

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NMOCD

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other			5. Lease Serial No. NMNM14164		
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other			6. If Indian, Allottee or Tribe Name		
2. Name of Operator COG OPERATING LLC			8. Lease Name and Well No. FASCINATOR FEDERAL COM 703H		
3. Address 2208 W MAIN STREET ARTESIA, NM 88210			9. API Well No. 30-025-45113		
4. Location of Well (Report location clearly and in accordance with Federal requirements)* At surface Sec 30 T24S R35E Mer NMP NENW Lot C 209FNL 1508FWL 32.195147 N Lat, 103.410280 W Lon At top prod interval reported below Sec 30 T24S R35E Mer NMP NENW Lot C 209FNL 1508FWL 32.195147 N Lat, 103.410280 W Lon At total depth Sec 31 T24S R35E Mer NMP SESW Lot N 204FSL 1509FWL 32.167283 N Lat, 103.410216 W Lon			10. Field and Pool, or Exploratory WC-025 G-09 S243532M; WB		
14. Date Spudded 01/10/2019			15. Date T.D. Reached 02/21/2019		
16. Date Completed ☐ D & A ☒ Ready to Prod. 09/05/2019			17. Elevations (DF, KB, RT, GL)* 3358 GL		
18. Total Depth: MD 22436 TVD 12770		19. Plug Back T.D.: MD 22183 TVD 12770		20. Depth Bridge Plug Set: MD 22332 TVD 12770	
21. Type Electric & Other Mechanical Logs Run (Submit copy of each)			22. Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit analysis) Directional Survey? ☐ No ☒ Yes (Submit analysis)		

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
14.750	10.750 L80	45.5	0	1229		650		0	
9.875	7.625 L80	29.7	0	11934	5423	2050		0	
6.750	5.500 P110	23.0	0	22426		1575		0	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	11891	11881						

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WOLFBONE	12857	22307	12857 TO 22307		1064	OPEN
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
12857 TO 22307	SEE ATTACHED INFORMATION

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
09/05/2019	09/05/2019	24	→	272.0	243.0	1760.0			GAS LIFT
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
19/64	SI	2300.0	→	272	243	1760		POW	

28a. Production - Interval B

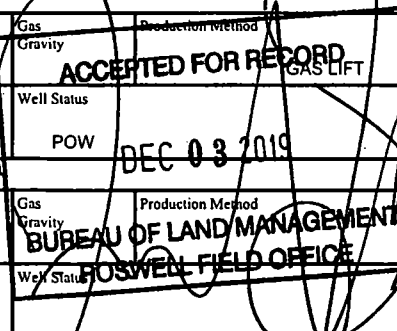
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
	SI		→						

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #483798 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

Reclamation due: 03/05/2028



28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

29. Disposition of Gas(Sold, used for fuel, vented, etc.)

SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
RUSTLER	848			RUSTLER	848
TOP OF SALT	1260			TOP OF SALT	1260
BOTTOM OF SALT	5116			BOTTOM OF SALT	5116
LAMAR	5433			LAMAR	5433
BELL CANYON	5477			BELL CANYON	5477
CHERRY CANYON	6485			CHERRY CANYON	6485
BRUSHY CANYON	8019			BRUSHY CANYON	8019
BONE SPRING LIMESTONE	9321			BONE SPRING LIMESTONE	9321

32. Additional remarks (include plugging procedure):

1ST BONE SPRING 10473
2ND BONE SPRING 11072
3RD BONE SPRING 12061
WOLFCAMP 12750

33. Circle enclosed attachments:

1. Electrical/Mechanical Logs (1 full set req'd.) 2. Geologic Report 3. DST Report 4. Directional Survey
5. Sundry Notice for plugging and cement verification 6. Core Analysis 7. Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #483798 Verified by the BLM Well Information System.
For COG OPERATING LLC, sent to the Hobbs
Committed to AFMSS for processing by JENNIFER SANCHEZ on 11/18/2019 ()

Name (please print) AMANDA AVERYTitle AUTHORIZED REPRESENTATIVESignature (Electronic Submission)Date 09/18/2019

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

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

DISTRICT I
1825 N. FRENCH DR., HOBBS, NM 88240
Phone: (575) 393-8181 Fax: (575) 393-0720

DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-8178 Fax: (505) 334-8170

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-45113	Pool Code 98098	Pool Name WC-025 G-09 S243532M; WOLFBONE
Property Code 322259	Property Name FASCINATOR FEDERAL COM	Well Number 703H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3358'

Surface Location

UL or lot No. C	Section 30	Township 24-S	Range 35-E	Lot Idn	Feet from the 209	North/South line NORTH	Feet from the 1508	East/West line WEST	County LEA
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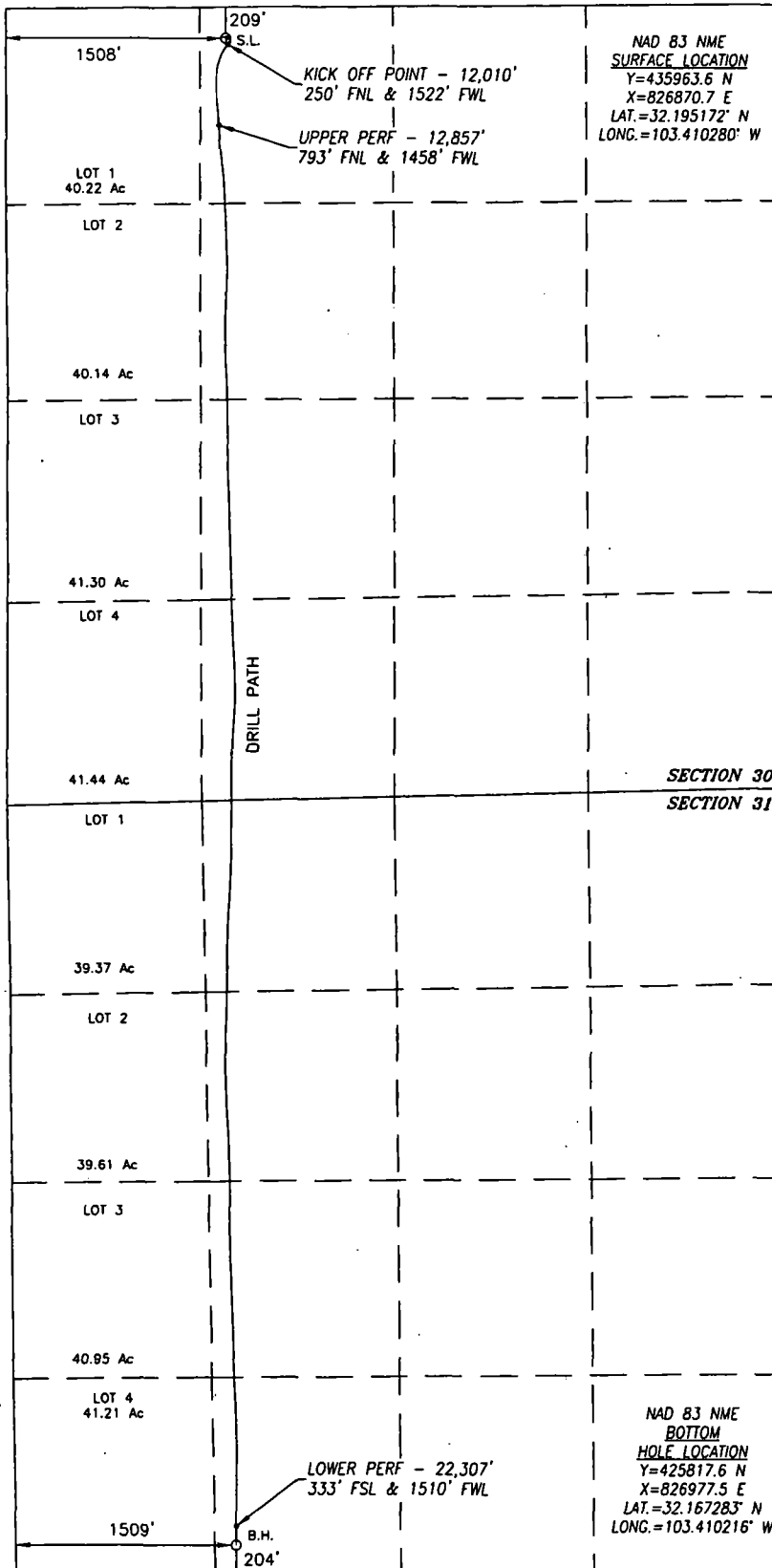
Bottom Hole Location If Different From Surface

