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

State of New Mexico
Energy, Minerals & Natural Resources

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

Form C-104
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

[1] Operator name and Address	[2] OGRID Number
COG Operating LLC 2208 W. Main Street Artesia, NM 88210	229137
	[3] Reason for Filing Code/ Effective Date NW

API Number	[5] Pool Name	[6] Pool Code
30-025-45653	Dogie Draw; Delaware	97779

[7] Property Code	[8] Property Name	[9] Well Number
326533	Pitchblende 19 30 Federal	38H

II. [10] Surface Location

Ul or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
A	19	25S	35E		450	North	710	East	Lea

[11] Bottom Hole Location

Ul or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
H	30	25S	35E		2589	North	1169	East	Lea

[12] Lse Code	[13] Producing Method Code	[14] Gas Connection Date	[15] C-129 Permit Number	[16] C-129 Effective Date	[17] C-129 Expiration Date
F					

III. Oil and Gas Transporters

[18] Transporter OGRID	[19] Transporter Name and Address	[20] O/G/W
	ACC	O
298751	Lucid 3100 McKinnon Ste 800 Dallas, TX 75201	G
278421	Holly Refining and Marketing PO Box 159 Artesia, NM 88210	O

IV. Well Completion Data

[21] Spud Date	[22] Ready Date	[23] TD	[24] PBTD	[25] Perforations	[26] DHC, MC
1/4/20	10/23/20	19,991’	19,905’	12,580-19,822’	

[27] Hole Size	[28] Casing & Tubing Size	[29] Depth Set	[30] Sacks Cement
14 3/4”	10 3/4”	1028’	893
8 3/4”	7 5/8”	11,820’	1625
6 3/4”	5 1/2”	19,976’	1605
	2 7/8”	11,558’	

V. Well Test Data

[31] Date New Oil	[32] Gas Delivery Date	[33] Test Date	[34] Test Length	[35] Tbg. Pressure	[36] Csg. Pressure
11/12/20	11/12/20	11/12/20	24 Hrs	3990#	3026#
[37] Choke Size	**[38] Oil**	**[39] Water**	**[40] Gas**		**[41] Test Method**
13/64	1000	2084	1920		Flowing

[42] I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: Amanda Avery

Printed name: Amanda Avery

Title: Regulatory Analyst

E-mail Address:

Date: 11/30/2020

Phone: 575-748-6962

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

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

☒ AMENDED REPORT
As Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025-45653	97779	Wildcat; Bone Spring

Property Code	Property Name	Well Number
326533	PITCHBLENDE FEDERAL 19-30	38H

OGRID No.	Operator Name	Elevation
229137	COG OPERATING, LLC	3329.9'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	19	25-S	35-E		450	NORTH	710	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	30	25-S	35		2589	NORTH	1169	EAST	LEA

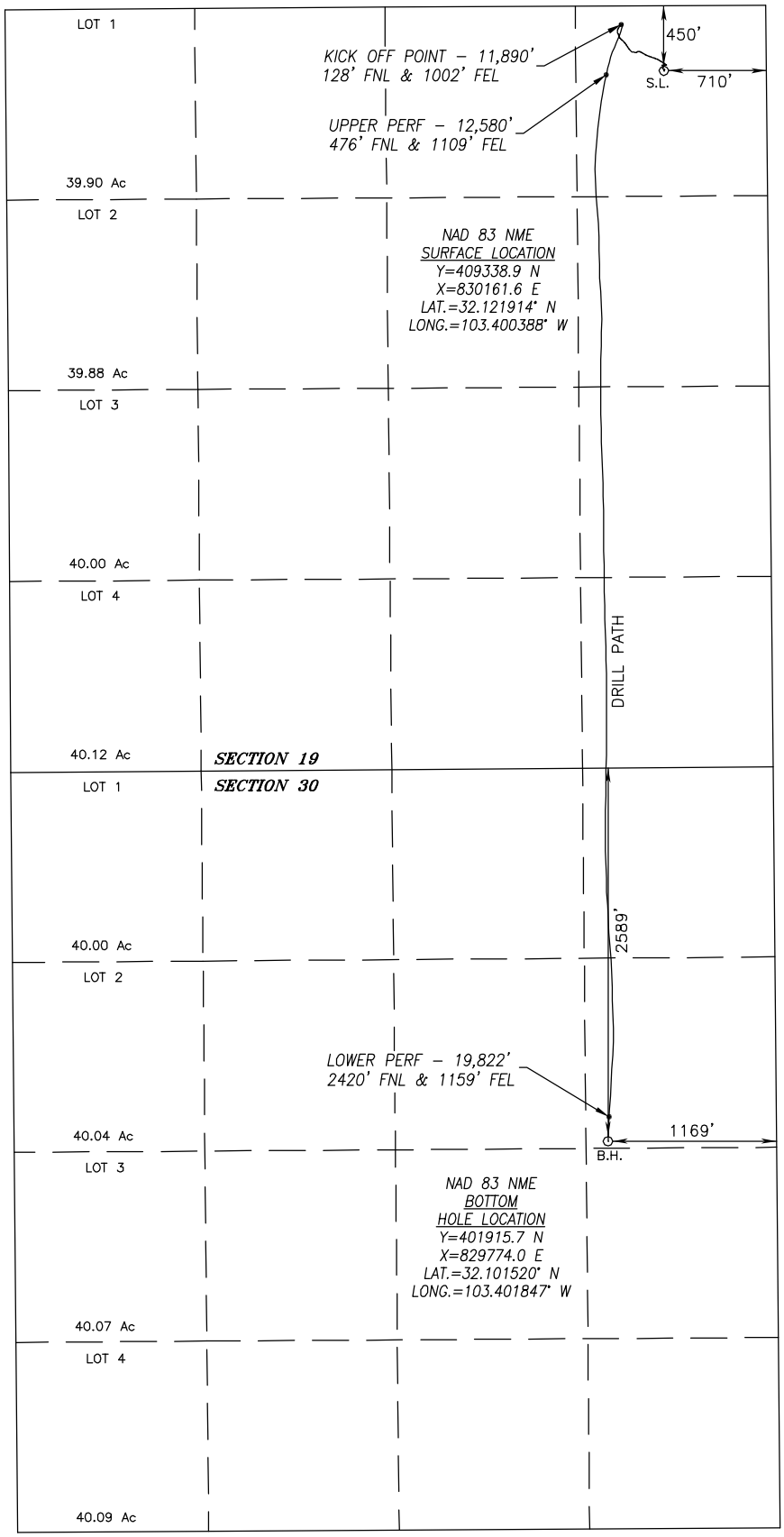
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
240			

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

PAGE 1 OF 2
W.O. #20-1337 DRAWN BY: WN

Property Code	Property Name	Well Number
326533	PITCHBLENDE FEDERAL 19-30	38H
OGRID No.	**Operator Name**	**Elevation**
229137	COG OPERATING, LLC	3329.9'



SURFACE INFO AND BOREPATH SHOWN HEREON IS BASED ON DIRECTIONAL SURVEY REPORT PROVIDED BY COG OPERATING, LLC FOR THE PITCHBLENDE FEDERAL 19-30 #38H SUPPLIED TO HARCROW SURVEYING, LLC ON OCTOBER 7, 2020

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.

Amanda Avery 11/16/20
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.

DEC. 5, 2019/FEB. 11, 2020
Date of Survey/Date of Geographic Survey

Signature & Seal of Professional Surveyor

CHAD L. HARCROW NEW MEXICO 17777 LICENSED PROFESSIONAL SURVEYOR

Chad Harcrow 10/8/20

Certificate No. CHAD HARCROW 17777

PAGE 2 OF 2 W.O. #20-1337 DRAWN BY: WN

NORTHERN DELAWARE BASIN

LEA COUNTY, NM
BULLDOG
PITCHBLENDE FEDERAL 19-30 38H

OWB

Design: AWP

Standard Survey Report

11 February, 2020

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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		

Well	PITCHBLENDE FEDERAL 19-30 38H, ACTIVE				
Well Position	**+N/-S**	0.0 usft	**Northing:**	409,280.80 usft	**Latitude:**	32° 7' 18.439 N
	+E/-W	0.0 usft	**Easting:**	788,974.90 usft	**Longitude:**	103° 23' 59.721 W
Position Uncertainty		3.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,330.0 usft

Wellbore	OWB				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	1/6/2020	6.59	59.96	47,633.24227695

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

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.0	0.0	0.0	183.00

Survey Program **Date** 2/11/2020

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	11,755.0	GYRO (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
11,755.0	19,991.0	MWD-CURVE/LATERAL (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.22	72.17	100.0	0.1	0.2	-0.1	0.22	0.22	0.00
125.0	0.32	102.69	125.0	0.1	0.3	-0.1	0.69	0.40	122.08
150.0	0.27	142.39	150.0	0.0	0.4	0.0	0.82	-0.20	158.80
175.0	0.29	155.04	175.0	-0.1	0.5	0.1	0.26	0.08	50.60
200.0	0.19	148.46	200.0	-0.2	0.5	0.2	0.41	-0.40	-26.32
225.0	0.27	169.22	225.0	-0.3	0.5	0.3	0.46	0.32	83.04
250.0	0.18	193.66	250.0	-0.4	0.5	0.4	0.52	-0.36	97.76
275.0	0.09	107.64	275.0	-0.4	0.6	0.4	0.78	-0.36	-344.08
300.0	0.07	25.43	300.0	-0.4	0.6	0.4	0.43	-0.08	-328.84
325.0	0.15	37.11	325.0	-0.4	0.6	0.4	0.33	0.32	46.72
350.0	0.39	46.27	350.0	-0.3	0.7	0.3	0.97	0.96	36.64
375.0	0.37	63.42	375.0	-0.2	0.8	0.2	0.46	-0.08	68.60
400.0	0.36	51.12	400.0	-0.1	1.0	0.1	0.32	-0.04	-49.20
425.0	0.45	52.72	425.0	0.0	1.1	0.0	0.36	0.36	6.40

