

District I
1625 N. French Dr., Hobbs, NM 88240

District II
811 S. First St., Artesia, NM 88210

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

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

Form C-104
Revised August 1, 2011

Submit one copy to appropriate District Office

☒ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address COG Operating LLC 2208 W. Main Street Artesia, NM 88210		² O GRID Number 229137	
		³ Reason for Filing Code/ Effective Date NW	
⁴ API Number 30 – 015-46381	⁵ Pool Name Purple Sage; Wolfcamp (Gas)		⁶ Pool Code 98220
⁷ Property Code 38476	⁸ Property Name Honey Graham State Com		⁹ Well Number 701H

II. ¹⁰ Surface Location

Ul or lot no. A	Section 20	Township 26S	Range 28E	Lot Idn	Feet from the 320	North/South Line North	Feet from the 745	East/West line East	County Eddy
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¹¹ Bottom Hole Location

Ul or lot no. 4	Section 32	Township 26S	Range 28E	Lot Idn	Feet from the 201	North/South Line South	Feet from the 592	East/West line East	County Eddy
¹² Lse Code S	¹³ Producing Method Code F		¹⁴ Gas Connection Date 8/4/20		¹⁵ C-129 Permit Number		¹⁶ C-129 Effective Date		¹⁷ C-129 Expiration Date

III. Oil and Gas Transporters

¹⁸ Transporter O GRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
	ACC (Alpha Crude Connector Pipeline)	O
282301	Energy Transfer Company 2001 Bryan Street Ste 3700 Dallas, TX 75201	G
278421	Holly Refining and Marketing	O
214984	Plains Marketing LP	O

IV. Well Completion Data

²¹ Spud Date 10/27/19	²² Ready Date 7/7/20	²³ TD 21,629'	²⁴ PBTD 21,371'	²⁵ Perforations 9,550-21,364'	²⁶ DHC, MC
²⁷ Hole Size		²⁸ Casing & Tubing Size		²⁹ Depth Set	³⁰ Sacks Cement
17 1/2"		13 5/8"		534'	640
12 ¼"		9 7/8"		8644'	1555
8 3/4"		5 1/2"		21614'	4700
		2 7/8"		8824'	

V. Well Test Data

³¹ Date New Oil 8/4/20	³² Gas Delivery Date 8/4/20	³³ Test Date 8/4/20	³⁴ Test Length 24 Hrs	³⁵ Tbg. Pressure 1600	³⁶ Csg. Pressure 1500
³⁷ Choke Size 28/164	³⁸ Oil 510	³⁹ Water 1212	⁴⁰ Gas 1137		⁴¹ Test Method Flowing
⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: Amanda Avery			OIL CONSERVATION DIVISION		
Printed name: Amanda Avery			Approved by: PATRICIA MARTINEZ		
Title: Regulatory Analyst			Title: PETROLEUM SPECIALIST		
E-mail Address: aavery@concho.com			Approval Date: 8/23/2024		
Date: 8/13/20		Phone: 575-748-6962			

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 Road, 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, NM 87505

EMNRD-OCD ARTESIA

REC'D: 8/05/2020

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☒ AMENDED REPORT
As Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-46381	² Pool Code 98220	³ Pool Name Purple Sage; Wolfcamp
⁴ Property Code 38476	⁵ Property Name HONEY GRAHAM STATE COM	⁶ Well Number 701H
⁷ OGRID NO. 229137	⁸ Operator Name COG OPERATING, LLC	⁹ Elevation 3064'

¹⁰ Surface Location

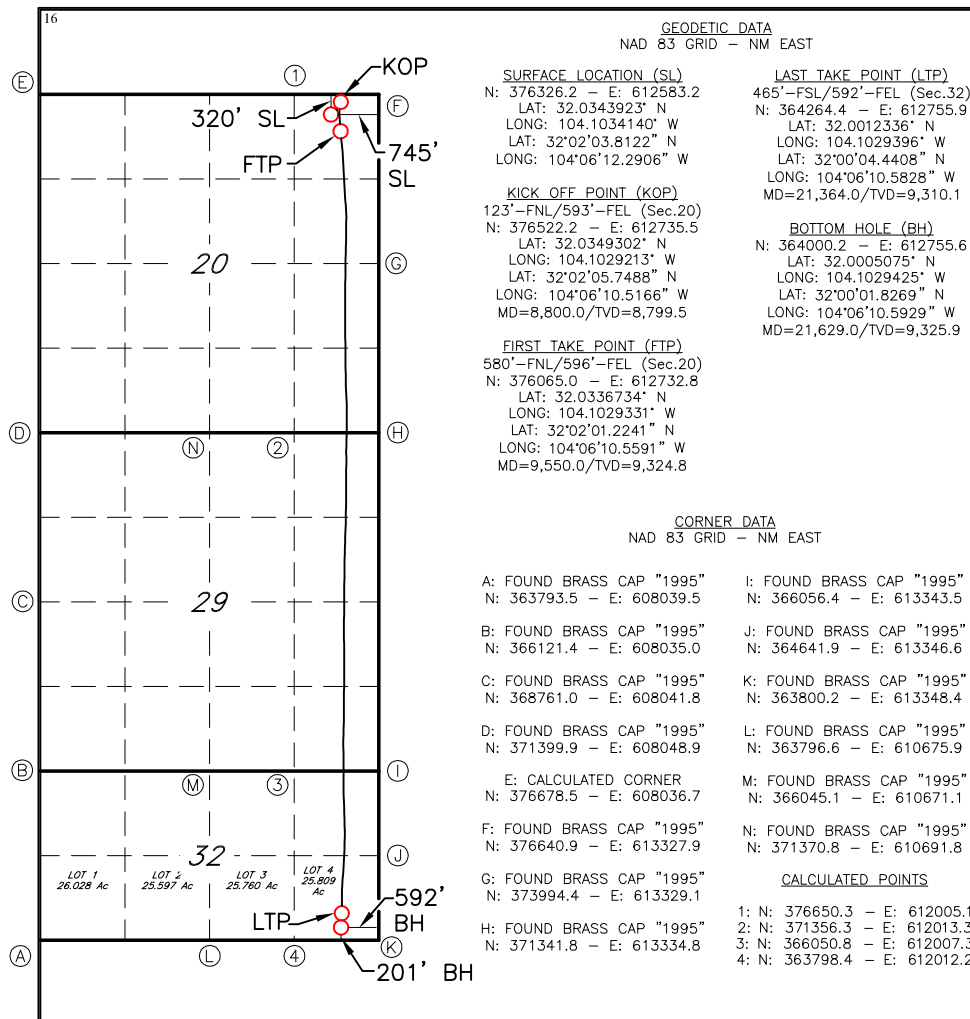
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
A	20	26S	28E		320	NORTH	745	EAST	EDDY

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		201	SOUTH	592	EAST	EDDY

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

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.

Amanda Avery 7/29/20

Signature Date

Amanda Avery

Printed Name

aaavery@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

19680

Certificate Number

REV: 6/16/20 AS-DRILL

Job No.: LS19090863AD

NORTHERN DELAWARE BASIN

EDDY COUNTY, NM

ATLAS

HONEY GRAHAM STATE COM #701H

OWB

Design: AWP

Standard Survey Report

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

Well	HONEY GRAHAM STATE COM #701H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty		3.0 usft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	OWB		
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/31/2019	6.93	59.77	47,528.72840699

Design	AWP		
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Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth:
				0.0

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

Survey Program	Date	12/5/2019
From (usft)	To (usft)	Survey (Wellbore)
100.0	8,560.0	GYROS-INTERMEDIATE (OWB)
8,674.0	21,629.0	MWD-CURVE/LATERAL (OWB)
Tool Name	Description	
Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction	

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	1.08	102.86	100.0	-0.2	0.9	0.2	1.08	1.08	0.00
	125.0	1.05	98.09	125.0	-0.3	1.4	0.3	0.37	-0.12	-19.08
	150.0	1.10	97.78	150.0	-0.4	1.8	0.4	0.20	0.20	-1.24
	175.0	1.18	85.75	175.0	-0.4	2.3	0.4	1.01	0.32	-48.12
	200.0	1.20	86.78	200.0	-0.3	2.9	0.4	0.12	0.08	4.12
	225.0	1.20	85.93	225.0	-0.3	3.4	0.4	0.07	0.00	-3.40
	250.0	1.27	82.76	250.0	-0.3	3.9	0.3	0.39	0.28	-12.68
	275.0	1.28	81.98	275.0	-0.2	4.5	0.3	0.08	0.04	-3.12
	300.0	1.34	81.44	300.0	-0.1	5.0	0.2	0.25	0.24	-2.16

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:	AWP	Database:	EDM_Users

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)
325.0	1.40	79.47	324.9	0.0	5.6	0.1	0.31	0.24	-7.88
350.0	1.38	79.19	349.9	0.1	6.2	0.0	0.08	-0.08	-1.12
375.0	1.40	80.12	374.9	0.2	6.8	-0.1	0.12	0.08	3.72
400.0	1.54	80.74	399.9	0.3	7.4	-0.2	0.56	0.56	2.48
425.0	1.66	82.54	424.9	0.4	8.1	-0.3	0.52	0.48	7.20
450.0	1.69	81.20	449.9	0.5	8.9	-0.4	0.20	0.12	-5.36
475.0	1.76	81.44	474.9	0.6	9.6	-0.5	0.28	0.28	0.96
500.0	1.87	77.86	499.9	0.8	10.4	-0.6	0.63	0.44	-14.32
525.0	1.92	76.13	524.9	1.0	11.2	-0.8	0.30	0.20	-6.92
550.0	2.10	74.26	549.8	1.2	12.0	-1.0	0.77	0.72	-7.48
575.0	2.14	74.04	574.8	1.5	12.9	-1.2	0.16	0.16	-0.88
600.0	2.14	73.65	599.8	1.7	13.8	-1.5	0.06	0.00	-1.56
625.0	2.17	72.29	624.8	2.0	14.7	-1.7	0.24	0.12	-5.44
650.0	2.21	72.46	649.8	2.3	15.6	-2.0	0.16	0.16	0.68
675.0	2.29	72.52	674.8	2.6	16.6	-2.3	0.32	0.32	0.24
700.0	2.37	70.38	699.7	2.9	17.5	-2.6	0.47	0.32	-8.56
725.0	2.45	71.22	724.7	3.2	18.5	-2.9	0.35	0.32	3.36
750.0	2.62	70.09	749.7	3.6	19.6	-3.3	0.71	0.68	-4.52
775.0	2.79	69.76	774.7	4.0	20.7	-3.7	0.68	0.68	-1.32
800.0	2.96	70.31	799.6	4.4	21.8	-4.1	0.69	0.68	2.20
825.0	3.14	69.68	824.6	4.9	23.1	-4.5	0.73	0.72	-2.52
850.0	3.30	69.79	849.6	5.4	24.4	-5.0	0.64	0.64	0.44
875.0	3.60	69.81	874.5	5.9	25.8	-5.5	1.20	1.20	0.08
900.0	3.78	71.50	899.5	6.4	27.3	-6.0	0.84	0.72	6.76
925.0	4.00	71.48	924.4	7.0	29.0	-6.5	0.88	0.88	-0.08
950.0	4.13	72.78	949.3	7.5	30.6	-7.0	0.64	0.52	5.20
975.0	4.24	74.86	974.3	8.0	32.4	-7.5	0.75	0.44	8.32
1,000.0	4.71	74.51	999.2	8.5	34.3	-7.9	1.88	1.88	-1.40
1,025.0	5.60	74.49	1,024.1	9.1	36.4	-8.5	3.56	3.56	-0.08
1,050.0	6.58	74.74	1,049.0	9.8	39.0	-9.2	3.92	3.92	1.00
1,075.0	7.27	73.69	1,073.8	10.7	41.9	-9.9	2.81	2.76	-4.20
1,100.0	7.83	72.57	1,098.6	11.6	45.0	-10.8	2.32	2.24	-4.48
1,125.0	8.43	68.01	1,123.3	12.8	48.4	-12.0	3.52	2.40	-18.24
1,150.0	9.09	64.00	1,148.0	14.4	51.8	-13.5	3.60	2.64	-16.04
1,175.0	9.39	62.83	1,172.7	16.2	55.4	-15.2	1.42	1.20	-4.68
1,200.0	9.43	62.63	1,197.4	18.0	59.1	-17.0	0.21	0.16	-0.80
1,225.0	9.06	57.94	1,222.0	20.0	62.5	-18.9	3.36	-1.48	-18.76
1,250.0	9.01	54.85	1,246.7	22.2	65.8	-21.0	1.95	-0.20	-12.36
1,275.0	8.68	52.22	1,271.4	24.5	68.9	-23.3	2.09	-1.32	-10.52
1,300.0	8.38	48.37	1,296.1	26.8	71.8	-25.6	2.58	-1.20	-15.40
1,325.0	7.62	38.86	1,320.9	29.3	74.2	-28.1	6.09	-3.04	-38.04
1,350.0	7.14	34.51	1,345.7	31.9	76.1	-30.6	2.95	-1.92	-17.40
1,375.0	6.56	28.93	1,370.5	34.4	77.7	-33.1	3.53	-2.32	-22.32

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:	AWP	Database:	EDM_Users

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)	
1,400.0	6.27	23.50	1,395.4	37.0	78.9	-35.6	2.69	-1.16	-21.72	
1,425.0	5.96	19.48	1,420.2	39.4	79.9	-38.0	2.11	-1.24	-16.08	
1,450.0	5.73	16.30	1,445.1	41.8	80.6	-40.4	1.59	-0.92	-12.72	
1,475.0	5.68	16.39	1,470.0	44.2	81.3	-42.8	0.20	-0.20	0.36	
1,500.0	5.58	16.62	1,494.8	46.6	82.0	-45.1	0.41	-0.40	0.92	
1,525.0	5.73	16.46	1,519.7	48.9	82.7	-47.5	0.60	0.60	-0.64	
1,550.0	5.61	15.46	1,544.6	51.3	83.4	-49.9	0.62	-0.48	-4.00	
1,575.0	5.28	16.23	1,569.5	53.6	84.1	-52.1	1.35	-1.32	3.08	
1,600.0	4.99	16.46	1,594.4	55.7	84.7	-54.3	1.16	-1.16	0.92	
1,625.0	5.06	17.56	1,619.3	57.8	85.3	-56.3	0.48	0.28	4.40	
1,650.0	4.98	17.69	1,644.2	59.9	86.0	-58.4	0.32	-0.32	0.52	
1,675.0	4.89	18.45	1,669.1	62.0	86.7	-60.5	0.44	-0.36	3.04	
1,700.0	4.80	19.52	1,694.0	64.0	87.4	-62.4	0.51	-0.36	4.28	
1,725.0	4.48	22.33	1,718.9	65.9	88.1	-64.3	1.57	-1.28	11.24	
1,750.0	4.36	22.87	1,743.9	67.6	88.8	-66.1	0.51	-0.48	2.16	
1,775.0	4.36	23.33	1,768.8	69.4	89.6	-67.8	0.14	0.00	1.84	
1,800.0	4.25	24.92	1,793.7	71.1	90.3	-69.5	0.65	-0.44	6.36	
1,825.0	4.29	24.53	1,818.6	72.8	91.1	-71.2	0.20	0.16	-1.56	
1,850.0	4.22	25.17	1,843.6	74.5	91.9	-72.9	0.34	-0.28	2.56	
1,875.0	4.27	26.04	1,868.5	76.1	92.7	-74.5	0.33	0.20	3.48	
1,900.0	4.33	25.44	1,893.4	77.8	93.5	-76.2	0.30	0.24	-2.40	
1,925.0	4.15	26.20	1,918.4	79.5	94.3	-77.8	0.75	-0.72	3.04	
1,950.0	4.27	26.36	1,943.3	81.1	95.1	-79.5	0.48	0.48	0.64	
1,975.0	4.18	26.41	1,968.2	82.8	95.9	-81.1	0.36	-0.36	0.20	
2,000.0	4.20	26.01	1,993.2	84.4	96.7	-82.7	0.14	0.08	-1.60	
2,025.0	3.88	25.95	2,018.1	86.0	97.5	-84.3	1.28	-1.28	-0.24	
2,050.0	3.39	25.99	2,043.1	87.4	98.2	-85.7	1.96	-1.96	0.16	
2,075.0	3.19	26.71	2,068.0	88.7	98.8	-87.0	0.82	-0.80	2.88	
2,100.0	3.06	27.20	2,093.0	89.9	99.5	-88.2	0.53	-0.52	1.96	
2,125.0	3.11	27.04	2,117.9	91.1	100.1	-89.4	0.20	0.20	-0.64	
2,150.0	3.08	29.41	2,142.9	92.3	100.7	-90.6	0.53	-0.12	9.48	
2,175.0	2.98	36.21	2,167.9	93.4	101.4	-91.7	1.49	-0.40	27.20	
2,200.0	3.07	41.14	2,192.8	94.5	102.3	-92.7	1.10	0.36	19.72	
2,225.0	3.13	42.69	2,217.8	95.5	103.2	-93.7	0.41	0.24	6.20	
2,250.0	3.19	44.09	2,242.8	96.5	104.1	-94.6	0.39	0.24	5.60	
2,275.0	3.19	45.96	2,267.7	97.5	105.1	-95.6	0.42	0.00	7.48	
2,300.0	3.27	46.78	2,292.7	98.4	106.1	-96.6	0.37	0.32	3.28	
2,325.0	2.48	42.83	2,317.6	99.3	107.0	-97.4	3.26	-3.16	-15.80	
2,350.0	1.34	30.28	2,342.6	100.0	107.5	-98.1	4.83	-4.56	-50.20	
2,375.0	1.03	9.24	2,367.6	100.4	107.7	-98.5	2.12	-1.24	-84.16	
2,400.0	0.79	341.49	2,392.6	100.8	107.7	-98.9	1.98	-0.96	-111.00	
2,425.0	0.73	331.98	2,417.6	101.1	107.5	-99.2	0.56	-0.24	-38.04	
2,450.0	0.72	326.53	2,442.6	101.4	107.4	-99.5	0.28	-0.04	-21.80	

