

EOG RESOURCES, INC.
GOLDEN GRAHAM 1 STATE COM #723H

Permit Information:

Well Name: Golden Graham 1 State Com #723H

Location:

SHL: 380' FSL & 2025' FEL, Section 1, T-26-S, R-28-E, Eddy Co., N.M.

BHL: 230' FNL & 2395' FEL, Section 36, T-25-S, R-28-E, Eddy Co., N.M.

Design A

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
12.25"	0 - 1,150'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0' - 8,716'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0'-20,100'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /sk	Slurry Description
1,150'	400	13.5	1.73	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	300	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
8,716'	600	14.2	1.11	1 st Stage (Tail): Class C + 5% Salt + (TOC @ 7,000')
	1,000	12.7	2.30	2 nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
20,100'	800	14.2	1.31	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 8,216')

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 - 1,150'	Fresh - Gel	8.6-8.8	28-34	N/c
1,150' - 8,716'	Brine	8.8-10.0	28-34	N/c
8,716' - 9,438'	Oil Base	10.0-11.5	58-68	3 - 6
9,438' - 20,100' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

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Design B

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 – 1,150'	13.375"	54.5#	J-55	STC	1.125	1.25	1.60
12.25"	0-2,771'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0 – 8,716'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0'-20,100'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /sk	Slurry Description
1,150'	697	13.5	1.74	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl ₂ (TOC @ Surface)
	333	14.8	1.35	Tail: Class 'C' + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate + 2.0% KCl (1.06 lb/sk)
2,771'	692	12.7	2.22	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
	303	14.8	1.32	Tail: Class C + 0.13% C-20
8,716'	375	10.8	3.67	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 2,271')
	400	14.8	2.38	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800
20,100'	950	14.8	1.31	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 8,216')

As a contingency, EOG requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (4,914') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 1,000 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed.

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,150'	Fresh - Gel	8.6-8.8	28-34	N/c
1,150' – 2,771'	Brine	10.0-10.2	28-34	N/c
2,771' – 8,716'	Oil Base	8.7-9.4	58-68	N/c - 6
8,716' – 20,100' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

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Hydrogen Sulfide Plan Summary

- A. All personnel shall receive proper H₂S training in accordance with Onshore Order III.C.3.a.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:

- Well control equipment
 - a. Flare line 150' from wellhead to be ignited by flare gun.
 - b. Choke manifold with a remotely operated choke.
 - c. Mud/gas separator

- Protective equipment for essential personnel.

Breathing apparatus:

- a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- b. Work/Escapes packs — 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- c. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.

Auxiliary Rescue Equipment:

- a. Stretcher
- b. Two OSHA full body harness
- c. 100 ft 5/8 inch OSHA approved rope
- d. 1-20# class ABC fire extinguisher

- H₂S detection and monitoring equipment:

The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.

(Gas sample tubes will be stored in the safety trailer)

- Visual warning systems.
 - a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - c. Two wind socks will be placed in strategic locations, visible from all angles.

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- **Mud program:**
The mud program has been designed to minimize the volume of H₂S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H₂S bearing zones.
- **Metallurgy:**
All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.
- **Communication:**
Communication will be via cell phones and land lines where available.

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GOLDEN GRAHAM 1 STATE COM #723H

Emergency Assistance Telephone List

PUBLIC SAFETY: **911 or**

Lea County Sheriff's Department	(575) 396-3611
Rod Coffman	
Fire Department:	
Carlsbad	(575) 885-3125
Artesia	(575) 746-5050
Hospitals:	
Carlsbad	(575) 887-4121
Artesia	(575) 748-3333
Hobbs	(575) 392-1979
Dept. of Public Safety/Carlsbad	(575) 748-9718
Highway Department	(575) 885-3281
New Mexico Oil Conservation	(575) 476-3440
U.S. Dept. of Labor	(575) 887-1174

EOG Resources, Inc.

