

NM OIL CONSERVATION

ARTESIA DISTRICT

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 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

SEP 28 2015

Form C-102

Revised August 1, 2011

Submit one copy to appropriate
District Office

RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-015- 43392		2 Pool Code 96610		3 Pool Name Empire; Glorieta Yeso East					
4 Property Code 39292		5 Property Name OUMET STATE COM						6 Well Number 21H	
7 OGRID NO. 229137		8 Operator Name COG OPERATING, LLC						9 Elevation 3642'	
10 Surface Location									
UL or lot no. 4	Section 2	Township 17S	Range 29E	Lot Idn	Feet from the 330	North/South line NORTH	Feet From the 170	East/West line WEST	County EDDY
11 Bottom Hole Location If Different From Surface									
UL or lot no. 1	Section 2	Township 17S	Range 29E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 330	East/West line EAST	County EDDY
12 Dedicated Acres 160.08		13 Joint or Infill		14 Consolidation Code		15 Order No.			

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.

Estimated Completed Interval:
330 FNL
330 FNL

GEODETIC DATA
NAD 27 GRID - NM EAST
SURFACE LOCATION
N 680270.3 - E 586073.7
LAT: 32.86983129° N
LONG: 104.05299328° W
BOTTOM HOLE
N 680270.0 - E 590866.8

CORNER DATA
NAD 27 GRID - NM EAST
A: FOUND 1/2" REBAR
N 675329.9 - E 585912.5
B: FOUND BRASS CAP "1914"
N 677971.0 - E 585901.6
C: FOUND BRASS CAP "1914"
N 680600.2 - E 585904.0
D: FOUND BRASS CAP "1914"
N 680599.8 - E 588550.2
E: FOUND BRASS CAP "1916"
N 680599.9 - E 591196.5
F: FOUND BRASS CAP "1914"
N 677961.6 - E 591198.9
G: FOUND BRASS CAP "1914"
N 675322.5 - E 591200.4
H: FOUND BRASS CAP "1914"
N 675322.9 - E 588553.7
1: CALCULATED CORNER
N 679290.7 - E 585902.8
2: CALCULATED CORNER
N 679281.3 - E 591197.7

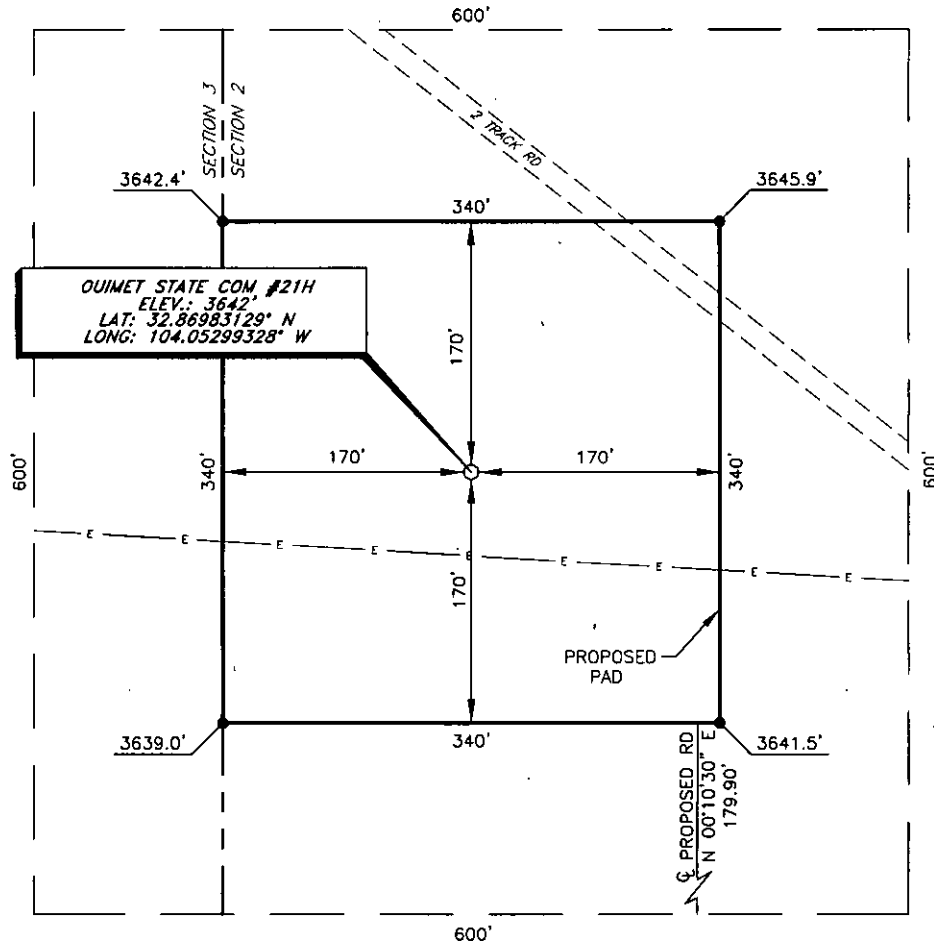
17 OPERATOR CERTIFICATION
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to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