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:	AWP	Database:	EDM_Users

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)	
2,475.0	0.70	328.84	2,467.6	101.7	107.2	-99.8	0.14	-0.08	9.24	
2,500.0	0.75	328.04	2,492.6	101.9	107.1	-100.0	0.20	0.20	-3.20	
2,525.0	0.71	326.81	2,517.6	102.2	106.9	-100.3	0.17	-0.16	-4.92	
2,550.0	0.68	322.06	2,542.6	102.4	106.7	-100.6	0.26	-0.12	-19.00	
2,575.0	0.63	318.65	2,567.6	102.7	106.5	-100.8	0.25	-0.20	-13.64	
2,600.0	0.70	319.65	2,592.6	102.9	106.3	-101.0	0.28	0.28	4.00	
2,625.0	0.67	323.65	2,617.6	103.1	106.1	-101.2	0.23	-0.12	16.00	
2,650.0	0.74	321.63	2,642.6	103.4	106.0	-101.5	0.30	0.28	-8.08	
2,675.0	0.70	318.82	2,667.6	103.6	105.8	-101.7	0.21	-0.16	-11.24	
2,700.0	0.73	319.09	2,692.6	103.8	105.6	-102.0	0.12	0.12	1.08	
2,725.0	0.73	316.90	2,717.6	104.1	105.3	-102.2	0.11	0.00	-8.76	
2,750.0	0.70	318.98	2,742.6	104.3	105.1	-102.5	0.16	-0.12	8.32	
2,775.0	0.78	316.15	2,767.6	104.5	104.9	-102.7	0.35	0.32	-11.32	
2,800.0	0.66	309.49	2,792.6	104.8	104.7	-102.9	0.58	-0.48	-26.64	
2,825.0	0.75	317.89	2,817.6	105.0	104.5	-103.1	0.55	0.36	33.60	
2,850.0	0.73	316.96	2,842.6	105.2	104.2	-103.4	0.09	-0.08	-3.72	
2,875.0	0.72	316.37	2,867.6	105.4	104.0	-103.6	0.05	-0.04	-2.36	
2,900.0	0.74	313.30	2,892.6	105.7	103.8	-103.8	0.18	0.08	-12.28	
2,925.0	0.72	310.03	2,917.6	105.9	103.6	-104.1	0.18	-0.08	-13.08	
2,950.0	0.73	315.82	2,942.6	106.1	103.3	-104.3	0.30	0.04	23.16	
2,975.0	0.84	333.40	2,967.6	106.4	103.1	-104.6	1.05	0.44	70.32	
3,000.0	1.18	357.69	2,992.6	106.8	103.1	-105.0	2.16	1.36	97.16	
3,025.0	1.33	354.02	3,017.6	107.3	103.0	-105.5	0.68	0.60	-14.68	
3,050.0	1.32	4.89	3,042.6	107.9	103.0	-106.1	1.00	-0.04	43.48	
3,075.0	1.36	2.56	3,067.6	108.5	103.0	-106.7	0.27	0.16	-9.32	
3,100.0	1.39	3.85	3,092.5	109.1	103.1	-107.3	0.17	0.12	5.16	
3,125.0	1.40	2.92	3,117.5	109.7	103.1	-107.9	0.10	0.04	-3.72	
3,150.0	1.45	2.98	3,142.5	110.3	103.1	-108.5	0.20	0.20	0.24	
3,175.0	1.39	4.23	3,167.5	110.9	103.2	-109.1	0.27	-0.24	5.00	
3,200.0	1.45	4.39	3,192.5	111.6	103.2	-109.7	0.24	0.24	0.64	
3,225.0	1.45	7.20	3,217.5	112.2	103.3	-110.4	0.28	0.00	11.24	
3,250.0	1.37	3.80	3,242.5	112.8	103.4	-111.0	0.46	-0.32	-13.60	
3,275.0	1.41	4.37	3,267.5	113.4	103.4	-111.6	0.17	0.16	2.28	
3,300.0	1.44	4.43	3,292.5	114.0	103.4	-112.2	0.12	0.12	0.24	
3,325.0	1.43	359.92	3,317.5	114.6	103.5	-112.8	0.45	-0.04	-18.04	
3,350.0	1.39	2.45	3,342.5	115.3	103.5	-113.4	0.30	-0.16	10.12	
3,375.0	1.41	358.68	3,367.5	115.9	103.5	-114.1	0.38	0.08	-15.08	
3,400.0	1.45	359.00	3,392.5	116.5	103.5	-114.7	0.16	0.16	1.28	
3,425.0	1.43	2.68	3,417.4	117.1	103.5	-115.3	0.38	-0.08	14.72	
3,450.0	1.43	0.66	3,442.4	117.7	103.5	-115.9	0.20	0.00	-8.08	
3,475.0	1.47	0.23	3,467.4	118.4	103.5	-116.6	0.17	0.16	-1.72	
3,500.0	1.46	358.48	3,492.4	119.0	103.5	-117.2	0.18	-0.04	-7.00	
3,525.0	1.49	357.86	3,517.4	119.7	103.5	-117.8	0.14	0.12	-2.48	
3,550.0	1.53	358.48	3,542.4	120.3	103.5	-118.5	0.17	0.16	2.48	

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:	AWP	Database:	EDM_Users

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)
3,575.0	1.50	357.30	3,567.4	121.0	103.4	-119.2	0.17	-0.12	-4.72
3,600.0	1.52	357.67	3,592.4	121.6	103.4	-119.8	0.09	0.08	1.48
3,625.0	1.50	357.14	3,617.4	122.3	103.4	-120.5	0.10	-0.08	-2.12
3,650.0	1.53	355.05	3,642.4	123.0	103.3	-121.1	0.25	0.12	-8.36
3,675.0	1.45	357.36	3,667.4	123.6	103.3	-121.8	0.40	-0.32	9.24
3,700.0	1.60	357.06	3,692.4	124.3	103.3	-122.5	0.60	0.60	-1.20
3,725.0	1.57	355.78	3,717.3	125.0	103.2	-123.1	0.19	-0.12	-5.12
3,750.0	1.63	355.96	3,742.3	125.7	103.2	-123.8	0.24	0.24	0.72
3,775.0	1.61	356.18	3,767.3	126.4	103.1	-124.5	0.08	-0.08	0.88
3,800.0	1.58	355.87	3,792.3	127.1	103.1	-125.2	0.12	-0.12	-1.24
3,825.0	1.57	353.54	3,817.3	127.7	103.0	-125.9	0.26	-0.04	-9.32
3,850.0	1.56	355.94	3,842.3	128.4	102.9	-126.6	0.27	-0.04	9.60
3,875.0	1.55	355.10	3,867.3	129.1	102.9	-127.3	0.10	-0.04	-3.36
3,900.0	1.60	356.57	3,892.3	129.8	102.8	-128.0	0.26	0.20	5.88
3,925.0	1.53	353.58	3,917.3	130.5	102.8	-128.6	0.43	-0.28	-11.96
3,950.0	1.60	354.07	3,942.3	131.1	102.7	-129.3	0.29	0.28	1.96
3,975.0	1.65	353.53	3,967.2	131.8	102.6	-130.0	0.21	0.20	-2.16
4,000.0	1.77	354.09	3,992.2	132.6	102.5	-130.8	0.48	0.48	2.24
4,025.0	1.58	355.85	4,017.2	133.3	102.5	-131.5	0.79	-0.76	7.04
4,050.0	1.62	356.89	4,042.2	134.0	102.4	-132.2	0.20	0.16	4.16
4,075.0	1.65	354.52	4,067.2	134.7	102.4	-132.9	0.30	0.12	-9.48
4,100.0	1.64	355.74	4,092.2	135.4	102.3	-133.6	0.15	-0.04	4.88
4,125.0	1.65	352.98	4,117.2	136.1	102.3	-134.3	0.32	0.04	-11.04
4,150.0	1.71	353.11	4,142.2	136.9	102.2	-135.1	0.24	0.24	0.52
4,175.0	1.63	354.24	4,167.2	137.6	102.1	-135.8	0.35	-0.32	4.52
4,200.0	1.65	353.84	4,192.2	138.3	102.0	-136.5	0.09	0.08	-1.60
4,225.0	1.74	353.16	4,217.1	139.0	101.9	-137.3	0.37	0.36	-2.72
4,250.0	1.68	357.23	4,242.1	139.8	101.9	-138.0	0.54	-0.24	16.28
4,275.0	1.61	358.39	4,267.1	140.5	101.8	-138.7	0.31	-0.28	4.64
4,300.0	1.61	0.24	4,292.1	141.2	101.8	-139.4	0.21	0.00	7.40
4,325.0	1.60	359.22	4,317.1	141.9	101.8	-140.1	0.12	-0.04	-4.08
4,350.0	1.63	356.78	4,342.1	142.6	101.8	-140.8	0.30	0.12	-9.76
4,375.0	1.62	358.98	4,367.1	143.3	101.8	-141.5	0.25	-0.04	8.80
4,400.0	1.69	359.64	4,392.1	144.0	101.8	-142.2	0.29	0.28	2.64
4,425.0	1.71	355.88	4,417.1	144.8	101.7	-143.0	0.45	0.08	-15.04
4,450.0	1.67	357.09	4,442.1	145.5	101.7	-143.7	0.21	-0.16	4.84
4,475.0	1.69	359.30	4,467.0	146.3	101.7	-144.5	0.27	0.08	8.84
4,500.0	1.66	0.69	4,492.0	147.0	101.7	-145.2	0.20	-0.12	5.56
4,525.0	1.69	358.80	4,517.0	147.7	101.7	-145.9	0.25	0.12	-7.56
4,550.0	1.61	359.58	4,542.0	148.4	101.7	-146.6	0.33	-0.32	3.12
4,575.0	1.63	356.91	4,567.0	149.1	101.6	-147.3	0.31	0.08	-10.68
4,600.0	1.65	356.29	4,592.0	149.9	101.6	-148.1	0.11	0.08	-2.48
4,625.0	1.61	356.56	4,617.0	150.6	101.5	-148.8	0.16	-0.16	1.08

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:	AWP	Database:	EDM_Users

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)	
4,650.0	1.63	355.67	4,642.0	151.3	101.5	-149.5	0.13	0.08	-3.56	
4,675.0	1.65	358.45	4,667.0	152.0	101.5	-150.2	0.33	0.08	11.12	
4,700.0	1.66	358.29	4,691.9	152.7	101.4	-150.9	0.04	0.04	-0.64	
4,725.0	1.62	0.03	4,716.9	153.4	101.4	-151.6	0.26	-0.16	6.96	
4,750.0	1.70	354.09	4,741.9	154.1	101.4	-152.4	0.76	0.32	-23.76	
4,775.0	1.68	357.67	4,766.9	154.9	101.3	-153.1	0.43	-0.08	14.32	
4,800.0	1.69	358.05	4,791.9	155.6	101.3	-153.8	0.06	0.04	1.52	
4,825.0	1.68	1.28	4,816.9	156.3	101.3	-154.6	0.38	-0.04	12.92	
4,850.0	1.67	4.11	4,841.9	157.1	101.3	-155.3	0.33	-0.04	11.32	
4,875.0	1.72	4.46	4,866.9	157.8	101.4	-156.0	0.20	0.20	1.40	
4,900.0	1.65	358.57	4,891.9	158.5	101.4	-156.8	0.75	-0.28	-23.56	
4,925.0	1.71	1.59	4,916.9	159.3	101.4	-157.5	0.43	0.24	12.08	
4,950.0	1.72	3.72	4,941.8	160.0	101.5	-158.2	0.26	0.04	8.52	
4,975.0	1.67	2.30	4,966.8	160.8	101.5	-159.0	0.26	-0.20	-5.68	
5,000.0	1.72	4.86	4,991.8	161.5	101.5	-159.7	0.36	0.20	10.24	
5,025.0	1.71	1.19	5,016.8	162.3	101.6	-160.5	0.44	-0.04	-14.68	
5,050.0	1.74	4.73	5,041.8	163.0	101.6	-161.2	0.44	0.12	14.16	
5,075.0	1.74	2.41	5,066.8	163.8	101.7	-162.0	0.28	0.00	-9.28	
5,100.0	1.79	3.05	5,091.8	164.5	101.7	-162.7	0.21	0.20	2.56	
5,125.0	1.70	6.69	5,116.8	165.3	101.8	-163.5	0.57	-0.36	14.56	
5,150.0	1.54	31.38	5,141.8	165.9	102.0	-164.1	2.84	-0.64	98.76	
5,175.0	1.60	40.69	5,166.7	166.5	102.4	-164.7	1.05	0.24	37.24	
5,200.0	1.62	47.64	5,191.7	167.0	102.9	-165.2	0.78	0.08	27.80	
5,225.0	1.65	52.06	5,216.7	167.5	103.4	-165.6	0.52	0.12	17.68	
5,250.0	1.74	56.36	5,241.7	167.9	104.0	-166.1	0.62	0.36	17.20	
5,275.0	1.66	55.07	5,266.7	168.3	104.6	-166.5	0.35	-0.32	-5.16	
5,300.0	1.65	54.06	5,291.7	168.7	105.2	-166.9	0.12	-0.04	-4.04	
5,325.0	1.72	55.79	5,316.7	169.1	105.8	-167.3	0.35	0.28	6.92	
5,350.0	1.73	53.67	5,341.7	169.6	106.4	-167.7	0.26	0.04	-8.48	
5,375.0	1.74	53.80	5,366.7	170.0	107.0	-168.1	0.04	0.04	0.52	
5,400.0	1.75	53.85	5,391.6	170.5	107.7	-168.6	0.04	0.04	0.20	
5,425.0	1.78	54.33	5,416.6	170.9	108.3	-169.0	0.13	0.12	1.92	
5,450.0	1.77	53.58	5,441.6	171.4	108.9	-169.5	0.10	-0.04	-3.00	
5,475.0	1.77	55.30	5,466.6	171.8	109.5	-169.9	0.21	0.00	6.88	
5,500.0	1.73	55.30	5,491.6	172.3	110.2	-170.3	0.16	-0.16	0.00	
5,525.0	1.74	54.41	5,516.6	172.7	110.8	-170.7	0.11	0.04	-3.56	
5,550.0	1.77	55.77	5,541.6	173.1	111.4	-171.2	0.21	0.12	5.44	
5,575.0	1.70	54.46	5,566.6	173.6	112.0	-171.6	0.32	-0.28	-5.24	
5,600.0	1.70	54.78	5,591.6	174.0	112.6	-172.0	0.04	0.00	1.28	
5,625.0	1.68	55.24	5,616.5	174.4	113.2	-172.4	0.10	-0.08	1.84	
5,650.0	1.72	57.92	5,641.5	174.8	113.9	-172.8	0.36	0.16	10.72	
5,675.0	1.64	57.56	5,666.5	175.2	114.5	-173.2	0.32	-0.32	-1.44	
5,700.0	1.61	54.92	5,691.5	175.6	115.1	-173.6	0.32	-0.12	-10.56	

