

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Carlsbad Field Office

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill for or re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 20185. Lease Serial No.
NMLC028731B
6. If Indian, Allottee or Tribe Name7. If Unit or CA/Agreement, Name and/or No.
NMNM111789X8. Well Name and No.
DODD FEDERAL UNIT 983H9. API Well No.
30-015-44808-00-X110. Field and Pool or Exploratory Area
DODD-GLORIETA-UPPER YESO11. County or Parish, State
EDDY COUNTY, NM

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
COG OPERATING LLCContact: ROBYN RUSSELL
E-Mail: rrussell@concho.com3a. Address
600 W ILLINOIS AVENUE
MIDLAND, TX 797013b. Phone No. (include area code)
Ph: 432-685-4385

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 10 T17S R29E SWNW 2025FNL 1150FWL
32.850815 N Lat, 104.067551 W Lon

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original APD
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

COG Operating LLC respectfully requests to change the surface hole location of this well
FROM: 2025' FNL 1150' FWL
TO: 2025' FNL 920' FWL

This move was made to optimize the completed lateral length of this wellbore.

Attached is a revised plat and directional plan.

RECEIVED

'AUG 17 2018

DISTRICT II-ARTESIA O.C.D.

Approved. WDD 8/11/2018 DOI-BLM-NM-P020-2018-0805 ^{stips} ^{Attache}

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #427790 verified by the BLM Well Information System

For COG OPERATING LLC, sent to the Carlsbad

Committed to AFMSS for processing by PRISCILLA PEREZ on 07/24/2018 (18PP2257SE)

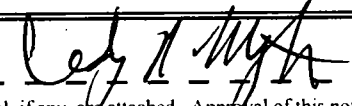
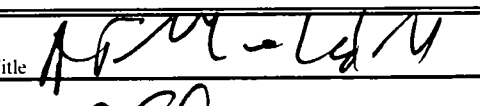
Name (Printed/Typed) ROBYN RUSSELL

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 07/18/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By 	Title 	Date 8/13/2018
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office CPO

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

(Instructions on page 2)

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

RW 8-23-18.

RECEIVED

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (505) 334-6161 Fax: (505) 334-6170
District II
3115 First St., Artesia, NM 88210
Phone: (505) 745-1283 Fax: (505) 744-9720
District III
1000 Rte. Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

DISTRICT II-ARTESIA O.C.D.

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-44808		Pool Code 97917	Pool Name Dodd; Glorieta-Upper Yeso
Property Code 308195	Property Name DODD FEDERAL UNIT		Well Number 983H
GRID NO 229137	Operator Name COG OPERATING, LLC		Elevation 3578'

Surface Location

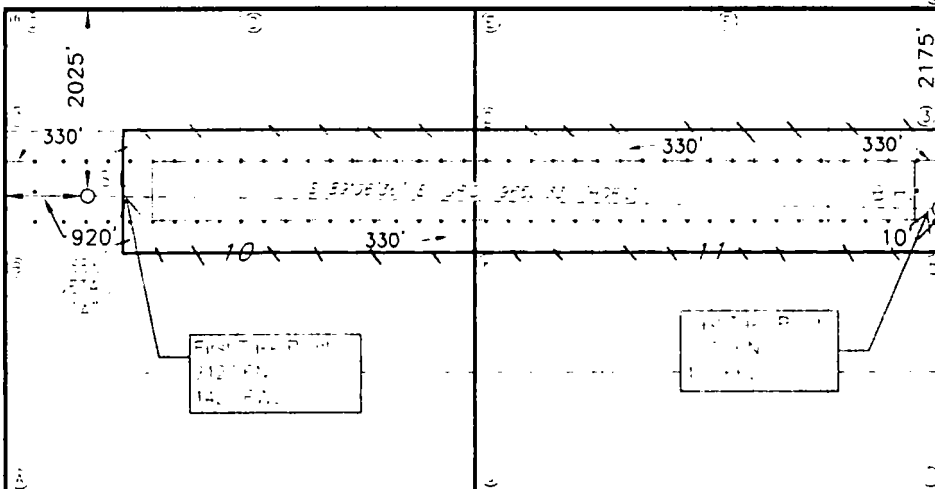
UT or lot no	Section	Township	Range	Lot Idn	Feet from the	North South line	Feet from the	East West line	County
E	10	17S	29E		2025	NORTH	920	WEST	EDDY

Bottom Hole Location If Different From Surface

UT or lot no	Section	Township	Range	Lot Idn	Feet from the	North South line	Feet from the	East West line	County
H	11	17S	29E		2175	NORTH	10	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No
280			

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division

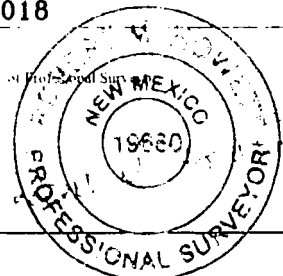


OPERATOR CERTIFICATION
I, the undersigned, hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Signature: *Robyn M. Russell* Date: **7/18/18**
Printed Name: **Robyn M. Russell**
Email Address: **Russell@concho.com**

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.

