

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

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

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

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

State of New Mexico
Energy, Minerals & Natural Resources

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

Form C-104
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address COG Operating LLC 2208 W. Main Street Artesia, NM 88210		² OGRID Number 229137	
		³ Reason for Filing Code/ Effective Date RT	
API Number 30-025-47105	⁵ Pool Name Bobcat Draw; Upper Wolfcamp		⁶ Pool Code 98094
⁷ Property Code 327008	⁸ Property Name Valor Federal Com		⁹ Well Number 708H

II. ¹⁰ Surface Location

Ul or lot no. D	Section 35	Township 25S	Range 33E	Lot Idn	Feet from the 210	North/South Line North	Feet from the 675	East/West line West	County Lea
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¹¹ Bottom Hole Location

Ul or lot no. E	Section 2	Township 26S	Range 33E	Lot Idn	Feet from the 2588	North/South Line North	Feet from the 966	East/West line West	County Lea
¹² Lse Code F	¹³ Producing Method Code		¹⁴ Gas Connection Date		¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date		¹⁷ C-129 Expiration Date	

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
	ACC	O
282301	Energy Transfer	G
278421	Holly Refining and Marketing PO Box 159 Artesia, NM 88210	O

IV. Well Completion Data

²¹ Spud Date 5/7/20	²² Ready Date 3/11/2021	²³ TD 19,979'	²⁴ PBTD 19,872'	²⁵ Perforations 12,681-19,877'	²⁶ DHC, MC
²⁷ Hole Size		²⁸ Casing & Tubing Size		²⁹ Depth Set	³⁰ Sacks Cement
14 3/4"		10 3/4"		1165'	796
8 3/4"		7 5/8"		11,703'	1400
6 3/4"		5 1/2"		19,964'	2150
		2 7/8"		11,522'	

V. Well Test Data

³¹ Date New Oil	³² Gas Delivery Date	³³ Test Date	³⁴ Test Length	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
³⁷ Choke Size	³⁸ Oil	³⁹ Water	⁴⁰ Gas		⁴¹ Test Method
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: <i>Amanda Avery</i>			OIL CONSERVATION DIVISION Approved by: KURT SIMMONS		
Printed name: Amanda Avery			Title: NMOCD, Santa Fe		
Title: Regulatory Analyst			Approval Date: 04/16/2021		
E-mail Address:			RT C-104 EXPIRES 07/15/2021 (90 DAYS)		
Date: 3/10/2021		Phone: 575-748-6962			

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
511 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 746-1283 Fax: (575) 746-9720

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 30-025-47105		Pool Code 98094	Pool Name Bobcat Draw; Upper Wolfcamp
Property Code 327008	Property Name VALOR FEDERAL COM		Well Number 708H
OGRID No. 229137	Operator Name COG OPERATING, LLC		Elevation 3324.8'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	35	25-S	33-E		210	NORTH	675	WEST	LEA