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:	AWP	Database:	EDM_Users

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)	
5,725.0	1.59	59.61	5,716.5	176.0	115.7	-174.0	0.53	-0.08	18.76	
5,750.0	1.47	59.75	5,741.5	176.3	116.2	-174.3	0.48	-0.48	0.56	
5,775.0	1.43	61.70	5,766.5	176.6	116.8	-174.6	0.25	-0.16	7.80	
5,800.0	1.41	60.38	5,791.5	176.9	117.3	-174.9	0.15	-0.08	-5.28	
5,825.0	1.36	62.42	5,816.5	177.2	117.9	-175.2	0.28	-0.20	8.16	
5,850.0	1.33	60.88	5,841.5	177.5	118.4	-175.4	0.19	-0.12	-6.16	
5,875.0	1.26	60.22	5,866.5	177.8	118.9	-175.7	0.29	-0.28	-2.64	
5,900.0	1.20	65.59	5,891.4	178.0	119.3	-175.9	0.52	-0.24	21.48	
5,925.0	1.19	64.72	5,916.4	178.3	119.8	-176.1	0.08	-0.04	-3.48	
5,950.0	1.16	63.22	5,941.4	178.5	120.3	-176.4	0.17	-0.12	-6.00	
5,975.0	1.13	64.37	5,966.4	178.7	120.7	-176.6	0.15	-0.12	4.60	
6,000.0	1.19	64.33	5,991.4	178.9	121.2	-176.8	0.24	0.24	-0.16	
6,025.0	1.16	62.55	6,016.4	179.1	121.6	-177.0	0.19	-0.12	-7.12	
6,050.0	1.18	65.69	6,041.4	179.4	122.1	-177.2	0.27	0.08	12.56	
6,075.0	1.22	62.49	6,066.4	179.6	122.6	-177.4	0.31	0.16	-12.80	
6,100.0	1.16	63.74	6,091.4	179.8	123.0	-177.7	0.26	-0.24	5.00	
6,125.0	1.18	63.83	6,116.4	180.1	123.5	-177.9	0.08	0.08	0.36	
6,150.0	1.12	64.91	6,141.4	180.3	123.9	-178.1	0.26	-0.24	4.32	
6,175.0	1.19	65.56	6,166.4	180.5	124.4	-178.3	0.28	0.28	2.60	
6,200.0	1.23	63.89	6,191.4	180.7	124.9	-178.5	0.21	0.16	-6.68	
6,225.0	1.23	67.48	6,216.4	180.9	125.4	-178.7	0.31	0.00	14.36	
6,250.0	1.20	64.23	6,241.4	181.1	125.8	-178.9	0.30	-0.12	-13.00	
6,275.0	1.10	62.62	6,266.4	181.4	126.3	-179.1	0.42	-0.40	-6.44	
6,300.0	1.07	67.25	6,291.4	181.6	126.7	-179.3	0.37	-0.12	18.52	
6,325.0	1.01	63.45	6,316.4	181.8	127.1	-179.5	0.37	-0.24	-15.20	
6,350.0	0.92	64.28	6,341.4	181.9	127.5	-179.7	0.36	-0.36	3.32	
6,375.0	0.89	59.58	6,366.4	182.1	127.9	-179.9	0.32	-0.12	-18.80	
6,400.0	0.82	56.61	6,391.3	182.3	128.2	-180.1	0.33	-0.28	-11.88	
6,425.0	0.77	51.24	6,416.3	182.5	128.5	-180.3	0.36	-0.20	-21.48	
6,450.0	0.69	44.54	6,441.3	182.7	128.7	-180.5	0.47	-0.32	-26.80	
6,475.0	0.65	31.49	6,466.3	183.0	128.9	-180.7	0.63	-0.16	-52.20	
6,500.0	0.65	15.64	6,491.3	183.2	129.0	-181.0	0.72	0.00	-63.40	
6,525.0	0.66	357.74	6,516.3	183.5	129.0	-181.2	0.82	0.04	-71.60	
6,550.0	0.71	355.19	6,541.3	183.8	129.0	-181.5	0.23	0.20	-10.20	
6,575.0	0.73	355.69	6,566.3	184.1	129.0	-181.9	0.08	0.08	2.00	
6,600.0	0.76	345.74	6,591.3	184.4	128.9	-182.2	0.53	0.12	-39.80	
6,625.0	0.85	339.74	6,616.3	184.8	128.8	-182.5	0.49	0.36	-24.00	
6,650.0	0.92	332.59	6,641.3	185.1	128.7	-182.9	0.52	0.28	-28.60	
6,675.0	0.96	337.34	6,666.3	185.5	128.5	-183.2	0.35	0.16	19.00	
6,700.0	0.90	330.97	6,691.3	185.9	128.3	-183.6	0.48	-0.24	-25.48	
6,725.0	0.92	333.91	6,716.3	186.2	128.1	-184.0	0.20	0.08	11.76	
6,750.0	1.03	331.16	6,741.3	186.6	127.9	-184.3	0.48	0.44	-11.00	
6,775.0	0.91	332.06	6,766.3	187.0	127.7	-184.7	0.48	-0.48	3.60	
6,800.0	0.94	333.95	6,791.3	187.3	127.5	-185.1	0.17	0.12	7.56	

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:	AWP	Database:	EDM_Users

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)
6,825.0	0.95	335.03	6,816.3	187.7	127.4	-185.5	0.08	0.04	4.32
6,850.0	0.89	333.23	6,841.3	188.1	127.2	-185.8	0.27	-0.24	-7.20
6,875.0	0.97	331.40	6,866.3	188.4	127.0	-186.2	0.34	0.32	-7.32
6,900.0	0.93	330.13	6,891.3	188.8	126.8	-186.5	0.18	-0.16	-5.08
6,925.0	0.96	327.28	6,916.3	189.1	126.6	-186.9	0.22	0.12	-11.40
6,950.0	0.89	324.55	6,941.3	189.5	126.4	-187.2	0.33	-0.28	-10.92
6,975.0	1.05	323.55	6,966.3	189.8	126.1	-187.6	0.64	0.64	-4.00
7,000.0	1.24	317.84	6,991.3	190.2	125.8	-188.0	0.89	0.76	-22.84
7,025.0	1.31	314.56	7,016.3	190.6	125.4	-188.4	0.40	0.28	-13.12
7,050.0	1.40	313.22	7,041.3	191.0	125.0	-188.8	0.38	0.36	-5.36
7,075.0	1.46	309.86	7,066.3	191.4	124.5	-189.2	0.41	0.24	-13.44
7,100.0	1.60	319.55	7,091.3	191.9	124.1	-189.7	1.17	0.56	38.76
7,125.0	2.60	333.87	7,116.2	192.7	123.6	-190.5	4.49	4.00	57.28
7,150.0	2.85	334.85	7,141.2	193.7	123.1	-191.6	1.02	1.00	3.92
7,175.0	2.79	336.73	7,166.2	194.9	122.6	-192.7	0.44	-0.24	7.52
7,200.0	2.81	341.05	7,191.1	196.0	122.1	-193.8	0.85	0.08	17.28
7,225.0	2.81	345.60	7,216.1	197.2	121.8	-195.0	0.89	0.00	18.20
7,250.0	2.78	349.02	7,241.1	198.4	121.5	-196.2	0.68	-0.12	13.68
7,275.0	2.73	352.82	7,266.1	199.5	121.3	-197.4	0.76	-0.20	15.20
7,300.0	2.40	4.59	7,291.0	200.7	121.3	-198.5	2.48	-1.32	47.08
7,325.0	2.18	16.70	7,316.0	201.6	121.5	-199.5	2.12	-0.88	48.44
7,350.0	2.08	22.72	7,341.0	202.5	121.8	-200.4	0.98	-0.40	24.08
7,375.0	2.08	28.84	7,366.0	203.3	122.2	-201.2	0.89	0.00	24.48
7,400.0	1.92	29.44	7,391.0	204.1	122.6	-201.9	0.65	-0.64	2.40
7,425.0	1.82	30.33	7,415.9	204.8	123.0	-202.6	0.42	-0.40	3.56
7,450.0	1.73	28.05	7,440.9	205.5	123.4	-203.3	0.46	-0.36	-9.12
7,475.0	1.57	28.85	7,465.9	206.1	123.7	-203.9	0.65	-0.64	3.20
7,500.0	1.51	26.04	7,490.9	206.7	124.0	-204.5	0.39	-0.24	-11.24
7,525.0	1.20	10.14	7,515.9	207.3	124.2	-205.1	1.94	-1.24	-63.60
7,550.0	1.10	4.39	7,540.9	207.7	124.3	-205.6	0.61	-0.40	-23.00
7,575.0	1.04	6.80	7,565.9	208.2	124.3	-206.0	0.30	-0.24	9.64
7,600.0	1.00	5.67	7,590.9	208.7	124.4	-206.5	0.18	-0.16	-4.52
7,625.0	0.99	5.63	7,615.9	209.1	124.4	-206.9	0.04	-0.04	-0.16
7,650.0	1.01	4.81	7,640.9	209.5	124.5	-207.3	0.10	0.08	-3.28
7,675.0	0.97	14.33	7,665.9	209.9	124.5	-207.7	0.68	-0.16	38.08
7,700.0	1.05	23.05	7,690.9	210.4	124.7	-208.2	0.69	0.32	34.88
7,725.0	1.07	30.10	7,715.9	210.8	124.9	-208.6	0.53	0.08	28.20
7,750.0	1.17	39.95	7,740.9	211.2	125.2	-209.0	0.87	0.40	39.40
7,775.0	1.41	49.22	7,765.9	211.6	125.5	-209.4	1.27	0.96	37.08
7,800.0	1.54	57.61	7,790.9	211.9	126.1	-209.7	1.01	0.52	33.56
7,825.0	1.69	60.96	7,815.8	212.3	126.7	-210.1	0.71	0.60	13.40
7,850.0	1.80	63.63	7,840.8	212.7	127.3	-210.4	0.55	0.44	10.68
7,875.0	1.84	63.73	7,865.8	213.0	128.1	-210.8	0.16	0.16	0.40

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:	AWP	Database:	EDM_Users

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)	
7,900.0	1.89	65.41	7,890.8	213.4	128.8	-211.1	0.30	0.20	6.72	
7,925.0	2.00	65.73	7,915.8	213.7	129.6	-211.4	0.44	0.44	1.28	
7,950.0	1.96	65.51	7,940.8	214.1	130.4	-211.8	0.16	-0.16	-0.88	
7,975.0	2.03	65.21	7,965.8	214.4	131.1	-212.1	0.28	0.28	-1.20	
8,000.0	2.05	65.72	7,990.8	214.8	132.0	-212.5	0.11	0.08	2.04	
8,025.0	2.15	65.42	8,015.7	215.2	132.8	-212.8	0.40	0.40	-1.20	
8,050.0	2.11	69.07	8,040.7	215.5	133.6	-213.2	0.57	-0.16	14.60	
8,075.0	2.08	72.98	8,065.7	215.8	134.5	-213.5	0.58	-0.12	15.64	
8,100.0	1.91	81.22	8,090.7	216.0	135.4	-213.6	1.33	-0.68	32.96	
8,125.0	1.82	81.90	8,115.7	216.2	136.2	-213.8	0.37	-0.36	2.72	
8,150.0	1.72	92.15	8,140.7	216.2	136.9	-213.8	1.33	-0.40	41.00	
8,175.0	1.67	92.71	8,165.6	216.2	137.7	-213.7	0.21	-0.20	2.24	
8,200.0	1.65	99.66	8,190.6	216.1	138.4	-213.6	0.81	-0.08	27.80	
8,225.0	1.76	101.60	8,215.6	215.9	139.1	-213.5	0.50	0.44	7.76	
8,250.0	1.81	105.60	8,240.6	215.8	139.9	-213.3	0.54	0.20	16.00	
8,275.0	1.87	108.87	8,265.6	215.5	140.6	-213.0	0.48	0.24	13.08	
8,300.0	2.02	110.87	8,290.6	215.2	141.4	-212.7	0.66	0.60	8.00	
8,325.0	2.15	119.98	8,315.6	214.8	142.3	-212.3	1.42	0.52	36.44	
8,350.0	2.36	127.85	8,340.6	214.3	143.1	-211.8	1.49	0.84	31.48	
8,375.0	2.52	131.23	8,365.5	213.6	143.9	-211.1	0.86	0.64	13.52	
8,400.0	2.64	133.24	8,390.5	212.9	144.7	-210.3	0.60	0.48	8.04	
8,425.0	2.81	139.10	8,415.5	212.0	145.5	-209.4	1.30	0.68	23.44	
8,450.0	2.91	140.86	8,440.4	211.0	146.3	-208.5	0.53	0.40	7.04	
8,475.0	2.97	145.97	8,465.4	210.0	147.1	-207.4	1.08	0.24	20.44	
8,500.0	3.06	149.76	8,490.4	208.9	147.8	-206.3	0.87	0.36	15.16	
8,525.0	3.05	152.82	8,515.3	207.7	148.4	-205.1	0.65	-0.04	12.24	
8,550.0	3.04	154.05	8,540.3	206.6	149.0	-203.9	0.26	-0.04	4.92	
8,560.0	3.01	154.19	8,550.3	206.1	149.3	-203.4	0.31	-0.30	1.40	
8,674.0	2.30	164.43	8,664.2	201.2	151.2	-198.5	0.75	-0.62	8.98	
8,704.0	2.24	164.47	8,694.1	200.0	151.5	-197.4	0.20	-0.20	0.13	
8,737.0	2.32	163.48	8,727.1	198.8	151.9	-196.1	0.27	0.24	-3.00	
8,799.0	2.68	176.16	8,789.1	196.1	152.3	-193.4	1.06	0.58	20.45	
8,846.0	8.39	193.15	8,835.8	191.7	151.6	-189.0	12.51	12.15	36.15	
8,893.0	14.17	194.83	8,881.9	182.8	149.4	-180.1	12.32	12.30	3.57	
8,924.0	17.55	194.78	8,911.7	174.6	147.2	-172.0	10.90	10.90	-0.16	
8,956.0	20.46	194.15	8,942.0	164.5	144.6	-162.0	9.12	9.09	-1.97	
8,987.0	23.63	191.08	8,970.7	153.1	142.1	-150.6	10.88	10.23	-9.90	
9,018.0	27.26	187.85	8,998.7	140.0	139.9	-137.6	12.53	11.71	-10.42	
9,081.0	33.39	184.82	9,053.0	108.4	136.5	-106.0	10.03	9.73	-4.81	
9,129.0	37.81	183.75	9,092.1	80.6	134.4	-78.2	9.30	9.21	-2.23	
9,175.0	41.46	182.54	9,127.5	51.3	132.8	-48.9	8.11	7.93	-2.63	
9,222.0	45.88	179.98	9,161.5	18.8	132.1	-16.5	10.13	9.40	-5.45	
9,262.5	48.96	179.37	9,188.9	-11.0	132.3	13.3	7.70	7.62	-1.50	