Signature: *[Signature]* Date: **9-25-15**
Printed Name: **Kelly J. Holly**
E-mail Address: **kholly@concho.com**

18 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: **6-23-2015**
Signature and Seal of Professional Surveyor: *[Signature]*
19680
Certificate Number

COG OPERATING, LLC
 OUIMET STATE COM #21H
 (330' FNL & 170' FWL)
 SECTION 2, T17S, R29E
 N. M. P. M., EDDY CO., NEW MEXICO



DIRECTIONS TO LOCATION

From the intersection of CR-215 (Kewanee Road) and US Hwy. 82;
 Go North on CR-215 approx. 3.0 miles to a two track road on the left;
 Turn left stay left and go Southwest approx. 0.6 miles;
 Turn right and continue Northwest on two tract road approx. 0.5 miles
 to proposed road on right;
 Turn right and follow proposed road North approx. 0.5 miles;
 Location is approx. 160 feet on the left.

SCALE: 1" = 100'
 0 50 100
 BEARINGS ARE
 NAD 27 GRID - NM EAST
 DISTANCES ARE
 GROUND.

Firm No.: TX 10193838 NM 4655451

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NO.	REVISION	DATE
JOB NO.:	LS1505267	
DWG. NO.:	1505267PAD	

RRC

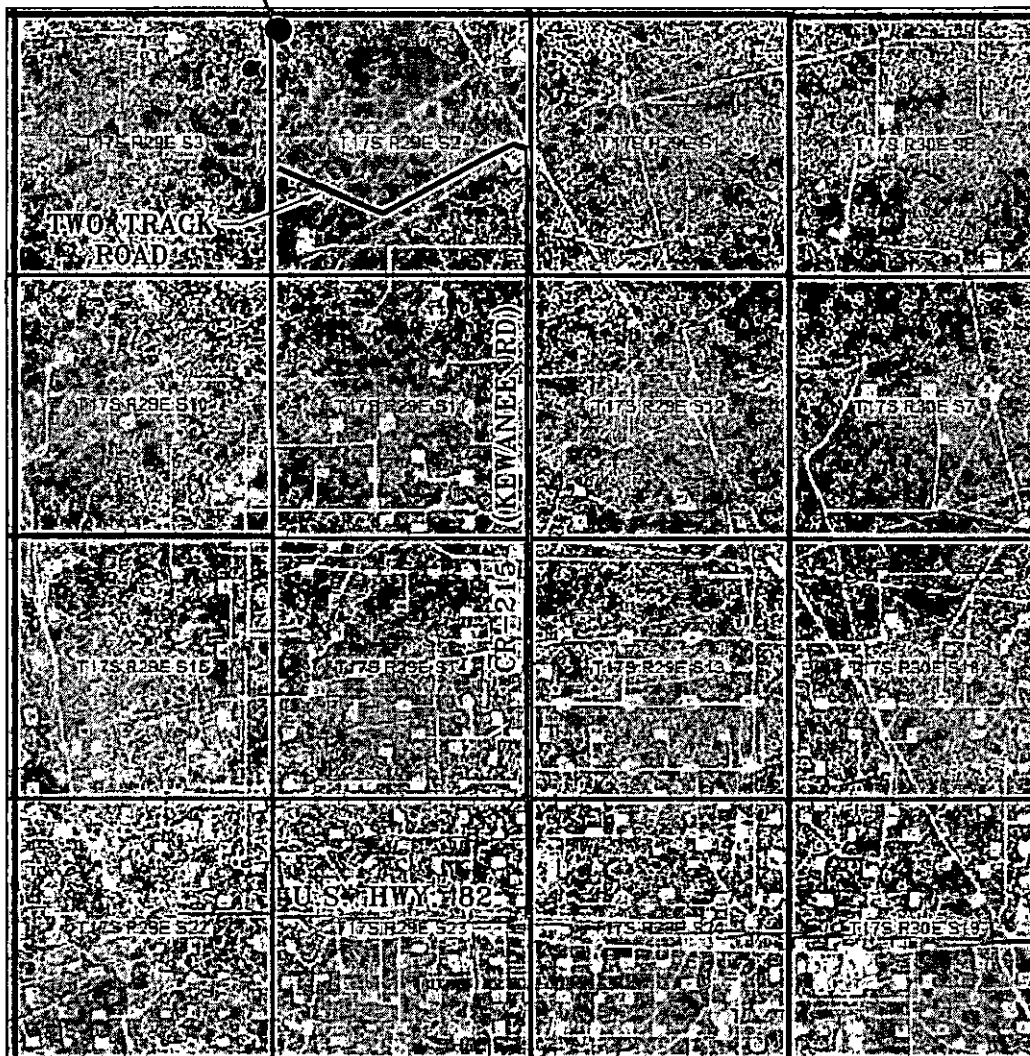
308 W. BROADWAY ST., HOBBS, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 6-23-15
SURVEYED BY: BC/ER
DRAWN BY: JC
APPROVED BY: RMH
SHEET : 1 OF 1

