000.0	90.00	359.62	12,228.0	7,189.4	1,672.4	7,366.8	0.00	0.00	0.00
20,100.0	90.00	359.62	12,228.0	7,289.4	1,671.8	7,465.4	0.00	0.00	0.00
20,200.0	90.00	359.62	12,228.0	7,389.4	1,671.1	7,563.9	0.00	0.00	0.00
20,300.0	90.00	359.62	12,228.0	7,489.4	1,670.4	7,662.4	0.00	0.00	0.00
20,400.0	90.00	359.62	12,228.0	7,589.4	1,669.8	7,760.9	0.00	0.00	0.00
20,500.0	90.00	359.62	12,228.0	7,689.4	1,669.1	7,859.4	0.00	0.00	0.00
20,600.0	90.00	359.62	12,228.0	7,789.4	1,668.5	7,957.9	0.00	0.00	0.00
20,700.0	90.00	359.62	12,228.0	7,889.4	1,667.8	8,056.5	0.00	0.00	0.00
20,800.0	90.00	359.62	12,228.0	7,989.3	1,667.1	8,155.0	0.00	0.00	0.00
20,900.0	90.00	359.62	12,228.0	8,089.3	1,666.5	8,253.5	0.00	0.00	0.00
21,000.0	90.00	359.62	12,228.0	8,189.3	1,665.8	8,352.0	0.00	0.00	0.00
21,100.0	90.00	359.62	12,228.0	8,289.3	1,665.2	8,450.5	0.00	0.00	0.00
21,200.0	90.00	359.62	12,228.0	8,389.3	1,664.5	8,549.0	0.00	0.00	0.00
21,300.0	90.00	359.62	12,228.0	8,489.3	1,663.9	8,647.6	0.00	0.00	0.00
21,400.0	90.00	359.62	12,228.0	8,589.3	1,663.2	8,746.1	0.00	0.00	0.00
21,500.0	90.00	359.62	12,228.0	8,689.3	1,662.5	8,844.6	0.00	0.00	0.00
21,600.0	90.00	359.62	12,228.0	8,789.3	1,661.9	8,943.1	0.00	0.00	0.00
21,700.0	90.00	359.62	12,228.0	8,889.3	1,661.2	9,041.6	0.00	0.00	0.00
21,800.0	90.00	359.62	12,228.0	8,989.3	1,660.6	9,140.1	0.00	0.00	0.00
21,900.0	90.00	359.62	12,228.0	9,089.3	1,659.9	9,238.7	0.00	0.00	0.00
22,000.0	90.00	359.62	12,228.0	9,189.3	1,659.3	9,337.2	0.00	0.00	0.00
22,100.0	90.00	359.62	12,228.0	9,289.3	1,658.6	9,435.7	0.00	0.00	0.00
22,200.0	90.00	359.62	12,228.0	9,389.3	1,657.9	9,534.2	0.00	0.00	0.00
22,300.0	90.00	359.62	12,228.0	9,489.3	1,657.3	9,632.7	0.00	0.00	0.00
22,400.0	90.00	359.62	12,228.0	9,589.3	1,656.6	9,731.2	0.00	0.00	0.00
22,500.0	90.00	359.62	12,228.0	9,689.3	1,656.0	9,829.7	0.00	0.00	0.00
22,600.0	90.00	359.62	12,228.0	9,789.3	1,655.3	9,928.3	0.00	0.00	0.00
LTP (MACHO NACHO STATE COM #601H)									
22,692.0	90.00	359.62	12,228.0	9,881.3	1,654.7	10,018.9	0.00	0.00	0.00
TD at 22692.0 - PBHL (MACHO NACHO STATE COM #601H)									

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 (MACHO NACHO - plan hits target center - Rectangle (sides W100.0 H10,406.3 D20.0)	0.00	179.62	12,228.0	9,881.3	1,654.7	456,779.10	725,631.20	32° 15' 13.300 N	103° 36' 12.492 W
FTP (MACHO NACHO S - plan misses target center by 163.5usft at 12369.5usft MD (12109.6 TVD, -412.1 N, 1722.4 E) - Circle (radius 50.0)	0.00	0.00	12,228.0	-524.8	1,723.8	446,373.00	725,700.30	32° 13' 30.321 N	103° 36' 12.511 W
LTP (MACHO NACHO S - plan misses target center by 42.0usft at 22600.0usft MD (12228.0 TVD, 9789.3 N, 1655.3 E) - Point	0.00	0.00	12,228.0	9,831.3	1,655.0	456,729.10	725,631.50	32° 15' 12.805 N	103° 36' 12.493 W

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #601H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #601H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Casing Points

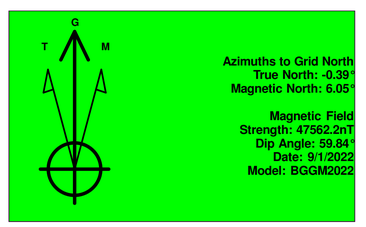
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
22,692.0	12,228.0	5-1/2" Production Casing	5-1/2	6-3/4

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,500.0	1,500.0	0.0	0.0	Start Build 2.00
2,200.2	2,193.3	-26.9	80.8	Start 6451.9 hold at 2200.2 MD
8,652.2	8,453.4	-520.9	1,561.9	Start Drop -1.00
10,052.6	9,840.0	-574.8	1,723.5	Start 1910.5 hold at 10052.6 MD
11,963.1	11,750.5	-574.8	1,723.5	Start DLS 12.00 TFO 359.62
12,713.1	12,228.0	-97.3	1,720.4	Start 9978.9 hold at 12713.1 MD
22,692.0	12,228.0	9,881.3	1,654.7	TD at 22692.0

ConocoPhillips

Project:	LEA COUNTY SOUTHEAST
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)
Well:	MACHO NACHO STATE COM #601H
Wellbore:	OWB
Design:	PWP0
GL:	3574.3
KB=27 @ 3601.3usft	



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.05°

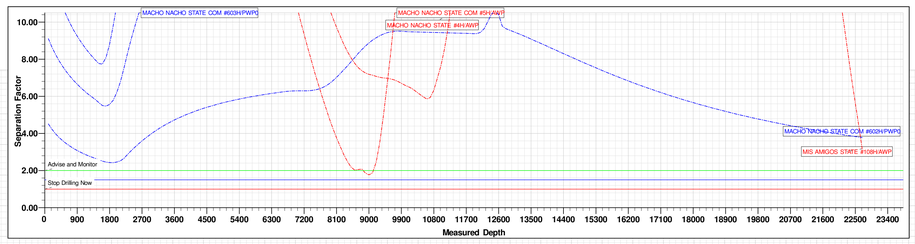
Magnetic Field
Strength: 47562.2nT
Dip Angle: 59.84°
Date: 9/1/2022
Model: BGGM2022

WELL DETAILS: MACHO NACHO STATE COM #601H

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	446897.80	723976.50	32° 13' 35.629 N	103° 36' 32.536 W

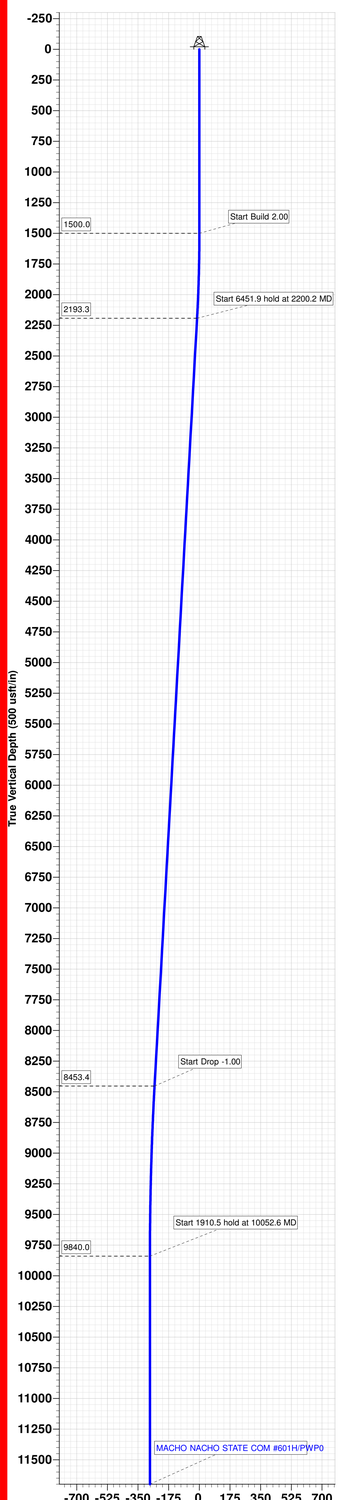
DESIGN TARGET DETAILS

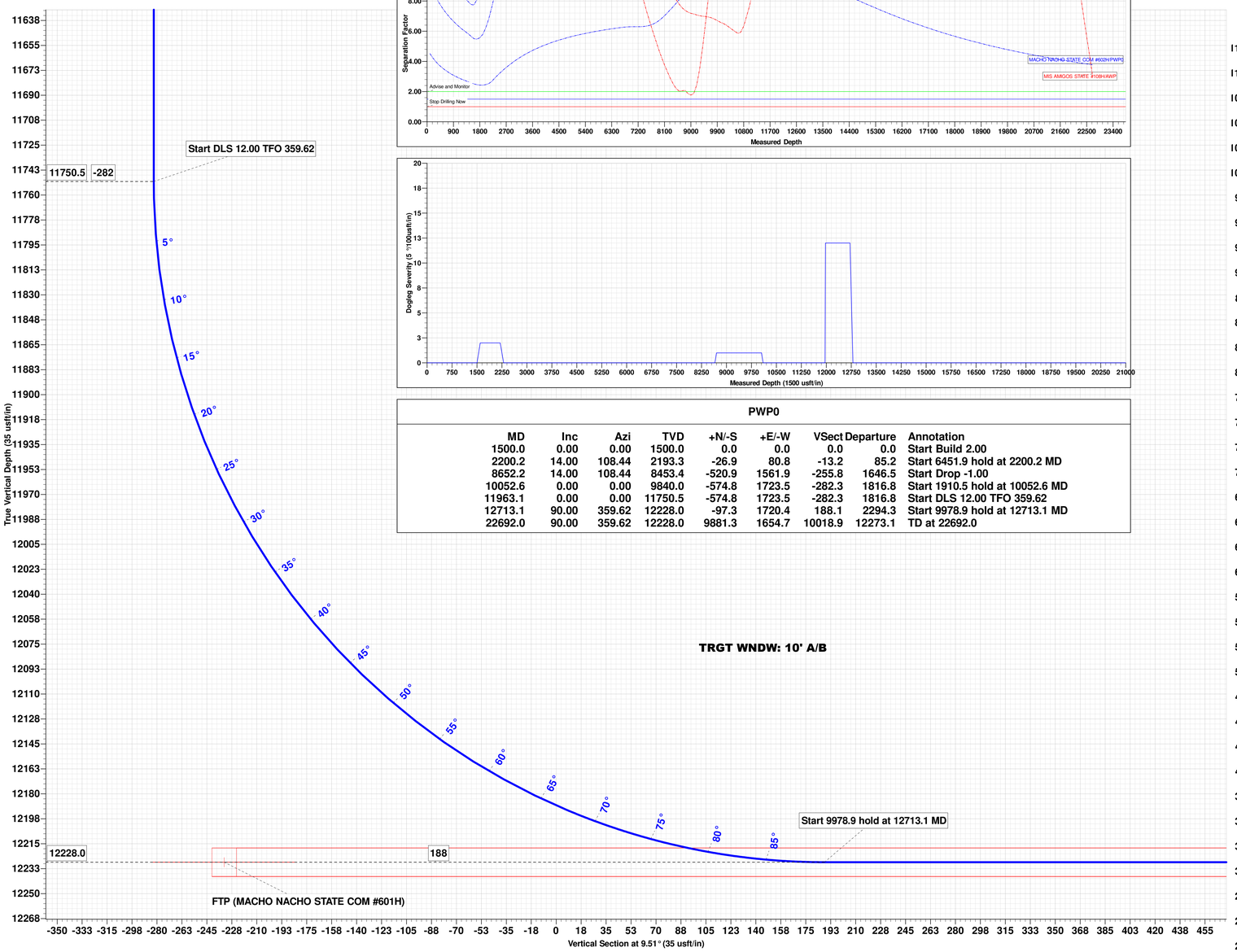
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
FTP (MACHO NACHO STATE COM #601H)	12228.0	-524.8	1723.8	446373.00	725700.30	Circle (Radius: 50.0)
LTP (MACHO NACHO STATE COM #601H)	12228.0	9831.3	1655.0	456729.10	725631.50	Point
PBHL (MACHO NACHO STATE COM #601H)	12228.0	9881.3	1654.7	456779.10	725631.20	Rectangle (Sides: L10406.3 W100.0)

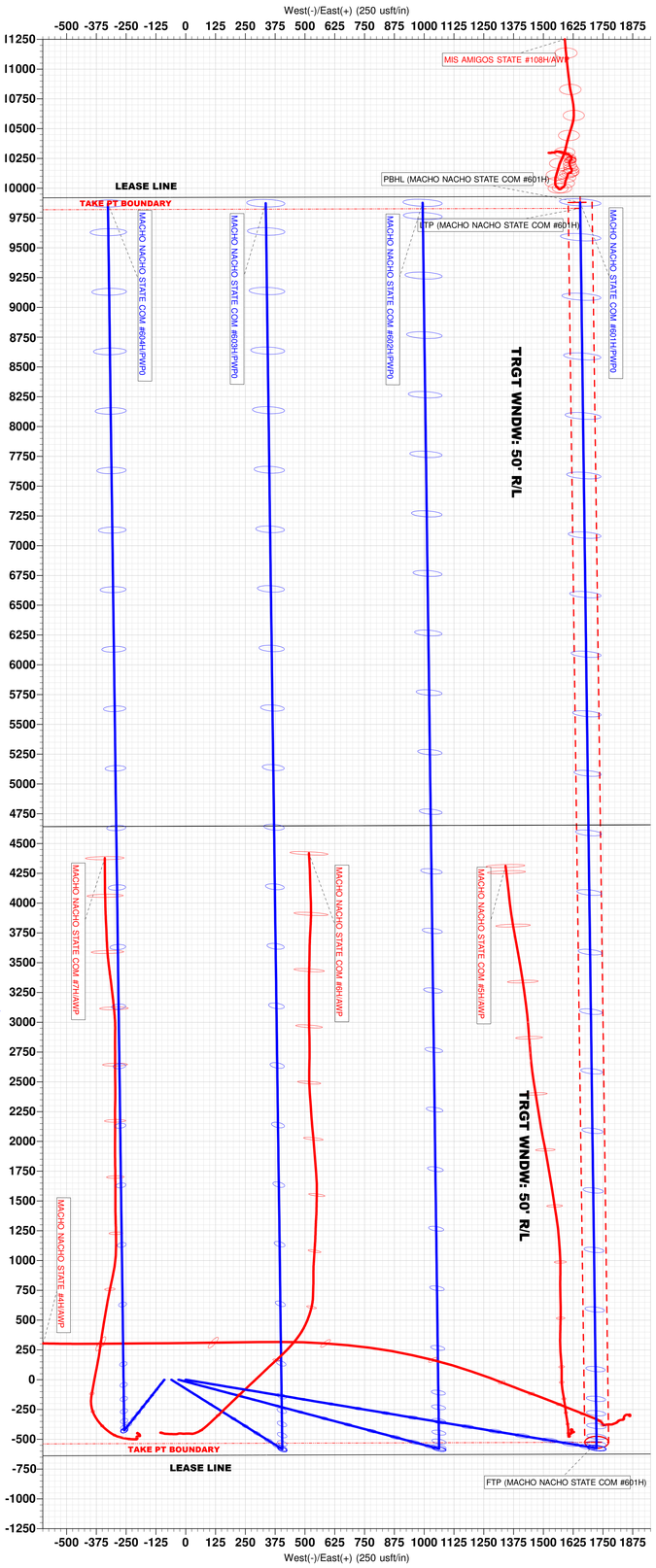


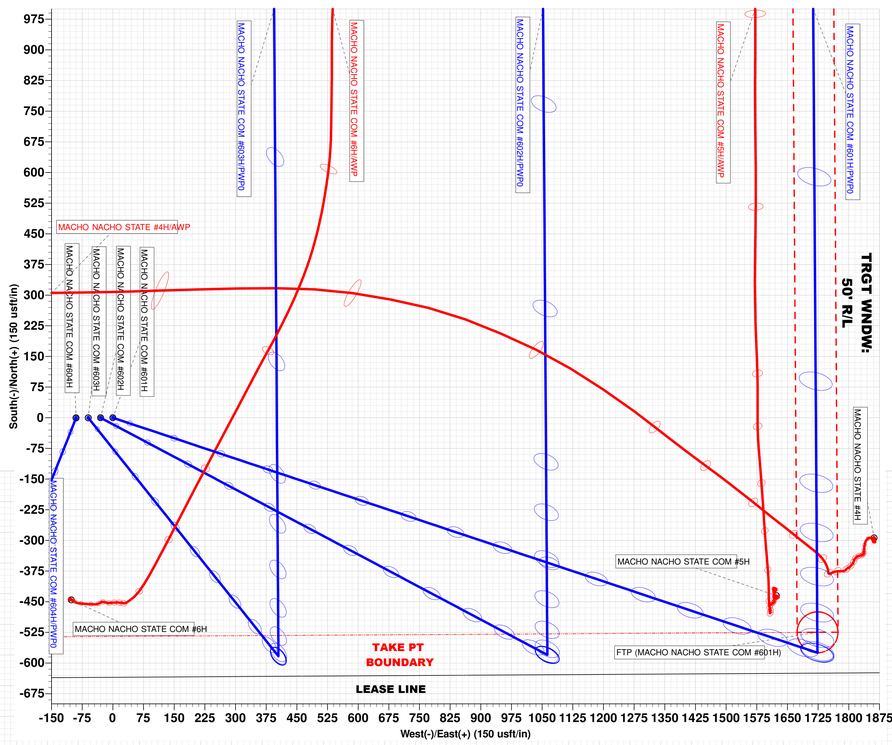
PWP0

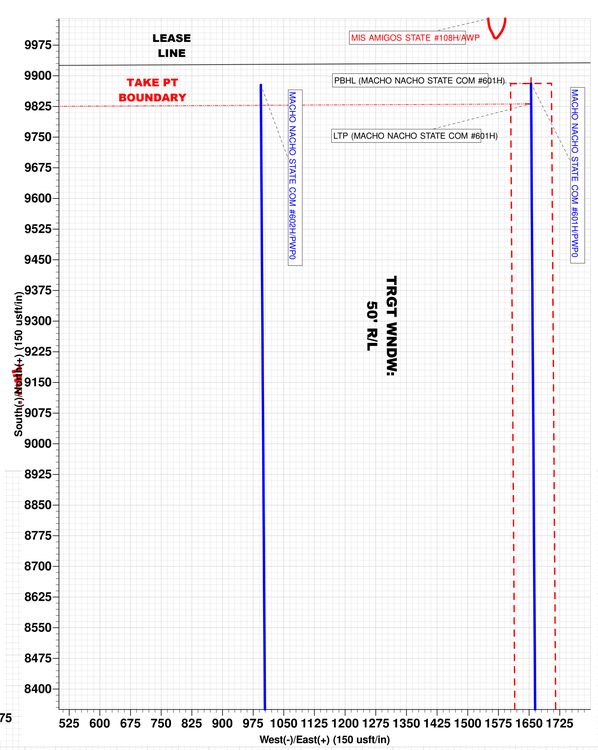
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1500.0	0.00	0.00	1500.0	0.0	0.0	0.0	0.0	Start Build 2.00
2200.2	14.00	108.44	2193.3	-26.9	80.8	-13.2	85.2	Start 6451.9 hold at 2200.2 MD
8652.2	14.00	108.44	8453.4	-520.9	1561.9	-255.8	1646.5	Start Drop -1.00
10052.6	0.00	0.00	9840.0	-574.8	1723.5	-282.3	1816.8	Start 1910.5 hold at 10052.6 MD
11963.1	0.00	0.00	11750.5	-574.8	1723.5	-282.3	1816.8	Start DLS 12.00 TFO 359.62
12713.1	90.00	359.62	12228.0	-97.3	1720.4	188.1	2294.3	Start 9978.9 hold at 12713.1 MD
22692.0	90.00	359.62	12228.0	9881.3	1654.7	10018.9	12273.1	TD at 22692.0

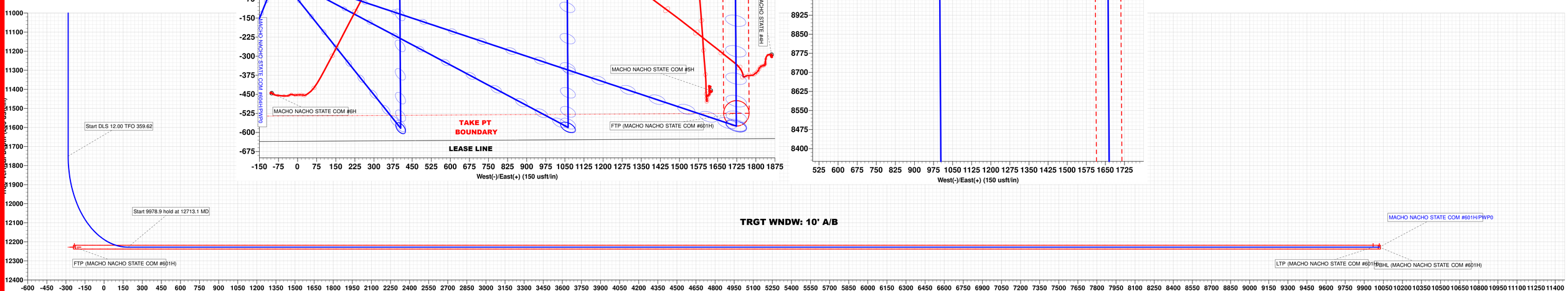












Macho Nacho State Com #601H

Casing and Cement

String	Hole Size	Csg OD	PPF	Depth	Sx Cement	TOC
Surface	14-3/4”	10-3/4””	45.5#	1,575’	1,000	0’
Intermediate	9-7/8” x 8-3/4”	7-5/8”	29.7#	11,750’	1,010	0’
Production	6-3/4”	5-1/2”	23.0#	22,692’	1,600	0’

Well Plan

Drill 14-3/4” hole to ~1,575’ with fresh water. Run 10-3/4” 45.5# J-55 BTC casing to TD and cement to surface in one stage (preset).

Drill 9-7/8” x 8-3/4” (taper at ~8,000’ MD) vertical hole to ~11,750’ with saturated brine. Run 7-5/8” 29.7# L80-IC BTC (0’-8,000’) / P110 W513 (8,000’-11,750’) casing to TD and cement to surface in one stage.

Drill 6-3/4” curve and lateral to ~22,692’ with OBM. Run 5-1/2” 23# P-110-CY TXP BTC (0’-11,250’) / P110-CY W441 (11,250’-22,692’) casing to TD and cement to surface in one stage.

Well Control

After setting 10-3/4” casing and installing 10,000 psi casing head, NU 13-5/8" Cameron BOP. Test casing to 1500 psi, annular to 2500 psi and other BOP equipment to 10,000 psi.

Type	Working Pressure	Test Pressure	Manufacture
Double Ram	10,000 psi	10,000 psi	Cameron

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: COG Operating LLC **OGRID:** 229137 **Date:** 12 / 20 / 23

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Macho Nacho State Com 601H	30-025-	O-7-24S-33E	635' FSL & 2050' FEL	± 1950	± 3853	± 4553

IV. Central Delivery Point Name: _____ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Macho Nacho State Com 601H	Pending	4/8/2024	± 25 days from spud	8/6/2024	8/16/2024	8/21/2024

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

VI. Separation Equipment

How Operator will size separation equipment to optimize gas capture:

All ConocoPhillips production facility equipment will be sized per industry standards (API 12J) with adequate retention time to effectively separate all phases of production. Each project will take into consideration the number of wells and type curves for each formation pool to ensure adequate facility capacity. Design considerations will also include review of all piping, tanks, VRU's and associated equipment to ensure optimized gas capture minimized risk of release.

VII. Operational Practices

Actions Operator will take to comply with the requirements below:

B. Drilling Operations

- During drilling, flare stacks will be located a minimum of 100 feet from the nearest surface hole location. All gas is captured or combusted. If an emergency or malfunction occurs, gas will be flared or vented for public health, safety, and the environment and be properly reported to the NMOCD pursuant to 19.15.27.8.G.
- Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.

C. Completion Operations

- During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.
- Individual well test separators will be set to properly separate gas and liquids. A temporary test separator will be utilized initially to process volumes. In addition, separators will be tied into flowback tanks which will be tied into the gas processing equipment for sales down a pipeline.

D. Venting and flaring during production operations

- During each phase of well life (drilling, completion and production) of a ConocoPhillips well, COP personnel will follow all necessary procedures to ensure both the operation and the equipment are within the NMAC 19.15.27.8 Subsection D guidelines.
- During well operations that require unloading of the well to atmospheric pressure, all reasonable actions will be taken to minimize vented gas
- Through the life of the well all flaring shall be measured, and venting events quantified using the data available and industry best practice.