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:	AWP	Database:	EDM_Users

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)
FTP @ 9262.5'MD / 91.88.9'TVD									
9,269.0	49.46	179.28	9,193.1	-15.9	132.4	18.2	7.70	7.62	-1.42
9,316.0	53.85	178.10	9,222.3	-52.8	133.2	55.1	9.55	9.34	-2.51
9,362.0	58.02	175.38	9,248.0	-90.8	135.4	93.1	10.30	9.07	-5.91
9,409.0	62.35	174.83	9,271.4	-131.4	138.9	133.8	9.27	9.21	-1.17
9,456.0	65.15	175.04	9,292.2	-173.4	142.6	175.8	5.97	5.96	0.45
9,505.0	70.03	175.43	9,310.9	-218.5	146.4	221.0	9.99	9.96	0.80
9,550.0	73.92	175.86	9,324.8	-261.2	149.6	263.7	8.69	8.64	0.96
9,597.0	76.13	175.97	9,336.9	-306.5	152.8	309.1	4.71	4.70	0.23
9,644.0	78.37	174.96	9,347.3	-352.2	156.5	354.8	5.21	4.77	-2.15
9,682.0	83.01	174.49	9,353.4	-389.5	159.9	392.2	12.27	12.21	-1.24
9,776.0	87.84	173.80	9,360.9	-482.7	169.5	485.5	5.19	5.14	-0.73
9,870.0	89.50	174.64	9,363.1	-576.2	178.9	579.2	1.98	1.77	0.89
9,963.0	89.56	177.17	9,363.9	-668.9	185.6	672.0	2.72	0.06	2.72
10,057.0	88.97	176.51	9,365.1	-762.8	190.8	766.0	0.94	-0.63	-0.70
10,151.0	88.86	177.41	9,366.9	-856.6	195.7	859.9	0.96	-0.12	0.96
10,245.0	86.03	176.44	9,371.1	-950.4	200.8	953.7	3.18	-3.01	-1.03
10,339.0	88.42	176.54	9,375.6	-1,044.1	206.5	1,047.5	2.54	2.54	0.11
10,433.0	90.21	176.54	9,376.7	-1,137.9	212.2	1,141.4	1.90	1.90	0.00
10,527.0	93.14	176.92	9,374.0	-1,231.7	217.6	1,235.3	3.14	3.12	0.40
10,620.0	92.43	176.56	9,369.5	-1,324.4	222.8	1,328.1	0.86	-0.76	-0.39
10,714.0	89.91	176.13	9,367.5	-1,418.2	228.8	1,422.0	2.72	-2.68	-0.46
10,808.0	89.39	175.97	9,368.1	-1,512.0	235.3	1,515.9	0.58	-0.55	-0.17
10,902.0	92.11	180.32	9,366.9	-1,605.9	238.3	1,609.8	5.46	2.89	4.63
10,996.0	89.11	180.24	9,365.9	-1,699.9	237.9	1,703.8	3.19	-3.19	-0.09
11,090.0	92.32	181.46	9,364.7	-1,793.9	236.5	1,797.7	3.65	3.41	1.30
11,183.0	91.87	181.01	9,361.3	-1,886.8	234.5	1,890.6	0.68	-0.48	-0.48
11,277.0	89.64	180.60	9,360.1	-1,980.7	233.2	1,984.5	2.41	-2.37	-0.44
11,371.0	90.63	181.36	9,359.9	-2,074.7	231.6	2,078.4	1.33	1.05	0.81
11,465.0	88.76	181.02	9,360.4	-2,168.7	229.6	2,172.4	2.02	-1.99	-0.36
11,559.0	88.25	181.20	9,362.8	-2,262.7	227.8	2,266.3	0.58	-0.54	0.19
11,653.0	89.95	180.94	9,364.3	-2,356.6	226.0	2,360.2	1.83	1.81	-0.28
11,747.0	89.56	180.34	9,364.7	-2,450.6	225.0	2,454.2	0.76	-0.41	-0.64
11,840.0	92.03	180.90	9,363.4	-2,543.6	224.0	2,547.1	2.72	2.66	0.60
11,934.0	92.08	180.70	9,360.0	-2,637.5	222.7	2,641.0	0.22	0.05	-0.21
12,028.0	90.91	180.72	9,357.6	-2,731.5	221.5	2,734.9	1.24	-1.24	0.02
12,122.0	89.37	180.38	9,357.3	-2,825.5	220.6	2,828.9	1.68	-1.64	-0.36
12,216.0	87.25	179.46	9,360.1	-2,919.4	220.7	2,922.8	2.46	-2.26	-0.98
12,310.0	90.34	179.74	9,362.1	-3,013.4	221.4	3,016.8	3.30	3.29	0.30
12,404.0	92.53	180.25	9,359.7	-3,107.4	221.4	3,110.7	2.39	2.33	0.54
12,497.0	92.77	180.37	9,355.4	-3,200.3	220.9	3,203.6	0.29	0.26	0.13
12,591.0	92.17	180.33	9,351.4	-3,294.2	220.3	3,297.5	0.64	-0.64	-0.04
12,685.0	90.16	179.11	9,349.5	-3,388.1	220.8	3,391.5	2.50	-2.14	-1.30
12,779.0	89.59	179.08	9,349.7	-3,482.1	222.3	3,485.5	0.61	-0.61	-0.03

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:	AWP	Database:	EDM_Users

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)	
12,873.0	88.66	179.18	9,351.1	-3,576.1	223.7	3,579.5	1.00	-0.99	0.11	
12,967.0	89.10	179.45	9,353.0	-3,670.1	224.8	3,673.4	0.55	0.47	0.29	
13,061.0	89.13	179.59	9,354.4	-3,764.1	225.6	3,767.4	0.15	0.03	0.15	
13,155.0	89.53	179.48	9,355.5	-3,858.1	226.4	3,861.4	0.44	0.43	-0.12	
13,249.0	89.34	179.26	9,356.4	-3,952.0	227.4	3,955.4	0.31	-0.20	-0.23	
13,342.0	92.26	179.16	9,355.1	-4,045.0	228.7	4,048.4	3.14	3.14	-0.11	
13,436.0	91.95	178.65	9,351.7	-4,138.9	230.5	4,142.3	0.63	-0.33	-0.54	
13,530.0	93.03	178.55	9,347.6	-4,232.8	232.8	4,236.2	1.15	1.15	-0.11	
13,624.0	91.82	178.66	9,343.6	-4,326.7	235.1	4,330.1	1.29	-1.29	0.12	
13,718.0	88.86	176.49	9,343.1	-4,420.6	239.0	4,424.1	3.90	-3.15	-2.31	
13,812.0	89.04	178.47	9,344.8	-4,514.5	243.2	4,518.0	2.11	0.19	2.11	
13,906.0	89.71	178.89	9,345.8	-4,608.5	245.3	4,612.0	0.84	0.71	0.45	
14,000.0	92.50	180.88	9,344.0	-4,702.4	245.5	4,706.0	3.65	2.97	2.12	
14,094.0	90.73	180.78	9,341.4	-4,796.4	244.2	4,799.9	1.89	-1.88	-0.11	
14,188.0	87.94	179.25	9,342.4	-4,890.4	244.1	4,893.9	3.38	-2.97	-1.63	
14,282.0	90.77	181.36	9,343.5	-4,984.3	243.6	4,987.8	3.76	3.01	2.24	
14,375.0	90.91	181.57	9,342.1	-5,077.3	241.3	5,080.7	0.27	0.15	0.23	
14,469.0	90.61	181.24	9,340.9	-5,171.3	239.0	5,174.6	0.47	-0.32	-0.35	
14,563.0	89.79	179.98	9,340.6	-5,265.3	237.9	5,268.6	1.60	-0.87	-1.34	
14,657.0	88.95	179.37	9,341.6	-5,359.2	238.5	5,362.6	1.10	-0.89	-0.65	
14,751.0	89.86	180.33	9,342.6	-5,453.2	238.7	5,456.6	1.41	0.97	1.02	
14,845.0	93.33	180.88	9,340.0	-5,547.2	237.7	5,550.5	3.74	3.69	0.59	
14,938.0	93.24	180.68	9,334.6	-5,640.0	236.5	5,643.3	0.24	-0.10	-0.22	
15,032.0	90.90	180.36	9,331.2	-5,733.9	235.6	5,737.2	2.51	-2.49	-0.34	
15,126.0	89.54	179.31	9,330.9	-5,827.9	235.9	5,831.2	1.83	-1.45	-1.12	
15,220.0	90.07	179.28	9,331.2	-5,921.9	237.0	5,925.2	0.56	0.56	-0.03	
15,314.0	90.01	180.99	9,331.1	-6,015.9	236.8	6,019.1	1.82	-0.06	1.82	
15,408.0	89.06	181.20	9,331.9	-6,109.9	235.0	6,113.1	1.04	-1.01	0.22	
15,502.0	88.73	181.54	9,333.7	-6,203.9	232.8	6,207.0	0.50	-0.35	0.36	
15,596.0	89.12	181.05	9,335.5	-6,297.8	230.7	6,300.9	0.67	0.41	-0.52	
15,690.0	88.41	180.80	9,337.5	-6,391.8	229.1	6,394.8	0.80	-0.76	-0.27	
15,784.0	92.00	182.24	9,337.2	-6,485.7	226.6	6,488.7	4.11	3.82	1.53	
15,878.0	92.46	182.44	9,333.5	-6,579.6	222.8	6,582.5	0.53	0.49	0.21	
15,972.0	92.33	182.44	9,329.6	-6,673.4	218.8	6,676.2	0.14	-0.14	0.00	
16,065.0	91.30	181.76	9,326.6	-6,766.3	215.4	6,769.0	1.33	-1.11	-0.73	
16,160.0	90.95	180.95	9,324.8	-6,861.3	213.2	6,863.9	0.93	-0.37	-0.85	
16,253.0	90.54	180.31	9,323.5	-6,954.2	212.1	6,956.9	0.82	-0.44	-0.69	
16,347.0	90.61	179.91	9,322.6	-7,048.2	212.0	7,050.9	0.43	0.07	-0.43	
16,441.0	92.11	180.68	9,320.4	-7,142.2	211.5	7,144.8	1.79	1.60	0.82	
16,534.0	90.38	181.47	9,318.4	-7,235.2	209.7	7,237.7	2.04	-1.86	0.85	
16,628.0	89.46	180.68	9,318.5	-7,329.2	208.0	7,331.7	1.29	-0.98	-0.84	
16,722.0	89.03	180.27	9,319.7	-7,423.1	207.2	7,425.6	0.63	-0.46	-0.44	
16,816.0	89.56	180.17	9,320.9	-7,517.1	206.8	7,519.6	0.57	0.56	-0.11	

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:	AWP	Database:	EDM_Users

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)
16,910.0	89.09	180.11	9,322.0	-7,611.1	206.6	7,613.6	0.50	-0.50	-0.06
17,004.0	90.88	181.01	9,322.0	-7,705.1	205.7	7,707.5	2.13	1.90	0.96
17,098.0	90.75	181.02	9,320.7	-7,799.1	204.0	7,801.5	0.14	-0.14	0.01
17,192.0	90.32	180.85	9,319.8	-7,893.1	202.5	7,895.4	0.49	-0.46	-0.18
17,286.0	92.59	181.94	9,317.4	-7,987.0	200.2	7,989.3	2.68	2.41	1.16
17,379.0	89.38	179.20	9,315.8	-8,080.0	199.3	8,082.2	4.54	-3.45	-2.95
17,473.0	87.55	178.69	9,318.3	-8,173.9	201.0	8,176.2	2.02	-1.95	-0.54
17,567.0	87.81	178.52	9,322.1	-8,267.8	203.3	8,270.1	0.33	0.28	-0.18
17,661.0	89.61	179.91	9,324.3	-8,361.8	204.6	8,364.1	2.42	1.91	1.48
17,755.0	86.87	179.07	9,327.1	-8,455.7	205.4	8,458.0	3.05	-2.91	-0.89
17,849.0	88.84	179.56	9,330.7	-8,549.6	206.5	8,551.9	2.16	2.10	0.52
17,942.0	90.68	180.35	9,331.0	-8,642.6	206.6	8,644.9	2.15	1.98	0.85
18,036.0	89.86	180.16	9,330.6	-8,736.6	206.2	8,738.9	0.90	-0.87	-0.20
18,130.0	88.16	180.95	9,332.2	-8,830.6	205.3	8,832.8	1.99	-1.81	0.84
18,224.0	89.82	181.42	9,333.9	-8,924.6	203.3	8,926.8	1.84	1.77	0.50
18,318.0	91.19	180.05	9,333.1	-9,018.6	202.1	9,020.7	2.06	1.46	-1.46
18,412.0	92.51	180.65	9,330.0	-9,112.5	201.6	9,114.6	1.54	1.40	0.64
18,506.0	90.46	180.78	9,327.6	-9,206.5	200.4	9,208.5	2.19	-2.18	0.14
18,600.0	87.89	179.30	9,328.9	-9,300.4	200.3	9,302.5	3.15	-2.73	-1.57
18,694.0	89.21	180.50	9,331.3	-9,394.4	200.5	9,396.5	1.90	1.40	1.28
18,787.0	92.33	181.37	9,330.1	-9,487.4	199.0	9,489.4	3.48	3.35	0.94
18,881.0	91.38	181.58	9,327.0	-9,581.3	196.5	9,583.3	1.04	-1.01	0.22
18,975.0	90.29	181.31	9,325.7	-9,675.2	194.2	9,677.2	1.19	-1.16	-0.29
19,069.0	88.54	180.66	9,326.6	-9,769.2	192.6	9,771.1	1.99	-1.86	-0.69
19,163.0	90.64	179.51	9,327.3	-9,863.2	192.4	9,865.1	2.55	2.23	-1.22
19,257.0	92.56	179.71	9,324.7	-9,957.2	193.1	9,959.0	2.05	2.04	0.21
19,351.0	94.32	179.61	9,319.0	-10,051.0	193.6	10,052.8	1.88	1.87	-0.11
19,444.0	91.89	180.06	9,314.0	-10,143.8	193.9	10,145.7	2.66	-2.61	0.48
19,538.0	88.98	180.13	9,313.3	-10,237.8	193.7	10,239.7	3.10	-3.10	0.07
19,632.0	88.96	179.58	9,315.0	-10,331.8	194.0	10,333.6	0.59	-0.02	-0.59
19,726.0	91.54	180.30	9,314.6	-10,425.8	194.1	10,427.6	2.85	2.74	0.77
19,820.0	91.63	179.17	9,312.0	-10,519.8	194.5	10,521.6	1.21	0.10	-1.20
19,914.0	89.99	177.60	9,310.6	-10,613.7	197.1	10,615.5	2.42	-1.74	-1.67
20,008.0	92.08	178.31	9,308.9	-10,707.6	200.5	10,709.5	2.35	2.22	0.76
20,102.0	92.09	178.11	9,305.5	-10,801.5	203.4	10,803.4	0.21	0.01	-0.21
20,196.0	89.94	178.35	9,303.8	-10,895.5	206.3	10,897.4	2.30	-2.29	0.26
20,291.0	91.30	178.61	9,302.8	-10,990.4	208.9	10,992.4	1.46	1.43	0.27
20,385.0	90.24	178.39	9,301.5	-11,084.4	211.3	11,086.4	1.15	-1.13	-0.23
20,479.0	88.80	178.89	9,302.3	-11,178.3	213.5	11,180.4	1.62	-1.53	0.53
20,573.0	90.57	180.17	9,302.9	-11,272.3	214.3	11,274.4	2.32	1.88	1.36
20,667.0	87.46	181.66	9,304.5	-11,366.3	212.8	11,368.3	3.67	-3.31	1.59
20,760.0	87.34	182.33	9,308.7	-11,459.1	209.6	11,461.1	0.73	-0.13	0.72
20,855.0	86.91	182.82	9,313.5	-11,553.9	205.3	11,555.8	0.69	-0.45	0.52

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:	AWP	Database:	EDM_Users

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)
20,949.0	87.96	183.36	9,317.7	-11,647.7	200.3	11,649.4	1.26	1.12	0.57
21,043.0	91.17	183.39	9,318.4	-11,741.5	194.7	11,743.1	3.42	3.41	0.03
21,137.0	92.79	184.72	9,315.1	-11,835.2	188.1	11,836.7	2.23	1.72	1.41
21,232.0	91.06	184.55	9,311.9	-11,929.9	180.4	11,931.2	1.83	-1.82	-0.18
21,326.0	90.83	183.27	9,310.4	-12,023.6	174.0	12,024.8	1.38	-0.24	-1.36
21,420.0	90.16	181.31	9,309.6	-12,117.5	170.2	12,118.7	2.20	-0.71	-2.09
21,499.1	85.84	179.56	9,312.3	-12,196.6	169.6	12,197.7	5.89	-5.46	-2.21
LTP @ 21499.1'MD / 9312.3'TVD									
21,515.0	84.97	179.21	9,313.6	-12,212.4	169.8	12,213.5	5.89	-5.46	-2.22
21,561.0	83.50	178.71	9,318.2	-12,258.2	170.6	12,259.3	3.37	-3.20	-1.09
LAST MWD SVY @ 21561'MD									
21,629.0	83.50	178.71	9,325.9	-12,325.7	172.2	12,326.8	0.00	0.00	0.00
PTD @ 21629'MD									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
LTP (HONEY GRAHA	0.00	0.00	9,292.6	-12,196.6	214.4	364,072.40	571,612.90	32° 0' 2.657 N	104° 6' 8.346 W
- actual wellpath misses target center by 48.9usft at 21498.1usft MD (9312.3 TVD, -12195.6 N, 169.6 E)									
- Point									
PBHL (HONEY GRAH	0.27	359.91	9,307.0	-12,326.5	214.6	363,942.50	571,613.10	32° 0' 1.372 N	104° 6' 8.347 W
- actual wellpath misses target center by 46.5usft at 21628.6usft MD (9325.9 TVD, -12325.3 N, 172.2 E)									
- Rectangle (sides W100.0 H12,550.0 D20.0)									
FTP (HONEY GRAHA	0.00	0.00	9,365.0	-11.3	195.0	376,257.70	571,593.50	32° 2' 3.251 N	104° 6' 8.269 W
- actual wellpath misses target center by 153.5usft at 9362.0usft MD (9248.0 TVD, -90.8 N, 135.4 E)									
- Circle (radius 50.0)									

Design Annotations

	Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
			+N/-S (usft)	+E/-W (usft)	
	9,262.5	9,188.9	-11.0	132.3	FTP @ 9262.5'MD / 91.88.9'TVD
	21,499.1	9,312.3	-12,196.6	169.6	LTP @ 21499.1'MD / 9312.3'TVD
	21,561.0	9,318.2	-12,258.2	170.6	LAST MWD SVY @ 21561'MD
	21,629.0	9,325.9	-12,325.7	172.2	PTD @ 21629'MD

Checked By: _____ Approved By: _____ Date: _____

NORTHERN DELAWARE BASIN

EDDY COUNTY, NM

ATLAS

HONEY GRAHAM STATE COM #701H

OWB

Design: AWP

Standard Survey Report

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

Well	HONEY GRAHAM STATE COM #701H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty		3.0 usft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	OWB		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	10/31/2019	6.93
			Dip Angle (°)
			59.77
			Field Strength (nT)
			47,528.72840699

