

District I
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Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
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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

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

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-015-45110		2 Pool Code 97917		3 Pool Name Dodd; Glorieta-Upper Yeso	
4 Property Code 308195 326425		5 Property Name DODD FEDERAL UNIT			6 Well Number 924H
7 OGRID NO. 328947		8 Operator Name Spur Energy Partners LLC			9 Elevation 3572'

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
0	15	17S	29E		170	SOUTH	2195	EAST	EDDY

11 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
0	10	17S	29E		80	SOUTH	2196	EAST	EDDY

12 Dedicated Acres 160	13 Joint or Infill	14 Consolidation Code	15 Order No.
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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.

16 DETAIL "A"	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 heretofore entered by the division. Signature: <i>John Chapman</i> Date: 3/12/2020 Printed Name: John Chapman E-mail Address: schapman@spurupllc.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. 10-13-2017 Date of Survey Signature and Seal of Professional Surveyor: <i>Robert M. Howett</i> 19680 Certificate Number 12/17/18 - AS DRILL
	19 GEODETIC DATA NAD 83 GRID - NM EAST SURFACE LOCATION (SL) N 864991.6 - E 624929.2 LAT: 32.8277930° N LONG: 104.0811995° W LAT: 32.49°40.0551° N LONG: 104°03'40.3180° W KICK OF POINT (KOP) 167°-FSL/2194°-FEL (SEC. 15) N 664988.4 - E 624930.6 LAT: 32.8277842° N LONG: 104.0611948° W LAT: 32.49°40.0230° N LONG: 104°03'40.3014° W MD=4.016.00/TVD=4.015.86 FIRST TAKE POINT (FTP) 665°-FSL/2200°-FEL (SEC. 15) N 865485.5 - E 624922.9 LAT: 32.8291534° N LONG: 104.0612156° W LAT: 32.49°44.9524° N LONG: 104°03'40.3763° W MD=4.832.00/TVD=4.622.69 CORNER DATA NAD 83 GRID - NM EAST A: FOUND BRASS CAP "1914" N: 664818.7 - E: 62136.6 B: FOUND 1/2" REBAR N: 670102.9 - E: 621822.7 C: FOUND BRASS CAP "1914" N: 672745.1 - E: 621808.9 D: FOUND BRASS CAP "1914" N: 675385.4 - E: 621807.5 E: FOUND BRASS CAP "1914" N: 675387.2 - E: 624453.5 F: FOUND 1/2" REBAR N: 675393.5 - E: 627091.5 G: FOUND BRASS CAP "1914" N: 672752.3 - E: 627098.9 H: FOUND ALUM. CAP. ILEGIBLE N: 670108.2 - E: 627111.4 I: FOUND BRASS CAP "1914" N: 667468.3 - E: 627117.8 J: FOUND BRASS CAP "1914" N: 664824.0 - E: 627124.4 K: FOUND 1" IRON PIPE N: 664821.2 - E: 624477.3 CALCULATED POINTS 1: N 670105.6 - E 624467.0 2: N 671427.1 - E 624483.6 3: N 671428.7 - E 625785.1 4: N 670108.9 - E 625789.2 5: N 664822.6 - E 625800.9
	20 BOTTOM HOLE (BH) 80°-FSL/2196°-FEL (SEC. 10) N 670186.0 - E 624915.4 LAT: 32.8420704° N LONG: 104.0612008° W LAT: 32.50°31.4536° N LONG: 104°03'40.3230° W MD=9.543.00/TVD=4.657.89

LS1709629D2

SURVEY DATA CERTIFICATION

Job #: 63609
Client: Concho Oil and Gas
County & State: Eddy County, NM
Well: Dodd Federal Unit #924H
API No: 300154511000
Proposed Direction: 359.80

TIE-IN DATA

MD	TVD	INC	AZM	N/-S	E/-W	DATA SOURCE
781.00	780.97	0.85	85.79	-2.96	2.91	Gyro Data
Data Source Company:						Scientific

SURVEY DATA

First Survey Date	First Survey Depth	INC	AZM
28-Sep-18	929 ft	0.71°	82.32°

Last Survey Date	Last Survey Depth	INC	AZM
6-Oct-18	9,491 ft	92.49°	359.07°

Survey Instrument Type

Phoenix MWD

Projected TD Survey Date	Projected TD Survey Depth	INC	AZM
6-Oct-18	9,543 ft	92.49°	359.07°