E. Performance standards for separation, storage tank and flare equipment

- All storage tanks and separation equipment are designed minimize risk of liquid or vapor release and optimize gas capture. This includes automation for automatic gauging and pressure monitoring.

- All flare stacks are equipped with auto ignition devices and/or continuous pilots and are designed to operate at maximum combustion efficiency pursuant NMAC 19.15.27.8 Subsection E. Flares will follow COP spacing guidelines to ensure they are a safe distance from combustibles and operations equipment.
- COP personnel will conduct routine AVO inspections on a regular basis per NMAC 19.15.27.8 Subsection E guidelines.

F. Measurement of vented and flared natural gas.

- Measurement equipment will be installed to quantify gas flared during drilling, completion and production of the well.
- All measurement devices installed will meet accuracy ratings per AGA and API standards.
- Measurement devices will be installed without manifolds that allow diversion of gas around the metering element, except for the sole purpose of inspection of servicing the measurement device.

VIII. Best Management Practices

- Operator will curtail or shut in production, within reasonable limits, during upset conditions to minimize venting and flaring.
- When feasible, Operator will use equipment to capture gas that would otherwise be vented or flared.
- During completions and production operations Operator will minimize blowdowns to atmosphere
- When feasible, Operator will use electric or air actuated equipment to reduce bleed emissions

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	Mayte Reyes
Printed Name:	Mayte Reyes
Title:	Sr. Regulatory Coodinator
E-mail Address:	mayte.x.reyes@conocophillips.com
Date:	12/20/2023
Phone:	575-748-6945

OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

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

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) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011

Permit 357261

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	229137
	3. API Number 30-025-52427

4. Property Code	5. Property Name	6. Well No.
335192	MACHO NACHO STATE COM	603H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
O	7	24S	33E	O	635	S	2110	E	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
B	6	24S	33E	2	50	N	1649	E	Lea

9. Pool Information

TRIPLE X;BONE SPRING, WEST	96674

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3574
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	22537	Bone Spring		1/16/2024
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.75	10.75	45.5	1575	1000	
Int1	9.875	7.625	29.7	11610	1000	
Prod	6.75	5.5	23	22537	1600	

Casing/Cement Program: Additional Comments

Drill 14-3/4" hole to ~1,575' with fresh water. Run 10-3/4" 45.5# J-55 BTC casing to TD and cement to surface in one stage (preset). Drill 9-7/8" x 8-3/4" (taper at ~8,000' MD) vertical hole to ~11,610' with saturated brine. Run 7-5/8" 29.7# L80-IC BTC (0'-8,000') / P110 W513 (8,000'-11,610') casing to TD and cement to surface in one stage. Drill 6-3/4" curve and lateral to ~22,537' with OBM. Run 5-1/2" 23# P-110-CY TXP BTC (0'-11,110') / P110-CY W441 (11,110'-22,537') casing to TD and cement to surface in one stage.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	10000	10000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.

Signature:

OIL CONSERVATION DIVISION

Printed Name:	Electronically filed by Robyn Russell	Approved By:	Paul F Kautz
Title:	Supervisor Delaware Regulatory	Title:	Geologist
Email Address:	robyn.m.russell@conocophillips.com	Approved Date:	1/12/2024 Expiration Date: 1/12/2026
Date:	1/9/2024 Phone: 432-685-4385	Conditions of Approval Attached	

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-	96674	Triple X; Bone Spring, West

Property Code	Property Name	Well Number
	MACHO NACHO STATE COM	603H

OGRID No.	Operator Name	Elevation
229137	COG OPERATING, LLC	3574.3'

Surface Location

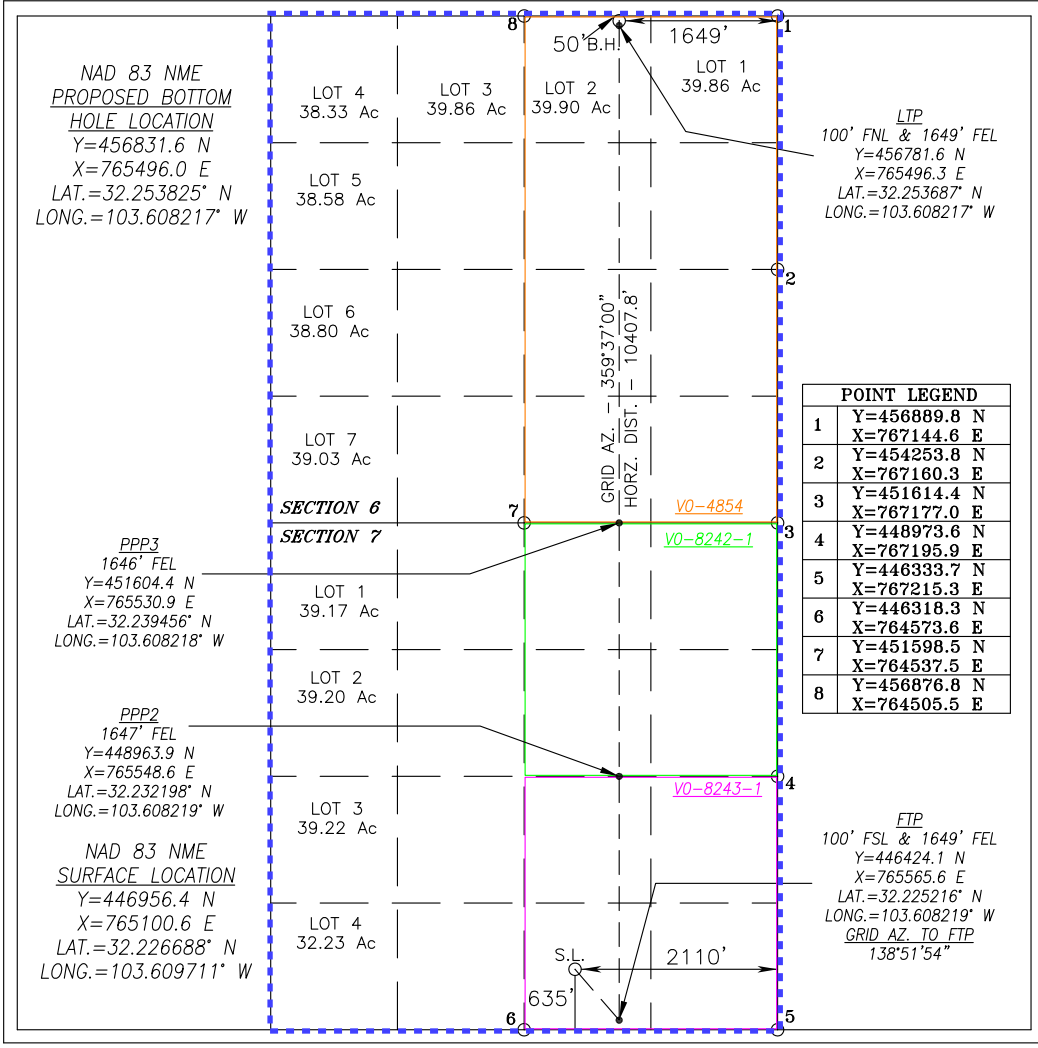
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	7	24-S	33-E		635	SOUTH	2110	EAST	LEA

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
2	6	24-S	33-E		50	NORTH	1649	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
1268.12			

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	
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3	Y=451614.4 N X=767177.0 E
4	Y=448973.6 N X=767195.9 E
5	Y=446333.7 N X=767215.3 E
6	Y=446318.3 N X=764573.6 E
7	Y=451598.5 N X=764537.5 E
8	Y=456876.8 N X=764505.5 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 1/4/2024
Signature Date

Mayte Reyes
Printed Name

mayte.x.reyes@cop.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.

AUGUST 9, 2023
Date of Survey

Signature & Seal of Professional Surveyor

Chad Harcrow 8/22/23
Certificate No. CHAD HARCROW 17777
W.O. # 23-613 DRAWN BY: WN

District I
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Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form APD Comments

Permit 357261

PERMIT COMMENTS

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	30-025-52427
	Well: MACHO NACHO STATE COM #603H

Created By	Comment	Comment Date
mreyes4	OIL: COG Operating 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 would be necessary.	1/9/2024

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

Form APD Conditions

Permit 357261

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	30-025-52427
	Well: MACHO NACHO STATE COM #603H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Will require administrative order for non-standard spacing unit
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

DELAWARE BASIN EAST

LEA COUNTY SOUTHEAST
MACHO NACHO STATE PROJECT (BULLDOG 2433)
MACHO NACHO STATE COM #603H

OWB

Plan: PWP0

Standard Planning Report

13 December, 2023

ConocoPhillips
Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #603H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #603H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project LEA COUNTY SOUTHEAST

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		

Site MACHO NACHO STATE PROJECT (BULLDOG 2433)

Site Position:		**Northing:**	398,637.10 usft	**Latitude:**	32° 5' 36.820 N
From:	Map	**Easting:**	741,887.40 usft	**Longitude:**	103° 33' 8.116 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well MACHO NACHO STATE COM #603H

Well Position	**+N/-S**	0.0 usft	**Northing:**	446,897.50 usft	**Latitude:**	32° 13' 35.631 N
	+E/-W	0.0 usft	**Easting:**	723,916.50 usft	**Longitude:**	103° 36' 33.235 W
Position Uncertainty		3.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,574.3 usft
Grid Convergence:		0.39 °				

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	9/1/2022	6.44	59.84	47,562.18831559

Design PWP0

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	2.29

Plan Survey Tool Program **Date** 12/13/2023

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	1,499.8	PWP0 (OWB)	r.5 SDI_KPR_WL_NS-CT SDI Keeper Wireline Gyrocomp	
2	1,499.8	11,762.9	PWP0 (OWB)	r.5 MWD+IFR1 OWSG MWD + IFR1 rev.5	
3	11,762.9	22,537.3	PWP0 (OWB)	r.5 MWD+IFR1+MS OWSG MWD + IFR1 + Multi-St	

ConocoPhillips

Planning Report

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Wellbore:	OWB		
Design:	PWP0		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,950.0	9.00	141.42	1,948.1	-27.6	22.0	2.00	2.00	0.00	141.42	
6,041.0	9.00	141.42	5,988.8	-527.9	421.0	0.00	0.00	0.00	0.00	
6,940.9	0.00	0.01	6,885.0	-583.0	465.0	1.00	-1.00	0.00	180.00	
11,806.4	0.00	0.01	11,750.5	-583.0	465.0	0.00	0.00	0.00	0.00	
12,556.4	90.00	359.62	12,228.0	-105.5	461.8	12.00	12.00	-0.05	359.62	
22,537.3	90.00	359.62	12,228.0	9,875.1	395.7	0.00	0.00	0.00	0.00	PBHL (MACHO NACH

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #603H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #603H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,600.0	2.00	141.42	1,600.0	-1.4	1.1	-1.3	2.00	2.00	0.00
1,700.0	4.00	141.42	1,699.8	-5.5	4.4	-5.3	2.00	2.00	0.00
1,800.0	6.00	141.42	1,799.5	-12.3	9.8	-11.9	2.00	2.00	0.00
1,900.0	8.00	141.42	1,898.7	-21.8	17.4	-21.1	2.00	2.00	0.00
1,950.0	9.00	141.42	1,948.1	-27.6	22.0	-26.7	2.00	2.00	0.00
Start 4091.0 hold at 1950.0 MD									
2,000.0	9.00	141.42	1,997.5	-33.7	26.9	-32.6	0.00	0.00	0.00
2,100.0	9.00	141.42	2,096.3	-45.9	36.6	-44.4	0.00	0.00	0.00
2,200.0	9.00	141.42	2,195.1	-58.1	46.4	-56.2	0.00	0.00	0.00
2,300.0	9.00	141.42	2,293.8	-70.4	56.1	-68.1	0.00	0.00	0.00
2,400.0	9.00	141.42	2,392.6	-82.6	65.9	-79.9	0.00	0.00	0.00
2,500.0	9.00	141.42	2,491.4	-94.8	75.6	-91.7	0.00	0.00	0.00
2,600.0	9.00	141.42	2,590.2	-107.1	85.4	-103.6	0.00	0.00	0.00
2,700.0	9.00	141.42	2,688.9	-119.3	95.1	-115.4	0.00	0.00	0.00
2,800.0	9.00	141.42	2,787.7	-131.5	104.9	-127.2	0.00	0.00	0.00
2,900.0	9.00	141.42	2,886.5	-143.7	114.7	-139.0	0.00	0.00	0.00
3,000.0	9.00	141.42	2,985.2	-156.0	124.4	-150.9	0.00	0.00	0.00
3,100.0	9.00	141.42	3,084.0	-168.2	134.2	-162.7	0.00	0.00	0.00
3,200.0	9.00	141.42	3,182.8	-180.4	143.9	-174.5	0.00	0.00	0.00
3,300.0	9.00	141.42	3,281.5	-192.7	153.7	-186.4	0.00	0.00	0.00
3,400.0	9.00	141.42	3,380.3	-204.9	163.4	-198.2	0.00	0.00	0.00
3,500.0	9.00	141.42	3,479.1	-217.1	173.2	-210.0	0.00	0.00	0.00
3,600.0	9.00	141.42	3,577.8	-229.4	182.9	-221.8	0.00	0.00	0.00
3,700.0	9.00	141.42	3,676.6	-241.6	192.7	-233.7	0.00	0.00	0.00
3,800.0	9.00	141.42	3,775.4	-253.8	202.4	-245.5	0.00	0.00	0.00
3,900.0	9.00	141.42	3,874.1	-266.0	212.2	-257.3	0.00	0.00	0.00
4,000.0	9.00	141.42	3,972.9	-278.3	221.9	-269.2	0.00	0.00	0.00
4,100.0	9.00	141.42	4,071.7	-290.5	231.7	-281.0	0.00	0.00	0.00
4,200.0	9.00	141.42	4,170.5	-302.7	241.5	-292.8	0.00	0.00	0.00
4,300.0	9.00	141.42	4,269.2	-315.0	251.2	-304.6	0.00	0.00	0.00
4,400.0	9.00	141.42	4,368.0	-327.2	261.0	-316.5	0.00	0.00	0.00
4,500.0	9.00	141.42	4,466.8	-339.4	270.7	-328.3	0.00	0.00	0.00
4,600.0	9.00	141.42	4,565.5	-351.6	280.5	-340.1	0.00	0.00	0.00
4,700.0	9.00	141.42	4,664.3	-363.9	290.2	-352.0	0.00	0.00	0.00
4,800.0	9.00	141.42	4,763.1	-376.1	300.0	-363.8	0.00	0.00	0.00
4,900.0	9.00	141.42	4,861.8	-388.3	309.7	-375.6	0.00	0.00	0.00

ConocoPhillips

Planning Report

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Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
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Well:	MACHO NACHO STATE COM #603H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.0	9.00	141.42	4,960.6	-400.6	319.5	-387.4	0.00	0.00	0.00
5,100.0	9.00	141.42	5,059.4	-412.8	329.2	-399.3	0.00	0.00	0.00
5,200.0	9.00	141.42	5,158.1	-425.0	339.0	-411.1	0.00	0.00	0.00
5,300.0	9.00	141.42	5,256.9	-437.2	348.7	-422.9	0.00	0.00	0.00
5,400.0	9.00	141.42	5,355.7	-449.5	358.5	-434.8	0.00	0.00	0.00
5,500.0	9.00	141.42	5,454.5	-461.7	368.3	-446.6	0.00	0.00	0.00
5,600.0	9.00	141.42	5,553.2	-473.9	378.0	-458.4	0.00	0.00	0.00
5,700.0	9.00	141.42	5,652.0	-486.2	387.8	-470.2	0.00	0.00	0.00
5,800.0	9.00	141.42	5,750.8	-498.4	397.5	-482.1	0.00	0.00	0.00
5,900.0	9.00	141.42	5,849.5	-510.6	407.3	-493.9	0.00	0.00	0.00
6,000.0	9.00	141.42	5,948.3	-522.9	417.0	-505.7	0.00	0.00	0.00
6,041.0	9.00	141.42	5,988.8	-527.9	421.0	-510.6	0.00	0.00	0.00
Start Drop -1.00									
6,100.0	8.41	141.42	6,047.1	-534.8	426.6	-517.3	1.00	-1.00	0.00
6,200.0	7.41	141.42	6,146.2	-545.6	435.2	-527.7	1.00	-1.00	0.00
6,300.0	6.41	141.42	6,245.4	-555.0	442.7	-536.8	1.00	-1.00	0.00
6,400.0	5.41	141.42	6,344.9	-563.1	449.1	-544.6	1.00	-1.00	0.00
6,500.0	4.41	141.42	6,444.5	-569.7	454.4	-551.1	1.00	-1.00	0.00
6,600.0	3.41	141.42	6,544.3	-575.1	458.7	-556.2	1.00	-1.00	0.00
6,700.0	2.41	141.42	6,644.2	-579.0	461.8	-560.1	1.00	-1.00	0.00
6,800.0	1.41	141.42	6,744.1	-581.6	463.9	-562.6	1.00	-1.00	0.00
6,900.0	0.41	141.42	6,844.1	-582.9	464.9	-563.8	1.00	-1.00	0.00
6,940.9	0.00	0.01	6,885.0	-583.0	465.0	-563.9	1.00	-1.00	0.00
Start 4865.5 hold at 6940.9 MD									
7,000.0	0.00	0.00	6,944.1	-583.0	465.0	-563.9	0.00	0.00	0.00
7,100.0	0.00	0.00	7,044.1	-583.0	465.0	-563.9	0.00	0.00	0.00
7,200.0	0.00	0.00	7,144.1	-583.0	465.0	-563.9	0.00	0.00	0.00
7,300.0	0.00	0.00	7,244.1	-583.0	465.0	-563.9	0.00	0.00	0.00
7,400.0	0.00	0.00	7,344.1	-583.0	465.0	-563.9	0.00	0.00	0.00
7,500.0	0.00	0.00	7,444.1	-583.0	465.0	-563.9	0.00	0.00	0.00
7,600.0	0.00	0.00	7,544.1	-583.0	465.0	-563.9	0.00	0.00	0.00
7,700.0	0.00	0.00	7,644.1	-583.0	465.0	-563.9	0.00	0.00	0.00
7,800.0	0.00	0.00	7,744.1	-583.0	465.0	-563.9	0.00	0.00	0.00
7,900.0	0.00	0.00	7,844.1	-583.0	465.0	-563.9	0.00	0.00	0.00
8,000.0	0.00	0.00	7,944.1	-583.0	465.0	-563.9	0.00	0.00	0.00
8,100.0	0.00	0.00	8,044.1	-583.0	465.0	-563.9	0.00	0.00	0.00
8,200.0	0.00	0.00	8,144.1	-583.0	465.0	-563.9	0.00	0.00	0.00
8,300.0	0.00	0.00	8,244.1	-583.0	465.0	-563.9	0.00	0.00	0.00
8,400.0	0.00	0.00	8,344.1	-583.0	465.0	-563.9	0.00	0.00	0.00
8,500.0	0.00	0.00	8,444.1	-583.0	465.0	-563.9	0.00	0.00	0.00
8,600.0	0.00	0.00	8,544.1	-583.0	465.0	-563.9	0.00	0.00	0.00
8,700.0	0.00	0.00	8,644.1	-583.0	465.0	-563.9	0.00	0.00	0.00
8,800.0	0.00	0.00	8,744.1	-583.0	465.0	-563.9	0.00	0.00	0.00
8,900.0	0.00	0.00	8,844.1	-583.0	465.0	-563.9	0.00	0.00	0.00
9,000.0	0.00	0.00	8,944.1	-583.0	465.0	-563.9	0.00	0.00	0.00
9,100.0	0.00	0.00	9,044.1	-583.0	465.0	-563.9	0.00	0.00	0.00
9,200.0	0.00	0.00	9,144.1	-583.0	465.0	-563.9	0.00	0.00	0.00
9,300.0	0.00	0.00	9,244.1	-583.0	465.0	-563.9	0.00	0.00	0.00
9,400.0	0.00	0.00	9,344.1	-583.0	465.0	-563.9	0.00	0.00	0.00
9,500.0	0.00	0.00	9,444.1	-583.0	465.0	-563.9	0.00	0.00	0.00
9,600.0	0.00	0.00	9,544.1	-583.0	465.0	-563.9	0.00	0.00	0.00
9,700.0	0.00	0.00	9,644.1	-583.0	465.0	-563.9	0.00	0.00	0.00
9,800.0	0.00	0.00	9,744.1	-583.0	465.0	-563.9	0.00	0.00	0.00

ConocoPhillips

Planning Report

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Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
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Wellbore:	OWB		
Design:	PWP0		

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	0.00	0.00	9,844.1	-583.0	465.0	-563.9	0.00	0.00	0.00
10,000.0	0.00	0.00	9,944.1	-583.0	465.0	-563.9	0.00	0.00	0.00
10,100.0	0.00	0.00	10,044.1	-583.0	465.0	-563.9	0.00	0.00	0.00
10,200.0	0.00	0.00	10,144.1	-583.0	465.0	-563.9	0.00	0.00	0.00
10,300.0	0.00	0.00	10,244.1	-583.0	465.0	-563.9	0.00	0.00	0.00
10,400.0	0.00	0.00	10,344.1	-583.0	465.0	-563.9	0.00	0.00	0.00
10,500.0	0.00	0.00	10,444.1	-583.0	465.0	-563.9	0.00	0.00	0.00
10,600.0	0.00	0.00	10,544.1	-583.0	465.0	-563.9	0.00	0.00	0.00
10,700.0	0.00	0.00	10,644.1	-583.0	465.0	-563.9	0.00	0.00	0.00
10,800.0	0.00	0.00	10,744.1	-583.0	465.0	-563.9	0.00	0.00	0.00
10,900.0	0.00	0.00	10,844.1	-583.0	465.0	-563.9	0.00	0.00	0.00
11,000.0	0.00	0.00	10,944.1	-583.0	465.0	-563.9	0.00	0.00	0.00
11,100.0	0.00	0.00	11,044.1	-583.0	465.0	-563.9	0.00	0.00	0.00
11,200.0	0.00	0.00	11,144.1	-583.0	465.0	-563.9	0.00	0.00	0.00
11,300.0	0.00	0.00	11,244.1	-583.0	465.0	-563.9	0.00	0.00	0.00
11,400.0	0.00	0.00	11,344.1	-583.0	465.0	-563.9	0.00	0.00	0.00
11,500.0	0.00	0.00	11,444.1	-583.0	465.0	-563.9	0.00	0.00	0.00
11,600.0	0.00	0.00	11,544.1	-583.0	465.0	-563.9	0.00	0.00	0.00
11,700.0	0.00	0.00	11,644.1	-583.0	465.0	-563.9	0.00	0.00	0.00
11,800.0	0.00	0.00	11,744.1	-583.0	465.0	-563.9	0.00	0.00	0.00
11,806.4	0.00	0.00	11,750.5	-583.0	465.0	-563.9	0.00	0.00	0.00
Start DLS 12.00 TFO 359.62									
11,900.0	11.23	359.62	11,843.5	-573.9	464.9	-554.8	12.00	12.00	0.00
12,000.0	23.23	359.62	11,938.8	-544.3	464.7	-525.2	12.00	12.00	0.00
12,100.0	35.23	359.62	12,025.9	-495.5	464.4	-476.6	12.00	12.00	0.00
12,200.0	47.23	359.62	12,101.0	-429.8	464.0	-410.8	12.00	12.00	0.00
FTP (MACHO NACHO STATE COM #603H)									
12,300.0	59.23	359.62	12,160.8	-349.8	463.5	-331.0	12.00	12.00	0.00
12,400.0	71.23	359.62	12,202.6	-259.2	462.9	-240.4	12.00	12.00	0.00
12,500.0	83.23	359.62	12,224.6	-161.8	462.2	-143.2	12.00	12.00	0.00
12,556.4	90.00	359.62	12,228.0	-105.5	461.8	-87.0	12.00	12.00	0.00
Start 9980.9 hold at 12556.4 MD									
12,600.0	90.00	359.62	12,228.0	-62.0	461.5	-43.4	0.00	0.00	0.00
12,700.0	90.00	359.62	12,228.0	38.0	460.9	56.5	0.00	0.00	0.00
12,800.0	90.00	359.62	12,228.0	138.0	460.2	156.4	0.00	0.00	0.00
12,900.0	90.00	359.62	12,228.0	238.0	459.6	256.3	0.00	0.00	0.00
13,000.0	90.00	359.62	12,228.0	338.0	458.9	356.1	0.00	0.00	0.00
13,100.0	90.00	359.62	12,228.0	438.0	458.2	456.0	0.00	0.00	0.00
13,200.0	90.00	359.62	12,228.0	538.0	457.6	555.9	0.00	0.00	0.00
13,300.0	90.00	359.62	12,228.0	638.0	456.9	655.8	0.00	0.00	0.00
13,400.0	90.00	359.62	12,228.0	738.0	456.2	755.7	0.00	0.00	0.00
13,500.0	90.00	359.62	12,228.0	838.0	455.6	855.6	0.00	0.00	0.00
13,600.0	90.00	359.62	12,228.0	938.0	454.9	955.5	0.00	0.00	0.00
13,700.0	90.00	359.62	12,228.0	1,038.0	454.3	1,055.4	0.00	0.00	0.00
13,800.0	90.00	359.62	12,228.0	1,138.0	453.6	1,155.3	0.00	0.00	0.00
13,900.0	90.00	359.62	12,228.0	1,238.0	452.9	1,255.2	0.00	0.00	0.00
14,000.0	90.00	359.62	12,228.0	1,338.0	452.3	1,355.1	0.00	0.00	0.00
14,100.0	90.00	359.62	12,228.0	1,438.0	451.6	1,454.9	0.00	0.00	0.00
14,200.0	90.00	359.62	12,228.0	1,538.0	450.9	1,554.8	0.00	0.00	0.00
14,300.0	90.00	359.62	12,228.0	1,638.0	450.3	1,654.7	0.00	0.00	0.00
14,400.0	90.00	359.62	12,228.0	1,738.0	449.6	1,754.6	0.00	0.00	0.00
14,500.0	90.00	359.62	12,228.0	1,838.0	449.0	1,854.5	0.00	0.00	0.00
14,600.0	90.00	359.62	12,228.0	1,938.0	448.3	1,954.4	0.00	0.00	0.00