UL or lot No. N	Section 31	Township 24-S	Range 35-E	Lot Idn	Feet from the 204	North/South line SOUTH	Feet from the 1509	East/West line WEST	County LEA
Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.						

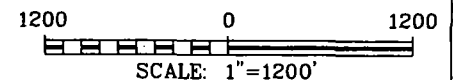
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SEE PAGE 2

Property Code 322259	Property Name FASCINATOR FEDERAL COM	Well Number 703H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3358'



BOREPATH SHOWN HEREON IS BASED ON
DIRECTIONAL SURVEY REPORT PROVIDED BY
COG OPERATING, LLC FOR THE FASCINATOR
FEDERAL COM #703H SUPPLIED TO HARCROW
SURVEYING, LLC ON AUGUST 14, 2019



OPERATOR CERTIFICATION

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

9/17/19

Signature

Date

Amanda Avery

Printed Name

aavery@concho.com

E-mail Address

SURVEYOR CERTIFICATION

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

OCT. 10, 2017/FEB. 28, 2019

Date of Survey/Date of Geographic Survey

Signature & Seal of Professional Surveyor



Chad Harcrow 9/9/19

Certificate No. CHAD HARCROW 17777

Intent ☐ As Drilled ☒

API #
30-025-45113

Operator Name: COG OPERATING, LLC	Property Name: FASCINATOR FEDERAL COM	Well Number 703H
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Kick Off Point (KOP)

UL C	Section 30	Township 24S	Range 35E	Lot	Feet 250	From N/S NORTH	Feet 1522	From E/W WEST	County LEA
Latitude 32.195060					Longitude -103.410237			NAD 83	

First Take Point (FTP)

UL C	Section 30	Township 24S	Range 35E	Lot	Feet 793	From N/S NORTH	Feet 1458	From E/W WEST	County LEA
Latitude 32.193569					Longitude -103.410442			NAD 83	

Last Take Point (LTP)

UL N	Section 31	Township 24S	Range 35E	Lot	Feet 333	From N/S SOUTH	Feet 1510	From E/W WEST	County LEA
Latitude 32.167637					Longitude -103.410214			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit? ☐ No

Is this well an infill well? ☐ Yes

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

API #
30-025-45113

Operator Name: COG Operating LLC	Property Name: Fascinator Federal Com	Well Number 706H
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- KZ 06/29/2018



CONCHO

NORTHERN DELAWARE BASIN

LEA COUNTY, NM

BULLDOG

FASCINATOR FED COM #703H

OWB

Design: ACTUAL WELLPLAN

Standard Survey Report

12 March, 2019



Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: FASCINATOR FED COM #703H
Wellbore: OWB
Design: ACTUAL WELLPLAN

Local Co-ordinate Reference: Well FASCINATOR FED COM #703H
TVD Reference: RKB=3358+27 @ 3385.0usft (SCANDRILL FREEDOM)
MD Reference: RKB=3358+27 @ 3385.0usft (SCANDRILL FREEDOM)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM_Users

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

Site	BULLDOG				
Site Position:		Northing:	398,637.10 usft	Latitude:	32° 5' 36.820 N
From:	Map	Easting:	741,887.40 usft	Longitude:	103° 33' 8.116 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.42 °

Well	FASCINATOR FED COM #703H				
Well Position	+N/-S	0.0 usft	Northing:	435,904.80 usft	Latitude: 32° 11' 42.169 N
	+E/-W	0.0 usft	Easting:	785,685.20 usft	Longitude: 103° 24' 35.314 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level: 3,358.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM2015	7/11/2018	6.79	60.03	47,814.29364959

Design	ACTUAL WELLPLAN			
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	179.40

Survey Program		Date	2/28/2019	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
172.0	11,735.0	MWD-SURFACE (OWB)	MWD	OWSG MWD - Standard
11,924.0	22,436.0	MWD-CURVE/LATERAL (OWB)	MWD+IFR1+MS	OWSG MWD + IFR1 + Multi-Station Correction

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
172.0	1.14	77.93	172.0	0.4	1.7	-0.3	-0.66	0.66	0.00
291.0	1.14	73.53	291.0	0.9	4.0	-0.9	0.07	0.00	-3.70
351.0	1.06	63.34	351.0	1.4	5.0	-1.3	0.35	-0.13	-16.98
411.0	0.97	65.62	410.9	1.8	6.0	-1.8	0.16	-0.15	3.80
558.0	0.70	92.87	557.9	2.3	8.0	-2.2	0.32	-0.18	18.54
678.0	0.88	86.72	677.9	2.3	9.7	-2.2	0.17	0.15	-5.13
770.0	1.23	79.86	769.9	2.5	11.4	-2.4	0.40	0.38	-7.46



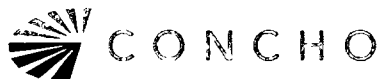
Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: FASCINATOR FED COM #703H
Wellbore: OWB
Design: ACTUAL WELLPLAN

