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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 C-101
August 1, 2011

Permit 273236

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 30-015-46381
4. Property Code 38476	5. Property Name HONEY GRAHAM STATE COM	6. Well No. 701H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	20	26S	28E		320	N	745	E	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
H	32	26S	28E	4	200	S	550	E	Eddy

9. Pool Information

PURPLE SAGE;WOLFCAMP (GAS)	98220

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
New Well	GAS		State	3064
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
N	21719	Wolfcamp		10/18/2019
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	17.5	13.375	54.5	500	450	0
Int1	12.25	9.625	40	8700	1400	0
Prod	8.75	5.5	20	21719	3000	8300

Casing/Cement Program: Additional Comments

Drill 17-1/2" hole to ~500' w/ fresh water. Run 13-3/8" 54.5# J-55 BTC casing to TD and cement to surface in one stage. Drill 12-1/4" hole to ~8,700' with cut brine emulsion. Run 9-5/8 40# L-80 BTC to TD and cement to surface in two stages. Drill 8-3/4" vertical hole, curve & lateral to 21719' with OBM. Run 5-1/2" 20# P110 BTC casing from TD to surface and cement to 8300' in one stage.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	5000	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 Diane Kuykendall	Approved By:	Raymond Podany
Title:	Production Accounting Director	Title:	Geologist
Email Address:	dkuykendall@concho.com	Approved Date: 10/18/2019	Expiration Date: 10/18/2021
Date: 10/9/2019	Phone: 432-685-4372	Conditions of Approval Attached	

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-	98220	Purple Sage; Wolfcamp

4 Property Code	5 Property Name	6 Well Number
38476	HONEY GRAHAM STATE COM	701H

7 OGRID NO.	8 Operator Name	9 Elevation
229137	COG OPERATING, LLC	3064'

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
A	20	26S	28E		320	NORTH	745	EAST	EDDY

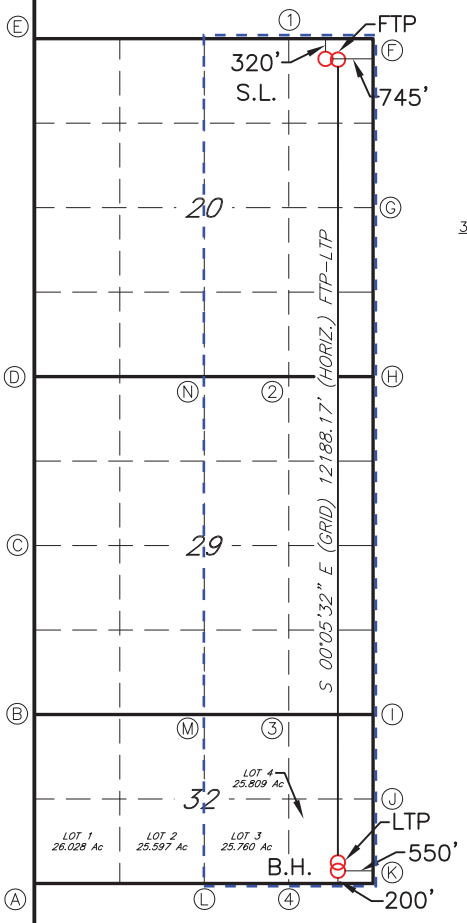
11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	32	26S	28E		200	SOUTH	550	EAST	EDDY

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
767.57			

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

16



GEODETIC DATA
NAD 83 GRID – NM EAST

SURFACE LOCATION (SL)
N: 376326.2 – E: 612583.2
LAT: 32.0343923° N
LONG: 104.1034140° W

FIRST TAKE POINT (FTP)
330' FNL & 550' FEL (Sec.20)
N: 376314.8 – E: 612778.2
LAT: 32.0343599° N
LON: 104.1027848° W

LAST TAKE POINT (LTP)
330' FSL & 550' FEL (Sec.32)
N: 364129.4 – E: 612797.8
LAT: 32.0008622° N
LON: 104.1028055° W

BOTTOM HOLE (BH)
N: 363999.4 – E: 612798.1
LAT: 32.0005050° N
LON: 104.1028055° W

GEODETIC DATA
NAD 83 GRID – NM EAST

A: FOUND BRASS CAP "1995"
N: 363793.5 – E: 608039.5

B: FOUND BRASS CAP "1995"
N: 366121.4 – E: 608035.0

C: FOUND BRASS CAP "1995"
N: 368761.0 – E: 608041.8

D: FOUND BRASS CAP "1995"
N: 371399.9 – E: 608048.9

E: CALCULATED CORNER
N: 376678.5 – E: 608036.7

F: FOUND BRASS CAP "1995"
N: 376640.9 – E: 613327.9

G: FOUND BRASS CAP "1995"
N: 373994.4 – E: 613329.1

H: FOUND BRASS CAP "1995"
N: 371341.8 – E: 613334.8

I: FOUND BRASS CAP "1995"
N: 366056.4 – E: 613343.5

J: FOUND BRASS CAP "1995"
N: 364641.9 – E: 613346.6

K: FOUND BRASS CAP "1995"
N: 363800.2 – E: 613348.4

L: FOUND BRASS CAP "1995"
N: 363796.6 – E: 610675.9

M: FOUND BRASS CAP "1995"
N: 366045.1 – E: 610671.1

N: FOUND BRASS CAP "1995"
N: 371370.8 – E: 610691.8

CALCULATED POINTS

1: N: 376650.3 – E: 612005.1
2: N: 371356.3 – E: 612013.3
3: N: 366050.8 – E: 612007.3
4: N: 363798.4 – E: 612012.2

17 OPERATOR CERTIFICATION

I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 10/09/19

Robyn M. Russell
Printed Name

Rrussell@concho.com
E-mail Address

18 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.