CORRECTION INFORMATION

Magnetic Declination Used	7.53 degrees
Grid Convergence Used	0.15 degrees
Total Correction	7.38 degrees

Corrected to True/Grid North
Grid

TO THE BEST OF MY KNOWLEDGE, I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

Joshua Zeigler
Signature

October 6, 2018
Date



PHOENIX
TECHNOLOGY SERVICES

COG Operating LLC

Eddy County, NM (NAD83 NME)

Dodd Federal Unit

#924H

OH / 63609

Survey: Phoenix MWD Surveys

Standard Survey Report

07 October, 2018





Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #924H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	RKB @ 3588.50usft (Trinidad 436)
Site:	Dodd Federal Unit	MD Reference:	RKB @ 3588.50usft (Trinidad 436)
Well:	#924H	North Reference:	Grid
Wellbore:	OH / 63609	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Trinidad 436)	Database:	USA Compass

Project	Eddy County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Dodd Federal Unit		
Site Position:	Northing:	669,073.18 usft	Latitude: 32° 50' 20.39158 N
From: Map	Easting:	626,883.92 usft	Longitude: 104° 3' 17.28311 W
Position Uncertainty:	0.00 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.15 °

Well	#924H		
Well Position	+N/-S	0.00 usft	Northing: 664,991.58 usft
	+E/-W	0.00 usft	Easting: 624,929.18 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
			Ground Level: 3,572.00 usft

Wellbore	OH / 63609		
Magnetics	Model Name	Sample Date	Declination (°)
	MVHD	10/31/2018	7.48
			Dip Angle (°)
			60.59
			Field Strength (nT)
			48,114.59038624

Design	Surveys (Trinidad 436)		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°)
			359.80

Survey Program	Date 10/7/2018		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
929.00	9,543.00	Phoenix MWD Surveys (OH / 63609)	MWD+HDGM
			Description
			OWSG Rev.2 MWD + HDGM

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)
781.00	0.85	85.79	780.97	-2.96	2.91	-2.97	0.00	0.00	0.00
Tie In									
929.00	0.71	82.32	928.96	-2.76	4.91	-2.78	0.10	-0.09	-2.34
First Phoenix MWD Survey									
992.00	0.68	94.98	991.95	-2.74	5.67	-2.76	0.25	-0.05	20.10
1,056.00	0.79	91.12	1,055.95	-2.78	6.49	-2.81	0.19	0.17	-6.03
1,119.00	0.76	88.11	1,118.94	-2.78	7.34	-2.80	0.08	-0.05	-4.78
1,182.00	0.72	81.48	1,181.94	-2.70	8.15	-2.73	0.15	-0.06	-10.52
1,244.00	0.74	80.91	1,243.93	-2.58	8.93	-2.61	0.03	0.03	-0.92
1,307.00	0.78	86.32	1,306.92	-2.49	9.76	-2.53	0.13	0.06	8.59

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Well:	#924H	North Reference:	Grid
Wellbore:	OH / 63609	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Trinidad 436)	Database:	USA Compass