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MD Reference: RKB=3358+27 @ 3385.0usft (SCANDRILL FREEDOM)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
861.0	1.14	75.29	860.9	2.9	13.2	-2.8	0.14	-0.10	-5.02
952.0	0.88	72.13	951.9	3.4	14.7	-3.2	0.29	-0.29	-3.47
1,043.0	0.70	80.92	1,042.9	3.7	15.9	-3.5	0.24	-0.20	9.66
1,134.0	0.70	79.33	1,133.9	3.9	17.0	-3.7	0.02	0.00	-1.75
1,147.0	0.79	67.73	1,146.9	3.9	17.2	-3.7	1.35	0.69	-89.23
1,316.0	1.01	39.70	1,315.8	5.5	19.2	-5.3	0.29	0.13	-16.59
1,416.0	0.92	24.14	1,415.8	6.9	20.1	-6.7	0.28	-0.09	-15.56
1,511.0	0.97	28.97	1,510.8	8.3	20.8	-8.1	0.10	0.05	5.08
1,606.0	0.88	32.05	1,605.8	9.6	21.6	-9.4	0.11	-0.09	3.24
1,701.0	0.70	16.93	1,700.8	10.8	22.2	-10.6	0.29	-0.19	-15.92
1,796.0	0.70	10.78	1,795.8	11.9	22.4	-11.7	0.08	0.00	-6.47
1,891.0	0.75	20.36	1,890.8	13.1	22.8	-12.8	0.14	0.05	10.08
1,985.0	0.84	23.26	1,984.8	14.3	23.2	-14.0	0.10	0.10	3.09
2,080.0	0.75	32.23	2,079.8	15.5	23.9	-15.2	0.16	-0.09	9.44
2,175.0	0.84	41.28	2,174.7	16.5	24.6	-16.2	0.16	0.09	9.53
2,270.0	0.88	52.40	2,269.7	17.5	25.7	-17.2	0.18	0.04	11.71
2,364.0	0.92	54.64	2,363.7	18.3	26.9	-18.1	0.06	0.04	2.38
2,459.0	0.88	52.35	2,458.7	19.2	28.1	-18.9	0.06	-0.04	-2.41
2,554.0	1.54	261.27	2,553.7	19.5	27.4	-19.2	2.47	0.69	-159.03
2,649.0	3.12	242.90	2,648.6	18.1	23.8	-17.9	1.82	1.66	-19.34
2,744.0	2.90	239.38	2,743.5	15.7	19.4	-15.5	0.30	-0.23	-3.71
2,839.0	2.81	232.53	2,838.4	13.1	15.5	-12.9	0.37	-0.09	-7.21
2,933.0	2.81	224.27	2,932.3	10.0	12.1	-9.9	0.43	0.00	-8.79
3,028.0	2.77	210.38	3,027.1	6.4	9.3	-6.3	0.71	-0.04	-14.62
3,123.0	2.77	207.74	3,122.0	2.4	7.1	-2.3	0.13	0.00	-2.78
3,217.0	2.95	198.51	3,215.9	-1.9	5.3	2.0	0.53	0.19	-9.82
3,312.0	3.03	191.04	3,310.8	-6.7	4.0	6.8	0.42	0.08	-7.86
3,407.0	3.25	184.89	3,405.6	-11.9	3.3	11.9	0.42	0.23	-6.47
3,501.0	2.15	181.02	3,499.5	-16.3	3.0	16.3	1.19	-1.17	-4.12
3,596.0	1.05	199.31	3,594.5	-18.9	2.7	18.9	1.26	-1.16	19.25
3,691.0	0.04	39.34	3,689.5	-19.7	2.4	19.7	1.14	-1.06	-168.39
3,786.0	0.75	90.85	3,784.5	-19.7	3.1	19.7	0.76	0.75	54.22
3,881.0	0.88	95.24	3,879.5	-19.8	4.4	19.8	0.15	0.14	4.62
3,976.0	1.05	103.33	3,974.5	-20.0	6.0	20.1	0.23	0.18	8.52
4,071.0	1.41	353.29	4,069.5	-19.1	6.7	19.1	2.13	0.38	-115.83
4,165.0	2.42	350.74	4,163.4	-16.0	6.3	16.0	1.08	1.07	-2.71
4,260.0	2.07	356.72	4,258.3	-12.3	5.8	12.3	0.44	-0.37	6.29
4,355.0	1.98	24.40	4,353.3	-9.1	6.4	9.1	1.02	-0.09	29.14
4,450.0	2.81	68.79	4,448.2	-6.7	9.3	6.8	2.07	0.87	46.73
4,545.0	4.18	83.64	4,543.0	-5.5	14.9	5.6	1.72	1.44	15.63
4,641.0	2.86	116.78	4,638.8	-6.2	20.5	6.4	2.47	-1.38	34.52
4,735.0	2.73	118.53	4,732.7	-8.3	24.6	8.6	0.17	-0.14	1.86



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #703H
 Wellbore: OWB
 Design: ACTUAL WELLPLAN

Local Co-ordinate Reference: Well FASCINATOR FED COM #703H
 TVD Reference: RKB=3358+27 @ 3385.0usft (SCANDRILL FREEDOM)
 MD Reference: RKB=3358+27 @ 3385.0usft (SCANDRILL FREEDOM)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 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)
4,830.0	2.59	91.82	4,827.6	-9.5	28.7	9.8	1.30	-0.15	-28.12
4,925.0	2.46	65.54	4,922.5	-8.7	32.7	9.0	1.22	-0.14	-27.66
5,020.0	1.89	46.55	5,017.5	-6.8	35.7	7.1	0.96	-0.60	-19.99
5,116.0	2.59	327.98	5,113.4	-3.8	35.7	4.2	3.01	0.73	-81.84
5,210.0	2.59	331.41	5,207.3	-0.2	33.5	0.5	0.16	0.00	3.65
5,305.0	2.51	331.58	5,302.2	3.6	31.5	-3.2	0.08	-0.08	0.18
5,400.0	3.16	298.80	5,397.1	6.6	28.2	-6.3	1.81	0.68	-34.51
5,495.0	3.78	285.35	5,492.0	8.7	22.9	-8.5	1.07	0.65	-14.16
5,590.0	3.78	283.07	5,586.7	10.3	16.9	-10.1	0.16	0.00	-2.40
5,684.0	3.91	281.66	5,680.5	11.6	10.7	-11.5	0.17	0.14	-1.50
5,779.0	3.47	273.84	5,775.3	12.5	4.7	-12.4	0.70	-0.46	-8.23
5,874.0	2.68	269.00	5,870.2	12.6	-0.4	-12.6	0.87	-0.83	-5.09
5,969.0	1.63	260.74	5,965.1	12.4	-4.0	-12.4	1.15	-1.11	-8.69
6,063.0	1.36	252.13	6,059.1	11.8	-6.4	-11.9	0.37	-0.29	-9.16
6,158.0	1.32	249.49	6,154.1	11.1	-8.5	-11.2	0.08	-0.04	-2.78
6,253.0	0.79	239.21	6,249.1	10.4	-10.1	-10.5	0.59	-0.56	-10.82
6,348.0	0.53	222.51	6,344.1	9.7	-10.9	-9.8	0.34	-0.27	-17.58
6,443.0	0.48	241.93	6,439.0	9.2	-11.6	-9.3	0.19	-0.05	20.44
6,538.0	0.44	235.43	6,534.0	8.8	-12.2	-8.9	0.07	-0.04	-6.84
6,633.0	0.48	235.52	6,629.0	8.4	-12.8	-8.5	0.04	0.04	0.09
6,728.0	0.40	233.67	6,724.0	7.9	-13.4	-8.1	0.09	-0.08	-1.95
6,823.0	0.35	237.01	6,819.0	7.6	-13.9	-7.7	0.06	-0.05	3.52
6,918.0	0.35	214.25	6,914.0	7.2	-14.4	-7.3	0.15	0.00	-23.96
7,012.0	0.31	217.76	7,008.0	6.7	-14.7	-6.9	0.05	-0.04	3.73
7,107.0	0.26	194.82	7,103.0	6.3	-14.9	-6.5	0.13	-0.05	-24.15
7,202.0	0.18	193.42	7,198.0	6.0	-15.0	-6.1	0.08	-0.08	-1.47
7,297.0	0.04	203.44	7,293.0	5.8	-15.0	-6.0	0.15	-0.15	10.55
7,392.0	0.04	124.16	7,388.0	5.8	-15.0	-5.9	0.05	0.00	-83.45
7,487.0	0.18	133.92	7,483.0	5.6	-14.9	-5.8	0.15	0.15	10.27
7,582.0	0.18	94.72	7,578.0	5.5	-14.6	-5.7	0.13	0.00	-41.26
7,677.0	0.13	80.57	7,673.0	5.5	-14.4	-5.7	0.07	-0.05	-14.89
7,772.0	0.18	93.05	7,768.0	5.5	-14.1	-5.7	0.06	0.05	13.14
7,866.0	0.22	70.81	7,862.0	5.6	-13.8	-5.7	0.09	0.04	-23.66
7,961.0	0.35	68.52	7,957.0	5.8	-13.3	-5.9	0.14	0.14	-2.41
8,056.0	0.44	80.30	8,052.0	5.9	-12.7	-6.1	0.13	0.09	12.40
8,151.0	0.66	64.22	8,147.0	6.2	-11.9	-6.3	0.28	0.23	-16.93
8,246.0	0.66	67.12	8,242.0	6.7	-10.9	-6.8	0.04	0.00	3.05
8,340.0	0.88	71.86	8,336.0	7.1	-9.7	-7.2	0.24	0.23	5.04
8,435.0	0.92	69.40	8,431.0	7.6	-8.3	-7.7	0.06	0.04	-2.59
8,530.0	0.92	72.22	8,526.0	8.1	-6.8	-8.2	0.05	0.00	2.97
8,624.0	0.97	78.19	8,620.0	8.5	-5.3	-8.6	0.12	0.05	6.35
8,719.0	1.05	75.38	8,715.0	8.9	-3.7	-8.9	0.10	0.08	-2.96