09-06-2019
Date of Survey

Signature and Seal of Professional Surveyor:

ROBERT M. HOWETT
NEW MEXICO
19680
PROFESSIONAL SURVEYOR

19680
Certificate Number

Job No.: LS19090863

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GAS CAPTURE PLAN

Date: 10/18/2019

☒ Original

☐ Amended - Reason for Amendment:

Operator & OGRID No.: [229137] COG OPERATING LLC

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

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

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
HONEY GRAHAM STATE COM #701H	30-015-46381	A-20-26S-28E	0320N 0745E	7450	None	Length of additional line is not known at this time. Processing Plant Location: Sec 35, Blk 57, T2S, Culberson County, TX

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to ETC Texas Pipeline, Ltd. and will be connected to ETC Texas Pipeline, Ltd. Low Pressure gathering system located in Eddy County, New Mexico. It will require 0' of pipeline to connect the facility to Low Pressure gathering system. COG OPERATING LLC provides (periodically) to ETC Texas Pipeline, Ltd. a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, COG OPERATING LLC and ETC Texas Pipeline, Ltd. have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at ETC Texas Pipeline, Ltd. Processing Plant located in Sec. 20, Twn. 26S, Rng. 28E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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

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Santa Fe, NM 87505

PERMIT COMMENTS

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	30-015-46381
	Well: HONEY GRAHAM STATE COM #701H

Created By	Comment	Comment Date
rodom	H2S concentrations of wells in this area from surface to TD are low enough that a contingency plan is not required.	10/9/2019

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Oil Conservation Division
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Santa Fe, NM 87505

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address:	API Number:
COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	30-015-46381
	Well: HONEY GRAHAM STATE COM #701H

OCD Reviewer	Condition
rpodany	Will require a directional survey with the C-104
rpodany	Cement is required to circulate on both surface and intermediate1 strings of casing

CONCHO

NORTHERN DELAWARE BASIN

EDDY COUNTY, NM
ATLAS
HONEY GRAHAM STATE COM #701H

OWB

Plan: PWP1

Standard Survey Report

09 October, 2019

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well HONEY GRAHAM STATE COM#701H
Project:	EDDY COUNTY, NM	**TVD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Site:	ATLAS	**MD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Well:	HONEY GRAHAM STATE COM #701H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDM_Users

Project EDDY COUNTY, NM

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site ATLAS

Site Position:		**Northing:**	371,480.80 usft	**Latitude:**	32° 1' 15.933 N
From:	Map	**Easting:**	573,599.60 usft	**Longitude:**	104° 5' 45.086 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.13 °

Well HONEY GRAHAM STATE COM #701H

Well Position	**+N/-S**	0.0 usft	**Northing:**	376,269.00 usft	**Latitude:**	32° 2' 3.367 N
	+E/-W	0.0 usft	**Easting:**	571,398.50 usft	**Longitude:**	104° 6' 10.534 W
Position Uncertainty		3.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,064.0 usft

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/9/2019	6.94	59.77	47,534.87159048

Design PWP1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	9,341.0	0.0	0.0	179.00

Survey Tool Program **Date** 10/9/2019

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	21,719.0	PWP1 (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction

Planned Survey

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

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well HONEY GRAHAM STATE COM#701H
Project:	EDDY COUNTY, NM	**TVD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Site:	ATLAS	**MD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Well:	HONEY GRAHAM STATE COM #701H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDM_Users

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.0	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
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well HONEY GRAHAM STATE COM#701H
Project:	EDDY COUNTY, NM	**TVD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Site:	ATLAS	**MD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Well:	HONEY GRAHAM STATE COM #701H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDM_Users