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)
1,370.00	0.74	87.44	1,369.92	-2.45	10.59	-2.48	0.07	-0.06	1.78
1,433.00	0.65	82.58	1,432.91	-2.38	11.35	-2.42	0.17	-0.14	-7.71
1,496.00	0.52	106.27	1,495.91	-2.42	11.98	-2.46	0.43	-0.21	37.60
1,559.00	0.38	112.25	1,558.91	-2.58	12.45	-2.62	0.23	-0.22	9.49
1,622.00	0.13	161.53	1,621.91	-2.72	12.67	-2.77	0.49	-0.40	78.22
1,685.00	0.23	247.79	1,684.91	-2.84	12.57	-2.88	0.41	0.16	136.92
1,748.00	0.48	276.28	1,747.91	-2.86	12.19	-2.90	0.47	0.40	45.22
1,811.00	0.36	245.44	1,810.91	-2.91	11.75	-2.95	0.40	-0.19	-48.95
1,874.00	0.31	248.82	1,873.90	-3.05	11.41	-3.09	0.09	-0.08	5.37
1,938.00	0.33	254.15	1,937.90	-3.17	11.07	-3.21	0.06	0.03	8.33
2,001.00	0.48	279.96	2,000.90	-3.17	10.64	-3.21	0.37	0.24	40.97
2,064.00	0.45	284.55	2,063.90	-3.06	10.14	-3.10	0.08	-0.05	7.29
2,127.00	0.42	277.77	2,126.90	-2.97	9.67	-3.00	0.09	-0.05	-10.76
2,190.00	0.54	281.86	2,189.90	-2.88	9.15	-2.91	0.20	0.19	6.49
2,253.00	0.42	264.45	2,252.89	-2.84	8.63	-2.87	0.30	-0.19	-27.63
2,316.00	0.53	270.47	2,315.89	-2.86	8.11	-2.89	0.19	0.17	9.56
2,380.00	0.57	273.92	2,379.89	-2.83	7.50	-2.86	0.08	0.06	5.39
2,443.00	0.62	265.01	2,442.89	-2.84	6.84	-2.87	0.17	0.08	-14.14
2,507.00	0.56	268.98	2,506.88	-2.88	6.19	-2.90	0.11	-0.09	6.20
2,569.00	0.51	280.46	2,568.88	-2.83	5.61	-2.85	0.19	-0.08	18.52
2,629.00	0.50	263.50	2,628.88	-2.81	5.09	-2.83	0.25	-0.02	-28.27
2,692.00	0.50	277.42	2,691.87	-2.81	4.54	-2.83	0.19	0.00	22.10
2,756.00	0.36	264.26	2,755.87	-2.79	4.07	-2.81	0.27	-0.22	-20.56
2,819.00	0.34	262.97	2,818.87	-2.84	3.69	-2.85	0.03	-0.03	-2.05
2,882.00	0.35	250.65	2,881.87	-2.92	3.32	-2.94	0.12	0.02	-19.56
2,945.00	0.27	258.27	2,944.87	-3.02	2.99	-3.03	0.14	-0.13	12.10
3,008.00	0.16	210.64	3,007.87	-3.12	2.80	-3.13	0.32	-0.17	-75.60
3,071.00	0.09	231.81	3,070.87	-3.23	2.72	-3.24	0.13	-0.11	33.60
3,134.00	0.13	261.38	3,133.87	-3.27	2.61	-3.28	0.11	0.06	46.94
3,197.00	0.18	182.17	3,196.87	-3.38	2.53	-3.39	0.32	0.08	-125.73
3,260.00	0.22	261.58	3,259.87	-3.50	2.41	-3.51	0.41	0.06	126.05
3,323.00	0.24	230.27	3,322.87	-3.60	2.19	-3.61	0.20	0.03	-49.70
3,386.00	0.14	219.94	3,385.87	-3.74	2.04	-3.75	0.17	-0.16	-16.40
3,449.00	0.14	204.55	3,448.87	-3.87	1.96	-3.88	0.06	0.00	-24.43
3,512.00	0.16	243.62	3,511.87	-3.98	1.85	-3.99	0.16	0.03	62.02
3,575.00	0.14	282.26	3,574.87	-4.00	1.69	-4.01	0.16	-0.03	61.33
3,638.00	0.17	269.85	3,637.87	-3.99	1.52	-3.99	0.07	0.05	-19.70
3,701.00	0.06	326.60	3,700.87	-3.96	1.41	-3.96	0.23	-0.17	90.08
3,764.00	0.06	225.71	3,763.87	-3.96	1.37	-3.96	0.15	0.00	-160.14
3,827.00	0.01	67.50	3,826.87	-3.98	1.35	-3.98	0.11	-0.08	-251.13
3,890.00	0.14	48.32	3,889.87	-3.92	1.41	-3.93	0.21	0.21	-30.44
3,953.00	0.05	48.79	3,952.87	-3.85	1.49	-3.86	0.14	-0.14	0.75
3,984.00	0.11	283.71	3,983.87	-3.84	1.47	-3.84	0.47	0.19	-403.48

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #924H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	RKB @ 3588.50usft (Trinidad 436)
Site:	Dodd Federal Unit	MD Reference:	RKB @ 3588.50usft (Trinidad 436)
Well:	#924H	North Reference:	Grid
Wellbore:	OH / 63609	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Trinidad 436)	Database:	USA Compass