Survey Report

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Project: LEA COUNTY, NM
Site: BULLDOG
Well: FASCINATOR FED COM #703H
Wellbore: OWB
Design: ACTUAL WELLPLAN

Local Co-ordinate Reference: Well FASCINATOR FED COM #703H
TVD Reference: RKB=3358+27 @ 3385.0usft (SCANDRILL FREEDOM)
MD Reference: RKB=3358+27 @ 3385.0usft (SCANDRILL FREEDOM)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
8,814.0	1.19	72.66	8,809.9	9.4	-1.9	-9.4	0.16	0.15	-2.86
8,909.0	1.32	71.95	8,904.9	10.0	0.1	-10.0	0.14	0.14	-0.75
9,003.0	1.49	68.26	8,998.9	10.8	2.2	-10.8	0.20	0.18	-3.93
9,098.0	1.14	91.64	9,093.9	11.2	4.3	-11.2	0.67	-0.37	24.61
9,193.0	1.10	98.32	9,188.8	11.1	6.2	-11.0	0.14	-0.04	7.03
9,288.0	1.36	95.51	9,283.8	10.8	8.2	-10.8	0.28	0.27	-2.96
9,382.0	1.41	100.96	9,377.8	10.5	10.4	-10.4	0.15	0.05	5.80
9,477.0	1.63	109.57	9,472.8	9.8	12.9	-9.7	0.33	0.23	9.06
9,572.0	1.76	111.15	9,567.7	8.9	15.5	-8.7	0.15	0.14	1.66
9,666.0	1.85	111.85	9,661.7	7.8	18.2	-7.6	0.10	0.10	0.74
9,760.0	1.54	129.34	9,755.6	6.4	20.6	-6.2	0.64	-0.33	18.61
9,854.0	1.23	144.37	9,849.6	4.8	22.2	-4.6	0.51	-0.33	15.99
9,951.0	1.10	119.85	9,946.6	3.5	23.6	-3.2	0.53	-0.13	-25.28
10,046.0	1.01	119.68	10,041.6	2.6	25.1	-2.4	0.09	-0.09	-0.18
10,140.0	1.14	123.46	10,135.6	1.7	26.6	-1.4	0.16	0.14	4.02
10,235.0	0.84	123.72	10,230.5	0.8	28.0	-0.5	0.32	-0.32	0.27
10,330.0	0.62	123.98	10,325.5	0.1	29.0	0.2	0.23	-0.23	0.27
10,424.0	2.11	175.14	10,419.5	-1.9	29.6	2.2	1.90	1.59	54.43
10,519.0	2.33	166.43	10,514.4	-5.5	30.2	5.8	0.42	0.23	-9.17
10,614.0	2.59	170.92	10,609.3	-9.5	31.0	9.8	0.34	0.27	4.73
10,709.0	2.37	174.70	10,704.3	-13.6	31.5	13.9	0.29	-0.23	3.98
10,804.0	2.02	175.22	10,799.2	-17.2	31.8	17.5	0.37	-0.37	0.55
10,898.0	1.49	176.01	10,893.1	-20.1	32.0	20.4	0.56	-0.56	0.84
10,993.0	1.27	174.96	10,988.1	-22.4	32.2	22.7	0.23	-0.23	-1.11
11,088.0	1.27	184.80	11,083.1	-24.5	32.2	24.8	0.23	0.00	10.36
11,183.0	0.97	207.04	11,178.1	-26.2	31.8	26.6	0.55	-0.32	23.41
11,279.0	0.84	206.69	11,274.1	-27.6	31.1	27.9	0.14	-0.14	-0.36
11,373.0	1.36	201.69	11,368.0	-29.2	30.3	29.6	0.56	0.55	-5.32
11,468.0	1.49	211.87	11,463.0	-31.3	29.3	31.6	0.30	0.14	10.72
11,562.0	1.54	225.50	11,557.0	-33.3	27.7	33.5	0.39	0.05	14.50
11,658.0	2.15	239.56	11,652.9	-35.1	25.3	35.3	0.79	0.64	14.65
11,735.0	2.15	239.56	11,729.9	-36.5	22.8	36.8	0.00	0.00	0.00
11,974.0	1.96	252.40	11,968.7	-40.0	15.0	40.2	0.21	-0.08	5.37
12,006.0	2.37	242.79	12,000.7	-40.5	13.9	40.7	1.71	1.28	-30.03
12,038.0	5.58	220.18	12,032.6	-42.0	12.3	42.1	10.98	10.03	-70.66
12,069.0	9.32	216.95	12,063.4	-45.2	9.8	45.3	12.14	12.06	-10.42
12,101.0	13.18	221.37	12,094.7	-50.0	5.9	50.0	12.35	12.06	13.81
12,133.0	17.88	215.60	12,125.6	-56.7	0.6	56.7	15.44	14.69	-18.03
12,164.0	21.20	213.59	12,154.8	-65.2	-5.3	65.2	10.93	10.71	-6.48
12,196.0	24.38	208.45	12,184.3	-75.9	-11.6	75.8	11.72	9.94	-16.06
12,227.0	26.79	206.88	12,212.2	-87.7	-17.9	87.5	8.08	7.77	-5.06
12,259.0	31.24	201.78	12,240.2	-101.9	-24.2	101.6	15.90	13.91	-15.94