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Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #603H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #603H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
14,700.0	90.00	359.62	12,228.0	2,038.0	447.6	2,054.3	0.00	0.00	0.00
14,800.0	90.00	359.62	12,228.0	2,138.0	447.0	2,154.2	0.00	0.00	0.00
14,900.0	90.00	359.62	12,228.0	2,238.0	446.3	2,254.1	0.00	0.00	0.00
15,000.0	90.00	359.62	12,228.0	2,338.0	445.6	2,354.0	0.00	0.00	0.00
15,100.0	90.00	359.62	12,228.0	2,438.0	445.0	2,453.9	0.00	0.00	0.00
15,200.0	90.00	359.62	12,228.0	2,538.0	444.3	2,553.7	0.00	0.00	0.00
15,300.0	90.00	359.62	12,228.0	2,638.0	443.7	2,653.6	0.00	0.00	0.00
15,400.0	90.00	359.62	12,228.0	2,738.0	443.0	2,753.5	0.00	0.00	0.00
15,500.0	90.00	359.62	12,228.0	2,838.0	442.3	2,853.4	0.00	0.00	0.00
15,600.0	90.00	359.62	12,228.0	2,938.0	441.7	2,953.3	0.00	0.00	0.00
15,700.0	90.00	359.62	12,228.0	3,038.0	441.0	3,053.2	0.00	0.00	0.00
15,800.0	90.00	359.62	12,228.0	3,138.0	440.3	3,153.1	0.00	0.00	0.00
15,900.0	90.00	359.62	12,228.0	3,238.0	439.7	3,253.0	0.00	0.00	0.00
16,000.0	90.00	359.62	12,228.0	3,338.0	439.0	3,352.9	0.00	0.00	0.00
16,100.0	90.00	359.62	12,228.0	3,438.0	438.4	3,452.8	0.00	0.00	0.00
16,200.0	90.00	359.62	12,228.0	3,538.0	437.7	3,552.7	0.00	0.00	0.00
16,300.0	90.00	359.62	12,228.0	3,638.0	437.0	3,652.5	0.00	0.00	0.00
16,400.0	90.00	359.62	12,228.0	3,738.0	436.4	3,752.4	0.00	0.00	0.00
16,500.0	90.00	359.62	12,228.0	3,838.0	435.7	3,852.3	0.00	0.00	0.00
16,600.0	90.00	359.62	12,228.0	3,938.0	435.0	3,952.2	0.00	0.00	0.00
16,700.0	90.00	359.62	12,228.0	4,038.0	434.4	4,052.1	0.00	0.00	0.00
16,800.0	90.00	359.62	12,228.0	4,138.0	433.7	4,152.0	0.00	0.00	0.00
16,900.0	90.00	359.62	12,228.0	4,238.0	433.1	4,251.9	0.00	0.00	0.00
17,000.0	90.00	359.62	12,228.0	4,338.0	432.4	4,351.8	0.00	0.00	0.00
17,100.0	90.00	359.62	12,228.0	4,437.9	431.7	4,451.7	0.00	0.00	0.00
17,200.0	90.00	359.62	12,228.0	4,537.9	431.1	4,551.6	0.00	0.00	0.00
17,300.0	90.00	359.62	12,228.0	4,637.9	430.4	4,651.5	0.00	0.00	0.00
17,400.0	90.00	359.62	12,228.0	4,737.9	429.7	4,751.4	0.00	0.00	0.00
17,500.0	90.00	359.62	12,228.0	4,837.9	429.1	4,851.2	0.00	0.00	0.00
17,600.0	90.00	359.62	12,228.0	4,937.9	428.4	4,951.1	0.00	0.00	0.00
17,700.0	90.00	359.62	12,228.0	5,037.9	427.8	5,051.0	0.00	0.00	0.00
17,800.0	90.00	359.62	12,228.0	5,137.9	427.1	5,150.9	0.00	0.00	0.00
17,900.0	90.00	359.62	12,228.0	5,237.9	426.4	5,250.8	0.00	0.00	0.00
18,000.0	90.00	359.62	12,228.0	5,337.9	425.8	5,350.7	0.00	0.00	0.00
18,100.0	90.00	359.62	12,228.0	5,437.9	425.1	5,450.6	0.00	0.00	0.00
18,200.0	90.00	359.62	12,228.0	5,537.9	424.4	5,550.5	0.00	0.00	0.00
18,300.0	90.00	359.62	12,228.0	5,637.9	423.8	5,650.4	0.00	0.00	0.00
18,400.0	90.00	359.62	12,228.0	5,737.9	423.1	5,750.3	0.00	0.00	0.00
18,500.0	90.00	359.62	12,228.0	5,837.9	422.5	5,850.2	0.00	0.00	0.00
18,600.0	90.00	359.62	12,228.0	5,937.9	421.8	5,950.0	0.00	0.00	0.00
18,700.0	90.00	359.62	12,228.0	6,037.9	421.1	6,049.9	0.00	0.00	0.00
18,800.0	90.00	359.62	12,228.0	6,137.9	420.5	6,149.8	0.00	0.00	0.00
18,900.0	90.00	359.62	12,228.0	6,237.9	419.8	6,249.7	0.00	0.00	0.00
19,000.0	90.00	359.62	12,228.0	6,337.9	419.1	6,349.6	0.00	0.00	0.00
19,100.0	90.00	359.62	12,228.0	6,437.9	418.5	6,449.5	0.00	0.00	0.00
19,200.0	90.00	359.62	12,228.0	6,537.9	417.8	6,549.4	0.00	0.00	0.00
19,300.0	90.00	359.62	12,228.0	6,637.9	417.2	6,649.3	0.00	0.00	0.00
19,400.0	90.00	359.62	12,228.0	6,737.9	416.5	6,749.2	0.00	0.00	0.00
19,500.0	90.00	359.62	12,228.0	6,837.9	415.8	6,849.1	0.00	0.00	0.00
19,600.0	90.00	359.62	12,228.0	6,937.9	415.2	6,949.0	0.00	0.00	0.00
19,700.0	90.00	359.62	12,228.0	7,037.9	414.5	7,048.8	0.00	0.00	0.00
19,800.0	90.00	359.62	12,228.0	7,137.9	413.8	7,148.7	0.00	0.00	0.00
19,900.0	90.00	359.62	12,228.0	7,237.9	413.2	7,248.6	0.00	0.00	0.00

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Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #603H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #603H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
20,000.0	90.00	359.62	12,228.0	7,337.9	412.5	7,348.5	0.00	0.00	0.00
20,100.0	90.00	359.62	12,228.0	7,437.9	411.9	7,448.4	0.00	0.00	0.00
20,200.0	90.00	359.62	12,228.0	7,537.9	411.2	7,548.3	0.00	0.00	0.00
20,300.0	90.00	359.62	12,228.0	7,637.9	410.5	7,648.2	0.00	0.00	0.00
20,400.0	90.00	359.62	12,228.0	7,737.9	409.9	7,748.1	0.00	0.00	0.00
20,500.0	90.00	359.62	12,228.0	7,837.9	409.2	7,848.0	0.00	0.00	0.00
20,600.0	90.00	359.62	12,228.0	7,937.9	408.5	7,947.9	0.00	0.00	0.00
20,700.0	90.00	359.62	12,228.0	8,037.9	407.9	8,047.8	0.00	0.00	0.00
20,800.0	90.00	359.62	12,228.0	8,137.9	407.2	8,147.6	0.00	0.00	0.00
20,900.0	90.00	359.62	12,228.0	8,237.9	406.5	8,247.5	0.00	0.00	0.00
21,000.0	90.00	359.62	12,228.0	8,337.9	405.9	8,347.4	0.00	0.00	0.00
21,100.0	90.00	359.62	12,228.0	8,437.9	405.2	8,447.3	0.00	0.00	0.00
21,200.0	90.00	359.62	12,228.0	8,537.9	404.6	8,547.2	0.00	0.00	0.00
21,300.0	90.00	359.62	12,228.0	8,637.9	403.9	8,647.1	0.00	0.00	0.00
21,400.0	90.00	359.62	12,228.0	8,737.9	403.2	8,747.0	0.00	0.00	0.00
21,500.0	90.00	359.62	12,228.0	8,837.9	402.6	8,846.9	0.00	0.00	0.00
21,600.0	90.00	359.62	12,228.0	8,937.9	401.9	8,946.8	0.00	0.00	0.00
21,700.0	90.00	359.62	12,228.0	9,037.8	401.2	9,046.7	0.00	0.00	0.00
21,800.0	90.00	359.62	12,228.0	9,137.8	400.6	9,146.6	0.00	0.00	0.00
21,900.0	90.00	359.62	12,228.0	9,237.8	399.9	9,246.4	0.00	0.00	0.00
22,000.0	90.00	359.62	12,228.0	9,337.8	399.3	9,346.3	0.00	0.00	0.00
22,100.0	90.00	359.62	12,228.0	9,437.8	398.6	9,446.2	0.00	0.00	0.00
22,200.0	90.00	359.62	12,228.0	9,537.8	397.9	9,546.1	0.00	0.00	0.00
22,300.0	90.00	359.62	12,228.0	9,637.8	397.3	9,646.0	0.00	0.00	0.00
22,400.0	90.00	359.62	12,228.0	9,737.8	396.6	9,745.9	0.00	0.00	0.00
22,487.3	90.00	359.62	12,228.0	9,825.1	396.0	9,833.1	0.00	0.00	0.00
LTP (MACHO NACHO STATE COM #603H)									
22,500.0	90.00	359.62	12,228.0	9,837.8	395.9	9,845.8	0.00	0.00	0.00
22,537.3	90.00	359.62	12,228.0	9,875.1	395.7	9,883.0	0.00	0.00	0.00
TD at 22537.3 - PBHL (MACHO NACHO STATE COM #603H)									

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
LTP (MACHO NACHO S - plan hits target center - Point	0.00	0.00	12,228.0	9,825.1	396.0	456,722.60	724,312.50	32° 15' 12.829 N	103° 36' 27.852 W
PBHL (MACHO NACHO - plan hits target center - Rectangle (sides W100.0 H10,407.5 D20.0)	0.00	179.62	12,228.0	9,875.1	395.7	456,772.60	724,312.20	32° 15' 13.324 N	103° 36' 27.852 W
FTP (MACHO NACHO S - plan misses target center by 163.2usft at 12200.0usft MD (12101.0 TVD, -429.8 N, 464.0 E) - Circle (radius 50.0)	0.00	0.00	12,228.0	-532.2	464.9	446,365.30	724,381.40	32° 13' 30.333 N	103° 36' 27.865 W

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #603H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3601.3usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3601.3usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #603H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Casing Points

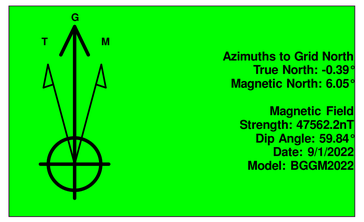
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
22,537.3	12,228.0	5-1/2" Production Casing	5-1/2	6-3/4

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,500.0	1,500.0	0.0	0.0	Start Build 2.00
1,950.0	1,948.1	-27.6	22.0	Start 4091.0 hold at 1950.0 MD
6,041.0	5,988.8	-527.9	421.0	Start Drop -1.00
6,940.9	6,885.0	-583.0	465.0	Start 4865.5 hold at 6940.9 MD
11,806.4	11,750.5	-583.0	465.0	Start DLS 12.00 TFO 359.62
12,556.4	12,228.0	-105.5	461.8	Start 9980.9 hold at 12556.4 MD
22,537.3	12,228.0	9,875.1	395.7	TD at 22537.3

ConocoPhillips

Project:	LEA COUNTY SOUTHEAST
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)
Well:	MACHO NACHO STATE COM #603H
Wellbore:	OWB
Design:	PWP0
GL:	3574.3
KB=27 @ 3601.3usft	



Azimuths to Grid North
True North: -0.39°
Magnetic North: 6.05°

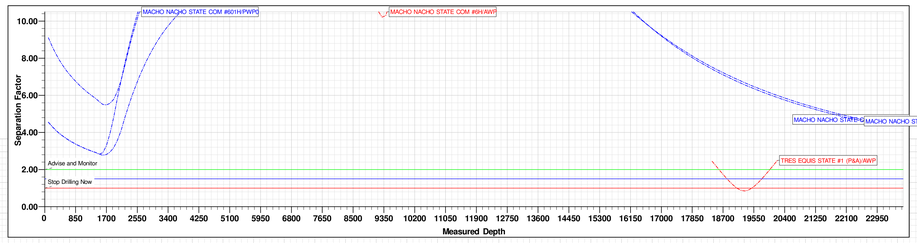
Magnetic Field
Strength: 47562.2nT
Dip Angle: 59.84°
Date: 9/1/2022
Model: BGGM2022

WELL DETAILS: MACHO NACHO STATE COM #603H

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	446897.50	723916.50	32° 13' 35.631 N	103° 36' 33.235 W

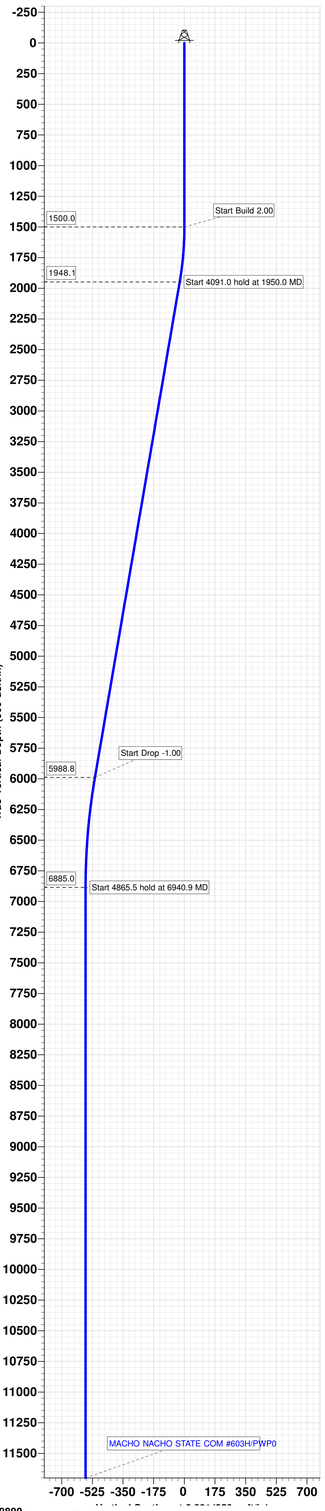
DESIGN TARGET DETAILS

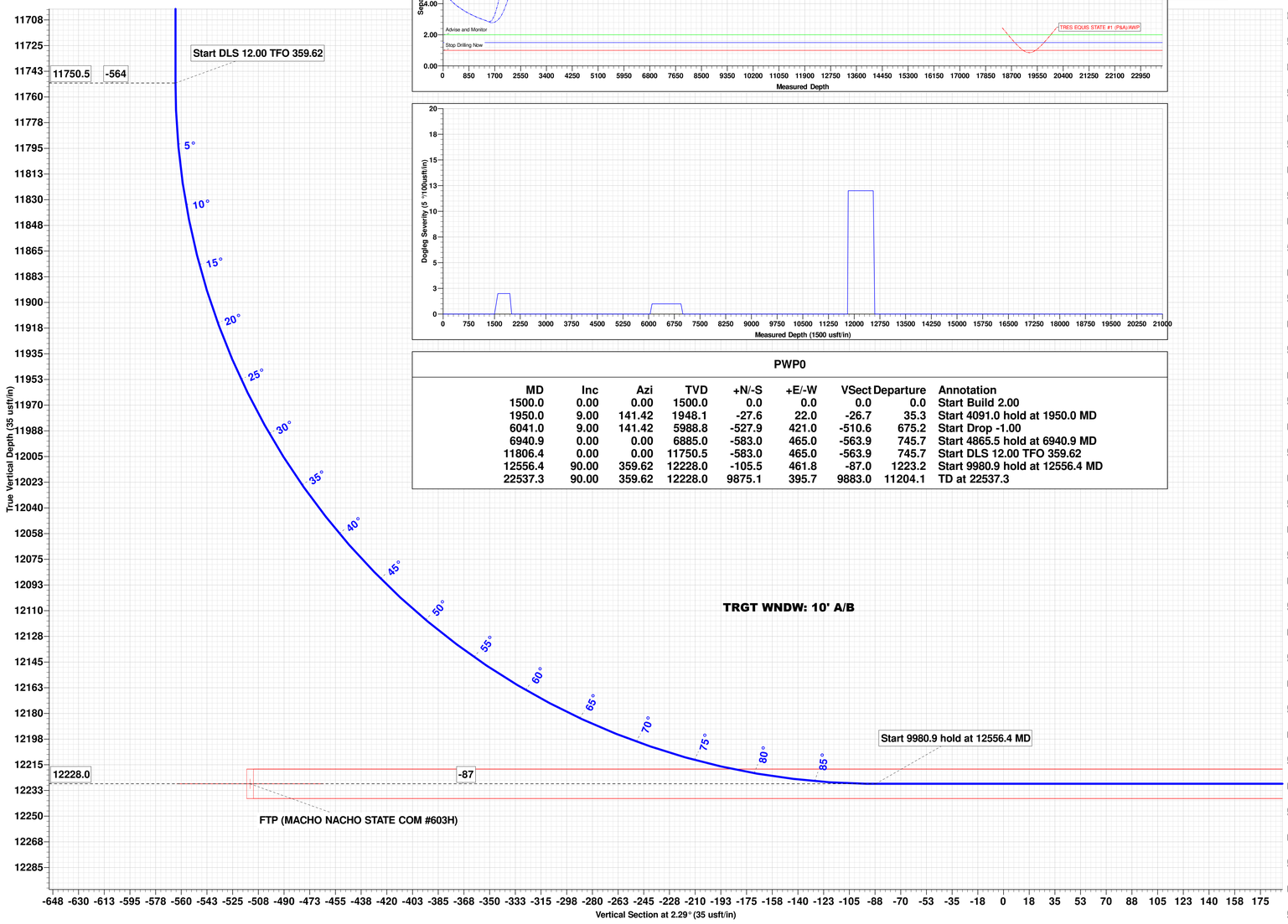
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
FTP (MACHO NACHO STATE COM #603H)	12228.0	-532.2	464.9	446365.30	724381.40	Circle (Radius: 50.0)
LTP (MACHO NACHO STATE COM #603H)	12228.0	9825.1	396.0	456722.60	724312.50	Point
PBHL (MACHO NACHO STATE COM #603H)	12228.0	9875.1	395.7	456772.60	724312.20	Rectangle (Sides: L10407.5 W100.0)

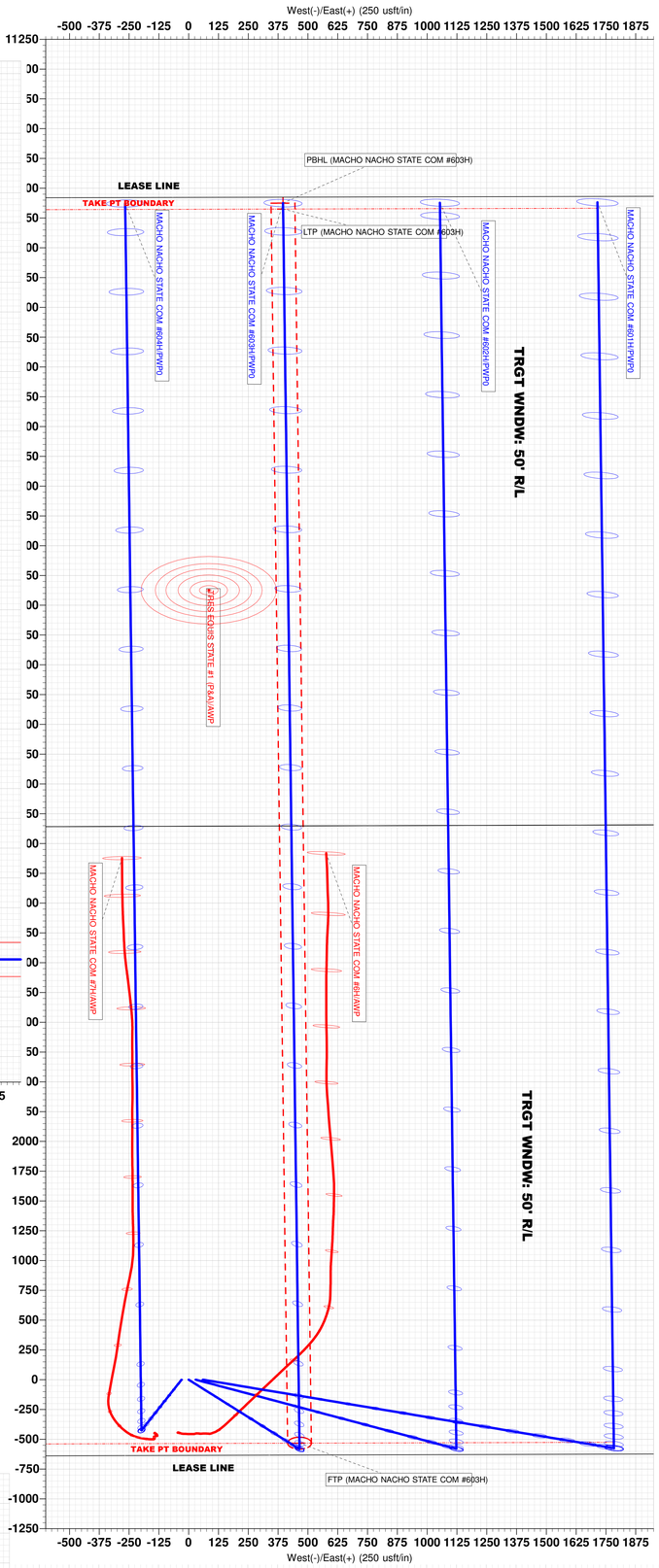


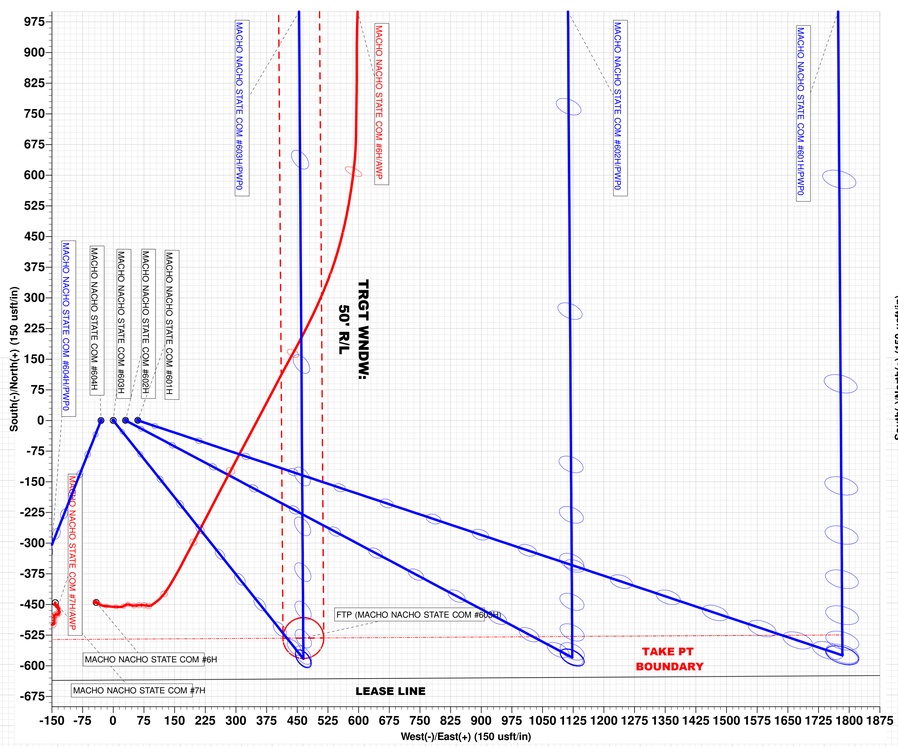
PWP0

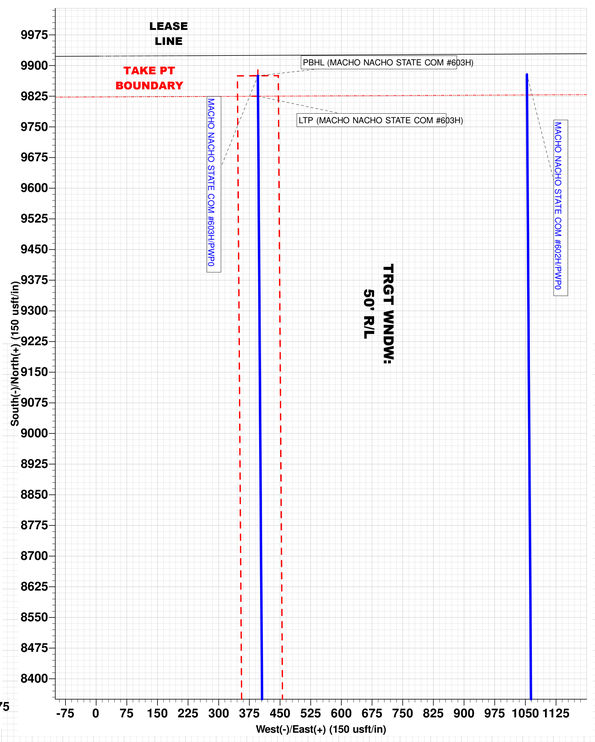
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1500.0	0.00	0.00	1500.0	0.0	0.0	0.0	0.0	Start Build 2.00
1950.0	9.00	141.42	1948.1	-27.6	22.0	-26.7	35.3	Start 4091.0 hold at 1950.0 MD
6041.0	9.00	141.42	5988.8	-527.9	421.0	-510.6	675.2	Start Drop -1.00
6940.9	0.00	0.00	6885.0	-583.0	465.0	-563.9	745.7	Start 4865.5 hold at 6940.9 MD
11806.4	0.00	0.00	11750.5	-583.0	465.0	-563.9	745.7	Start DLS 12.00 TFO 359.62
12556.4	90.00	359.62	12228.0	-105.5	461.8	-87.0	1223.2	Start 9980.9 hold at 12556.4 MD
22537.3	90.00	359.62	12228.0	9875.1	395.7	9883.0	11204.1	TD at 22537.3