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)
4,016.00	2.15	354.72	4,015.86	-3.23	1.39	-3.24	6.61	6.38	221.91
4,047.00	5.97	358.41	4,046.78	-1.04	1.29	-1.05	12.35	12.32	11.90
4,079.00	9.79	320	4,078.47	3.34	1.40	3.34	12.10	11.94	14.97
4,110.00	14.47	1.34	4,108.77	9.85	1.63	9.84	15.15	15.10	-6.00
4,142.00	18.66	0.21	4,139.43	18.97	1.75	18.96	13.13	13.09	-3.53
4,173.00	23.61	359.35	4,168.34	30.14	1.69	30.13	16.00	15.97	-2.77
4,205.00	27.95	358.16	4,197.15	44.05	1.38	44.05	13.66	13.56	-3.72
4,236.00	31.95	355.83	4,224.00	59.50	0.55	59.50	13.44	12.90	-7.52
4,268.00	35.72	356.12	4,250.58	77.27	-0.70	77.27	11.79	11.78	0.91
4,330.00	43.26	357.34	4,298.39	116.61	-2.91	116.62	12.23	12.16	1.97
4,362.00	44.60	0.02	4,321.44	136.80	-3.42	136.81	7.16	4.19	8.38
4,394.00	44.83	0.63	4,344.18	161.31	-3.29	161.32	1.52	0.72	1.91
4,456.00	44.97	0.34	4,388.10	205.07	-2.92	205.08	0.40	0.23	-0.47
4,519.00	45.04	0.15	4,432.64	249.62	-2.73	249.63	0.24	0.11	-0.30
4,582.00	45.09	359.72	4,477.14	294.22	-2.78	294.23	0.49	0.08	-0.68
4,614.00	45.17	359.53	4,499.71	316.90	-2.93	316.91	0.49	0.25	-0.59
4,646.00	47.23	359.29	4,521.86	339.99	-3.17	340.00	6.46	6.44	-0.75
4,677.00	50.67	358.58	4,542.22	363.36	-3.60	363.37	11.23	11.10	-2.29
4,708.00	53.31	357.65	4,561.30	387.77	-4.41	387.79	8.84	8.52	-3.00
4,740.00	57.58	357.81	4,579.45	414.10	-5.45	414.12	13.35	13.34	0.50
4,771.00	60.89	358.59	4,595.31	440.72	-6.29	440.74	10.89	10.68	2.52
4,803.00	63.78	359.96	4,610.16	469.06	-6.64	469.08	9.79	9.03	4.28
4,835.00	65.02	1.60	4,623.99	497.91	-6.25	497.93	6.03	3.88	5.13
4,866.00	68.16	2.95	4,636.31	526.33	-5.11	526.35	10.89	10.13	4.35
4,898.00	70.78	3.86	4,647.53	556.24	-3.33	556.25	8.61	8.19	2.84
4,929.00	73.86	3.95	4,656.94	585.71	-1.32	585.71	9.94	9.94	0.29
4,961.00	76.79	3.88	4,665.05	616.59	0.79	616.58	9.16	9.16	-0.22
4,993.00	78.82	4.98	4,671.81	647.77	3.21	647.76	7.18	6.34	3.44
5,024.00	81.00	5.00	4,677.24	678.17	5.86	678.15	7.03	7.03	0.06
5,056.00	84.54	4.18	4,681.26	709.81	8.40	709.78	11.35	11.06	-2.56
5,087.00	86.47	3.70	4,683.69	740.64	10.53	740.60	6.41	6.23	-1.55
5,119.00	88.39	2.20	4,685.13	772.57	12.17	772.52	7.61	6.00	-4.69
5,150.00	89.35	0.39	4,685.74	803.55	12.87	803.50	6.61	3.10	-5.84
5,214.00	90.47	358.94	4,685.84	867.55	12.50	867.50	2.86	1.75	-2.27
5,276.00	91.04	358.52	4,685.02	929.52	11.12	929.48	1.14	0.92	-0.68
5,340.00	90.45	358.56	4,684.19	993.50	9.49	993.46	0.92	-0.92	0.06
5,403.00	89.15	358.53	4,684.41	1,056.48	7.89	1,056.44	2.06	-2.06	-0.05
5,466.00	89.42	358.47	4,685.20	1,119.45	6.24	1,119.42	0.44	0.43	-0.10
5,529.00	89.90	358.29	4,685.57	1,182.42	4.46	1,182.40	0.81	0.76	-0.29
5,592.00	90.22	357.50	4,685.50	1,245.38	2.15	1,245.36	1.35	0.51	-1.25
5,654.00	90.75	357.07	4,684.98	1,307.31	-0.79	1,307.30	1.10	0.85	-0.69
5,717.00	90.73	357.12	4,684.17	1,370.22	-3.98	1,370.23	0.09	-0.03	0.08
5,781.00	89.76	356.92	4,683.89	1,434.13	-7.31	1,434.15	1.55	-1.52	-0.31
5,844.00	89.78	357.26	4,684.14	1,497.05	-10.51	1,497.08	0.54	0.03	0.54