Design	AWP		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°)
			179.00

Survey Program	Date	12/5/2019		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	8,560.0	GYROS-INTERMEDIATE (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
8,674.0	21,629.0	MWD-CURVE/LATERAL (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction

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	1.08	102.86	100.0	-0.2	0.9	0.2	1.08	1.08	0.00
125.0	1.05	98.09	125.0	-0.3	1.4	0.3	0.37	-0.12	-19.08
150.0	1.10	97.78	150.0	-0.4	1.8	0.4	0.20	0.20	-1.24
175.0	1.18	85.75	175.0	-0.4	2.3	0.4	1.01	0.32	-48.12
200.0	1.20	86.78	200.0	-0.3	2.9	0.4	0.12	0.08	4.12
225.0	1.20	85.93	225.0	-0.3	3.4	0.4	0.07	0.00	-3.40
250.0	1.27	82.76	250.0	-0.3	3.9	0.3	0.39	0.28	-12.68
275.0	1.28	81.98	275.0	-0.2	4.5	0.3	0.08	0.04	-3.12
300.0	1.34	81.44	300.0	-0.1	5.0	0.2	0.25	0.24	-2.16

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:	AWP	Database:	EDM_Users

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)
325.0	1.40	79.47	324.9	0.0	5.6	0.1	0.31	0.24	-7.88
350.0	1.38	79.19	349.9	0.1	6.2	0.0	0.08	-0.08	-1.12
375.0	1.40	80.12	374.9	0.2	6.8	-0.1	0.12	0.08	3.72
400.0	1.54	80.74	399.9	0.3	7.4	-0.2	0.56	0.56	2.48
425.0	1.66	82.54	424.9	0.4	8.1	-0.3	0.52	0.48	7.20
450.0	1.69	81.20	449.9	0.5	8.9	-0.4	0.20	0.12	-5.36
475.0	1.76	81.44	474.9	0.6	9.6	-0.5	0.28	0.28	0.96
500.0	1.87	77.86	499.9	0.8	10.4	-0.6	0.63	0.44	-14.32
525.0	1.92	76.13	524.9	1.0	11.2	-0.8	0.30	0.20	-6.92
550.0	2.10	74.26	549.8	1.2	12.0	-1.0	0.77	0.72	-7.48
575.0	2.14	74.04	574.8	1.5	12.9	-1.2	0.16	0.16	-0.88
600.0	2.14	73.65	599.8	1.7	13.8	-1.5	0.06	0.00	-1.56
625.0	2.17	72.29	624.8	2.0	14.7	-1.7	0.24	0.12	-5.44
650.0	2.21	72.46	649.8	2.3	15.6	-2.0	0.16	0.16	0.68
675.0	2.29	72.52	674.8	2.6	16.6	-2.3	0.32	0.32	0.24
700.0	2.37	70.38	699.7	2.9	17.5	-2.6	0.47	0.32	-8.56
725.0	2.45	71.22	724.7	3.2	18.5	-2.9	0.35	0.32	3.36
750.0	2.62	70.09	749.7	3.6	19.6	-3.3	0.71	0.68	-4.52
775.0	2.79	69.76	774.7	4.0	20.7	-3.7	0.68	0.68	-1.32
800.0	2.96	70.31	799.6	4.4	21.8	-4.1	0.69	0.68	2.20
825.0	3.14	69.68	824.6	4.9	23.1	-4.5	0.73	0.72	-2.52
850.0	3.30	69.79	849.6	5.4	24.4	-5.0	0.64	0.64	0.44
875.0	3.60	69.81	874.5	5.9	25.8	-5.5	1.20	1.20	0.08
900.0	3.78	71.50	899.5	6.4	27.3	-6.0	0.84	0.72	6.76
925.0	4.00	71.48	924.4	7.0	29.0	-6.5	0.88	0.88	-0.08
950.0	4.13	72.78	949.3	7.5	30.6	-7.0	0.64	0.52	5.20
975.0	4.24	74.86	974.3	8.0	32.4	-7.5	0.75	0.44	8.32
1,000.0	4.71	74.51	999.2	8.5	34.3	-7.9	1.88	1.88	-1.40
1,025.0	5.60	74.49	1,024.1	9.1	36.4	-8.5	3.56	3.56	-0.08
1,050.0	6.58	74.74	1,049.0	9.8	39.0	-9.2	3.92	3.92	1.00
1,075.0	7.27	73.69	1,073.8	10.7	41.9	-9.9	2.81	2.76	-4.20
1,100.0	7.83	72.57	1,098.6	11.6	45.0	-10.8	2.32	2.24	-4.48
1,125.0	8.43	68.01	1,123.3	12.8	48.4	-12.0	3.52	2.40	-18.24
1,150.0	9.09	64.00	1,148.0	14.4	51.8	-13.5	3.60	2.64	-16.04
1,175.0	9.39	62.83	1,172.7	16.2	55.4	-15.2	1.42	1.20	-4.68
1,200.0	9.43	62.63	1,197.4	18.0	59.1	-17.0	0.21	0.16	-0.80
1,225.0	9.06	57.94	1,222.0	20.0	62.5	-18.9	3.36	-1.48	-18.76
1,250.0	9.01	54.85	1,246.7	22.2	65.8	-21.0	1.95	-0.20	-12.36
1,275.0	8.68	52.22	1,271.4	24.5	68.9	-23.3	2.09	-1.32	-10.52
1,300.0	8.38	48.37	1,296.1	26.8	71.8	-25.6	2.58	-1.20	-15.40
1,325.0	7.62	38.86	1,320.9	29.3	74.2	-28.1	6.09	-3.04	-38.04
1,350.0	7.14	34.51	1,345.7	31.9	76.1	-30.6	2.95	-1.92	-17.40
1,375.0	6.56	28.93	1,370.5	34.4	77.7	-33.1	3.53	-2.32	-22.32

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:	AWP	Database:	EDM_Users

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)	
1,400.0	6.27	23.50	1,395.4	37.0	78.9	-35.6	2.69	-1.16	-21.72	
1,425.0	5.96	19.48	1,420.2	39.4	79.9	-38.0	2.11	-1.24	-16.08	
1,450.0	5.73	16.30	1,445.1	41.8	80.6	-40.4	1.59	-0.92	-12.72	
1,475.0	5.68	16.39	1,470.0	44.2	81.3	-42.8	0.20	-0.20	0.36	
1,500.0	5.58	16.62	1,494.8	46.6	82.0	-45.1	0.41	-0.40	0.92	
1,525.0	5.73	16.46	1,519.7	48.9	82.7	-47.5	0.60	0.60	-0.64	
1,550.0	5.61	15.46	1,544.6	51.3	83.4	-49.9	0.62	-0.48	-4.00	
1,575.0	5.28	16.23	1,569.5	53.6	84.1	-52.1	1.35	-1.32	3.08	
1,600.0	4.99	16.46	1,594.4	55.7	84.7	-54.3	1.16	-1.16	0.92	
1,625.0	5.06	17.56	1,619.3	57.8	85.3	-56.3	0.48	0.28	4.40	
1,650.0	4.98	17.69	1,644.2	59.9	86.0	-58.4	0.32	-0.32	0.52	
1,675.0	4.89	18.45	1,669.1	62.0	86.7	-60.5	0.44	-0.36	3.04	
1,700.0	4.80	19.52	1,694.0	64.0	87.4	-62.4	0.51	-0.36	4.28	
1,725.0	4.48	22.33	1,718.9	65.9	88.1	-64.3	1.57	-1.28	11.24	
1,750.0	4.36	22.87	1,743.9	67.6	88.8	-66.1	0.51	-0.48	2.16	
1,775.0	4.36	23.33	1,768.8	69.4	89.6	-67.8	0.14	0.00	1.84	
1,800.0	4.25	24.92	1,793.7	71.1	90.3	-69.5	0.65	-0.44	6.36	
1,825.0	4.29	24.53	1,818.6	72.8	91.1	-71.2	0.20	0.16	-1.56	
1,850.0	4.22	25.17	1,843.6	74.5	91.9	-72.9	0.34	-0.28	2.56	
1,875.0	4.27	26.04	1,868.5	76.1	92.7	-74.5	0.33	0.20	3.48	
1,900.0	4.33	25.44	1,893.4	77.8	93.5	-76.2	0.30	0.24	-2.40	
1,925.0	4.15	26.20	1,918.4	79.5	94.3	-77.8	0.75	-0.72	3.04	
1,950.0	4.27	26.36	1,943.3	81.1	95.1	-79.5	0.48	0.48	0.64	
1,975.0	4.18	26.41	1,968.2	82.8	95.9	-81.1	0.36	-0.36	0.20	
2,000.0	4.20	26.01	1,993.2	84.4	96.7	-82.7	0.14	0.08	-1.60	
2,025.0	3.88	25.95	2,018.1	86.0	97.5	-84.3	1.28	-1.28	-0.24	
2,050.0	3.39	25.99	2,043.1	87.4	98.2	-85.7	1.96	-1.96	0.16	
2,075.0	3.19	26.71	2,068.0	88.7	98.8	-87.0	0.82	-0.80	2.88	
2,100.0	3.06	27.20	2,093.0	89.9	99.5	-88.2	0.53	-0.52	1.96	
2,125.0	3.11	27.04	2,117.9	91.1	100.1	-89.4	0.20	0.20	-0.64	
2,150.0	3.08	29.41	2,142.9	92.3	100.7	-90.6	0.53	-0.12	9.48	
2,175.0	2.98	36.21	2,167.9	93.4	101.4	-91.7	1.49	-0.40	27.20	
2,200.0	3.07	41.14	2,192.8	94.5	102.3	-92.7	1.10	0.36	19.72	
2,225.0	3.13	42.69	2,217.8	95.5	103.2	-93.7	0.41	0.24	6.20	
2,250.0	3.19	44.09	2,242.8	96.5	104.1	-94.6	0.39	0.24	5.60	
2,275.0	3.19	45.96	2,267.7	97.5	105.1	-95.6	0.42	0.00	7.48	
2,300.0	3.27	46.78	2,292.7	98.4	106.1	-96.6	0.37	0.32	3.28	
2,325.0	2.48	42.83	2,317.6	99.3	107.0	-97.4	3.26	-3.16	-15.80	
2,350.0	1.34	30.28	2,342.6	100.0	107.5	-98.1	4.83	-4.56	-50.20	
2,375.0	1.03	9.24	2,367.6	100.4	107.7	-98.5	2.12	-1.24	-84.16	
2,400.0	0.79	341.49	2,392.6	100.8	107.7	-98.9	1.98	-0.96	-111.00	
2,425.0	0.73	331.98	2,417.6	101.1	107.5	-99.2	0.56	-0.24	-38.04	
2,450.0	0.72	326.53	2,442.6	101.4	107.4	-99.5	0.28	-0.04	-21.80	

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:	AWP	Database:	EDM_Users

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)	
2,475.0	0.70	328.84	2,467.6	101.7	107.2	-99.8	0.14	-0.08	9.24	
2,500.0	0.75	328.04	2,492.6	101.9	107.1	-100.0	0.20	0.20	-3.20	
2,525.0	0.71	326.81	2,517.6	102.2	106.9	-100.3	0.17	-0.16	-4.92	
2,550.0	0.68	322.06	2,542.6	102.4	106.7	-100.6	0.26	-0.12	-19.00	
2,575.0	0.63	318.65	2,567.6	102.7	106.5	-100.8	0.25	-0.20	-13.64	
2,600.0	0.70	319.65	2,592.6	102.9	106.3	-101.0	0.28	0.28	4.00	
2,625.0	0.67	323.65	2,617.6	103.1	106.1	-101.2	0.23	-0.12	16.00	
2,650.0	0.74	321.63	2,642.6	103.4	106.0	-101.5	0.30	0.28	-8.08	
2,675.0	0.70	318.82	2,667.6	103.6	105.8	-101.7	0.21	-0.16	-11.24	
2,700.0	0.73	319.09	2,692.6	103.8	105.6	-102.0	0.12	0.12	1.08	
2,725.0	0.73	316.90	2,717.6	104.1	105.3	-102.2	0.11	0.00	-8.76	
2,750.0	0.70	318.98	2,742.6	104.3	105.1	-102.5	0.16	-0.12	8.32	
2,775.0	0.78	316.15	2,767.6	104.5	104.9	-102.7	0.35	0.32	-11.32	
2,800.0	0.66	309.49	2,792.6	104.8	104.7	-102.9	0.58	-0.48	-26.64	
2,825.0	0.75	317.89	2,817.6	105.0	104.5	-103.1	0.55	0.36	33.60	
2,850.0	0.73	316.96	2,842.6	105.2	104.2	-103.4	0.09	-0.08	-3.72	
2,875.0	0.72	316.37	2,867.6	105.4	104.0	-103.6	0.05	-0.04	-2.36	
2,900.0	0.74	313.30	2,892.6	105.7	103.8	-103.8	0.18	0.08	-12.28	
2,925.0	0.72	310.03	2,917.6	105.9	103.6	-104.1	0.18	-0.08	-13.08	
2,950.0	0.73	315.82	2,942.6	106.1	103.3	-104.3	0.30	0.04	23.16	
2,975.0	0.84	333.40	2,967.6	106.4	103.1	-104.6	1.05	0.44	70.32	
3,000.0	1.18	357.69	2,992.6	106.8	103.1	-105.0	2.16	1.36	97.16	
3,025.0	1.33	354.02	3,017.6	107.3	103.0	-105.5	0.68	0.60	-14.68	
3,050.0	1.32	4.89	3,042.6	107.9	103.0	-106.1	1.00	-0.04	43.48	
3,075.0	1.36	2.56	3,067.6	108.5	103.0	-106.7	0.27	0.16	-9.32	
3,100.0	1.39	3.85	3,092.5	109.1	103.1	-107.3	0.17	0.12	5.16	
3,125.0	1.40	2.92	3,117.5	109.7	103.1	-107.9	0.10	0.04	-3.72	
3,150.0	1.45	2.98	3,142.5	110.3	103.1	-108.5	0.20	0.20	0.24	
3,175.0	1.39	4.23	3,167.5	110.9	103.2	-109.1	0.27	-0.24	5.00	
3,200.0	1.45	4.39	3,192.5	111.6	103.2	-109.7	0.24	0.24	0.64	
3,225.0	1.45	7.20	3,217.5	112.2	103.3	-110.4	0.28	0.00	11.24	
3,250.0	1.37	3.80	3,242.5	112.8	103.4	-111.0	0.46	-0.32	-13.60	
3,275.0	1.41	4.37	3,267.5	113.4	103.4	-111.6	0.17	0.16	2.28	
3,300.0	1.44	4.43	3,292.5	114.0	103.4	-112.2	0.12	0.12	0.24	
3,325.0	1.43	359.92	3,317.5	114.6	103.5	-112.8	0.45	-0.04	-18.04	
3,350.0	1.39	2.45	3,342.5	115.3	103.5	-113.4	0.30	-0.16	10.12	
3,375.0	1.41	358.68	3,367.5	115.9	103.5	-114.1	0.38	0.08	-15.08	
3,400.0	1.45	359.00	3,392.5	116.5	103.5	-114.7	0.16	0.16	1.28	
3,425.0	1.43	2.68	3,417.4	117.1	103.5	-115.3	0.38	-0.08	14.72	
3,450.0	1.43	0.66	3,442.4	117.7	103.5	-115.9	0.20	0.00	-8.08	
3,475.0	1.47	0.23	3,467.4	118.4	103.5	-116.6	0.17	0.16	-1.72	
3,500.0	1.46	358.48	3,492.4	119.0	103.5	-117.2	0.18	-0.04	-7.00	
3,525.0	1.49	357.86	3,517.4	119.7	103.5	-117.8	0.14	0.12	-2.48	
3,550.0	1.53	358.48	3,542.4	120.3	103.5	-118.5	0.17	0.16	2.48	

