

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 LOGS

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			7. Unit or CA Agreement Name and No.		
Contact: AMANDA AVERY E-Mail: aavery@concho.com			8. Lease Name and Well No. FASCINSTOR FEDERAL COM 704H		
3. Address 2208 W MAIN STREET ARTESIA, NM 88210			9. API Well No. 30-025-45114		
3a. Phone No. (include area code) Ph: 575-748-6940			10. Field and Pool, or Exploratory WC-025 G-09 S243532M; WB		
4. Location of Well (Report location clearly and in accordance with Federal requirements)* Sec 30 T24S R35E Mer NMP At surface NWNW Lot 1 210FNL 979FWL 32.195171 N Lat, 103.411993 W Lon Sec 30 T24S R35E Mer NMP At top prod interval reported below NWNW Lot 1 210FNL 979FWL 32.195171 N Lat, 103.411993 W Lon Sec 31 T24S R35E Mer NMP At total depth SWSW Lot 4 200FSL 1130FWL 32.167271 N Lat, 103.411442 W Lon			11. Sec., T., R., M., or Block and Survey or Area Sec 30 T24S R35E Mer NMP		
14. Date Spudded 12/18/2018		15. Date T.D. Reached 01/29/2019		16. Date Completed ☐ D & A ☒ Ready to Prod. 09/09/2019	
17. Elevations (DF, KB, RT, GL)* 3370 GL		18. Total Depth: MD 22679 TVD 12928			
19. Plug Back T.D.: MD 22597 TVD 12928		20. Depth Bridge Plug Set: MD 22597 TVD 12928			
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 Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375 J55	54.5	0	1182		1000		0	
12.250	9.625 L80	47.0	0	12042	5442	2810		0	
8.500	5.500 P110	23.0	0	22669		4035		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	12093	12083						

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WOLFBONE	12918	22572	12918 TO 22572		1764	OPEN
B)						
C)						
D)						

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

Depth Interval	Amount and Type of Material
12918 TO 22572	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
09/09/2019	09/09/2019	24	→	314.0	352.0	2251.0			GAS LIFT
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
21/64	SI 3575	2600.0	→	314	352	2251		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 #484184 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

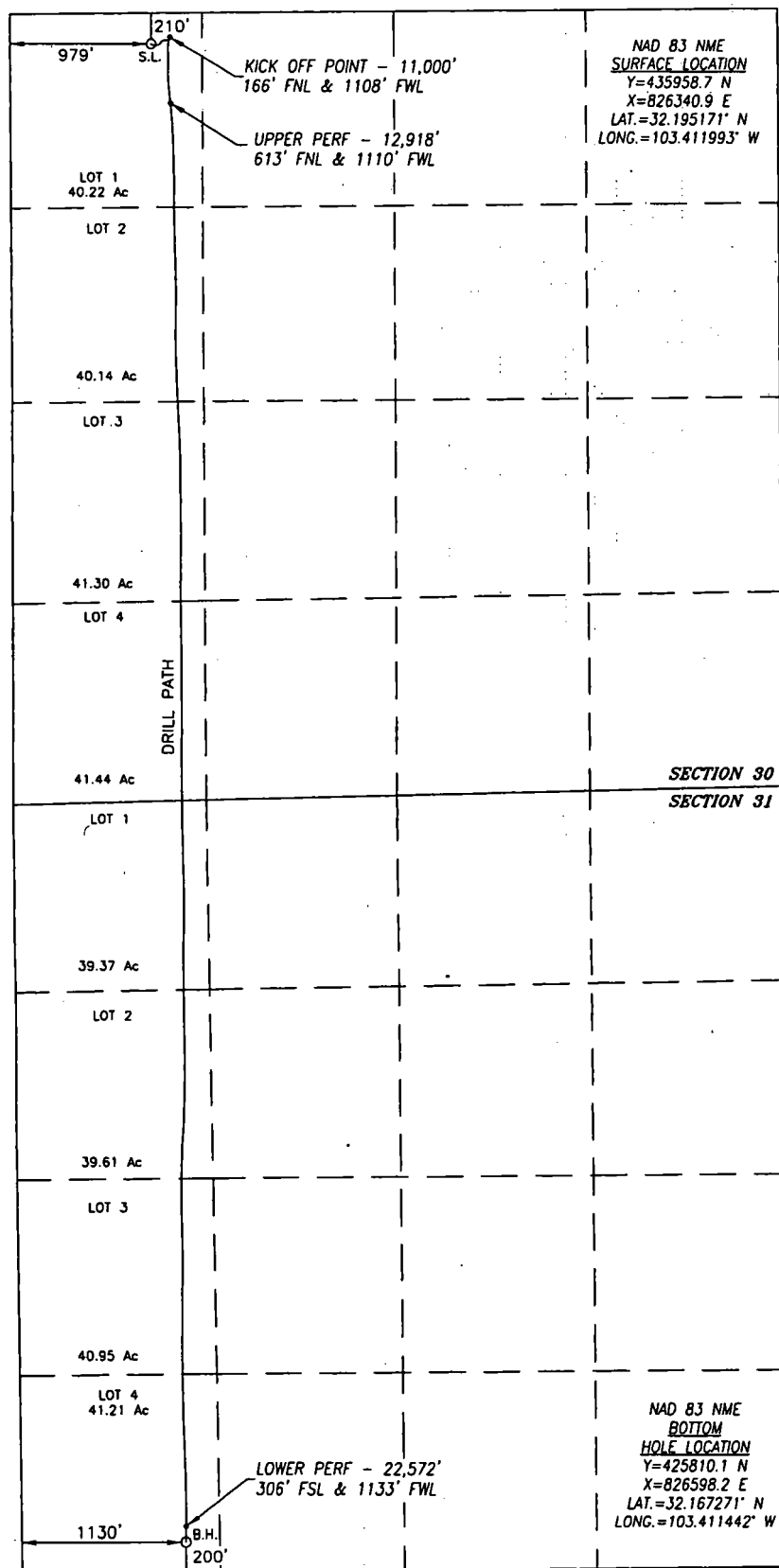
Reclamation due: 03/09/2020

ACCEPTED FOR RECORD

DEC 03 2019

BUREAU OF LAND MANAGEMENT
ROSWELL FIELD OFFICE

Property Code 322259	Property Name FASCINATOR FEDERAL COM	Well Number 704H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3370'



BOREPATH SHOWN HEREON IS BASED ON DIRECTIONAL SURVEY REPORT PROVIDED BY COG OPERATING, LLC FOR THE FASCINATOR FEDERAL COM #704H SUPPLIED TO HARCROW SURVEYING, LLC ON AUGUST 15, 2019

1200 0 1200
SCALE: 1"=1200'

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.

9/18/19

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. 17, 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



Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: FASCINATOR FED COM #704H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM_Users

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

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

Well	FASCINATOR FED COM #704H		
Well Position	+N/-S	0.0 usft	Northing: 435,899.90 usft
	+E/-W	0.0 usft	Easting: 785,155.40 usft
Position Uncertainty	3.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 11' 42.165 N
		Longitude:	103° 24' 41.479 W
		Ground Level:	3,370.0 usft

Wellbore	OWB		
Magnetics	Model Name	Sample Date	Declination
	WMM2015	6/25/2018	(°) 6.79
			Dip Angle
			(°) 60.03
			Field Strength
			(nT) 47,818.65313916

Design	ACTUAL WELLPATH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°) 178.55

Survey Program	Date 2/28/2019		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.0	11,922.0	GYRO (OWB)	Standard Keeper 104
11,922.0	22,679.0	MWD-CURVE/LATERAL (OWB)	MWD+IFR1+MS
			Description
			Standard Wireline Keeper ver 1.0.4
			OWSG MWD + IFR1 + Multi-Station Correction

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate	
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.16	251.52	100.0	0.0	-0.1	0.0	0.16	0.16	0.00	
125.0	0.39	213.75	125.0	-0.1	-0.2	0.1	1.12	0.92	-151.08	
150.0	0.56	206.31	150.0	-0.3	-0.3	0.3	0.72	0.68	-29.76	
175.0	0.59	210.77	175.0	-0.5	-0.4	0.5	0.22	0.12	17.84	
200.0	0.57	215.37	200.0	-0.7	-0.6	0.7	0.20	-0.08	18.40	
225.0	0.56	213.14	225.0	-0.9	-0.7	0.9	0.10	-0.04	-8.92	
250.0	0.50	205.80	250.0	-1.1	-0.8	1.1	0.36	-0.24	-29.36	
275.0	0.70	208.70	275.0	-1.4	-0.9	1.4	0.81	0.80	11.60	
300.0	0.75	211.88	300.0	-1.6	-1.1	1.6	0.26	0.20	12.72	



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
325.0	0.66	211.19	325.0	-1.9	-1.3	1.9	0.36	-0.36	-2.76
350.0	0.61	213.38	350.0	-2.1	-1.4	2.1	0.22	-0.20	8.76
375.0	0.48	215.79	375.0	-2.3	-1.5	2.3	0.53	-0.52	9.64
400.0	0.48	209.58	400.0	-2.5	-1.7	2.5	0.21	0.00	-24.84
425.0	0.44	214.01	425.0	-2.7	-1.8	2.6	0.21	-0.16	17.72
450.0	0.55	203.89	450.0	-2.9	-1.9	2.8	0.56	0.44	-40.48
475.0	0.34	200.45	475.0	-3.1	-1.9	3.0	0.85	-0.84	-13.76
500.0	0.32	195.61	500.0	-3.2	-2.0	3.1	0.14	-0.08	-19.36
525.0	0.40	193.35	525.0	-3.3	-2.0	3.3	0.32	0.32	-9.04
550.0	0.28	186.55	550.0	-3.5	-2.1	3.4	0.51	-0.48	-27.20
575.0	0.23	200.96	575.0	-3.6	-2.1	3.5	0.32	-0.20	57.64
600.0	0.22	188.21	600.0	-3.7	-2.1	3.6	0.20	-0.04	-51.00
625.0	0.10	185.91	625.0	-3.8	-2.1	3.7	0.48	-0.48	-9.20
650.0	0.11	207.78	650.0	-3.8	-2.1	3.7	0.16	0.04	87.48
675.0	0.09	256.44	675.0	-3.8	-2.2	3.8	0.34	-0.08	194.64
700.0	0.07	142.55	700.0	-3.8	-2.2	3.8	0.54	-0.08	-455.56
725.0	0.10	60.74	725.0	-3.8	-2.1	3.8	0.45	0.12	-327.24
750.0	0.04	283.40	750.0	-3.8	-2.1	3.8	0.53	-0.24	-549.36
775.0	0.08	57.32	775.0	-3.8	-2.1	3.8	0.45	0.16	535.68
800.0	0.12	11.88	800.0	-3.8	-2.1	3.7	0.34	0.16	-181.76
825.0	0.15	9.21	825.0	-3.7	-2.1	3.7	0.12	0.12	-10.68
850.0	0.14	8.22	850.0	-3.7	-2.1	3.6	0.04	-0.04	-3.96
875.0	0.18	350.30	875.0	-3.6	-2.1	3.5	0.25	0.16	-71.68
900.0	0.19	347.79	900.0	-3.5	-2.1	3.5	0.05	0.04	-10.04
925.0	0.26	5.35	925.0	-3.4	-2.1	3.4	0.39	0.28	70.24
950.0	0.20	1.81	950.0	-3.3	-2.1	3.3	0.25	-0.24	-14.16
975.0	0.20	12.90	975.0	-3.2	-2.1	3.2	0.15	0.00	44.36
1,000.0	0.18	3.94	1,000.0	-3.2	-2.1	3.1	0.14	-0.08	-35.84
1,025.0	0.16	9.86	1,025.0	-3.1	-2.1	3.0	0.11	-0.08	23.68
1,050.0	0.12	38.26	1,050.0	-3.0	-2.0	3.0	0.32	-0.16	113.60
1,075.0	0.15	27.15	1,075.0	-3.0	-2.0	2.9	0.16	0.12	-44.44
1,100.0	0.05	46.87	1,100.0	-2.9	-2.0	2.9	0.42	-0.40	78.88
1,125.0	0.17	51.93	1,125.0	-2.9	-2.0	2.9	0.48	0.48	20.24
1,150.0	0.13	69.63	1,150.0	-2.9	-1.9	2.8	0.24	-0.16	70.80
1,175.0	0.24	88.72	1,175.0	-2.9	-1.8	2.8	0.50	0.44	76.36
1,200.0	0.20	101.21	1,200.0	-2.9	-1.7	2.8	0.25	-0.16	49.96
1,225.0	0.27	91.31	1,225.0	-2.9	-1.6	2.8	0.32	0.28	-39.60
1,250.0	0.33	90.88	1,250.0	-2.9	-1.5	2.8	0.24	0.24	-1.72
1,275.0	0.29	90.70	1,275.0	-2.9	-1.4	2.9	0.16	-0.16	-0.72
1,300.0	0.31	99.93	1,300.0	-2.9	-1.2	2.9	0.21	0.08	36.92
1,325.0	0.31	97.66	1,325.0	-2.9	-1.1	2.9	0.05	0.00	-9.08
1,350.0	0.40	102.52	1,350.0	-2.9	-0.9	2.9	0.38	0.36	19.44
1,375.0	0.30	85.72	1,375.0	-3.0	-0.8	2.9	0.57	-0.40	-67.20