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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)
450.0	0.34	51.63	450.0	0.1	1.2	-0.2	0.44	-0.44	-4.36
475.0	0.31	28.00	475.0	0.2	1.3	-0.3	0.55	-0.12	-94.52
500.0	0.30	19.44	500.0	0.3	1.4	-0.4	0.19	-0.04	-34.24
525.0	0.34	15.44	525.0	0.5	1.4	-0.5	0.18	0.16	-16.00
550.0	0.38	7.03	550.0	0.6	1.4	-0.7	0.26	0.16	-33.64
575.0	0.60	15.91	575.0	0.8	1.5	-0.9	0.93	0.88	35.52
600.0	0.64	29.82	600.0	1.1	1.6	-1.1	0.62	0.16	55.64
625.0	0.72	40.60	625.0	1.3	1.8	-1.4	0.60	0.32	43.12
650.0	0.53	46.47	650.0	1.5	2.0	-1.6	0.80	-0.76	23.48
675.0	0.30	48.92	675.0	1.6	2.1	-1.7	0.92	-0.92	9.80
700.0	0.28	21.62	700.0	1.7	2.2	-1.8	0.55	-0.08	-109.20
725.0	0.45	15.59	725.0	1.9	2.2	-2.0	0.70	0.68	-24.12
750.0	0.59	15.73	750.0	2.1	2.3	-2.2	0.56	0.56	0.56
775.0	0.78	25.46	775.0	2.4	2.4	-2.5	0.89	0.76	38.92
800.0	0.68	34.93	800.0	2.6	2.5	-2.8	0.63	-0.40	37.88
825.0	0.70	28.87	825.0	2.9	2.7	-3.0	0.30	0.08	-24.24
850.0	0.69	21.78	850.0	3.2	2.8	-3.3	0.35	-0.04	-28.36
875.0	0.70	10.88	875.0	3.5	2.9	-3.6	0.53	0.04	-43.60
900.0	0.75	357.59	900.0	3.8	2.9	-3.9	0.70	0.20	-53.16
925.0	0.92	12.55	925.0	4.1	3.0	-4.3	1.10	0.68	59.84
950.0	0.90	25.62	950.0	4.5	3.1	-4.7	0.83	-0.08	52.28
975.0	0.72	21.51	975.0	4.8	3.2	-5.0	0.76	-0.72	-16.44
1,000.0	0.72	21.29	1,000.0	5.1	3.4	-5.3	0.01	0.00	-0.88
1,025.0	0.75	17.55	1,025.0	5.4	3.5	-5.6	0.23	0.12	-14.96
1,050.0	0.88	11.51	1,050.0	5.8	3.5	-6.0	0.62	0.52	-24.16
1,075.0	1.05	14.58	1,075.0	6.2	3.6	-6.4	0.71	0.68	12.28
1,100.0	0.90	19.59	1,100.0	6.6	3.8	-6.8	0.69	-0.60	20.04
1,125.0	0.74	32.50	1,124.9	6.9	3.9	-7.1	0.97	-0.64	51.64
1,150.0	0.72	35.80	1,149.9	7.2	4.1	-7.4	0.19	-0.08	13.20
1,175.0	0.48	30.43	1,174.9	7.4	4.2	-7.6	0.98	-0.96	-21.48
1,200.0	0.64	14.42	1,199.9	7.6	4.3	-7.8	0.89	0.64	-64.04
1,225.0	0.86	18.76	1,224.9	7.9	4.4	-8.2	0.91	0.88	17.36
1,250.0	1.02	27.66	1,249.9	8.3	4.6	-8.5	0.86	0.64	35.60
1,275.0	0.91	36.95	1,274.9	8.7	4.8	-8.9	0.76	-0.44	37.16
1,300.0	0.66	28.31	1,299.9	8.9	5.0	-9.2	1.10	-1.00	-34.56
1,325.0	0.57	336.83	1,324.9	9.2	5.0	-9.4	2.16	-0.36	-205.92
1,350.0	0.72	304.11	1,349.9	9.4	4.8	-9.6	1.56	0.60	-130.88
1,375.0	0.71	291.34	1,374.9	9.5	4.6	-9.8	0.64	-0.04	-51.08
1,400.0	0.69	279.62	1,399.9	9.6	4.3	-9.8	0.58	-0.08	-46.88
1,425.0	0.87	281.91	1,424.9	9.7	3.9	-9.9	0.73	0.72	9.16
1,450.0	0.95	293.71	1,449.9	9.8	3.6	-10.0	0.81	0.32	47.20
1,475.0	0.85	306.21	1,474.9	10.0	3.2	-10.2	0.88	-0.40	50.00
1,500.0	0.70	296.40	1,499.9	10.2	2.9	-10.3	0.80	-0.60	-39.24

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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)
1,525.0	0.82	285.73	1,524.9	10.3	2.6	-10.4	0.74	0.48	-42.68
1,550.0	0.83	284.57	1,549.9	10.4	2.3	-10.5	0.08	0.04	-4.64
1,575.0	1.11	278.38	1,574.9	10.5	1.9	-10.5	1.19	1.12	-24.76
1,600.0	1.08	284.09	1,599.9	10.6	1.4	-10.6	0.45	-0.12	22.84
1,625.0	1.09	291.72	1,624.9	10.7	0.9	-10.7	0.58	0.04	30.52
1,650.0	0.85	298.46	1,649.9	10.9	0.6	-10.9	1.06	-0.96	26.96
1,675.0	0.76	289.03	1,674.9	11.0	0.2	-11.0	0.64	-0.36	-37.72
1,700.0	0.90	287.12	1,699.9	11.1	-0.1	-11.1	0.57	0.56	-7.64
1,725.0	1.03	294.46	1,724.9	11.3	-0.5	-11.2	0.72	0.52	29.36
1,750.0	0.90	299.50	1,749.9	11.5	-0.9	-11.4	0.62	-0.52	20.16
1,775.0	0.76	283.73	1,774.9	11.6	-1.2	-11.5	1.07	-0.56	-63.08
1,800.0	0.89	278.27	1,799.9	11.7	-1.6	-11.6	0.61	0.52	-21.84
1,825.0	1.02	285.06	1,824.9	11.8	-2.0	-11.6	0.69	0.52	27.16
1,850.0	0.96	294.59	1,849.9	11.9	-2.4	-11.8	0.70	-0.24	38.12
1,875.0	0.76	285.31	1,874.9	12.0	-2.7	-11.9	0.97	-0.80	-37.12
1,900.0	0.66	279.82	1,899.9	12.1	-3.0	-11.9	0.48	-0.40	-21.96
1,925.0	0.83	265.97	1,924.9	12.1	-3.3	-11.9	0.99	0.68	-55.40
1,950.0	0.84	277.49	1,949.9	12.1	-3.7	-11.9	0.67	0.04	46.08
1,975.0	0.99	288.96	1,974.9	12.2	-4.1	-12.0	0.94	0.60	45.88
2,000.0	0.85	279.83	1,999.9	12.3	-4.5	-12.1	0.81	-0.56	-36.52
2,025.0	0.84	292.45	2,024.9	12.4	-4.8	-12.2	0.74	-0.04	50.48
2,050.0	0.74	288.73	2,049.9	12.5	-5.1	-12.3	0.45	-0.40	-14.88
2,075.0	0.67	274.58	2,074.8	12.6	-5.4	-12.3	0.75	-0.28	-56.60
2,100.0	0.83	270.62	2,099.8	12.6	-5.8	-12.3	0.67	0.64	-15.84
2,125.0	0.83	278.66	2,124.8	12.7	-6.1	-12.3	0.47	0.00	32.16
2,150.0	0.82	287.29	2,149.8	12.7	-6.5	-12.4	0.50	-0.04	34.52
2,175.0	0.64	278.90	2,174.8	12.8	-6.8	-12.4	0.84	-0.72	-33.56
2,200.0	0.78	270.37	2,199.8	12.8	-7.1	-12.4	0.70	0.56	-34.12
2,225.0	0.90	283.31	2,224.8	12.9	-7.5	-12.5	0.89	0.48	51.76
2,250.0	0.82	275.32	2,249.8	12.9	-7.8	-12.5	0.58	-0.32	-31.96
2,275.0	0.60	300.38	2,274.8	13.0	-8.1	-12.6	1.50	-0.88	100.24
2,300.0	0.48	282.83	2,299.8	13.1	-8.3	-12.7	0.81	-0.48	-70.20
2,325.0	0.65	274.82	2,324.8	13.1	-8.6	-12.7	0.75	0.68	-32.04
2,350.0	0.83	279.59	2,349.8	13.2	-8.9	-12.7	0.76	0.72	19.08
2,375.0	0.70	303.62	2,374.8	13.3	-9.2	-12.8	1.37	-0.52	96.12
2,400.0	0.49	317.90	2,399.8	13.5	-9.4	-13.0	1.02	-0.84	57.12
2,425.0	0.48	281.91	2,424.8	13.6	-9.6	-13.1	1.20	-0.04	-143.96
2,450.0	0.67	286.02	2,449.8	13.6	-9.8	-13.1	0.78	0.76	16.44
2,475.0	0.66	309.76	2,474.8	13.8	-10.1	-13.2	1.09	-0.04	94.96
2,500.0	0.43	331.42	2,499.8	13.9	-10.2	-13.4	1.22	-0.92	86.64
2,525.0	0.34	317.90	2,524.8	14.1	-10.3	-13.5	0.51	-0.36	-54.08
2,550.0	0.51	329.32	2,549.8	14.2	-10.4	-13.7	0.76	0.68	45.68
2,575.0	0.33	2.91	2,574.8	14.4	-10.5	-13.8	1.19	-0.72	134.36