VICINITY MAP

NOT TO SCALE

OUIMET STATE COM #21H



*SECTION 2, TWP. 17 SOUTH, RGE. 29 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO*

OPERATOR: COG Operating, LLC
LEASE: Ouimet State Com
WELL NO.: 21H

LOCATION: 330' FNL & 170' FWL
ELEVATION: 3642'

Firm No.: TX 10193838 NM 4655451

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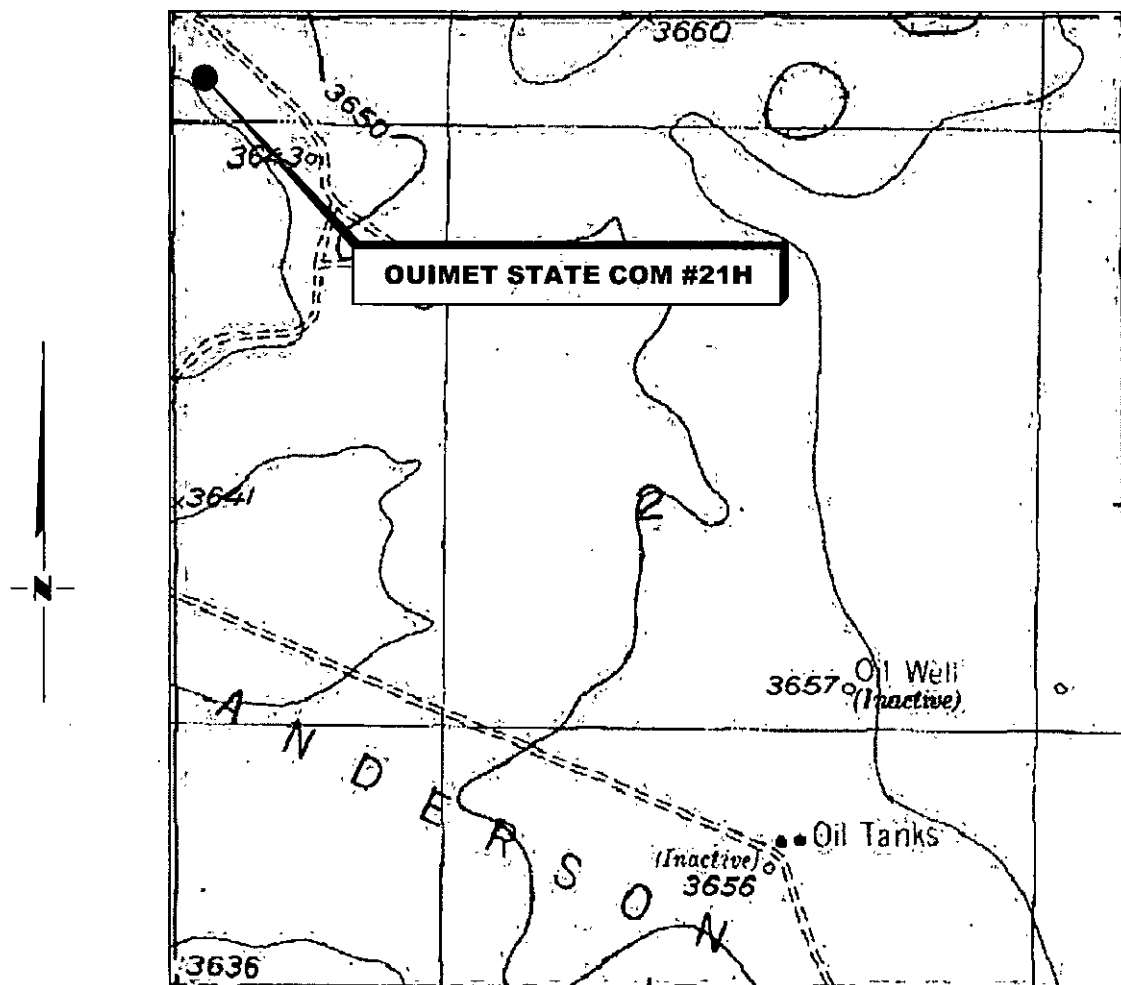
NO.	REVISION	DATE
JOB NO.: LS1505267		
DWG. NO.: 1505267VM		