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
1,400.0	0.34	91.81	1,400.0	-3.0	-0.6	2.9	0.21	0.16	24.36
1,425.0	0.42	100.77	1,425.0	-3.0	-0.5	3.0	0.40	0.32	35.84
1,450.0	0.44	93.63	1,450.0	-3.0	-0.3	3.0	0.23	0.08	-28.56
1,475.0	0.49	94.87	1,475.0	-3.0	-0.1	3.0	0.20	0.20	4.96
1,500.0	0.52	88.17	1,500.0	-3.0	0.1	3.0	0.26	0.12	-26.80
1,525.0	0.51	97.54	1,525.0	-3.0	0.3	3.0	0.34	-0.04	37.48
1,550.0	0.57	106.94	1,550.0	-3.1	0.6	3.1	0.43	0.24	37.60
1,575.0	0.62	103.63	1,575.0	-3.2	0.8	3.2	0.24	0.20	-13.24
1,600.0	0.67	104.72	1,600.0	-3.2	1.1	3.2	0.21	0.20	4.36
1,625.0	0.71	98.97	1,625.0	-3.3	1.4	3.3	0.32	0.16	-23.00
1,650.0	0.70	101.89	1,650.0	-3.3	1.7	3.4	0.15	-0.04	11.68
1,675.0	0.71	104.47	1,675.0	-3.4	2.0	3.5	0.13	0.04	10.32
1,700.0	0.72	99.17	1,700.0	-3.5	2.3	3.5	0.27	0.04	-21.20
1,725.0	0.74	96.43	1,725.0	-3.5	2.6	3.6	0.16	0.08	-10.96
1,750.0	0.78	99.61	1,750.0	-3.6	2.9	3.6	0.23	0.16	12.72
1,775.0	0.80	100.18	1,775.0	-3.6	3.3	3.7	0.09	0.08	2.28
1,800.0	0.81	99.56	1,800.0	-3.7	3.6	3.8	0.05	0.04	-2.48
1,825.0	0.89	101.46	1,824.9	-3.8	4.0	3.9	0.34	0.32	7.60
1,850.0	0.76	102.03	1,849.9	-3.8	4.3	3.9	0.52	-0.52	2.28
1,875.0	0.86	99.90	1,874.9	-3.9	4.7	4.0	0.42	0.40	-8.52
1,900.0	0.89	104.25	1,899.9	-4.0	5.1	4.1	0.29	0.12	17.40
1,925.0	0.83	106.25	1,924.9	-4.1	5.4	4.2	0.27	-0.24	8.00
1,950.0	0.89	103.18	1,949.9	-4.2	5.8	4.3	0.30	0.24	-12.28
1,975.0	1.01	101.59	1,974.9	-4.3	6.2	4.4	0.49	0.48	-6.36
2,000.0	1.08	100.68	1,999.9	-4.3	6.6	4.5	0.29	0.28	-3.64
2,025.0	1.09	100.88	2,024.9	-4.4	7.1	4.6	0.04	0.04	0.80
2,050.0	1.13	102.59	2,049.9	-4.5	7.6	4.7	0.21	0.16	6.84
2,075.0	1.21	103.05	2,074.9	-4.6	8.1	4.8	0.32	0.32	1.84
2,100.0	1.19	99.49	2,099.9	-4.7	8.6	5.0	0.31	-0.08	-14.24
2,125.0	1.25	100.20	2,124.9	-4.8	9.1	5.1	0.25	0.24	2.84
2,150.0	1.21	100.73	2,149.9	-4.9	9.6	5.2	0.17	-0.16	2.12
2,175.0	1.30	102.10	2,174.9	-5.0	10.2	5.3	0.38	0.36	5.48
2,200.0	1.36	99.68	2,199.9	-5.1	10.8	5.4	0.33	0.24	-9.68
2,225.0	1.38	99.00	2,224.9	-5.2	11.3	5.5	0.10	0.08	-2.72
2,250.0	1.45	100.94	2,249.9	-5.4	12.0	5.7	0.34	0.28	7.76
2,275.0	1.40	98.90	2,274.9	-5.5	12.6	5.8	0.28	-0.20	-8.16
2,300.0	1.51	102.30	2,299.9	-5.6	13.2	5.9	0.56	0.44	13.60
2,325.0	1.50	103.08	2,324.8	-5.7	13.8	6.1	0.09	-0.04	3.12
2,350.0	1.50	100.45	2,349.8	-5.9	14.5	6.2	0.28	0.00	-10.52
2,375.0	1.60	99.84	2,374.8	-6.0	15.1	6.4	0.41	0.40	-2.44
2,400.0	1.52	99.68	2,399.8	-6.1	15.8	6.5	0.32	-0.32	-0.64
2,425.0	1.52	100.85	2,424.8	-6.2	16.5	6.6	0.12	0.00	4.68
2,450.0	1.59	106.50	2,449.8	-6.4	17.1	6.8	0.67	0.28	22.60



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
2,475.0	1.63	104.06	2,474.8	-6.6	17.8	7.0	0.32	0.16	-9.76
2,500.0	1.60	106.11	2,499.8	-6.7	18.5	7.2	0.26	-0.12	8.20
2,525.0	1.58	105.52	2,524.8	-6.9	19.1	7.4	0.10	-0.08	-2.36
2,550.0	1.61	106.43	2,549.8	-7.1	19.8	7.6	0.16	0.12	3.64
2,575.0	1.53	106.52	2,574.8	-7.3	20.5	7.8	0.32	-0.32	0.36
2,600.0	1.47	105.52	2,599.7	-7.5	21.1	8.0	0.26	-0.24	-4.00
2,625.0	1.28	112.49	2,624.7	-7.7	21.7	8.2	1.01	-0.76	27.88
2,650.0	1.01	105.04	2,649.7	-7.8	22.1	8.4	1.23	-1.08	-29.80
2,675.0	0.93	107.22	2,674.7	-8.0	22.5	8.5	0.35	-0.32	8.72
2,700.0	1.05	107.86	2,699.7	-8.1	23.0	8.7	0.48	0.48	2.56
2,725.0	0.94	105.11	2,724.7	-8.2	23.4	8.8	0.48	-0.44	-11.00
2,750.0	0.93	106.09	2,749.7	-8.3	23.8	8.9	0.08	-0.04	3.92
2,775.0	0.92	111.95	2,774.7	-8.5	24.1	9.1	0.38	-0.04	23.44
2,800.0	0.94	108.86	2,799.7	-8.6	24.5	9.2	0.22	0.08	-12.36
2,825.0	0.96	108.48	2,824.7	-8.7	24.9	9.4	0.08	0.08	-1.52
2,850.0	0.92	110.65	2,849.7	-8.9	25.3	9.5	0.21	-0.16	8.68
2,875.0	0.88	107.86	2,874.7	-9.0	25.7	9.6	0.24	-0.16	-11.16
2,900.0	0.84	109.90	2,899.7	-9.1	26.0	9.8	0.20	-0.16	8.16
2,925.0	0.91	110.89	2,924.7	-9.3	26.4	9.9	0.29	0.28	3.96
2,950.0	0.87	107.94	2,949.7	-9.4	26.8	10.1	0.24	-0.16	-11.80
2,975.0	0.89	112.95	2,974.7	-9.5	27.1	10.2	0.32	0.08	20.04
3,000.0	0.91	113.48	2,999.7	-9.7	27.5	10.4	0.09	0.08	2.12
3,025.0	0.92	110.84	3,024.7	-9.8	27.8	10.5	0.17	0.04	-10.56
3,050.0	0.92	109.07	3,049.7	-10.0	28.2	10.7	0.11	0.00	-7.08
3,075.0	1.01	110.70	3,074.7	-10.1	28.6	10.8	0.38	0.36	6.52
3,100.0	0.97	113.68	3,099.7	-10.3	29.0	11.0	0.26	-0.16	11.92
3,125.0	0.98	114.77	3,124.7	-10.4	29.4	11.2	0.08	0.04	4.36
3,150.0	0.88	108.95	3,149.7	-10.6	29.8	11.3	0.55	-0.40	-23.28
3,175.0	0.82	109.39	3,174.7	-10.7	30.1	11.5	0.24	-0.24	1.76
3,200.0	0.39	95.94	3,199.7	-10.8	30.4	11.6	1.80	-1.72	-53.80
3,225.0	0.28	102.43	3,224.7	-10.8	30.5	11.6	0.46	-0.44	25.96
3,250.0	0.16	103.99	3,249.7	-10.8	30.6	11.6	0.48	-0.48	6.24
3,275.0	0.19	82.38	3,274.7	-10.8	30.7	11.6	0.29	0.12	-86.44
3,300.0	0.23	83.85	3,299.7	-10.8	30.8	11.6	0.16	0.16	5.88
3,325.0	0.21	91.21	3,324.7	-10.8	30.9	11.6	0.14	-0.08	29.44
3,350.0	0.17	73.86	3,349.7	-10.8	31.0	11.6	0.28	-0.16	-69.40
3,375.0	0.18	65.41	3,374.7	-10.8	31.0	11.6	0.11	0.04	-33.80
3,400.0	0.20	75.76	3,399.7	-10.8	31.1	11.5	0.16	0.08	41.40
3,425.0	0.38	69.44	3,424.7	-10.7	31.2	11.5	0.73	0.72	-25.28
3,450.0	0.45	83.39	3,449.7	-10.7	31.4	11.5	0.49	0.28	55.80
3,475.0	0.31	78.48	3,474.7	-10.6	31.6	11.4	0.57	-0.56	-19.64
3,500.0	0.37	82.30	3,499.7	-10.6	31.7	11.4	0.26	0.24	15.28
3,525.0	0.53	84.08	3,524.7	-10.6	31.9	11.4	0.64	0.64	7.12
3,550.0	0.66	84.02	3,549.7	-10.6	32.2	11.4	0.52	0.52	-0.24