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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)
2,600.0	0.30	316.60	2,599.8	14.5	-10.5	-13.9	1.00	-0.12	-185.24
2,625.0	0.54	343.59	2,624.8	14.7	-10.6	-14.1	1.22	0.96	107.96
2,650.0	0.48	3.69	2,649.8	14.9	-10.6	-14.3	0.75	-0.24	80.40
2,675.0	0.47	14.37	2,674.8	15.1	-10.6	-14.5	0.36	-0.04	42.72
2,700.0	0.15	51.96	2,699.8	15.2	-10.5	-14.6	1.45	-1.28	150.36
2,725.0	0.28	332.50	2,724.8	15.3	-10.5	-14.7	1.17	0.52	-317.84
2,750.0	0.62	17.60	2,749.8	15.5	-10.5	-14.9	1.87	1.36	180.40
2,775.0	0.60	26.94	2,774.8	15.7	-10.4	-15.2	0.41	-0.08	37.36
2,800.0	0.31	41.02	2,799.8	15.9	-10.3	-15.3	1.23	-1.16	56.32
2,825.0	0.54	22.86	2,824.8	16.0	-10.2	-15.5	1.06	0.92	-72.64
2,850.0	0.75	43.79	2,849.8	16.3	-10.1	-15.7	1.25	0.84	83.72
2,875.0	0.76	43.31	2,874.8	16.5	-9.9	-16.0	0.05	0.04	-1.92
2,900.0	0.76	41.64	2,899.8	16.8	-9.6	-16.2	0.09	0.00	-6.68
2,925.0	0.77	37.53	2,924.8	17.0	-9.4	-16.5	0.22	0.04	-16.44
2,950.0	0.62	38.24	2,949.8	17.3	-9.2	-16.7	0.60	-0.60	2.84
2,975.0	0.59	17.09	2,974.8	17.5	-9.1	-17.0	0.90	-0.12	-84.60
3,000.0	0.80	27.65	2,999.8	17.8	-9.0	-17.3	0.98	0.84	42.24
3,025.0	0.66	43.06	3,024.8	18.0	-8.8	-17.5	0.96	-0.56	61.64
3,050.0	0.57	33.16	3,049.8	18.2	-8.6	-17.8	0.56	-0.36	-39.60
3,075.0	0.65	14.48	3,074.8	18.5	-8.5	-18.0	0.85	0.32	-74.72
3,100.0	0.64	28.91	3,099.8	18.7	-8.4	-18.3	0.65	-0.04	57.72
3,125.0	0.54	24.92	3,124.8	19.0	-8.3	-18.5	0.43	-0.40	-15.96
3,150.0	0.73	16.04	3,149.8	19.2	-8.2	-18.8	0.85	0.76	-35.52
3,175.0	0.87	37.89	3,174.8	19.5	-8.1	-19.1	1.33	0.56	87.40
3,200.0	1.15	41.29	3,199.8	19.9	-7.8	-19.4	1.14	1.12	13.60
3,225.0	1.09	51.64	3,224.8	20.2	-7.4	-19.8	0.84	-0.24	41.40
3,250.0	1.06	36.47	3,249.8	20.5	-7.1	-20.1	1.14	-0.12	-60.68
3,275.0	1.13	39.12	3,274.8	20.9	-6.8	-20.5	0.35	0.28	10.60
3,300.0	1.46	44.29	3,299.8	21.3	-6.4	-21.0	1.40	1.32	20.68
3,325.0	1.36	44.44	3,324.8	21.8	-6.0	-21.4	0.40	-0.40	0.60
3,350.0	1.32	40.69	3,349.7	22.2	-5.6	-21.9	0.39	-0.16	-15.00
3,375.0	1.38	41.50	3,374.7	22.6	-5.2	-22.3	0.25	0.24	3.24
3,400.0	1.26	40.30	3,399.7	23.1	-4.9	-22.8	0.49	-0.48	-4.80
3,425.0	1.40	29.33	3,424.7	23.6	-4.5	-23.3	1.16	0.56	-43.88
3,450.0	1.76	10.06	3,449.7	24.2	-4.3	-23.9	2.55	1.44	-77.08
3,475.0	1.69	16.31	3,474.7	24.9	-4.1	-24.7	0.80	-0.28	25.00
3,500.0	1.53	20.62	3,499.7	25.6	-3.9	-25.4	0.80	-0.64	17.24
3,525.0	1.64	14.25	3,524.7	26.3	-3.7	-26.0	0.83	0.44	-25.48
3,550.0	1.86	24.06	3,549.7	27.0	-3.5	-26.8	1.48	0.88	39.24
3,575.0	1.88	21.86	3,574.7	27.7	-3.1	-27.5	0.30	0.08	-8.80
3,600.0	2.13	26.58	3,599.6	28.5	-2.8	-28.3	1.20	1.00	18.88
3,625.0	1.93	27.95	3,624.6	29.3	-2.4	-29.1	0.82	-0.80	5.48
3,650.0	2.17	23.21	3,649.6	30.1	-2.0	-30.0	1.17	0.96	-18.96
3,675.0	2.03	31.20	3,674.6	30.9	-1.6	-30.8	1.30	-0.56	31.96

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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)
3,700.0	1.82	22.10	3,699.6	31.7	-1.2	-31.6	1.48	-0.84	-36.40
3,725.0	1.33	340.52	3,724.6	32.3	-1.1	-32.2	4.83	-1.96	-166.32
3,750.0	1.38	318.34	3,749.6	32.8	-1.4	-32.7	2.09	0.20	-88.72
3,775.0	1.43	307.22	3,774.6	33.2	-1.9	-33.1	1.11	0.20	-44.48
3,800.0	1.62	300.67	3,799.5	33.6	-2.4	-33.4	1.03	0.76	-26.20
3,825.0	1.48	304.72	3,824.5	34.0	-3.0	-33.8	0.71	-0.56	16.20
3,850.0	1.32	306.25	3,849.5	34.3	-3.5	-34.1	0.66	-0.64	6.12
3,875.0	1.37	292.91	3,874.5	34.6	-4.0	-34.3	1.27	0.20	-53.36
3,900.0	1.29	298.68	3,899.5	34.9	-4.5	-34.6	0.62	-0.32	23.08
3,925.0	1.28	296.09	3,924.5	35.1	-5.0	-34.8	0.24	-0.04	-10.36
3,950.0	1.40	287.96	3,949.5	35.3	-5.6	-35.0	0.90	0.48	-32.52
3,975.0	1.50	296.75	3,974.5	35.6	-6.2	-35.2	0.97	0.40	35.16
4,000.0	1.41	296.77	3,999.5	35.9	-6.7	-35.5	0.36	-0.36	0.08
4,025.0	1.38	296.43	4,024.5	36.1	-7.3	-35.7	0.12	-0.12	-1.36
4,050.0	1.29	288.31	4,049.5	36.3	-7.8	-35.9	0.84	-0.36	-32.48
4,075.0	1.53	284.92	4,074.5	36.5	-8.4	-36.0	1.02	0.96	-13.56
4,100.0	1.51	292.94	4,099.5	36.7	-9.0	-36.2	0.85	-0.08	32.08
4,125.0	1.45	291.82	4,124.5	37.0	-9.6	-36.4	0.27	-0.24	-4.48
4,150.0	1.38	293.69	4,149.4	37.2	-10.2	-36.6	0.34	-0.28	7.48
4,175.0	1.60	286.80	4,174.4	37.4	-10.8	-36.8	1.13	0.88	-27.56
4,200.0	1.38	291.43	4,199.4	37.7	-11.4	-37.0	1.00	-0.88	18.52
4,225.0	1.16	284.45	4,224.4	37.8	-11.9	-37.1	1.07	-0.88	-27.92
4,250.0	1.23	292.99	4,249.4	38.0	-12.4	-37.3	0.76	0.28	34.16
4,275.0	0.56	293.47	4,274.4	38.1	-12.8	-37.4	2.68	-2.68	1.92
4,300.0	0.36	133.41	4,299.4	38.1	-12.8	-37.4	3.63	-0.80	-640.24
4,325.0	0.52	159.64	4,324.4	38.0	-12.7	-37.3	1.01	0.64	104.92
4,350.0	0.41	143.83	4,349.4	37.8	-12.7	-37.1	0.67	-0.44	-63.24
4,375.0	0.59	125.49	4,374.4	37.7	-12.5	-37.0	0.95	0.72	-73.36
4,400.0	0.70	136.30	4,399.4	37.5	-12.3	-36.8	0.65	0.44	43.24
4,425.0	0.64	132.97	4,424.4	37.3	-12.1	-36.6	0.29	-0.24	-13.32
4,450.0	0.58	114.41	4,449.4	37.1	-11.9	-36.4	0.82	-0.24	-74.24
4,475.0	0.49	96.97	4,474.4	37.1	-11.6	-36.4	0.74	-0.36	-69.76
4,500.0	0.61	78.38	4,499.4	37.1	-11.4	-36.4	0.85	0.48	-74.36
4,525.0	0.86	75.69	4,524.4	37.1	-11.1	-36.5	1.01	1.00	-10.76
4,550.0	1.19	81.95	4,549.4	37.2	-10.7	-36.6	1.39	1.32	25.04
4,575.0	1.51	81.86	4,574.4	37.3	-10.1	-36.7	1.28	1.28	-0.36
4,600.0	2.03	88.23	4,599.4	37.4	-9.3	-36.8	2.22	2.08	25.48
4,625.0	2.33	88.98	4,624.4	37.4	-8.3	-36.9	1.21	1.20	3.00
4,650.0	2.27	92.96	4,649.3	37.4	-7.3	-36.9	0.68	-0.24	15.92
4,675.0	2.17	87.48	4,674.3	37.4	-6.4	-37.0	0.94	-0.40	-21.92
4,700.0	2.46	89.34	4,699.3	37.4	-5.4	-37.1	1.20	1.16	7.44
4,725.0	2.45	94.93	4,724.3	37.4	-4.3	-37.1	0.96	-0.04	22.36
4,750.0	2.15	92.39	4,749.3	37.3	-3.3	-37.1	1.27	-1.20	-10.16