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)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
5,600.0	2.00	36.16	5,600.0	1.4	1.0	-1.4	2.00	2.00	0.00
5,700.0	4.00	36.16	5,699.8	5.6	4.1	-5.6	2.00	2.00	0.00
5,749.5	4.99	36.16	5,749.2	8.8	6.4	-8.7	2.00	2.00	0.00
Start 3051.1 hold at 5749.5 MD									
5,800.0	4.99	36.16	5,799.5	12.3	9.0	-12.2	0.00	0.00	0.00
5,900.0	4.99	36.16	5,899.1	19.3	14.1	-19.1	0.00	0.00	0.00
6,000.0	4.99	36.16	5,998.7	26.4	19.3	-26.0	0.00	0.00	0.00
6,100.0	4.99	36.16	6,098.4	33.4	24.4	-32.9	0.00	0.00	0.00
6,200.0	4.99	36.16	6,198.0	40.4	29.5	-39.9	0.00	0.00	0.00
6,300.0	4.99	36.16	6,297.6	47.4	34.7	-46.8	0.00	0.00	0.00
6,400.0	4.99	36.16	6,397.2	54.4	39.8	-53.7	0.00	0.00	0.00
6,500.0	4.99	36.16	6,496.8	61.5	44.9	-60.7	0.00	0.00	0.00
6,600.0	4.99	36.16	6,596.5	68.5	50.1	-67.6	0.00	0.00	0.00
6,700.0	4.99	36.16	6,696.1	75.5	55.2	-74.5	0.00	0.00	0.00
6,800.0	4.99	36.16	6,795.7	82.5	60.3	-81.5	0.00	0.00	0.00
6,900.0	4.99	36.16	6,895.3	89.5	65.5	-88.4	0.00	0.00	0.00
7,000.0	4.99	36.16	6,994.9	96.6	70.6	-95.3	0.00	0.00	0.00
7,100.0	4.99	36.16	7,094.6	103.6	75.7	-102.3	0.00	0.00	0.00
7,200.0	4.99	36.16	7,194.2	110.6	80.9	-109.2	0.00	0.00	0.00
7,300.0	4.99	36.16	7,293.8	117.6	86.0	-116.1	0.00	0.00	0.00
7,400.0	4.99	36.16	7,393.4	124.7	91.1	-123.1	0.00	0.00	0.00
7,500.0	4.99	36.16	7,493.1	131.7	96.2	-130.0	0.00	0.00	0.00
7,600.0	4.99	36.16	7,592.7	138.7	101.4	-136.9	0.00	0.00	0.00
7,700.0	4.99	36.16	7,692.3	145.7	106.5	-143.8	0.00	0.00	0.00
7,800.0	4.99	36.16	7,791.9	152.7	111.6	-150.8	0.00	0.00	0.00
7,900.0	4.99	36.16	7,891.5	159.8	116.8	-157.7	0.00	0.00	0.00
8,000.0	4.99	36.16	7,991.2	166.8	121.9	-164.6	0.00	0.00	0.00
8,100.0	4.99	36.16	8,090.8	173.8	127.0	-171.6	0.00	0.00	0.00
8,200.0	4.99	36.16	8,190.4	180.8	132.2	-178.5	0.00	0.00	0.00
8,300.0	4.99	36.16	8,290.0	187.9	137.3	-185.4	0.00	0.00	0.00
8,400.0	4.99	36.16	8,389.6	194.9	142.4	-192.4	0.00	0.00	0.00
8,500.0	4.99	36.16	8,489.3	201.9	147.6	-199.3	0.00	0.00	0.00
8,600.0	4.99	36.16	8,588.9	208.9	152.7	-206.2	0.00	0.00	0.00
8,700.0	4.99	36.16	8,688.5	215.9	157.8	-213.2	0.00	0.00	0.00
8,800.0	4.99	36.16	8,788.1	223.0	163.0	-220.1	0.00	0.00	0.00
8,800.6	4.99	36.16	8,788.7	223.0	163.0	-220.1	0.00	0.00	0.00
Start DLS 10.00 TFO 143.63									
8,900.0	6.62	153.45	8,887.9	221.4	168.1	-218.4	10.00	1.64	117.97
9,000.0	16.19	169.65	8,985.8	202.4	173.2	-199.4	10.00	9.57	16.19
9,100.0	26.08	173.84	9,079.0	166.8	178.1	-163.7	10.00	9.89	4.19
9,200.0	36.03	175.82	9,164.5	115.5	182.6	-112.3	10.00	9.95	1.99

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well HONEY GRAHAM STATE COM#701H
Project:	EDDY COUNTY, NM	**TVD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Site:	ATLAS	**MD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Well:	HONEY GRAHAM STATE COM #701H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDM_Users

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)
9,300.0	46.00	177.04	9,239.9	50.1	186.6	-46.8	10.00	9.97	1.21
9,400.0	55.97	177.90	9,302.8	-27.5	190.0	30.8	10.00	9.98	0.86
9,500.0	65.96	178.57	9,351.2	-114.7	192.7	118.1	10.00	9.98	0.68
9,600.0	75.94	179.15	9,383.8	-209.1	194.5	212.5	10.00	9.99	0.58
9,700.0	85.93	179.68	9,399.6	-307.7	195.5	311.1	10.00	9.99	0.53
9,743.7	90.29	179.91	9,401.0	-351.4	195.7	354.7	10.00	9.99	0.52
Start 11975.3 hold at 9743.7 MD									
9,800.0	90.29	179.91	9,400.7	-407.7	195.8	411.0	0.00	0.00	0.00
9,900.0	90.29	179.91	9,400.2	-507.7	195.9	511.0	0.00	0.00	0.00
10,000.0	90.29	179.91	9,399.7	-607.7	196.1	611.0	0.00	0.00	0.00
10,100.0	90.29	179.91	9,399.2	-707.7	196.2	711.0	0.00	0.00	0.00
10,200.0	90.29	179.91	9,398.7	-807.7	196.4	811.0	0.00	0.00	0.00
10,300.0	90.29	179.91	9,398.2	-907.7	196.6	911.0	0.00	0.00	0.00
10,400.0	90.29	179.91	9,397.7	-1,007.7	196.7	1,011.0	0.00	0.00	0.00
10,500.0	90.29	179.91	9,397.2	-1,107.7	196.9	1,111.0	0.00	0.00	0.00
10,600.0	90.29	179.91	9,396.7	-1,207.7	197.0	1,210.9	0.00	0.00	0.00
10,700.0	90.29	179.91	9,396.2	-1,307.7	197.2	1,310.9	0.00	0.00	0.00
10,800.0	90.29	179.91	9,395.7	-1,407.7	197.3	1,410.9	0.00	0.00	0.00
10,900.0	90.29	179.91	9,395.2	-1,507.7	197.5	1,510.9	0.00	0.00	0.00
11,000.0	90.29	179.91	9,394.7	-1,607.7	197.7	1,610.9	0.00	0.00	0.00
11,100.0	90.29	179.91	9,394.2	-1,707.7	197.8	1,710.9	0.00	0.00	0.00
11,200.0	90.29	179.91	9,393.7	-1,807.7	198.0	1,810.9	0.00	0.00	0.00
11,300.0	90.29	179.91	9,393.2	-1,907.7	198.1	1,910.8	0.00	0.00	0.00
11,400.0	90.29	179.91	9,392.7	-2,007.7	198.3	2,010.8	0.00	0.00	0.00
11,500.0	90.29	179.91	9,392.2	-2,107.7	198.5	2,110.8	0.00	0.00	0.00
11,600.0	90.29	179.91	9,391.7	-2,207.7	198.6	2,210.8	0.00	0.00	0.00
11,700.0	90.29	179.91	9,391.2	-2,307.7	198.8	2,310.8	0.00	0.00	0.00
11,800.0	90.29	179.91	9,390.7	-2,407.7	198.9	2,410.8	0.00	0.00	0.00
11,900.0	90.29	179.91	9,390.2	-2,507.7	199.1	2,510.8	0.00	0.00	0.00
12,000.0	90.29	179.91	9,389.7	-2,607.7	199.2	2,610.7	0.00	0.00	0.00
12,100.0	90.29	179.91	9,389.2	-2,707.7	199.4	2,710.7	0.00	0.00	0.00
12,200.0	90.29	179.91	9,388.7	-2,807.7	199.6	2,810.7	0.00	0.00	0.00
12,300.0	90.29	179.91	9,388.2	-2,907.7	199.7	2,910.7	0.00	0.00	0.00
12,400.0	90.29	179.91	9,387.7	-3,007.7	199.9	3,010.7	0.00	0.00	0.00
12,500.0	90.29	179.91	9,387.2	-3,107.7	200.0	3,110.7	0.00	0.00	0.00
12,600.0	90.29	179.91	9,386.7	-3,207.7	200.2	3,210.7	0.00	0.00	0.00
12,700.0	90.29	179.91	9,386.2	-3,307.7	200.4	3,310.6	0.00	0.00	0.00
12,800.0	90.29	179.91	9,385.7	-3,407.7	200.5	3,410.6	0.00	0.00	0.00
12,900.0	90.29	179.91	9,385.2	-3,507.7	200.7	3,510.6	0.00	0.00	0.00
13,000.0	90.29	179.91	9,384.7	-3,607.7	200.8	3,610.6	0.00	0.00	0.00
13,100.0	90.29	179.91	9,384.2	-3,707.7	201.0	3,710.6	0.00	0.00	0.00
13,200.0	90.29	179.91	9,383.7	-3,807.7	201.1	3,810.6	0.00	0.00	0.00
13,300.0	90.29	179.91	9,383.2	-3,907.7	201.3	3,910.6	0.00	0.00	0.00