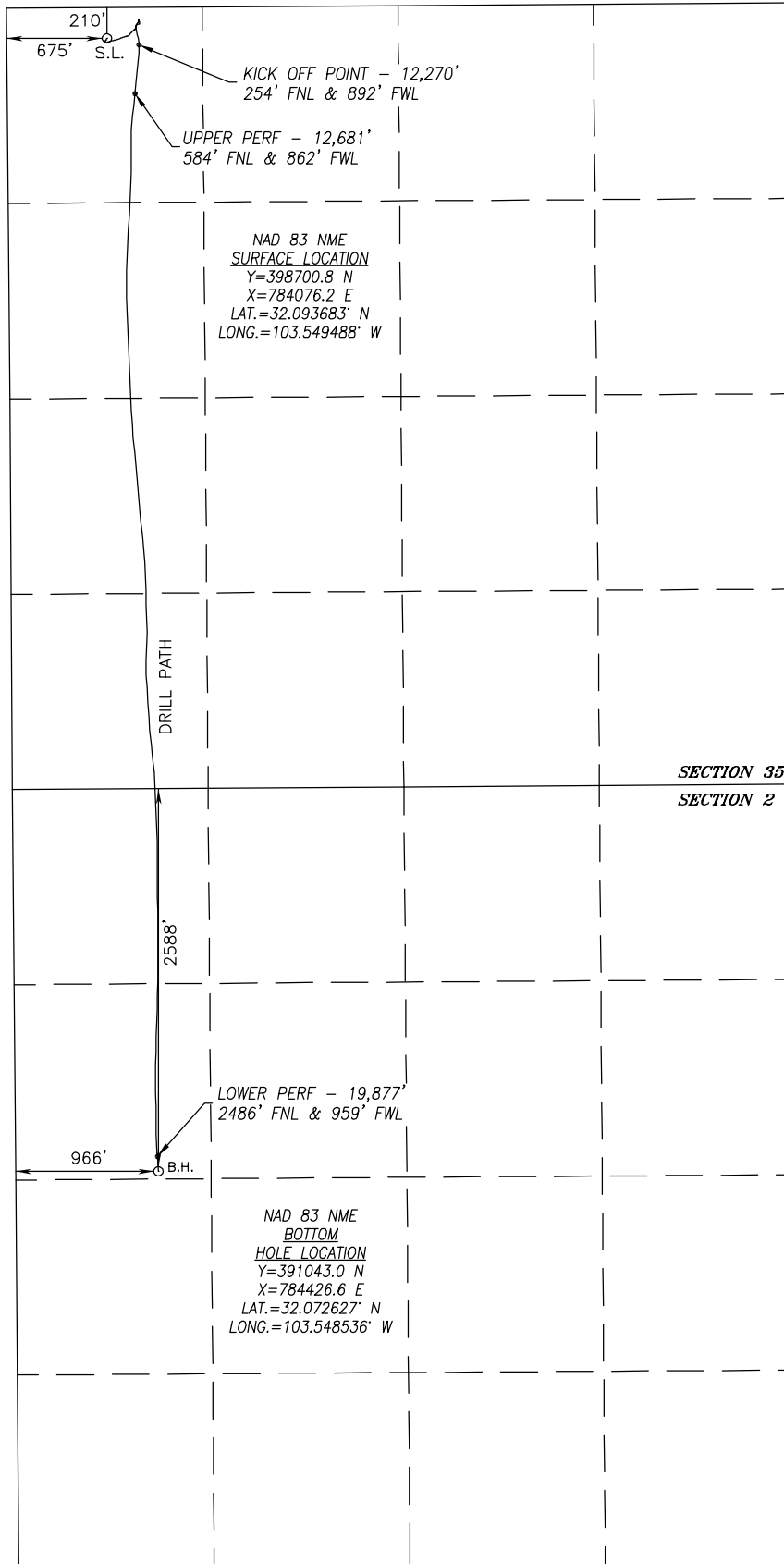
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	2	26-S	33-E		2588	NORTH	966	WEST	LEA
Dedicated Acres 960		Joint or Infill	Consolidation Code		Order No.				

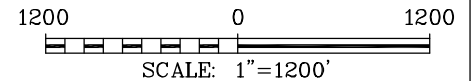
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

SEE PAGE 2

Property Code 327008	Property Name VALOR FEDERAL COM	Well Number 708H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3324.8'



SURFACE INFO AND BOREPATH SHOWN HEREON IS BASED ON DIRECTIONAL SURVEY REPORT PROVIDED BY COG OPERATING, LLC FOR THE VALOR FEDERAL COM 708H SUPPLIED TO HARCROW SURVEYING, LLC ON FEBRUARY 16, 2021



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 3/10/21

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.

NOV. 22, 2019/JUN. 3, 2020

Date of Survey/Date of Geographic Survey

Signature & Seal of Professional Surveyor



Chad Harcrow 2/19/21

Certificate No. CHAD HARCROW 17777

PAGE 2 OF 2

W.O. #21-190

DRAWN BY: WN

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

DELAWARE BASIN EAST

BULLDOG PROSPECT (NM-E)

VALOR PROJECT (BULLDOG 2533)

VALOR FED COM 708H

ST01

Design: ST01

Standard Survey Report

03 June, 2020

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well VALOR FED COM 708H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Site:	VALOR PROJECT (BULLDOG 2533)	MD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Well:	VALOR FED COM 708H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	edm

Project	BULLDOG PROSPECT (NM-E)		
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	VALOR FED COM 708H, ACTIVE				
Well Position	+N/-S	0.0 usft	Northing:	398,643.30 usft	Latitude: 32° 5' 36.810 N
	+E/-W	0.0 usft	Easting:	742,889.60 usft	Longitude: 103° 32' 56.466 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level: 3,325.0 usft

Wellbore	ST01				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	5/21/2020	6.65	59.82	47,530.80909960

Design	ST01				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	12,251.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	177.39	