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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)
4,775.0	2.36	86.10	4,774.2	37.3	-2.3	-37.1	1.30	0.84	-25.16
4,800.0	2.55	88.18	4,799.2	37.4	-1.2	-37.2	0.84	0.76	8.32
4,825.0	2.39	90.83	4,824.2	37.4	-0.2	-37.3	0.79	-0.64	10.60
4,850.0	2.18	89.67	4,849.2	37.4	0.8	-37.4	0.86	-0.84	-4.64
4,875.0	2.49	83.86	4,874.2	37.4	1.8	-37.5	1.56	1.24	-23.24
4,900.0	2.75	86.95	4,899.1	37.5	3.0	-37.6	1.18	1.04	12.36
4,925.0	2.84	80.92	4,924.1	37.6	4.2	-37.8	1.23	0.36	-24.12
4,950.0	2.87	86.31	4,949.1	37.8	5.4	-38.0	1.08	0.12	21.56
4,975.0	2.98	88.11	4,974.0	37.8	6.7	-38.1	0.57	0.44	7.20
5,000.0	3.17	87.78	4,999.0	37.9	8.0	-38.3	0.76	0.76	-1.32
5,025.0	2.90	85.94	5,024.0	38.0	9.4	-38.4	1.15	-1.08	-7.36
5,050.0	2.41	90.44	5,048.9	38.0	10.5	-38.5	2.13	-1.96	18.00
5,075.0	2.19	95.51	5,073.9	38.0	11.5	-38.5	1.20	-0.88	20.28
5,100.0	2.15	97.01	5,098.9	37.9	12.5	-38.5	0.28	-0.16	6.00
5,125.0	2.37	94.46	5,123.9	37.8	13.4	-38.4	0.97	0.88	-10.20
5,150.0	2.36	98.04	5,148.9	37.6	14.5	-38.3	0.59	-0.04	14.32
5,175.0	2.30	96.13	5,173.8	37.5	15.5	-38.3	0.39	-0.24	-7.64
5,200.0	2.19	96.89	5,198.8	37.4	16.4	-38.2	0.46	-0.44	3.04
5,225.0	1.69	90.29	5,223.8	37.3	17.3	-38.2	2.19	-2.00	-26.40
5,250.0	0.90	50.58	5,248.8	37.5	17.8	-38.3	4.61	-3.16	-158.84
5,275.0	0.77	19.09	5,273.8	37.8	18.0	-38.6	1.88	-0.52	-125.96
5,300.0	0.84	9.69	5,298.8	38.1	18.1	-39.0	0.60	0.28	-37.60
5,325.0	0.71	8.51	5,323.8	38.4	18.2	-39.3	0.52	-0.52	-4.72
5,350.0	0.78	356.50	5,348.8	38.7	18.2	-39.6	0.68	0.28	-48.04
5,375.0	1.19	311.76	5,373.8	39.1	18.0	-40.0	3.36	1.64	-178.96
5,400.0	2.15	314.21	5,398.8	39.6	17.4	-40.4	3.85	3.84	9.80
5,425.0	3.12	304.85	5,423.7	40.3	16.5	-41.1	4.23	3.88	-37.44
5,450.0	3.91	307.88	5,448.7	41.2	15.3	-42.0	3.25	3.16	12.12
5,475.0	3.65	307.01	5,473.6	42.2	14.0	-42.9	1.06	-1.04	-3.48
5,500.0	3.98	304.06	5,498.6	43.2	12.6	-43.8	1.54	1.32	-11.80
5,525.0	3.90	308.19	5,523.5	44.2	11.3	-44.7	1.18	-0.32	16.52
5,550.0	3.71	307.97	5,548.5	45.2	10.0	-45.7	0.76	-0.76	-0.88
5,575.0	3.90	304.18	5,573.4	46.2	8.6	-46.6	1.26	0.76	-15.16
5,600.0	3.93	308.60	5,598.4	47.2	7.2	-47.5	1.21	0.12	17.68
5,625.0	3.83	307.60	5,623.3	48.3	5.9	-48.5	0.48	-0.40	-4.00
5,650.0	3.81	305.57	5,648.2	49.2	4.6	-49.4	0.55	-0.08	-8.12
5,675.0	4.05	306.69	5,673.2	50.3	3.2	-50.4	1.01	0.96	4.48
5,700.0	3.95	308.53	5,698.1	51.3	1.8	-51.3	0.65	-0.40	7.36
5,725.0	4.28	303.19	5,723.1	52.4	0.4	-52.3	2.02	1.32	-21.36
5,750.0	4.85	303.69	5,748.0	53.5	-1.3	-53.3	2.29	2.28	2.00
5,775.0	4.86	302.43	5,772.9	54.6	-3.1	-54.4	0.43	0.04	-5.04
5,800.0	4.81	303.04	5,797.8	55.8	-4.9	-55.4	0.29	-0.20	2.44
5,825.0	4.87	300.85	5,822.7	56.9	-6.6	-56.4	0.78	0.24	-8.76

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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)
5,850.0	5.07	302.17	5,847.6	58.0	-8.5	-57.5	0.92	0.80	5.28
5,875.0	4.82	302.57	5,872.5	59.2	-10.3	-58.5	1.01	-1.00	1.60
5,900.0	5.14	300.86	5,897.4	60.3	-12.2	-59.6	1.41	1.28	-6.84
5,925.0	4.87	302.00	5,922.3	61.4	-14.0	-60.6	1.15	-1.08	4.56
5,950.0	4.60	300.34	5,947.3	62.5	-15.8	-61.6	1.21	-1.08	-6.64
5,975.0	4.53	298.42	5,972.2	63.5	-17.5	-62.5	0.67	-0.28	-7.68
6,000.0	4.76	300.46	5,997.1	64.5	-19.3	-63.4	1.13	0.92	8.16
6,025.0	4.60	301.34	6,022.0	65.5	-21.0	-64.3	0.70	-0.64	3.52
6,050.0	4.58	301.33	6,046.9	66.6	-22.7	-65.3	0.08	-0.08	-0.04
6,075.0	4.47	300.72	6,071.9	67.6	-24.4	-66.2	0.48	-0.44	-2.44
6,100.0	4.52	300.08	6,096.8	68.6	-26.1	-67.1	0.28	0.20	-2.56
6,125.0	4.51	299.87	6,121.7	69.6	-27.8	-68.0	0.08	-0.04	-0.84
6,150.0	4.35	299.83	6,146.6	70.5	-29.5	-68.9	0.64	-0.64	-0.16
6,175.0	4.31	300.34	6,171.5	71.5	-31.1	-69.7	0.22	-0.16	2.04
6,200.0	4.36	300.11	6,196.5	72.4	-32.8	-70.6	0.21	0.20	-0.92
6,225.0	4.27	299.17	6,221.4	73.3	-34.4	-71.4	0.46	-0.36	-3.76
6,250.0	4.17	298.49	6,246.3	74.2	-36.0	-72.2	0.45	-0.40	-2.72
6,275.0	4.12	295.69	6,271.3	75.1	-37.6	-73.0	0.83	-0.20	-11.20
6,300.0	4.26	294.53	6,296.2	75.8	-39.3	-73.7	0.65	0.56	-4.64
6,325.0	4.19	297.39	6,321.1	76.6	-40.9	-74.4	0.89	-0.28	11.44
6,350.0	4.09	297.33	6,346.1	77.5	-42.5	-75.1	0.40	-0.40	-0.24
6,375.0	4.31	294.22	6,371.0	78.3	-44.2	-75.8	1.27	0.88	-12.44
6,400.0	4.15	296.60	6,395.9	79.0	-45.8	-76.5	0.95	-0.64	9.52
6,425.0	4.07	295.09	6,420.9	79.8	-47.5	-77.2	0.54	-0.32	-6.04
6,450.0	4.35	293.01	6,445.8	80.6	-49.1	-77.9	1.28	1.12	-8.32
6,475.0	4.09	295.90	6,470.7	81.3	-50.8	-78.6	1.34	-1.04	11.56
6,500.0	4.24	292.84	6,495.7	82.1	-52.5	-79.2	1.07	0.60	-12.24
6,525.0	4.06	294.21	6,520.6	82.8	-54.1	-79.9	0.82	-0.72	5.48
6,550.0	4.12	291.27	6,545.5	83.5	-55.8	-80.5	0.87	0.24	-11.76
6,575.0	3.94	292.85	6,570.5	84.2	-57.4	-81.0	0.85	-0.72	6.32
6,600.0	4.18	289.81	6,595.4	84.8	-59.0	-81.6	1.29	0.96	-12.16
6,625.0	4.12	292.01	6,620.4	85.4	-60.7	-82.1	0.68	-0.24	8.80
6,650.0	3.85	290.55	6,645.3	86.1	-62.3	-82.7	1.15	-1.08	-5.84
6,675.0	4.02	292.36	6,670.2	86.7	-63.9	-83.2	0.84	0.68	7.24
6,700.0	4.06	289.65	6,695.2	87.3	-65.6	-83.8	0.78	0.16	-10.84
6,725.0	4.06	292.55	6,720.1	88.0	-67.2	-84.3	0.82	0.00	11.60
6,750.0	4.30	290.23	6,745.0	88.6	-68.9	-84.9	1.17	0.96	-9.28
6,775.0	4.42	289.30	6,770.0	89.3	-70.7	-85.5	0.56	0.48	-3.72
6,800.0	4.43	287.33	6,794.9	89.9	-72.6	-86.0	0.61	0.04	-7.88
6,825.0	4.69	288.27	6,819.8	90.5	-74.4	-86.5	1.08	1.04	3.76
6,850.0	4.61	289.65	6,844.7	91.1	-76.4	-87.0	0.55	-0.32	5.52
6,875.0	4.49	287.86	6,869.7	91.8	-78.2	-87.6	0.74	-0.48	-7.16
6,900.0	4.47	288.99	6,894.6	92.4	-80.1	-88.1	0.36	-0.08	4.52
6,925.0	4.62	288.60	6,919.5	93.0	-82.0	-88.6	0.61	0.60	-1.56