Survey Report

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North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
12,290.0	35.21	203.13	12,266.1	-117.6	-30.7	117.2	13.03	12.81	4.35
12,298.3	35.86	202.76	12,272.9	-122.0	-32.6	121.7	8.25	7.83	-4.47
FTP @ 12298.3' MD, 330' FNL, 1484' FWL									
12,322.0	37.72	201.76	12,291.9	-135.2	-37.9	134.7	8.25	7.85	-4.21
12,353.0	42.22	199.08	12,315.6	-153.8	-44.9	153.3	15.54	14.52	-8.65
12,385.0	46.71	194.97	12,338.5	-175.2	-51.4	174.7	16.66	14.03	-12.84
12,416.0	48.30	191.55	12,359.4	-197.5	-56.6	196.9	9.62	5.13	-11.03
12,448.0	51.60	187.15	12,380.0	-221.6	-60.6	221.0	14.73	10.31	-13.75
12,479.0	54.88	185.40	12,398.6	-246.3	-63.3	245.6	11.51	10.58	-5.65
12,511.0	56.03	183.49	12,416.7	-272.6	-65.3	271.9	6.09	3.59	-5.97
12,542.0	57.54	182.18	12,433.7	-298.5	-66.6	297.8	6.02	4.87	-4.23
12,574.0	59.06	179.72	12,450.5	-325.7	-67.1	325.0	8.08	4.75	-7.69
12,605.0	61.99	177.23	12,465.7	-352.7	-66.3	352.0	11.76	9.45	-8.03
12,636.0	63.84	175.00	12,479.9	-380.2	-64.5	379.5	8.75	5.97	-7.19
12,668.0	64.49	174.42	12,493.8	-408.9	-61.8	408.2	2.61	2.03	-1.81
12,700.0	66.16	173.90	12,507.2	-437.8	-58.8	437.2	5.42	5.22	-1.63
12,731.0	68.80	173.73	12,519.0	-466.3	-55.8	465.7	8.53	8.52	-0.55
12,763.0	69.60	173.95	12,530.4	-496.0	-52.5	495.5	2.58	2.50	0.69
12,794.0	68.85	174.26	12,541.4	-524.9	-49.6	524.3	2.59	-2.42	1.00
12,826.0	69.06	175.75	12,552.9	-554.6	-47.0	554.1	4.39	0.66	4.66
12,857.0	71.15	177.50	12,563.4	-583.7	-45.3	583.2	8.58	6.74	5.65
12,889.0	74.35	178.13	12,572.9	-614.3	-44.1	613.8	10.18	10.00	1.97
12,920.0	75.94	176.97	12,580.9	-644.2	-42.8	643.7	6.28	5.13	-3.74
12,951.0	75.91	175.97	12,588.4	-674.2	-41.0	673.7	3.13	-0.10	-3.23
12,983.0	78.58	173.18	12,595.5	-705.3	-38.0	704.8	11.91	8.34	-8.72
13,014.0	81.68	173.95	12,600.8	-735.6	-34.6	735.2	10.29	10.00	2.48
13,046.0	84.59	174.48	12,604.6	-767.2	-31.4	766.8	9.24	9.09	1.66
13,078.0	84.48	174.55	12,607.7	-798.9	-28.3	798.6	0.41	-0.34	0.22
13,109.0	84.53	174.37	12,610.6	-829.6	-25.4	829.3	0.60	0.16	-0.58
13,204.0	86.22	174.00	12,618.3	-923.8	-15.8	923.6	1.82	1.78	-0.39
13,259.0	85.96	176.09	12,622.0	-978.5	-11.0	978.3	3.82	-0.47	3.80
13,354.0	89.44	178.13	12,625.9	-1,073.3	-6.2	1,073.2	4.25	3.66	2.15
13,448.0	88.77	175.93	12,627.3	-1,167.1	-1.4	1,167.1	2.45	-0.71	-2.34
13,543.0	88.38	177.37	12,629.7	-1,261.9	4.2	1,261.9	1.57	-0.41	1.52
13,637.0	88.54	179.32	12,632.2	-1,355.9	6.9	1,355.9	2.08	0.17	2.07
13,732.0	87.98	177.83	12,635.1	-1,450.8	9.3	1,450.8	1.67	-0.59	-1.57
13,827.0	88.88	179.61	12,637.7	-1,545.7	11.4	1,545.8	2.10	0.95	1.87
13,921.0	89.55	181.61	12,639.0	-1,639.7	10.4	1,639.7	2.24	0.71	2.13
14,016.0	89.38	180.97	12,639.9	-1,734.7	8.2	1,734.7	0.70	-0.18	-0.67
14,110.0	88.99	181.05	12,641.2	-1,828.7	6.6	1,828.6	0.42	-0.41	0.09
14,205.0	89.10	180.64	12,642.8	-1,923.6	5.2	1,923.6	0.45	0.12	-0.43
14,299.0	89.83	181.32	12,643.7	-2,017.6	3.6	2,017.5	1.06	0.78	0.72



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Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,394.0	85.69	178.21	12,647.4	-2,112.5	4.0	2,112.4	5.45	-4.36	-3.27
14,488.0	90.90	176.22	12,650.2	-2,206.3	8.5	2,206.3	5.93	5.54	-2.12
14,580.0	88.66	178.99	12,650.5	-2,298.2	12.4	2,298.2	3.87	-2.43	3.01
14,675.0	87.53	178.41	12,653.7	-2,393.1	14.5	2,393.2	1.34	-1.19	-0.61
14,769.0	87.03	179.85	12,658.2	-2,487.0	15.9	2,487.1	1.62	-0.53	1.53
14,864.0	86.75	179.44	12,663.3	-2,581.9	16.5	2,581.9	0.52	-0.29	-0.43
14,959.0	87.09	178.09	12,668.4	-2,676.7	18.6	2,676.8	1.46	0.36	-1.42
15,054.0	87.25	178.11	12,673.1	-2,771.5	21.7	2,771.6	0.17	0.17	0.02
15,150.0	87.48	178.67	12,677.5	-2,867.4	24.4	2,867.5	0.63	0.24	0.58
15,245.0	88.37	177.90	12,681.0	-2,962.3	27.3	2,962.4	1.24	0.94	-0.81
15,341.0	86.86	177.56	12,685.0	-3,058.1	31.1	3,058.3	1.61	-1.57	-0.35
15,436.0	87.76	178.07	12,689.4	-3,153.0	34.7	3,153.2	1.09	0.95	0.54
15,531.0	88.54	177.77	12,692.5	-3,247.9	38.1	3,248.1	0.88	0.82	-0.32
15,627.0	87.87	179.01	12,695.5	-3,343.8	40.8	3,344.0	1.47	-0.70	1.29
15,722.0	89.78	179.82	12,697.4	-3,438.7	41.8	3,439.0	2.18	2.01	0.85
15,818.0	88.77	178.68	12,698.7	-3,534.7	43.0	3,535.0	1.59	-1.05	-1.19
15,913.0	87.76	177.73	12,701.5	-3,629.6	46.0	3,629.9	1.46	-1.06	-1.00
16,007.0	89.05	176.40	12,704.1	-3,723.5	50.8	3,723.8	1.97	1.37	-1.41
16,103.0	90.00	178.19	12,704.9	-3,819.3	55.4	3,819.7	2.11	0.99	1.86
16,199.0	90.22	178.21	12,704.8	-3,915.3	58.4	3,915.7	0.23	0.23	0.02
16,294.0	90.06	177.20	12,704.5	-4,010.2	62.2	4,010.7	1.08	-0.17	-1.06
16,390.0	86.64	175.20	12,707.3	-4,106.0	68.5	4,106.4	4.13	-3.56	-2.08
16,476.0	90.00	179.60	12,709.8	-4,191.8	72.4	4,192.3	6.44	3.91	5.12
16,571.0	90.67	178.47	12,709.3	-4,286.8	74.0	4,287.3	1.38	0.71	-1.19
16,666.0	90.34	178.70	12,708.4	-4,381.7	76.4	4,382.3	0.42	-0.35	0.24
16,761.0	89.41	182.70	12,708.6	-4,476.7	75.2	4,477.3	4.32	-0.98	4.21
16,856.0	92.04	183.32	12,707.4	-4,571.6	70.2	4,572.1	2.84	2.77	0.65
16,952.0	93.56	184.26	12,702.7	-4,667.2	63.9	4,667.7	1.86	1.58	0.98
17,047.0	92.60	181.09	12,697.6	-4,762.0	59.5	4,762.3	3.48	-1.01	-3.34
17,141.0	90.48	180.29	12,695.1	-4,855.9	58.3	4,856.3	2.41	-2.26	-0.85
17,234.0	88.49	180.41	12,695.9	-4,948.9	57.8	4,949.3	2.14	-2.14	0.13
17,328.0	86.89	180.61	12,699.7	-5,042.8	56.9	5,043.2	1.72	-1.70	0.21
17,422.0	88.38	179.93	12,703.6	-5,136.8	56.5	5,137.1	1.74	1.59	-0.72
17,516.0	86.78	179.96	12,707.6	-5,230.7	56.6	5,231.0	1.70	-1.70	0.03
17,611.0	87.59	179.93	12,712.2	-5,325.6	56.7	5,325.9	0.85	0.85	-0.03
17,705.0	88.38	181.48	12,715.5	-5,419.5	55.5	5,419.8	1.85	0.84	1.65
17,799.0	87.70	179.97	12,718.8	-5,513.4	54.3	5,513.7	1.76	-0.72	-1.61
17,893.0	89.30	180.71	12,721.2	-5,607.4	53.8	5,607.6	1.88	1.70	0.79
17,987.0	90.59	184.85	12,721.3	-5,701.3	49.2	5,701.5	4.61	1.37	4.40
18,082.0	91.20	184.50	12,719.8	-5,795.9	41.5	5,796.0	0.74	0.64	-0.37
18,176.0	86.81	182.94	12,721.5	-5,889.7	35.4	5,889.7	4.96	-4.67	-1.66
18,270.0	85.37	181.34	12,727.9	-5,983.4	31.9	5,983.4	2.29	-1.53	-1.70