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
3,575.0	0.69	86.14	3,574.7	-10.5	32.5	11.4	0.16	0.12	8.48
3,600.0	0.71	85.23	3,599.6	-10.5	32.8	11.4	0.09	0.08	-3.64
3,625.0	0.81	83.00	3,624.6	-10.5	33.1	11.3	0.42	0.40	-8.92
3,650.0	0.90	86.53	3,649.6	-10.5	33.5	11.3	0.42	0.36	14.12
3,675.0	1.01	83.56	3,674.6	-10.4	33.9	11.3	0.48	0.44	-11.88
3,700.0	1.14	86.95	3,699.6	-10.4	34.4	11.2	0.58	0.52	13.56
3,725.0	1.16	85.70	3,724.6	-10.4	34.9	11.2	0.13	0.08	-5.00
3,750.0	1.23	90.29	3,749.6	-10.3	35.4	11.2	0.47	0.28	18.36
3,775.0	1.42	92.10	3,774.6	-10.3	36.0	11.3	0.78	0.76	7.24
3,800.0	1.57	93.37	3,799.6	-10.4	36.6	11.3	0.61	0.60	5.08
3,825.0	1.60	94.52	3,824.6	-10.4	37.3	11.4	0.17	0.12	4.60
3,850.0	1.57	92.81	3,849.6	-10.5	38.0	11.4	0.22	-0.12	-6.84
3,875.0	1.62	94.67	3,874.6	-10.5	38.7	11.5	0.29	0.20	7.44
3,900.0	1.80	93.19	3,899.6	-10.6	39.4	11.6	0.74	0.72	-5.92
3,925.0	1.58	95.24	3,924.6	-10.6	40.2	11.6	0.91	-0.88	8.20
3,950.0	1.17	78.33	3,949.6	-10.6	40.7	11.6	2.29	-1.64	-67.64
3,975.0	0.86	57.36	3,974.5	-10.4	41.2	11.5	1.92	-1.24	-83.88
4,000.0	0.88	57.37	3,999.5	-10.2	41.5	11.3	0.08	0.08	0.04
4,025.0	0.84	49.14	4,024.5	-10.0	41.8	11.1	0.52	-0.16	-32.92
4,050.0	0.79	52.12	4,049.5	-9.8	42.1	10.9	0.26	-0.20	11.92
4,075.0	0.86	45.94	4,074.5	-9.6	42.3	10.6	0.45	0.28	-24.72
4,100.0	0.83	46.09	4,099.5	-9.3	42.6	10.4	0.12	-0.12	0.60
4,125.0	0.91	47.01	4,124.5	-9.0	42.9	10.1	0.32	0.32	3.68
4,150.0	0.89	47.29	4,149.5	-8.8	43.2	9.9	0.08	-0.08	1.12
4,175.0	0.76	47.16	4,174.5	-8.5	43.4	9.6	0.52	-0.52	-0.52
4,200.0	0.81	46.36	4,199.5	-8.3	43.7	9.4	0.20	0.20	-3.20
4,225.0	0.92	46.41	4,224.5	-8.0	43.9	9.1	0.44	0.44	0.20
4,250.0	0.78	45.34	4,249.5	-7.8	44.2	8.9	0.56	-0.56	-4.28
4,275.0	1.05	54.70	4,274.5	-7.5	44.5	8.6	1.23	1.08	37.44
4,300.0	1.08	58.50	4,299.5	-7.3	44.9	8.4	0.31	0.12	15.20
4,325.0	0.96	58.78	4,324.5	-7.0	45.3	8.2	0.48	-0.48	1.12
4,350.0	0.99	60.21	4,349.5	-6.8	45.6	8.0	0.15	0.12	5.72
4,375.0	1.07	61.78	4,374.5	-6.6	46.0	7.8	0.34	0.32	6.28
4,400.0	1.11	64.21	4,399.5	-6.4	46.5	7.6	0.24	0.16	9.72
4,425.0	1.14	70.09	4,424.5	-6.2	46.9	7.4	0.48	0.12	23.52
4,450.0	1.30	78.13	4,449.5	-6.1	47.4	7.3	0.94	0.64	32.16
4,475.0	1.44	76.50	4,474.5	-5.9	48.0	7.1	0.58	0.56	-6.52
4,500.0	1.52	77.84	4,499.5	-5.8	48.6	7.0	0.35	0.32	5.36
4,525.0	1.56	78.40	4,524.5	-5.6	49.3	6.9	0.17	0.16	2.24
4,550.0	1.53	79.18	4,549.5	-5.5	50.0	6.8	0.15	-0.12	3.12
4,575.0	1.47	79.64	4,574.4	-5.4	50.6	6.7	0.24	-0.24	1.84
4,600.0	1.61	81.29	4,599.4	-5.3	51.3	6.6	0.59	0.56	6.60
4,625.0	1.70	84.80	4,624.4	-5.2	52.0	6.5	0.54	0.36	14.04



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
4,650.0	1.75	85.17	4,649.4	-5.1	52.7	6.5	0.20	0.20	1.48
4,675.0	1.69	85.14	4,674.4	-5.1	53.5	6.4	0.24	-0.24	-0.12
4,700.0	1.48	83.98	4,699.4	-5.0	54.2	6.4	0.85	-0.84	-4.64
4,725.0	1.25	79.05	4,724.4	-4.9	54.8	6.3	1.03	-0.92	-19.72
4,750.0	1.05	78.27	4,749.4	-4.8	55.2	6.2	0.80	-0.80	-3.12
4,775.0	0.79	79.54	4,774.4	-4.7	55.6	6.1	1.04	-1.04	5.08
4,800.0	0.44	42.80	4,799.4	-4.6	55.9	6.0	2.04	-1.40	-146.96
4,825.0	0.37	31.92	4,824.4	-4.5	56.0	5.9	0.41	-0.28	-43.52
4,850.0	0.39	33.80	4,849.4	-4.4	56.1	5.8	0.09	0.08	7.52
4,875.0	0.41	31.89	4,874.4	-4.2	56.2	5.6	0.10	0.08	-7.64
4,900.0	0.46	31.54	4,899.4	-4.0	56.3	5.5	0.20	0.20	-1.40
4,925.0	0.64	51.33	4,924.4	-3.9	56.4	5.3	1.04	0.72	79.16
4,950.0	0.73	66.05	4,949.4	-3.7	56.7	5.2	0.79	0.36	58.88
4,975.0	0.94	65.90	4,974.4	-3.6	57.0	5.0	0.84	0.84	-0.60
5,000.0	0.92	66.76	4,999.4	-3.4	57.4	4.9	0.10	-0.08	3.44
5,025.0	0.88	68.00	5,024.4	-3.3	57.7	4.7	0.18	-0.16	4.96
5,050.0	0.89	65.90	5,049.4	-3.1	58.1	4.6	0.14	0.04	-8.40
5,075.0	0.89	62.53	5,074.4	-2.9	58.5	4.4	0.21	0.00	-13.48
5,100.0	0.93	55.64	5,099.4	-2.7	58.8	4.2	0.47	0.16	-27.56
5,125.0	0.83	53.38	5,124.3	-2.5	59.1	4.0	0.42	-0.40	-9.04
5,150.0	0.88	54.13	5,149.3	-2.3	59.4	3.8	0.20	0.20	3.00
5,175.0	0.96	53.65	5,174.3	-2.1	59.7	3.6	0.32	0.32	-1.92
5,200.0	1.04	57.01	5,199.3	-1.8	60.1	3.3	0.40	0.32	13.44
5,225.0	0.84	52.79	5,224.3	-1.6	60.4	3.1	0.85	-0.80	-16.88
5,250.0	1.00	54.06	5,249.3	-1.3	60.8	2.9	0.65	0.64	5.08
5,275.0	0.98	50.72	5,274.3	-1.1	61.1	2.6	0.24	-0.08	-13.36
5,300.0	0.91	49.80	5,299.3	-0.8	61.4	2.4	0.29	-0.28	-3.68
5,325.0	0.93	48.51	5,324.3	-0.5	61.7	2.1	0.12	0.08	-5.16
5,350.0	1.01	50.74	5,349.3	-0.3	62.0	1.8	0.35	0.32	8.92
5,375.0	1.03	50.15	5,374.3	0.0	62.4	1.6	0.09	0.08	-2.36
5,400.0	0.99	47.72	5,399.3	0.3	62.7	1.3	0.23	-0.16	-9.72
5,425.0	0.90	48.31	5,424.3	0.6	63.0	1.0	0.36	-0.36	2.36
5,450.0	1.09	46.29	5,449.3	0.9	63.3	0.7	0.77	0.76	-8.08
5,475.0	1.11	46.38	5,474.3	1.2	63.7	0.4	0.08	0.08	0.36
5,500.0	1.10	43.92	5,499.3	1.5	64.0	0.1	0.19	-0.04	-9.84
5,525.0	1.12	45.59	5,524.3	1.9	64.4	-0.3	0.15	0.08	6.68
5,550.0	1.11	45.07	5,549.3	2.2	64.7	-0.6	0.06	-0.04	-2.08
5,575.0	1.14	47.85	5,574.3	2.6	65.1	-0.9	0.25	0.12	11.12
5,600.0	1.12	46.77	5,599.3	2.9	65.4	-1.2	0.12	-0.08	-4.32
5,625.0	1.17	46.27	5,624.3	3.2	65.8	-1.6	0.20	0.20	-2.00
5,650.0	1.20	45.28	5,649.3	3.6	66.2	-1.9	0.15	0.12	-3.96
5,675.0	1.28	43.57	5,674.3	4.0	66.5	-2.3	0.35	0.32	-6.84
5,700.0	1.15	43.67	5,699.3	4.4	66.9	-2.7	0.52	-0.52	0.40