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well HONEY GRAHAM STATE COM#701H
Project:	EDDY COUNTY, NM	**TVD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Site:	ATLAS	**MD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Well:	HONEY GRAHAM STATE COM #701H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDM_Users

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,400.0	90.29	179.91	9,382.7	-4,007.7	201.5	4,010.6	0.00	0.00	0.00
13,500.0	90.29	179.91	9,382.2	-4,107.6	201.6	4,110.5	0.00	0.00	0.00
13,600.0	90.29	179.91	9,381.7	-4,207.6	201.8	4,210.5	0.00	0.00	0.00
13,700.0	90.29	179.91	9,381.2	-4,307.6	201.9	4,310.5	0.00	0.00	0.00
13,800.0	90.29	179.91	9,380.7	-4,407.6	202.1	4,410.5	0.00	0.00	0.00
13,900.0	90.29	179.91	9,380.2	-4,507.6	202.2	4,510.5	0.00	0.00	0.00
14,000.0	90.29	179.91	9,379.7	-4,607.6	202.4	4,610.5	0.00	0.00	0.00
14,100.0	90.29	179.91	9,379.2	-4,707.6	202.6	4,710.5	0.00	0.00	0.00
14,200.0	90.29	179.91	9,378.7	-4,807.6	202.7	4,810.4	0.00	0.00	0.00
14,300.0	90.29	179.91	9,378.2	-4,907.6	202.9	4,910.4	0.00	0.00	0.00
14,400.0	90.29	179.91	9,377.7	-5,007.6	203.0	5,010.4	0.00	0.00	0.00
14,500.0	90.29	179.91	9,377.2	-5,107.6	203.2	5,110.4	0.00	0.00	0.00
14,600.0	90.29	179.91	9,376.7	-5,207.6	203.4	5,210.4	0.00	0.00	0.00
14,700.0	90.29	179.91	9,376.2	-5,307.6	203.5	5,310.4	0.00	0.00	0.00
14,800.0	90.29	179.91	9,375.7	-5,407.6	203.7	5,410.4	0.00	0.00	0.00
14,900.0	90.29	179.91	9,375.2	-5,507.6	203.8	5,510.3	0.00	0.00	0.00
15,000.0	90.29	179.91	9,374.7	-5,607.6	204.0	5,610.3	0.00	0.00	0.00
15,100.0	90.29	179.91	9,374.2	-5,707.6	204.1	5,710.3	0.00	0.00	0.00
15,200.0	90.29	179.91	9,373.7	-5,807.6	204.3	5,810.3	0.00	0.00	0.00
15,300.0	90.29	179.91	9,373.2	-5,907.6	204.5	5,910.3	0.00	0.00	0.00
15,400.0	90.29	179.91	9,372.7	-6,007.6	204.6	6,010.3	0.00	0.00	0.00
15,500.0	90.29	179.91	9,372.2	-6,107.6	204.8	6,110.3	0.00	0.00	0.00
15,600.0	90.29	179.91	9,371.7	-6,207.6	204.9	6,210.2	0.00	0.00	0.00
15,700.0	90.29	179.91	9,371.2	-6,307.6	205.1	6,310.2	0.00	0.00	0.00
15,800.0	90.29	179.91	9,370.7	-6,407.6	205.2	6,410.2	0.00	0.00	0.00
15,900.0	90.29	179.91	9,370.2	-6,507.6	205.4	6,510.2	0.00	0.00	0.00
16,000.0	90.29	179.91	9,369.7	-6,607.6	205.6	6,610.2	0.00	0.00	0.00
16,100.0	90.29	179.91	9,369.2	-6,707.6	205.7	6,710.2	0.00	0.00	0.00
16,200.0	90.29	179.91	9,368.7	-6,807.6	205.9	6,810.2	0.00	0.00	0.00
16,300.0	90.29	179.91	9,368.2	-6,907.6	206.0	6,910.2	0.00	0.00	0.00
16,400.0	90.29	179.91	9,367.7	-7,007.6	206.2	7,010.1	0.00	0.00	0.00
16,500.0	90.29	179.91	9,367.2	-7,107.6	206.4	7,110.1	0.00	0.00	0.00
16,600.0	90.29	179.91	9,366.7	-7,207.6	206.5	7,210.1	0.00	0.00	0.00
16,700.0	90.29	179.91	9,366.2	-7,307.6	206.7	7,310.1	0.00	0.00	0.00
16,800.0	90.29	179.91	9,365.6	-7,407.6	206.8	7,410.1	0.00	0.00	0.00
16,900.0	90.29	179.91	9,365.1	-7,507.6	207.0	7,510.1	0.00	0.00	0.00
17,000.0	90.29	179.91	9,364.6	-7,607.6	207.1	7,610.1	0.00	0.00	0.00
17,100.0	90.29	179.91	9,364.1	-7,707.6	207.3	7,710.0	0.00	0.00	0.00
17,200.0	90.29	179.91	9,363.6	-7,807.6	207.5	7,810.0	0.00	0.00	0.00
17,300.0	90.29	179.91	9,363.1	-7,907.6	207.6	7,910.0	0.00	0.00	0.00
17,400.0	90.29	179.91	9,362.6	-8,007.6	207.8	8,010.0	0.00	0.00	0.00
17,500.0	90.29	179.91	9,362.1	-8,107.6	207.9	8,110.0	0.00	0.00	0.00
17,600.0	90.29	179.91	9,361.6	-8,207.6	208.1	8,210.0	0.00	0.00	0.00