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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)
6,950.0	4.52	288.25	6,944.4	93.7	-83.9	-89.2	0.42	-0.40	-1.40
6,975.0	4.55	287.72	6,969.3	94.3	-85.7	-89.7	0.21	0.12	-2.12
7,000.0	4.54	287.89	6,994.3	94.9	-87.6	-90.2	0.07	-0.04	0.68
7,025.0	4.94	288.87	7,019.2	95.5	-89.6	-90.7	1.63	1.60	3.92
7,050.0	4.92	288.30	7,044.1	96.2	-91.6	-91.3	0.21	-0.08	-2.28
7,075.0	4.83	289.68	7,069.0	96.9	-93.6	-91.9	0.59	-0.36	5.52
7,100.0	4.75	288.92	7,093.9	97.6	-95.6	-92.5	0.41	-0.32	-3.04
7,125.0	4.68	288.57	7,118.8	98.3	-97.5	-93.0	0.30	-0.28	-1.40
7,150.0	4.59	290.39	7,143.7	98.9	-99.5	-93.6	0.69	-0.36	7.28
7,175.0	4.58	289.26	7,168.7	99.6	-101.3	-94.2	0.36	-0.04	-4.52
7,200.0	4.56	289.99	7,193.6	100.3	-103.2	-94.7	0.25	-0.08	2.92
7,225.0	4.63	290.96	7,218.5	101.0	-105.1	-95.3	0.42	0.28	3.88
7,250.0	4.58	291.96	7,243.4	101.7	-107.0	-96.0	0.38	-0.20	4.00
7,275.0	4.61	290.10	7,268.3	102.4	-108.8	-96.6	0.61	0.12	-7.44
7,300.0	4.81	290.59	7,293.3	103.2	-110.7	-97.2	0.82	0.80	1.96
7,325.0	4.69	292.82	7,318.2	103.9	-112.7	-97.9	0.88	-0.48	8.92
7,350.0	4.47	291.22	7,343.1	104.7	-114.5	-98.5	1.02	-0.88	-6.40
7,375.0	4.60	291.03	7,368.0	105.4	-116.4	-99.1	0.52	0.52	-0.76
7,400.0	4.32	292.68	7,392.9	106.1	-118.2	-99.8	1.23	-1.12	6.60
7,425.0	4.59	291.16	7,417.9	106.8	-120.0	-100.4	1.18	1.08	-6.08
7,450.0	4.47	293.75	7,442.8	107.6	-121.8	-101.1	0.95	-0.48	10.36
7,475.0	4.57	290.85	7,467.7	108.3	-123.6	-101.7	1.00	0.40	-11.60
7,500.0	4.41	293.15	7,492.6	109.1	-125.4	-102.3	0.96	-0.64	9.20
7,525.0	4.99	298.69	7,517.5	110.0	-127.3	-103.1	2.94	2.32	22.16
7,550.0	5.05	302.39	7,542.4	111.1	-129.2	-104.2	1.32	0.24	14.80
7,575.0	5.44	302.59	7,567.3	112.3	-131.1	-105.3	1.56	1.56	0.80
7,600.0	5.22	301.19	7,592.2	113.5	-133.1	-106.4	1.02	-0.88	-5.60
7,625.0	5.37	302.83	7,617.1	114.7	-135.0	-107.5	0.85	0.60	6.56
7,650.0	5.30	300.72	7,642.0	116.0	-137.0	-108.6	0.83	-0.28	-8.44
7,675.0	5.27	303.98	7,666.9	117.2	-138.9	-109.8	1.21	-0.12	13.04
7,700.0	5.10	303.17	7,691.8	118.5	-140.8	-110.9	0.74	-0.68	-3.24
7,725.0	4.85	302.10	7,716.7	119.6	-142.6	-112.0	1.07	-1.00	-4.28
7,750.0	4.80	300.82	7,741.6	120.7	-144.4	-113.0	0.47	-0.20	-5.12
7,775.0	4.74	300.09	7,766.5	121.8	-146.2	-114.0	0.34	-0.24	-2.92
7,800.0	4.61	299.49	7,791.5	122.8	-148.0	-114.9	0.56	-0.52	-2.40
7,825.0	4.69	299.79	7,816.4	123.8	-149.7	-115.8	0.33	0.32	1.20
7,850.0	4.52	299.62	7,841.3	124.8	-151.5	-116.7	0.68	-0.68	-0.68
7,875.0	4.51	297.77	7,866.2	125.7	-153.2	-117.5	0.58	-0.04	-7.40
7,900.0	4.48	299.89	7,891.1	126.7	-154.9	-118.4	0.68	-0.12	8.48
7,925.0	4.43	296.15	7,916.1	127.6	-156.6	-119.2	1.18	-0.20	-14.96
7,950.0	4.37	299.50	7,941.0	128.5	-158.3	-120.0	1.06	-0.24	13.40
7,975.0	4.33	295.39	7,965.9	129.4	-160.0	-120.8	1.26	-0.16	-16.44
8,000.0	4.13	296.19	7,990.9	130.2	-161.7	-121.5	0.83	-0.80	3.20

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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)
8,025.0	3.86	292.63	8,015.8	130.9	-163.3	-122.1	1.47	-1.08	-14.24
8,050.0	3.56	295.03	8,040.7	131.5	-164.8	-122.7	1.35	-1.20	9.60
8,075.0	3.38	292.79	8,065.7	132.1	-166.1	-123.3	0.90	-0.72	-8.96
8,100.0	3.39	288.52	8,090.7	132.7	-167.5	-123.7	1.01	0.04	-17.08
8,125.0	3.28	291.33	8,115.6	133.2	-168.9	-124.1	0.79	-0.44	11.24
8,150.0	2.98	291.36	8,140.6	133.7	-170.2	-124.6	1.20	-1.20	0.12
8,175.0	2.93	290.39	8,165.5	134.1	-171.4	-125.0	0.28	-0.20	-3.88
8,200.0	2.95	292.28	8,190.5	134.6	-172.6	-125.4	0.40	0.08	7.56
8,225.0	2.72	286.41	8,215.5	135.0	-173.7	-125.7	1.48	-0.92	-23.48
8,250.0	3.05	261.10	8,240.4	135.1	-174.9	-125.7	5.22	1.32	-101.24
8,275.0	3.99	244.85	8,265.4	134.6	-176.4	-125.2	5.45	3.76	-65.00
8,300.0	4.31	241.03	8,290.3	133.8	-178.0	-124.3	1.69	1.28	-15.28
8,325.0	4.46	240.01	8,315.3	132.8	-179.7	-123.2	0.68	0.60	-4.08
8,350.0	4.55	242.46	8,340.2	131.9	-181.4	-122.2	0.85	0.36	9.80
8,375.0	4.41	243.18	8,365.1	131.0	-183.1	-121.2	0.60	-0.56	2.88
8,400.0	4.46	239.81	8,390.0	130.1	-184.8	-120.2	1.06	0.20	-13.48
8,425.0	4.76	242.11	8,414.9	129.1	-186.6	-119.1	1.41	1.20	9.20
8,450.0	5.72	256.24	8,439.8	128.3	-188.7	-118.2	6.41	3.84	56.52
8,475.0	5.91	257.99	8,464.7	127.7	-191.2	-117.6	1.04	0.76	7.00
8,500.0	6.12	260.72	8,489.6	127.3	-193.7	-116.9	1.42	0.84	10.92
8,525.0	5.94	270.63	8,514.4	127.1	-196.4	-116.6	4.22	-0.72	39.64
8,550.0	6.02	278.27	8,539.3	127.3	-198.9	-116.7	3.20	0.32	30.56
8,575.0	5.96	277.96	8,564.2	127.6	-201.5	-116.9	0.27	-0.24	-1.24
8,600.0	5.87	277.31	8,589.0	128.0	-204.1	-117.1	0.45	-0.36	-2.60
8,625.0	5.69	277.79	8,613.9	128.3	-206.6	-117.3	0.75	-0.72	1.92
8,650.0	5.45	277.47	8,638.8	128.6	-209.0	-117.5	0.97	-0.96	-1.28
8,675.0	5.30	277.16	8,663.7	128.9	-211.3	-117.7	0.61	-0.60	-1.24
8,700.0	5.11	276.81	8,688.6	129.2	-213.6	-117.8	0.77	-0.76	-1.40
8,725.0	4.90	276.18	8,713.5	129.4	-215.7	-118.0	0.87	-0.84	-2.52
8,750.0	4.66	277.33	8,738.4	129.7	-217.8	-118.1	1.03	-0.96	4.60
8,775.0	4.64	277.85	8,763.3	130.0	-219.8	-118.3	0.19	-0.08	2.08
8,800.0	4.75	286.92	8,788.2	130.4	-221.8	-118.6	3.00	0.44	36.28
8,825.0	4.89	304.29	8,813.1	131.3	-223.7	-119.4	5.84	0.56	69.48
8,850.0	5.69	316.91	8,838.0	132.8	-225.4	-120.8	5.63	3.20	50.48
8,875.0	5.69	317.98	8,862.9	134.6	-227.1	-122.6	0.42	0.00	4.28
8,900.0	5.69	316.17	8,887.8	136.4	-228.8	-124.3	0.72	0.00	-7.24
8,925.0	5.45	319.18	8,912.7	138.2	-230.4	-126.0	1.51	-0.96	12.04
8,950.0	5.28	319.14	8,937.6	140.0	-231.9	-127.7	0.68	-0.68	-0.16
8,975.0	5.17	318.56	8,962.5	141.7	-233.4	-129.3	0.49	-0.44	-2.32
9,000.0	5.32	316.59	8,987.4	143.4	-235.0	-130.9	0.94	0.60	-7.88
9,025.0	5.28	319.40	9,012.2	145.1	-236.5	-132.5	1.05	-0.16	11.24
9,050.0	5.19	320.48	9,037.1	146.9	-238.0	-134.2	0.53	-0.36	4.32
9,075.0	5.35	320.15	9,062.0	148.6	-239.4	-135.9	0.65	0.64	-1.32