RRC

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

SCALE: N.T.S.
DATE: 6-23-15
SURVEYED BY: ER/BC
DRAWN BY: JC
APPROVED BY: RMH
SHEET : 1 OF 1

LOCATION VERIFICATION MAP



SECTION 2, TWP. 17 SOUTH, RGE. 29 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: COG Operating, LLC
LEASE: Ouimet State Com
WELL NO.: 21H
ELEVATION: 3642'

LOCATION: 330' FNL & 170' FWL
CONTOUR INTERVAL: 10'
USGS TOPO. SOURCE MAP:
Red Lake SE, NM (1955)

Firm No.: TX 10193838 NM 4655451

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NO.	REVISION	DATE
JOB NO.:	LS1505267	
DWG. NO.:	1505267LVM	

RRC

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

SCALE: 1" = 1000'
DATE: 6-23-15
SURVEYED BY: ER/BC
DRAWN BY: JC
APPROVED BY: RMH
SHEET : 1 OF 1



NM OIL CONSERVATION

ARTESIA DISTRICT

SEP 28 2015

RECEIVED

COG Operating LLC

Eddy County, NM

Ouimet State Com #21H

SHL: 330' FNL, 170' FWL, Sec 2, T17S, R29E, Lot 4

PP: 330' FNL, 330' FWL, Sec 2, T17S, R29E, Lot 4

EOC: 330' FNL, 700' FWL, Sec 2, T17S, R29E, Lot 4

BHL: 330' FNL, 330' FEL, Sec 2, T17S, R29E, Lot 1

Plan: Plan #1

Standard Planning Report

13 July, 2015





TDS
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Ouimet State Corn #21H
Company:	COG Operating LLC	TVD Reference:	KB @ 3654.0usft (United 43)
Project:	Eddy County, NM	MD Reference:	KB @ 3654.0usft (United 43)
Site:	Ouimet State Corn #21H	North Reference:	Grid
Well:	SHL: 330' FNL, 170' FWL, Sec 2, T17S, R29E, Lot 4	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 330' FNL, 330' FEL, Sec 2, T17S, R29E, Lot 1		
Design:	Plan #1		

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

Site	Ouimet State Corn #21H		
Site Position:	From: Map	Northing: 680,270.30 usft	Latitude: 32° 52' 11.393 N
		Easting: 586,073.70 usft	Longitude: 104° 3' 10.776 W
Position Uncertainty:	0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.15 °