Survey Program	Date	6/3/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
122.0	1,114.0	MWD-SURFACE (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction	
1,244.0	11,615.0	MWD-INTERMEDIATE (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction	
11,654.0	12,251.0	MWD-CURVE/LATERAL (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction	
12,268.0	19,979.0	MWD-CURVE/LATERAL (ST01)	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	
122.0	0.18	17.99	122.0	0.2	0.1	-0.2	0.15	0.15	0.00	
211.0	0.48	197.64	211.0	0.0	0.0	0.0	0.74	0.34	201.85	
413.0	0.75	206.16	413.0	-2.0	-0.8	2.0	0.14	0.13	4.22	
503.0	0.75	200.36	503.0	-3.1	-1.3	3.1	0.08	0.00	-6.44	
590.0	0.79	208.06	590.0	-4.2	-1.8	4.1	0.13	0.05	8.85	
677.0	0.97	197.81	677.0	-5.4	-2.3	5.3	0.27	0.21	-11.78	
852.0	1.10	201.59	851.9	-8.4	-3.4	8.2	0.08	0.07	2.16	
938.0	0.88	212.84	937.9	-9.7	-4.0	9.5	0.34	-0.26	13.08	
1,027.0	1.32	205.55	1,026.9	-11.2	-4.8	11.0	0.52	0.49	-8.19	
1,114.0	1.36	208.89	1,113.9	-13.0	-5.8	12.7	0.10	0.05	3.84	
1,244.0	1.53	231.10	1,243.8	-15.4	-7.9	15.1	0.45	0.13	17.08	
1,338.0	1.19	231.41	1,337.8	-16.8	-9.6	16.4	0.36	-0.36	0.33	

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well VALOR FED COM 708H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Site:	VALOR PROJECT (BULLDOG 2533)	MD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Well:	VALOR FED COM 708H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	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)	
1,432.0	1.30	226.65	1,431.8	-18.2	-11.2	17.7	0.16	0.12	-5.06	
1,526.0	1.29	220.71	1,525.8	-19.7	-12.6	19.1	0.14	-0.01	-6.32	
1,620.0	1.41	223.04	1,619.7	-21.4	-14.1	20.7	0.14	0.13	2.48	
1,714.0	1.45	228.98	1,713.7	-23.0	-15.8	22.3	0.16	0.04	6.32	
1,809.0	0.65	104.05	1,808.7	-23.9	-16.2	23.2	2.00	-0.84	-131.51	
1,903.0	0.88	111.15	1,902.7	-24.3	-15.0	23.6	0.26	0.24	7.55	
1,997.0	1.01	119.69	1,996.7	-25.0	-13.6	24.3	0.20	0.14	9.09	
2,092.0	0.77	111.41	2,091.7	-25.6	-12.3	25.0	0.29	-0.25	-8.72	
2,186.0	0.70	99.29	2,185.7	-25.9	-11.1	25.4	0.18	-0.07	-12.89	
2,280.0	0.76	100.42	2,279.7	-26.2	-9.9	25.7	0.07	0.06	1.20	
2,374.0	0.83	93.90	2,373.6	-26.3	-8.6	25.9	0.12	0.07	-6.94	
2,469.0	1.13	87.52	2,468.6	-26.3	-7.0	26.0	0.34	0.32	-6.72	
2,563.0	1.54	79.77	2,562.6	-26.1	-4.8	25.8	0.48	0.44	-8.24	
2,657.0	1.77	82.68	2,656.6	-25.6	-2.2	25.5	0.26	0.24	3.10	
2,751.0	1.93	81.37	2,750.5	-25.2	0.8	25.2	0.18	0.17	-1.39	
2,846.0	1.97	81.07	2,845.5	-24.7	4.0	24.9	0.04	0.04	-0.32	
2,941.0	2.17	68.16	2,940.4	-23.8	7.3	24.1	0.53	0.21	-13.59	
3,035.0	2.50	70.69	3,034.3	-22.5	10.9	22.9	0.37	0.35	2.69	
3,130.0	3.02	72.93	3,129.2	-21.0	15.3	21.7	0.56	0.55	2.36	
3,224.0	3.68	74.90	3,223.1	-19.5	20.5	20.4	0.71	0.70	2.10	
3,318.0	3.90	73.95	3,316.8	-17.9	26.5	19.1	0.24	0.23	-1.01	
3,412.0	4.02	76.87	3,410.6	-16.2	32.8	17.7	0.25	0.13	3.11	
3,507.0	3.93	74.21	3,505.4	-14.6	39.2	16.4	0.22	-0.09	-2.80	
3,601.0	3.69	77.17	3,599.2	-13.0	45.2	15.1	0.33	-0.26	3.15	
3,696.0	3.50	83.00	3,694.0	-12.0	51.1	14.3	0.43	-0.20	6.14	
3,790.0	3.24	79.50	3,787.8	-11.2	56.5	13.7	0.35	-0.28	-3.72	
3,885.0	3.70	77.02	3,882.7	-10.0	62.2	12.8	0.51	0.48	-2.61	
3,979.0	3.86	72.24	3,976.5	-8.3	68.1	11.4	0.38	0.17	-5.09	
4,073.0	3.79	70.94	4,070.2	-6.4	74.1	9.7	0.12	-0.07	-1.38	
4,168.0	3.63	69.27	4,165.0	-4.3	79.9	7.9	0.20	-0.17	-1.76	
4,262.0	3.80	63.01	4,258.9	-1.8	85.4	5.7	0.47	0.18	-6.66	
4,356.0	4.58	68.44	4,352.6	1.0	91.7	3.2	0.93	0.83	5.78	
4,450.0	4.69	75.92	4,446.3	3.3	98.9	1.2	0.65	0.12	7.96	
4,545.0	2.82	51.63	4,541.1	5.7	104.5	-0.9	2.54	-1.97	-25.57	
4,639.0	2.34	59.14	4,635.0	8.1	108.0	-3.2	0.62	-0.51	7.99	
4,733.0	3.09	79.85	4,728.9	9.5	112.1	-4.4	1.30	0.80	22.03	
4,827.0	2.85	77.96	4,822.8	10.5	116.9	-5.1	0.28	-0.26	-2.01	
4,922.0	2.41	72.43	4,917.7	11.6	121.1	-6.0	0.53	-0.46	-5.82	
5,016.0	2.08	72.98	5,011.6	12.7	124.6	-7.0	0.35	-0.35	0.59	
5,110.0	1.77	73.35	5,105.5	13.6	127.6	-7.8	0.33	-0.33	0.39	
5,204.0	1.45	74.87	5,199.5	14.3	130.2	-8.4	0.34	-0.34	1.62	
5,298.0	1.29	78.76	5,293.5	14.8	132.4	-8.8	0.20	-0.17	4.14	
5,392.0	1.53	80.17	5,387.4	15.2	134.6	-9.1	0.26	0.26	1.50	