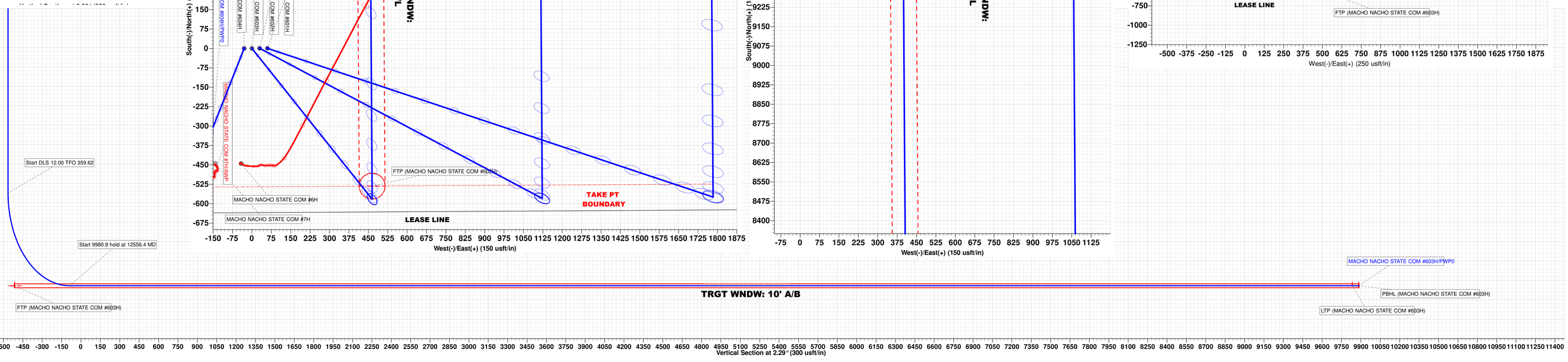












Macho Nacho State Com #603H

Casing and Cement

String	Hole Size	Csg OD	PPF	Depth	Sx Cement	TOC
Surface	14-3/4”	10-3/4””	45.5#	1,575’	1,000	0’
Intermediate	9-7/8” x 8-3/4”	7-5/8”	29.7#	11,610’	1,000	0’
Production	6-3/4”	5-1/2”	23.0#	22,537’	1,600	0’

Well Plan

Drill 14-3/4” hole to ~1,575’ with fresh water. Run 10-3/4” 45.5# J-55 BTC casing to TD and cement to surface in one stage (preset).

Drill 9-7/8” x 8-3/4” (taper at ~8,000’ MD) vertical hole to ~11,610’ with saturated brine. Run 7-5/8” 29.7# L80-IC BTC (0’-8,000’) / P110 W513 (8,000’-11,610’) casing to TD and cement to surface in one stage.

Drill 6-3/4” curve and lateral to ~22,537’ with OBM. Run 5-1/2” 23# P-110-CY TXP BTC (0’-11,110’) / P110-CY W441 (11,110’-22,537’) casing to TD and cement to surface in one stage.

Well Control

After setting 10-3/4” casing and installing 10,000 psi casing head, NU 13-5/8" Cameron BOP. Test casing to 1500 psi, annular to 2500 psi and other BOP equipment to 10,000 psi.

Type	Working Pressure	Test Pressure	Manufacture
Double Ram	10,000 psi	10,000 psi	Cameron

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: COG Operating LLC **OGRID:** 229137 **Date:** 12 / 20 / 23

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Macho Nacho State Com 603H	30-025-	O-7-24S-33E	635' FSL & 2110' FEL	± 1950	± 3853	± 4553

IV. Central Delivery Point Name: _____ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Macho Nacho State Com 603H	Pending	4/8/2024	± 25 days from spud	8/6/2024	8/16/2024	8/21/2024

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

VI. Separation Equipment

How Operator will size separation equipment to optimize gas capture:

All ConocoPhillips production facility equipment will be sized per industry standards (API 12J) with adequate retention time to effectively separate all phases of production. Each project will take into consideration the number of wells and type curves for each formation pool to ensure adequate facility capacity. Design considerations will also include review of all piping, tanks, VRU's and associated equipment to ensure optimized gas capture minimized risk of release.

VII. Operational Practices

Actions Operator will take to comply with the requirements below:

B. Drilling Operations

- During drilling, flare stacks will be located a minimum of 100 feet from the nearest surface hole location. All gas is captured or combusted. If an emergency or malfunction occurs, gas will be flared or vented for public health, safety, and the environment and be properly reported to the NMOCD pursuant to 19.15.27.8.G.
- Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.

C. Completion Operations

- During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.
- Individual well test separators will be set to properly separate gas and liquids. A temporary test separator will be utilized initially to process volumes. In addition, separators will be tied into flowback tanks which will be tied into the gas processing equipment for sales down a pipeline.

D. Venting and flaring during production operations

- During each phase of well life (drilling, completion and production) of a ConocoPhillips well, COP personnel will follow all necessary procedures to ensure both the operation and the equipment are within the NMAC 19.15.27.8 Subsection D guidelines.
- During well operations that require unloading of the well to atmospheric pressure, all reasonable actions will be taken to minimize vented gas
- Through the life of the well all flaring shall be measured, and venting events quantified using the data available and industry best practice.

E. Performance standards for separation, storage tank and flare equipment

- All storage tanks and separation equipment are designed minimize risk of liquid or vapor release and optimize gas capture. This includes automation for automatic gauging and pressure monitoring.

- All flare stacks are equipped with auto ignition devices and/or continuous pilots and are designed to operate at maximum combustion efficiency pursuant NMAC 19.15.27.8 Subsection E. Flares will follow COP spacing guidelines to ensure they are a safe distance from combustibles and operations equipment.
- COP personnel will conduct routine AVO inspections on a regular basis per NMAC 19.15.27.8 Subsection E guidelines.

F. Measurement of vented and flared natural gas.

- Measurement equipment will be installed to quantify gas flared during drilling, completion and production of the well.
- All measurement devices installed will meet accuracy ratings per AGA and API standards.
- Measurement devices will be installed without manifolds that allow diversion of gas around the metering element, except for the sole purpose of inspection of servicing the measurement device.

VIII. Best Management Practices

- Operator will curtail or shut in production, within reasonable limits, during upset conditions to minimize venting and flaring.
- When feasible, Operator will use equipment to capture gas that would otherwise be vented or flared.
- During completions and production operations Operator will minimize blowdowns to atmosphere
- When feasible, Operator will use electric or air actuated equipment to reduce bleed emissions

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	Mayte Reyes
Printed Name:	Mayte Reyes
Title:	Sr. Regulatory Coodinator
E-mail Address:	mayte.x.reyes@conocophillips.com
Date:	12/20/2023
Phone:	575-748-6945

OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

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

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) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011

Permit 357264

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	229137
	3. API Number 30-025-52428

4. Property Code	5. Property Name	6. Well No.
335192	MACHO NACHO STATE COM	605H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
N	7	24S	33E		300	S	1395	W	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
C	6	24S	33E	3	50	N	2311	W	Lea

9. Pool Information

TRIPLE X;BONE SPRING, WEST	96674

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3570
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	22456	Bone Spring		1/16/2024
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.75	10.75	45.5	1530	980	
Int1	9.875	7.625	29.7	11700	1010	
Prod	6.75	5.5	23	22456	1600	

Casing/Cement Program: Additional Comments

Drill 14-3/4" hole to ~1,530' with fresh water. Run 10-3/4" 45.5# J-55 BTC casing to TD and cement to surface in one stage (preset). Drill 9-7/8" x 8-3/4" (taper at ~8,000' MD) vertical hole to ~11,700' with saturated brine. Run 7-5/8" 29.7# L80-IC BTC (0'-8,000') / P110 W513 (8,000'-11,700') casing to TD and cement to surface in one stage. Drill 6-3/4" curve and lateral to ~22,456' with OBM. Run 5-1/2" 23# P-110-CY TXP BTC (0'-11,200') / P110-CY W441 (11,200'-22,456') casing to TD and cement to surface in one stage.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	10000	10000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.

Signature:

OIL CONSERVATION DIVISION

Printed Name:	Electronically filed by Robyn Russell	Approved By:	Paul F Kautz
Title:	Supervisor Delaware Regulatory	Title:	Geologist
Email Address:	robyn.m.russell@conocophillips.com	Approved Date:	1/12/2024 Expiration Date: 1/12/2026
Date:	1/9/2024 Phone: 432-685-4385	Conditions of Approval Attached	

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-	96674	Triple X; Bone Spring, West

Property Code	Property Name	Well Number
	MACHO NACHO STATE COM	605H

OGRID No.	Operator Name	Elevation
2291137	COG OPERATING, LLC	3570.5'

Surface Location

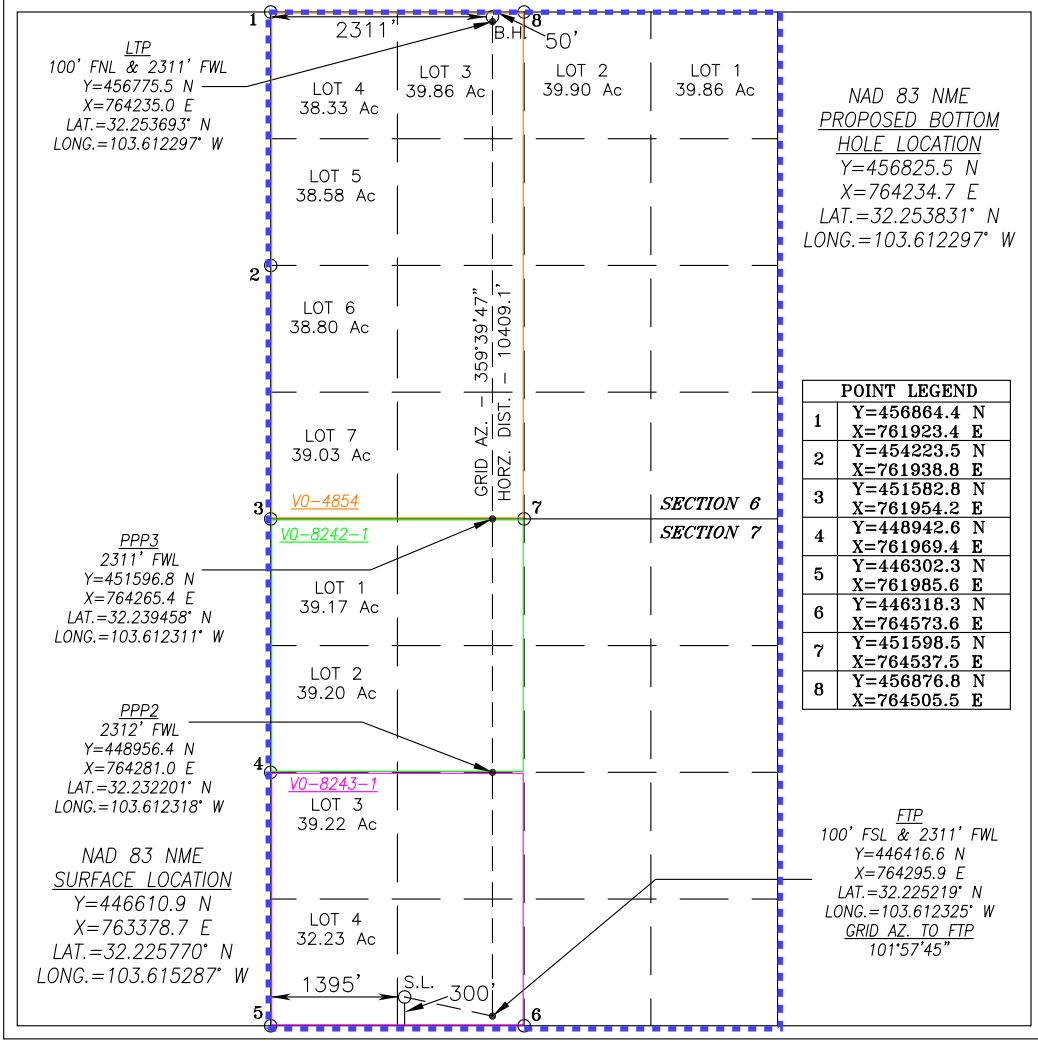
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	7	24-S	33-E		300	SOUTH	1395	WEST	LEA

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
3	6	24-S	33-E		50	NORTH	2311	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
1268.12			

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	
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3	Y=451582.8 N X=761954.2 E
4	Y=448942.6 N X=761969.4 E
5	Y=446302.3 N X=761985.6 E
6	Y=446318.3 N X=764573.6 E
7	Y=451598.5 N X=764537.5 E
8	Y=456876.8 N X=764505.5 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 1/4/2024
Signature Date

Mayte Reyes
Printed Name

mayte.x.reyes@cop.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.

AUGUST 9, 2023
Date of Survey

Signature & Seal of Professional Surveyor

CHAD L. HARCROW
NEW MEXICO
17777
LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 8/22/23
Certificate No. CHAD HARCROW 17777
W.O. # 23-611 DRAWN BY: WN

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Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form APD Comments

Permit 357264

PERMIT COMMENTS

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	30-025-52428
	Well: MACHO NACHO STATE COM #605H

Created By	Comment	Comment Date
mreyes4	OIL: COG Operating 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 would be necessary.	1/9/2024

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) 476-3470 Fax:(505) 476-3462

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

Form APD Conditions

Permit 357264

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	30-025-52428
	Well: MACHO NACHO STATE COM #605H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Will require administrative order for non-standard spacing unit
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

DELAWARE BASIN EAST

LEA COUNTY SOUTHEAST
MACHO NACHO STATE PROJECT (BULLDOG 2433)
MACHO NACHO STATE COM #605H

OWB

Plan: PWP0

Standard Planning Report

14 December, 2023

ConocoPhillips
Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #605H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3597.5usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3597.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project LEA COUNTY SOUTHEAST

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		

Site MACHO NACHO STATE PROJECT (BULLDOG 2433)

Site Position:		**Northing:**	398,637.10 usft	**Latitude:**	32° 5' 36.820 N
From:	Map	**Easting:**	741,887.40 usft	**Longitude:**	103° 33' 8.116 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well MACHO NACHO STATE COM #605H

Well Position	**+N/-S**	0.0 usft	**Northing:**	446,552.10 usft	**Latitude:**	32° 13' 32.327 N
	+E/-W	0.0 usft	**Easting:**	722,194.50 usft	**Longitude:**	103° 36' 53.307 W
Position Uncertainty		3.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,570.5 usft
Grid Convergence:		0.38 °				

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	9/1/2022	6.44	59.84	47,561.71109932

Design PWP0

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	4.79

Plan Survey Tool Program **Date** 12/14/2023

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	1,496.5	PWP0 (OWB)	r.5 SDI_KPR_WL_NS-CT SDI Keeper Wireline Gyrocomp	
2	1,496.5	11,843.0	PWP0 (OWB)	r.5 MWD+IFR1 OWSG MWD + IFR1 rev.5	
3	11,843.0	22,455.0	PWP0 (OWB)	r.5 MWD+IFR1+MS OWSG MWD + IFR1 + Multi-St	

ConocoPhillips

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Wellbore:	OWB		
Design:	PWP0		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,049.8	11.00	98.34	2,046.5	-7.6	52.0	2.00	2.00	0.00	98.34	
6,078.4	11.00	98.34	6,001.1	-119.1	812.4	0.00	0.00	0.00	0.00	
7,178.1	0.00	0.01	7,094.0	-134.4	916.5	1.00	-1.00	0.00	180.00	
11,834.6	0.00	0.01	11,750.5	-134.4	916.5	0.00	0.00	0.00	0.00	VT (MACHO NACHO
12,584.6	90.00	359.67	12,228.0	343.1	913.7	12.00	12.00	-0.05	359.67	
22,406.0	90.00	359.67	12,228.0	10,164.3	856.7	0.00	0.00	0.00	0.00	LTP (MACHO NACHO
22,456.0	90.00	359.67	12,228.0	10,214.3	856.4	0.00	0.00	0.00	0.00	PBHL (MACHO NACH

ConocoPhillips

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Well:	MACHO NACHO STATE COM #605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,600.0	2.00	98.34	1,600.0	-0.3	1.7	-0.1	2.00	2.00	0.00
1,700.0	4.00	98.34	1,699.8	-1.0	6.9	-0.4	2.00	2.00	0.00
1,800.0	6.00	98.34	1,799.5	-2.3	15.5	-1.0	2.00	2.00	0.00
1,900.0	8.00	98.34	1,898.7	-4.0	27.6	-1.7	2.00	2.00	0.00
2,000.0	10.00	98.34	1,997.5	-6.3	43.1	-2.7	2.00	2.00	0.00
2,049.8	11.00	98.34	2,046.5	-7.6	52.0	-3.3	2.00	2.00	0.00
Start 4028.6 hold at 2049.8 MD									
2,100.0	11.00	98.34	2,095.7	-9.0	61.5	-3.8	0.00	0.00	0.00
2,200.0	11.00	98.34	2,193.9	-11.8	80.4	-5.0	0.00	0.00	0.00
2,300.0	11.00	98.34	2,292.0	-14.6	99.3	-6.2	0.00	0.00	0.00
2,400.0	11.00	98.34	2,390.2	-17.3	118.1	-7.4	0.00	0.00	0.00
2,500.0	11.00	98.34	2,488.4	-20.1	137.0	-8.6	0.00	0.00	0.00
2,600.0	11.00	98.34	2,586.5	-22.9	155.9	-9.8	0.00	0.00	0.00
2,700.0	11.00	98.34	2,684.7	-25.6	174.8	-10.9	0.00	0.00	0.00
2,800.0	11.00	98.34	2,782.9	-28.4	193.6	-12.1	0.00	0.00	0.00
2,900.0	11.00	98.34	2,881.0	-31.2	212.5	-13.3	0.00	0.00	0.00
3,000.0	11.00	98.34	2,979.2	-33.9	231.4	-14.5	0.00	0.00	0.00
3,100.0	11.00	98.34	3,077.3	-36.7	250.3	-15.7	0.00	0.00	0.00
3,200.0	11.00	98.34	3,175.5	-39.5	269.1	-16.8	0.00	0.00	0.00
3,300.0	11.00	98.34	3,273.7	-42.2	288.0	-18.0	0.00	0.00	0.00
3,400.0	11.00	98.34	3,371.8	-45.0	306.9	-19.2	0.00	0.00	0.00
3,500.0	11.00	98.34	3,470.0	-47.8	325.7	-20.4	0.00	0.00	0.00
3,600.0	11.00	98.34	3,568.2	-50.5	344.6	-21.6	0.00	0.00	0.00
3,700.0	11.00	98.34	3,666.3	-53.3	363.5	-22.7	0.00	0.00	0.00
3,800.0	11.00	98.34	3,764.5	-56.1	382.4	-23.9	0.00	0.00	0.00
3,900.0	11.00	98.34	3,862.7	-58.8	401.2	-25.1	0.00	0.00	0.00
4,000.0	11.00	98.34	3,960.8	-61.6	420.1	-26.3	0.00	0.00	0.00
4,100.0	11.00	98.34	4,059.0	-64.4	439.0	-27.5	0.00	0.00	0.00
4,200.0	11.00	98.34	4,157.1	-67.1	457.9	-28.6	0.00	0.00	0.00
4,300.0	11.00	98.34	4,255.3	-69.9	476.7	-29.8	0.00	0.00	0.00
4,400.0	11.00	98.34	4,353.5	-72.7	495.6	-31.0	0.00	0.00	0.00
4,500.0	11.00	98.34	4,451.6	-75.4	514.5	-32.2	0.00	0.00	0.00
4,600.0	11.00	98.34	4,549.8	-78.2	533.4	-33.4	0.00	0.00	0.00
4,700.0	11.00	98.34	4,648.0	-81.0	552.2	-34.5	0.00	0.00	0.00
4,800.0	11.00	98.34	4,746.1	-83.7	571.1	-35.7	0.00	0.00	0.00
4,900.0	11.00	98.34	4,844.3	-86.5	590.0	-36.9	0.00	0.00	0.00