Well	SHL: 330' FNL, 170' FWL, Sec 2, T17S, R29E, Lot 4		
Well Position	+N/-S 0.0 usft	Northing: 680,270.30 usft	Latitude: 32° 52' 11.393 N
	+E/-W 0.0 usft	Easting: 586,073.70 usft	Longitude: 104° 3' 10.776 W
Position Uncertainty	0.0 usft	Wellhead Elevation: 0.0 usft	Ground Level: 3,642.0 usft

Wellbore		BHL: 330' FNL, 330' FEL, Sec 2, T17S, R29E, Lot 1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	7/13/2015	7.43	60.60	48,468

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	90.00

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,379.2	0.00	0.00	4,379.2	0.0	0.0	0.00	0.00	0.00	0.00	
5,206.5	91.00	90.00	4,900.0	0.0	530.0	11.00	11.00	10.88	90.00	
9,470.3	91.00	90.00	4,825.6	-0.3	4,793.1	0.00	0.00	0.00	0.00	PBHL (OSC #21H/OH



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Ouimet State Com #21H
Company:	COG Operating LLC	TVD Reference:	KB @ 3654.0usft (United 43)
Project:	Eddy County, NM	MD Reference:	KB @ 3654.0usft (United 43)
Site:	Ouimet State Com #21H	North Reference:	Grid
Well:	SHL: 330' FNL, 170' FWL, Sec 2, T17S, R29E, Lot 4	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 330' FNL, 330' FEL, Sec 2, T17S, R29E, Lot 1		
Design:	Plan #1		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,379.2	0.00	0.00	4,379.2	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start DLS 11.00 TFO 90.00									
4,400.0	2.29	90.00	4,400.0	0.0	0.4	0.4	11.00	11.00	0.00
4,450.0	7.79	90.00	4,449.8	0.0	4.8	4.8	11.00	11.00	0.00
4,500.0	13.29	90.00	4,498.9	0.0	13.9	13.9	11.00	11.00	0.00
4,550.0	18.79	90.00	4,547.0	0.0	27.8	27.8	11.00	11.00	0.00
4,600.0	24.29	90.00	4,593.4	0.0	46.1	46.1	11.00	11.00	0.00
4,650.0	29.79	90.00	4,638.0	0.0	68.8	68.8	11.00	11.00	0.00



TDS
Planning Report



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Project:	Eddy County, NM	MD Reference:	KB @ 3654.0usft (United 43)
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Well:	SHL: 330' FNL, 170' FWL, Sec 2, T17S, R29E, Lot 4	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 330' FNL, 330' FEL, Sec 2, T17S, R29E, Lot 1		
Design:	Plan #1		