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,100.0	5.77	319.69	9,086.9	150.5	-241.0	-137.7	1.69	1.68	-1.84
9,125.0	6.85	325.43	9,111.8	152.7	-242.7	-139.8	5.00	4.32	22.96
9,150.0	6.77	324.41	9,136.6	155.1	-244.4	-142.1	0.58	-0.32	-4.08
9,175.0	7.05	325.41	9,161.4	157.6	-246.1	-144.5	1.22	1.12	4.00
9,200.0	6.62	326.43	9,186.2	160.0	-247.8	-146.8	1.79	-1.72	4.08
9,225.0	6.27	326.31	9,211.1	162.4	-249.3	-149.1	1.40	-1.40	-0.48
9,250.0	6.01	326.41	9,235.9	164.6	-250.8	-151.2	1.04	-1.04	0.40
9,275.0	5.81	326.30	9,260.8	166.7	-252.2	-153.3	0.80	-0.80	-0.44
9,300.0	5.65	326.22	9,285.7	168.8	-253.6	-155.3	0.64	-0.64	-0.32
9,325.0	5.22	326.03	9,310.6	170.8	-254.9	-157.2	1.72	-1.72	-0.76
9,350.0	4.87	327.70	9,335.5	172.6	-256.1	-159.0	1.52	-1.40	6.68
9,375.0	4.57	326.80	9,360.4	174.3	-257.2	-160.6	1.24	-1.20	-3.60
9,400.0	4.51	326.93	9,385.3	176.0	-258.3	-162.2	0.24	-0.24	0.52
9,425.0	4.12	324.57	9,410.2	177.6	-259.4	-163.7	1.71	-1.56	-9.44
9,450.0	4.29	325.58	9,435.2	179.1	-260.4	-165.2	0.74	0.68	4.04
9,475.0	4.84	325.04	9,460.1	180.7	-261.6	-166.8	2.21	2.20	-2.16
9,500.0	5.54	322.73	9,485.0	182.5	-262.9	-168.5	2.92	2.80	-9.24
9,525.0	5.69	321.30	9,509.9	184.4	-264.4	-170.3	0.82	0.60	-5.72
9,550.0	5.50	321.66	9,534.7	186.4	-265.9	-172.2	0.77	-0.76	1.44
9,575.0	5.67	323.09	9,559.6	188.3	-267.4	-174.0	0.88	0.68	5.72
9,600.0	5.45	322.85	9,584.5	190.2	-268.9	-175.9	0.88	-0.88	-0.96
9,625.0	5.58	321.02	9,609.4	192.1	-270.3	-177.7	0.87	0.52	-7.32
9,650.0	5.55	322.53	9,634.3	194.0	-271.8	-179.5	0.60	-0.12	6.04
9,675.0	5.32	321.39	9,659.2	195.9	-273.3	-181.3	1.02	-0.92	-4.56
9,700.0	5.18	319.96	9,684.1	197.6	-274.7	-183.0	0.77	-0.56	-5.72
9,725.0	5.05	319.06	9,709.0	199.3	-276.2	-184.6	0.61	-0.52	-3.60
9,750.0	5.00	318.37	9,733.9	201.0	-277.6	-186.2	0.31	-0.20	-2.76
9,775.0	4.88	317.23	9,758.8	202.6	-279.1	-187.7	0.62	-0.48	-4.56
9,800.0	4.70	315.21	9,783.7	204.1	-280.5	-189.1	0.99	-0.72	-8.08
9,825.0	4.75	314.40	9,808.6	205.5	-282.0	-190.5	0.33	0.20	-3.24
9,850.0	4.61	314.70	9,833.5	207.0	-283.4	-191.8	0.57	-0.56	1.20
9,875.0	4.46	313.49	9,858.4	208.3	-284.9	-193.1	0.71	-0.60	-4.84
9,900.0	4.32	312.55	9,883.4	209.6	-286.3	-194.4	0.63	-0.56	-3.76
9,925.0	4.45	311.83	9,908.3	210.9	-287.7	-195.6	0.56	0.52	-2.88
9,950.0	4.60	314.05	9,933.2	212.3	-289.1	-196.8	0.92	0.60	8.88
9,975.0	4.49	312.02	9,958.1	213.6	-290.6	-198.1	0.78	-0.44	-8.12
10,000.0	4.61	314.31	9,983.1	215.0	-292.0	-199.4	0.87	0.48	9.16
10,025.0	4.50	314.33	10,008.0	216.4	-293.4	-200.7	0.44	-0.44	0.08
10,050.0	4.55	313.20	10,032.9	217.7	-294.9	-202.0	0.41	0.20	-4.52
10,075.0	4.69	312.58	10,057.8	219.1	-296.3	-203.3	0.59	0.56	-2.48
10,100.0	4.53	311.59	10,082.7	220.5	-297.8	-204.6	0.71	-0.64	-3.96
10,125.0	4.49	314.77	10,107.7	221.8	-299.3	-205.8	1.01	-0.16	12.72
10,150.0	4.52	314.09	10,132.6	223.2	-300.7	-207.1	0.25	0.12	-2.72
10,175.0	4.26	316.34	10,157.5	224.5	-302.0	-208.4	1.25	-1.04	9.00

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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)
10,200.0	4.34	314.89	10,182.4	225.9	-303.3	-209.7	0.54	0.32	-5.80
10,225.0	4.12	316.30	10,207.4	227.2	-304.6	-210.9	0.97	-0.88	5.64
10,250.0	4.29	318.54	10,232.3	228.5	-305.9	-212.2	0.95	0.68	8.96
10,275.0	3.95	322.30	10,257.2	229.9	-307.0	-213.5	1.74	-1.36	15.04
10,300.0	3.87	323.35	10,282.2	231.3	-308.0	-214.8	0.43	-0.32	4.20
10,325.0	4.00	331.05	10,307.1	232.7	-309.0	-216.2	2.17	0.52	30.80
10,350.0	3.96	334.04	10,332.1	234.3	-309.8	-217.7	0.85	-0.16	11.96
10,375.0	4.13	337.19	10,357.0	235.9	-310.5	-219.3	1.12	0.68	12.60
10,400.0	4.06	342.04	10,381.9	237.5	-311.1	-220.9	1.41	-0.28	19.40
10,425.0	3.78	345.76	10,406.9	239.2	-311.6	-222.5	1.51	-1.12	14.88
10,450.0	3.77	348.06	10,431.8	240.8	-311.9	-224.1	0.61	-0.04	9.20
10,475.0	3.72	348.75	10,456.8	242.4	-312.3	-225.7	0.27	-0.20	2.76
10,500.0	3.60	348.02	10,481.7	243.9	-312.6	-227.2	0.51	-0.48	-2.92
10,525.0	3.53	348.60	10,506.7	245.5	-312.9	-228.7	0.31	-0.28	2.32
10,550.0	3.51	349.80	10,531.6	247.0	-313.2	-230.2	0.31	-0.08	4.80
10,575.0	3.48	346.93	10,556.6	248.5	-313.5	-231.7	0.71	-0.12	-11.48
10,600.0	3.54	342.85	10,581.5	249.9	-313.9	-233.2	1.03	0.24	-16.32
10,625.0	3.78	331.47	10,606.5	251.4	-314.5	-234.6	3.05	0.96	-45.52
10,650.0	3.90	330.15	10,631.4	252.9	-315.3	-236.0	0.60	0.48	-5.28
10,675.0	3.86	330.68	10,656.4	254.3	-316.2	-237.4	0.21	-0.16	2.12
10,700.0	3.86	329.44	10,681.3	255.8	-317.0	-238.8	0.33	0.00	-4.96
10,725.0	3.65	330.64	10,706.3	257.2	-317.8	-240.2	0.90	-0.84	4.80
10,750.0	3.21	332.39	10,731.2	258.5	-318.6	-241.5	1.81	-1.76	7.00
10,775.0	3.04	331.17	10,756.2	259.7	-319.2	-242.7	0.73	-0.68	-4.88
10,800.0	2.76	333.32	10,781.1	260.8	-319.8	-243.7	1.20	-1.12	8.60
10,825.0	2.58	334.96	10,806.1	261.9	-320.3	-244.8	0.78	-0.72	6.56
10,850.0	2.47	334.04	10,831.1	262.9	-320.8	-245.7	0.47	-0.44	-3.68
10,875.0	2.47	332.90	10,856.1	263.8	-321.3	-246.7	0.20	0.00	-4.56
10,900.0	2.31	335.21	10,881.0	264.8	-321.7	-247.6	0.75	-0.64	9.24
10,925.0	2.22	335.89	10,906.0	265.7	-322.1	-248.5	0.38	-0.36	2.72
10,950.0	2.12	337.71	10,931.0	266.6	-322.5	-249.3	0.49	-0.40	7.28
10,975.0	2.10	339.56	10,956.0	267.4	-322.8	-250.1	0.28	-0.08	7.40
11,000.0	2.13	341.72	10,981.0	268.3	-323.1	-251.0	0.34	0.12	8.64
11,025.0	2.15	348.22	11,006.0	269.2	-323.4	-251.9	0.97	0.08	26.00
11,050.0	2.12	354.65	11,030.9	270.1	-323.5	-252.8	0.97	-0.12	25.72
11,075.0	1.99	356.40	11,055.9	271.0	-323.6	-253.7	0.58	-0.52	7.00
11,100.0	1.86	0.18	11,080.9	271.8	-323.6	-254.5	0.73	-0.52	15.12
11,125.0	1.77	1.70	11,105.9	272.6	-323.6	-255.3	0.41	-0.36	6.08
11,150.0	1.82	10.47	11,130.9	273.4	-323.5	-256.1	1.12	0.20	35.08
11,175.0	2.16	14.06	11,155.9	274.2	-323.3	-256.9	1.45	1.36	14.36
11,200.0	2.68	16.03	11,180.8	275.3	-323.0	-258.0	2.11	2.08	7.88
11,225.0	3.06	16.41	11,205.8	276.5	-322.7	-259.2	1.52	1.52	1.52
11,250.0	3.41	18.59	11,230.8	277.8	-322.3	-260.6	1.48	1.40	8.72