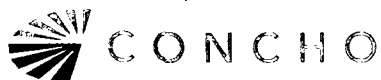
Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: FASCINATOR FED COM #703H
Wellbore: OWB
Design: ACTUAL WELLPLAN

Local Co-ordinate Reference: Well FASCINATOR FED COM #703H
TVD Reference: RKB=3358+27 @ 3385.0usft (SCANDRILL FREEDOM)
MD Reference: RKB=3358+27 @ 3385.0usft (SCANDRILL FREEDOM)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
18,365.0	87.17	180.37	12,734.0	-6,078.2	30.5	6,078.2	2.15	1.89	-1.02
18,459.0	86.58	180.03	12,739.2	-6,172.0	30.1	6,172.0	0.72	-0.63	-0.36
18,553.0	87.06	180.30	12,744.4	-6,265.9	29.9	6,265.9	0.59	0.51	0.29
18,648.0	87.14	181.72	12,749.2	-6,360.8	28.2	6,360.7	1.50	0.08	1.49
18,743.0	88.40	181.30	12,752.9	-6,455.6	25.7	6,455.6	1.40	1.33	-0.44
18,837.0	89.78	180.54	12,754.4	-6,549.6	24.2	6,549.5	1.68	1.47	-0.81
18,931.0	91.88	181.90	12,753.0	-6,643.6	22.2	6,643.4	2.66	2.23	1.45
19,026.0	92.18	181.74	12,749.7	-6,738.5	19.2	6,738.3	0.36	0.32	-0.17
19,121.0	90.34	179.18	12,747.6	-6,833.4	18.4	6,833.3	3.32	-1.94	-2.69
19,215.0	89.41	177.75	12,747.8	-6,927.4	20.9	6,927.2	1.81	-0.99	-1.52
19,309.0	91.54	178.16	12,747.0	-7,021.3	24.3	7,021.2	2.31	2.27	0.44
19,403.0	92.72	177.87	12,743.5	-7,115.2	27.5	7,115.1	1.29	1.26	-0.31
19,498.0	93.81	177.01	12,738.1	-7,210.0	31.8	7,209.9	1.46	1.15	-0.91
19,595.0	91.29	175.29	12,733.8	-7,306.6	38.3	7,306.6	3.14	-2.60	-1.77
19,701.0	87.87	177.82	12,734.5	-7,412.4	44.6	7,412.5	4.01	-3.23	2.39
19,796.0	88.77	178.89	12,737.3	-7,507.3	47.4	7,507.4	1.47	0.95	1.13
19,890.0	88.49	178.68	12,739.6	-7,601.3	49.3	7,601.4	0.37	-0.30	-0.22
19,984.0	88.32	177.53	12,742.2	-7,695.2	52.5	7,695.3	1.24	-0.18	-1.22
20,079.0	89.50	179.75	12,744.0	-7,790.1	54.7	7,790.3	2.65	1.24	2.34
20,172.0	88.71	180.07	12,745.5	-7,883.1	54.9	7,883.3	0.92	-0.85	0.34
20,266.0	88.43	179.32	12,747.8	-7,977.1	55.4	7,977.2	0.85	-0.30	-0.80
20,361.0	88.77	178.11	12,750.1	-8,072.0	57.5	8,072.2	1.32	0.36	-1.27
20,455.0	88.66	179.27	12,752.2	-8,166.0	59.6	8,166.2	1.24	-0.12	1.23
20,548.0	88.66	177.68	12,754.4	-8,258.9	62.1	8,259.1	1.71	0.00	-1.71
20,644.0	88.77	178.28	12,756.6	-8,354.8	65.5	8,355.1	0.64	0.11	0.63
20,738.0	88.82	178.25	12,758.5	-8,448.8	68.3	8,449.0	0.06	0.05	-0.03
20,832.0	87.59	177.69	12,761.5	-8,542.7	71.7	8,543.0	1.44	-1.31	-0.60
20,925.0	88.60	177.99	12,764.6	-8,635.6	75.2	8,635.9	1.13	1.09	0.32
21,020.0	88.99	178.13	12,766.6	-8,730.5	78.4	8,730.8	0.44	0.41	0.15
21,113.0	88.60	177.80	12,768.5	-8,823.4	81.7	8,823.8	0.55	-0.42	-0.35
21,207.0	89.22	178.15	12,770.3	-8,917.3	85.0	8,917.7	0.76	0.66	0.37
21,301.0	90.95	177.38	12,770.2	-9,011.2	88.7	9,011.7	2.01	1.84	-0.82
21,395.0	88.77	177.02	12,770.4	-9,105.1	93.3	9,105.6	2.35	-2.32	-0.38
21,488.0	90.67	177.32	12,770.9	-9,198.0	97.9	9,198.5	2.07	2.04	0.32
21,582.0	89.66	177.67	12,770.6	-9,291.9	102.0	9,292.5	1.14	-1.07	0.37
21,676.0	88.88	179.05	12,771.8	-9,385.9	104.7	9,386.5	1.69	-0.83	1.47
21,770.0	88.26	179.88	12,774.1	-9,479.8	105.5	9,480.4	1.10	-0.66	0.88
21,864.0	88.54	180.41	12,776.8	-9,573.8	105.3	9,574.4	0.64	0.30	0.56
21,959.0	89.94	180.44	12,778.0	-9,668.8	104.6	9,669.4	1.47	1.47	0.03
22,053.0	91.57	180.04	12,776.8	-9,762.8	104.2	9,763.3	1.79	1.73	-0.43
22,148.0	91.74	179.61	12,774.0	-9,857.7	104.5	9,858.3	0.49	0.18	-0.45
22,242.0	90.78	179.59	12,772.0	-9,951.7	105.1	9,952.3	1.02	-1.02	-0.02