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)
4,700.0	35.29	90.00	4,680.1	0.0	95.7	95.7	11.00	11.00	0.00
4,750.0	40.79	90.00	4,719.5	0.0	126.5	126.5	11.00	11.00	0.00
4,800.0	46.29	90.00	4,755.7	0.0	160.9	160.9	11.00	11.00	0.00
4,850.0	51.79	90.00	4,788.5	0.0	198.7	198.7	11.00	11.00	0.00
4,900.0	57.29	90.00	4,817.5	0.0	239.4	239.4	11.00	11.00	0.00
4,950.0	62.79	90.00	4,842.4	0.0	282.7	282.7	11.00	11.00	0.00
5,000.0	68.29	90.00	4,863.1	0.0	328.2	328.2	11.00	11.00	0.00
5,050.0	73.79	90.00	4,879.4	0.0	375.4	375.4	11.00	11.00	0.00
5,100.0	79.29	90.00	4,891.0	0.0	424.1	424.1	11.00	11.00	0.00
5,150.0	84.79	90.00	4,897.9	0.0	473.6	473.6	11.00	11.00	0.00
5,200.0	90.29	90.00	4,900.1	0.0	523.5	523.5	11.00	11.00	0.00
5,206.5	91.00	90.00	4,900.0	0.0	530.0	530.0	11.00	11.00	0.00
EOC - Start 4263.8 hold at 5206.5 MD									
5,300.0	91.00	90.00	4,898.4	0.0	623.5	623.5	0.00	0.00	0.00
5,400.0	91.00	90.00	4,896.6	0.0	723.5	723.5	0.00	0.00	0.00
5,500.0	91.00	90.00	4,894.9	-0.1	823.4	823.4	0.00	0.00	0.00
5,600.0	91.00	90.00	4,893.1	-0.1	923.4	923.4	0.00	0.00	0.00
5,700.0	91.00	90.00	4,891.4	-0.1	1,023.4	1,023.4	0.00	0.00	0.00
5,800.0	91.00	90.00	4,889.6	-0.1	1,123.4	1,123.4	0.00	0.00	0.00
5,900.0	91.00	90.00	4,887.9	-0.1	1,223.4	1,223.4	0.00	0.00	0.00
6,000.0	91.00	90.00	4,886.1	-0.1	1,323.4	1,323.4	0.00	0.00	0.00
6,100.0	91.00	90.00	4,884.4	-0.1	1,423.4	1,423.4	0.00	0.00	0.00
6,200.0	91.00	90.00	4,882.7	-0.1	1,523.3	1,523.3	0.00	0.00	0.00
6,300.0	91.00	90.00	4,880.9	-0.1	1,623.3	1,623.3	0.00	0.00	0.00
6,400.0	91.00	90.00	4,879.2	-0.1	1,723.3	1,723.3	0.00	0.00	0.00
6,500.0	91.00	90.00	4,877.4	-0.1	1,823.3	1,823.3	0.00	0.00	0.00
6,600.0	91.00	90.00	4,875.7	-0.1	1,923.3	1,923.3	0.00	0.00	0.00
6,700.0	91.00	90.00	4,873.9	-0.1	2,023.3	2,023.3	0.00	0.00	0.00
6,800.0	91.00	90.00	4,872.2	-0.1	2,123.2	2,123.2	0.00	0.00	0.00
6,900.0	91.00	90.00	4,870.4	-0.1	2,223.2	2,223.2	0.00	0.00	0.00
7,000.0	91.00	90.00	4,868.7	-0.1	2,323.2	2,323.2	0.00	0.00	0.00
7,100.0	91.00	90.00	4,866.9	-0.2	2,423.2	2,423.2	0.00	0.00	0.00
7,200.0	91.00	90.00	4,865.2	-0.2	2,523.2	2,523.2	0.00	0.00	0.00
7,300.0	91.00	90.00	4,863.5	-0.2	2,623.2	2,623.2	0.00	0.00	0.00
7,400.0	91.00	90.00	4,861.7	-0.2	2,723.2	2,723.2	0.00	0.00	0.00
7,500.0	91.00	90.00	4,860.0	-0.2	2,823.1	2,823.1	0.00	0.00	0.00
7,600.0	91.00	90.00	4,858.2	-0.2	2,923.1	2,923.1	0.00	0.00	0.00
7,700.0	91.00	90.00	4,856.5	-0.2	3,023.1	3,023.1	0.00	0.00	0.00
7,800.0	91.00	90.00	4,854.7	-0.2	3,123.1	3,123.1	0.00	0.00	0.00
7,900.0	91.00	90.00	4,853.0	-0.2	3,223.1	3,223.1	0.00	0.00	0.00
8,000.0	91.00	90.00	4,851.2	-0.2	3,323.1	3,323.1	0.00	0.00	0.00
8,100.0	91.00	90.00	4,849.5	-0.2	3,423.0	3,423.0	0.00	0.00	0.00
8,200.0	91.00	90.00	4,847.8	-0.2	3,523.0	3,523.0	0.00	0.00	0.00
8,300.0	91.00	90.00	4,846.0	-0.2	3,623.0	3,623.0	0.00	0.00	0.00
8,400.0	91.00	90.00	4,844.3	-0.2	3,723.0	3,723.0	0.00	0.00	0.00
8,500.0	91.00	90.00	4,842.5	-0.2	3,823.0	3,823.0	0.00	0.00	0.00
8,600.0	91.00	90.00	4,840.8	-0.2	3,923.0	3,923.0	0.00	0.00	0.00
8,700.0	91.00	90.00	4,839.0	-0.3	4,023.0	4,023.0	0.00	0.00	0.00
8,800.0	91.00	90.00	4,837.3	-0.3	4,122.9	4,122.9	0.00	0.00	0.00
8,900.0	91.00	90.00	4,835.5	-0.3	4,222.9	4,222.9	0.00	0.00	0.00
9,000.0	91.00	90.00	4,833.8	-0.3	4,322.9	4,322.9	0.00	0.00	0.00
9,100.0	91.00	90.00	4,832.0	-0.3	4,422.9	4,422.9	0.00	0.00	0.00