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:	AWP	Database:	EDM_Users

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)
3,575.0	1.50	357.30	3,567.4	121.0	103.4	-119.2	0.17	-0.12	-4.72
3,600.0	1.52	357.67	3,592.4	121.6	103.4	-119.8	0.09	0.08	1.48
3,625.0	1.50	357.14	3,617.4	122.3	103.4	-120.5	0.10	-0.08	-2.12
3,650.0	1.53	355.05	3,642.4	123.0	103.3	-121.1	0.25	0.12	-8.36
3,675.0	1.45	357.36	3,667.4	123.6	103.3	-121.8	0.40	-0.32	9.24
3,700.0	1.60	357.06	3,692.4	124.3	103.3	-122.5	0.60	0.60	-1.20
3,725.0	1.57	355.78	3,717.3	125.0	103.2	-123.1	0.19	-0.12	-5.12
3,750.0	1.63	355.96	3,742.3	125.7	103.2	-123.8	0.24	0.24	0.72
3,775.0	1.61	356.18	3,767.3	126.4	103.1	-124.5	0.08	-0.08	0.88
3,800.0	1.58	355.87	3,792.3	127.1	103.1	-125.2	0.12	-0.12	-1.24
3,825.0	1.57	353.54	3,817.3	127.7	103.0	-125.9	0.26	-0.04	-9.32
3,850.0	1.56	355.94	3,842.3	128.4	102.9	-126.6	0.27	-0.04	9.60
3,875.0	1.55	355.10	3,867.3	129.1	102.9	-127.3	0.10	-0.04	-3.36
3,900.0	1.60	356.57	3,892.3	129.8	102.8	-128.0	0.26	0.20	5.88
3,925.0	1.53	353.58	3,917.3	130.5	102.8	-128.6	0.43	-0.28	-11.96
3,950.0	1.60	354.07	3,942.3	131.1	102.7	-129.3	0.29	0.28	1.96
3,975.0	1.65	353.53	3,967.2	131.8	102.6	-130.0	0.21	0.20	-2.16
4,000.0	1.77	354.09	3,992.2	132.6	102.5	-130.8	0.48	0.48	2.24
4,025.0	1.58	355.85	4,017.2	133.3	102.5	-131.5	0.79	-0.76	7.04
4,050.0	1.62	356.89	4,042.2	134.0	102.4	-132.2	0.20	0.16	4.16
4,075.0	1.65	354.52	4,067.2	134.7	102.4	-132.9	0.30	0.12	-9.48
4,100.0	1.64	355.74	4,092.2	135.4	102.3	-133.6	0.15	-0.04	4.88
4,125.0	1.65	352.98	4,117.2	136.1	102.3	-134.3	0.32	0.04	-11.04
4,150.0	1.71	353.11	4,142.2	136.9	102.2	-135.1	0.24	0.24	0.52
4,175.0	1.63	354.24	4,167.2	137.6	102.1	-135.8	0.35	-0.32	4.52
4,200.0	1.65	353.84	4,192.2	138.3	102.0	-136.5	0.09	0.08	-1.60
4,225.0	1.74	353.16	4,217.1	139.0	101.9	-137.3	0.37	0.36	-2.72
4,250.0	1.68	357.23	4,242.1	139.8	101.9	-138.0	0.54	-0.24	16.28
4,275.0	1.61	358.39	4,267.1	140.5	101.8	-138.7	0.31	-0.28	4.64
4,300.0	1.61	0.24	4,292.1	141.2	101.8	-139.4	0.21	0.00	7.40
4,325.0	1.60	359.22	4,317.1	141.9	101.8	-140.1	0.12	-0.04	-4.08
4,350.0	1.63	356.78	4,342.1	142.6	101.8	-140.8	0.30	0.12	-9.76
4,375.0	1.62	358.98	4,367.1	143.3	101.8	-141.5	0.25	-0.04	8.80
4,400.0	1.69	359.64	4,392.1	144.0	101.8	-142.2	0.29	0.28	2.64
4,425.0	1.71	355.88	4,417.1	144.8	101.7	-143.0	0.45	0.08	-15.04
4,450.0	1.67	357.09	4,442.1	145.5	101.7	-143.7	0.21	-0.16	4.84
4,475.0	1.69	359.30	4,467.0	146.3	101.7	-144.5	0.27	0.08	8.84
4,500.0	1.66	0.69	4,492.0	147.0	101.7	-145.2	0.20	-0.12	5.56
4,525.0	1.69	358.80	4,517.0	147.7	101.7	-145.9	0.25	0.12	-7.56
4,550.0	1.61	359.58	4,542.0	148.4	101.7	-146.6	0.33	-0.32	3.12
4,575.0	1.63	356.91	4,567.0	149.1	101.6	-147.3	0.31	0.08	-10.68
4,600.0	1.65	356.29	4,592.0	149.9	101.6	-148.1	0.11	0.08	-2.48
4,625.0	1.61	356.56	4,617.0	150.6	101.5	-148.8	0.16	-0.16	1.08

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:	AWP	Database:	EDM_Users

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)
4,650.0	1.63	355.67	4,642.0	151.3	101.5	-149.5	0.13	0.08	-3.56
4,675.0	1.65	358.45	4,667.0	152.0	101.5	-150.2	0.33	0.08	11.12
4,700.0	1.66	358.29	4,691.9	152.7	101.4	-150.9	0.04	0.04	-0.64
4,725.0	1.62	0.03	4,716.9	153.4	101.4	-151.6	0.26	-0.16	6.96
4,750.0	1.70	354.09	4,741.9	154.1	101.4	-152.4	0.76	0.32	-23.76
4,775.0	1.68	357.67	4,766.9	154.9	101.3	-153.1	0.43	-0.08	14.32
4,800.0	1.69	358.05	4,791.9	155.6	101.3	-153.8	0.06	0.04	1.52
4,825.0	1.68	1.28	4,816.9	156.3	101.3	-154.6	0.38	-0.04	12.92
4,850.0	1.67	4.11	4,841.9	157.1	101.3	-155.3	0.33	-0.04	11.32
4,875.0	1.72	4.46	4,866.9	157.8	101.4	-156.0	0.20	0.20	1.40
4,900.0	1.65	358.57	4,891.9	158.5	101.4	-156.8	0.75	-0.28	-23.56
4,925.0	1.71	1.59	4,916.9	159.3	101.4	-157.5	0.43	0.24	12.08
4,950.0	1.72	3.72	4,941.8	160.0	101.5	-158.2	0.26	0.04	8.52
4,975.0	1.67	2.30	4,966.8	160.8	101.5	-159.0	0.26	-0.20	-5.68
5,000.0	1.72	4.86	4,991.8	161.5	101.5	-159.7	0.36	0.20	10.24
5,025.0	1.71	1.19	5,016.8	162.3	101.6	-160.5	0.44	-0.04	-14.68
5,050.0	1.74	4.73	5,041.8	163.0	101.6	-161.2	0.44	0.12	14.16
5,075.0	1.74	2.41	5,066.8	163.8	101.7	-162.0	0.28	0.00	-9.28
5,100.0	1.79	3.05	5,091.8	164.5	101.7	-162.7	0.21	0.20	2.56
5,125.0	1.70	6.69	5,116.8	165.3	101.8	-163.5	0.57	-0.36	14.56
5,150.0	1.54	31.38	5,141.8	165.9	102.0	-164.1	2.84	-0.64	98.76
5,175.0	1.60	40.69	5,166.7	166.5	102.4	-164.7	1.05	0.24	37.24
5,200.0	1.62	47.64	5,191.7	167.0	102.9	-165.2	0.78	0.08	27.80
5,225.0	1.65	52.06	5,216.7	167.5	103.4	-165.6	0.52	0.12	17.68
5,250.0	1.74	56.36	5,241.7	167.9	104.0	-166.1	0.62	0.36	17.20
5,275.0	1.66	55.07	5,266.7	168.3	104.6	-166.5	0.35	-0.32	-5.16
5,300.0	1.65	54.06	5,291.7	168.7	105.2	-166.9	0.12	-0.04	-4.04
5,325.0	1.72	55.79	5,316.7	169.1	105.8	-167.3	0.35	0.28	6.92
5,350.0	1.73	53.67	5,341.7	169.6	106.4	-167.7	0.26	0.04	-8.48
5,375.0	1.74	53.80	5,366.7	170.0	107.0	-168.1	0.04	0.04	0.52
5,400.0	1.75	53.85	5,391.6	170.5	107.7	-168.6	0.04	0.04	0.20
5,425.0	1.78	54.33	5,416.6	170.9	108.3	-169.0	0.13	0.12	1.92
5,450.0	1.77	53.58	5,441.6	171.4	108.9	-169.5	0.10	-0.04	-3.00
5,475.0	1.77	55.30	5,466.6	171.8	109.5	-169.9	0.21	0.00	6.88
5,500.0	1.73	55.30	5,491.6	172.3	110.2	-170.3	0.16	-0.16	0.00
5,525.0	1.74	54.41	5,516.6	172.7	110.8	-170.7	0.11	0.04	-3.56
5,550.0	1.77	55.77	5,541.6	173.1	111.4	-171.2	0.21	0.12	5.44
5,575.0	1.70	54.46	5,566.6	173.6	112.0	-171.6	0.32	-0.28	-5.24
5,600.0	1.70	54.78	5,591.6	174.0	112.6	-172.0	0.04	0.00	1.28
5,625.0	1.68	55.24	5,616.5	174.4	113.2	-172.4	0.10	-0.08	1.84
5,650.0	1.72	57.92	5,641.5	174.8	113.9	-172.8	0.36	0.16	10.72
5,675.0	1.64	57.56	5,666.5	175.2	114.5	-173.2	0.32	-0.32	-1.44
5,700.0	1.61	54.92	5,691.5	175.6	115.1	-173.6	0.32	-0.12	-10.56

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:	AWP	Database:	EDM_Users

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)	
5,725.0	1.59	59.61	5,716.5	176.0	115.7	-174.0	0.53	-0.08	18.76	
5,750.0	1.47	59.75	5,741.5	176.3	116.2	-174.3	0.48	-0.48	0.56	
5,775.0	1.43	61.70	5,766.5	176.6	116.8	-174.6	0.25	-0.16	7.80	
5,800.0	1.41	60.38	5,791.5	176.9	117.3	-174.9	0.15	-0.08	-5.28	
5,825.0	1.36	62.42	5,816.5	177.2	117.9	-175.2	0.28	-0.20	8.16	
5,850.0	1.33	60.88	5,841.5	177.5	118.4	-175.4	0.19	-0.12	-6.16	
5,875.0	1.26	60.22	5,866.5	177.8	118.9	-175.7	0.29	-0.28	-2.64	
5,900.0	1.20	65.59	5,891.4	178.0	119.3	-175.9	0.52	-0.24	21.48	
5,925.0	1.19	64.72	5,916.4	178.3	119.8	-176.1	0.08	-0.04	-3.48	
5,950.0	1.16	63.22	5,941.4	178.5	120.3	-176.4	0.17	-0.12	-6.00	
5,975.0	1.13	64.37	5,966.4	178.7	120.7	-176.6	0.15	-0.12	4.60	
6,000.0	1.19	64.33	5,991.4	178.9	121.2	-176.8	0.24	0.24	-0.16	
6,025.0	1.16	62.55	6,016.4	179.1	121.6	-177.0	0.19	-0.12	-7.12	
6,050.0	1.18	65.69	6,041.4	179.4	122.1	-177.2	0.27	0.08	12.56	
6,075.0	1.22	62.49	6,066.4	179.6	122.6	-177.4	0.31	0.16	-12.80	
6,100.0	1.16	63.74	6,091.4	179.8	123.0	-177.7	0.26	-0.24	5.00	
6,125.0	1.18	63.83	6,116.4	180.1	123.5	-177.9	0.08	0.08	0.36	
6,150.0	1.12	64.91	6,141.4	180.3	123.9	-178.1	0.26	-0.24	4.32	
6,175.0	1.19	65.56	6,166.4	180.5	124.4	-178.3	0.28	0.28	2.60	
6,200.0	1.23	63.89	6,191.4	180.7	124.9	-178.5	0.21	0.16	-6.68	
6,225.0	1.23	67.48	6,216.4	180.9	125.4	-178.7	0.31	0.00	14.36	
6,250.0	1.20	64.23	6,241.4	181.1	125.8	-178.9	0.30	-0.12	-13.00	
6,275.0	1.10	62.62	6,266.4	181.4	126.3	-179.1	0.42	-0.40	-6.44	
6,300.0	1.07	67.25	6,291.4	181.6	126.7	-179.3	0.37	-0.12	18.52	
6,325.0	1.01	63.45	6,316.4	181.8	127.1	-179.5	0.37	-0.24	-15.20	
6,350.0	0.92	64.28	6,341.4	181.9	127.5	-179.7	0.36	-0.36	3.32	
6,375.0	0.89	59.58	6,366.4	182.1	127.9	-179.9	0.32	-0.12	-18.80	
6,400.0	0.82	56.61	6,391.3	182.3	128.2	-180.1	0.33	-0.28	-11.88	
6,425.0	0.77	51.24	6,416.3	182.5	128.5	-180.3	0.36	-0.20	-21.48	
6,450.0	0.69	44.54	6,441.3	182.7	128.7	-180.5	0.47	-0.32	-26.80	
6,475.0	0.65	31.49	6,466.3	183.0	128.9	-180.7	0.63	-0.16	-52.20	
6,500.0	0.65	15.64	6,491.3	183.2	129.0	-181.0	0.72	0.00	-63.40	
6,525.0	0.66	357.74	6,516.3	183.5	129.0	-181.2	0.82	0.04	-71.60	
6,550.0	0.71	355.19	6,541.3	183.8	129.0	-181.5	0.23	0.20	-10.20	
6,575.0	0.73	355.69	6,566.3	184.1	129.0	-181.9	0.08	0.08	2.00	
6,600.0	0.76	345.74	6,591.3	184.4	128.9	-182.2	0.53	0.12	-39.80	
6,625.0	0.85	339.74	6,616.3	184.8	128.8	-182.5	0.49	0.36	-24.00	
6,650.0	0.92	332.59	6,641.3	185.1	128.7	-182.9	0.52	0.28	-28.60	
6,675.0	0.96	337.34	6,666.3	185.5	128.5	-183.2	0.35	0.16	19.00	
6,700.0	0.90	330.97	6,691.3	185.9	128.3	-183.6	0.48	-0.24	-25.48	
6,725.0	0.92	333.91	6,716.3	186.2	128.1	-184.0	0.20	0.08	11.76	
6,750.0	1.03	331.16	6,741.3	186.6	127.9	-184.3	0.48	0.44	-11.00	
6,775.0	0.91	332.06	6,766.3	187.0	127.7	-184.7	0.48	-0.48	3.60	
6,800.0	0.94	333.95	6,791.3	187.3	127.5	-185.1	0.17	0.12	7.56	

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:	AWP	Database:	EDM_Users

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)
6,825.0	0.95	335.03	6,816.3	187.7	127.4	-185.5	0.08	0.04	4.32
6,850.0	0.89	333.23	6,841.3	188.1	127.2	-185.8	0.27	-0.24	-7.20
6,875.0	0.97	331.40	6,866.3	188.4	127.0	-186.2	0.34	0.32	-7.32
6,900.0	0.93	330.13	6,891.3	188.8	126.8	-186.5	0.18	-0.16	-5.08
6,925.0	0.96	327.28	6,916.3	189.1	126.6	-186.9	0.22	0.12	-11.40
6,950.0	0.89	324.55	6,941.3	189.5	126.4	-187.2	0.33	-0.28	-10.92
6,975.0	1.05	323.55	6,966.3	189.8	126.1	-187.6	0.64	0.64	-4.00
7,000.0	1.24	317.84	6,991.3	190.2	125.8	-188.0	0.89	0.76	-22.84
7,025.0	1.31	314.56	7,016.3	190.6	125.4	-188.4	0.40	0.28	-13.12
7,050.0	1.40	313.22	7,041.3	191.0	125.0	-188.8	0.38	0.36	-5.36
7,075.0	1.46	309.86	7,066.3	191.4	124.5	-189.2	0.41	0.24	-13.44
7,100.0	1.60	319.55	7,091.3	191.9	124.1	-189.7	1.17	0.56	38.76
7,125.0	2.60	333.87	7,116.2	192.7	123.6	-190.5	4.49	4.00	57.28
7,150.0	2.85	334.85	7,141.2	193.7	123.1	-191.6	1.02	1.00	3.92
7,175.0	2.79	336.73	7,166.2	194.9	122.6	-192.7	0.44	-0.24	7.52
7,200.0	2.81	341.05	7,191.1	196.0	122.1	-193.8	0.85	0.08	17.28
7,225.0	2.81	345.60	7,216.1	197.2	121.8	-195.0	0.89	0.00	18.20
7,250.0	2.78	349.02	7,241.1	198.4	121.5	-196.2	0.68	-0.12	13.68
7,275.0	2.73	352.82	7,266.1	199.5	121.3	-197.4	0.76	-0.20	15.20
7,300.0	2.40	4.59	7,291.0	200.7	121.3	-198.5	2.48	-1.32	47.08
7,325.0	2.18	16.70	7,316.0	201.6	121.5	-199.5	2.12	-0.88	48.44
7,350.0	2.08	22.72	7,341.0	202.5	121.8	-200.4	0.98	-0.40	24.08
7,375.0	2.08	28.84	7,366.0	203.3	122.2	-201.2	0.89	0.00	24.48
7,400.0	1.92	29.44	7,391.0	204.1	122.6	-201.9	0.65	-0.64	2.40
7,425.0	1.82	30.33	7,415.9	204.8	123.0	-202.6	0.42	-0.40	3.56
7,450.0	1.73	28.05	7,440.9	205.5	123.4	-203.3	0.46	-0.36	-9.12
7,475.0	1.57	28.85	7,465.9	206.1	123.7	-203.9	0.65	-0.64	3.20
7,500.0	1.51	26.04	7,490.9	206.7	124.0	-204.5	0.39	-0.24	-11.24
7,525.0	1.20	10.14	7,515.9	207.3	124.2	-205.1	1.94	-1.24	-63.60
7,550.0	1.10	4.39	7,540.9	207.7	124.3	-205.6	0.61	-0.40	-23.00
7,575.0	1.04	6.80	7,565.9	208.2	124.3	-206.0	0.30	-0.24	9.64
7,600.0	1.00	5.67	7,590.9	208.7	124.4	-206.5	0.18	-0.16	-4.52
7,625.0	0.99	5.63	7,615.9	209.1	124.4	-206.9	0.04	-0.04	-0.16
7,650.0	1.01	4.81	7,640.9	209.5	124.5	-207.3	0.10	0.08	-3.28
7,675.0	0.97	14.33	7,665.9	209.9	124.5	-207.7	0.68	-0.16	38.08
7,700.0	1.05	23.05	7,690.9	210.4	124.7	-208.2	0.69	0.32	34.88
7,725.0	1.07	30.10	7,715.9	210.8	124.9	-208.6	0.53	0.08	28.20
7,750.0	1.17	39.95	7,740.9	211.2	125.2	-209.0	0.87	0.40	39.40
7,775.0	1.41	49.22	7,765.9	211.6	125.5	-209.4	1.27	0.96	37.08
7,800.0	1.54	57.61	7,790.9	211.9	126.1	-209.7	1.01	0.52	33.56
7,825.0	1.69	60.96	7,815.8	212.3	126.7	-210.1	0.71	0.60	13.40
7,850.0	1.80	63.63	7,840.8	212.7	127.3	-210.4	0.55	0.44	10.68
7,875.0	1.84	63.73	7,865.8	213.0	128.1	-210.8	0.16	0.16	0.40