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
5,725.0	1.13	42.02	5,724.2	4.7	67.2	-3.0	0.15	-0.08	-6.60
5,750.0	0.84	28.63	5,749.2	5.1	67.5	-3.4	1.47	-1.16	-53.56
5,775.0	0.68	5.08	5,774.2	5.4	67.6	-3.7	1.39	-0.64	-94.20
5,800.0	0.67	348.65	5,799.2	5.7	67.6	-4.0	0.77	-0.04	-65.72
5,825.0	0.75	343.39	5,824.2	6.0	67.5	-4.3	0.41	0.32	-21.04
5,850.0	0.70	341.36	5,849.2	6.3	67.4	-4.6	0.22	-0.20	-8.12
5,875.0	0.70	335.09	5,874.2	6.6	67.3	-4.9	0.31	0.00	-25.08
5,900.0	0.75	335.03	5,899.2	6.9	67.2	-5.2	0.20	0.20	-0.24
5,925.0	0.76	338.26	5,924.2	7.2	67.0	-5.5	0.17	0.04	12.92
5,950.0	0.75	335.86	5,949.2	7.5	66.9	-5.8	0.13	-0.04	-9.60
5,975.0	0.76	331.74	5,974.2	7.8	66.8	-6.1	0.22	0.04	-16.48
6,000.0	0.77	333.24	5,999.2	8.1	66.6	-6.4	0.09	0.04	6.00
6,025.0	0.73	332.72	6,024.2	8.3	66.5	-6.7	0.16	-0.16	-2.08
6,050.0	0.73	334.42	6,049.2	8.6	66.3	-6.9	0.09	0.00	6.80
6,075.0	0.79	331.59	6,074.2	8.9	66.2	-7.2	0.28	0.24	-11.32
6,100.0	0.75	335.60	6,099.2	9.2	66.0	-7.6	0.27	-0.16	16.04
6,125.0	0.73	335.89	6,124.2	9.5	65.9	-7.8	0.08	-0.08	1.16
6,150.0	0.74	336.33	6,149.2	9.8	65.8	-8.1	0.05	0.04	1.76
6,175.0	0.71	329.93	6,174.2	10.1	65.6	-8.4	0.35	-0.12	-25.60
6,200.0	0.78	335.92	6,199.2	10.4	65.5	-8.7	0.42	0.28	23.96
6,225.0	0.75	334.39	6,224.2	10.7	65.3	-9.0	0.15	-0.12	-6.12
6,250.0	0.68	333.25	6,249.2	11.0	65.2	-9.3	0.29	-0.28	-4.56
6,275.0	0.75	334.16	6,274.2	11.2	65.0	-9.6	0.28	0.28	3.64
6,300.0	0.77	345.63	6,299.2	11.6	64.9	-9.9	0.61	0.08	45.88
6,325.0	0.63	16.91	6,324.2	11.9	64.9	-10.2	1.60	-0.56	125.12
6,350.0	0.77	47.30	6,349.2	12.1	65.1	-10.4	1.56	0.56	121.56
6,375.0	0.68	57.86	6,374.2	12.3	65.3	-10.6	0.64	-0.36	42.24
6,400.0	0.71	58.28	6,399.2	12.4	65.6	-10.8	0.12	0.12	1.68
6,425.0	0.78	63.68	6,424.2	12.6	65.9	-10.9	0.40	0.28	21.60
6,450.0	0.82	61.84	6,449.2	12.8	66.2	-11.1	0.19	0.16	-7.36
6,475.0	0.73	60.91	6,474.2	12.9	66.5	-11.2	0.36	-0.36	-3.72
6,500.0	0.75	56.68	6,499.2	13.1	66.8	-11.4	0.23	0.08	-16.92
6,525.0	0.66	58.11	6,524.2	13.3	67.0	-11.6	0.37	-0.36	5.72
6,550.0	0.85	58.68	6,549.2	13.4	67.3	-11.7	0.76	0.76	2.28
6,575.0	0.88	62.40	6,574.2	13.6	67.6	-11.9	0.25	0.12	14.88
6,600.0	0.90	59.85	6,599.2	13.8	68.0	-12.1	0.18	0.08	-10.20
6,625.0	0.81	56.76	6,624.2	14.0	68.3	-12.3	0.40	-0.36	-12.36
6,650.0	0.90	58.52	6,649.2	14.2	68.6	-12.5	0.37	0.36	7.04
6,675.0	0.92	58.52	6,674.2	14.4	69.0	-12.7	0.08	0.08	0.00
6,700.0	0.88	61.41	6,699.2	14.6	69.3	-12.8	0.24	-0.16	11.56
6,725.0	0.95	59.97	6,724.2	14.8	69.6	-13.0	0.29	0.28	-5.76
6,750.0	1.04	63.93	6,749.2	15.0	70.0	-13.2	0.45	0.36	15.84
6,775.0	1.07	64.13	6,774.1	15.2	70.4	-13.4	0.12	0.12	0.80
6,800.0	1.12	64.40	6,799.1	15.4	70.9	-13.6	0.20	0.20	1.08



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
6,825.0	1.13	62.27	6,824.1	15.6	71.3	-13.8	0.17	0.04	-8.52
6,850.0	1.17	63.48	6,849.1	15.9	71.8	-14.0	0.19	0.16	4.84
6,875.0	1.13	63.12	6,874.1	16.1	72.2	-14.3	0.16	-0.16	-1.44
6,900.0	1.18	62.21	6,899.1	16.3	72.6	-14.5	0.21	0.20	-3.64
6,925.0	1.24	63.63	6,924.1	16.6	73.1	-14.7	0.27	0.24	5.68
6,950.0	1.16	65.27	6,949.1	16.8	73.6	-14.9	0.35	-0.32	6.56
6,975.0	1.22	64.14	6,974.1	17.0	74.1	-15.1	0.26	0.24	-4.52
7,000.0	1.26	62.81	6,999.1	17.2	74.5	-15.4	0.20	0.16	-5.32
7,025.0	1.21	62.80	7,024.1	17.5	75.0	-15.6	0.20	-0.20	-0.04
7,050.0	1.26	64.97	7,049.1	17.7	75.5	-15.8	0.27	0.20	8.68
7,075.0	1.19	63.51	7,074.1	18.0	76.0	-16.0	0.31	-0.28	-5.84
7,100.0	1.21	65.81	7,099.1	18.2	76.5	-16.2	0.21	0.08	9.20
7,125.0	1.28	63.83	7,124.1	18.4	77.0	-16.5	0.33	0.28	-7.92
7,150.0	1.36	64.48	7,149.1	18.7	77.5	-16.7	0.33	0.32	2.60
7,175.0	1.36	62.96	7,174.1	18.9	78.0	-17.0	0.14	0.00	-6.08
7,200.0	1.36	66.21	7,199.1	19.2	78.5	-17.2	0.31	0.00	13.00
7,225.0	1.35	65.48	7,224.0	19.4	79.1	-17.4	0.08	-0.04	-2.92
7,250.0	1.45	63.90	7,249.0	19.7	79.6	-17.7	0.43	0.40	-6.32
7,275.0	1.42	63.87	7,274.0	20.0	80.2	-17.9	0.12	-0.12	-0.12
7,300.0	1.45	64.75	7,299.0	20.2	80.8	-18.2	0.15	0.12	3.52
7,325.0	1.51	64.43	7,324.0	20.5	81.3	-18.5	0.24	0.24	-1.28
7,350.0	1.58	64.41	7,349.0	20.8	81.9	-18.7	0.28	0.28	-0.08
7,375.0	1.68	65.96	7,374.0	21.1	82.6	-19.0	0.44	0.40	6.20
7,400.0	1.46	62.94	7,399.0	21.4	83.2	-19.3	0.94	-0.88	-12.08
7,425.0	1.54	65.93	7,424.0	21.7	83.8	-19.6	0.45	0.32	11.96
7,450.0	1.54	64.69	7,449.0	22.0	84.4	-19.8	0.13	0.00	-4.96
7,475.0	1.65	66.66	7,474.0	22.2	85.0	-20.1	0.49	0.44	7.88
7,500.0	1.69	66.84	7,498.9	22.5	85.7	-20.4	0.16	0.16	0.72
7,525.0	1.67	69.26	7,523.9	22.8	86.4	-20.6	0.29	-0.08	9.68
7,550.0	1.64	68.09	7,548.9	23.1	87.1	-20.9	0.18	-0.12	-4.68
7,575.0	1.72	67.11	7,573.9	23.4	87.7	-21.1	0.34	0.32	-3.92
7,600.0	1.65	66.45	7,598.9	23.6	88.4	-21.4	0.29	-0.28	-2.64
7,625.0	1.65	66.31	7,623.9	23.9	89.1	-21.7	0.02	0.00	-0.56
7,650.0	1.70	70.91	7,648.9	24.2	89.8	-21.9	0.57	0.20	18.40
7,675.0	1.64	68.84	7,673.9	24.4	90.4	-22.1	0.34	-0.24	-8.28
7,700.0	1.76	71.13	7,698.9	24.7	91.1	-22.4	0.55	0.48	9.16
7,725.0	1.72	67.81	7,723.9	25.0	91.9	-22.6	0.43	-0.16	-13.28
7,750.0	1.73	69.61	7,748.8	25.2	92.6	-22.9	0.22	0.04	7.20
7,775.0	1.81	69.21	7,773.8	25.5	93.3	-23.1	0.32	0.32	-1.60
7,800.0	1.77	68.32	7,798.8	25.8	94.0	-23.4	0.19	-0.16	-3.56
7,825.0	1.66	70.68	7,823.8	26.1	94.7	-23.7	0.52	-0.44	9.44
7,850.0	1.78	71.09	7,848.8	26.3	95.4	-23.9	0.48	0.48	1.64
7,875.0	1.86	71.61	7,873.8	26.6	96.2	-24.1	0.33	0.32	2.08