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Ouimet State Com #21H
Company:	COG Operating LLC	TVD Reference:	KB @ 3654.0usft (United 43)
Project:	Eddy County, NM	MD Reference:	KB @ 3654.0usft (United 43)
Site:	Ouimet State Com #21H	North Reference:	Grid
Well:	SHL: 330' FNL, 170' FWL, Sec 2, T17S, R29E, Lot 4	Survey Calculation Method:	Minimum Curvature
Wellbore:	BHL: 330' FNL, 330' FEL, Sec 2, T17S, R29E, Lot 1		
Design:	Plan #1		

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)	
9,200.0	91.00	90.00	4,830.3	-0.3	4,522.9	4,522.9	0.00	0.00	0.00	
9,300.0	91.00	90.00	4,828.6	-0.3	4,622.9	4,622.9	0.00	0.00	0.00	
9,400.0	91.00	90.00	4,826.8	-0.3	4,722.8	4,722.8	0.00	0.00	0.00	
9,470.3	91.00	90.00	4,825.6	-0.3	4,793.1	4,793.1	0.00	0.00	0.00	
TD at 9470.3										

Design Targets										
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PP (OSC #21H/OH Plan	- plan hits target center	0.00	0.00	4,754.8	0.0	160.0	680,270.29	586,233.70	32° 52' 11.389 N	104° 3' 8.900 W
- Point										
PBHL (OSC #21H/OH)	- plan hits target center	0.00	0.00	4,825.6	-0.3	4,793.1	680,270.00	590,866.80	32° 52' 11.260 N	104° 2' 14.577 W
- Point										
EOC (OSC #21H/OH Pl:	- plan hits target center	0.00	0.00	4,900.0	0.0	530.0	680,270.26	586,603.69	32° 52' 11.379 N	104° 3' 4.562 W
- Point										

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
4,379.2	4,379.2	0.0	0.0	KOP - Start DLS 11.00 TFO 90.00	
5,206.5	4,900.0	0.0	530.0	EOC - Start 4263.8 hold at 5206.5 MD	
9,470.3	4,825.6	-0.3	4,793.1	TD at 9470.3	



Ground Elevation: 3642.0
RKB Elevation: KB @ 3654.0usft (United 43)

Northing 680270.30 Easting 586073.70 Latitude 32° 52' 11.393 N Longitude 104° 3' 10.776 W

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.0	0.00	0.0	0.0	0.0	0.00	0.00	0.0	0.0
2	4379.2	0.00	0.00	4379.2	0.0	0.0	0.00	0.00	0.0	0.0
3	5206.5	91.00	90.00	4900.0	0.0	530.0	11.00	90.00	530.0	0.0
4	9470.3	91.00	90.00	4825.5	-0.3	4793.1	0.00	0.00	4793.1	PBHL (OSC #21H/OH)

COG Operating LLC

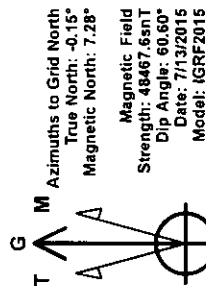
Project: Eddy County, NM

Site: Oilmet State Com #21H

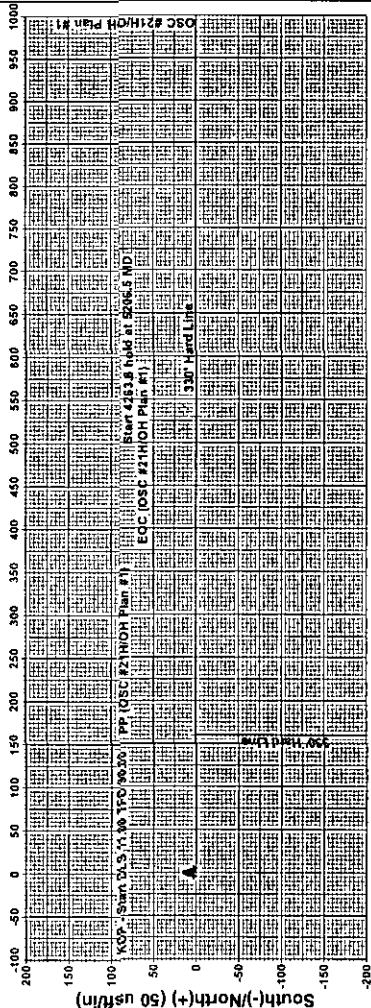
Well: SHL: 330' FNL, 170' FWL, Sec 2, T17S, R29E, Lot 4