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well HONEY GRAHAM STATE COM#701H
Project:	EDDY COUNTY, NM	**TVD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Site:	ATLAS	**MD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Well:	HONEY GRAHAM STATE COM #701H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDM_Users

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)
17,700.0	90.29	179.91	9,361.1	-8,307.6	208.3	8,310.0	0.00	0.00	0.00
17,800.0	90.29	179.91	9,360.6	-8,407.6	208.4	8,409.9	0.00	0.00	0.00
17,900.0	90.29	179.91	9,360.1	-8,507.6	208.6	8,509.9	0.00	0.00	0.00
18,000.0	90.29	179.91	9,359.6	-8,607.6	208.7	8,609.9	0.00	0.00	0.00
18,100.0	90.29	179.91	9,359.1	-8,707.6	208.9	8,709.9	0.00	0.00	0.00
18,200.0	90.29	179.91	9,358.6	-8,807.6	209.0	8,809.9	0.00	0.00	0.00
18,300.0	90.29	179.91	9,358.1	-8,907.6	209.2	8,909.9	0.00	0.00	0.00
18,400.0	90.29	179.91	9,357.6	-9,007.6	209.4	9,009.9	0.00	0.00	0.00
18,500.0	90.29	179.91	9,357.1	-9,107.6	209.5	9,109.8	0.00	0.00	0.00
18,600.0	90.29	179.91	9,356.6	-9,207.6	209.7	9,209.8	0.00	0.00	0.00
18,700.0	90.29	179.91	9,356.1	-9,307.6	209.8	9,309.8	0.00	0.00	0.00
18,800.0	90.29	179.91	9,355.6	-9,407.6	210.0	9,409.8	0.00	0.00	0.00
18,900.0	90.29	179.91	9,355.1	-9,507.6	210.1	9,509.8	0.00	0.00	0.00
19,000.0	90.29	179.91	9,354.6	-9,607.6	210.3	9,609.8	0.00	0.00	0.00
19,100.0	90.29	179.91	9,354.1	-9,707.6	210.5	9,709.8	0.00	0.00	0.00
19,200.0	90.29	179.91	9,353.6	-9,807.6	210.6	9,809.8	0.00	0.00	0.00
19,300.0	90.29	179.91	9,353.1	-9,907.6	210.8	9,909.7	0.00	0.00	0.00
19,400.0	90.29	179.91	9,352.6	-10,007.6	210.9	10,009.7	0.00	0.00	0.00
19,500.0	90.29	179.91	9,352.1	-10,107.6	211.1	10,109.7	0.00	0.00	0.00
19,600.0	90.29	179.91	9,351.6	-10,207.6	211.3	10,209.7	0.00	0.00	0.00
19,700.0	90.29	179.91	9,351.1	-10,307.6	211.4	10,309.7	0.00	0.00	0.00
19,800.0	90.29	179.91	9,350.6	-10,407.6	211.6	10,409.7	0.00	0.00	0.00
19,900.0	90.29	179.91	9,350.1	-10,507.6	211.7	10,509.7	0.00	0.00	0.00
20,000.0	90.29	179.91	9,349.6	-10,607.6	211.9	10,609.6	0.00	0.00	0.00
20,100.0	90.29	179.91	9,349.1	-10,707.6	212.0	10,709.6	0.00	0.00	0.00
20,200.0	90.29	179.91	9,348.6	-10,807.6	212.2	10,809.6	0.00	0.00	0.00
20,300.0	90.29	179.91	9,348.1	-10,907.6	212.4	10,909.6	0.00	0.00	0.00
20,400.0	90.29	179.91	9,347.6	-11,007.6	212.5	11,009.6	0.00	0.00	0.00
20,500.0	90.29	179.91	9,347.1	-11,107.6	212.7	11,109.6	0.00	0.00	0.00
20,600.0	90.29	179.91	9,346.6	-11,207.6	212.8	11,209.6	0.00	0.00	0.00
20,700.0	90.29	179.91	9,346.1	-11,307.6	213.0	11,309.5	0.00	0.00	0.00
20,800.0	90.29	179.91	9,345.6	-11,407.5	213.1	11,409.5	0.00	0.00	0.00
20,900.0	90.29	179.91	9,345.1	-11,507.5	213.3	11,509.5	0.00	0.00	0.00
21,000.0	90.29	179.91	9,344.6	-11,607.5	213.5	11,609.5	0.00	0.00	0.00
21,100.0	90.29	179.91	9,344.1	-11,707.5	213.6	11,709.5	0.00	0.00	0.00
21,200.0	90.29	179.91	9,343.6	-11,807.5	213.8	11,809.5	0.00	0.00	0.00
21,300.0	90.29	179.91	9,343.1	-11,907.5	213.9	11,909.5	0.00	0.00	0.00
21,400.0	90.29	179.91	9,342.6	-12,007.5	214.1	12,009.4	0.00	0.00	0.00
21,500.0	90.29	179.91	9,342.1	-12,107.5	214.3	12,109.4	0.00	0.00	0.00
21,600.0	90.29	179.91	9,341.6	-12,207.5	214.4	12,209.4	0.00	0.00	0.00
21,700.0	90.29	179.91	9,341.1	-12,307.5	214.6	12,309.4	0.00	0.00	0.00
21,719.0	90.29	179.91	9,341.0	-12,326.5	214.6	12,328.4	0.00	0.00	0.00
TD at 21719.0									