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
7,900.0	1.73	71.25	7,898.8	26.8	96.9	-24.3	0.52	-0.52	-1.44
7,925.0	1.63	72.31	7,923.8	27.0	97.6	-24.6	0.42	-0.40	4.24
7,950.0	1.51	75.10	7,948.7	27.2	98.3	-24.7	0.57	-0.48	11.16
7,975.0	1.48	74.89	7,973.7	27.4	98.9	-24.9	0.12	-0.12	-0.84
8,000.0	1.07	79.87	7,998.7	27.5	99.4	-25.0	1.70	-1.64	19.92
8,025.0	0.69	108.53	8,023.7	27.5	99.8	-25.0	2.28	-1.52	114.64
8,050.0	0.45	120.06	8,048.7	27.4	100.0	-24.9	1.06	-0.96	46.12
8,075.0	0.52	131.25	8,073.7	27.3	100.2	-24.7	0.47	0.28	44.76
8,100.0	0.54	123.61	8,098.7	27.2	100.4	-24.6	0.29	0.08	-30.56
8,125.0	0.48	130.12	8,123.7	27.0	100.6	-24.5	0.33	-0.24	26.04
8,150.0	0.48	130.53	8,148.7	26.9	100.7	-24.3	0.01	0.00	1.64
8,175.0	0.50	125.34	8,173.7	26.8	100.9	-24.2	0.19	0.08	-20.76
8,200.0	0.51	123.83	8,198.7	26.6	101.1	-24.1	0.07	0.04	-6.04
8,225.0	0.50	128.79	8,223.7	26.5	101.3	-23.9	0.18	-0.04	19.84
8,250.0	0.39	126.41	8,248.7	26.4	101.4	-23.8	0.45	-0.44	-9.52
8,275.0	0.46	124.83	8,273.7	26.3	101.6	-23.7	0.28	0.28	-6.32
8,300.0	0.57	127.91	8,298.7	26.1	101.7	-23.6	0.45	0.44	12.32
8,325.0	0.50	122.66	8,323.7	26.0	101.9	-23.4	0.34	-0.28	-21.00
8,350.0	0.48	127.77	8,348.7	25.9	102.1	-23.3	0.19	-0.08	20.44
8,375.0	0.46	127.69	8,373.7	25.8	102.3	-23.2	0.08	-0.08	-0.32
8,400.0	0.49	126.68	8,398.7	25.6	102.4	-23.0	0.12	0.12	-4.04
8,425.0	0.52	131.24	8,423.7	25.5	102.6	-22.9	0.20	0.12	18.24
8,450.0	0.58	130.99	8,448.7	25.3	102.8	-22.7	0.24	0.24	-1.00
8,475.0	0.51	125.27	8,473.7	25.2	103.0	-22.6	0.35	-0.28	-22.88
8,500.0	0.48	125.38	8,498.7	25.1	103.1	-22.4	0.12	-0.12	0.44
8,525.0	0.44	123.02	8,523.7	24.9	103.3	-22.3	0.18	-0.16	-9.44
8,550.0	0.55	129.22	8,548.7	24.8	103.5	-22.2	0.49	0.44	24.80
8,575.0	0.66	128.39	8,573.7	24.7	103.7	-22.0	0.44	0.44	-3.32
8,600.0	0.52	136.00	8,598.7	24.5	103.9	-21.8	0.64	-0.56	30.44
8,625.0	0.56	122.31	8,623.7	24.3	104.1	-21.7	0.54	0.16	-54.76
8,650.0	0.59	127.61	8,648.7	24.2	104.3	-21.5	0.24	0.12	21.20
8,675.0	0.62	125.94	8,673.7	24.0	104.5	-21.4	0.14	0.12	-6.68
8,700.0	0.57	122.46	8,698.7	23.9	104.7	-21.2	0.25	-0.20	-13.92
8,725.0	0.51	116.14	8,723.7	23.8	104.9	-21.1	0.34	-0.24	-25.28
8,750.0	0.55	123.25	8,748.7	23.7	105.1	-21.0	0.31	0.16	28.44
8,775.0	0.68	117.47	8,773.7	23.5	105.3	-20.9	0.58	0.52	-23.12
8,800.0	0.63	114.19	8,798.7	23.4	105.6	-20.7	0.25	-0.20	-13.12
8,825.0	0.63	107.26	8,823.7	23.3	105.8	-20.6	0.30	0.00	-27.72
8,850.0	0.69	112.03	8,848.7	23.2	106.1	-20.5	0.33	0.24	19.08
8,875.0	0.79	106.39	8,873.7	23.1	106.4	-20.4	0.49	0.40	-22.56
8,900.0	0.74	105.01	8,898.7	23.0	106.7	-20.3	0.21	-0.20	-5.52
8,925.0	0.78	101.97	8,923.7	22.9	107.1	-20.2	0.23	0.16	-12.16
8,950.0	0.76	99.94	8,948.7	22.9	107.4	-20.1	0.14	-0.08	-8.12



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
8,975.0	0.73	91.83	8,973.7	22.8	107.7	-20.1	0.44	-0.12	-32.44
9,000.0	0.86	91.60	8,998.7	22.8	108.1	-20.1	0.52	0.52	-0.92
9,025.0	0.85	89.27	9,023.7	22.8	108.4	-20.1	0.14	-0.04	-9.32
9,050.0	0.85	89.48	9,048.7	22.8	108.8	-20.1	0.01	0.00	0.84
9,075.0	0.80	91.24	9,073.7	22.8	109.2	-20.1	0.22	-0.20	7.04
9,100.0	0.83	89.41	9,098.7	22.8	109.5	-20.0	0.16	0.12	-7.32
9,125.0	0.88	87.83	9,123.7	22.8	109.9	-20.0	0.22	0.20	-6.32
9,150.0	0.89	89.85	9,148.7	22.8	110.3	-20.0	0.13	0.04	8.08
9,175.0	0.97	87.95	9,173.7	22.8	110.7	-20.0	0.34	0.32	-7.60
9,200.0	0.92	90.00	9,198.7	22.9	111.1	-20.0	0.24	-0.20	8.20
9,225.0	0.97	84.61	9,223.7	22.9	111.5	-20.0	0.41	0.20	-21.56
9,250.0	1.02	85.24	9,248.7	22.9	111.9	-20.1	0.20	0.20	2.52
9,275.0	1.03	82.64	9,273.6	23.0	112.4	-20.1	0.19	0.04	-10.40
9,300.0	1.07	82.40	9,298.6	23.0	112.8	-20.2	0.16	0.16	-0.96
9,325.0	1.04	81.26	9,323.6	23.1	113.3	-20.2	0.15	-0.12	-4.56
9,350.0	1.09	81.09	9,348.6	23.2	113.8	-20.3	0.20	0.20	-0.68
9,375.0	1.14	82.82	9,373.6	23.2	114.2	-20.3	0.24	0.20	6.92
9,400.0	1.18	78.94	9,398.6	23.3	114.7	-20.4	0.35	0.16	-15.52
9,425.0	1.14	72.83	9,423.6	23.4	115.2	-20.5	0.52	-0.16	-24.44
9,450.0	1.14	75.76	9,448.6	23.6	115.7	-20.6	0.23	0.00	11.72
9,475.0	1.20	69.78	9,473.6	23.7	116.2	-20.8	0.54	0.24	-23.92
9,500.0	1.21	69.91	9,498.6	23.9	116.7	-20.9	0.04	0.04	0.52
9,525.0	1.21	68.88	9,523.6	24.1	117.2	-21.1	0.09	0.00	-4.12
9,550.0	1.22	70.08	9,548.6	24.3	117.7	-21.3	0.11	0.04	4.80
9,575.0	1.15	70.03	9,573.6	24.4	118.2	-21.4	0.28	-0.28	-0.20
9,600.0	1.10	65.89	9,598.6	24.6	118.6	-21.6	0.38	-0.20	-16.56
9,625.0	1.15	61.30	9,623.6	24.8	119.1	-21.8	0.41	0.20	-18.36
9,650.0	1.04	59.31	9,648.6	25.1	119.5	-22.0	0.47	-0.44	-7.96
9,675.0	1.10	58.72	9,673.6	25.3	119.9	-22.3	0.24	0.24	-2.36
9,700.0	1.04	54.15	9,698.6	25.6	120.3	-22.5	0.42	-0.24	-18.28
9,725.0	0.95	56.69	9,723.6	25.8	120.6	-22.8	0.40	-0.36	10.16
9,750.0	1.08	51.15	9,748.6	26.1	121.0	-23.0	0.65	0.52	-22.16
9,775.0	1.03	52.45	9,773.6	26.4	121.3	-23.3	0.22	-0.20	5.20
9,800.0	1.01	53.71	9,798.5	26.6	121.7	-23.6	0.12	-0.08	5.04
9,825.0	1.03	54.60	9,823.5	26.9	122.1	-23.8	0.10	0.08	3.56
9,850.0	1.01	55.26	9,848.5	27.2	122.4	-24.0	0.09	-0.08	2.64
9,875.0	1.10	54.10	9,873.5	27.4	122.8	-24.3	0.37	0.36	-4.64
9,900.0	1.03	54.13	9,898.5	27.7	123.2	-24.6	0.28	-0.28	0.12
9,925.0	1.09	51.35	9,923.5	28.0	123.5	-24.8	0.32	0.24	-11.12
9,950.0	1.01	48.95	9,948.5	28.3	123.9	-25.1	0.37	-0.32	-9.60
9,975.0	1.12	46.15	9,973.5	28.6	124.2	-25.4	0.49	0.44	-11.20
10,000.0	1.19	50.46	9,998.5	28.9	124.6	-25.8	0.45	0.28	17.24
10,025.0	1.12	49.48	10,023.5	29.2	125.0	-26.1	0.29	-0.28	-3.92
10,050.0	1.13	48.55	10,048.5	29.6	125.4	-26.4	0.08	0.04	-3.72



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
10,075.0	1.07	49.56	10,073.5	29.9	125.7	-26.7	0.25	-0.24	4.04
10,100.0	1.16	49.19	10,098.5	30.2	126.1	-27.0	0.36	0.36	-1.48
10,125.0	1.09	49.05	10,123.5	30.5	126.5	-27.3	0.28	-0.28	-0.56
10,150.0	1.09	48.15	10,148.5	30.8	126.8	-27.6	0.07	0.00	-3.60
10,175.0	1.09	45.27	10,173.5	31.2	127.2	-27.9	0.22	0.00	-11.52
10,200.0	1.06	47.11	10,198.5	31.5	127.5	-28.2	0.18	-0.12	7.36
10,225.0	0.97	42.43	10,223.5	31.8	127.8	-28.5	0.49	-0.36	-18.72
10,250.0	0.85	44.40	10,248.5	32.1	128.1	-28.8	0.50	-0.48	7.88
10,275.0	0.95	39.86	10,273.5	32.4	128.4	-29.1	0.49	0.40	-18.16
10,300.0	0.92	30.06	10,298.5	32.7	128.6	-29.4	0.65	-0.12	-39.20
10,325.0	1.00	27.03	10,323.5	33.1	128.8	-29.8	0.38	0.32	-12.12
10,350.0	1.00	19.14	10,348.5	33.5	129.0	-30.2	0.55	0.00	-31.56
10,375.0	1.25	9.54	10,373.5	33.9	129.1	-30.7	1.25	1.00	-38.40
10,400.0	1.48	6.01	10,398.4	34.5	129.2	-31.3	0.98	0.92	-14.12
10,425.0	1.49	3.75	10,423.4	35.2	129.2	-31.9	0.24	0.04	-9.04
10,450.0	1.45	4.21	10,448.4	35.8	129.3	-32.5	0.17	-0.16	1.84
10,475.0	1.53	4.40	10,473.4	36.5	129.3	-33.2	0.32	0.32	0.76
10,500.0	1.53	2.47	10,498.4	37.1	129.3	-33.9	0.21	0.00	-7.72
10,525.0	1.53	4.81	10,523.4	37.8	129.4	-34.5	0.25	0.00	9.36
10,550.0	1.51	3.23	10,548.4	38.5	129.4	-35.2	0.19	-0.08	-6.32
10,575.0	1.42	6.60	10,573.4	39.1	129.5	-35.8	0.50	-0.36	13.48
10,600.0	1.22	7.40	10,598.4	39.7	129.6	-36.4	0.80	-0.80	3.20
10,625.0	1.00	4.47	10,623.4	40.2	129.6	-36.9	0.91	-0.88	-11.72
10,650.0	0.95	358.49	10,648.4	40.6	129.6	-37.3	0.45	-0.20	-23.92
10,675.0	0.86	359.09	10,673.4	41.0	129.6	-37.7	0.36	-0.36	2.40
10,700.0	0.83	356.18	10,698.4	41.3	129.6	-38.1	0.21	-0.12	-11.64
10,725.0	0.79	355.90	10,723.4	41.7	129.6	-38.4	0.16	-0.16	-1.12
10,750.0	0.83	354.57	10,748.4	42.0	129.5	-38.8	0.18	0.16	-5.32
10,775.0	0.83	353.20	10,773.4	42.4	129.5	-39.1	0.08	0.00	-5.48
10,800.0	0.79	354.56	10,798.4	42.8	129.5	-39.5	0.18	-0.16	5.44
10,825.0	0.83	349.46	10,823.3	43.1	129.4	-39.8	0.33	0.16	-20.40
10,850.0	0.69	353.04	10,848.3	43.4	129.4	-40.1	0.59	-0.56	14.32
10,875.0	0.70	352.32	10,873.3	43.7	129.3	-40.5	0.05	0.04	-2.88
10,900.0	0.72	351.10	10,898.3	44.0	129.3	-40.8	0.10	0.08	-4.88
10,925.0	0.68	350.93	10,923.3	44.3	129.2	-41.1	0.16	-0.16	-0.68
10,950.0	0.70	351.15	10,948.3	44.6	129.2	-41.4	0.08	0.08	0.88
10,975.0	0.68	344.32	10,973.3	44.9	129.1	-41.7	0.34	-0.08	-27.32
11,000.0	0.68	340.88	10,998.3	45.2	129.0	-41.9	0.16	0.00	-13.76
11,025.0	0.61	341.50	11,023.3	45.5	128.9	-42.2	0.28	-0.28	2.48
11,050.0	0.46	337.64	11,048.3	45.7	128.9	-42.4	0.62	-0.60	-15.44
11,075.0	0.44	332.26	11,073.3	45.9	128.8	-42.6	0.19	-0.08	-21.52
11,100.0	0.37	318.87	11,098.3	46.0	128.7	-42.8	0.47	-0.28	-53.56
11,125.0	0.32	331.48	11,123.3	46.1	128.6	-42.9	0.36	-0.20	50.44