Survey Report

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Local Co-ordinate Reference: Well FASCINATOR FED COM #703H
TVD Reference: RKB=3358+27 @ 3385.0usft (SCANDRILL FREEDOM)
MD Reference: RKB=3358+27 @ 3385.0usft (SCANDRILL FREEDOM)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
22,319.8	90.23	179.24	12,771.3	-10,029.5	105.9	10,030.1	0.84	-0.71	-0.45
LTP @ 22319.8' MD, 330' FSL, 1527' FWL									
22,337.0	90.11	179.16	12,771.2	-10,046.7	106.2	10,047.3	0.84	-0.71	-0.45
22,407.0	90.78	180.28	12,770.7	-10,116.7	106.5	10,117.3	1.86	0.96	1.60
22,436.0	90.78	180.28	12,770.3	-10,145.7	106.4	10,146.2	0.00	0.00	0.00

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,298.3	12,272.9	-122.0	-32.6	FTP @ 12298.3' MD, 330' FNL, 1484' FWL
22,319.8	12,771.3	-10,029.5	105.9	LTP @ 22319.8' MD, 330' FSL, 1527' FWL

Checked By: _____ Approved By: _____ Date: _____

	Stage 1	Distance Between Perfs		Shots	Stage 2	Distance Between Perfs		Shots	Stage 3	Distance Between Perfs		Shots	Stage 4	Distance Between Perfs		Shots
		Perfs	Perfs			Perfs	Perfs			Perfs	Perfs			Perfs	Perfs	
From Bottom to Top	22,307	22	5	22,090	64	4	21,878	25	4	21,626	81	4	21,375	23	4	
	22,285	22	5	22,077	12	4	21,852	23	4	21,601	30	4	21,350	21	4	
	22,263	22	5	22,065	12	4	21,829	27	4	21,571	20	4	21,329	29	4	
	22,241	22	5	22,053	75	8	21,802	25	4	21,551	75	8	21,300	76	8	
	22,219	22	4	21,978	25	7	21,777		3	21,478	23	7	21,224	23	7	
	22,197	22	4	21,953	25	3	21,752	25	3	21,453	28	3	21,201	27	3	
	22,175	21	4	21,928	25	3	21,727	20	3	21,425	27	3	21,174	17	3	
	22,154		4	21,903		3	21,707		3	21,398		3	21,157		3	
Plug to Plug		91	36	Plug to Plug	47	36	Plug to Plug	88	28	Plug to Plug	88	36	Plug to Plug	88	36	
Frac Plug		22,332	Total Shots	Frac Plug	22,100	Total Shots	Frac Plug	21,890	Total Shots	Frac Plug	21,639	Total Shots	Frac Plug	21,388	Total Shots	

	Stage 5	Distance Between Perfs		Shots	Stage 6	Distance Between Perfs		Shots	Stage 7	Distance Between Perfs		Shots	Stage 8	Distance Between Perfs		Shots
		Perfs	Perfs			Perfs	Perfs			Perfs	Perfs			Perfs	Perfs	
From Bottom to Top	21,124	33	4	20,873	75	4	20,615	31	4	20,360	35	4	20,107	37	4	
	21,099	25	4	20,847	25	4	20,590	19	4	20,345	25	4	20,094	25	4	
	21,074	26	4	20,822	25	4	20,571	25	4	20,320	29	4	20,069	22	4	
	21,048	29	4	20,797	75	4	20,546	75	4	20,291	72	4	20,047	79	4	
	21,019	21	3	20,722	25	3	20,471	26	3	20,219	25	3	19,968	25	3	
	20,998	25	3	20,697	25	3	20,445	25	3	20,194	30	3	19,943	22	3	
	20,973	25	3	20,672	26	3	20,420	25	3	20,164	20	3	19,921	28	3	
	20,948		3	20,646		3	20,395		3	20,144		3	19,893		3	
Plug to Plug		88	28	Plug to Plug	88	28	Plug to Plug	82	28	Plug to Plug	79	28	Plug to Plug	70	28	
Frac Plug		21,136	Total Shots	Frac Plug	20,885	Total Shots	Frac Plug	20,628	Total Shots	Frac Plug	20,370	Total Shots	Frac Plug	20,117	Total Shots	

	Stage 9	Distance Between Perfs		Shots	Stage 10	Distance Between Perfs		Shots	Stage 11	Distance Between Perfs		Shots	Stage 12	Distance Between Perfs		Shots
		Perfs	Perfs			Perfs	Perfs			Perfs	Perfs			Perfs	Perfs	
From Bottom to Top	19,866	27	4	19,612	29	4	19,359	31	4	19,114	25	4	18,862	32	4	
	19,842	25	4	19,591	25	4	19,340	25	4	19,089	29	4	18,837	30	4	
	19,817	25	4	19,566	25	4	19,315	25	4	19,060	22	4	18,807	20	4	
	19,792	75	4	19,541	75	4	19,290	76	4	19,038	75	4	18,787	75	4	
	19,717	25	3	19,466	26	3	19,214	27	3	18,963	30	3	18,712	25	3	
	19,692	25	3	19,440	25	3	19,187	23	3	18,933	20	3	18,687	26	3	
	19,667	26	3	19,415	25	3	19,164	25	3	18,913	19	3	18,661	26	3	
	19,641		3	19,390		3	19,139		3	18,894		3	18,635		3	
Plug to Plug		88	28	Plug to Plug	88	28	Plug to Plug	88	28	Plug to Plug	88	28	Plug to Plug	88	28	
Frac Plug		19,880	Total Shots	Frac Plug	19,629	Total Shots	Frac Plug	19,378	Total Shots	Frac Plug	19,126	Total Shots	Frac Plug	18,875	Total Shots	

	Stage 13	Distance Between Perfs		Shots	Stage 14	Distance Between Perfs		Shots	Stage 15	Distance Between Perfs		Shots	Stage 16	Distance Between Perfs		Shots
		Perfs	Perfs			Perfs	Perfs			Perfs	Perfs			Perfs	Perfs	
From Bottom to Top	18,611	24	4	18,360	30	4	18,109	26	4	17,853	30	4	17,596	35	4	
	18,586	25	4	18,335	25	4	18,081	1023	4	17,829	22	4	17,581	25	4	
	18,561	25	4	18,310	25	4	18,058	25	4	17,807	25	4	17,556	27	4	
	18,536	76	4	18,285	76	4	18,033	79	4	17,782	72	4	17,529	74	4	
	18,460	25	3	18,209	25	3	17,954	21	3	17,710	28	3	17,455	25	3	
	18,435	25	3	18,184	25	3	17,933	25	3	17,682	26	3	17,430	29	3	
	18,410	20	3	18,159	24	3	17,908	25	3	17,656	25	3	17,401	21	3	
	18,390		3	18,135		3	17,883		3	17,631		3	17,380		3	
Plug to Plug		88	28	Plug to Plug	54	28	Plug to Plug	87	28	Plug to Plug	84	28	Plug to Plug	81	28	
Frac Plug		18,624	Total Shots	Frac Plug	18,339	Total Shots	Frac Plug	18,120	Total Shots	Frac Plug	17,866	Total Shots	Frac Plug	17,610	Total Shots	