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Wellbore:	OH / 63609	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Trinidad 436)	Database:	USA Compass

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)
5,906.00	90.13	356.54	4,684.19	1,558.96	-13.86	1,559.00	1.29	0.56	-1.16
5,970.00	90.28	356.72	4,683.96	1,622.85	-17.62	1,622.90	0.37	0.23	0.28
6,033.00	90.44	358.44	4,683.57	1,685.79	-20.28	1,685.85	2.74	0.25	2.73
6,096.00	90.27	3.35	4,683.18	1,748.76	-19.30	1,748.82	7.80	-0.27	7.79
6,158.00	90.22	4.92	4,682.91	1,810.60	-14.83	1,810.64	2.53	-0.08	2.53
6,221.00	90.62	4.71	4,682.45	1,873.37	-9.54	1,873.40	0.72	0.63	-0.33
6,284.00	90.13	2.76	4,682.04	1,936.24	-5.43	1,936.24	3.19	-0.78	-3.10
6,347.00	90.55	2.56	4,681.67	1,999.17	-2.51	1,999.16	0.74	0.67	-0.32
6,410.00	89.59	0.57	4,681.59	2,062.14	-0.79	2,062.13	3.51	-1.52	-3.16
6,473.00	90.21	0.94	4,681.70	2,125.13	0.04	2,125.12	1.15	0.98	0.59
6,537.00	90.76	1.23	4,681.16	2,189.12	1.25	2,189.10	0.97	0.86	0.45
6,600.00	89.81	0.24	4,680.84	2,252.11	2.06	2,252.09	2.18	-1.51	-1.57
6,663.00	90.25	359.44	4,680.81	2,315.11	1.88	2,315.09	1.45	0.70	-1.27
6,726.00	90.47	358.28	4,680.41	2,378.10	0.63	2,378.08	1.87	0.35	-1.84
6,789.00	91.02	358.28	4,679.59	2,441.06	-1.26	2,441.05	0.87	0.87	0.00
6,853.00	91.52	358.41	4,678.18	2,505.02	-3.11	2,505.01	0.81	0.78	0.20
6,916.00	91.92	358.76	4,676.29	2,567.97	-4.86	2,567.97	0.84	0.63	0.56
6,979.00	91.02	359.10	4,674.67	2,630.94	-5.84	2,630.94	1.53	-1.43	0.54
7,042.00	88.99	359.42	4,674.66	2,693.93	-6.65	2,693.94	3.26	-3.22	0.51
7,105.00	89.50	359.67	4,675.49	2,756.92	-7.15	2,756.93	0.90	0.81	0.40
7,168.00	89.59	359.33	4,675.99	2,819.92	-7.70	2,819.93	0.56	0.14	-0.54
7,231.00	89.70	359.46	4,676.38	2,882.91	-8.37	2,882.92	0.27	0.17	0.21
7,295.00	89.95	359.34	4,676.58	2,946.91	-9.04	2,946.92	0.43	0.39	-0.19
7,357.00	90.21	358.96	4,676.49	3,008.90	-9.96	3,008.92	0.74	0.42	-0.61
7,421.00	90.35	359.22	4,676.18	3,072.89	-10.97	3,072.91	0.46	0.22	0.41
7,484.00	90.90	359.72	4,675.49	3,135.89	-11.56	3,135.91	1.18	0.87	0.79
7,547.00	91.33	359.80	4,674.27	3,198.87	-11.82	3,198.90	0.69	0.68	0.13
7,610.00	91.78	0.13	4,672.56	3,261.85	-11.86	3,261.87	0.89	0.71	0.52
7,673.00	89.93	0.77	4,671.62	3,324.84	-11.37	3,324.86	3.11	-2.94	1.02
7,736.00	89.18	1.27	4,672.11	3,387.83	-10.24	3,387.84	1.43	-1.19	0.79
7,799.00	89.52	0.95	4,672.82	3,450.81	-9.02	3,450.82	0.74	0.54	-0.51
7,862.00	89.90	0.74	4,673.14	3,513.80	-8.09	3,513.81	0.69	0.60	-0.33
7,925.00	90.47	0.44	4,672.94	3,576.80	-7.45	3,576.80	1.02	0.90	-0.48
7,988.00	91.04	0.40	4,672.11	3,639.79	-6.98	3,639.79	0.91	0.90	-0.06
8,051.00	91.42	0.07	4,670.75	3,702.77	-6.73	3,702.78	0.80	0.60	-0.52
8,115.00	92.01	0.26	4,668.84	3,766.75	-6.54	3,766.75	0.97	0.92	0.30
8,178.00	91.30	359.13	4,667.02	3,829.72	-6.88	3,829.72	2.12	-1.13	-1.79
8,242.00	90.33	358.89	4,666.11	3,893.70	-7.98	3,893.70	1.56	-1.52	-0.38
8,305.00	89.22	358.69	4,666.36	3,956.68	-9.31	3,956.69	1.79	-1.76	-0.32
8,368.00	89.72	358.78	4,666.94	4,019.67	-10.70	4,019.68	0.81	0.79	0.14
8,431.00	90.42	358.80	4,666.86	4,082.65	-12.03	4,082.67	1.11	1.11	0.03
8,494.00	91.05	358.97	4,666.05	4,145.63	-13.26	4,145.66	1.04	1.00	0.27
8,558.00	91.76	358.87	4,664.49	4,209.60	-14.47	4,209.63	1.12	1.11	-0.16