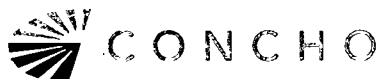
Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
11,150.0	0.32	309.35	11,148.3	46.3	128.5	-43.0	0.49	0.00	-88.52
11,175.0	0.30	316.85	11,173.3	46.3	128.4	-43.1	0.18	-0.08	30.00
11,200.0	0.31	320.11	11,198.3	46.4	128.3	-43.2	0.08	0.04	13.04
11,225.0	0.34	316.98	11,223.3	46.6	128.2	-43.3	0.14	0.12	-12.52
11,250.0	0.23	304.55	11,248.3	46.6	128.1	-43.4	0.50	-0.44	-49.72
11,275.0	0.10	295.49	11,273.3	46.7	128.1	-43.4	0.53	-0.52	-36.24
11,300.0	0.16	234.87	11,298.3	46.7	128.0	-43.4	0.56	0.24	-242.48
11,325.0	0.24	202.51	11,323.3	46.6	128.0	-43.3	0.54	0.32	-129.44
11,350.0	0.44	189.02	11,348.3	46.5	127.9	-43.2	0.86	0.80	-53.96
11,375.0	0.60	187.44	11,373.3	46.2	127.9	-43.0	0.64	0.64	-6.32
11,400.0	0.70	183.57	11,398.3	45.9	127.9	-42.7	0.44	0.40	-15.48
11,425.0	0.69	181.93	11,423.3	45.6	127.9	-42.4	0.09	-0.04	-6.56
11,450.0	0.64	191.66	11,448.3	45.4	127.8	-42.1	0.49	-0.20	38.92
11,475.0	0.71	183.23	11,473.3	45.1	127.8	-41.8	0.49	0.28	-33.72
11,500.0	0.72	183.80	11,498.3	44.8	127.8	-41.5	0.05	0.04	2.28
11,525.0	0.77	181.57	11,523.3	44.4	127.8	-41.2	0.23	0.20	-8.92
11,550.0	0.79	183.99	11,548.3	44.1	127.7	-40.8	0.15	0.08	9.68
11,575.0	0.80	194.20	11,573.3	43.7	127.7	-40.5	0.57	0.04	40.84
11,600.0	0.81	203.68	11,598.3	43.4	127.6	-40.2	0.53	0.04	37.92
11,625.0	0.88	211.58	11,623.3	43.1	127.4	-39.9	0.54	0.28	31.60
11,650.0	0.91	216.13	11,648.3	42.8	127.2	-39.5	0.31	0.12	18.20
11,675.0	0.95	221.27	11,673.3	42.4	126.9	-39.2	0.37	0.16	20.56
11,700.0	0.99	224.09	11,698.3	42.1	126.6	-38.9	0.25	0.16	11.28
11,725.0	0.99	225.34	11,723.3	41.8	126.3	-38.6	0.09	0.00	5.00
11,750.0	0.90	226.19	11,748.3	41.5	126.0	-38.3	0.36	-0.36	3.40
11,775.0	0.81	230.42	11,773.3	41.3	125.8	-38.1	0.44	-0.36	16.92
11,800.0	0.63	229.10	11,798.3	41.1	125.5	-37.9	0.72	-0.72	-5.28
11,825.0	0.54	229.07	11,823.3	40.9	125.3	-37.7	0.36	-0.36	-0.12
11,850.0	0.55	232.72	11,848.3	40.8	125.2	-37.6	0.14	0.04	14.60
11,875.0	0.47	243.72	11,873.3	40.7	125.0	-37.5	0.50	-0.32	44.00
11,900.0	0.47	220.76	11,898.3	40.5	124.8	-37.4	0.75	0.00	-91.84
11,922.0	0.46	227.88	11,920.3	40.4	124.7	-37.2	0.27	-0.05	32.36
12,097.0	0.51	208.15	12,095.3	39.2	123.8	-36.1	0.10	0.03	-11.27
12,129.0	0.42	209.50	12,127.3	39.0	123.7	-35.9	0.28	-0.28	4.22
12,161.0	2.00	188.87	12,159.3	38.4	123.5	-35.2	5.04	4.94	-64.47
12,192.0	5.64	198.91	12,190.2	36.4	122.9	-33.3	11.89	11.74	32.39
12,224.0	9.16	197.63	12,221.9	32.5	121.7	-29.4	11.01	11.00	-4.00
12,256.0	12.32	195.15	12,253.4	26.8	120.0	-23.7	9.98	9.88	-7.75
12,287.0	15.27	188.81	12,283.5	19.5	118.5	-16.5	10.68	9.52	-20.45
12,318.0	18.46	182.08	12,313.1	10.6	117.7	-7.6	12.05	10.29	-21.71
12,349.0	21.39	181.44	12,342.3	0.0	117.4	-2.9	9.48	9.45	-2.06
12,381.0	22.94	180.41	12,371.9	-12.0	117.2	15.0	4.99	4.84	-3.22
12,412.0	25.72	178.84	12,400.1	-24.8	117.3	27.8	9.21	8.97	-5.06



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
12,444.0	28.95	179.44	12,428.6	-39.5	117.5	42.5	10.13	10.09	1.88
12,476.0	31.24	179.74	12,456.3	-55.6	117.6	58.5	7.17	7.16	0.94
12,508.0	34.80	179.83	12,483.1	-73.0	117.7	75.9	11.13	11.13	0.28
12,539.0	38.52	179.65	12,507.9	-91.5	117.8	94.4	12.00	12.00	-0.58
12,571.0	42.14	181.08	12,532.3	-112.2	117.6	115.1	11.68	11.31	4.47
12,581.5	43.03	181.01	12,540.1	-119.3	117.5	122.2	8.46	8.45	-0.63
FTP @ 12581.5' MD, 330' FNL, 1104' FWL									
12,602.0	44.76	180.89	12,554.8	-133.5	117.3	136.4	8.46	8.45	-0.60
12,634.0	47.32	180.18	12,577.0	-156.5	117.1	159.5	8.16	8.00	-2.22
12,665.0	50.15	179.62	12,597.5	-179.8	117.1	182.7	9.23	9.13	-1.81
12,697.0	53.97	177.36	12,617.2	-205.1	117.8	208.0	13.17	11.94	-7.06
12,729.0	57.92	176.51	12,635.1	-231.5	119.2	234.5	12.54	12.34	-2.66
12,761.0	61.08	175.26	12,651.3	-259.0	121.2	262.0	10.43	9.88	-3.91
12,792.0	63.90	174.07	12,665.6	-286.4	123.7	289.4	9.71	9.10	-3.84
12,824.0	65.48	174.09	12,679.3	-315.2	126.7	318.3	4.94	4.94	0.06
12,855.0	67.46	174.77	12,691.7	-343.5	129.5	346.6	6.70	6.39	2.19
12,887.0	69.25	174.58	12,703.5	-373.1	132.2	376.3	5.62	5.59	-0.59
12,918.0	71.75	174.50	12,713.8	-402.2	135.0	405.4	8.07	8.06	-0.26
12,950.0	75.26	173.77	12,722.9	-432.7	138.2	436.0	11.18	10.97	-2.28
12,981.0	78.11	174.52	12,730.1	-462.7	141.2	466.1	9.49	9.19	2.42
13,013.0	80.28	175.47	12,736.1	-494.0	144.0	497.5	7.38	6.78	2.97
13,045.0	82.69	176.13	12,740.8	-525.6	146.3	529.1	7.80	7.53	2.06
13,076.0	83.99	176.69	12,744.4	-556.3	148.2	559.9	4.56	4.19	1.81
13,108.0	85.43	177.27	12,747.4	-588.1	149.9	591.7	4.85	4.50	1.81
13,176.0	87.39	177.98	12,751.6	-655.9	152.7	659.6	3.06	2.88	1.04
13,272.0	88.68	177.48	12,754.9	-751.8	156.5	755.5	1.44	1.34	-0.52
13,366.0	87.65	178.52	12,757.9	-845.7	159.8	849.4	1.56	-1.10	1.11
13,461.0	87.06	178.64	12,762.3	-940.5	162.1	944.3	0.63	-0.62	0.13
13,556.0	88.32	180.06	12,766.1	-1,035.4	163.2	1,039.2	2.00	1.33	1.49
13,650.0	90.06	179.97	12,767.5	-1,129.4	163.2	1,133.2	1.85	1.85	-0.10
13,745.0	87.62	178.53	12,769.4	-1,224.4	164.4	1,228.2	2.98	-2.57	-1.52
13,840.0	87.36	178.35	12,773.5	-1,319.3	167.0	1,323.1	0.33	-0.27	-0.19
13,934.0	88.18	178.79	12,777.2	-1,413.2	169.4	1,417.0	0.99	0.87	0.47
14,029.0	87.14	177.47	12,781.1	-1,508.0	172.5	1,511.9	1.77	-1.09	-1.39
14,123.0	87.20	179.36	12,785.7	-1,601.9	175.1	1,605.8	2.01	0.06	2.01
14,217.0	88.46	180.03	12,789.3	-1,695.8	175.6	1,699.7	1.52	1.34	0.71
14,312.0	89.13	180.38	12,791.3	-1,790.8	175.2	1,794.6	0.80	0.71	0.37
14,407.0	87.06	180.66	12,794.4	-1,885.7	174.4	1,889.5	2.20	-2.18	0.29
14,501.0	86.13	180.83	12,800.0	-1,979.5	173.1	1,983.3	1.01	-0.99	0.18
14,596.0	88.15	179.56	12,804.8	-2,074.4	172.8	2,078.1	2.51	2.13	-1.34
14,690.0	84.31	178.46	12,810.9	-2,168.2	174.4	2,171.9	4.25	-4.09	-1.17
14,785.0	82.33	176.57	12,822.0	-2,262.4	178.5	2,266.2	2.87	-2.08	-1.99
14,879.0	83.94	176.97	12,833.2	-2,355.6	183.8	2,359.5	1.76	1.71	0.43
14,974.0	84.48	176.95	12,842.8	-2,450.0	188.8	2,454.0	0.57	0.57	-0.02