ConocoPhillips

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Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3597.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.0	11.00	98.34	4,942.5	-89.3	608.9	-38.1	0.00	0.00	0.00
5,100.0	11.00	98.34	5,040.6	-92.0	627.7	-39.3	0.00	0.00	0.00
5,200.0	11.00	98.34	5,138.8	-94.8	646.6	-40.4	0.00	0.00	0.00
5,300.0	11.00	98.34	5,237.0	-97.6	665.5	-41.6	0.00	0.00	0.00
5,400.0	11.00	98.34	5,335.1	-100.3	684.3	-42.8	0.00	0.00	0.00
5,500.0	11.00	98.34	5,433.3	-103.1	703.2	-44.0	0.00	0.00	0.00
5,600.0	11.00	98.34	5,531.4	-105.9	722.1	-45.2	0.00	0.00	0.00
5,700.0	11.00	98.34	5,629.6	-108.6	741.0	-46.3	0.00	0.00	0.00
5,800.0	11.00	98.34	5,727.8	-111.4	759.8	-47.5	0.00	0.00	0.00
5,900.0	11.00	98.34	5,825.9	-114.2	778.7	-48.7	0.00	0.00	0.00
6,000.0	11.00	98.34	5,924.1	-116.9	797.6	-49.9	0.00	0.00	0.00
6,078.4	11.00	98.34	6,001.1	-119.1	812.4	-50.8	0.00	0.00	0.00
Start Drop -1.00									
6,100.0	10.78	98.34	6,022.3	-119.7	816.4	-51.1	1.00	-1.00	0.00
6,200.0	9.78	98.34	6,120.7	-122.3	834.1	-52.2	1.00	-1.00	0.00
6,300.0	8.78	98.34	6,219.4	-124.6	850.0	-53.2	1.00	-1.00	0.00
6,400.0	7.78	98.34	6,318.3	-126.7	864.3	-54.1	1.00	-1.00	0.00
6,500.0	6.78	98.34	6,417.5	-128.6	876.8	-54.8	1.00	-1.00	0.00
6,600.0	5.78	98.34	6,516.9	-130.1	887.6	-55.5	1.00	-1.00	0.00
6,700.0	4.78	98.34	6,616.5	-131.5	896.8	-56.1	1.00	-1.00	0.00
6,800.0	3.78	98.34	6,716.2	-132.6	904.1	-56.6	1.00	-1.00	0.00
6,900.0	2.78	98.34	6,816.0	-133.4	909.8	-56.9	1.00	-1.00	0.00
7,000.0	1.78	98.34	6,915.9	-134.0	913.7	-57.2	1.00	-1.00	0.00
7,100.0	0.78	98.34	7,015.9	-134.3	916.0	-57.3	1.00	-1.00	0.00
7,178.1	0.00	0.01	7,094.0	-134.4	916.5	-57.3	1.00	-1.00	0.00
Start 4656.5 hold at 7178.1 MD									
7,200.0	0.00	0.00	7,115.9	-134.4	916.5	-57.3	0.00	0.00	0.00
7,300.0	0.00	0.00	7,215.9	-134.4	916.5	-57.3	0.00	0.00	0.00
7,400.0	0.00	0.00	7,315.9	-134.4	916.5	-57.3	0.00	0.00	0.00
7,500.0	0.00	0.00	7,415.9	-134.4	916.5	-57.3	0.00	0.00	0.00
7,600.0	0.00	0.00	7,515.9	-134.4	916.5	-57.3	0.00	0.00	0.00
7,700.0	0.00	0.00	7,615.9	-134.4	916.5	-57.3	0.00	0.00	0.00
7,800.0	0.00	0.00	7,715.9	-134.4	916.5	-57.3	0.00	0.00	0.00
7,900.0	0.00	0.00	7,815.9	-134.4	916.5	-57.3	0.00	0.00	0.00
8,000.0	0.00	0.00	7,915.9	-134.4	916.5	-57.3	0.00	0.00	0.00
8,100.0	0.00	0.00	8,015.9	-134.4	916.5	-57.3	0.00	0.00	0.00
8,200.0	0.00	0.00	8,115.9	-134.4	916.5	-57.3	0.00	0.00	0.00
8,300.0	0.00	0.00	8,215.9	-134.4	916.5	-57.3	0.00	0.00	0.00
8,400.0	0.00	0.00	8,315.9	-134.4	916.5	-57.3	0.00	0.00	0.00
8,500.0	0.00	0.00	8,415.9	-134.4	916.5	-57.3	0.00	0.00	0.00
8,600.0	0.00	0.00	8,515.9	-134.4	916.5	-57.3	0.00	0.00	0.00
8,700.0	0.00	0.00	8,615.9	-134.4	916.5	-57.3	0.00	0.00	0.00
8,800.0	0.00	0.00	8,715.9	-134.4	916.5	-57.3	0.00	0.00	0.00
8,900.0	0.00	0.00	8,815.9	-134.4	916.5	-57.3	0.00	0.00	0.00
9,000.0	0.00	0.00	8,915.9	-134.4	916.5	-57.3	0.00	0.00	0.00
9,100.0	0.00	0.00	9,015.9	-134.4	916.5	-57.3	0.00	0.00	0.00
9,200.0	0.00	0.00	9,115.9	-134.4	916.5	-57.3	0.00	0.00	0.00
9,300.0	0.00	0.00	9,215.9	-134.4	916.5	-57.3	0.00	0.00	0.00
9,400.0	0.00	0.00	9,315.9	-134.4	916.5	-57.3	0.00	0.00	0.00
9,500.0	0.00	0.00	9,415.9	-134.4	916.5	-57.3	0.00	0.00	0.00
9,600.0	0.00	0.00	9,515.9	-134.4	916.5	-57.3	0.00	0.00	0.00
9,700.0	0.00	0.00	9,615.9	-134.4	916.5	-57.3	0.00	0.00	0.00
9,800.0	0.00	0.00	9,715.9	-134.4	916.5	-57.3	0.00	0.00	0.00

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Design:	PWP0		

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	0.00	0.00	9,815.9	-134.4	916.5	-57.3	0.00	0.00	0.00
10,000.0	0.00	0.00	9,915.9	-134.4	916.5	-57.3	0.00	0.00	0.00
10,100.0	0.00	0.00	10,015.9	-134.4	916.5	-57.3	0.00	0.00	0.00
10,200.0	0.00	0.00	10,115.9	-134.4	916.5	-57.3	0.00	0.00	0.00
10,300.0	0.00	0.00	10,215.9	-134.4	916.5	-57.3	0.00	0.00	0.00
10,400.0	0.00	0.00	10,315.9	-134.4	916.5	-57.3	0.00	0.00	0.00
10,500.0	0.00	0.00	10,415.9	-134.4	916.5	-57.3	0.00	0.00	0.00
10,600.0	0.00	0.00	10,515.9	-134.4	916.5	-57.3	0.00	0.00	0.00
10,700.0	0.00	0.00	10,615.9	-134.4	916.5	-57.3	0.00	0.00	0.00
10,800.0	0.00	0.00	10,715.9	-134.4	916.5	-57.3	0.00	0.00	0.00
10,900.0	0.00	0.00	10,815.9	-134.4	916.5	-57.3	0.00	0.00	0.00
11,000.0	0.00	0.00	10,915.9	-134.4	916.5	-57.3	0.00	0.00	0.00
11,100.0	0.00	0.00	11,015.9	-134.4	916.5	-57.3	0.00	0.00	0.00
11,200.0	0.00	0.00	11,115.9	-134.4	916.5	-57.3	0.00	0.00	0.00
11,300.0	0.00	0.00	11,215.9	-134.4	916.5	-57.3	0.00	0.00	0.00
11,400.0	0.00	0.00	11,315.9	-134.4	916.5	-57.3	0.00	0.00	0.00
11,500.0	0.00	0.00	11,415.9	-134.4	916.5	-57.3	0.00	0.00	0.00
11,600.0	0.00	0.00	11,515.9	-134.4	916.5	-57.3	0.00	0.00	0.00
11,700.0	0.00	0.00	11,615.9	-134.4	916.5	-57.3	0.00	0.00	0.00
11,800.0	0.00	0.00	11,715.9	-134.4	916.5	-57.3	0.00	0.00	0.00
11,834.6	0.00	0.00	11,750.5	-134.4	916.5	-57.3	0.00	0.00	0.00
Start DLS 12.00 TFO 359.67 - VT (MACHO NACHO STATE COM #605H)									
11,900.0	7.85	359.67	11,815.7	-129.9	916.5	-52.9	12.00	12.00	0.00
12,000.0	19.85	359.67	11,912.6	-106.0	916.3	-29.1	12.00	12.00	0.00
12,100.0	31.85	359.67	12,002.5	-62.5	916.1	14.3	12.00	12.00	0.00
12,197.3	43.53	359.67	12,079.3	-3.1	915.7	73.4	12.00	12.00	0.00
FTP (MACHO NACHO STATE COM #605H)									
12,200.0	43.85	359.67	12,081.3	-1.2	915.7	75.3	12.00	12.00	0.00
12,300.0	55.85	359.67	12,145.6	75.1	915.3	151.3	12.00	12.00	0.00
12,400.0	67.85	359.67	12,192.7	163.1	914.8	238.9	12.00	12.00	0.00
12,500.0	79.85	359.67	12,220.5	258.9	914.2	334.4	12.00	12.00	0.00
12,584.6	90.00	359.67	12,228.0	343.1	913.7	418.2	12.00	12.00	0.00
Start 9821.4 hold at 12584.6 MD									
12,600.0	90.00	359.67	12,228.0	358.5	913.6	433.6	0.00	0.00	0.00
12,700.0	90.00	359.67	12,228.0	458.5	913.0	533.2	0.00	0.00	0.00
12,800.0	90.00	359.67	12,228.0	558.5	912.5	632.8	0.00	0.00	0.00
12,900.0	90.00	359.67	12,228.0	658.5	911.9	732.4	0.00	0.00	0.00
13,000.0	90.00	359.67	12,228.0	758.5	911.3	832.0	0.00	0.00	0.00
13,100.0	90.00	359.67	12,228.0	858.5	910.7	931.6	0.00	0.00	0.00
13,200.0	90.00	359.67	12,228.0	958.5	910.1	1,031.2	0.00	0.00	0.00
13,300.0	90.00	359.67	12,228.0	1,058.5	909.6	1,130.8	0.00	0.00	0.00
13,400.0	90.00	359.67	12,228.0	1,158.5	909.0	1,230.4	0.00	0.00	0.00
13,500.0	90.00	359.67	12,228.0	1,258.5	908.4	1,330.0	0.00	0.00	0.00
13,600.0	90.00	359.67	12,228.0	1,358.5	907.8	1,429.6	0.00	0.00	0.00
13,700.0	90.00	359.67	12,228.0	1,458.5	907.2	1,529.2	0.00	0.00	0.00
13,800.0	90.00	359.67	12,228.0	1,558.5	906.7	1,628.8	0.00	0.00	0.00
13,900.0	90.00	359.67	12,228.0	1,658.5	906.1	1,728.4	0.00	0.00	0.00
14,000.0	90.00	359.67	12,228.0	1,758.5	905.5	1,828.0	0.00	0.00	0.00
14,100.0	90.00	359.67	12,228.0	1,858.5	904.9	1,927.6	0.00	0.00	0.00
14,200.0	90.00	359.67	12,228.0	1,958.5	904.3	2,027.2	0.00	0.00	0.00
14,300.0	90.00	359.67	12,228.0	2,058.5	903.8	2,126.8	0.00	0.00	0.00
14,400.0	90.00	359.67	12,228.0	2,158.5	903.2	2,226.4	0.00	0.00	0.00
14,500.0	90.00	359.67	12,228.0	2,258.5	902.6	2,326.0	0.00	0.00	0.00

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Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #605H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3597.5usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3597.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
14,600.0	90.00	359.67	12,228.0	2,358.5	902.0	2,425.6	0.00	0.00	0.00
14,700.0	90.00	359.67	12,228.0	2,458.5	901.4	2,525.2	0.00	0.00	0.00
14,800.0	90.00	359.67	12,228.0	2,558.5	900.8	2,624.8	0.00	0.00	0.00
14,900.0	90.00	359.67	12,228.0	2,658.5	900.3	2,724.4	0.00	0.00	0.00
15,000.0	90.00	359.67	12,228.0	2,758.5	899.7	2,824.0	0.00	0.00	0.00
15,100.0	90.00	359.67	12,228.0	2,858.5	899.1	2,923.6	0.00	0.00	0.00
15,200.0	90.00	359.67	12,228.0	2,958.5	898.5	3,023.2	0.00	0.00	0.00
15,300.0	90.00	359.67	12,228.0	3,058.5	897.9	3,122.8	0.00	0.00	0.00
15,400.0	90.00	359.67	12,228.0	3,158.5	897.4	3,222.4	0.00	0.00	0.00
15,500.0	90.00	359.67	12,228.0	3,258.5	896.8	3,322.0	0.00	0.00	0.00
15,600.0	90.00	359.67	12,228.0	3,358.5	896.2	3,421.6	0.00	0.00	0.00
15,700.0	90.00	359.67	12,228.0	3,458.5	895.6	3,521.2	0.00	0.00	0.00
15,800.0	90.00	359.67	12,228.0	3,558.5	895.0	3,620.8	0.00	0.00	0.00
15,900.0	90.00	359.67	12,228.0	3,658.4	894.5	3,720.4	0.00	0.00	0.00
16,000.0	90.00	359.67	12,228.0	3,758.4	893.9	3,820.0	0.00	0.00	0.00
16,100.0	90.00	359.67	12,228.0	3,858.4	893.3	3,919.6	0.00	0.00	0.00
16,200.0	90.00	359.67	12,228.0	3,958.4	892.7	4,019.2	0.00	0.00	0.00
16,300.0	90.00	359.67	12,228.0	4,058.4	892.1	4,118.8	0.00	0.00	0.00
16,400.0	90.00	359.67	12,228.0	4,158.4	891.6	4,218.4	0.00	0.00	0.00
16,500.0	90.00	359.67	12,228.0	4,258.4	891.0	4,318.0	0.00	0.00	0.00
16,600.0	90.00	359.67	12,228.0	4,358.4	890.4	4,417.6	0.00	0.00	0.00
16,700.0	90.00	359.67	12,228.0	4,458.4	889.8	4,517.2	0.00	0.00	0.00
16,800.0	90.00	359.67	12,228.0	4,558.4	889.2	4,616.8	0.00	0.00	0.00
16,900.0	90.00	359.67	12,228.0	4,658.4	888.7	4,716.4	0.00	0.00	0.00
17,000.0	90.00	359.67	12,228.0	4,758.4	888.1	4,816.0	0.00	0.00	0.00
17,100.0	90.00	359.67	12,228.0	4,858.4	887.5	4,915.6	0.00	0.00	0.00
17,200.0	90.00	359.67	12,228.0	4,958.4	886.9	5,015.2	0.00	0.00	0.00
17,300.0	90.00	359.67	12,228.0	5,058.4	886.3	5,114.8	0.00	0.00	0.00
17,400.0	90.00	359.67	12,228.0	5,158.4	885.8	5,214.4	0.00	0.00	0.00
17,500.0	90.00	359.67	12,228.0	5,258.4	885.2	5,314.0	0.00	0.00	0.00
17,600.0	90.00	359.67	12,228.0	5,358.4	884.6	5,413.6	0.00	0.00	0.00
17,700.0	90.00	359.67	12,228.0	5,458.4	884.0	5,513.2	0.00	0.00	0.00
17,800.0	90.00	359.67	12,228.0	5,558.4	883.4	5,612.8	0.00	0.00	0.00
17,900.0	90.00	359.67	12,228.0	5,658.4	882.9	5,712.4	0.00	0.00	0.00
18,000.0	90.00	359.67	12,228.0	5,758.4	882.3	5,812.0	0.00	0.00	0.00
18,100.0	90.00	359.67	12,228.0	5,858.4	881.7	5,911.6	0.00	0.00	0.00
18,200.0	90.00	359.67	12,228.0	5,958.4	881.1	6,011.2	0.00	0.00	0.00
18,300.0	90.00	359.67	12,228.0	6,058.4	880.5	6,110.8	0.00	0.00	0.00
18,400.0	90.00	359.67	12,228.0	6,158.4	880.0	6,210.4	0.00	0.00	0.00
18,500.0	90.00	359.67	12,228.0	6,258.4	879.4	6,310.0	0.00	0.00	0.00
18,600.0	90.00	359.67	12,228.0	6,358.4	878.8	6,409.6	0.00	0.00	0.00
18,700.0	90.00	359.67	12,228.0	6,458.4	878.2	6,509.2	0.00	0.00	0.00
18,800.0	90.00	359.67	12,228.0	6,558.4	877.6	6,608.8	0.00	0.00	0.00
18,900.0	90.00	359.67	12,228.0	6,658.4	877.1	6,708.4	0.00	0.00	0.00
19,000.0	90.00	359.67	12,228.0	6,758.4	876.5	6,808.0	0.00	0.00	0.00
19,100.0	90.00	359.67	12,228.0	6,858.4	875.9	6,907.6	0.00	0.00	0.00
19,200.0	90.00	359.67	12,228.0	6,958.4	875.3	7,007.2	0.00	0.00	0.00
19,300.0	90.00	359.67	12,228.0	7,058.4	874.7	7,106.8	0.00	0.00	0.00
19,400.0	90.00	359.67	12,228.0	7,158.4	874.1	7,206.4	0.00	0.00	0.00
19,500.0	90.00	359.67	12,228.0	7,258.4	873.6	7,306.0	0.00	0.00	0.00
19,600.0	90.00	359.67	12,228.0	7,358.4	873.0	7,405.6	0.00	0.00	0.00
19,700.0	90.00	359.67	12,228.0	7,458.4	872.4	7,505.2	0.00	0.00	0.00
19,800.0	90.00	359.67	12,228.0	7,558.4	871.8	7,604.8	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #605H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3597.5usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3597.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
19,900.0	90.00	359.67	12,228.0	7,658.4	871.2	7,704.4	0.00	0.00	0.00
20,000.0	90.00	359.67	12,228.0	7,758.4	870.7	7,804.0	0.00	0.00	0.00
20,100.0	90.00	359.67	12,228.0	7,858.4	870.1	7,903.6	0.00	0.00	0.00
20,200.0	90.00	359.67	12,228.0	7,958.4	869.5	8,003.2	0.00	0.00	0.00
20,300.0	90.00	359.67	12,228.0	8,058.4	868.9	8,102.8	0.00	0.00	0.00
20,400.0	90.00	359.67	12,228.0	8,158.4	868.3	8,202.4	0.00	0.00	0.00
20,500.0	90.00	359.67	12,228.0	8,258.4	867.8	8,302.0	0.00	0.00	0.00
20,600.0	90.00	359.67	12,228.0	8,358.4	867.2	8,401.6	0.00	0.00	0.00
20,700.0	90.00	359.67	12,228.0	8,458.4	866.6	8,501.2	0.00	0.00	0.00
20,800.0	90.00	359.67	12,228.0	8,558.4	866.0	8,600.8	0.00	0.00	0.00
20,900.0	90.00	359.67	12,228.0	8,658.4	865.4	8,700.4	0.00	0.00	0.00
21,000.0	90.00	359.67	12,228.0	8,758.4	864.9	8,800.0	0.00	0.00	0.00
21,100.0	90.00	359.67	12,228.0	8,858.4	864.3	8,899.6	0.00	0.00	0.00
21,200.0	90.00	359.67	12,228.0	8,958.4	863.7	8,999.2	0.00	0.00	0.00
21,300.0	90.00	359.67	12,228.0	9,058.4	863.1	9,098.8	0.00	0.00	0.00
21,400.0	90.00	359.67	12,228.0	9,158.4	862.5	9,198.4	0.00	0.00	0.00
21,500.0	90.00	359.67	12,228.0	9,258.4	862.0	9,298.0	0.00	0.00	0.00
21,600.0	90.00	359.67	12,228.0	9,358.4	861.4	9,397.6	0.00	0.00	0.00
21,700.0	90.00	359.67	12,228.0	9,458.4	860.8	9,497.2	0.00	0.00	0.00
21,800.0	90.00	359.67	12,228.0	9,558.3	860.2	9,596.8	0.00	0.00	0.00
21,900.0	90.00	359.67	12,228.0	9,658.3	859.6	9,696.4	0.00	0.00	0.00
22,000.0	90.00	359.67	12,228.0	9,758.3	859.1	9,796.0	0.00	0.00	0.00
22,100.0	90.00	359.67	12,228.0	9,858.3	858.5	9,895.6	0.00	0.00	0.00
22,200.0	90.00	359.67	12,228.0	9,958.3	857.9	9,995.2	0.00	0.00	0.00
22,300.0	90.00	359.67	12,228.0	10,058.3	857.3	10,094.8	0.00	0.00	0.00
22,400.0	90.00	359.67	12,228.0	10,158.3	856.7	10,194.4	0.00	0.00	0.00
22,406.0	90.00	359.67	12,228.0	10,164.3	856.7	10,200.3	0.00	0.00	0.00
Start 50.0 hold at 22406.0 MD - LTP (MACHO NACHO STATE COM #605H)									
22,456.0	90.00	359.67	12,228.0	10,214.3	856.4	10,250.1	0.00	0.00	0.00
TD at 22456.0 - PBHL (MACHO NACHO STATE COM #605H)									

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
VT (MACHO NACHO ST - plan hits target center - Circle (radius 25.0)	0.00	0.01	11,750.5	-134.4	916.5	446,417.73	723,110.98	32° 13' 30.937 N	103° 36' 42.649 W
PBHL (MACHO NACHO - plan hits target center - Rectangle (sides W100.0 H10,409.0 D20.0)	0.00	179.67	12,228.0	10,214.3	856.4	456,766.40	723,050.90	32° 15' 13.347 N	103° 36' 42.539 W
FTP (MACHO NACHO S - plan misses target center by 242.3usft at 12197.3usft MD (12079.3 TVD, -3.1 N, 915.7 E) - Circle (radius 50.0)	0.00	0.00	12,228.0	-194.4	917.2	446,357.70	723,111.70	32° 13' 30.342 N	103° 36' 42.646 W
LTP (MACHO NACHO S - plan hits target center - Point	0.00	0.00	12,228.0	10,164.3	856.7	456,716.40	723,051.20	32° 15' 12.852 N	103° 36' 42.540 W

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #605H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3597.5usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3597.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #605H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Casing Points

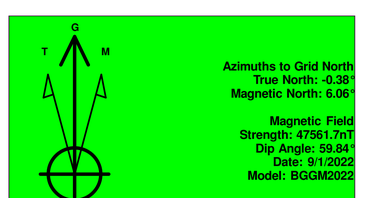
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
22,574.0		PB PROD. -5 1/2	5-1/2	6-3/4

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,500.0	1,500.0	0.0	0.0	Start Build 2.00
2,049.8	2,046.5	-7.6	52.0	Start 4028.6 hold at 2049.8 MD
6,078.4	6,001.1	-119.1	812.4	Start Drop -1.00
7,178.1	7,094.0	-134.4	916.5	Start 4656.5 hold at 7178.1 MD
11,834.6	11,750.5	-134.4	916.5	Start DLS 12.00 TFO 359.67
12,584.6	12,228.0	343.1	913.7	Start 9821.4 hold at 12584.6 MD
22,406.0	12,228.0	10,164.3	856.7	Start 50.0 hold at 22406.0 MD
22,456.0	12,228.0	10,214.3	856.4	TD at 22456.0

ConocoPhillips

Project:	LEA COUNTY SOUTHEAST
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)
Well:	MACHO NACHO STATE COM #605H
Wellbore:	OWB
Design:	PWP0
GL:	3570.5
KB=27 @ 3597.5usft	



Azimuths to Grid North
True North: -0.38°
Magnetic North: 6.06°

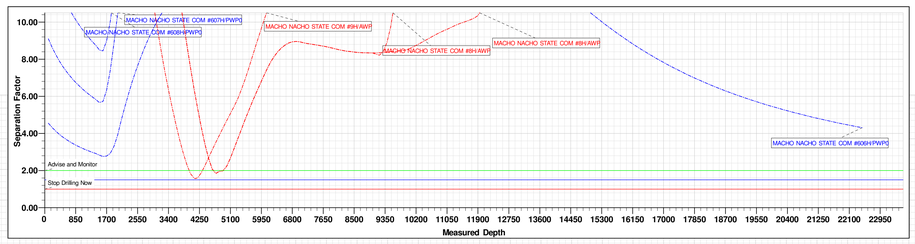
Magnetic Field
Strength: 47561.7nT
Dip Angle: 59.84°
Date: 9/1/2022
Model: BGGM2022

WELL DETAILS: MACHO NACHO STATE COM #605H

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	446552.10	722194.50	32° 13' 32.327 N	103° 36' 53.307 W