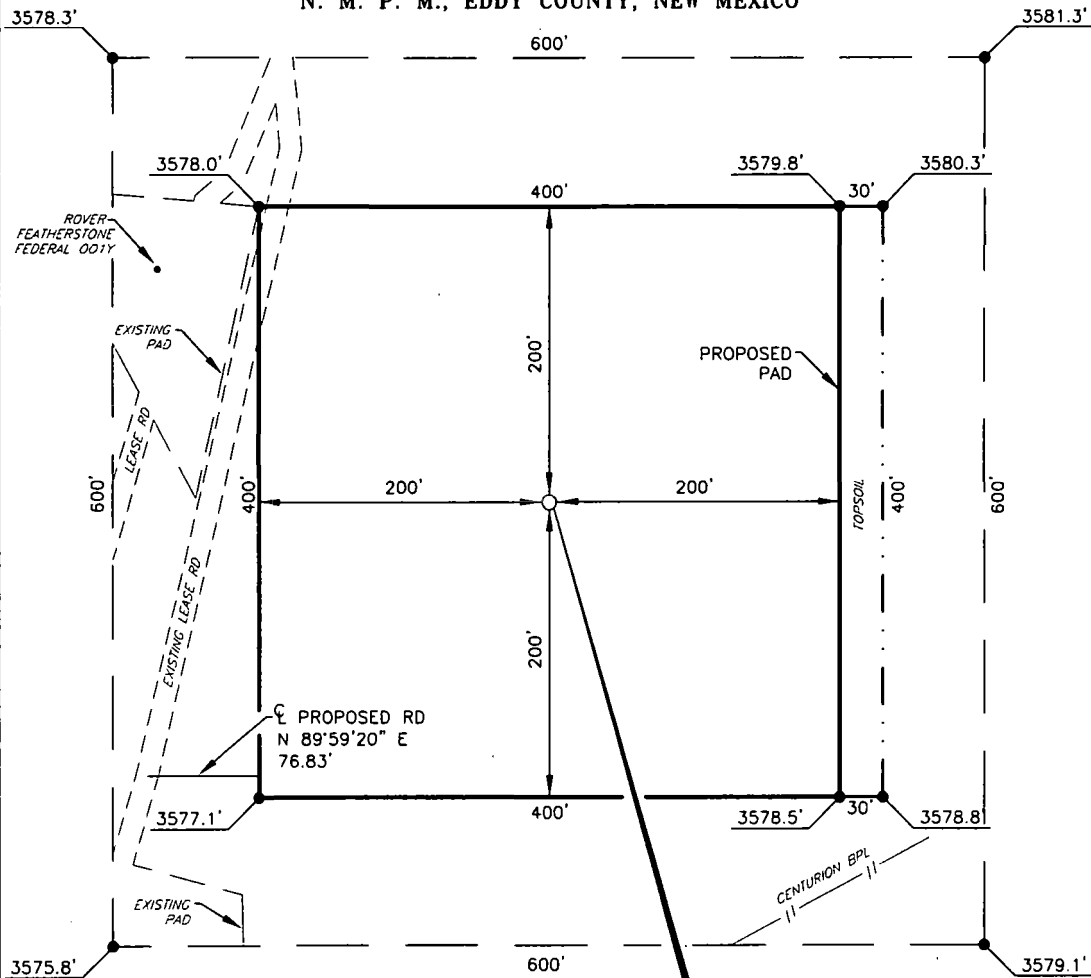
Date of Survey: **5/10/2018**
Signature and Seal of Professional Surveyor: *[Signature]*
Certificate Number: **19680**



RRC-Job No.: LS1709633R

RWP 8-23-19

COG OPERATING, LLC
DODD FEDERAL UNIT #983H
(2025' FNL & 920' FWL)
SECTION 10, T17S, R29E
N. M. P. M., EDDY COUNTY, NEW MEXICO



DODD FEDERAL UNIT #983H
ELEV.: 3578'
LAT: 32.8508140° N (NAD83)
LONG: 104.0682957° W (NAD83)

DIRECTIONS TO LOCATION

From the intersection of U.S. HWY 182 and CR-214 (Barnaval Draw);
Go North on CR-214 for approx. 1.8 miles to a lease road on the right;
Turn right and go Northeast approx. 0.1 miles to a lease road on the left;
Turn left and go North approx. 0.3 miles to location on the right.

I, R. M. Howett, a N. M. Professional Surveyor, hereby certify that I prepared this unclassified survey of a well location from an actual survey made on the ground under my direct supervision, said survey and plat meet the Min. Stds. for Land Surveying in the State of N. M. and are true and correct to the best of my knowledge and belief.

Robert M. Howett
Robert M. Howett NM PS 19680



SCALE: 1" = 100'
0 50 100

BEARINGS ARE
NAD 83 GRID - NM EAST
DISTANCES ARE GROUND

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NO.	REVISION	DATE
JOB NO.:	LS1709633R	
DWG. NO.:	1709633-4	

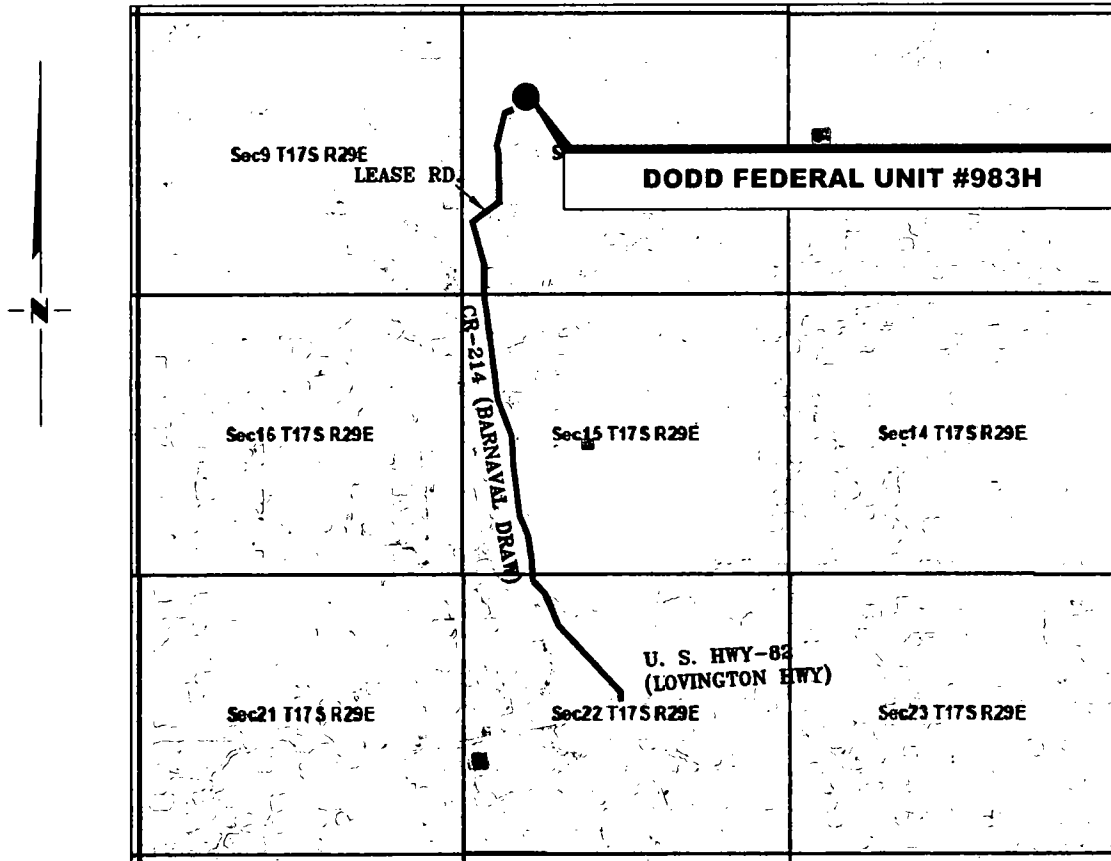
RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 5/10/2018
SURVEYED BY: BC/AJ
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