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well HONEY GRAHAM STATE COM#701H
Project:	EDDY COUNTY, NM	**TVD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Site:	ATLAS	**MD Reference:**	KB=27' @ 3091.0usft (Scan Freedom)
Well:	HONEY GRAHAM STATE COM #701H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	PWP1	**Database:**	EDM_Users

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 (HONEY GRAHA - plan misses target center by 0.7usft at 21589.1usft MD (9341.7 TVD, -12196.6 N, 214.4 E) - Point	0.00	0.00	9,341.0	-12,196.6	214.4	364,072.40	571,612.90	32° 0' 2.657 N	104° 6' 8.346 W
PBHL (HONEY GRAH - plan hits target center - Rectangle (sides W100.0 H12,550.0 D20.0)	0.29	359.91	9,341.0	-12,326.5	214.6	363,942.50	571,613.10	32° 0' 1.372 N	104° 6' 8.347 W
FTP (HONEY GRAHA - plan misses target center by 91.9usft at 9433.7usft MD (9320.8 TVD, -55.9 N, 191.0 E) - Circle (radius 50.0)	0.00	0.00	9,401.0	-11.3	195.0	376,257.70	571,593.50	32° 2' 3.251 N	104° 6' 8.269 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
5500	5500	0	0	Start Build 2.00
5749	5749	9	6	Start 3051.1 hold at 5749.5 MD
8801	8789	223	163	Start DLS 10.00 TFO 143.63
9744	9401	-351	196	Start 11975.3 hold at 9743.7 MD
21,719	9341	-12,327	215	TD at 21719.0

Checked By: _____ Approved By: _____ Date: _____

CONCHO

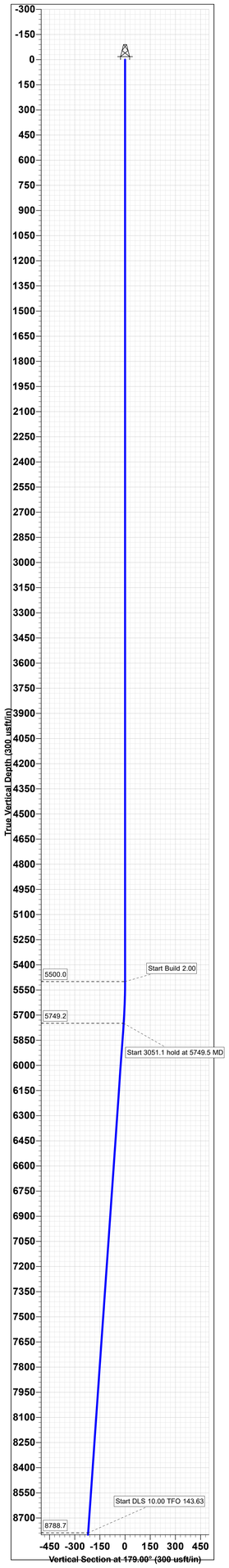
Project:	EDDY COUNTY, NM
Site:	ATLAS
Well:	HONEY GRAHAM STATE COM #701H
Wellbore:	OWB
Design:	PWP1
GL:	3064.0
KB=27' @ 3091.0usft (Scan Freedom)	