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #924H
Project:	Eddy County, NM (NAD83 NME)	TVD Reference:	RKB @ 3588.50usft (Trinidad 436)
Site:	Dodd Federal Unit	MD Reference:	RKB @ 3588.50usft (Trinidad 436)
Well:	#924H	North Reference:	Grid
Wellbore:	OH / 63609	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Trinidad 436)	Database:	USA Compass

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
8,621.00	91.55	359.10	4,662.67	4,272.57	-15.58	4,272.60	0.49	-0.33	0.37
8,684.00	90.81	359.65	4,661.37	4,335.55	-16.27	4,335.58	1.46	-1.17	0.87
8,748.00	90.85	0.14	4,660.44	4,399.54	-16.39	4,399.57	0.77	0.06	0.77
8,811.00	89.73	0.37	4,660.12	4,462.54	-16.10	4,462.57	1.81	-1.78	0.37
8,874.00	90.62	0.57	4,659.93	4,525.54	-15.59	4,525.56	1.45	1.41	0.32
8,937.00	89.99	1.18	4,659.59	4,588.53	-14.63	4,588.55	1.39	-1.00	0.97
9,000.00	88.59	1.62	4,660.38	4,651.50	-13.09	4,651.52	2.33	-2.22	0.70
9,062.00	89.59	1.63	4,661.36	4,713.47	-11.33	4,713.48	1.61	1.61	0.02
9,126.00	89.11	0.74	4,662.09	4,777.45	-10.01	4,777.46	1.58	-0.75	-1.39
9,189.00	88.90	359.56	4,663.18	4,840.44	-9.84	4,840.44	1.90	-0.33	-1.87
9,252.00	89.59	359.53	4,664.01	4,903.43	-10.34	4,903.44	1.10	1.10	-0.05
9,316.00	90.22	359.39	4,664.12	4,967.43	-10.94	4,967.44	1.01	0.98	-0.22
9,379.00	90.84	359.38	4,663.53	5,030.42	-11.62	5,030.43	0.98	0.98	-0.02
9,442.00	91.90	359.35	4,662.03	5,093.40	-12.32	5,093.41	1.68	1.68	-0.05
9,491.00	92.49	359.07	4,660.15	5,142.36	-12.99	5,142.37	1.33	1.20	-0.57
Final Phoenix MWD Survey									
9,543.00	92.49	359.07	4,657.89	5,194.31	-13.83	5,194.32	0.00	0.00	0.00
Projection to TD									

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
781.00	780.97	-2.96	2.91	Tie In
929.00	928.96	-2.76	4.91	First Phoenix MWD Survey
9,491.00	4,660.15	5,142.36	-12.99	Final Phoenix MWD Survey
9,543.00	4,657.89	5,194.32	-13.83	Projection to TD