VICINITY MAP

NOT TO SCALE



*SECTION 10, TWP. 17 SOUTH, RGE. 29 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO*

OPERATOR: COG Operating, LLC
LEASE: Dodd Federal Unit
WELL NO.: 983H

LOCATION: 2025' FNL & 920' FWL
ELEVATION: 3578'

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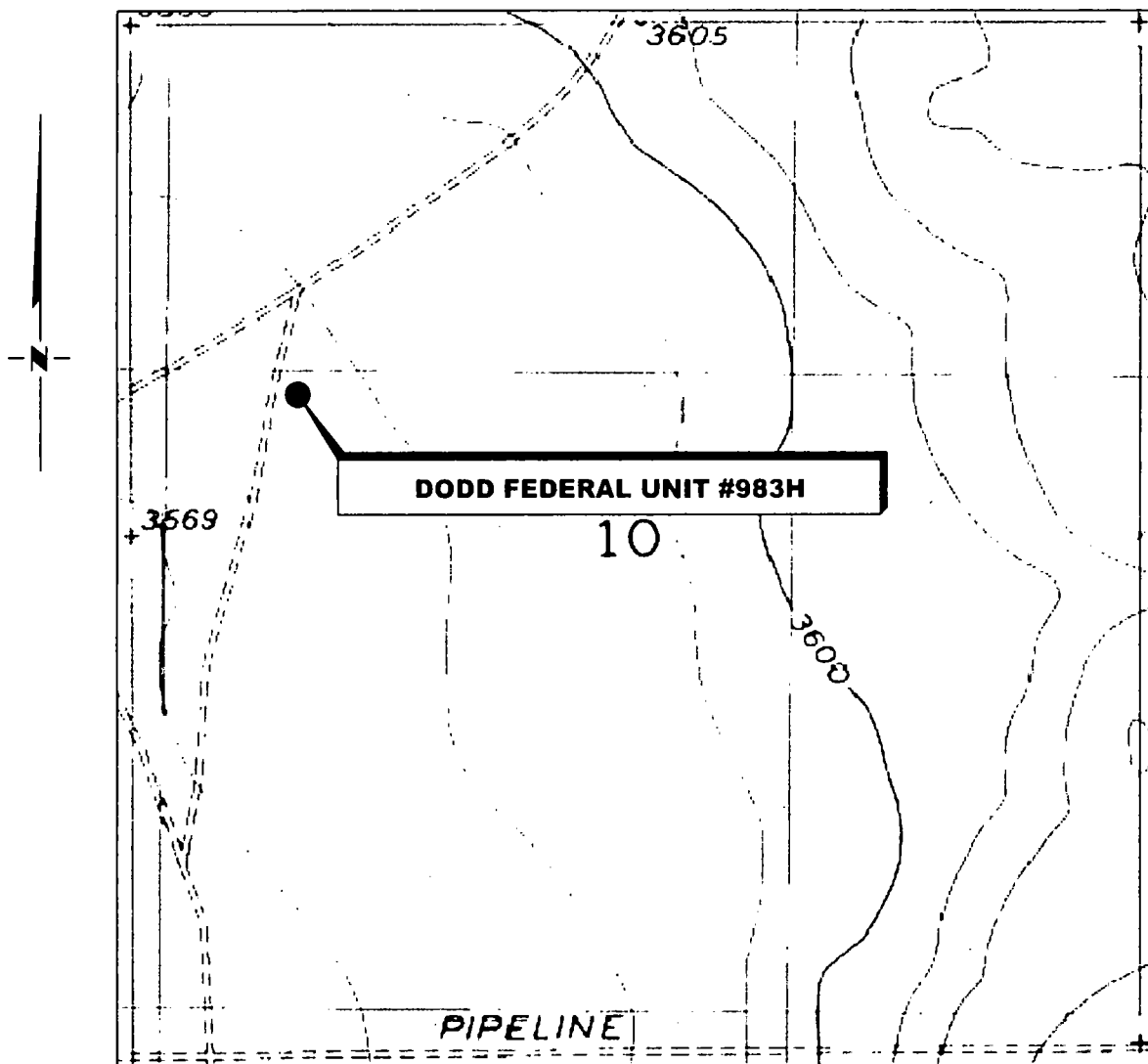
NO.	REVISION	DATE
JOB NO.: LS1709633R		
DWG. NO.: 1709633-3		

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.
DATE: 5-10-2018
SURVEYED BY: BC/AJ
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

LOCATION VERIFICATION MAP



*SECTION 10, TWP. 17 SOUTH, RGE. 29 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO*

OPERATOR: COG Operating, LLC

LEASE: Dodd Federal Unit

WELL NO.: 983H

ELEVATION: 3578'

LOCATION: 2025' FNL & 920' FWL

CONTOUR INTERVAL: 10'

USGS TOPO. SOURCE MAP:

Red Lake SE, NM (P. E. 1985)

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NO.	REVISION	DATE
JOB NO.: LS1709633R		
DWG. NO.: 1709633-2		

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: N. T. S.