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well VALOR FED COM 708H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
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Well:	VALOR FED COM 708H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	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)	
5,486.0	1.31	82.99	5,481.4	15.6	136.9	-9.3	0.25	-0.23	3.00	
5,581.0	1.15	80.69	5,576.4	15.9	139.0	-9.5	0.18	-0.17	-2.42	
5,675.0	1.46	71.46	5,670.4	16.4	141.0	-10.0	0.40	0.33	-9.82	
5,770.0	1.54	77.20	5,765.3	17.1	143.4	-10.5	0.18	0.08	6.04	
5,864.0	1.41	79.36	5,859.3	17.6	145.8	-10.9	0.15	-0.14	2.30	
5,958.0	2.16	45.46	5,953.3	19.0	148.2	-12.3	1.34	0.80	-36.06	
6,052.0	2.49	41.16	6,047.2	21.8	150.8	-14.9	0.40	0.35	-4.57	
6,146.0	1.94	41.12	6,141.1	24.5	153.2	-17.5	0.59	-0.59	-0.04	
6,240.0	2.09	34.24	6,235.1	27.2	155.2	-20.1	0.30	0.16	-7.32	
6,334.0	2.12	37.34	6,329.0	30.0	157.2	-22.8	0.13	0.03	3.30	
6,428.0	2.13	34.76	6,422.9	32.8	159.3	-25.5	0.10	0.01	-2.74	
6,523.0	2.19	42.57	6,517.9	35.6	161.5	-28.2	0.32	0.06	8.22	
6,617.0	2.39	42.31	6,611.8	38.3	164.0	-30.8	0.21	0.21	-0.28	
6,711.0	2.17	43.04	6,705.7	41.1	166.6	-33.5	0.24	-0.23	0.78	
6,806.0	2.18	41.94	6,800.6	43.7	169.0	-36.0	0.05	0.01	-1.16	
6,900.0	1.86	45.51	6,894.6	46.1	171.3	-38.3	0.37	-0.34	3.80	
6,994.0	1.98	46.56	6,988.5	48.3	173.6	-40.4	0.13	0.13	1.12	
7,089.0	1.71	49.62	7,083.5	50.4	175.8	-42.3	0.30	-0.28	3.22	
7,183.0	1.53	54.48	7,177.4	52.0	177.9	-43.9	0.24	-0.19	5.17	
7,277.0	1.43	46.25	7,271.4	53.6	179.8	-45.3	0.25	-0.11	-8.76	
7,372.0	1.25	45.64	7,366.4	55.1	181.4	-46.8	0.19	-0.19	-0.64	
7,466.0	1.31	49.20	7,460.4	56.5	182.9	-48.1	0.11	0.06	3.79	
7,560.0	1.25	45.22	7,554.3	57.9	184.5	-49.5	0.11	-0.06	-4.23	
7,655.0	1.15	57.60	7,649.3	59.2	186.0	-50.6	0.29	-0.11	13.03	
7,749.0	0.89	62.39	7,743.3	60.0	187.5	-51.4	0.29	-0.28	5.10	
7,843.0	1.05	64.23	7,837.3	60.7	188.9	-52.1	0.17	0.17	1.96	
7,938.0	0.93	64.38	7,932.3	61.4	190.4	-52.7	0.13	-0.13	0.16	
8,032.0	0.91	60.56	8,026.3	62.1	191.7	-53.4	0.07	-0.02	-4.06	
8,126.0	0.97	72.39	8,120.3	62.8	193.1	-53.9	0.22	0.06	12.59	
8,220.0	3.26	10.18	8,214.2	65.6	194.3	-56.7	3.12	2.44	-66.18	
8,314.0	3.60	8.59	8,308.0	71.2	195.2	-62.2	0.38	0.36	-1.69	
8,408.0	3.47	7.48	8,401.8	76.9	196.1	-67.9	0.16	-0.14	-1.18	
8,503.0	2.84	1.97	8,496.7	82.1	196.5	-73.1	0.74	-0.66	-5.80	
8,597.0	2.57	37.44	8,590.6	86.1	197.9	-77.0	1.77	-0.29	37.73	
8,691.0	2.43	48.08	8,684.5	89.1	200.6	-79.9	0.51	-0.15	11.32	
8,785.0	2.18	44.40	8,778.4	91.7	203.4	-82.4	0.31	-0.27	-3.91	
8,879.0	1.99	52.36	8,872.4	94.0	205.9	-84.5	0.37	-0.20	8.47	
8,974.0	2.44	79.47	8,967.3	95.4	209.2	-85.8	1.19	0.47	28.54	
9,068.0	2.27	86.51	9,061.2	95.9	213.0	-86.1	0.36	-0.18	7.49	
9,163.0	1.96	80.06	9,156.2	96.3	216.5	-86.3	0.41	-0.33	-6.79	
9,258.0	1.23	82.93	9,251.1	96.7	219.1	-86.6	0.77	-0.77	3.02	
9,352.0	0.62	81.93	9,345.1	96.9	220.6	-86.7	0.65	-0.65	-1.06	
9,446.0	0.68	7.25	9,439.1	97.5	221.2	-87.3	0.84	0.06	-79.45	
9,541.0	0.60	324.48	9,534.1	98.4	221.0	-88.3	0.50	-0.08	-45.02	