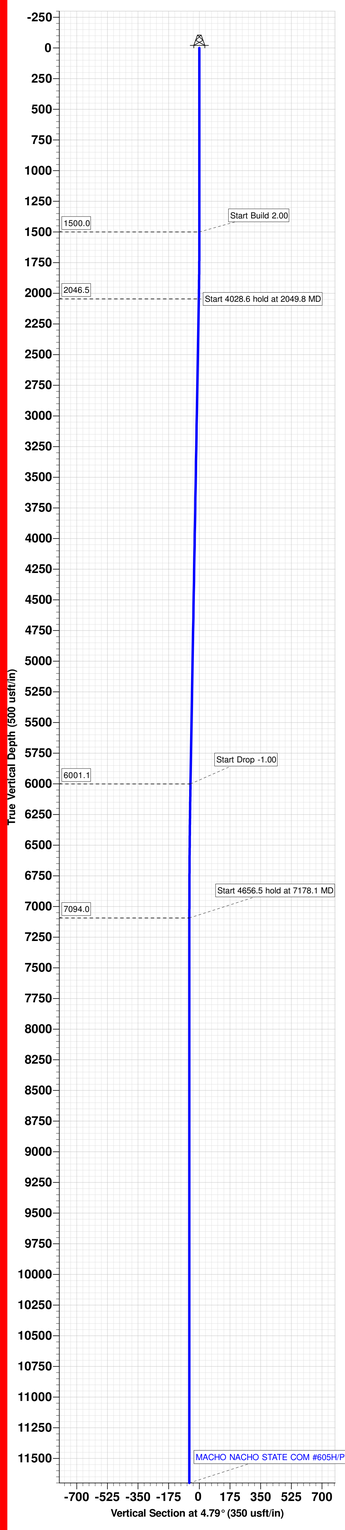
DESIGN TARGET DETAILS

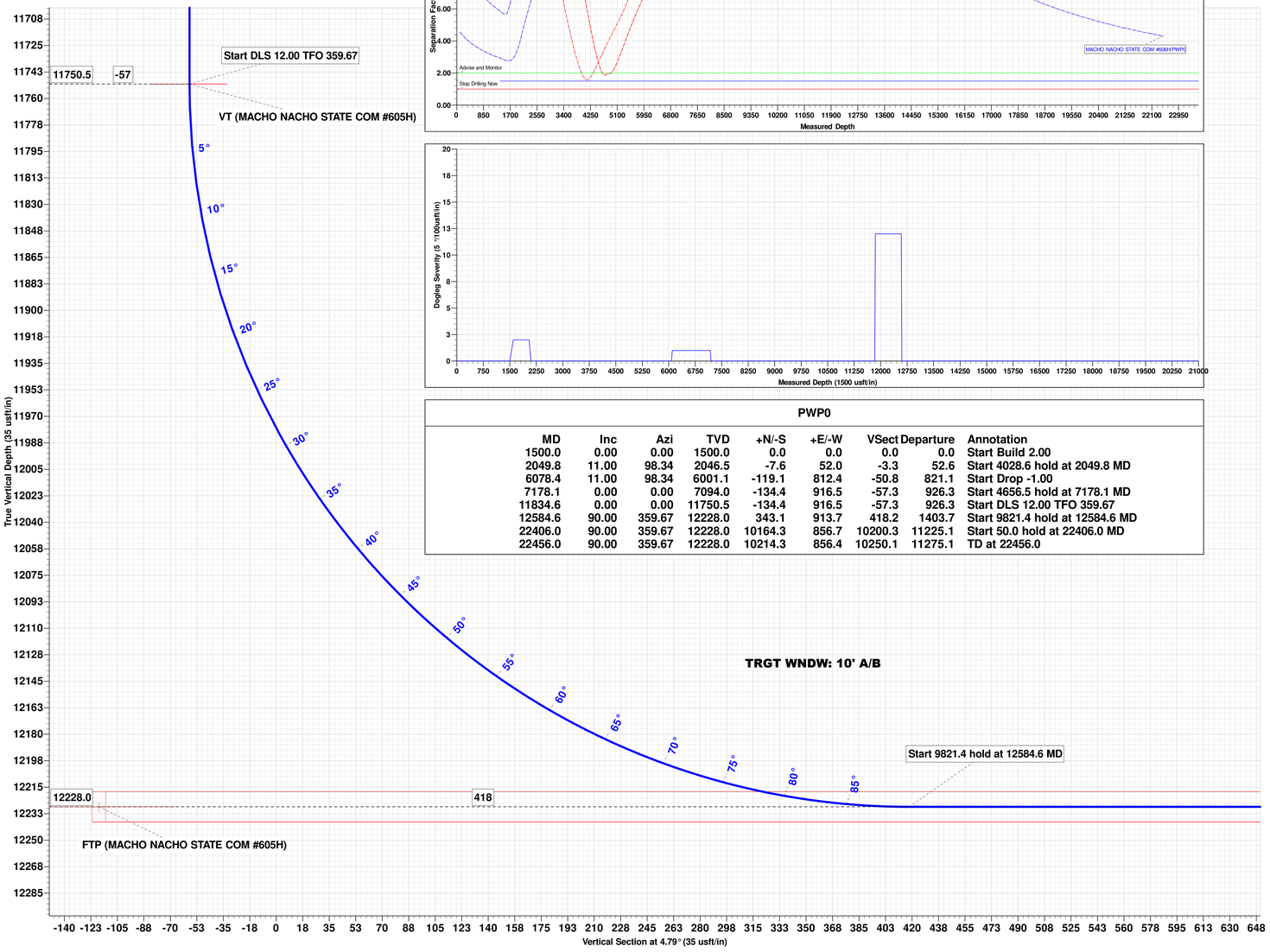
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
VT (MACHO NACHO STATE COM #605H)	11750.5	-134.4	916.5	446417.73	723110.98	Circle (Radius: 25.0)
FTP (MACHO NACHO STATE COM #605H)	12228.0	-194.4	917.2	446357.70	723111.70	Circle (Radius: 50.0)
LTP (MACHO NACHO STATE COM #605H)	12228.0	10164.3	856.7	456716.40	723051.20	Point
PBHL (MACHO NACHO STATE COM #605H)	12228.0	10214.3	856.4	456766.40	723050.90	Rectangle (Sides: L10409.0 W100.0)

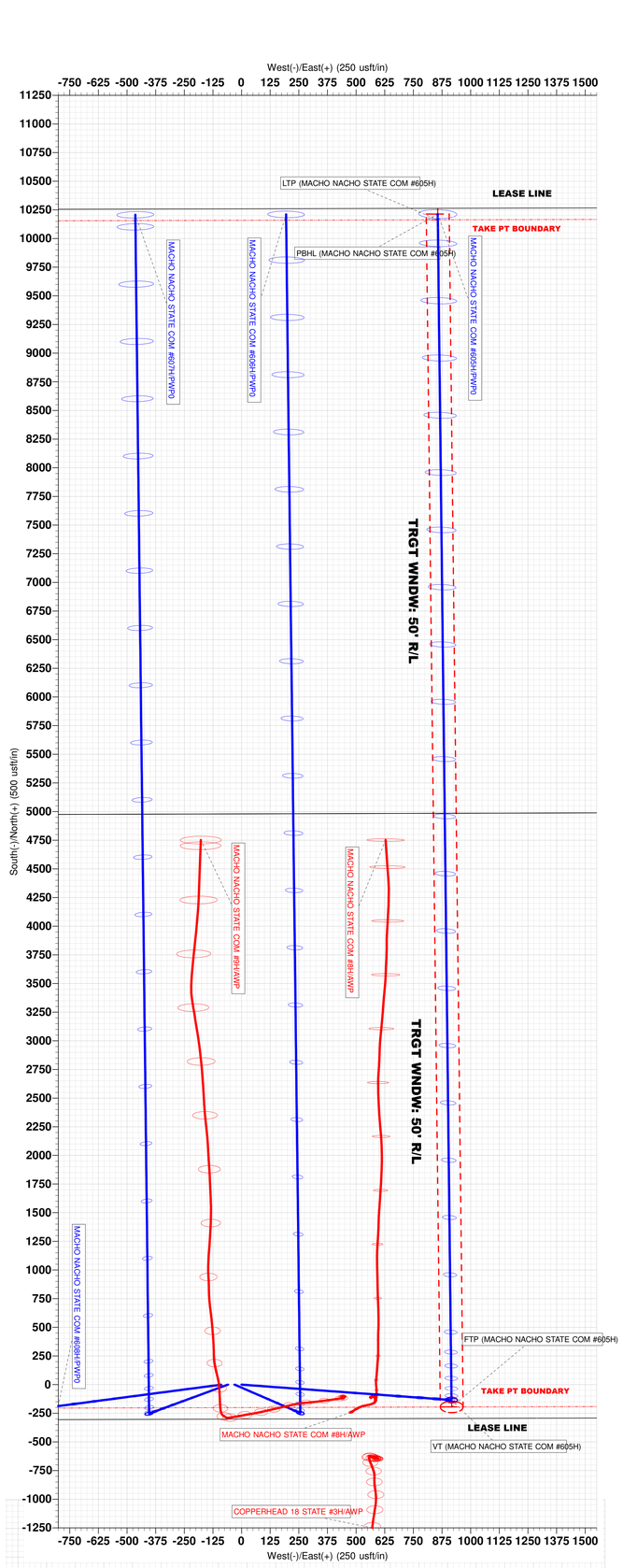


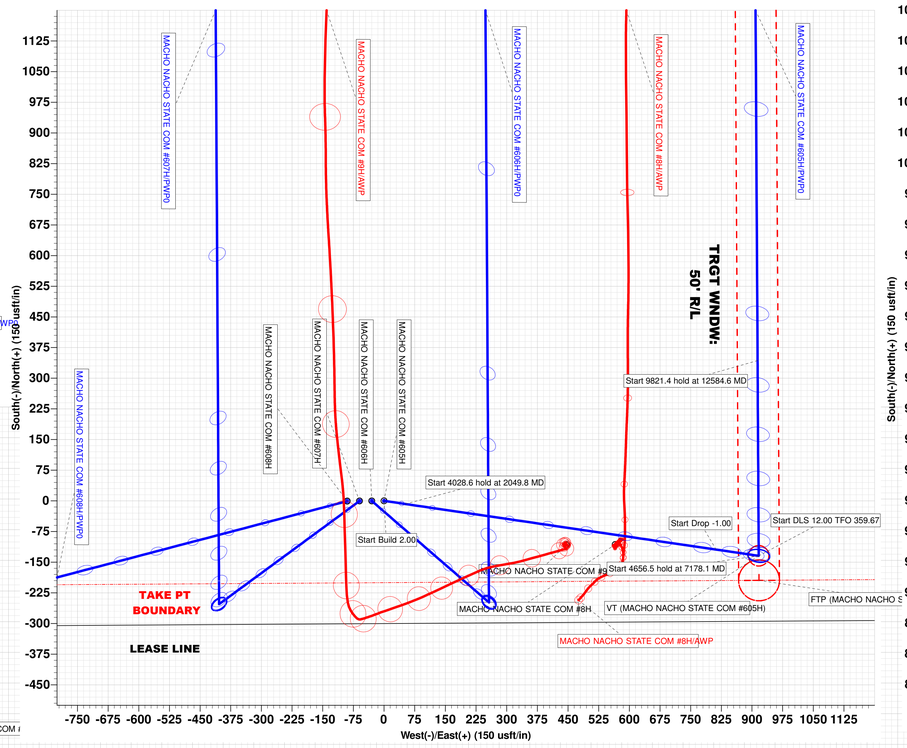
PWP0

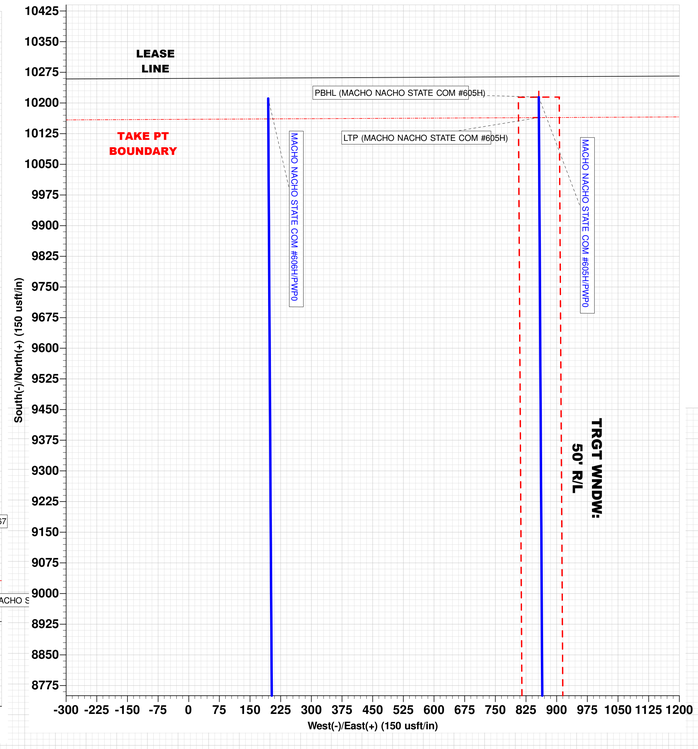
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1500.0	0.00	0.00	1500.0	0.0	0.0	0.0	0.0	Start Build 2.00
2049.8	11.00	98.34	2046.5	-7.6	52.0	-3.3	52.6	Start 4028.6 hold at 2049.8 MD
6078.4	11.00	98.34	6001.1	-119.1	812.4	-50.8	821.1	Start Drop -1.00
7178.1	0.00	0.00	7094.0	-134.4	916.5	-57.3	926.3	Start 4656.5 hold at 7178.1 MD
11834.6	0.00	0.00	11750.5	-134.4	916.5	-57.3	926.3	Start DLS 12.00 TFO 359.67
12584.6	90.00	359.67	12228.0	343.1	913.7	418.2	1403.7	Start 9821.4 hold at 12584.6 MD
22406.0	90.00	359.67	12228.0	10164.3	856.7	10200.3	11225.1	Start 50.0 hold at 22406.0 MD
22456.0	90.00	359.67	12228.0	10214.3	856.4	10250.1	11275.1	TD at 22456.0

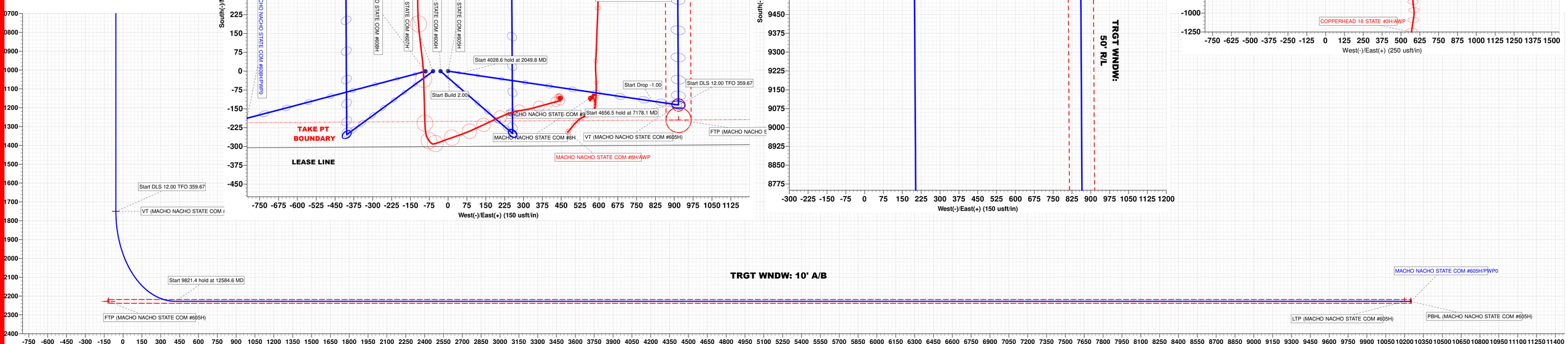












Macho Nacho State Com #605H

Casing and Cement

String	Hole Size	Csg OD	PPF	Depth	Sx Cement	TOC
Surface	14-3/4”	10-3/4””	45.5#	1,530’	980	0’
Intermediate	9-7/8” x 8-3/4”	7-5/8”	29.7#	11,700’	1,010	0’
Production	6-3/4”	5-1/2”	23.0#	22,456’	1,600	0’

Well Plan

Drill 14-3/4” hole to ~1,530’ with fresh water. Run 10-3/4” 45.5# J-55 BTC casing to TD and cement to surface in one stage (preset).

Drill 9-7/8” x 8-3/4” (taper at ~8,000’ MD) vertical hole to ~11,700’ with saturated brine. Run 7-5/8” 29.7# L80-IC BTC (0’-8,000’) / P110 W513 (8,000’-11,700’) casing to TD and cement to surface in one stage.

Drill 6-3/4” curve and lateral to ~22,456’ with OBM. Run 5-1/2” 23# P-110-CY TXP BTC (0’-11,200’) / P110-CY W441 (11,200’-22,456’) casing to TD and cement to surface in one stage.

Well Control

After setting 10-3/4” casing and installing 10,000 psi casing head, NU 13-5/8" Cameron BOP. Test casing to 1500 psi, annular to 2500 psi and other BOP equipment to 10,000 psi.

Type	Working Pressure	Test Pressure	Manufacture
Double Ram	10,000 psi	10,000 psi	Cameron

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: COG Operating LLC **OGRID:** 229137 **Date:** 12 / 20 / 23

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Macho Nacho State Com 605H	30-025-	N-7-24S-33E	300' FSL & 1395' FWL	± 1950	± 3853	± 4553

IV. Central Delivery Point Name: _____ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Macho Nacho State Com 605H	Pending	4/8/2024	± 25 days from spud	8/6/2024	8/16/2024	8/21/2024

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

VI. Separation Equipment

How Operator will size separation equipment to optimize gas capture:

All ConocoPhillips production facility equipment will be sized per industry standards (API 12J) with adequate retention time to effectively separate all phases of production. Each project will take into consideration the number of wells and type curves for each formation pool to ensure adequate facility capacity. Design considerations will also include review of all piping, tanks, VRU's and associated equipment to ensure optimized gas capture minimized risk of release.

VII. Operational Practices

Actions Operator will take to comply with the requirements below:

B. Drilling Operations

- During drilling, flare stacks will be located a minimum of 100 feet from the nearest surface hole location. All gas is captured or combusted. If an emergency or malfunction occurs, gas will be flared or vented for public health, safety, and the environment and be properly reported to the NMOCD pursuant to 19.15.27.8.G.
- Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.

C. Completion Operations

- During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.
- Individual well test separators will be set to properly separate gas and liquids. A temporary test separator will be utilized initially to process volumes. In addition, separators will be tied into flowback tanks which will be tied into the gas processing equipment for sales down a pipeline.

D. Venting and flaring during production operations

- During each phase of well life (drilling, completion and production) of a ConocoPhillips well, COP personnel will follow all necessary procedures to ensure both the operation and the equipment are within the NMAC 19.15.27.8 Subsection D guidelines.
- During well operations that require unloading of the well to atmospheric pressure, all reasonable actions will be taken to minimize vented gas
- Through the life of the well all flaring shall be measured, and venting events quantified using the data available and industry best practice.

E. Performance standards for separation, storage tank and flare equipment

- All storage tanks and separation equipment are designed minimize risk of liquid or vapor release and optimize gas capture. This includes automation for automatic gauging and pressure monitoring.

- All flare stacks are equipped with auto ignition devices and/or continuous pilots and are designed to operate at maximum combustion efficiency pursuant NMAC 19.15.27.8 Subsection E. Flares will follow COP spacing guidelines to ensure they are a safe distance from combustibles and operations equipment.
- COP personnel will conduct routine AVO inspections on a regular basis per NMAC 19.15.27.8 Subsection E guidelines.

F. Measurement of vented and flared natural gas.

- Measurement equipment will be installed to quantify gas flared during drilling, completion and production of the well.
- All measurement devices installed will meet accuracy ratings per AGA and API standards.
- Measurement devices will be installed without manifolds that allow diversion of gas around the metering element, except for the sole purpose of inspection of servicing the measurement device.

VIII. Best Management Practices

- Operator will curtail or shut in production, within reasonable limits, during upset conditions to minimize venting and flaring.
- When feasible, Operator will use equipment to capture gas that would otherwise be vented or flared.
- During completions and production operations Operator will minimize blowdowns to atmosphere
- When feasible, Operator will use electric or air actuated equipment to reduce bleed emissions

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	*Mayte Reyes*
Printed Name:	Mayte Reyes
Title:	Sr. Regulatory Coodinator
E-mail Address:	mayte.x.reyes@conocophillips.com
Date:	12/20/2023
Phone:	575-748-6945

OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

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

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) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011

Permit 357263

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	229137
	3. API Number 30-025-52429

4. Property Code	5. Property Name	6. Well No.
335192	MACHO NACHO STATE COM	607H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
N	7	24S	33E	4	300	S	1335	W	Lea

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
D	6	24S	33E	4	50	N	991	W	Lea

9. Pool Information

TRIPLE X;BONE SPRING, WEST	96674

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	OIL		State	3571
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	22505	Bone Spring		1/16/2024
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ **We will be using a closed-loop system in lieu of lined pits**

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.75	10.75	45.5	1530	980	
Int1	9.875	7.625	29.7	11620	1010	
Prod	6.75	5.5	23	22505	1590	

Casing/Cement Program: Additional Comments

Drill 14-3/4" hole to ~1,530' with fresh water. Run 10-3/4" 45.5# J-55 BTC casing to TD and cement to surface in one stage (preset). Drill 9-7/8" x 8-3/4" (taper at ~8,000' MD) vertical hole to ~11,620' with saturated brine. Run 7-5/8" 29.7# L80-IC BTC (0'-8,000') / P110 W513 (8,000'-11,620') casing to TD and cement to surface in one stage. Drill 6-3/4" curve and lateral to ~22,505' with OBM. Run 5-1/2" 23# P-110-CY TXP BTC (0'-11,120') / P110-CY W441 (11,120'-22,505') casing to TD and cement to surface in one stage.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	10000	10000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒, if applicable.

Signature:

OIL CONSERVATION DIVISION

Printed Name:	Electronically filed by Robyn Russell	Approved By:	Paul F Kautz
Title:	Supervisor Delaware Regulatory	Title:	Geologist
Email Address:	robyn.m.russell@conocophillips.com	Approved Date:	1/12/2024 Expiration Date: 1/12/2026
Date:	1/9/2024 Phone: 432-685-4385	Conditions of Approval Attached	

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-	96674	Triple X; Bone Spring, West

Property Code	Property Name	Well Number
	MACHO NACHO STATE COM	607H

OGRID No.	Operator Name	Elevation
229137	COG OPERATING, LLC	3571.5'

Surface Location

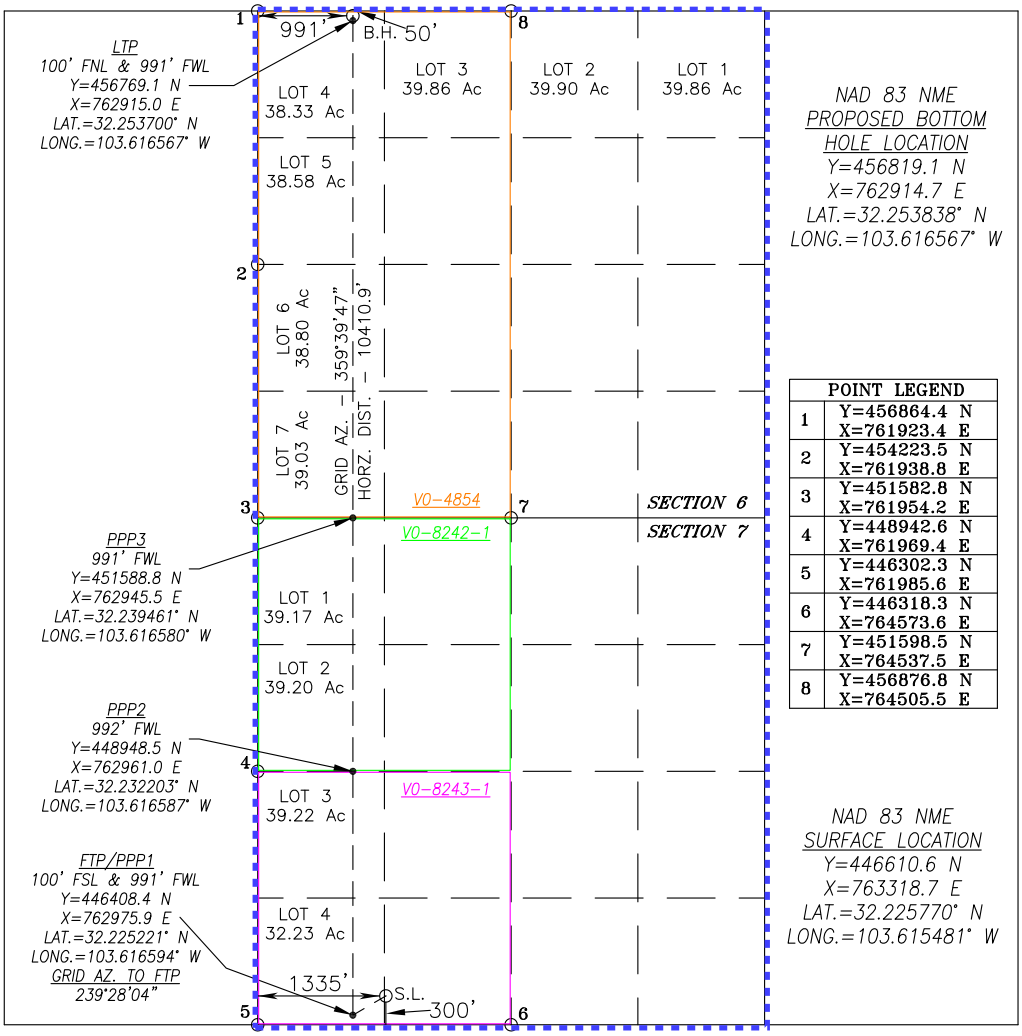
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	7	24-S	33-E		300	SOUTH	1335	WEST	LEA

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
4	6	24-S	33-E		50	NORTH	991	WEST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
1268.12			

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



NAD 83 NME
PROPOSED BOTTOM
HOLE LOCATION
Y=456819.1 N
X=762914.7 E
LAT.=32.253838° N
LONG.=103.616567° W

POINT LEGEND	
1	Y=456864.4 N X=761923.4 E
2	Y=454223.5 N X=761938.8 E
3	Y=451582.8 N X=761954.2 E
4	Y=448942.6 N X=761969.4 E
5	Y=446302.3 N X=761985.6 E
6	Y=446318.3 N X=764573.6 E
7	Y=451598.5 N X=764537.5 E
8	Y=456876.8 N X=764505.5 E

NAD 83 NME
SURFACE LOCATION
Y=446610.6 N
X=763318.7 E
LAT.=32.225770° N
LONG.=103.615481° W

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 1/4/2024
Signature Date

Mayte Reyes
Printed Name

mayte.x.reyes@cop.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.