	Stage 17	Distance Between Perfs		Shots	Stage 18	Distance Between Perfs		Shots	Stage 19	Distance Between Perfs		Shots	Stage 20	Distance Between Perfs		Shots
		Perfs	Perfs			Perfs	Perfs			Perfs	Perfs			Perfs	Perfs	
From Bottom to Top	17,346	34	4	17,092	37	4	16,843	35	4	16,590	36	4	16,349	31	4	
	17,330	25	4	17,079	26	4	16,827	25	4	16,576	25	4	16,325	25	4	
	17,305	20	4	17,053	28	4	16,802	30	4	16,551	29	4	16,300	22	4	
	17,285	81	4	17,025	72	4	16,772	70	4	16,522	72	4	16,278	79	4	
	17,204	25	3	16,953	25	3	16,702	25	3	16,450	25	3	16,199	25	3	
	17,179	20	3	16,928	28	3	16,677	24	3	16,425	22	3	16,174	25	3	
	17,159	30	3	16,900	22	3	16,653	27	3	16,403	23	3	16,149	19	3	
	17,129		3	16,878		3	16,626		3	16,380		3	16,130		3	
Plug to Plug		71	28	Plug to Plug	77	28	Plug to Plug	81	28	Plug to Plug	78	28	Plug to Plug	87	28	
Frac Plug		17,356	Total Shots	Frac Plug	17,102	Total Shots	Frac Plug	16,853	Total Shots	Frac Plug	16,600	Total Shots	Frac Plug	16,365	Total Shots	

	Stage 21	Distance Between Perfs		Shots	Stage 22	Distance Between Perfs		Shots	Stage 23	Distance Between Perfs		Shots	Stage 24	Distance Between Perfs		Shots
		Perfs	Perfs			Perfs	Perfs			Perfs	Perfs			Perfs	Perfs	
From Bottom to Top	16,099	31	4	15,835	37	4	15,595	26	4	15,340	30	4	15,091	28	4	
	16,074	26	4	15,822	25	4	15,571	25	4	15,320	25	4	15,068	25	4	
	16,048	29	4	15,797	22	4	15,546	23	4	15,295	26	4	15,043	25	4	
	16,019	71	4	15,775	78	4	15,523	78	4	15,269	75	4	15,018	75	4	
	15,948	25	3	15,697	26	3	15,445	25	3	15,194	25	3	14,943	25	3	
	15,923	20	3	15,671	22	3	15,420	25	3	15,169	25	3	14,918	25	3	
	15,903	31	3	15,649	28	3	15,395	25	3	15,144	25	3	14,893	26	3	
	15,872		3	15,621		3	15,370		3	15,119		3	14,867		3	
Plug to Plug		98	28	Plug to Plug	70	28	Plug to Plug	86	28	Plug to Plug	54	28	Plug to Plug	88	28	
Frac Plug		16,117	Total Shots	Frac Plug	15,845	Total Shots	Frac Plug	15,609	Total Shots	Frac Plug	15,323	Total Shots	Frac Plug	15,106	Total Shots	

From Bottom to Top	Stage 31	Distance Between Perfs	Shots	Stage 32	Distance Between Perfs	Shots	Stage 33	Distance Between Perfs	Shots	Stage 34	Distance Between Perfs	Shots	Stage 35	Distance Between Perfs	Shots
	14,836	31	4	14,591	25	4	14,340	25	4	14,089	31	4	13,837	30	4
	14,817	25	4	14,566	29	4	14,315	23	4	14,063	25	4	13,812	25	4
	14,792	25	4	14,537	21	4	14,292	28	4	14,038	25	4	13,787	25	4
	14,767	75	4	14,516	76	4	14,264	75	4	14,013	75	4	13,762	76	4
	14,692	28	3	14,440	20	3	14,189	25	3	13,938	25	3	13,886	25	3
	14,664	23	3	14,420	30	3	14,164	25	3	13,913	25	3	13,661	25	3
	14,641	25	3	14,390	25	3	14,139	19	3	13,888	21	3	13,636	25	3
	14,616		3	14,365		3	14,120		3	13,867		3	13,611		3
	Plug to Plug	88	28	Plug to Plug	88	28	Plug to Plug	88	28	Plug to Plug	88	28	Plug to Plug	88	28
Frac Plug		14,855	Total Shots	Frac Plug	14,604	Total Shots	Frac Plug	14,352	Total Shots	Frac Plug	14,101	Total Shots	Frac Plug	13,850	Total Shots

From Bottom to Top	Stage 36	Distance Between Perfs	Shots	Stage 37	Distance Between Perfs	Shots	Stage 38	Distance Between Perfs	Shots	Stage 39	Distance Between Perfs	Shots	Stage 40	Distance Between Perfs	Shots
	13,585	26	4	13,330	30	4	13,084	29	4		12857			0	
	13,567	31	4	13,310	25	4	13,058	25	4						
	13,536	25	4	13,285	29	4	13,033	25	4						
	13,511	73	4	13,256	72	4	13,008	15	4						
	13,438	28	3	13,184	25	3	12,993	85	3						
	13,410	25	3	13,159	21	3	12,908	25	3						
	13,385	25	3	13,138	25	3	12,883	26	3						
	13,360		3	13,113		3	12,857		3						
	Plug to Plug	84	28	Plug to Plug	84	28	Plug to Plug	92	28	Plug to Plug	0	0	Plug to Plug	0	0
Frac Plug		13,595	Total Shots	Frac Plug	13,340	Total Shots	Frac Plug	13,100	Total Shots	Frac Plug		Total Shots	Frac Plug		Total Shots

Fascinator Federal Com #703H

<u>Perfs</u>	<u>7 1/2% Acid (Gal)</u>	<u>Sand (#)</u>	<u>Fluid (Gal)</u>
1	1512	502540	443100
2	1512	499300	397950
3	1512	495200	505050
4	1512	499300	431928
5	1512	500800	414036
6	1512	509090	417396
7	1512	495780	491468
8	1512	499500	438942
9	1512	501100	445368
10	1512	493620	465612
11	1512	500200	492476
12	1512	501300	460950
13	1512	500800	458850
14	1512	499700	450232
15	1512	497170	440454
16	1512	502600	448140
17	1512	499600	439194
18	1512	506770	438732
19	1512	494990	432096
20	1512	499300	422646
21	1512	500640	433020
22	1512	500500	435036
23	1512	499640	432516
24	1512	509480	427396
25	1512	506900	436758
26	1512	499600	427770
27	1512	507420	421722
28	1512	508720	424998
29	1512	500370	423822
30	1512	498430	417744
31	1512	501560	401352
32	1512	499690	389256
33	1512	499840	416682
34	1512	500500	412566
35	1512	503250	409634
36	1512	504750	401394
37	1512	502550	389928
38	1512	505140	395808
Totals	55944	19,047,640	16,432,021