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well VALOR FED COM 708H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Site:	VALOR PROJECT (BULLDOG 2533)	MD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Well:	VALOR FED COM 708H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	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)
9,635.0	1.25	335.64	9,628.1	99.8	220.3	-89.6	0.71	0.69	11.87
9,729.0	1.44	350.09	9,722.1	101.9	219.7	-91.8	0.41	0.20	15.37
9,824.0	2.31	22.07	9,817.0	104.8	220.2	-94.7	1.40	0.92	33.66
9,918.0	1.88	10.21	9,911.0	108.1	221.1	-97.9	0.65	-0.46	-12.62
10,013.0	1.82	342.27	10,005.9	111.1	221.0	-100.9	0.94	-0.06	-29.41
10,107.0	1.85	344.10	10,099.9	114.0	220.1	-103.8	0.07	0.03	1.95
10,201.0	2.07	336.17	10,193.8	117.0	219.0	-106.9	0.37	0.23	-8.44
10,295.0	1.46	341.87	10,287.8	119.7	217.9	-109.6	0.67	-0.65	6.06
10,390.0	1.42	329.20	10,382.7	121.8	217.0	-111.8	0.34	-0.04	-13.34
10,484.0	0.98	312.69	10,476.7	123.4	215.8	-113.4	0.59	-0.47	-17.56
10,578.0	0.78	276.35	10,570.7	124.0	214.5	-114.1	0.62	-0.21	-38.66
10,673.0	0.29	24.23	10,665.7	124.3	214.0	-114.4	0.96	-0.52	113.56
10,767.0	0.41	48.85	10,759.7	124.7	214.3	-114.8	0.20	0.13	26.19
10,861.0	0.46	110.39	10,853.7	124.8	215.0	-114.9	0.48	0.05	65.47
10,955.0	0.80	123.20	10,947.7	124.3	215.9	-114.3	0.39	0.36	13.63
11,050.0	0.43	136.64	11,042.7	123.7	216.7	-113.7	0.42	-0.39	14.15
11,144.0	0.58	146.84	11,136.7	123.0	217.2	-113.0	0.19	0.16	10.85
11,238.0	0.78	190.25	11,230.7	122.0	217.3	-112.0	0.57	0.21	46.18
11,333.0	1.86	206.68	11,325.6	120.0	216.5	-110.0	1.19	1.14	17.29
11,427.0	2.11	188.60	11,419.6	116.9	215.6	-107.0	0.71	0.27	-19.23
11,521.0	2.48	211.05	11,513.5	113.5	214.2	-103.6	1.03	0.39	23.88
11,615.0	3.20	215.00	11,607.4	109.6	211.7	-99.8	0.79	0.77	4.20
11,654.0	3.41	220.03	11,646.3	107.8	210.3	-98.1	0.92	0.54	12.90
11,779.0	3.37	227.13	11,771.1	102.4	205.2	-93.0	0.34	-0.03	5.68
11,874.0	3.53	218.94	11,865.9	98.3	201.4	-89.0	0.54	0.17	-8.62
11,968.0	6.22	191.89	11,959.6	91.0	198.5	-81.9	3.69	2.86	-28.78
12,015.0	12.75	178.12	12,005.9	83.3	198.1	-74.2	14.61	13.89	-29.30
12,062.0	21.14	172.17	12,050.9	69.7	199.5	-60.6	18.21	17.85	-12.66
12,109.0	29.09	168.58	12,093.4	50.1	202.9	-40.8	17.22	16.91	-7.64
12,157.0	31.47	169.42	12,134.8	26.4	207.5	-16.9	5.04	4.96	1.75
12,204.0	39.36	171.48	12,173.1	-0.5	212.0	10.1	16.98	16.79	4.38
12,251.0	40.61	172.44	12,209.1	-30.4	216.2	40.2	2.97	2.66	2.04
12,268.0	39.73	173.81	12,222.1	-41.3	217.5	51.1	7.34	-5.18	8.06
12,315.0	41.36	179.99	12,257.8	-71.8	219.1	81.7	9.22	3.47	13.15
12,363.0	43.93	184.02	12,293.2	-104.2	218.0	114.0	7.81	5.35	8.40
12,410.0	53.79	186.88	12,324.0	-139.4	214.5	149.0	21.47	20.98	6.09
12,457.0	54.77	186.03	12,351.5	-177.3	210.2	186.7	2.55	2.09	-1.81
12,504.0	57.49	185.39	12,377.7	-216.2	206.4	225.3	5.90	5.79	-1.36
12,551.0	59.30	185.18	12,402.3	-256.0	202.7	265.0	3.87	3.85	-0.45
12,597.0	62.21	185.71	12,424.8	-296.0	198.9	304.7	6.41	6.33	1.15
12,646.0	68.63	186.46	12,445.1	-340.2	194.1	348.7	13.18	13.10	1.53
12,692.0	76.75	186.15	12,458.8	-383.9	189.3	392.1	17.66	17.65	-0.67
12,740.0	82.78	186.89	12,467.3	-430.8	184.0	438.7	12.65	12.56	1.54