DATE: 5-10-2018

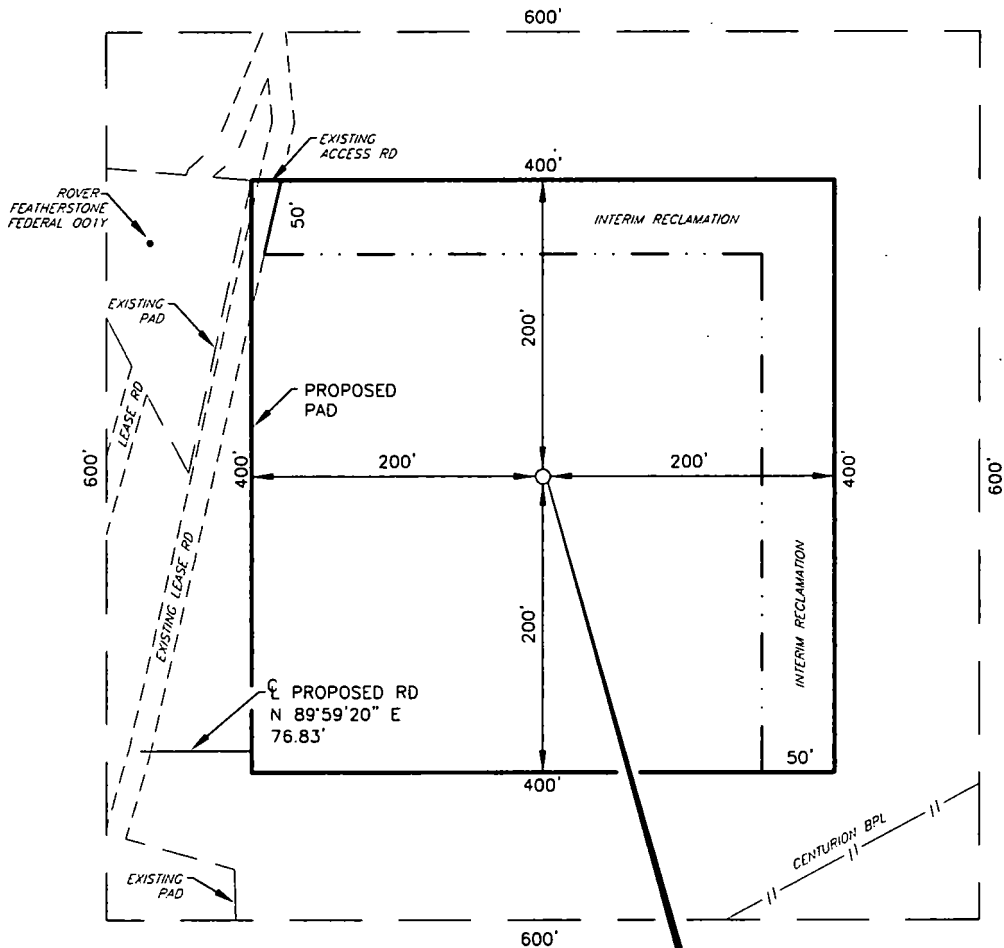
SURVEYED BY: BC/AJ

DRAWN BY: LPS

APPROVED BY: RMH

SHEET: 1 OF 1

COG OPERATING, LLC
DODD FEDERAL UNIT #983H
INTERIM RECLAMATION
(2025' FNL & 920' FWL)
SECTION 10, T17S, R29E
N. M. P. M., EDDY COUNTY, NEW MEXICO



DODD FEDERAL UNIT #983H
ELEV.: 3578'
LAT: 32.8508140° N (NAD83)
LONG: 104.0682957° W (NAD83)

DIRECTIONS TO LOCATION

From the intersection of U.S. HWY 182 and CR-214 (Barnaval Draw);
Go North on CR-214 for approx. 1.8 miles to a lease road on the right;
Turn right and go Northeast approx. 0.1 miles to a lease road on the left;
Turn left and go North approx. 0.3 miles to location on the right.

SCALE: 1" = 100'
0 50 100

BEARINGS ARE
NAD 83 GRID - NM EAST
DISTANCES ARE GROUND

Copyright 2016 - All Rights Reserved

NO.	REVISION	DATE
JOB NO.:	LS1709633R	
DWG. NO.:	1709633-6	

RRC

308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 5/10/2018
SURVEYED BY: BC/AJ
DRAWN BY: LPS
APPROVED BY: RMH
SHEET: 1 OF 1

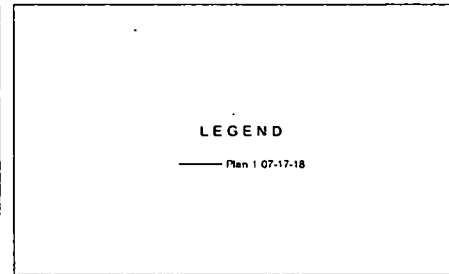


Project: Eddy County, NM (NAD27 NME)
Site: Dodd Federal Unit
Well: 983H
Wellbore: OH
Design: Plan 1 07-17-18
Rig: Double K 7