AUGUST 9, 2023
Date of Survey

Signature & Seal of Professional Surveyor

CHAD L. HARCROW
NEW MEXICO
17777
LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 8/22/23

Certificate No. CHAD HARCROW 17777
W.O. # 23-609 DRAWN BY: WN

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) 476-3470 Fax:(505) 476-3462

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

Form APD Comments

Permit 357263

PERMIT COMMENTS

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	30-025-52429
	Well: MACHO NACHO STATE COM #607H

Created By	Comment	Comment Date
mreyes4	OIL: COG Operating 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 would be necessary.	1/9/2024

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

Form APD Conditions

Permit 357263

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	30-025-52429
	Well: MACHO NACHO STATE COM #607H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Will require administrative order for non-standard spacing unit
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud

DELAWARE BASIN EAST

LEA COUNTY SOUTHEAST
MACHO NACHO STATE PROJECT (BULLDOG 2433)
MACHO NACHO STATE COM #607H

OWB

Plan: PWP0

Standard Planning Report

14 December, 2023

ConocoPhillips
Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #607H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3598.5usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3598.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #607H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project LEA COUNTY SOUTHEAST

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		

Site MACHO NACHO STATE PROJECT (BULLDOG 2433)

Site Position:		**Northing:**	398,637.10 usft	**Latitude:**	32° 5' 36.820 N
From:	Map	**Easting:**	741,887.40 usft	**Longitude:**	103° 33' 8.116 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "		

Well MACHO NACHO STATE COM #607H

Well Position	**+N/-S**	0.0 usft	**Northing:**	446,551.80 usft	**Latitude:**	32° 13' 32.328 N
	+E/-W	0.0 usft	**Easting:**	722,134.50 usft	**Longitude:**	103° 36' 54.006 W
Position Uncertainty		3.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,571.5 usft
Grid Convergence:		0.38 °				

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2022	9/1/2022	6.44	59.84	47,561.71568865

Design PWP0

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	357.74

Plan Survey Tool Program **Date** 12/14/2023

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	22,505.2	PWP0 (OWB)	r.5 MWD+IFR1+MS OWSG MWD + IFR1 + Multi-St	

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #607H
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Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3598.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #607H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,800.4	6.01	233.70	1,799.9	-9.3	-12.7	2.00	2.00	0.00	233.70	
5,420.7	6.01	233.70	5,400.3	-233.7	-318.1	0.00	0.00	0.00	0.00	
6,021.5	0.00	0.00	6,000.0	-252.3	-343.4	1.00	-1.00	0.00	180.00	
11,772.0	0.00	0.00	11,750.5	-252.3	-343.4	0.00	0.00	0.00	0.00	VT (MACHO NACHO
12,522.0	90.00	359.67	12,228.0	225.2	-346.2	12.00	12.00	-0.04	359.67	
22,455.2	90.00	359.67	12,228.0	10,158.2	-403.3	0.00	0.00	0.00	0.00	LTP (MACHO NACHO
22,505.2	90.00	359.67	12,228.0	10,208.2	-403.6	0.00	0.00	0.00	0.00	PBHL (MACHO NACH

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #607H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3598.5usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3598.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #607H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
1,600.0	2.00	233.70	1,600.0	-1.0	-1.4	-1.0	2.00	2.00	0.00
1,700.0	4.00	233.70	1,699.8	-4.1	-5.6	-3.9	2.00	2.00	0.00
1,800.0	6.00	233.70	1,799.5	-9.3	-12.6	-8.8	2.00	2.00	0.00
1,800.4	6.01	233.70	1,799.9	-9.3	-12.7	-8.8	2.00	2.00	0.00
Start 3620.3 hold at 1800.4 MD									
1,900.0	6.01	233.70	1,898.9	-15.5	-21.1	-14.6	0.00	0.00	0.00
2,000.0	6.01	233.70	1,998.4	-21.7	-29.5	-20.5	0.00	0.00	0.00
2,100.0	6.01	233.70	2,097.8	-27.9	-38.0	-26.4	0.00	0.00	0.00
2,200.0	6.01	233.70	2,197.3	-34.1	-46.4	-32.2	0.00	0.00	0.00
2,300.0	6.01	233.70	2,296.7	-40.3	-54.8	-38.1	0.00	0.00	0.00
2,400.0	6.01	233.70	2,396.2	-46.5	-63.3	-43.9	0.00	0.00	0.00
2,500.0	6.01	233.70	2,495.6	-52.7	-71.7	-49.8	0.00	0.00	0.00
2,600.0	6.01	233.70	2,595.1	-58.9	-80.1	-55.7	0.00	0.00	0.00
2,700.0	6.01	233.70	2,694.5	-65.1	-88.6	-61.5	0.00	0.00	0.00
2,800.0	6.01	233.70	2,794.0	-71.3	-97.0	-67.4	0.00	0.00	0.00
2,900.0	6.01	233.70	2,893.4	-77.5	-105.4	-73.2	0.00	0.00	0.00
3,000.0	6.01	233.70	2,992.9	-83.7	-113.9	-79.1	0.00	0.00	0.00
3,100.0	6.01	233.70	3,092.3	-89.9	-122.3	-84.9	0.00	0.00	0.00
3,200.0	6.01	233.70	3,191.8	-96.0	-130.7	-90.8	0.00	0.00	0.00
3,300.0	6.01	233.70	3,291.2	-102.2	-139.2	-96.7	0.00	0.00	0.00
3,400.0	6.01	233.70	3,390.7	-108.4	-147.6	-102.5	0.00	0.00	0.00
3,500.0	6.01	233.70	3,490.1	-114.6	-156.1	-108.4	0.00	0.00	0.00
3,600.0	6.01	233.70	3,589.6	-120.8	-164.5	-114.2	0.00	0.00	0.00
3,700.0	6.01	233.70	3,689.0	-127.0	-172.9	-120.1	0.00	0.00	0.00
3,800.0	6.01	233.70	3,788.5	-133.2	-181.4	-126.0	0.00	0.00	0.00
3,900.0	6.01	233.70	3,887.9	-139.4	-189.8	-131.8	0.00	0.00	0.00
4,000.0	6.01	233.70	3,987.4	-145.6	-198.2	-137.7	0.00	0.00	0.00
4,100.0	6.01	233.70	4,086.8	-151.8	-206.7	-143.5	0.00	0.00	0.00
4,200.0	6.01	233.70	4,186.3	-158.0	-215.1	-149.4	0.00	0.00	0.00
4,300.0	6.01	233.70	4,285.7	-164.2	-223.5	-155.3	0.00	0.00	0.00
4,400.0	6.01	233.70	4,385.2	-170.4	-232.0	-161.1	0.00	0.00	0.00
4,500.0	6.01	233.70	4,484.6	-176.6	-240.4	-167.0	0.00	0.00	0.00
4,600.0	6.01	233.70	4,584.1	-182.8	-248.9	-172.8	0.00	0.00	0.00
4,700.0	6.01	233.70	4,683.5	-189.0	-257.3	-178.7	0.00	0.00	0.00
4,800.0	6.01	233.70	4,783.0	-195.2	-265.7	-184.6	0.00	0.00	0.00
4,900.0	6.01	233.70	4,882.4	-201.4	-274.2	-190.4	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #607H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3598.5usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3598.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #607H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,000.0	6.01	233.70	4,981.9	-207.6	-282.6	-196.3	0.00	0.00	0.00
5,100.0	6.01	233.70	5,081.3	-213.8	-291.0	-202.1	0.00	0.00	0.00
5,200.0	6.01	233.70	5,180.8	-220.0	-299.5	-208.0	0.00	0.00	0.00
5,300.0	6.01	233.70	5,280.2	-226.2	-307.9	-213.8	0.00	0.00	0.00
5,400.0	6.01	233.70	5,379.7	-232.4	-316.3	-219.7	0.00	0.00	0.00
5,420.7	6.01	233.70	5,400.3	-233.7	-318.1	-220.9	0.00	0.00	0.00
Start Drop -1.00									
5,500.0	5.22	233.70	5,479.2	-238.3	-324.3	-225.3	1.00	-1.00	0.00
5,600.0	4.22	233.70	5,578.8	-243.1	-331.0	-229.9	1.00	-1.00	0.00
5,700.0	3.22	233.70	5,678.6	-247.0	-336.2	-233.5	1.00	-1.00	0.00
5,800.0	2.22	233.70	5,778.5	-249.8	-340.0	-236.1	1.00	-1.00	0.00
5,900.0	1.22	233.70	5,878.5	-251.5	-342.4	-237.8	1.00	-1.00	0.00
6,000.0	0.22	233.70	5,978.5	-252.3	-343.4	-238.5	1.00	-1.00	0.00
6,021.5	0.00	0.00	6,000.0	-252.3	-343.4	-238.5	1.00	-1.00	0.00
Start 5750.5 hold at 6021.5 MD									
6,100.0	0.00	0.00	6,078.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,178.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
6,300.0	0.00	0.00	6,278.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,378.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
6,500.0	0.00	0.00	6,478.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,578.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
6,700.0	0.00	0.00	6,678.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,778.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
6,900.0	0.00	0.00	6,878.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,978.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
7,100.0	0.00	0.00	7,078.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
7,200.0	0.00	0.00	7,178.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
7,300.0	0.00	0.00	7,278.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
7,400.0	0.00	0.00	7,378.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
7,500.0	0.00	0.00	7,478.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
7,600.0	0.00	0.00	7,578.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
7,700.0	0.00	0.00	7,678.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
7,800.0	0.00	0.00	7,778.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
7,900.0	0.00	0.00	7,878.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
8,000.0	0.00	0.00	7,978.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
8,100.0	0.00	0.00	8,078.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
8,200.0	0.00	0.00	8,178.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
8,300.0	0.00	0.00	8,278.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
8,400.0	0.00	0.00	8,378.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
8,500.0	0.00	0.00	8,478.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
8,600.0	0.00	0.00	8,578.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
8,700.0	0.00	0.00	8,678.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
8,800.0	0.00	0.00	8,778.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
8,900.0	0.00	0.00	8,878.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
9,000.0	0.00	0.00	8,978.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
9,100.0	0.00	0.00	9,078.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
9,200.0	0.00	0.00	9,178.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
9,300.0	0.00	0.00	9,278.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
9,400.0	0.00	0.00	9,378.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
9,500.0	0.00	0.00	9,478.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
9,600.0	0.00	0.00	9,578.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
9,700.0	0.00	0.00	9,678.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
9,800.0	0.00	0.00	9,778.5	-252.3	-343.4	-238.5	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #607H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3598.5usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3598.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #607H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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	0.00	0.00	9,878.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
10,000.0	0.00	0.00	9,978.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
10,100.0	0.00	0.00	10,078.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
10,200.0	0.00	0.00	10,178.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
10,300.0	0.00	0.00	10,278.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
10,400.0	0.00	0.00	10,378.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
10,500.0	0.00	0.00	10,478.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
10,600.0	0.00	0.00	10,578.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
10,700.0	0.00	0.00	10,678.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
10,800.0	0.00	0.00	10,778.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
10,900.0	0.00	0.00	10,878.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
11,000.0	0.00	0.00	10,978.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
11,100.0	0.00	0.00	11,078.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
11,200.0	0.00	0.00	11,178.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
11,300.0	0.00	0.00	11,278.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
11,400.0	0.00	0.00	11,378.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
11,500.0	0.00	0.00	11,478.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
11,600.0	0.00	0.00	11,578.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
11,700.0	0.00	0.00	11,678.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
11,772.0	0.00	0.00	11,750.5	-252.3	-343.4	-238.5	0.00	0.00	0.00
Start DLS 12.00 TFO 359.67 - VT (MACHO NACHO STATE COM #607H)									
11,800.0	3.36	359.67	11,778.4	-251.5	-343.5	-237.7	12.00	12.00	0.00
11,900.0	15.36	359.67	11,876.9	-235.3	-343.5	-221.5	12.00	12.00	0.00
12,000.0	27.36	359.67	11,969.9	-198.9	-343.8	-185.2	12.00	12.00	0.00
12,100.0	39.36	359.67	12,053.3	-144.0	-344.1	-130.3	12.00	12.00	0.00
12,181.5	49.14	359.67	12,111.6	-87.2	-344.4	-73.5	12.00	12.00	0.00
FTP (MACHO NACHO STATE COM #607H)									
12,200.0	51.36	359.67	12,123.4	-73.0	-344.5	-59.3	12.00	12.00	0.00
12,300.0	63.36	359.67	12,177.3	11.0	-345.0	24.7	12.00	12.00	0.00
12,400.0	75.36	359.67	12,212.5	104.4	-345.5	118.0	12.00	12.00	0.00
12,500.0	87.36	359.67	12,227.5	203.1	-346.1	216.6	12.00	12.00	0.00
12,522.0	90.00	359.67	12,228.0	225.2	-346.2	238.7	12.00	12.00	0.00
Start 9933.2 hold at 12522.0 MD									
12,600.0	90.00	359.67	12,228.0	303.1	-346.6	316.6	0.00	0.00	0.00
12,700.0	90.00	359.67	12,228.0	403.1	-347.2	416.5	0.00	0.00	0.00
12,800.0	90.00	359.67	12,228.0	503.1	-347.8	516.5	0.00	0.00	0.00
12,900.0	90.00	359.67	12,228.0	603.1	-348.4	616.4	0.00	0.00	0.00
13,000.0	90.00	359.67	12,228.0	703.1	-348.9	716.3	0.00	0.00	0.00
13,100.0	90.00	359.67	12,228.0	803.1	-349.5	816.3	0.00	0.00	0.00
13,200.0	90.00	359.67	12,228.0	903.1	-350.1	916.2	0.00	0.00	0.00
13,300.0	90.00	359.67	12,228.0	1,003.1	-350.7	1,016.2	0.00	0.00	0.00
13,400.0	90.00	359.67	12,228.0	1,103.1	-351.2	1,116.1	0.00	0.00	0.00
13,500.0	90.00	359.67	12,228.0	1,203.1	-351.8	1,216.1	0.00	0.00	0.00
13,600.0	90.00	359.67	12,228.0	1,303.1	-352.4	1,316.0	0.00	0.00	0.00
13,700.0	90.00	359.67	12,228.0	1,403.1	-353.0	1,415.9	0.00	0.00	0.00
13,800.0	90.00	359.67	12,228.0	1,503.1	-353.5	1,515.9	0.00	0.00	0.00
13,900.0	90.00	359.67	12,228.0	1,603.1	-354.1	1,615.8	0.00	0.00	0.00
14,000.0	90.00	359.67	12,228.0	1,703.1	-354.7	1,715.8	0.00	0.00	0.00
14,100.0	90.00	359.67	12,228.0	1,803.1	-355.3	1,815.7	0.00	0.00	0.00
14,200.0	90.00	359.67	12,228.0	1,903.1	-355.8	1,915.7	0.00	0.00	0.00
14,300.0	90.00	359.67	12,228.0	2,003.1	-356.4	2,015.6	0.00	0.00	0.00
14,400.0	90.00	359.67	12,228.0	2,103.1	-357.0	2,115.5	0.00	0.00	0.00
14,500.0	90.00	359.67	12,228.0	2,203.1	-357.6	2,215.5	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #607H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3598.5usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3598.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #607H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
14,600.0	90.00	359.67	12,228.0	2,303.1	-358.1	2,315.4	0.00	0.00	0.00
14,700.0	90.00	359.67	12,228.0	2,403.1	-358.7	2,415.4	0.00	0.00	0.00
14,800.0	90.00	359.67	12,228.0	2,503.1	-359.3	2,515.3	0.00	0.00	0.00
14,900.0	90.00	359.67	12,228.0	2,603.1	-359.9	2,615.3	0.00	0.00	0.00
15,000.0	90.00	359.67	12,228.0	2,703.1	-360.4	2,715.2	0.00	0.00	0.00
15,100.0	90.00	359.67	12,228.0	2,803.1	-361.0	2,815.1	0.00	0.00	0.00
15,200.0	90.00	359.67	12,228.0	2,903.1	-361.6	2,915.1	0.00	0.00	0.00
15,300.0	90.00	359.67	12,228.0	3,003.1	-362.2	3,015.0	0.00	0.00	0.00
15,400.0	90.00	359.67	12,228.0	3,103.1	-362.7	3,115.0	0.00	0.00	0.00
15,500.0	90.00	359.67	12,228.0	3,203.1	-363.3	3,214.9	0.00	0.00	0.00
15,600.0	90.00	359.67	12,228.0	3,303.1	-363.9	3,314.9	0.00	0.00	0.00
15,700.0	90.00	359.67	12,228.0	3,403.1	-364.5	3,414.8	0.00	0.00	0.00
15,800.0	90.00	359.67	12,228.0	3,503.1	-365.0	3,514.8	0.00	0.00	0.00
15,900.0	90.00	359.67	12,228.0	3,603.1	-365.6	3,614.7	0.00	0.00	0.00
16,000.0	90.00	359.67	12,228.0	3,703.1	-366.2	3,714.6	0.00	0.00	0.00
16,100.0	90.00	359.67	12,228.0	3,803.1	-366.8	3,814.6	0.00	0.00	0.00
16,200.0	90.00	359.67	12,228.0	3,903.1	-367.3	3,914.5	0.00	0.00	0.00
16,300.0	90.00	359.67	12,228.0	4,003.1	-367.9	4,014.5	0.00	0.00	0.00
16,400.0	90.00	359.67	12,228.0	4,103.1	-368.5	4,114.4	0.00	0.00	0.00
16,500.0	90.00	359.67	12,228.0	4,203.1	-369.1	4,214.4	0.00	0.00	0.00
16,600.0	90.00	359.67	12,228.0	4,303.1	-369.6	4,314.3	0.00	0.00	0.00
16,700.0	90.00	359.67	12,228.0	4,403.0	-370.2	4,414.2	0.00	0.00	0.00
16,800.0	90.00	359.67	12,228.0	4,503.0	-370.8	4,514.2	0.00	0.00	0.00
16,900.0	90.00	359.67	12,228.0	4,603.0	-371.4	4,614.1	0.00	0.00	0.00
17,000.0	90.00	359.67	12,228.0	4,703.0	-371.9	4,714.1	0.00	0.00	0.00
17,100.0	90.00	359.67	12,228.0	4,803.0	-372.5	4,814.0	0.00	0.00	0.00
17,200.0	90.00	359.67	12,228.0	4,903.0	-373.1	4,914.0	0.00	0.00	0.00
17,300.0	90.00	359.67	12,228.0	5,003.0	-373.7	5,013.9	0.00	0.00	0.00
17,400.0	90.00	359.67	12,228.0	5,103.0	-374.2	5,113.8	0.00	0.00	0.00
17,500.0	90.00	359.67	12,228.0	5,203.0	-374.8	5,213.8	0.00	0.00	0.00
17,600.0	90.00	359.67	12,228.0	5,303.0	-375.4	5,313.7	0.00	0.00	0.00
17,700.0	90.00	359.67	12,228.0	5,403.0	-376.0	5,413.7	0.00	0.00	0.00
17,800.0	90.00	359.67	12,228.0	5,503.0	-376.5	5,513.6	0.00	0.00	0.00
17,900.0	90.00	359.67	12,228.0	5,603.0	-377.1	5,613.6	0.00	0.00	0.00
18,000.0	90.00	359.67	12,228.0	5,703.0	-377.7	5,713.5	0.00	0.00	0.00
18,100.0	90.00	359.67	12,228.0	5,803.0	-378.3	5,813.4	0.00	0.00	0.00
18,200.0	90.00	359.67	12,228.0	5,903.0	-378.8	5,913.4	0.00	0.00	0.00
18,300.0	90.00	359.67	12,228.0	6,003.0	-379.4	6,013.3	0.00	0.00	0.00
18,400.0	90.00	359.67	12,228.0	6,103.0	-380.0	6,113.3	0.00	0.00	0.00
18,500.0	90.00	359.67	12,228.0	6,203.0	-380.6	6,213.2	0.00	0.00	0.00
18,600.0	90.00	359.67	12,228.0	6,303.0	-381.1	6,313.2	0.00	0.00	0.00
18,700.0	90.00	359.67	12,228.0	6,403.0	-381.7	6,413.1	0.00	0.00	0.00
18,800.0	90.00	359.67	12,228.0	6,503.0	-382.3	6,513.0	0.00	0.00	0.00
18,900.0	90.00	359.67	12,228.0	6,603.0	-382.9	6,613.0	0.00	0.00	0.00
19,000.0	90.00	359.67	12,228.0	6,703.0	-383.4	6,712.9	0.00	0.00	0.00
19,100.0	90.00	359.67	12,228.0	6,803.0	-384.0	6,812.9	0.00	0.00	0.00
19,200.0	90.00	359.67	12,228.0	6,903.0	-384.6	6,912.8	0.00	0.00	0.00
19,300.0	90.00	359.67	12,228.0	7,003.0	-385.2	7,012.8	0.00	0.00	0.00
19,400.0	90.00	359.67	12,228.0	7,103.0	-385.7	7,112.7	0.00	0.00	0.00
19,500.0	90.00	359.67	12,228.0	7,203.0	-386.3	7,212.6	0.00	0.00	0.00
19,600.0	90.00	359.67	12,228.0	7,303.0	-386.9	7,312.6	0.00	0.00	0.00
19,700.0	90.00	359.67	12,228.0	7,403.0	-387.5	7,412.5	0.00	0.00	0.00
19,800.0	90.00	359.67	12,228.0	7,503.0	-388.0	7,512.5	0.00	0.00	0.00

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #607H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3598.5usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3598.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #607H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

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)
19,900.0	90.00	359.67	12,228.0	7,603.0	-388.6	7,612.4	0.00	0.00	0.00
20,000.0	90.00	359.67	12,228.0	7,703.0	-389.2	7,712.4	0.00	0.00	0.00
20,100.0	90.00	359.67	12,228.0	7,803.0	-389.8	7,812.3	0.00	0.00	0.00
20,200.0	90.00	359.67	12,228.0	7,903.0	-390.3	7,912.2	0.00	0.00	0.00
20,300.0	90.00	359.67	12,228.0	8,003.0	-390.9	8,012.2	0.00	0.00	0.00
20,400.0	90.00	359.67	12,228.0	8,103.0	-391.5	8,112.1	0.00	0.00	0.00
20,500.0	90.00	359.67	12,228.0	8,203.0	-392.1	8,212.1	0.00	0.00	0.00
20,600.0	90.00	359.67	12,228.0	8,303.0	-392.6	8,312.0	0.00	0.00	0.00
20,700.0	90.00	359.67	12,228.0	8,403.0	-393.2	8,412.0	0.00	0.00	0.00
20,800.0	90.00	359.67	12,228.0	8,503.0	-393.8	8,511.9	0.00	0.00	0.00
20,900.0	90.00	359.67	12,228.0	8,603.0	-394.4	8,611.8	0.00	0.00	0.00
21,000.0	90.00	359.67	12,228.0	8,703.0	-394.9	8,711.8	0.00	0.00	0.00
21,100.0	90.00	359.67	12,228.0	8,803.0	-395.5	8,811.7	0.00	0.00	0.00
21,200.0	90.00	359.67	12,228.0	8,903.0	-396.1	8,911.7	0.00	0.00	0.00
21,300.0	90.00	359.67	12,228.0	9,003.0	-396.7	9,011.6	0.00	0.00	0.00
21,400.0	90.00	359.67	12,228.0	9,103.0	-397.2	9,111.6	0.00	0.00	0.00
21,500.0	90.00	359.67	12,228.0	9,203.0	-397.8	9,211.5	0.00	0.00	0.00
21,600.0	90.00	359.67	12,228.0	9,303.0	-398.4	9,311.4	0.00	0.00	0.00
21,700.0	90.00	359.67	12,228.0	9,403.0	-399.0	9,411.4	0.00	0.00	0.00
21,800.0	90.00	359.67	12,228.0	9,503.0	-399.5	9,511.3	0.00	0.00	0.00
21,900.0	90.00	359.67	12,228.0	9,603.0	-400.1	9,611.3	0.00	0.00	0.00
22,000.0	90.00	359.67	12,228.0	9,703.0	-400.7	9,711.2	0.00	0.00	0.00
22,100.0	90.00	359.67	12,228.0	9,803.0	-401.3	9,811.2	0.00	0.00	0.00
22,200.0	90.00	359.67	12,228.0	9,903.0	-401.8	9,911.1	0.00	0.00	0.00
22,300.0	90.00	359.67	12,228.0	10,003.0	-402.4	10,011.0	0.00	0.00	0.00
22,400.0	90.00	359.67	12,228.0	10,103.0	-403.0	10,111.0	0.00	0.00	0.00
22,455.2	90.00	359.67	12,228.0	10,158.2	-403.3	10,166.2	0.00	0.00	0.00
Start 50.0 hold at 22455.2 MD - LTP (MACHO NACHO STATE COM #607H)									
22,500.0	90.00	359.67	12,228.0	10,203.0	-403.6	10,210.9	0.00	0.00	0.00
22,505.2	90.00	359.67	12,228.0	10,208.2	-403.6	10,216.2	0.00	0.00	0.00
TD at 22505.2 - PBHL (MACHO NACHO STATE COM #607H)									