EOG / Midland	Office (432) 686-3600
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Company Drilling Consultants:

David Dominique	Cell (985) 518-5839
Mike Vann	Cell (817) 980-5507

Drilling Engineer

Steve Munsell	Office (432) 686-3609
	Cell (432) 894-1256

Drilling Manager

Aj Dach	Office (432) 686-3751
	Cell (817) 480-1167

Drilling Superintendent

Domingo Lopez	Office (432) 686-3702
	Cell (432) 215-9452

H&P Drilling

H&P Drilling	Office (432) 563-5757
H&P 651 Drilling Rig	Rig (903) 509-7131

Tool Pusher:

Johnathan Craig	Cell (817) 760-6374
Brad Garrett	

Safety

Brian Chandler (HSE Manager)	Office (432) 686-3695
	Cell (817) 239-0251



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DISTRICT II-ARTESIA O.C.D.

EOG Resources - Midland

Eddy County, NM (NAD 83 NME)

Golden Graham 1 State Com

#723H

OH

Plan: Plan #0.1

Standard Planning Report

24 April, 2019

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #723H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3000.0usft
Project:	Eddy County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3000.0usft
Site:	Golden Graham 1 State Com	North Reference:	Grid
Well:	#723H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Project	Eddy County, NM (NAD 83 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	Golden Graham 1 State Com		
Site Position:	Map	Northings:	387,494.00 usft
From:		Easting:	630,031.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 3' 53.919 N
		Longitude:	104° 2' 49.246 W
		Grid Convergence:	0.15 °

Well	#723H		
Well Position	+N/-S	159.0 usft	Northings:
	+E/-W	2,581.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level:
			2,975.0 usft
		Latitude:	32° 3' 55.423 N
		Longitude:	104° 2' 19.246 W

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	4/24/2019	6.96
			Dip Angle
			(°)
			59.82
			Field Strength
			(nT)
			47,607.78118426

Design	Plan #0.1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			357.75

Plan Survey Tool Program	Date 4/24/2019		
Depth From	Depth To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
1	0.0	20,100.4 Plan #0.1 (OH)	MWD
			OWSG MWD - Standard
			Remarks

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,478.8	3.58	228.35	1,478.7	-3.7	-4.2	2.00	2.00	0.00	228.35	
9,259.1	3.58	228.35	9,243.8	-326.3	-366.8	0.00	0.00	0.00	0.00	
9,437.9	0.00	0.01	9,422.5	-330.0	-371.0	2.00	-2.00	0.00	180.00	KOP(GG 1 SC #723H
10,187.9	90.00	359.87	9,900.0	147.5	-372.1	12.00	12.00	-0.02	359.87	
20,100.4	90.00	359.87	9,900.0	10,060.0	-395.0	0.00	0.00	0.00	0.00	PBHL(GG 1 SC #723I



Planning Report

Database:	EDM 5000.14	Local Co-ordinate Reference:	Well #723H
Company:	EOG Resources - Midland	TVD Reference:	KB = 25 @ 3000.0usft
Project:	Eddy County, NM (NAD 83 NME)	MD Reference:	KB = 25 @ 3000.0usft
Site:	Golden Graham 1 State Com	North Reference:	Grid
Well:	#723H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