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:	AWP	Database:	EDM_Users

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)
7,900.0	1.89	65.41	7,890.8	213.4	128.8	-211.1	0.30	0.20	6.72
7,925.0	2.00	65.73	7,915.8	213.7	129.6	-211.4	0.44	0.44	1.28
7,950.0	1.96	65.51	7,940.8	214.1	130.4	-211.8	0.16	-0.16	-0.88
7,975.0	2.03	65.21	7,965.8	214.4	131.1	-212.1	0.28	0.28	-1.20
8,000.0	2.05	65.72	7,990.8	214.8	132.0	-212.5	0.11	0.08	2.04
8,025.0	2.15	65.42	8,015.7	215.2	132.8	-212.8	0.40	0.40	-1.20
8,050.0	2.11	69.07	8,040.7	215.5	133.6	-213.2	0.57	-0.16	14.60
8,075.0	2.08	72.98	8,065.7	215.8	134.5	-213.5	0.58	-0.12	15.64
8,100.0	1.91	81.22	8,090.7	216.0	135.4	-213.6	1.33	-0.68	32.96
8,125.0	1.82	81.90	8,115.7	216.2	136.2	-213.8	0.37	-0.36	2.72
8,150.0	1.72	92.15	8,140.7	216.2	136.9	-213.8	1.33	-0.40	41.00
8,175.0	1.67	92.71	8,165.6	216.2	137.7	-213.7	0.21	-0.20	2.24
8,200.0	1.65	99.66	8,190.6	216.1	138.4	-213.6	0.81	-0.08	27.80
8,225.0	1.76	101.60	8,215.6	215.9	139.1	-213.5	0.50	0.44	7.76
8,250.0	1.81	105.60	8,240.6	215.8	139.9	-213.3	0.54	0.20	16.00
8,275.0	1.87	108.87	8,265.6	215.5	140.6	-213.0	0.48	0.24	13.08
8,300.0	2.02	110.87	8,290.6	215.2	141.4	-212.7	0.66	0.60	8.00
8,325.0	2.15	119.98	8,315.6	214.8	142.3	-212.3	1.42	0.52	36.44
8,350.0	2.36	127.85	8,340.6	214.3	143.1	-211.8	1.49	0.84	31.48
8,375.0	2.52	131.23	8,365.5	213.6	143.9	-211.1	0.86	0.64	13.52
8,400.0	2.64	133.24	8,390.5	212.9	144.7	-210.3	0.60	0.48	8.04
8,425.0	2.81	139.10	8,415.5	212.0	145.5	-209.4	1.30	0.68	23.44
8,450.0	2.91	140.86	8,440.4	211.0	146.3	-208.5	0.53	0.40	7.04
8,475.0	2.97	145.97	8,465.4	210.0	147.1	-207.4	1.08	0.24	20.44
8,500.0	3.06	149.76	8,490.4	208.9	147.8	-206.3	0.87	0.36	15.16
8,525.0	3.05	152.82	8,515.3	207.7	148.4	-205.1	0.65	-0.04	12.24
8,550.0	3.04	154.05	8,540.3	206.6	149.0	-203.9	0.26	-0.04	4.92
8,560.0	3.01	154.19	8,550.3	206.1	149.3	-203.4	0.31	-0.30	1.40
8,674.0	2.30	164.43	8,664.2	201.2	151.2	-198.5	0.75	-0.62	8.98
8,704.0	2.24	164.47	8,694.1	200.0	151.5	-197.4	0.20	-0.20	0.13
8,737.0	2.32	163.48	8,727.1	198.8	151.9	-196.1	0.27	0.24	-3.00
8,799.0	2.68	176.16	8,789.1	196.1	152.3	-193.4	1.06	0.58	20.45
8,846.0	8.39	193.15	8,835.8	191.7	151.6	-189.0	12.51	12.15	36.15
8,893.0	14.17	194.83	8,881.9	182.8	149.4	-180.1	12.32	12.30	3.57
8,924.0	17.55	194.78	8,911.7	174.6	147.2	-172.0	10.90	10.90	-0.16
8,956.0	20.46	194.15	8,942.0	164.5	144.6	-162.0	9.12	9.09	-1.97
8,987.0	23.63	191.08	8,970.7	153.1	142.1	-150.6	10.88	10.23	-9.90
9,018.0	27.26	187.85	8,998.7	140.0	139.9	-137.6	12.53	11.71	-10.42
9,081.0	33.39	184.82	9,053.0	108.4	136.5	-106.0	10.03	9.73	-4.81
9,129.0	37.81	183.75	9,092.1	80.6	134.4	-78.2	9.30	9.21	-2.23
9,175.0	41.46	182.54	9,127.5	51.3	132.8	-48.9	8.11	7.93	-2.63
9,222.0	45.88	179.98	9,161.5	18.8	132.1	-16.5	10.13	9.40	-5.45
9,262.5	48.96	179.37	9,188.9	-11.0	132.3	13.3	7.70	7.62	-1.50

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:	AWP	Database:	EDM_Users

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)
FTP @ 9262.5'MD / 91.88.9'TVD									
9,269.0	49.46	179.28	9,193.1	-15.9	132.4	18.2	7.70	7.62	-1.42
9,316.0	53.85	178.10	9,222.3	-52.8	133.2	55.1	9.55	9.34	-2.51
9,362.0	58.02	175.38	9,248.0	-90.8	135.4	93.1	10.30	9.07	-5.91
9,409.0	62.35	174.83	9,271.4	-131.4	138.9	133.8	9.27	9.21	-1.17
9,456.0	65.15	175.04	9,292.2	-173.4	142.6	175.8	5.97	5.96	0.45
9,505.0	70.03	175.43	9,310.9	-218.5	146.4	221.0	9.99	9.96	0.80
9,550.0	73.92	175.86	9,324.8	-261.2	149.6	263.7	8.69	8.64	0.96
9,597.0	76.13	175.97	9,336.9	-306.5	152.8	309.1	4.71	4.70	0.23
9,644.0	78.37	174.96	9,347.3	-352.2	156.5	354.8	5.21	4.77	-2.15
9,682.0	83.01	174.49	9,353.4	-389.5	159.9	392.2	12.27	12.21	-1.24
9,776.0	87.84	173.80	9,360.9	-482.7	169.5	485.5	5.19	5.14	-0.73
9,870.0	89.50	174.64	9,363.1	-576.2	178.9	579.2	1.98	1.77	0.89
9,963.0	89.56	177.17	9,363.9	-668.9	185.6	672.0	2.72	0.06	2.72
10,057.0	88.97	176.51	9,365.1	-762.8	190.8	766.0	0.94	-0.63	-0.70
10,151.0	88.86	177.41	9,366.9	-856.6	195.7	859.9	0.96	-0.12	0.96
10,245.0	86.03	176.44	9,371.1	-950.4	200.8	953.7	3.18	-3.01	-1.03
10,339.0	88.42	176.54	9,375.6	-1,044.1	206.5	1,047.5	2.54	2.54	0.11
10,433.0	90.21	176.54	9,376.7	-1,137.9	212.2	1,141.4	1.90	1.90	0.00
10,527.0	93.14	176.92	9,374.0	-1,231.7	217.6	1,235.3	3.14	3.12	0.40
10,620.0	92.43	176.56	9,369.5	-1,324.4	222.8	1,328.1	0.86	-0.76	-0.39
10,714.0	89.91	176.13	9,367.5	-1,418.2	228.8	1,422.0	2.72	-2.68	-0.46
10,808.0	89.39	175.97	9,368.1	-1,512.0	235.3	1,515.9	0.58	-0.55	-0.17
10,902.0	92.11	180.32	9,366.9	-1,605.9	238.3	1,609.8	5.46	2.89	4.63
10,996.0	89.11	180.24	9,365.9	-1,699.9	237.9	1,703.8	3.19	-3.19	-0.09
11,090.0	92.32	181.46	9,364.7	-1,793.9	236.5	1,797.7	3.65	3.41	1.30
11,183.0	91.87	181.01	9,361.3	-1,886.8	234.5	1,890.6	0.68	-0.48	-0.48
11,277.0	89.64	180.60	9,360.1	-1,980.7	233.2	1,984.5	2.41	-2.37	-0.44
11,371.0	90.63	181.36	9,359.9	-2,074.7	231.6	2,078.4	1.33	1.05	0.81
11,465.0	88.76	181.02	9,360.4	-2,168.7	229.6	2,172.4	2.02	-1.99	-0.36
11,559.0	88.25	181.20	9,362.8	-2,262.7	227.8	2,266.3	0.58	-0.54	0.19
11,653.0	89.95	180.94	9,364.3	-2,356.6	226.0	2,360.2	1.83	1.81	-0.28
11,747.0	89.56	180.34	9,364.7	-2,450.6	225.0	2,454.2	0.76	-0.41	-0.64
11,840.0	92.03	180.90	9,363.4	-2,543.6	224.0	2,547.1	2.72	2.66	0.60
11,934.0	92.08	180.70	9,360.0	-2,637.5	222.7	2,641.0	0.22	0.05	-0.21
12,028.0	90.91	180.72	9,357.6	-2,731.5	221.5	2,734.9	1.24	-1.24	0.02
12,122.0	89.37	180.38	9,357.3	-2,825.5	220.6	2,828.9	1.68	-1.64	-0.36
12,216.0	87.25	179.46	9,360.1	-2,919.4	220.7	2,922.8	2.46	-2.26	-0.98
12,310.0	90.34	179.74	9,362.1	-3,013.4	221.4	3,016.8	3.30	3.29	0.30
12,404.0	92.53	180.25	9,359.7	-3,107.4	221.4	3,110.7	2.39	2.33	0.54
12,497.0	92.77	180.37	9,355.4	-3,200.3	220.9	3,203.6	0.29	0.26	0.13
12,591.0	92.17	180.33	9,351.4	-3,294.2	220.3	3,297.5	0.64	-0.64	-0.04
12,685.0	90.16	179.11	9,349.5	-3,388.1	220.8	3,391.5	2.50	-2.14	-1.30
12,779.0	89.59	179.08	9,349.7	-3,482.1	222.3	3,485.5	0.61	-0.61	-0.03

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:	AWP	Database:	EDM_Users

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)	
12,873.0	88.66	179.18	9,351.1	-3,576.1	223.7	3,579.5	1.00	-0.99	0.11	
12,967.0	89.10	179.45	9,353.0	-3,670.1	224.8	3,673.4	0.55	0.47	0.29	
13,061.0	89.13	179.59	9,354.4	-3,764.1	225.6	3,767.4	0.15	0.03	0.15	
13,155.0	89.53	179.48	9,355.5	-3,858.1	226.4	3,861.4	0.44	0.43	-0.12	
13,249.0	89.34	179.26	9,356.4	-3,952.0	227.4	3,955.4	0.31	-0.20	-0.23	
13,342.0	92.26	179.16	9,355.1	-4,045.0	228.7	4,048.4	3.14	3.14	-0.11	
13,436.0	91.95	178.65	9,351.7	-4,138.9	230.5	4,142.3	0.63	-0.33	-0.54	
13,530.0	93.03	178.55	9,347.6	-4,232.8	232.8	4,236.2	1.15	1.15	-0.11	
13,624.0	91.82	178.66	9,343.6	-4,326.7	235.1	4,330.1	1.29	-1.29	0.12	
13,718.0	88.86	176.49	9,343.1	-4,420.6	239.0	4,424.1	3.90	-3.15	-2.31	
13,812.0	89.04	178.47	9,344.8	-4,514.5	243.2	4,518.0	2.11	0.19	2.11	
13,906.0	89.71	178.89	9,345.8	-4,608.5	245.3	4,612.0	0.84	0.71	0.45	
14,000.0	92.50	180.88	9,344.0	-4,702.4	245.5	4,706.0	3.65	2.97	2.12	
14,094.0	90.73	180.78	9,341.4	-4,796.4	244.2	4,799.9	1.89	-1.88	-0.11	
14,188.0	87.94	179.25	9,342.4	-4,890.4	244.1	4,893.9	3.38	-2.97	-1.63	
14,282.0	90.77	181.36	9,343.5	-4,984.3	243.6	4,987.8	3.76	3.01	2.24	
14,375.0	90.91	181.57	9,342.1	-5,077.3	241.3	5,080.7	0.27	0.15	0.23	
14,469.0	90.61	181.24	9,340.9	-5,171.3	239.0	5,174.6	0.47	-0.32	-0.35	
14,563.0	89.79	179.98	9,340.6	-5,265.3	237.9	5,268.6	1.60	-0.87	-1.34	
14,657.0	88.95	179.37	9,341.6	-5,359.2	238.5	5,362.6	1.10	-0.89	-0.65	
14,751.0	89.86	180.33	9,342.6	-5,453.2	238.7	5,456.6	1.41	0.97	1.02	
14,845.0	93.33	180.88	9,340.0	-5,547.2	237.7	5,550.5	3.74	3.69	0.59	
14,938.0	93.24	180.68	9,334.6	-5,640.0	236.5	5,643.3	0.24	-0.10	-0.22	
15,032.0	90.90	180.36	9,331.2	-5,733.9	235.6	5,737.2	2.51	-2.49	-0.34	
15,126.0	89.54	179.31	9,330.9	-5,827.9	235.9	5,831.2	1.83	-1.45	-1.12	
15,220.0	90.07	179.28	9,331.2	-5,921.9	237.0	5,925.2	0.56	0.56	-0.03	
15,314.0	90.01	180.99	9,331.1	-6,015.9	236.8	6,019.1	1.82	-0.06	1.82	
15,408.0	89.06	181.20	9,331.9	-6,109.9	235.0	6,113.1	1.04	-1.01	0.22	
15,502.0	88.73	181.54	9,333.7	-6,203.9	232.8	6,207.0	0.50	-0.35	0.36	
15,596.0	89.12	181.05	9,335.5	-6,297.8	230.7	6,300.9	0.67	0.41	-0.52	
15,690.0	88.41	180.80	9,337.5	-6,391.8	229.1	6,394.8	0.80	-0.76	-0.27	
15,784.0	92.00	182.24	9,337.2	-6,485.7	226.6	6,488.7	4.11	3.82	1.53	
15,878.0	92.46	182.44	9,333.5	-6,579.6	222.8	6,582.5	0.53	0.49	0.21	
15,972.0	92.33	182.44	9,329.6	-6,673.4	218.8	6,676.2	0.14	-0.14	0.00	
16,065.0	91.30	181.76	9,326.6	-6,766.3	215.4	6,769.0	1.33	-1.11	-0.73	
16,160.0	90.95	180.95	9,324.8	-6,861.3	213.2	6,863.9	0.93	-0.37	-0.85	
16,253.0	90.54	180.31	9,323.5	-6,954.2	212.1	6,956.9	0.82	-0.44	-0.69	
16,347.0	90.61	179.91	9,322.6	-7,048.2	212.0	7,050.9	0.43	0.07	-0.43	
16,441.0	92.11	180.68	9,320.4	-7,142.2	211.5	7,144.8	1.79	1.60	0.82	
16,534.0	90.38	181.47	9,318.4	-7,235.2	209.7	7,237.7	2.04	-1.86	0.85	
16,628.0	89.46	180.68	9,318.5	-7,329.2	208.0	7,331.7	1.29	-0.98	-0.84	
16,722.0	89.03	180.27	9,319.7	-7,423.1	207.2	7,425.6	0.63	-0.46	-0.44	
16,816.0	89.56	180.17	9,320.9	-7,517.1	206.8	7,519.6	0.57	0.56	-0.11	