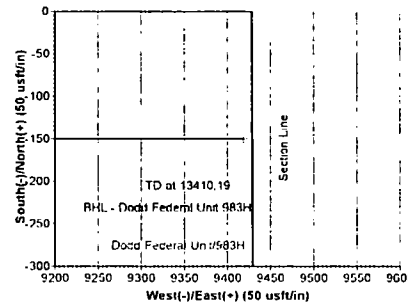
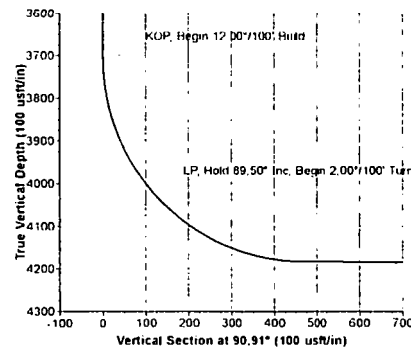
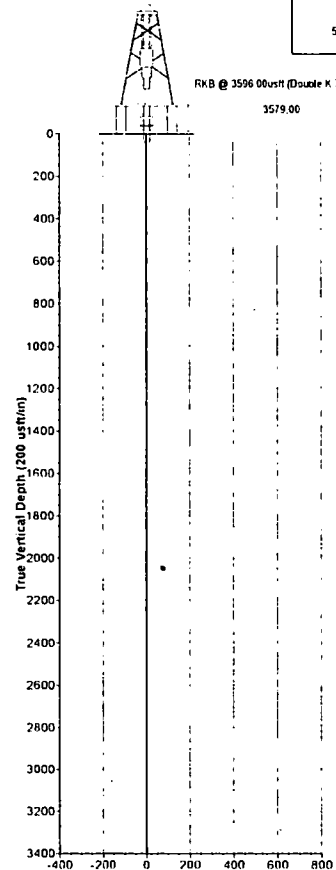


Compass rose showing True North (T), Grid North (G), and Magnetic North (M).
Azimuths to Grid North
True North: -0.14°
Magnetic North: 7.37°
Magnetic Field
Strength: 48148.1nT
Dip Angle: 60.61°
Date: 7/17/2018
Model: MVHD

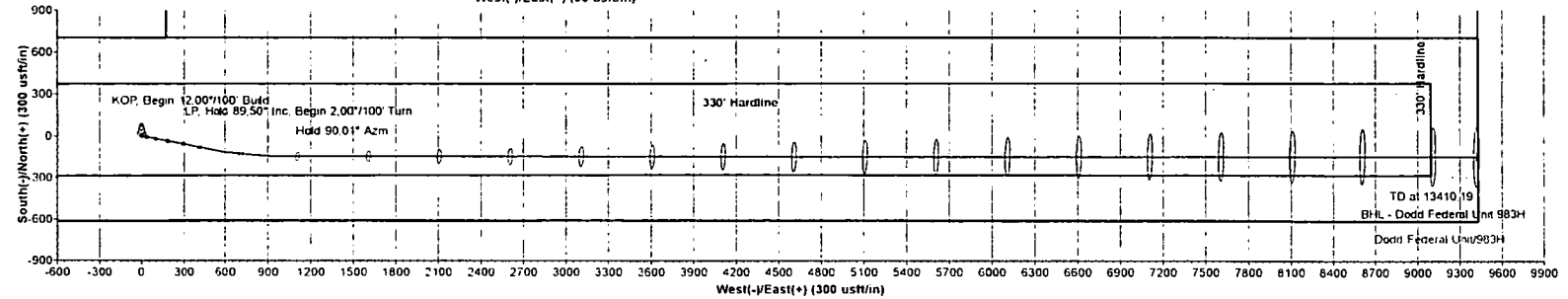
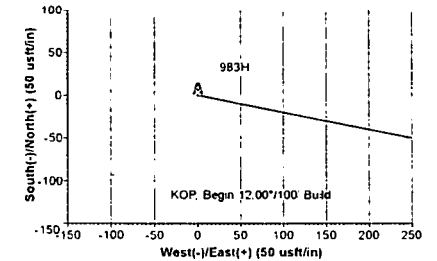
WELL DETAILS										
3579.00										
True S	True N	North	East	Latitude	Longitude					
0.00	0.00	673798.40	581779.30	32° 51' 2.51416 N	104° 4' 1.33370 W					
SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	True S	True N	Diag	TFace	VSeci Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	3705.55	0.00	0.00	3705.55	0.00	0.00	0.00	0.00	0.00	KOP Begin 12.00°/100' Build
3	4451.38	89.50	101.35	4183.00	-93.15	454.04	12.00	101.35	465.47	LP Hold 89.50° Inc. Begin 2.00°/100' Turn
4	5018.48	89.50	90.01	4187.96	-149.17	1027.41	2.00	-90.05	1029.66	Hold 90.01° Azm
5	13410.19	89.50	90.01	4761.08	-150.30	9418.80	0.00	0.00	9470.00	TD at 13410.19
RHL - Dodd Federal Unit 983H										