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
VT (MACHO NACHO ST - plan hits target center - Circle (radius 25.0)	0.00	0.00	11,750.5	-252.3	-343.4	446,299.50	721,791.05	32° 13' 29.854 N	103° 36' 58.023 W
LTP (MACHO NACHO S - plan hits target center - Point	0.00	0.00	12,228.0	10,158.2	-403.3	456,710.00	721,731.20	32° 15' 12.876 N	103° 36' 57.911 W
PBHL (MACHO NACHO - plan hits target center - Rectangle (sides W100.0 H10,410.7 D20.0)	0.00	179.67	12,228.0	10,208.2	-403.6	456,760.00	721,730.90	32° 15' 13.371 N	103° 36' 57.910 W
FTP (MACHO NACHO S - plan misses target center by 163.6usft at 12181.5usft MD (12111.6 TVD, -87.2 N, -344.4 E) - Circle (radius 50.0)	0.00	0.00	12,228.0	-202.2	-342.8	446,349.60	721,791.70	32° 13' 30.350 N	103° 36' 58.012 W

ConocoPhillips

Planning Report

Database:	EDT 17 Central Planning Prod	**Local Co-ordinate Reference:**	Well MACHO NACHO STATE COM #607H
Company:	DELAWARE BASIN EAST	**TVD Reference:**	KB=27 @ 3598.5usft
Project:	LEA COUNTY SOUTHEAST	**MD Reference:**	KB=27 @ 3598.5usft
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)	**North Reference:**	Grid
Well:	MACHO NACHO STATE COM #607H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Casing Points

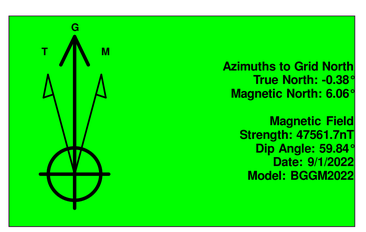
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
22,505.3	12,228.0	PB PROD. -5 1/2	5-1/2	6-3/4

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,500.0	1,500.0	0.0	0.0	Start Build 2.00
1,800.4	1,799.9	-9.3	-12.7	Start 3620.3 hold at 1800.4 MD
5,420.7	5,400.3	-233.7	-318.1	Start Drop -1.00
6,021.5	6,000.0	-252.3	-343.4	Start 5750.5 hold at 6021.5 MD
11,772.0	11,750.5	-252.3	-343.4	Start DLS 12.00 TFO 359.67
12,522.0	12,228.0	225.2	-346.2	Start 9933.2 hold at 12522.0 MD
22,455.2	12,228.0	10,158.2	-403.3	Start 50.0 hold at 22455.2 MD
22,505.2	12,228.0	10,208.2	-403.6	TD at 22505.2

ConocoPhillips

Project:	LEA COUNTY SOUTHEAST
Site:	MACHO NACHO STATE PROJECT (BULLDOG 2433)
Well:	MACHO NACHO STATE COM #607H
Wellbore:	OWB
Design:	PWP0
GL:	3571.5
KB=27 @ 3598.5usft	



Azimuths to Grid North
True North: -0.38°
Magnetic North: 6.06°

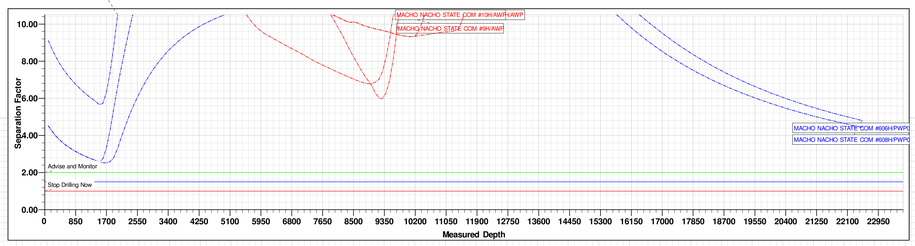
Magnetic Field
Strength: 47561.7nT
Dip Angle: 59.84°
Date: 9/1/2022
Model: BGGM2022

WELL DETAILS: MACHO NACHO STATE COM #607H

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	446551.80	722134.50	32° 13' 32.328 N	103° 36' 54.006 W

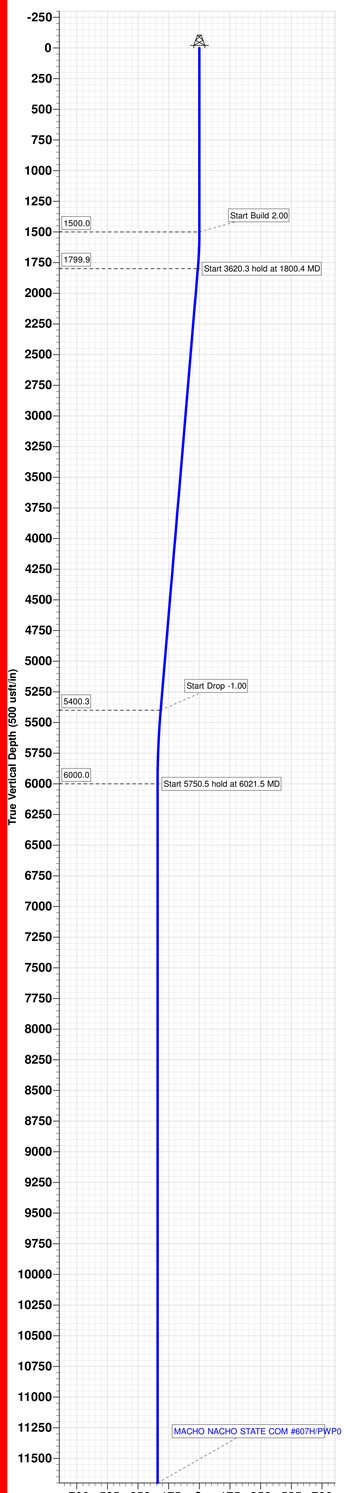
DESIGN TARGET DETAILS

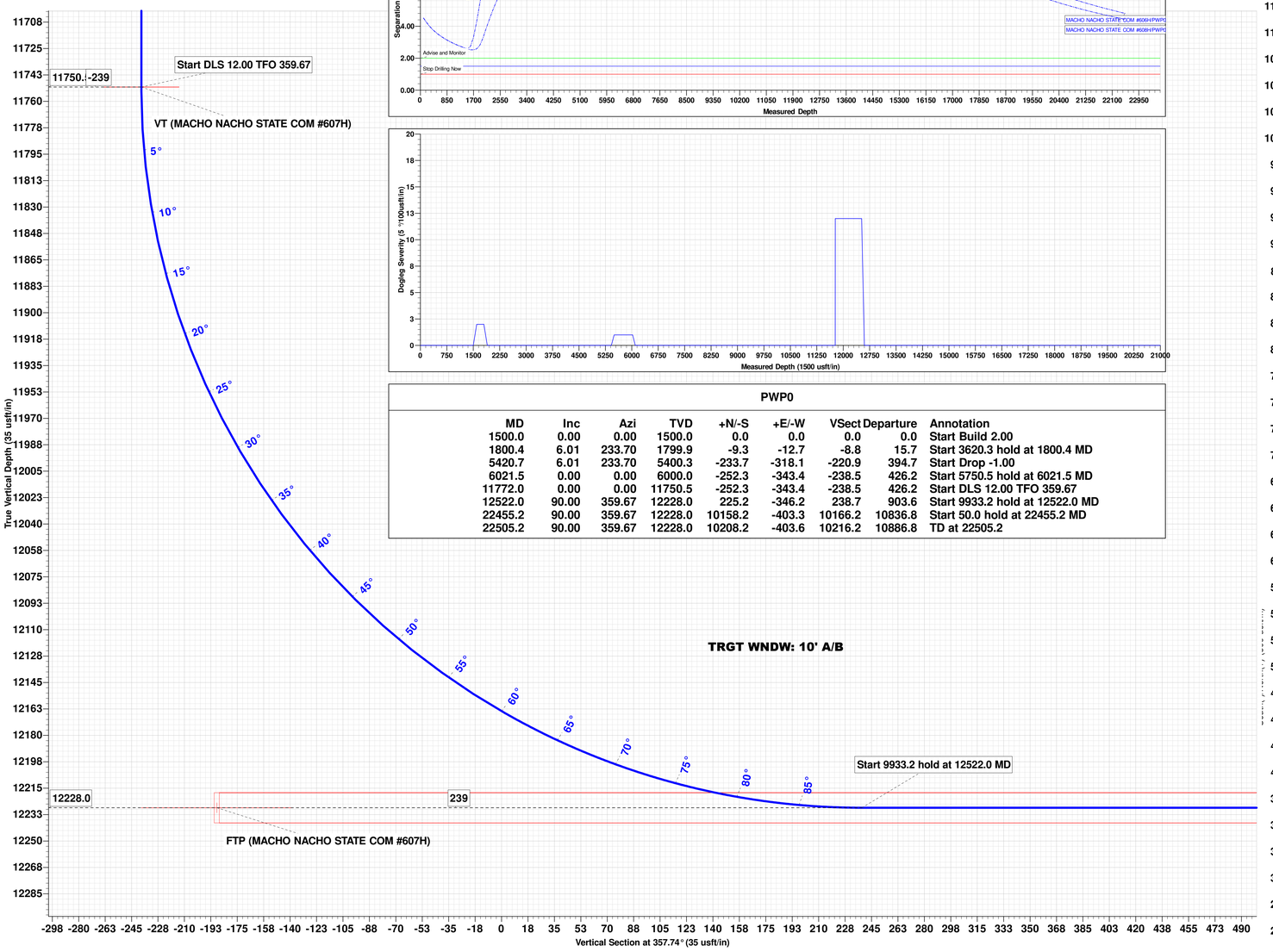
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
VT (MACHO NACHO STATE COM #607H)	11750.5	-252.3	-343.4	446299.50	721791.05	Circle (Radius: 25.0)
FTP (MACHO NACHO STATE COM #607H)	12228.0	-202.2	-342.8	446349.60	721791.70	Circle (Radius: 50.0)
LTP (MACHO NACHO STATE COM #607H)	12228.0	10158.2	-403.3	456710.00	721731.20	Point
PBHL (MACHO NACHO STATE COM #607H)	12228.0	10208.2	-403.6	456760.00	721730.90	Rectangle (Sides: L10410.7 W100.0)

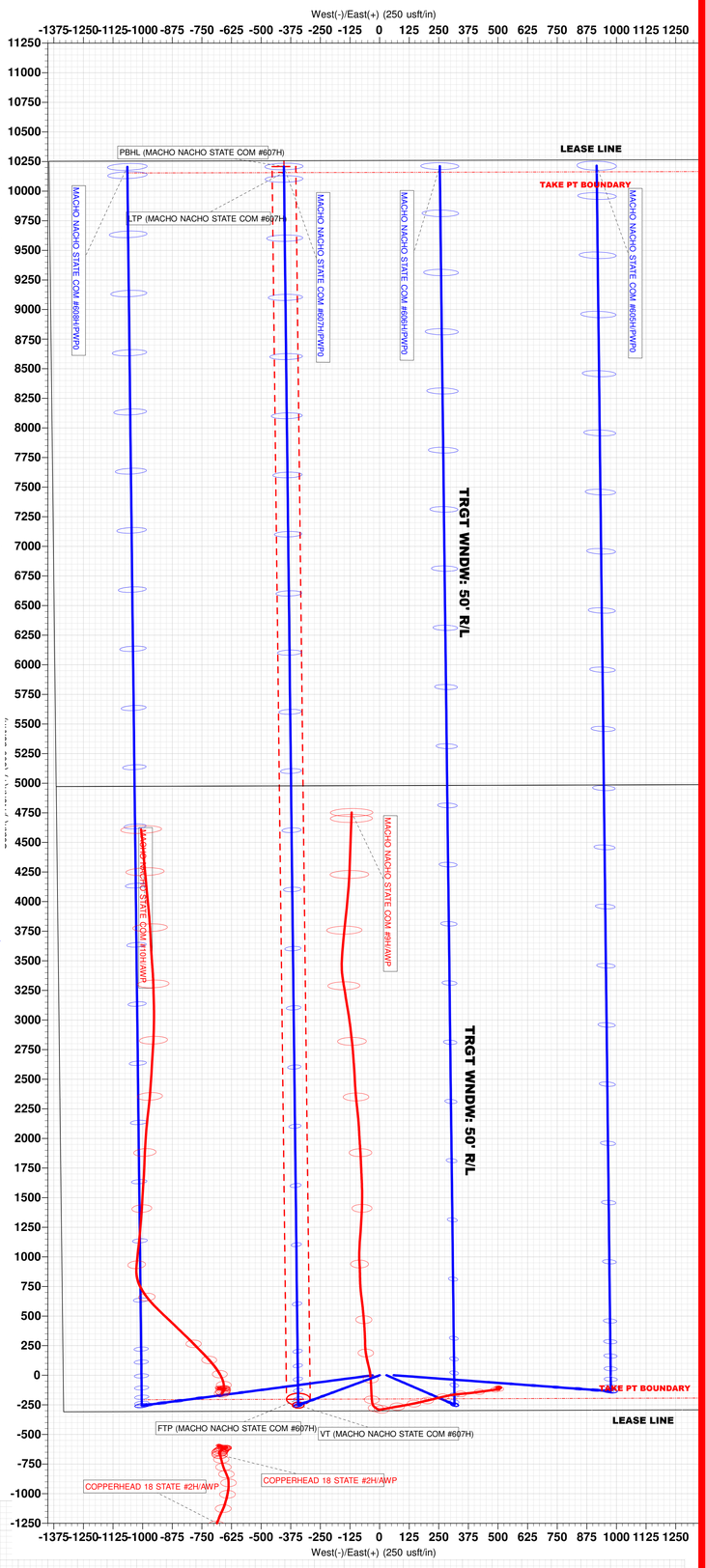


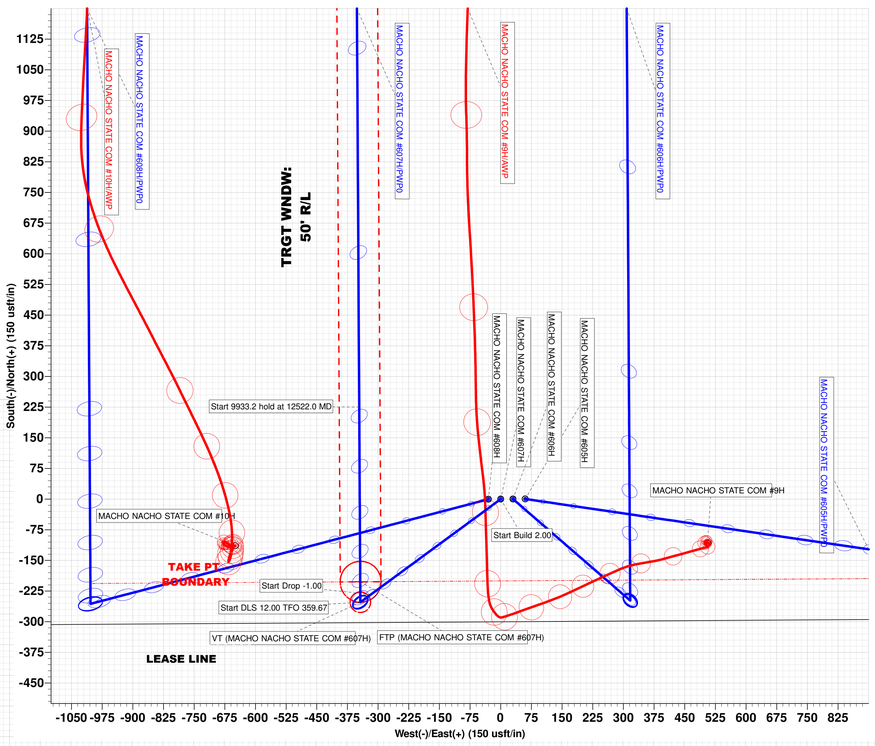
PWP0

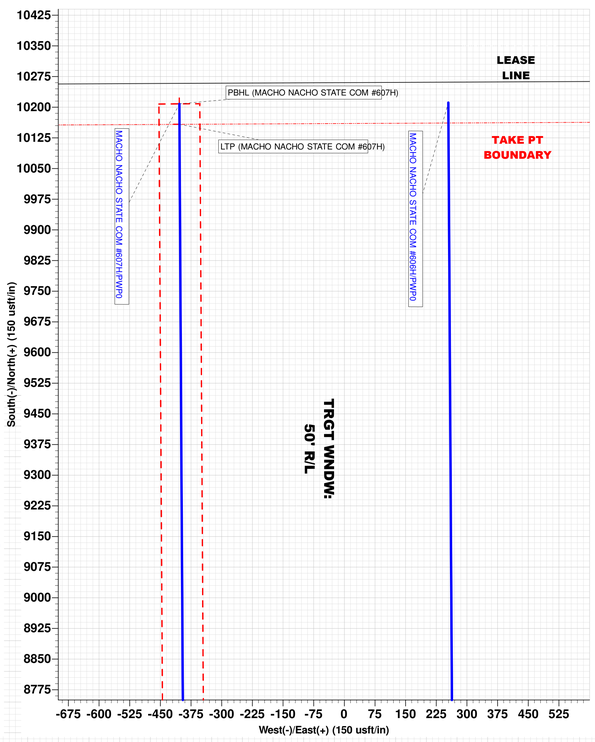
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1500.0	0.00	0.00	1500.0	0.0	0.0	0.0	0.0	Start Build 2.00
1800.4	6.01	233.70	1799.9	-9.3	-12.7	-8.8	15.7	Start 3620.3 hold at 1800.4 MD
5420.7	6.01	233.70	5400.3	-233.7	-318.1	-220.9	394.7	Start Drop -1.00
6021.5	0.00	0.00	6000.0	-252.3	-343.4	-238.5	426.2	Start 5750.5 hold at 6021.5 MD
11772.0	0.00	0.00	11750.5	-252.3	-343.4	-238.5	426.2	Start DLS 12.00 TFO 359.67
12522.0	90.00	359.67	12228.0	225.2	-346.2	238.7	903.6	Start 9933.2 hold at 12522.0 MD
22455.2	90.00	359.67	12228.0	10158.2	-403.3	10166.2	10836.8	Start 50.0 hold at 22455.2 MD
22505.2	90.00	359.67	12228.0	10208.2	-403.6	10216.2	10886.8	TD at 22505.2

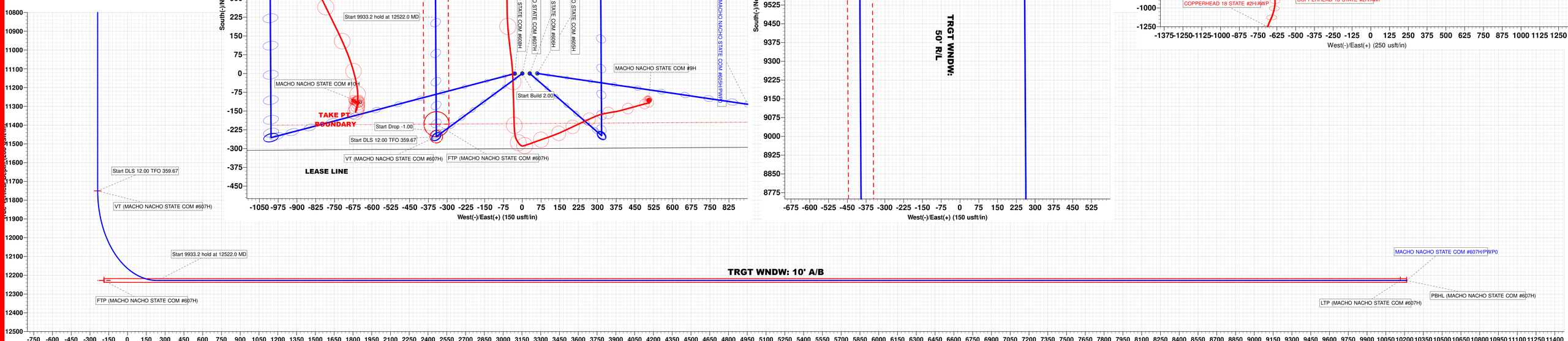












Macho Nacho State Com #607H

Casing and Cement

String	Hole Size	Csg OD	PPF	Depth	Sx Cement	TOC
Surface	14-3/4”	10-3/4””	45.5#	1,530’	980	0’
Intermediate	9-7/8” x 8-3/4”	7-5/8”	29.7#	11,620’	1,010	0’
Production	6-3/4”	5-1/2”	23.0#	22,505’	1,590	0’

Well Plan

Drill 14-3/4” hole to ~1,530’ with fresh water. Run 10-3/4” 45.5# J-55 BTC casing to TD and cement to surface in one stage (preset).

Drill 9-7/8” x 8-3/4” (taper at ~8,000’ MD) vertical hole to ~11,620’ with saturated brine. Run 7-5/8” 29.7# L80-IC BTC (0’-8,000’) / P110 W513 (8,000’-11,620’) casing to TD and cement to surface in one stage.

Drill 6-3/4” curve and lateral to ~22,505’ with OBM. Run 5-1/2” 23# P-110-CY TXP BTC (0’-11,120’) / P110-CY W441 (11,120’-22,505’) casing to TD and cement to surface in one stage.

Well Control

After setting 10-3/4” casing and installing 10,000 psi casing head, NU 13-5/8" Cameron BOP. Test casing to 1500 psi, annular to 2500 psi and other BOP equipment to 10,000 psi.

Type	Working Pressure	Test Pressure	Manufacture
Double Ram	10,000 psi	10,000 psi	Cameron

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: COG Operating LLC **OGRID:** 229137 **Date:** 12 / 20 / 23

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Macho Nacho State Com 607H	30-025-	N-7-24S-33E	300' FSL & 1335' FWL	± 1950	± 3853	± 4553

IV. Central Delivery Point Name: _____ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Macho Nacho State Com 607H	Pending	4/8/2024	± 25 days from spud	8/6/2024	8/16/2024	8/21/2024

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system. ***If Operator checks this box, Operator will select one of the following:***

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- **(a)** power generation on lease;
- **(b)** power generation for grid;
- **(c)** compression on lease;
- **(d)** liquids removal on lease;
- **(e)** reinjection for underground storage;
- **(f)** reinjection for temporary storage;
- **(g)** reinjection for enhanced oil recovery;
- **(h)** fuel cell production; and
- **(i)** other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

VI. Separation Equipment

How Operator will size separation equipment to optimize gas capture:

All ConocoPhillips production facility equipment will be sized per industry standards (API 12J) with adequate retention time to effectively separate all phases of production. Each project will take into consideration the number of wells and type curves for each formation pool to ensure adequate facility capacity. Design considerations will also include review of all piping, tanks, VRU's and associated equipment to ensure optimized gas capture minimized risk of release.

VII. Operational Practices

Actions Operator will take to comply with the requirements below:

B. Drilling Operations

- During drilling, flare stacks will be located a minimum of 100 feet from the nearest surface hole location. All gas is captured or combusted. If an emergency or malfunction occurs, gas will be flared or vented for public health, safety, and the environment and be properly reported to the NMOCD pursuant to 19.15.27.8.G.
- Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.

C. Completion Operations

- During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.
- Individual well test separators will be set to properly separate gas and liquids. A temporary test separator will be utilized initially to process volumes. In addition, separators will be tied into flowback tanks which will be tied into the gas processing equipment for sales down a pipeline.

D. Venting and flaring during production operations

- During each phase of well life (drilling, completion and production) of a ConocoPhillips well, COP personnel will follow all necessary procedures to ensure both the operation and the equipment are within the NMAC 19.15.27.8 Subsection D guidelines.
- During well operations that require unloading of the well to atmospheric pressure, all reasonable actions will be taken to minimize vented gas
- Through the life of the well all flaring shall be measured, and venting events quantified using the data available and industry best practice.

E. Performance standards for separation, storage tank and flare equipment

- All storage tanks and separation equipment are designed minimize risk of liquid or vapor release and optimize gas capture. This includes automation for automatic gauging and pressure monitoring.

- All flare stacks are equipped with auto ignition devices and/or continuous pilots and are designed to operate at maximum combustion efficiency pursuant NMAC 19.15.27.8 Subsection E. Flares will follow COP spacing guidelines to ensure they are a safe distance from combustibles and operations equipment.
- COP personnel will conduct routine AVO inspections on a regular basis per NMAC 19.15.27.8 Subsection E guidelines.

F. Measurement of vented and flared natural gas.

- Measurement equipment will be installed to quantify gas flared during drilling, completion and production of the well.
- All measurement devices installed will meet accuracy ratings per AGA and API standards.
- Measurement devices will be installed without manifolds that allow diversion of gas around the metering element, except for the sole purpose of inspection of servicing the measurement device.

VIII. Best Management Practices

- Operator will curtail or shut in production, within reasonable limits, during upset conditions to minimize venting and flaring.
- When feasible, Operator will use equipment to capture gas that would otherwise be vented or flared.
- During completions and production operations Operator will minimize blowdowns to atmosphere
- When feasible, Operator will use electric or air actuated equipment to reduce bleed emissions

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:	*Mayte Reyes*
Printed Name:	Mayte Reyes
Title:	Sr. Regulatory Coodinator
E-mail Address:	mayte.x.reyes@conocophillips.com
Date:	12/20/2023
Phone:	575-748-6945

OIL CONSERVATION DIVISION
(Only applicable when submitted as a standalone form)

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

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