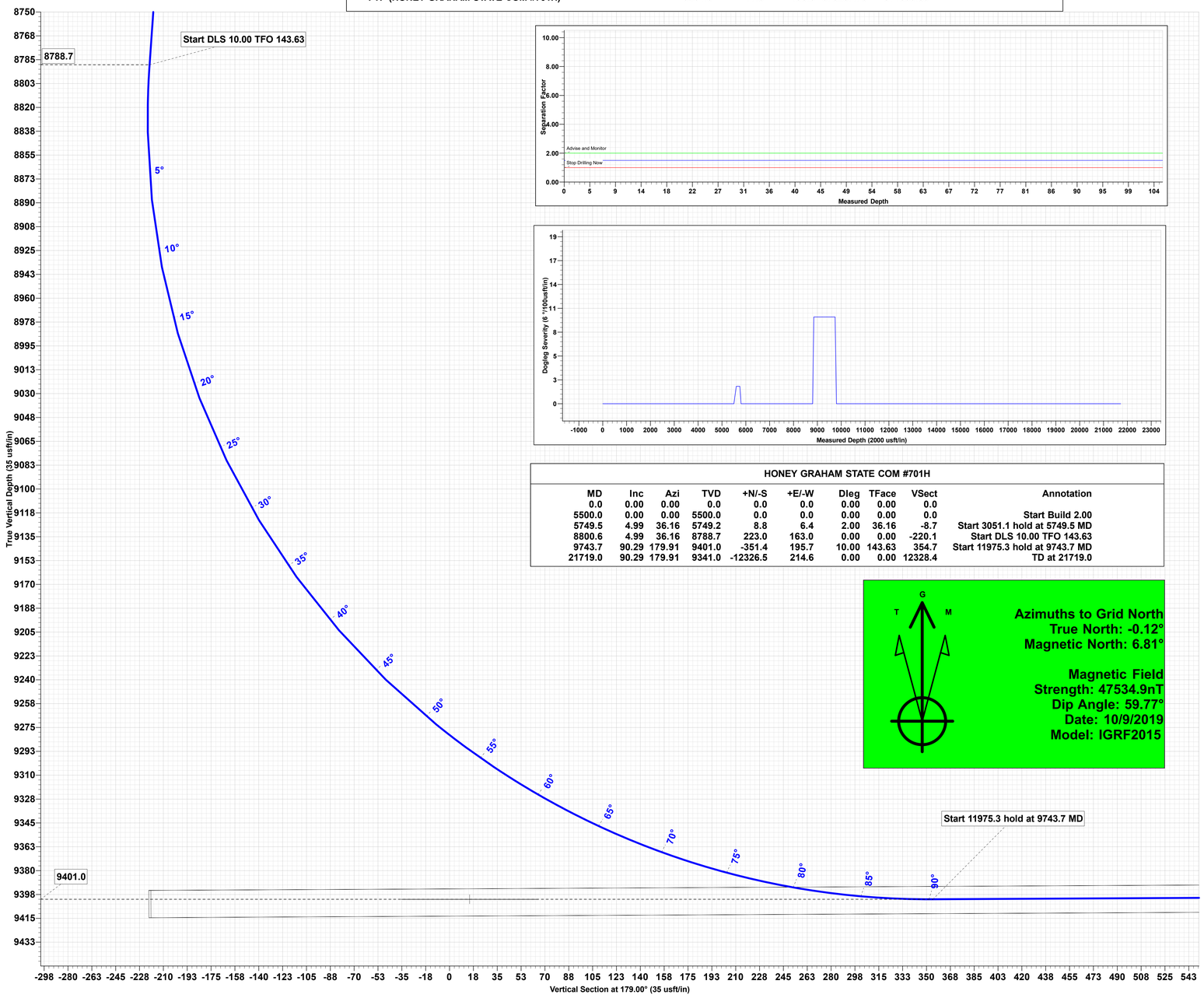
WELL DETAILS: HONEY GRAHAM STATE COM #701H

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.0	0.0	376269.00	571398.50	32° 2' 3.367 N	104° 6' 10.534 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
LTP (HONEY GRAHAM STATE COM #701H)	9341.0	-12196.6	214.4	364072.40	571612.90
PBHL (HONEY GRAHAM STATE COM #701H)	9341.0	-12326.5	214.6	363942.50	571613.10
FTP (HONEY GRAHAM STATE COM #701H)	9401.0	-11.3	195.0	376257.70	571593.50