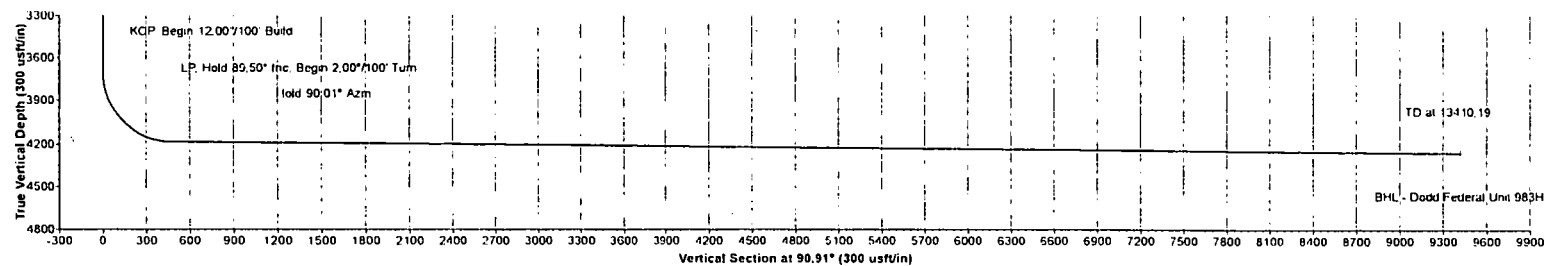
Map System	US State Plane 1927 (Exact solution)
Datum	NAD 1927 (NADCON CONUS)
Ellipsoid	Clarke 1866
Zone Name	New Mexico East 3001
Local Origin	Well 983H, Grid North
Latitude	32° 51' 2.51416 N
Longitude	104° 4' 1.33370 W
Grid East	581779.30
Grid North	673298.40
Scale Factor	1.000
Geomagnetic Model	MVHD
Sample Date	17-Jul-18
Magnetic Declination	7.51°
Dip Angle from Horizontal	60.61°
Magnetic Field Strength	48148.13530249nT
To convert a Magnetic Direction to a Grid Direction, Add 7.37°.	
To convert a Magnetic Direction to a True Direction, Add 7.51° East	
To convert a True Direction to a Grid Direction, Subtract 0.14°	



DESIGN TARGET DETAILS									
Item	TVD	True S	True N	North	East	Latitude	Longitude		
BHL - Dodd Federal Unit 983H	4761.08	-150.30	9418.80	673148.10	591198.10	32° 51' 0.77839 N	104° 7' 10.92702 W		



Vertical Section at 90.91° (200 usft/in)





COG Operating LLC

**Eddy County, NM (NAD27 NME)
Dodd Federal Unit
983H**

OH

Plan: Plan 1 07-17-18

Standard Planning Report

17 July, 2018



Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Dodd Federal Unit
Well: 983H
Wellbore: OH
Design: Plan 1 07-17-18

Local Co-ordinate Reference: Well 983H
TVD Reference: RKB @ 3596.00usft (Double K 7)
MD Reference: RKB @ 3596.00usft (Double K 7)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Eddy County, NM (NAD27 NME)		
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 Dodd Federal Unit
Site Position: Northing: 669,009.70 usft Latitude: 32° 50' 19.97600 N
From: Map Easting: 585,704.90 usft Longitude: 104° 3' 15.44871 W
Position Uncertainty: 0.00 usft Slot Radius: 13-3/16 " Grid Convergence: 0.15 °

Well 983H
Well Position +N/-S 4,288.70 usft Northing: 673,298.40 usft Latitude: 32° 51' 2.51416 N
 +E/-W -3,925.60 usft Easting: 581,779.30 usft Longitude: 104° 4' 1.33370 W
Position Uncertainty 0.00 usft Wellhead Elevation: Ground Level: 3,579.00 usft

Wellbore OH
Magnetics Model Name Sample Date Declination (°) Dip Angle (°) Field Strength (nT)
 MVHD 7/17/2018 7.51 60.61 48,148.13530249

Design Plan 1 07-17-18

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 0.00
Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
 (usft) (usft) (usft) (°)
 0.00 0.00 0.00 90.91

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,705.55	0.00	0.00	3,705.55	0.00	0.00	0.00	0.00	0.00	0.00	
4,451.38	89.50	101.35	4,183.00	-93.15	464.04	12.00	12.00	0.00	101.35	
5,018.48	89.50	90.01	4,187.96	-149.17	1,027.41	2.00	0.00	-2.00	-90.05	
13,410.19	89.50	90.01	4,261.08	-150.30	9,418.80	0.00	0.00	0.00	0.00	BHL - Dodd Federa

Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Dodd Federal Unit
Well: 983H
Wellbore: OH
Design: Plan 1 07-17-18