Wellbore: BHL: 330' FNL, 330' FEL, Sec 2, T17S, R29E, Lot 1

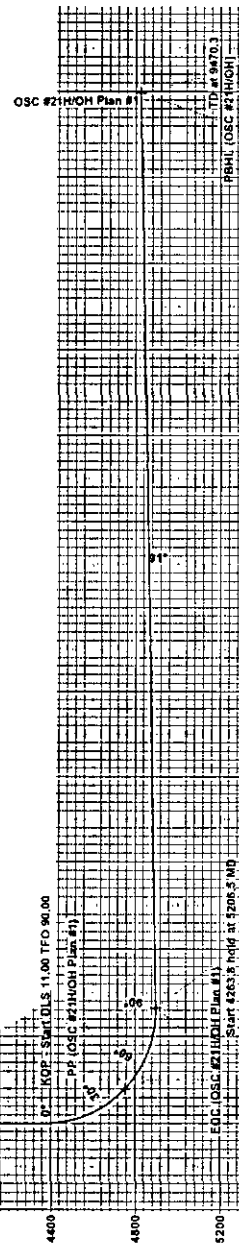
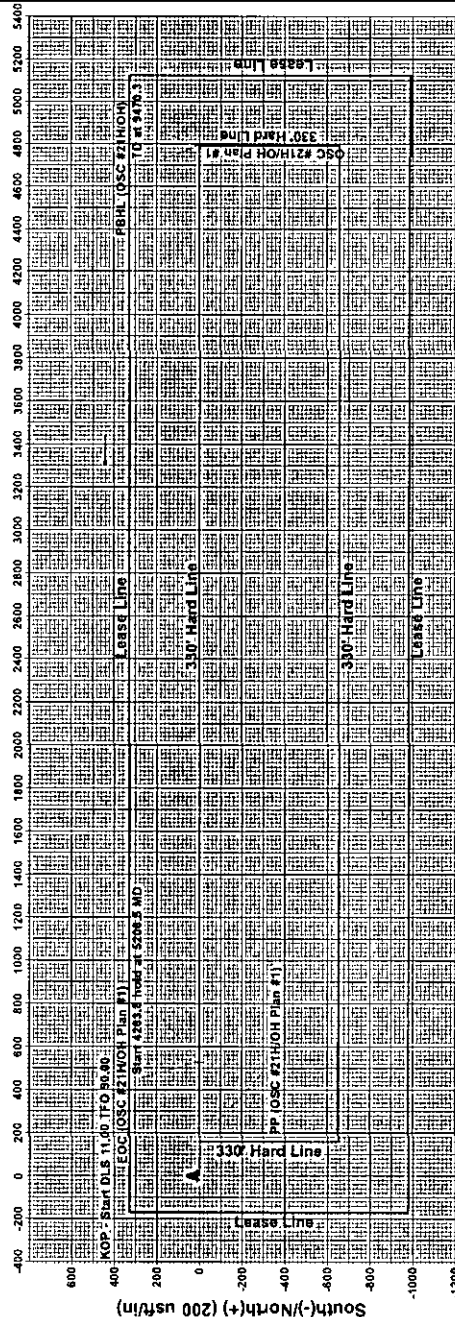
Plan: Plan #1 (SHL: 330' FNL, 170' FWL, Sec 2, T17S, R29E, Lot 4/BHL: 330' FNL, 330' FEL, Sec 2, T17S, R29E, Lot 1)



West(-)/East(+) (50 usf/in)



West(-)/East(+) (200 usf/in)



Vertical Section at 90.00° (200 usf/in)

Terra Directional Services LLC

322 Spring Hill Drive, Suite A300, Spring, Tx 77386

Phone: 432-425-7532

PROJECT DETAILS: Eddy County, NM
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Local North: Grid