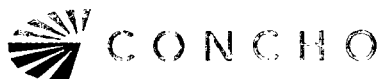
Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
15,067.0	- 84.42	177.34	12,851.8	-2,542.5	193.4	2,546.5	0.42	-0.06	0.42
15,162.0	84.25	177.21	12,861.2	-2,636.9	197.9	2,641.0	0.22	-0.18	-0.14
15,257.0	86.41	178.77	12,868.9	-2,731.5	201.2	2,735.7	2.80	2.27	1.64
15,352.0	86.25	179.10	12,875.0	-2,826.3	203.0	2,830.5	0.39	-0.17	0.35
15,447.0	87.42	179.06	12,880.2	-2,921.1	204.5	2,925.4	1.23	1.23	-0.04
15,541.0	88.57	179.61	12,883.5	-3,015.1	205.6	3,019.3	1.36	1.22	0.59
15,636.0	87.98	178.94	12,886.4	-3,110.0	206.8	3,114.2	0.94	-0.62	-0.71
15,730.0	88.57	179.23	12,889.2	-3,204.0	208.3	3,208.2	0.70	0.63	0.31
15,825.0	88.01	178.24	12,892.0	-3,298.9	210.4	3,303.2	1.20	-0.59	-1.04
15,919.0	88.54	181.07	12,894.9	-3,392.8	210.9	3,397.1	3.06	0.56	3.01
16,014.0	88.57	180.77	12,897.3	-3,487.8	209.4	3,492.0	0.32	0.03	-0.32
16,108.0	88.43	179.84	12,899.7	-3,581.8	208.9	3,585.9	1.00	-0.15	-0.99
16,202.0	89.27	179.91	12,901.6	-3,675.7	209.1	3,679.8	0.90	0.89	0.07
16,297.0	89.55	179.84	12,902.6	-3,770.7	209.3	3,774.8	0.30	0.29	-0.07
16,391.0	90.14	178.76	12,902.9	-3,864.7	210.5	3,868.8	1.31	0.63	-1.15
16,486.0	91.32	178.43	12,901.6	-3,959.7	212.8	3,963.8	1.29	1.24	-0.35
16,580.0	91.43	179.57	12,899.4	-4,053.6	214.5	4,057.8	1.22	0.12	1.21
16,675.0	89.27	179.78	12,898.8	-4,148.6	215.0	4,152.7	2.28	-2.27	0.22
16,769.0	88.15	180.18	12,900.9	-4,242.6	215.0	4,246.7	1.27	-1.19	0.43
16,864.0	88.21	179.83	12,903.9	-4,337.6	215.0	4,341.6	0.37	0.06	-0.37
16,958.0	88.24	179.69	12,906.9	-4,431.5	215.4	4,435.5	0.15	0.03	-0.15
17,052.0	89.66	179.59	12,908.6	-4,525.5	216.0	4,529.5	1.51	1.51	-0.11
17,147.0	89.61	179.19	12,909.2	-4,620.5	217.0	4,624.5	0.42	-0.05	-0.42
17,242.0	90.25	180.02	12,909.3	-4,715.5	217.7	4,719.5	1.10	0.67	0.87
17,337.0	88.88	180.42	12,910.0	-4,810.5	217.3	4,814.4	1.50	-1.44	0.42
17,431.0	88.63	180.54	12,912.1	-4,904.4	216.5	4,908.4	0.29	-0.27	0.13
17,526.0	86.25	180.07	12,916.3	-4,999.3	216.0	5,003.2	2.55	-2.51	-0.49
17,621.0	85.77	179.56	12,922.9	-5,094.1	216.3	5,098.0	0.74	-0.51	-0.54
17,715.0	86.05	179.07	12,929.6	-5,187.9	217.4	5,191.7	0.60	0.30	-0.52
17,810.0	86.75	178.80	12,935.6	-5,282.7	219.2	5,286.5	0.79	0.74	-0.28
17,904.0	87.68	178.50	12,940.1	-5,376.5	221.4	5,380.4	1.04	0.99	-0.32
17,999.0	87.90	178.25	12,943.8	-5,471.4	224.1	5,475.3	0.35	0.23	-0.26
18,094.0	88.57	178.15	12,946.7	-5,566.3	227.1	5,570.3	0.71	0.71	-0.11
18,188.0	88.01	179.27	12,949.5	-5,660.3	229.2	5,664.2	1.33	-0.60	1.19
18,283.0	88.29	178.76	12,952.6	-5,755.2	230.8	5,759.2	0.61	0.29	-0.54
18,378.0	89.83	178.68	12,954.2	-5,850.2	233.0	5,854.2	1.62	1.62	-0.08
18,472.0	90.03	180.60	12,954.3	-5,944.1	233.5	5,948.2	2.05	0.21	2.04
18,567.0	90.06	180.42	12,954.2	-6,039.1	232.7	6,043.1	0.19	0.03	-0.19
18,662.0	91.82	180.53	12,952.7	-6,134.1	231.9	6,138.0	1.86	1.85	0.12
18,757.0	92.16	180.70	12,949.4	-6,229.1	230.9	6,232.9	0.40	0.36	0.18
18,851.0	89.47	178.91	12,948.0	-6,323.0	231.2	6,326.9	3.44	-2.86	-1.90
18,946.0	90.00	179.36	12,948.5	-6,418.0	232.6	6,421.9	0.73	0.56	0.47
19,040.0	88.04	178.94	12,950.1	-6,512.0	234.0	6,515.8	2.13	-2.09	-0.45



Survey Report

Company: NORTHERN DELAWARE BASIN
 Project: LEA COUNTY, NM
 Site: BULLDOG
 Well: FASCINATOR FED COM #704H
 Wellbore: OWB
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
 TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
 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)
19,134.0	89.44	179.37	12,952.1	-6,606.0	235.4	6,609.8	1.56	1.49	0.46
19,229.0	90.25	178.70	12,952.4	-6,700.9	237.0	6,704.8	1.11	0.85	-0.71
19,324.0	89.24	177.85	12,952.8	-6,795.9	239.9	6,799.8	1.39	-1.06	-0.89
19,419.0	90.67	180.08	12,952.9	-6,890.9	241.6	6,894.8	2.79	1.51	2.35
19,514.0	89.83	180.01	12,952.5	-6,985.9	241.5	6,989.7	0.89	-0.88	-0.07
19,609.0	88.57	180.23	12,953.8	-7,080.9	241.3	7,084.7	1.35	-1.33	0.23
19,703.0	87.23	179.84	12,957.2	-7,174.8	241.3	7,178.6	1.48	-1.43	-0.41
19,798.0	91.54	182.50	12,958.3	-7,269.7	239.3	7,273.5	5.33	4.54	2.80
19,892.0	93.19	183.58	12,954.4	-7,363.5	234.4	7,367.1	2.10	1.76	1.15
19,987.0	93.08	183.30	12,949.2	-7,458.2	228.7	7,461.6	0.32	-0.12	-0.29
20,082.0	94.46	182.20	12,942.9	-7,552.9	224.1	7,556.1	1.86	1.45	-1.16
20,177.0	94.71	181.09	12,935.3	-7,647.5	221.4	7,650.7	1.19	0.26	-1.17
20,274.0	91.93	180.16	12,929.7	-7,744.4	220.3	7,747.5	3.02	-2.87	-0.96
20,369.0	90.70	178.40	12,927.5	-7,839.3	221.5	7,842.4	2.26	-1.29	-1.85
20,464.0	90.42	178.42	12,926.6	-7,934.3	224.2	7,937.4	0.30	-0.29	0.02
20,558.0	90.08	179.11	12,926.2	-8,028.3	226.2	8,031.4	0.82	-0.36	0.73
20,653.0	89.38	178.36	12,926.7	-8,123.2	228.3	8,126.4	1.08	-0.74	-0.79
20,748.0	89.24	178.99	12,927.8	-8,218.2	230.5	8,221.4	0.68	-0.15	0.66
20,841.0	88.99	179.28	12,929.2	-8,311.2	231.9	8,314.4	0.41	-0.27	0.31
20,936.0	89.13	179.58	12,930.8	-8,406.2	232.8	8,409.4	0.35	0.15	0.32
21,031.0	90.25	180.61	12,931.3	-8,501.2	232.7	8,504.3	1.60	1.18	1.08
21,125.0	89.33	180.29	12,931.7	-8,595.2	231.9	8,598.3	1.04	-0.98	-0.34
21,220.0	89.86	180.63	12,932.3	-8,690.2	231.2	8,693.2	0.66	0.56	0.36
21,315.0	89.89	180.51	12,932.5	-8,785.1	230.2	8,788.2	0.13	0.03	-0.13
21,410.0	89.38	180.01	12,933.1	-8,880.1	229.8	8,883.1	0.75	-0.54	-0.53
21,505.0	90.56	179.59	12,933.2	-8,975.1	230.1	8,978.1	1.32	1.24	-0.44
21,599.0	90.14	179.11	12,932.6	-9,069.1	231.2	9,072.1	0.68	-0.45	-0.51
21,694.0	89.55	178.80	12,932.9	-9,164.1	232.9	9,167.1	0.70	-0.62	-0.33
21,788.0	92.10	178.36	12,931.5	-9,258.1	235.3	9,261.1	2.75	2.71	-0.47
21,883.0	93.39	177.56	12,927.0	-9,352.9	238.6	9,355.9	1.60	1.36	-0.84
21,977.0	92.32	177.61	12,922.3	-9,446.7	242.6	9,449.8	1.14	-1.14	0.05
22,072.0	88.91	177.37	12,921.3	-9,541.6	246.8	9,544.8	3.60	-3.59	-0.25
22,167.0	89.55	177.66	12,922.5	-9,636.5	250.9	9,639.8	0.74	0.67	0.31
22,261.0	89.38	178.55	12,923.4	-9,730.4	254.0	9,733.7	0.96	-0.18	0.95
22,356.0	89.13	178.25	12,924.7	-9,825.4	256.6	9,828.7	0.41	-0.26	-0.32
22,450.0	89.22	179.96	12,926.0	-9,919.4	258.1	9,922.7	1.82	0.10	1.82
22,544.0	88.49	179.81	12,927.9	-10,013.3	258.3	10,016.7	0.79	-0.78	-0.16
22,562.0	88.94	180.06	12,928.3	-10,031.3	258.3	10,034.7	2.84	2.47	1.40
LTP @ 22562.0' MD, 330' FSL, 1148' FWL									
22,622.0	90.42	180.90	12,928.6	-10,091.3	257.8	10,094.6	2.84	2.47	1.40
22,679.0	90.42	180.90	12,928.2	-10,148.3	256.9	10,151.6	0.00	0.00	0.00



Survey Report

Company: NORTHERN DELAWARE BASIN
Project: LEA COUNTY, NM
Site: BULLDOG
Well: FASCINATOR FED COM #704H
Wellbore: OWB
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well FASCINATOR FED COM #704H
TVD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
MD Reference: RKB=3370+29 @ 3399.0usft (NORAM 23)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM_Users

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,581.5	12,540.1	-119.3	117.5	FTP @ 12581.5' MD, 330' FNL, 1104' FWL
22,562.0	12,928.3	-10,031.3	258.3	LTP @ 22562.0' MD, 330' FSL, 1148' FWL