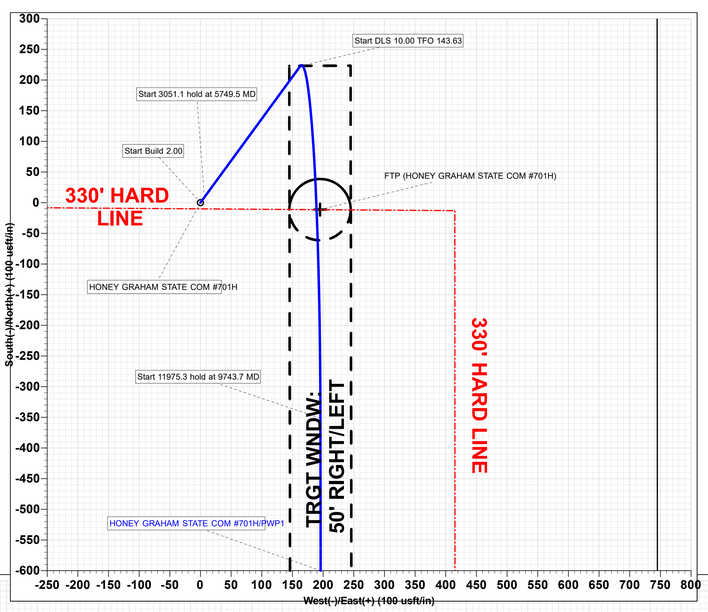


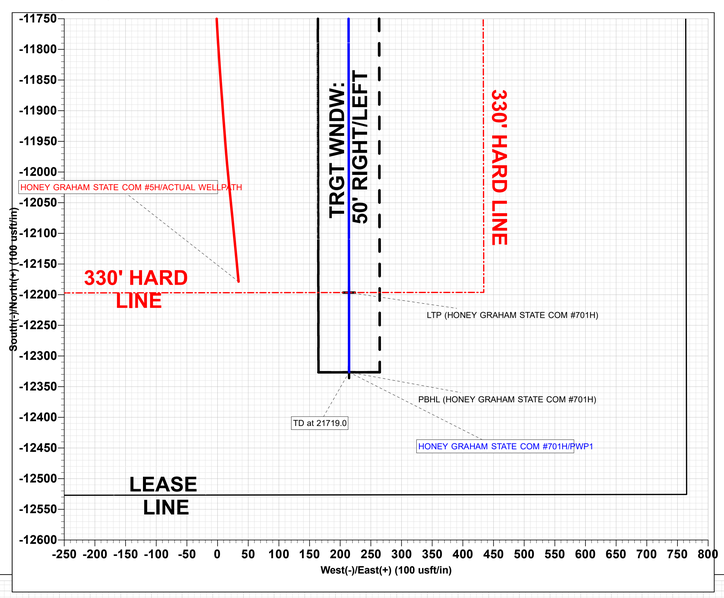
HONEY GRAHAM STATE COM #701H

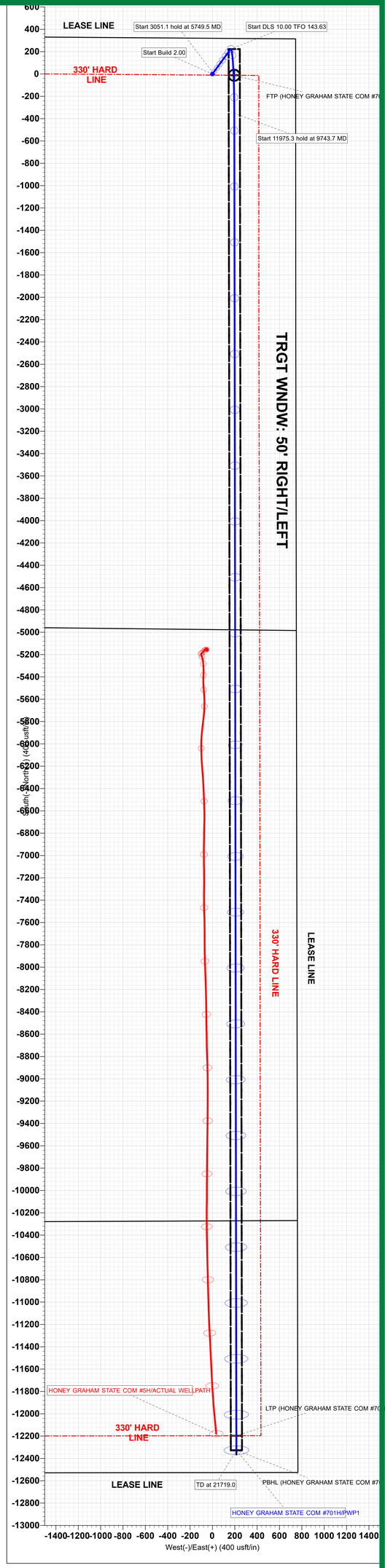
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
5500.0	0.00	0.00	5500.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
5749.5	4.99	36.16	5749.2	8.8	6.4	2.00	36.16	-8.7	Start 3051.1 hold at 5749.5 MD
8800.6	4.99	36.16	8788.7	223.0	163.0	0.00	0.00	-220.1	Start DLS 10.00 TFO 143.63
9743.7	90.29	179.91	9401.0	-351.4	195.7	10.00	143.63	354.7	Start 11975.3 hold at 9743.7 MD
21719.0	90.29	179.91	9341.0	-12326.5	214.6	0.00	0.00	12328.4	TD at 21719.0

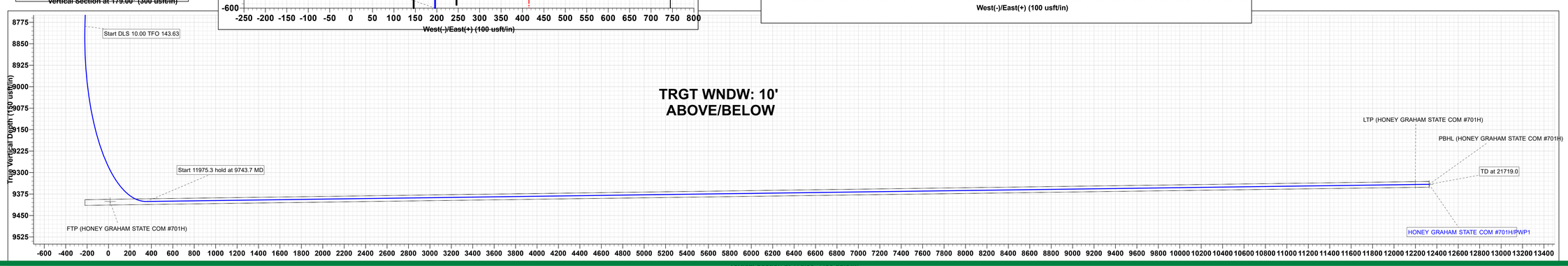
Azimuths to Grid North
True North: -0.12°
Magnetic North: 6.81°

Magnetic Field
Strength: 47534.9nT
Dip Angle: 59.77°
Date: 10/9/2019
Model: IGRF2015









Intent [X] As Drilled [ ]

API #

Operator Name:	Property Name:	Well Number
COG Operating LLC	Honey Graham State Com	701H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	20	26S	28E		320	FNL	745	FEL	Eddy

Latitude	Longitude	NAD
32.0343923	-104.1034140	83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	20	26S	28E		330	FNL	550	FEL	Eddy

Latitude	Longitude	NAD
32.0343599	-104.1027848	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
H	32	26S	28E	4	330	FSL	550	FEL	Eddy

Latitude	Longitude	NAD
32.0008622	-104.1028055	83

Is this well the defining well for the Horizontal Spacing Unit? [Y]

Is this well an infill well? [N]

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

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

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

☒ Original Date: 10/09/2019

☐ Amended

Reason for Amendment: _____

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

Note: A C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule 19.15.18.12.A

Well(s)/Production Facility – Name of facility

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

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Honey Graham State Com #701H	30-015-	Unit A, Sec 20, T26S, R28E	320 FNL 745 FEL	7450	0	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to **ETC** and will be connected to **ETC's** low/high pressure gathering system located in **Eddy County**, New Mexico. **It will require additional** pipeline to connect the facility to low/high pressure gathering system **of which the amount is unknown currently**. **COG Operating LLC** provides (periodically) to **ETC** a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, **COG Operating LLC** and **ETC** have periodic conference calls to discuss changes to the drilling and completion schedules. Gas from these wells will be processed at **ETC's Red Bluff** Processing Plant located in **Sec. 35, BLK 57, T2S, Culberson County, Texas**. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

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

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

Alternatives to Reduce Flaring

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

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