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well VALOR FED COM 708H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Site:	VALOR PROJECT (BULLDOG 2533)	MD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Well:	VALOR FED COM 708H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	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)
12,777.0	87.41	186.16	12,470.5	-467.4	179.8	475.1	12.67	12.51	-1.97
12,834.0	87.01	185.04	12,473.3	-524.0	174.2	531.4	2.08	-0.70	-1.96
12,928.0	90.48	183.70	12,475.3	-617.7	167.1	624.7	3.96	3.69	-1.43
12,936.0	90.33	182.84	12,475.3	-625.7	166.6	632.7	10.91	-1.88	-10.75
13,030.0	89.26	179.13	12,475.6	-719.7	165.0	726.5	4.11	-1.14	-3.95
13,125.0	90.17	180.51	12,476.1	-814.7	165.3	821.4	1.74	0.96	1.45
13,219.0	89.67	180.94	12,476.2	-908.7	164.1	915.2	0.70	-0.53	0.46
13,313.0	90.32	181.96	12,476.2	-1,002.6	161.7	1,009.0	1.29	0.69	1.09
13,407.0	91.10	183.65	12,475.1	-1,096.5	157.1	1,102.5	1.98	0.83	1.80
13,502.0	90.29	182.69	12,473.9	-1,191.4	151.9	1,197.0	1.32	-0.85	-1.01
13,597.0	91.17	183.73	12,472.7	-1,286.2	146.5	1,291.5	1.43	0.93	1.09
13,691.0	89.65	181.58	12,472.0	-1,380.1	142.2	1,385.1	2.80	-1.62	-2.29
13,785.0	90.54	183.13	12,471.9	-1,474.0	138.3	1,478.8	1.90	0.95	1.65
13,879.0	89.04	181.33	12,472.2	-1,567.9	134.7	1,572.4	2.49	-1.60	-1.91
13,973.0	88.49	181.63	12,474.2	-1,661.9	132.2	1,666.2	0.67	-0.59	0.32
14,067.0	88.15	178.71	12,477.0	-1,755.8	132.0	1,760.0	3.13	-0.36	-3.11
14,161.0	88.84	176.73	12,479.5	-1,849.7	135.7	1,854.0	2.23	0.73	-2.11
14,256.0	89.35	177.24	12,481.0	-1,944.6	140.7	1,949.0	0.76	0.54	0.54
14,351.0	90.50	177.15	12,481.1	-2,039.5	145.3	2,044.0	1.21	1.21	-0.09
14,446.0	91.65	178.60	12,479.3	-2,134.4	148.9	2,138.9	1.95	1.21	1.53
14,540.0	90.12	177.56	12,477.9	-2,228.3	152.0	2,232.9	1.97	-1.63	-1.11
14,635.0	89.03	176.72	12,478.6	-2,323.2	156.8	2,327.9	1.45	-1.15	-0.88
14,729.0	90.34	178.73	12,479.1	-2,417.1	160.5	2,421.9	2.55	1.39	2.14
14,824.0	88.87	175.85	12,479.7	-2,512.0	165.0	2,516.9	3.40	-1.55	-3.03
14,919.0	90.92	175.89	12,479.9	-2,606.7	171.8	2,611.8	2.16	2.16	0.04
15,013.0	89.47	175.29	12,479.6	-2,700.4	179.0	2,705.8	1.67	-1.54	-0.64
15,107.0	88.86	173.85	12,481.0	-2,794.0	187.9	2,799.7	1.66	-0.65	-1.53
15,201.0	90.95	175.09	12,481.1	-2,887.6	197.0	2,893.5	2.59	2.22	1.32
15,295.0	90.99	176.11	12,479.5	-2,981.3	204.2	2,987.5	1.09	0.04	1.09
15,390.0	90.05	174.37	12,478.7	-3,075.9	212.1	3,082.4	2.08	-0.99	-1.83
15,485.0	88.81	174.40	12,479.6	-3,170.5	221.4	3,177.3	1.31	-1.31	0.03
15,579.0	89.77	174.60	12,480.8	-3,264.0	230.4	3,271.1	1.04	1.02	0.21
15,673.0	90.02	174.07	12,480.9	-3,357.6	239.7	3,365.0	0.62	0.27	-0.56
15,767.0	89.93	174.71	12,481.0	-3,451.1	248.9	3,458.9	0.69	-0.10	0.68
15,861.0	90.58	176.34	12,480.6	-3,544.8	256.2	3,552.8	1.87	0.69	1.73
15,956.0	89.10	176.20	12,480.8	-3,639.6	262.4	3,647.8	1.56	-1.56	-0.15
16,050.0	90.57	179.20	12,481.1	-3,733.5	266.2	3,741.8	3.55	1.56	3.19
16,144.0	89.27	179.50	12,481.2	-3,827.5	267.2	3,835.7	1.42	-1.38	0.32
16,239.0	90.53	177.58	12,481.4	-3,922.5	269.6	3,930.7	2.42	1.33	-2.02
16,333.0	89.88	178.00	12,481.1	-4,016.4	273.3	4,024.7	0.82	-0.69	0.45
16,428.0	89.60	184.31	12,481.5	-4,111.3	271.3	4,119.4	6.65	-0.29	6.64
16,522.0	88.17	181.94	12,483.3	-4,205.2	266.2	4,212.9	2.94	-1.52	-2.52
16,616.0	86.18	176.80	12,488.0	-4,299.0	267.3	4,306.7	5.86	-2.12	-5.47