Checked By: _____ Approved By: _____ Date: _____

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	22,572	25	5	22,337	62	5	22,177	25	5	21,979	25	5	21,782	25	5
	22,547	24	5	22,327	10	5	22,152	24	5	21,955	25	5	21,757	24	5
	22,523	25	5	22,317	17	5	22,128	25	5	21,930	25	5	21,733	25	5
	22,498	25	5	22,300	24	5	22,103	25	5	21,905	24	5	21,708	25	5
	22,473	24	4	22,276	25	4	22,078		4	21,881	22	4	21,683	25	4
	22,449	25	4	22,251	25	4	22,056	27	4	21,859	28	4	21,658	24	4
	22,424	25	4	22,226	24	4	22,029	25	4	21,831	24	4	21,634	25	4
	22,399		4	22,202		4	22,004		4	21,807		4	21,609		4
	Plug to Plug	99	36	Plug to Plug	47	36	Plug to Plug	86	36	Plug to Plug	87	36	Plug to Plug	86	36
	Frac Plug	22,597	Total Shots	Frac Plug	22,347	Total Shots	Frac Plug	22,189	Total Shots	Frac Plug	21,992	Total Shots	Frac Plug	21,794	Total Shots

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	21,584	25	5	21,387	25	5	21,179	35	5	20,986	30	5	20,794	25	5
	21,560	28	5	21,362	25	5	21,165	25	5	20,967	25	5	20,770	25	5
	21,532	22	5	21,337	24	5	21,140	20	5	20,942	24	5	20,745	25	5
	21,510	24	5	21,313	25	5	21,120	29	5	20,918	25	5	20,720	25	5
	21,486	25	4	21,288	25	4	21,091	25	4	20,893	25	4	20,695	24	4
	21,461	25	4	21,263	29	4	21,066	25	4	20,868	24	4	20,671	25	4
	21,436	24	4	21,234	20	4	21,041	25	4	20,844	25	4	20,646	25	4
	21,412		4	21,214		4	21,016		4	20,819		4	20,621		4
	Plug to Plug	87	36	Plug to Plug	86	36	Plug to Plug	70	36	Plug to Plug	86	36	Plug to Plug	87	36
	Frac Plug	21,597	Total Shots	Frac Plug	21,399	Total Shots	Frac Plug	21,190	Total Shots	Frac Plug	21,004	Total Shots	Frac Plug	20,807	Total Shots

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	20,597	24	5	20,399	25	5	20,202	24	5	19,971	58	5	19,804	27	5
	20,574	27	5	20,375	25	5	20,177	25	5	19,951	20	5	19,782	25	5
	20,547	24	5	20,350	28	5	20,152	24	5	19,931	20	5	19,757	26	5
	20,523	25	5	20,322	22	5	20,128	25	5	19,911	20	5	19,731	23	5
	20,498	25	4	20,300	24	4	20,103	23	4	19,891	20	4	19,708	25	4
	20,473	27	4	20,276	25	4	20,080	26	4	19,871	20	4	19,683	25	4
	20,446	22	4	20,251	25	4	20,054	25	4	19,851	20	4	19,658	24	4
	20,424		4	20,226		4	20,029		4	19,831		4	19,634		4
	Plug to Plug	85	36	Plug to Plug	94	36	Plug to Plug	86	36	Plug to Plug	65	36	Plug to Plug	81	36
	Frac Plug	20,608	Total Shots	Frac Plug	20,416	Total Shots	Frac Plug	20,214	Total Shots	Frac Plug	19,976	Total Shots	Frac Plug	19,812	Total Shots

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	19,609	25	5	19,412	24	5	19,214	28	5	19,016	25	5	18,819	25	5
	19,584	24	5	19,387	29	5	19,189	24	5	18,992	25	5	18,794	24	5
	19,560	25	5	19,358	21	5	19,165	25	5	18,967	23	5	18,770	25	5
	19,535	25	5	19,337	24	5	19,140	25	5	18,944	26	5	18,745	25	5
	19,510	24	4	19,313	25	4	19,115	24	4	18,918	25	4	18,720	22	4
	19,486	25	4	19,288	25	4	19,091	21	4	18,893	25	4	18,698	27	4
	19,461	25	4	19,263	21	4	19,070	29	4	18,868	24	4	18,671	25	4
	19,436		4	19,242		4	19,041		4	18,844		4	18,646		4
	Plug to Plug	86	36	Plug to Plug	87	36	Plug to Plug	86	36	Plug to Plug	85	36	Plug to Plug	86	36
	Frac Plug	19,621	Total Shots	Frac Plug	19,424	Total Shots	Frac Plug	19,226	Total Shots	Frac Plug	19,029	Total Shots	Frac Plug	18,831	Total Shots

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	18,621	25	5	18,416	33	5	18,222	29	5	18,029	25	5	17,828	28	5
	18,597	25	5	18,399	24	5	18,202	25	5	18,004	25	5	17,804	22	5
	18,572	25	5	18,375	27	5	18,177	25	5	17,979	24	5	17,782	25	5
	18,547	27	5	18,348	23	5	18,152	24	5	17,955	21	5	17,757	29	5
	18,520	22	4	18,325	25	4	18,128	23	4	17,934	29	4	17,728	20	4
	18,498	25	4	18,300	24	4	18,105	27	4	17,905	24	4	17,708	25	4
	18,473	24	4	18,276	25	4	18,078	24	4	17,881	25	4	17,683	25	4
	18,449		4	18,251		4	18,054		4	17,856		4	17,658		4
	Plug to Plug	87	36	Plug to Plug	78	36	Plug to Plug	87	36	Plug to Plug	85	36	Plug to Plug	83	36
	Frac Plug	18,634	Total Shots	Frac Plug	18,426	Total Shots	Frac Plug	18,239	Total Shots	Frac Plug	18,041	Total Shots	Frac Plug	17,840	Total Shots

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	17,628	30	5	17,434	27	5	17,239	24	5	17,041	27	5	16,844	24	5
	17,609	25	5	17,412	25	5	17,214	23	5	17,017	25	5	16,819	25	5
	17,584	26	5	17,387	25	5	17,191	26	5	16,992	25	5	16,794	24	5
	17,558	23	5	17,362	24	5	17,165	25	5	16,967	25	5	16,770	25	5
	17,535	25	4	17,338	26	4	17,140	25	4	16,942	24	4	16,745	27	4
	17,510	24	4	17,312	24	4	17,115	24	4	16,918	27	4	16,718	22	4
	17,486	25	4	17,288	25	4	17,091	23	4	16,891	23	4	16,696	25	4
	17,461		4	17,263		4	17,068		4	16,868		4	16,671		4
	Plug to Plug	82	36	Plug to Plug	87	36	Plug to Plug	86	36	Plug to Plug	87	36	Plug to Plug	88	36
	Frac Plug	17,640	Total Shots	Frac Plug	17,449	Total Shots	Frac Plug	17,251	Total Shots	Frac Plug	17,054	Total Shots	Frac Plug	16,858	Total Shots

From Bottom to Top	Distance Between Perfs	Shots	Distance Between Perfs	Shots	Distance Between Perfs	Shots	Distance Between Perfs	Shots	Distance Between Perfs	Shots	Distance Between Perfs	Shots			
	16,646	25	5	16,449	29	5	16,251	25	5	16,054	26	5	15,856	25	5
	16,821	26	5	16,424	25	5	16,226	28	5	16,029	25	5	15,829	22	5
	16,595	23	5	16,399	24	5	16,198	21	5	16,004	24	5	15,807	25	5
	16,572	25	5	16,375	25	5	16,177	25	5	15,980	29	5	15,782	25	5
	16,547	24	4	16,350	25	4	16,152	24	4	15,951	21	4	15,757	24	4
	16,523	25	4	16,325	25	4	16,128	25	4	15,930	25	4	15,733	25	4
	16,498	20	4	16,300	24	4	16,103	23	4	15,905	24	4	15,708	25	4
	16,478		4	16,276		4	16,080		4	15,881		4	15,683		4
	Plug to Plug	87	36	Plug to Plug	86	36	Plug to Plug	86	36	Plug to Plug	86	36	Plug to Plug	86	36
Frac Plug	16,659	Total Shots	Frac Plug	16,461	Total Shots	Frac Plug	16,263	Total Shots	Frac Plug	16,066	Total Shots	Frac Plug	15,868	Total Shots	

From Bottom to Top	Stage 36	Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	15,657	26	5		15,461	29	5		15,263	25	5		15,064	27	5
	15,634	25	5		15,436	24	5		15,234	20	5		15,041	24	5
	15,609	25	5		15,412	25	5		15,214	25	5		15,017	25	5
	15,584	24	5		15,387	21	5		15,189	24	5		14,992	25	5
	15,560	25	4		15,366	28	4		15,165	25	4		14,967	29	4
	15,535	25	4		15,338	25	4		15,140	25	4		14,938	20	4
	15,510	20	4		15,313	25	4		15,115	24	4		14,918	25	4
	15,490		4		15,288		4		15,091		4		14,893		4
	Plug to Plug	87	36	Plug to Plug	86	36	Plug to Plug	87	36	Plug to Plug	86	36	Plug to Plug	87	36
Frac Plug	15,671	Total Shots	Frac Plug	15,473	Total Shots	Frac Plug	15,276	Total Shots	Frac Plug	15,078	Total Shots	Frac Plug	14,881	Total Shots	

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	14,663	33	5	14,451	47	5	14,278	26	5	14,078	25	5	13,876	29	5
	14,646	25	5	14,434	23	5	14,251	25	5	14,054	25	5	13,856	25	5
	14,621	24	5	14,411	22	5	14,226	24	5	14,029	25	5	13,831	24	5
	14,597	25	5	14,389	22	5	14,202	22	5	14,004	24	5	13,807	25	5
	14,572	25	4	14,367	23	4	14,180	28	4	13,980	25	4	13,782	25	4
	14,547	24	4	14,344	23	4	14,152	24	4	13,955	25	4	13,757	24	4
	14,523	25	4	14,321	19	4	14,128	25	4	13,930	25	4	13,733	25	4
	14,498		4	14,302			14,103			13,905		4	13,708		4
	Plug to Plug	77	36	Plug to Plug	73	36	Plug to Plug	86	36	Plug to Plug	87	36	Plug to Plug	80	36
Frac Plug	14,674	Total Shots	Frac Plug	14,462	Total Shots	Frac Plug	14,288	Total Shots	Frac Plug	14,091	Total Shots	Frac Plug	13,887	Total Shots	

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots	Stage 50	Distance Between Perfs	Shots	
		13,682	26	5	13,481	29	5	13,288	23	5	13,086	29	5		12918	5
		13,659	25	5	13,461	25	5	13,263	22	5	13,069	28	5			5
		13,634	25	5	13,436	24	5	13,241	27	5	13,041	24	5			5
		13,609	25	5	13,412	25	5	13,214	25	5	13,017	25	5			5
		13,584	24	4	13,387	25	4	13,189	24	4	12,992	25	4			4
		13,560	25	4	13,362	24	4	13,165	25	4	12,967	24	4			4
		13,535	25	4	13,338	27	4	13,140	25	4	12,943	25	4			4
		13,510		4	13,311		4	13,115		4	12,918		4			4
		Plug to Plug	87	36	Plug to Plug	86	36	Plug to Plug	87	36	Plug to Plug	83	36	Plug to Plug	0	36
	Frac Plug	13,696	Total Shots	Frac Plug	13,498	Total Shots	Frac Plug	13,301	Total Shots	Frac Plug	13,100	Total Shots	Frac Plug		Total Shots	