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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)
11,275.0	3.70	17.90	11,255.7	279.3	-321.8	-262.1	1.17	1.16	-2.76
11,300.0	4.07	19.02	11,280.7	280.9	-321.3	-263.7	1.51	1.48	4.48
11,325.0	4.31	19.48	11,305.6	282.6	-320.6	-265.4	0.97	0.96	1.84
11,350.0	4.55	21.47	11,330.5	284.4	-320.0	-267.3	1.14	0.96	7.96
11,375.0	4.78	24.50	11,355.4	286.3	-319.2	-269.2	1.35	0.92	12.12
11,400.0	5.01	26.66	11,380.3	288.2	-318.3	-271.2	1.18	0.92	8.64
11,425.0	5.50	27.69	11,405.2	290.3	-317.2	-273.3	2.00	1.96	4.12
11,450.0	5.82	27.20	11,430.1	292.4	-316.1	-275.5	1.29	1.28	-1.96
11,475.0	5.99	27.78	11,455.0	294.7	-314.9	-277.8	0.72	0.68	2.32
11,500.0	6.17	27.33	11,479.8	297.1	-313.7	-280.2	0.74	0.72	-1.80
11,525.0	6.06	28.25	11,504.7	299.4	-312.4	-282.7	0.59	-0.44	3.68
11,550.0	6.14	30.01	11,529.6	301.7	-311.1	-285.0	0.81	0.32	7.04
11,575.0	5.91	30.94	11,554.4	304.0	-309.8	-287.4	1.00	-0.92	3.72
11,600.0	5.40	32.01	11,579.3	306.1	-308.5	-289.5	2.08	-2.04	4.28
11,625.0	5.05	33.21	11,604.2	308.0	-307.3	-291.5	1.47	-1.40	4.80
11,650.0	4.44	32.84	11,629.1	309.8	-306.2	-293.3	2.44	-2.44	-1.48
11,675.0	4.14	36.24	11,654.0	311.3	-305.1	-294.9	1.57	-1.20	13.60
11,700.0	4.13	38.76	11,679.0	312.7	-304.0	-296.4	0.73	-0.04	10.08
11,725.0	4.00	38.33	11,703.9	314.1	-302.9	-297.8	0.53	-0.52	-1.72
11,750.0	3.77	42.99	11,728.9	315.4	-301.8	-299.2	1.56	-0.92	18.64
11,755.0	3.73	43.99	11,733.8	315.6	-301.6	-299.4	1.53	-0.80	20.00
11,883.0	3.58	59.35	11,861.6	320.7	-295.2	-304.8	0.77	-0.12	12.00
11,915.0	3.46	106.61	11,893.5	320.9	-293.5	-305.1	8.82	-0.38	147.69
11,946.0	5.09	151.96	11,924.5	319.4	-291.9	-303.7	11.68	5.26	146.29
11,978.0	5.76	168.25	11,956.3	316.6	-290.9	-300.9	5.23	2.09	50.91
12,010.0	8.36	174.73	11,988.1	312.7	-290.4	-297.1	8.48	8.13	20.25
12,058.0	13.17	183.23	12,035.2	303.8	-290.4	-288.2	10.53	10.02	17.71
12,105.0	20.07	193.14	12,080.2	290.6	-292.5	-274.8	15.82	14.68	21.09
12,153.0	27.52	197.96	12,124.1	272.0	-297.8	-256.0	16.03	15.52	10.04
12,200.0	34.88	201.52	12,164.3	249.1	-306.1	-232.7	16.14	15.66	7.57
12,248.0	39.56	203.70	12,202.5	222.3	-317.3	-205.4	10.13	9.75	4.54
12,294.0	43.03	204.37	12,237.1	194.6	-329.6	-177.1	7.60	7.54	1.46
12,342.0	46.16	203.22	12,271.3	163.8	-343.2	-145.6	6.73	6.52	-2.40
12,389.0	49.26	200.69	12,302.9	131.5	-356.2	-112.7	7.70	6.60	-5.38
12,437.0	54.56	197.11	12,332.5	95.8	-368.4	-76.4	12.50	11.04	-7.46
12,484.0	59.78	193.13	12,358.0	57.7	-378.7	-37.8	13.19	11.11	-8.47
12,532.0	66.62	193.32	12,379.6	16.0	-388.5	4.4	14.25	14.25	0.40
12,579.0	73.26	192.34	12,395.7	-27.0	-398.2	47.8	14.26	14.13	-2.09
12,627.0	77.31	191.91	12,407.9	-72.4	-408.0	93.7	8.48	8.44	-0.90
12,674.0	79.80	190.58	12,417.2	-117.6	-417.0	139.3	5.98	5.30	-2.83
12,722.0	85.67	188.94	12,423.3	-164.5	-425.0	186.5	12.69	12.23	-3.42
12,768.0	89.88	188.42	12,425.1	-209.9	-432.0	232.2	9.22	9.15	-1.13
12,863.0	90.98	187.52	12,424.4	-304.0	-445.1	326.9	1.50	1.16	-0.95

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

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)
12,958.0	91.04	186.01	12,422.7	-398.3	-456.3	421.7	1.59	0.06	-1.59
13,053.0	91.42	187.46	12,420.6	-492.6	-467.5	516.4	1.58	0.40	1.53
13,147.0	92.18	182.19	12,417.7	-586.2	-475.4	610.3	5.66	0.81	-5.61
13,242.0	89.63	178.36	12,416.2	-681.2	-475.8	705.2	4.84	-2.68	-4.03
13,336.0	89.56	177.59	12,416.9	-775.1	-472.5	798.8	0.82	-0.07	-0.82
13,431.0	87.39	176.66	12,419.4	-870.0	-467.7	893.3	2.48	-2.28	-0.98
13,526.0	85.75	174.54	12,425.1	-964.5	-460.5	987.3	2.82	-1.73	-2.23
13,620.0	88.85	177.99	12,429.5	-1,058.2	-454.4	1,080.5	4.93	3.30	3.67
13,715.0	89.28	178.40	12,431.0	-1,153.1	-451.4	1,175.2	0.63	0.45	0.43
13,810.0	88.73	177.41	12,432.7	-1,248.0	-447.9	1,269.8	1.19	-0.58	-1.04
13,905.0	90.88	180.58	12,433.0	-1,343.0	-446.2	1,364.5	4.03	2.26	3.34
14,000.0	90.14	176.71	12,432.2	-1,438.0	-444.0	1,459.2	4.15	-0.78	-4.07
14,094.0	89.44	175.07	12,432.5	-1,531.7	-437.2	1,552.5	1.90	-0.74	-1.74
14,188.0	88.28	178.43	12,434.4	-1,625.5	-431.9	1,645.9	3.78	-1.23	3.57
14,284.0	88.25	179.30	12,437.3	-1,721.5	-430.0	1,741.6	0.91	-0.03	0.91
14,378.0	90.11	182.86	12,438.6	-1,815.4	-431.8	1,835.5	4.27	1.98	3.79
14,473.0	89.42	181.93	12,439.0	-1,910.3	-435.8	1,930.5	1.22	-0.73	-0.98
14,567.0	91.33	180.87	12,438.4	-2,004.3	-438.1	2,024.5	2.32	2.03	-1.13
14,662.0	92.10	179.98	12,435.6	-2,099.3	-438.8	2,119.3	1.24	0.81	-0.94
14,757.0	93.02	180.30	12,431.3	-2,194.2	-439.0	2,214.1	1.03	0.97	0.34
14,851.0	93.35	179.33	12,426.1	-2,288.0	-438.7	2,307.8	1.09	0.35	-1.03
14,947.0	92.99	178.79	12,420.8	-2,383.8	-437.1	2,403.5	0.68	-0.38	-0.56
15,042.0	90.62	178.38	12,417.8	-2,478.8	-434.8	2,498.1	2.53	-2.49	-0.43
15,137.0	91.84	178.27	12,415.8	-2,573.7	-432.0	2,592.8	1.29	1.28	-0.12
15,232.0	91.81	178.15	12,412.7	-2,668.6	-429.0	2,687.4	0.13	-0.03	-0.13
15,326.0	90.23	178.72	12,411.1	-2,762.6	-426.5	2,781.1	1.79	-1.68	0.61
15,421.0	89.59	177.96	12,411.2	-2,857.5	-423.7	2,875.8	1.05	-0.67	-0.80
15,516.0	88.72	178.73	12,412.6	-2,952.5	-421.0	2,970.4	1.22	-0.92	0.81
15,610.0	88.93	178.06	12,414.5	-3,046.4	-418.3	3,064.1	0.75	0.22	-0.71
15,704.0	89.71	180.46	12,415.7	-3,140.4	-417.1	3,157.9	2.68	0.83	2.55
15,799.0	90.15	179.90	12,415.8	-3,235.4	-417.4	3,252.8	0.75	0.46	-0.59
15,894.0	89.44	179.45	12,416.1	-3,330.4	-416.9	3,347.6	0.88	-0.75	-0.47
15,989.0	89.22	178.98	12,417.2	-3,425.4	-415.6	3,442.4	0.55	-0.23	-0.49
16,083.0	88.86	178.62	12,418.8	-3,519.3	-413.6	3,536.2	0.54	-0.38	-0.38
16,177.0	89.42	179.44	12,420.2	-3,613.3	-412.0	3,629.9	1.06	0.60	0.87
16,271.0	90.20	179.69	12,420.5	-3,707.3	-411.3	3,723.7	0.87	0.83	0.27
16,366.0	90.86	179.16	12,419.6	-3,802.3	-410.3	3,818.6	0.89	0.69	-0.56
16,461.0	90.64	177.69	12,418.4	-3,897.2	-407.7	3,913.2	1.56	-0.23	-1.55
16,556.0	90.67	177.36	12,417.3	-3,992.1	-403.6	4,007.8	0.35	0.03	-0.35
16,650.0	91.95	178.19	12,415.2	-4,086.0	-400.0	4,101.4	1.62	1.36	0.88
16,744.0	92.53	179.05	12,411.5	-4,179.9	-397.7	4,195.0	1.10	0.62	0.91
16,839.0	92.60	179.98	12,407.2	-4,274.8	-396.9	4,289.8	0.98	0.07	0.98
16,934.0	92.80	180.39	12,402.8	-4,369.7	-397.2	4,384.5	0.48	0.21	0.43
17,028.0	92.00	179.53	12,398.8	-4,463.7	-397.2	4,478.3	1.25	-0.85	-0.91