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well VALOR FED COM 708H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Site:	VALOR PROJECT (BULLDOG 2533)	MD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Well:	VALOR FED COM 708H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	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)
16,711.0	87.04	176.41	12,493.6	-4,393.7	272.9	4,401.6	0.99	0.91	-0.41
16,805.0	88.30	176.80	12,497.4	-4,487.4	278.4	4,495.5	1.40	1.34	0.41
16,900.0	89.54	177.16	12,499.2	-4,582.3	283.4	4,590.5	1.36	1.31	0.38
16,995.0	89.01	174.34	12,500.4	-4,677.0	290.5	4,685.4	3.02	-0.56	-2.97
17,090.0	89.14	173.60	12,501.9	-4,771.5	300.5	4,780.2	0.79	0.14	-0.78
17,184.0	88.39	173.30	12,504.0	-4,864.8	311.2	4,874.0	0.86	-0.80	-0.32
17,279.0	90.15	175.37	12,505.2	-4,959.4	320.5	4,968.8	2.86	1.85	2.18
17,373.0	90.57	177.52	12,504.6	-5,053.2	326.4	5,062.8	2.33	0.45	2.29
17,467.0	89.65	177.34	12,504.4	-5,147.1	330.6	5,156.8	1.00	-0.98	-0.19
17,561.0	90.65	177.53	12,504.1	-5,241.0	334.8	5,250.8	1.08	1.06	0.20
17,656.0	89.72	177.48	12,503.8	-5,335.9	338.9	5,345.8	0.98	-0.98	-0.05
17,750.0	90.21	179.95	12,503.9	-5,429.9	341.0	5,439.8	2.68	0.52	2.63
17,845.0	89.96	179.41	12,503.8	-5,524.9	341.6	5,534.7	0.63	-0.26	-0.57
17,939.0	91.77	181.20	12,502.3	-5,618.8	341.1	5,628.5	2.71	1.93	1.90
18,034.0	90.79	179.15	12,500.2	-5,713.8	340.8	5,723.4	2.39	-1.03	-2.16
18,128.0	90.52	178.80	12,499.1	-5,807.8	342.5	5,817.4	0.47	-0.29	-0.37
18,222.0	89.68	178.88	12,499.0	-5,901.8	344.4	5,911.3	0.90	-0.89	0.09
18,317.0	89.72	180.21	12,499.5	-5,996.8	345.1	6,006.3	1.40	0.04	1.40
18,411.0	89.05	180.10	12,500.5	-6,090.8	344.9	6,100.1	0.72	-0.71	-0.12
18,505.0	88.89	179.37	12,502.2	-6,184.7	345.3	6,194.0	0.79	-0.17	-0.78
18,599.0	91.36	180.11	12,502.0	-6,278.7	345.7	6,288.0	2.74	2.63	0.79
18,693.0	92.32	181.02	12,499.0	-6,372.7	344.8	6,381.8	1.41	1.02	0.97
18,788.0	90.59	181.88	12,496.5	-6,467.6	342.4	6,476.5	2.03	-1.82	0.91
18,882.0	89.59	180.66	12,496.4	-6,561.6	340.3	6,570.3	1.68	-1.06	-1.30
18,976.0	91.65	182.08	12,495.4	-6,655.5	338.1	6,664.0	2.66	2.19	1.51
19,070.0	92.78	182.19	12,491.7	-6,749.4	334.6	6,757.6	1.21	1.20	0.12
19,164.0	90.35	180.76	12,489.2	-6,843.3	332.2	6,851.4	3.00	-2.59	-1.52
19,258.0	89.64	180.52	12,489.2	-6,937.3	331.1	6,945.2	0.80	-0.76	-0.26
19,352.0	90.41	180.83	12,489.1	-7,031.3	330.0	7,039.0	0.88	0.82	0.33
19,446.0	88.44	178.78	12,490.1	-7,125.3	330.3	7,132.9	3.02	-2.10	-2.18
19,541.0	88.96	178.92	12,492.2	-7,220.3	332.2	7,227.9	0.57	0.55	0.15
19,635.0	88.60	179.85	12,494.2	-7,314.2	333.2	7,321.8	1.06	-0.38	0.99
19,729.0	90.26	178.84	12,495.2	-7,408.2	334.3	7,415.8	2.07	1.77	-1.07
19,823.0	89.30	175.77	12,495.5	-7,502.1	338.7	7,509.7	3.42	-1.02	-3.27
19,908.0	90.08	175.88	12,496.0	-7,586.9	344.9	7,594.7	0.93	0.92	0.13
LAST MWD @ 19908'MD									
19,929.5	90.08	175.88	12,496.0	-7,608.3	346.5	7,616.2	0.00	0.00	0.00
LTP @ 19929.5"MD									
19,979.0	90.08	175.89	12,495.9	-7,657.7	350.0	7,665.7	0.02	0.00	0.02
PTD @ 19979'MD									