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:	AWP	Database:	EDM_Users

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)
16,910.0	89.09	180.11	9,322.0	-7,611.1	206.6	7,613.6	0.50	-0.50	-0.06
17,004.0	90.88	181.01	9,322.0	-7,705.1	205.7	7,707.5	2.13	1.90	0.96
17,098.0	90.75	181.02	9,320.7	-7,799.1	204.0	7,801.5	0.14	-0.14	0.01
17,192.0	90.32	180.85	9,319.8	-7,893.1	202.5	7,895.4	0.49	-0.46	-0.18
17,286.0	92.59	181.94	9,317.4	-7,987.0	200.2	7,989.3	2.68	2.41	1.16
17,379.0	89.38	179.20	9,315.8	-8,080.0	199.3	8,082.2	4.54	-3.45	-2.95
17,473.0	87.55	178.69	9,318.3	-8,173.9	201.0	8,176.2	2.02	-1.95	-0.54
17,567.0	87.81	178.52	9,322.1	-8,267.8	203.3	8,270.1	0.33	0.28	-0.18
17,661.0	89.61	179.91	9,324.3	-8,361.8	204.6	8,364.1	2.42	1.91	1.48
17,755.0	86.87	179.07	9,327.1	-8,455.7	205.4	8,458.0	3.05	-2.91	-0.89
17,849.0	88.84	179.56	9,330.7	-8,549.6	206.5	8,551.9	2.16	2.10	0.52
17,942.0	90.68	180.35	9,331.0	-8,642.6	206.6	8,644.9	2.15	1.98	0.85
18,036.0	89.86	180.16	9,330.6	-8,736.6	206.2	8,738.9	0.90	-0.87	-0.20
18,130.0	88.16	180.95	9,332.2	-8,830.6	205.3	8,832.8	1.99	-1.81	0.84
18,224.0	89.82	181.42	9,333.9	-8,924.6	203.3	8,926.8	1.84	1.77	0.50
18,318.0	91.19	180.05	9,333.1	-9,018.6	202.1	9,020.7	2.06	1.46	-1.46
18,412.0	92.51	180.65	9,330.0	-9,112.5	201.6	9,114.6	1.54	1.40	0.64
18,506.0	90.46	180.78	9,327.6	-9,206.5	200.4	9,208.5	2.19	-2.18	0.14
18,600.0	87.89	179.30	9,328.9	-9,300.4	200.3	9,302.5	3.15	-2.73	-1.57
18,694.0	89.21	180.50	9,331.3	-9,394.4	200.5	9,396.5	1.90	1.40	1.28
18,787.0	92.33	181.37	9,330.1	-9,487.4	199.0	9,489.4	3.48	3.35	0.94
18,881.0	91.38	181.58	9,327.0	-9,581.3	196.5	9,583.3	1.04	-1.01	0.22
18,975.0	90.29	181.31	9,325.7	-9,675.2	194.2	9,677.2	1.19	-1.16	-0.29
19,069.0	88.54	180.66	9,326.6	-9,769.2	192.6	9,771.1	1.99	-1.86	-0.69
19,163.0	90.64	179.51	9,327.3	-9,863.2	192.4	9,865.1	2.55	2.23	-1.22
19,257.0	92.56	179.71	9,324.7	-9,957.2	193.1	9,959.0	2.05	2.04	0.21
19,351.0	94.32	179.61	9,319.0	-10,051.0	193.6	10,052.8	1.88	1.87	-0.11
19,444.0	91.89	180.06	9,314.0	-10,143.8	193.9	10,145.7	2.66	-2.61	0.48
19,538.0	88.98	180.13	9,313.3	-10,237.8	193.7	10,239.7	3.10	-3.10	0.07
19,632.0	88.96	179.58	9,315.0	-10,331.8	194.0	10,333.6	0.59	-0.02	-0.59
19,726.0	91.54	180.30	9,314.6	-10,425.8	194.1	10,427.6	2.85	2.74	0.77
19,820.0	91.63	179.17	9,312.0	-10,519.8	194.5	10,521.6	1.21	0.10	-1.20
19,914.0	89.99	177.60	9,310.6	-10,613.7	197.1	10,615.5	2.42	-1.74	-1.67
20,008.0	92.08	178.31	9,308.9	-10,707.6	200.5	10,709.5	2.35	2.22	0.76
20,102.0	92.09	178.11	9,305.5	-10,801.5	203.4	10,803.4	0.21	0.01	-0.21
20,196.0	89.94	178.35	9,303.8	-10,895.5	206.3	10,897.4	2.30	-2.29	0.26
20,291.0	91.30	178.61	9,302.8	-10,990.4	208.9	10,992.4	1.46	1.43	0.27
20,385.0	90.24	178.39	9,301.5	-11,084.4	211.3	11,086.4	1.15	-1.13	-0.23
20,479.0	88.80	178.89	9,302.3	-11,178.3	213.5	11,180.4	1.62	-1.53	0.53
20,573.0	90.57	180.17	9,302.9	-11,272.3	214.3	11,274.4	2.32	1.88	1.36
20,667.0	87.46	181.66	9,304.5	-11,366.3	212.8	11,368.3	3.67	-3.31	1.59
20,760.0	87.34	182.33	9,308.7	-11,459.1	209.6	11,461.1	0.73	-0.13	0.72
20,855.0	86.91	182.82	9,313.5	-11,553.9	205.3	11,555.8	0.69	-0.45	0.52

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:	AWP	Database:	EDM_Users

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)
20,949.0	87.96	183.36	9,317.7	-11,647.7	200.3	11,649.4	1.26	1.12	0.57
21,043.0	91.17	183.39	9,318.4	-11,741.5	194.7	11,743.1	3.42	3.41	0.03
21,137.0	92.79	184.72	9,315.1	-11,835.2	188.1	11,836.7	2.23	1.72	1.41
21,232.0	91.06	184.55	9,311.9	-11,929.9	180.4	11,931.2	1.83	-1.82	-0.18
21,326.0	90.83	183.27	9,310.4	-12,023.6	174.0	12,024.8	1.38	-0.24	-1.36
21,420.0	90.16	181.31	9,309.6	-12,117.5	170.2	12,118.7	2.20	-0.71	-2.09
21,499.1	85.84	179.56	9,312.3	-12,196.6	169.6	12,197.7	5.89	-5.46	-2.21
LTP @ 21499.1'MD / 9312.3'TVD									
21,515.0	84.97	179.21	9,313.6	-12,212.4	169.8	12,213.5	5.89	-5.46	-2.22
21,561.0	83.50	178.71	9,318.2	-12,258.2	170.6	12,259.3	3.37	-3.20	-1.09
LAST MWD SVY @ 21561'MD									
21,629.0	83.50	178.71	9,325.9	-12,325.7	172.2	12,326.8	0.00	0.00	0.00
PTD @ 21629'MD									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
LTP (HONEY GRAHA	0.00	0.00	9,292.6	-12,196.6	214.4	364,072.40	571,612.90	32° 0' 2.657 N	104° 6' 8.346 W
- actual wellpath misses target center by 48.9usft at 21498.1usft MD (9312.3 TVD, -12195.6 N, 169.6 E)									
- Point									
PBHL (HONEY GRAH	0.27	359.91	9,307.0	-12,326.5	214.6	363,942.50	571,613.10	32° 0' 1.372 N	104° 6' 8.347 W
- actual wellpath misses target center by 46.5usft at 21628.6usft MD (9325.9 TVD, -12325.3 N, 172.2 E)									
- Rectangle (sides W100.0 H12,550.0 D20.0)									
FTP (HONEY GRAHA	0.00	0.00	9,365.0	-11.3	195.0	376,257.70	571,593.50	32° 2' 3.251 N	104° 6' 8.269 W
- actual wellpath misses target center by 153.5usft at 9362.0usft MD (9248.0 TVD, -90.8 N, 135.4 E)									
- Circle (radius 50.0)									

Design Annotations

	Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
			+N/-S (usft)	+E/-W (usft)	
	9,262.5	9,188.9	-11.0	132.3	FTP @ 9262.5'MD / 91.88.9'TVD
	21,499.1	9,312.3	-12,196.6	169.6	LTP @ 21499.1'MD / 9312.3'TVD
	21,561.0	9,318.2	-12,258.2	170.6	LAST MWD SVY @ 21561'MD
	21,629.0	9,325.9	-12,325.7	172.2	PTD @ 21629'MD

Checked By: _____ Approved By: _____ Date: _____

Submit 1 Copy To Appropriate District Office

District I – (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II – (575) 748-1283
811 S. First St., Artesia, NM 88210
District III – (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well ☐ Gas Well ☒ Other		WELL API NO. 30-015-46381 5. Indicate Type of Lease STATE ☒ FEE ☐ 6. State Oil & Gas Lease No.
2. Name of Operator COG Operating LLC		7. Lease Name or Unit Agreement Name Honey Graham State Com
3. Address of Operator 2208 W. Main Street, Artesia, NM 88210		8. Well Number 701H
4. Well Location Unit Letter <u>A</u> : <u>320</u> feet from the <u>North</u> line and <u>745</u> feet from the <u>East</u> line Section <u>20</u> Township <u>26S</u> Range <u>28E</u> NMPM Eddy County		9. OGRID Number 229137
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3064' GR		10. Pool name or Wildcat Purple Sage; Wolfcamp

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK ☐	REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐	ALTERING CASING ☐
PULL OR ALTER CASING ☐	COMMENCE DRILLING OPNS. ☐
DOWNHOLE COMMINGLE ☐	P AND A ☐
CLOSED-LOOP SYSTEM ☐	CASING/CEMENT JOB ☐
OTHER: ☐	OTHER: Completion Operations ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

4/15/20 Test 9 5/8" x 5 1/2" annulus to 1500# for 30 mins. Good test. Set Composite Bridge Plug @ 21,474'. Test to 11,601#.

6/6/20 to 6/14/20 Perf 9,550 – 21,364' (1450). Acdz w/ 5,292 gal 7-1/2%; frac w/ 24,660,445# sand & 23,356,284 gal fluid.

7/2/20 to 7/3/20 Drill out CFP's. Clean down to PBTD @ 21371'.

7/4/20 to 7/6/20 Set 2 7/8" 6.5# L-80 tbg @ 8,824' & pkr @ 8,814'. Installed gas lift system.

7/9/20 – Ready date.

8/3/20 Began flowback and testing.

8/4/20 Date of first production.

Spud Date:

10/27/19

Rig Release Date:

12/6/20

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Amanda Avery TITLE: Regulatory Analyst DATE: 7/28/2020

Type or print name: Amanda Avery E-mail address: aavery@concho.com PHONE: (575) 748-6962

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

Submit To Appropriate District Office Two Copies <u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> 1220 S. St. Francis Dr., Santa Fe, NM 87505		State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505				Form C-105 Revised April 3, 2017										
		1. WELL API NO.		30-015-46381												
		2. Type of Lease ☒ STATE ☐ FEE ☐ FED/INDIAN														
		3. State Oil & Gas Lease No.														
WELL COMPLETION OR RECOMPLETION REPORT AND LOG																
4. Reason for filing: ☒ COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) ☐ C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)				5. Lease Name or Unit Agreement Name Honey Graham State Com 6. Well Number: 701H												
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER _____																
8. Name of Operator COG Operating LLC				9. OGRID 229137												
10. Address of Operator 2208 W. Main Street Artesia, NM 88210				11. Pool name or Wildcat Purple Sage; Wolfcamp (Gas)												
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County						
Surface:	A	20	26S	28E		320'	North	745'	East	Eddy						
BH:	4	32	26S	28E		201'	South	592'	East	Eddy						
13. Date Spudded 10/27/19	14. Date T.D. Reached 12/2/19	15. Date Rig Released 12/6/19		16. Date Completed (Ready to Produce) 7/7/20		17. Elevations (DF and RKB, RT, GR, etc.) 3064' GR										
18. Total Measured Depth of Well 21,629'		19. Plug Back Measured Depth 21,371'		20. Was Directional Survey Made? Yes		21. Type Electric and Other Logs Run										
22. Producing Interval(s), of this completion - Top, Bottom, Name 9,550-21,364' Wolfcamp																
23. CASING RECORD (Report all strings set in well)																
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED						
13 3/8"		54.5#		534'		17 1/2"		640 sx								
9 7/8		40#		8644'		12 1/4"		1555 sx								
5 1/2"		23#		21614'		8 3/4"		4700 sx								
24. LINER RECORD						25. TUBING RECORD										
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET									
					2 7/8"	8824'	8814'									
26. Perforation record (interval, size, and number) 9550-21364' (1440)						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC. <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>DEPTH INTERVAL</th> <th>AMOUNT AND KIND MATERIAL USED</th> </tr> <tr> <td>9550-21364'</td> <td>Acid w/5,292 gal 7 1/2%; Frac w/24,060,445# sand & 23,356,284 gal fluid</td> </tr> <tr> <td> </td> <td> </td> </tr> </table>					DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED	9550-21364'	Acid w/5,292 gal 7 1/2%; Frac w/24,060,445# sand & 23,356,284 gal fluid		
DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED															
9550-21364'	Acid w/5,292 gal 7 1/2%; Frac w/24,060,445# sand & 23,356,284 gal fluid															
28. PRODUCTION																
Date First Production 8/4/20		Production Method (<i>Flowing, gas lift, pumping - Size and type pump</i>) Flowing				Well Status (<i>Prod. or Shut-in</i>) Producing										
Date of Test 8/4/20	Hours Tested 24	Choke Size 28/128"	Prod'n For Test Period	Oil - Bbl 510	Gas - MCF 1137	Water - Bbl. 1212	Gas - Oil Ratio									
Flow Tubing Press. 1600#	Casing Pressure 1500#	Calculated 24-Hour Rate	Oil - Bbl. 510	Gas - MCF 1137	Water - Bbl. 1212	Oil Gravity - API - (<i>Corr.</i>)										
29. Disposition of Gas (<i>Sold, used for fuel, vented, etc.</i>) Sold						30. Test Witnessed By Nicholas Jancha										
31. List Attachments Surveys																
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.						33. Rig Release Date: 12/6/19										
34. If an on-site burial was used at the well, report the exact location of the on-site burial:																
Latitude			Longitude			NAD83										
I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief Printed Signature Amanda Avery Name: Amanda Avery Title Regulatory Analyst Date: 8/13/20 E-mail Address: aavery@concho.com																



CURRENT WELL SKETCH

API: 30-015-46381
 SPUD: 10/27/2019
 FRR: 12/6/2019
 RIG: Scandriill Freedom

Honey Graham State Com 701H
 Purple Sage; Wolfcamp
 Eddy County

Sec 20 T/B 26S R/Svy 28E
 SHL: 320' FNL & 745' FEL
 BHL: 201' FSL & 592' FEL (est.)
 Sec 32 T/B 26S R/Svy 28E
 GL: 3,064'
 KB: 3,091'
 ZERO: 27'

HOLE SIZE	MW	BHST	Evaluation
17.5"	8.8 (ppg)		No Logs
12.25"	9.2 (ppg)		No Logs
8.75"	11.1 (ppg)	155°F (est.)	Mud and Cased-Hole logs

Surface Casing @ 534'
 13.375" 54.5 ppf J55 BTC
 Circulated 209 sx cement

Intermediate Casing @ 8,644'
 9.625" 40 ppf L80 HC BTC
 Circulated: 164 sx cement

KOP @ 8,799'
 EOC @ 9,870'
 EOL @ 21,614'
 TD @ 21,629'

Average TVD in Lateral 9,336'

Notes: Wet Shoe

Production Casing @ 21,614'
 5.5" 23 ppf P110 RY CDCHTQ
 PBTD (LC) 21,566'
 MJ: 8,702'
 Floation Collar: 8,805'
 Circulated: 184 sx cement

Updated by J. Trela
 Date: 2/9/2023

District I
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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

ACKNOWLEDGMENTS

Action 184460

ACKNOWLEDGMENTS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 184460
	Action Type: [C-104] Completion Packet (C-104C)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

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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

CONDITIONS

Action 184460

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 184460
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
plmartinez	File 3160-4 Completion Report within 10 days of BLM approval.	8/23/2024