Local Co-ordinate Reference: Well 983H
TVD Reference: RKB @ 3596.00usft (Double K 7)
MD Reference: RKB @ 3596.00usft (Double K 7)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned 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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3,705.55	0.00	0.00	3,705.55	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 12.00°/100' Build									
3,800.00	11.33	101.35	3,799.39	-1.83	9.13	9.16	12.00	12.00	0.00
3,900.00	23.33	101.35	3,894.67	-7.69	38.29	38.41	12.00	12.00	0.00
4,000.00	35.33	101.35	3,981.69	-17.31	86.23	86.50	12.00	12.00	0.00
4,100.00	47.33	101.35	4,056.64	-30.28	150.87	151.33	12.00	12.00	0.00
4,200.00	59.33	101.35	4,116.24	-46.04	229.37	230.07	12.00	12.00	0.00
4,300.00	71.33	101.35	4,157.90	-63.89	318.30	319.28	12.00	12.00	0.00
4,400.00	83.33	101.35	4,179.79	-83.06	413.79	415.06	12.00	12.00	0.00
4,451.38	89.50	101.35	4,183.00	-93.15	464.04	465.47	12.00	12.00	0.00
LP, Hold 89.50° Inc, Begin 2.00°/100' Turn									
4,500.00	89.50	100.38	4,183.42	-102.31	511.79	513.35	2.00	0.00	-2.00
4,600.00	89.50	98.38	4,184.30	-118.60	610.44	612.25	2.00	0.00	-2.00
4,700.00	89.50	96.38	4,185.17	-131.44	709.60	711.61	2.00	0.00	-2.00
4,800.00	89.50	94.38	4,186.05	-140.81	809.15	811.30	2.00	0.00	-2.00
4,900.00	89.50	92.38	4,186.92	-146.70	908.97	911.20	2.00	0.00	-2.00
5,000.00	89.50	90.38	4,187.80	-149.11	1,008.93	1,011.18	2.00	0.00	-2.00
5,018.48	89.50	90.01	4,187.96	-149.17	1,027.41	1,029.66	2.00	0.00	-2.00
Hold 90.01° Azm									
5,100.00	89.50	90.01	4,188.67	-149.18	1,108.93	1,111.17	0.00	0.00	0.00
5,200.00	89.50	90.01	4,189.54	-149.19	1,208.93	1,211.15	0.00	0.00	0.00
5,300.00	89.50	90.01	4,190.41	-149.21	1,308.92	1,311.14	0.00	0.00	0.00
5,400.00	89.50	90.01	4,191.28	-149.22	1,408.92	1,411.12	0.00	0.00	0.00
5,500.00	89.50	90.01	4,192.15	-149.23	1,508.91	1,511.10	0.00	0.00	0.00
5,600.00	89.50	90.01	4,193.03	-149.25	1,608.91	1,611.09	0.00	0.00	0.00
5,700.00	89.50	90.01	4,193.90	-149.26	1,708.91	1,711.07	0.00	0.00	0.00
5,800.00	89.50	90.01	4,194.77	-149.27	1,808.90	1,811.05	0.00	0.00	0.00
5,900.00	89.50	90.01	4,195.64	-149.29	1,908.90	1,911.04	0.00	0.00	0.00
6,000.00	89.50	90.01	4,196.51	-149.30	2,008.90	2,011.02	0.00	0.00	0.00
6,100.00	89.50	90.01	4,197.38	-149.31	2,108.89	2,111.01	0.00	0.00	0.00
6,200.00	89.50	90.01	4,198.25	-149.33	2,208.89	2,210.99	0.00	0.00	0.00
6,300.00	89.50	90.01	4,199.12	-149.34	2,308.88	2,310.97	0.00	0.00	0.00
6,400.00	89.50	90.01	4,200.00	-149.35	2,408.88	2,410.96	0.00	0.00	0.00
6,500.00	89.50	90.01	4,200.87	-149.37	2,508.88	2,510.94	0.00	0.00	0.00
6,600.00	89.50	90.01	4,201.74	-149.38	2,608.87	2,610.92	0.00	0.00	0.00
6,700.00	89.50	90.01	4,202.61	-149.39	2,708.87	2,710.91	0.00	0.00	0.00
6,800.00	89.50	90.01	4,203.48	-149.41	2,808.87	2,810.89	0.00	0.00	0.00
6,900.00	89.50	90.01	4,204.35	-149.42	2,908.86	2,910.88	0.00	0.00	0.00
7,000.00	89.50	90.01	4,205.22	-149.43	3,008.86	3,010.86	0.00	0.00	0.00
7,100.00	89.50	90.01	4,206.10	-149.45	3,108.85	3,110.84	0.00	0.00	0.00
7,200.00	89.50	90.01	4,206.97	-149.46	3,208.85	3,210.83	0.00	0.00	0.00
7,300.00	89.50	90.01	4,207.84	-149.48	3,308.85	3,310.81	0.00	0.00	0.00
7,400.00	89.50	90.01	4,208.71	-149.49	3,408.84	3,410.79	0.00	0.00	0.00
7,500.00	89.50	90.01	4,209.58	-149.50	3,508.84	3,510.78	0.00	0.00	0.00
7,600.00	89.50	90.01	4,210.45	-149.52	3,608.84	3,610.76	0.00	0.00	0.00
7,700.00	89.50	90.01	4,211.32	-149.53	3,708.83	3,710.74	0.00	0.00	0.00
7,800.00	89.50	90.01	4,212.20	-149.54	3,808.83	3,810.73	0.00	0.00	0.00
7,900.00	89.50	90.01	4,213.07	-149.56	3,908.82	3,910.71	0.00	0.00	0.00
8,000.00	89.50	90.01	4,213.94	-149.57	4,008.82	4,010.70	0.00	0.00	0.00
8,100.00	89.50	90.01	4,214.81	-149.58	4,108.82	4,110.68	0.00	0.00	0.00
8,200.00	89.50	90.01	4,215.68	-149.60	4,208.81	4,210.66	0.00	0.00	0.00
8,300.00	89.50	90.01	4,216.55	-149.61	4,308.81	4,310.65	0.00	0.00	0.00

Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Dodd Federal Unit
Well: 983H
Wellbore: OH
Design: Plan 1 07-17-18