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well VALOR FED COM 708H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Site:	VALOR PROJECT (BULLDOG 2533)	MD Reference:	KB=30 @ 3355.0usft (SCAN QUEST)
Well:	VALOR FED COM 708H	North Reference:	Grid
Wellbore:	ST01	Survey Calculation Method:	Minimum Curvature
Design:	ST01	Database:	edm

Design Targets

Target Name

- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
FTP (VALOR FED CC - actual wellpath misses target center by 266.8usft at 12332.7usft MD (12271.0 TVD, -83.5 N, 219.0 E) - Circle (radius 50.0)	0.00	0.00	12,450.0	112.1	189.0	398,755.40	743,078.60	32° 5' 37.905 N	103° 32' 54.260 W
LTP (VALOR FED CO - actual wellpath misses target center by 11.3usft at 19929.5usft MD (12496.0 TVD, -7608.3 N, 346.5 E) - Point	0.00	0.00	12,485.0	-7,609.9	348.8	391,033.40	743,238.40	32° 4' 21.479 N	103° 32' 53.056 W
PBHL (VALOR FED C - actual wellpath misses target center by 11.2usft at 19979.0usft MD (12495.9 TVD, -7657.7 N, 350.0 E) - Rectangle (sides W100.0 H2,418.0 D20.0)	0.44	359.56	12,485.0	-7,659.9	349.2	390,983.40	743,238.80	32° 4' 20.984 N	103° 32' 53.055 W

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
19,908.0	12,496.0	-7,586.9	344.9	LAST MWD @ 19908'MD
19,929.5	12,496.0	-7,608.3	346.5	LTP @ 19929.5'MD
19,979.0	12,495.9	-7,657.7	350.0	PTD @ 19979'MD

Checked By: _____ Approved By: _____ 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) 476-3470 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 20445

CONDITIONS OF APPROVAL

Operator:	COG OPERATING LLC	600 W Illinois Ave	Midland, TX79701	OGRID:	229137	Action Number:	20445	Action Type:	C-104C
OCD Reviewer									Condition
ksimmons									None