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,122.0	90.87	180.00	12,396.5	-4,557.6	-396.8	4,572.1	1.30	-1.20	0.50
17,216.0	90.02	180.41	12,395.7	-4,651.6	-397.1	4,666.0	1.00	-0.90	0.44
17,311.0	86.91	182.08	12,398.3	-4,746.6	-399.2	4,760.9	3.72	-3.27	1.76
17,406.0	87.03	181.32	12,403.3	-4,841.4	-402.0	4,855.8	0.81	0.13	-0.80
17,501.0	86.84	180.60	12,408.4	-4,936.2	-403.6	4,950.6	0.78	-0.20	-0.76
17,595.0	87.07	179.51	12,413.4	-5,030.1	-403.7	5,044.3	1.18	0.24	-1.16
17,691.0	88.60	180.79	12,417.0	-5,126.0	-403.9	5,140.1	2.08	1.59	1.33
17,785.0	90.11	180.41	12,418.1	-5,220.0	-404.9	5,234.0	1.66	1.61	-0.40
17,880.0	91.61	179.69	12,416.6	-5,315.0	-405.0	5,328.9	1.75	1.58	-0.76
17,975.0	92.94	179.06	12,412.9	-5,409.9	-404.0	5,423.6	1.55	1.40	-0.66
18,070.0	92.59	178.52	12,408.3	-5,504.8	-401.9	5,518.3	0.68	-0.37	-0.57
18,165.0	90.68	178.50	12,405.6	-5,599.7	-399.5	5,612.9	2.01	-2.01	-0.02
18,260.0	92.37	177.27	12,403.1	-5,694.6	-396.0	5,707.5	2.20	1.78	-1.29
18,355.0	91.11	177.33	12,400.2	-5,789.4	-391.5	5,802.0	1.33	-1.33	0.06
18,449.0	89.60	176.88	12,399.6	-5,883.3	-386.8	5,895.5	1.68	-1.61	-0.48
18,544.0	90.97	175.80	12,399.1	-5,978.1	-380.7	5,989.9	1.84	1.44	-1.14
18,638.0	90.89	176.17	12,397.6	-6,071.9	-374.1	6,083.1	0.40	-0.09	0.39
18,733.0	89.82	175.77	12,397.0	-6,166.6	-367.4	6,177.4	1.20	-1.13	-0.42
18,827.0	88.98	176.90	12,398.0	-6,260.4	-361.4	6,270.8	1.50	-0.89	1.20
18,921.0	87.95	178.77	12,400.5	-6,354.3	-357.9	6,364.4	2.27	-1.10	1.99
19,016.0	88.84	179.29	12,403.2	-6,449.3	-356.3	6,459.1	1.08	0.94	0.55
19,111.0	90.23	177.97	12,403.9	-6,544.2	-354.0	6,553.8	2.02	1.46	-1.39
19,205.0	89.74	178.42	12,404.0	-6,638.2	-351.0	6,647.5	0.71	-0.52	0.48
19,300.0	88.71	181.67	12,405.2	-6,733.2	-351.1	6,742.3	3.59	-1.08	3.42
19,395.0	89.61	184.07	12,406.6	-6,828.0	-355.9	6,837.3	2.70	0.95	2.53
19,489.0	90.82	182.93	12,406.3	-6,921.9	-361.6	6,931.3	1.77	1.29	-1.21
19,584.0	92.25	182.45	12,403.7	-7,016.7	-366.1	7,026.3	1.59	1.51	-0.51
19,679.0	91.83	183.40	12,400.4	-7,111.5	-370.9	7,121.2	1.09	-0.44	1.00
19,774.0	89.78	183.69	12,399.0	-7,206.3	-376.8	7,216.2	2.18	-2.16	0.31
19,869.0	91.30	183.05	12,398.1	-7,301.2	-382.4	7,311.2	1.74	1.60	-0.67
19,926.0	92.11	182.51	12,396.4	-7,358.1	-385.1	7,368.1	1.71	1.42	-0.95
Final MWD Svy @ 19929'MD									
19,942.4	92.11	182.51	12,395.8	-7,374.4	-385.8	7,384.5	0.00	0.00	0.00
LTP @ 11942.4'MD									
19,991.0	92.11	182.51	12,394.0	-7,423.0	-388.0	7,433.1	0.00	0.00	0.00
PTD @ 19991'MD									

Concho Resources LLC

Survey Report

Company:	NORTHERN DELAWARE BASIN	**Local Co-ordinate Reference:**	Well PITCHBLENDE FEDERAL 19-30 38H
Project:	LEA COUNTY, NM	**TVD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Site:	BULLDOG	**MD Reference:**	KB=26' @ 3356.0usft (MCVAY 8)
Well:	PITCHBLENDE FEDERAL 19-30 38H	**North Reference:**	Grid
Wellbore:	OWB	**Survey Calculation Method:**	Minimum Curvature
Design:	AWP	**Database:**	edm

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
19,926.0	12,396.4	-7,358.1	-385.1	Final MWD Svy @ 19929'MD
19,942.4	12,395.8	-7,374.4	-385.8	LTP @ 11942.4'MD
19,991.0	12,394.0	-7,423.0	-388.0	PTD @ 19991'MD

Checked By: _____ Approved By: _____ Date: _____

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. NMNM136223

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator: COG OPERATING LLC
Contact: AMANDA AVERY
E-Mail: aavery@concho.com

8. Lease Name and Well No.: PITCHBLENDE FED 19-30 038H

3. Address: ONE CONCHO CENTER 600 W ILLINOIS AVENUE
MIDLAND, TX 79701-4287

3a. Phone No. (include area code)
Ph: 575-748-6940

9. API Well No.: 30-025-45653-00-S1

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
At surface: Sec 19 T25S R35E Mer NMP
NENE 450FNL 710FEL 32.121914 N Lat, 103.400383 W Lon
At top prod interval reported below: Sec 19 T25S R35E Mer NMP
NENE 450FNL 710FEL
At total depth: Sec 30 T25S R35E Mer NMP
SENE 2589FNL 1169FEL

10. Field and Pool, or Exploratory
WILDCAT BONE SPRING
UNKNOWN

11. Sec., T., R., M., or Block and Survey or Area: Sec 19 T25S R35E Mer NMP

12. County or Parish: LEA

13. State: NM

14. Date Spudded: 01/04/2020

15. Date T.D. Reached: 02/04/2020

16. Date Completed
☐ D & A ☒ Ready to Prod.
10/23/2020

17. Elevations (DF, KB, RT, GL)*: 3330 GL

18. Total Depth: MD 19991 TVD 12394

19. Plug Back T.D.: MD 19830 TVD 12394

20. Depth Bridge Plug Set: MD 19905 TVD 12394

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
14.750	10.750 J55	45.5	0	1028		893		0	
8.750	7.625 P110	29.7	0	11820		1625		0	
6.750	5.500 P110	18.0	0	19976		1605		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	11558	11548						

25. Producing Intervals / 26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) BRUSHY CANYON LOWER			12580 TO 19822			OPEN
B) DELAWARE	12580	19822				
C)						
D)						

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

Depth Interval	Amount and Type of Material
12580 TO 19822	57918 7 1/2%; 14,721,240# SAND; 14,875,619 GAL /CAT 3 FLUID

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
11/12/2020	11/12/2020	24	→	1000.0	1920.0	2084.0			GAS LIFT

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
15/64	3990	3026.0	→	1000	1920	2084	1920	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
11/12/2020	11/12/2020	24	→	1000.0	1920.0	2084.0			GAS LIFT

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
15/64	3990	3026.0	→	1000	1920	2084		POW

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

ELECTRONIC SUBMISSION #538873 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

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.)*
CAPTURED

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	921			RUSTLER	921
TOP OF SALT	1443			TOP OF SALT	1443
BASE OF SALT	5157			BASE OF SALT	5157
LAMAR	5455			LAMAR	5455
BELL CANYON	5481			BELL CANYON	5481
CHERRY CANYON	6452			CHERRY CANYON	6452
BRUSHY CANYON	9119			BRUSHY CANYON	9119
BRUSHY CANYON A	9119			BRUSHY CANYON A	9119

32. Additional remarks (include plugging procedure):
BONE SPRING LIMESTONE 9299
AVALON M 9685
AVALON L 10083
FIRST BONE SPRING 10469
FIRST BONE SPRING SHALE 10642
SECOND BONE SPRING 10985
SECOND BONE SPRING BASE 11545
THIRD BONE SPRING 12136

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 #538873 Verified by the BLM Well Information System.
For COG OPERATING LLC, sent to the Hobbs
Committed to AFMSS for processing by DEBORAH HAM on 12/12/2020 (21DMH0036SE)

Name *(please print)* AMANDA AVERY Title REGULATORY ANALYST

Signature (Electronic Submission) Date 12/01/2020

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 fradulent statements or representations as to any matter within its jurisdiction.

**** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ** REVISED ****

Additional data for transaction #538873 that would not fit on the form

32. Additional remarks, continued

V SAND 12356
THIRD BONE SPRING 12512

Revisions to Operator-Submitted EC Data for Well Completion #538873

	Operator Submitted	BLM Revised (AFMSS)
Lease:	NMNM136223	NMNM136223
Agreement:		
Operator:	COG OPERATING LLC 2208 W MAIN STREET ARTESIA, NM 88210 Ph: 575-748-6940	COG OPERATING LLC ONE CONCHO CENTER 600 W ILLINOIS AVENUE MIDLAND, TX 79701-4287 Ph: 432.685.4342
Admin Contact:	AMANDA AVERY REGULATORY ANALYST E-Mail: aavery@concho.com Ph: 575-748-6940	AMANDA AVERY REGULATORY ANALYST E-Mail: aavery@concho.com Ph: 575-748-6940
Tech Contact:	AMANDA AVERY REGULATORY ANALYST E-Mail: aavery@concho.com Ph: 575-748-6940	AMANDA AVERY REGULATORY ANALYST E-Mail: aavery@concho.com Ph: 575-748-6940
Well Name: Number:	PITCHBLENDE 10 30 FEDERAL 38H	PITCHBLENDE FED 19-30 038H
Location: State: County: S/T/R: Surf Loc:	 NM LEA Sec 19 T25S R35E Mer NMP Lot A 450FNL 710FEL	 NM LEA Sec 19 T25S R35E Mer NMP NENE 450FNL 710FEL 32.121914 N Lat, 103.400383 W Lon
Field/Pool:	DOGIE DRAW	WILDCAT BONE SPRING
Logs Run:		
Producing Intervals - Formations:	DELAWARE	BRUSHY CANYON LOWER DELAWARE
Porous Zones:	RUSTLER TOP OF SALT BOTTOM OF SALT LAMAR BELL CANYON CHERRY CANYON BRUSHY CANYON BRUSHY CANYON A	RUSTLER TOP OF SALT BASE OF SALT LAMAR BELL CANYON CHERRY CANYON BRUSHY CANYON BRUSHY CANYON A
Markers:	RUSTLER TOP OF SALT BOTTOM OF SALT LAMAR BELL CANYON CHERRY CANYON BRUSHY CANYON BRUSHY CANYON A	RUSTLER TOP OF SALT BASE OF SALT LAMAR BELL CANYON CHERRY CANYON BRUSHY CANYON BRUSHY CANYON A

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 20153

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
COG OPERATING LLC	600 W Illinois Ave	Midland, TX79701	229137	20153	C-104C

OCD Reviewer	Condition
ksimmons	None