Local Co-ordinate Reference: Well 983H
TVD Reference: RKB @ 3596.00usft (Double K 7)
MD Reference: RKB @ 3596.00usft (Double K 7)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned 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)
8,400.00	89.50	90.01	4,217.42	-149.62	4,408.80	4,410.63	0.00	0.00	0.00
8,500.00	89.50	90.01	4,218.29	-149.64	4,508.80	4,510.61	0.00	0.00	0.00
8,600.00	89.50	90.01	4,219.17	-149.65	4,608.80	4,610.60	0.00	0.00	0.00
8,700.00	89.50	90.01	4,220.04	-149.66	4,708.79	4,710.58	0.00	0.00	0.00
8,800.00	89.50	90.01	4,220.91	-149.68	4,808.79	4,810.57	0.00	0.00	0.00
8,900.00	89.50	90.01	4,221.78	-149.69	4,908.79	4,910.55	0.00	0.00	0.00
9,000.00	89.50	90.01	4,222.65	-149.70	5,008.78	5,010.53	0.00	0.00	0.00
9,100.00	89.50	90.01	4,223.52	-149.72	5,108.78	5,110.52	0.00	0.00	0.00
9,200.00	89.50	90.01	4,224.39	-149.73	5,208.77	5,210.50	0.00	0.00	0.00
9,300.00	89.50	90.01	4,225.27	-149.75	5,308.77	5,310.48	0.00	0.00	0.00
9,400.00	89.50	90.01	4,226.14	-149.76	5,408.77	5,410.47	0.00	0.00	0.00
9,500.00	89.50	90.01	4,227.01	-149.77	5,508.76	5,510.45	0.00	0.00	0.00
9,600.00	89.50	90.01	4,227.88	-149.79	5,608.76	5,610.44	0.00	0.00	0.00
9,700.00	89.50	90.01	4,228.75	-149.80	5,708.76	5,710.42	0.00	0.00	0.00
9,800.00	89.50	90.01	4,229.62	-149.81	5,808.75	5,810.40	0.00	0.00	0.00
9,900.00	89.50	90.01	4,230.49	-149.83	5,908.75	5,910.39	0.00	0.00	0.00
10,000.00	89.50	90.01	4,231.37	-149.84	6,008.74	6,010.37	0.00	0.00	0.00
10,100.00	89.50	90.01	4,232.24	-149.85	6,108.74	6,110.35	0.00	0.00	0.00
10,200.00	89.50	90.01	4,233.11	-149.87	6,208.74	6,210.34	0.00	0.00	0.00
10,300.00	89.50	90.01	4,233.98	-149.88	6,308.73	6,310.32	0.00	0.00	0.00
10,400.00	89.50	90.01	4,234.85	-149.89	6,408.73	6,410.30	0.00	0.00	0.00
10,500.00	89.50	90.01	4,235.72	-149.91	6,508.72	6,510.29	0.00	0.00	0.00
10,600.00	89.50	90.01	4,236.59	-149.92	6,608.72	6,610.27	0.00	0.00	0.00
10,700.00	89.50	90.01	4,237.46	-149.93	6,708.72	6,710.26	0.00	0.00	0.00
10,800.00	89.50	90.01	4,238.34	-149.95	6,808.71	6,810.24	0.00	0.00	0.00
10,900.00	89.50	90.01	4,239.21	-149.96	6,908.71	6,910.22	0.00	0.00	0.00
11,000.00	89.50	90.01	4,240.08	-149.97	7,008.71	7,010.21	0.00	0.00	0.00
11,100.00	89.50	90.01	4,240.95	-149.99	7,108.70	7,110.19	0.00	0.00	0.00
11,200.00	89.50	90.01	4,241.82	-150.00	7,208.70	7,210.17	0.00	0.00	0.00
11,300.00	89.50	90.01	4,242.69	-150.02	7,308.69	7,310.16	0.00	0.00	0.00
11,400.00	89.50	90.01	4,243.56	-150.03	7,408.69	7,410.14	0.00	0.00	0.00
11,500.00	89.50	90.01	4,244.44	-150.04	7,508.69	7,510.13	0.00	0.00	0.00
11,600.00	89.50	90.01	4,245.31	-150.06	7,608.68	7,610.11	0.00	0.00	0.00
11,700.00	89.50	90.01	4,246.18	-150.07	7,708.68	7,710.09	0.00	0.00	0.00
11,800.00	89.50	90.01	4,247.05	-150.08	7,808.68	7,810.08	0.00	0.00	0.00
11,900.00	89.50	90.01	4,247.92	-150.10	7,908.67	7,910.06	0.00	0.00	0.00
12,000.00	89.50	90.01	4,248.79	-150.11	8,008.67	8,010.04	0.00	0.00	0.00
12,100.00	89.50	90.01	4,249.66	-150.12	8,108.66	8,110.03	0.00	0.00	0.00
12,200.00	89.50	90.01	4,250.54	-150.14	8,208.66	8,210.01	0.00	0.00	0.00
12,300.00	89.50	90.01	4,251.41	-150.15	8,308.66	8,309.99	0.00	0.00	0.00
12,400.00	89.50	90.01	4,252.28	-150.16	8,408.65	8,409.98	0.00	0.00	0.00
12,500.00	89.50	90.01	4,253.15	-150.18	8,508.65	8,509.96	0.00	0.00	0.00
12,600.00	89.50	90.01	4,254.02	-150.19	8,608.65	8,609.95	0.00	0.00	0.00
12,700.00	89.50	90.01	4,254.89	-150.20	8,708.64	8,709.93	0.00	0.00	0.00
12,800.00	89.50	90.01	4,255.76	-150.22	8,808.64	8,809.91	0.00	0.00	0.00
12,900.00	89.50	90.01	4,256.63	-150.23	8,908.63	8,909.90	0.00	0.00	0.00
13,000.00	89.50	90.01	4,257.51	-150.24	9,008.63	9,009.88	0.00	0.00	0.00
13,100.00	89.50	90.01	4,258.38	-150.26	9,108.63	9,109.86	0.00	0.00	0.00
13,200.00	89.50	90.01	4,259.25	-150.27	9,208.62	9,209.85	0.00	0.00	0.00
13,300.00	89.50	90.01	4,260.12	-150.29	9,308.62	9,309.83	0.00	0.00	0.00
13,400.00	89.50	90.01	4,260.99	-150.30	9,408.61	9,409.82	0.00	0.00	0.00
13,410.19	89.50	90.01	4,261.08	-150.30	9,418.80	9,420.00	0.00	0.00	0.00

TD at 13410.19

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Local Co-ordinate Reference: Well 983H
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North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
BHL - Dodd Federal L	0.00	0.00	4,261.08	-150.30	9,418.80	673,148.10	591,198.10	32° 51' 0.77839 N	104° 2' 10.92702 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
3,705.55	3,705.55	0.00	0.00	KOP, Begin 12.00°/100' Build
4,451.38	4,183.00	-93.15	464.04	LP, Hold 89.50° Inc, Begin 2.00°/100' Turn
5,018.48	4,187.96	-149.17	1,027.41	Hold 90.01° Azm
13,410.19	4,261.08	-150.30	9,418.80	TD at 13410.19