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	2.00	228.35	1,400.0	-1.2	-1.3	-1.1	2.00	2.00	0.00
1,478.8	3.58	228.35	1,478.7	-3.7	-4.2	-3.5	2.00	2.00	0.00
1,500.0	3.58	228.35	1,499.8	-4.6	-5.2	-4.4	0.00	0.00	0.00
1,600.0	3.58	228.35	1,599.6	-8.7	-9.8	-8.3	0.00	0.00	0.00
1,700.0	3.58	228.35	1,699.5	-12.9	-14.5	-12.3	0.00	0.00	0.00
1,800.0	3.58	228.35	1,799.3	-17.0	-19.1	-16.3	0.00	0.00	0.00
1,900.0	3.58	228.35	1,899.1	-21.2	-23.8	-20.2	0.00	0.00	0.00
2,000.0	3.58	228.35	1,998.9	-25.3	-28.5	-24.2	0.00	0.00	0.00
2,100.0	3.58	228.35	2,098.7	-29.5	-33.1	-28.1	0.00	0.00	0.00
2,200.0	3.58	228.35	2,198.5	-33.6	-37.8	-32.1	0.00	0.00	0.00
2,300.0	3.58	228.35	2,298.3	-37.8	-42.4	-36.1	0.00	0.00	0.00
2,400.0	3.58	228.35	2,398.1	-41.9	-47.1	-40.0	0.00	0.00	0.00
2,500.0	3.58	228.35	2,497.9	-46.0	-51.8	-44.0	0.00	0.00	0.00
2,600.0	3.58	228.35	2,597.7	-50.2	-56.4	-47.9	0.00	0.00	0.00
2,700.0	3.58	228.35	2,697.5	-54.3	-61.1	-51.9	0.00	0.00	0.00
2,800.0	3.58	228.35	2,797.3	-58.5	-65.8	-55.9	0.00	0.00	0.00
2,900.0	3.58	228.35	2,897.1	-62.6	-70.4	-59.8	0.00	0.00	0.00
3,000.0	3.58	228.35	2,996.9	-66.8	-75.1	-63.8	0.00	0.00	0.00
3,100.0	3.58	228.35	3,096.7	-70.9	-79.7	-67.7	0.00	0.00	0.00
3,200.0	3.58	228.35	3,196.5	-75.1	-84.4	-71.7	0.00	0.00	0.00
3,300.0	3.58	228.35	3,296.3	-79.2	-89.1	-75.7	0.00	0.00	0.00
3,400.0	3.58	228.35	3,396.1	-83.4	-93.7	-79.6	0.00	0.00	0.00
3,500.0	3.58	228.35	3,495.9	-87.5	-98.4	-83.6	0.00	0.00	0.00
3,600.0	3.58	228.35	3,595.8	-91.7	-103.0	-87.5	0.00	0.00	0.00
3,700.0	3.58	228.35	3,695.6	-95.8	-107.7	-91.5	0.00	0.00	0.00
3,800.0	3.58	228.35	3,795.4	-99.9	-112.4	-95.5	0.00	0.00	0.00
3,900.0	3.58	228.35	3,895.2	-104.1	-117.0	-99.4	0.00	0.00	0.00
4,000.0	3.58	228.35	3,995.0	-108.2	-121.7	-103.4	0.00	0.00	0.00
4,100.0	3.58	228.35	4,094.8	-112.4	-126.4	-107.3	0.00	0.00	0.00
4,200.0	3.58	228.35	4,194.6	-116.5	-131.0	-111.3	0.00	0.00	0.00
4,300.0	3.58	228.35	4,294.4	-120.7	-135.7	-115.3	0.00	0.00	0.00
4,400.0	3.58	228.35	4,394.2	-124.8	-140.3	-119.2	0.00	0.00	0.00
4,500.0	3.58	228.35	4,494.0	-129.0	-145.0	-123.2	0.00	0.00	0.00
4,600.0	3.58	228.35	4,593.8	-133.1	-149.7	-127.1	0.00	0.00	0.00
4,700.0	3.58	228.35	4,693.6	-137.3	-154.3	-131.1	0.00	0.00	0.00
4,800.0	3.58	228.35	4,793.4	-141.4	-159.0	-135.1	0.00	0.00	0.00
4,900.0	3.58	228.35	4,893.2	-145.6	-163.6	-139.0	0.00	0.00	0.00
5,000.0	3.58	228.35	4,993.0	-149.7	-168.3	-143.0	0.00	0.00	0.00
5,100.0	3.58	228.35	5,092.8	-153.8	-173.0	-146.9	0.00	0.00	0.00
5,200.0	3.58	228.35	5,192.6	-158.0	-177.6	-150.9	0.00	0.00	0.00



Planning Report

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 Project: Eddy County, NM (NAD 83 NME)
 Site: Golden Graham 1 State Com
 Well: #723H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #723H
 TVD Reference: KB = 25 @ 3000.0usft
 MD Reference: KB = 25 @ 3000.0usft
 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)
5,300.0	3.58	228.35	5,292.4	-162.1	-182.3	-154.9	0.00	0.00	0.00
5,400.0	3.58	228.35	5,392.2	-166.3	-186.9	-158.8	0.00	0.00	0.00
5,500.0	3.58	228.35	5,492.1	-170.4	-191.6	-162.8	0.00	0.00	0.00
5,600.0	3.58	228.35	5,591.9	-174.6	-196.3	-166.7	0.00	0.00	0.00
5,700.0	3.58	228.35	5,691.7	-178.7	-200.9	-170.7	0.00	0.00	0.00
5,800.0	3.58	228.35	5,791.5	-182.9	-205.6	-174.7	0.00	0.00	0.00
5,900.0	3.58	228.35	5,891.3	-187.0	-210.3	-178.6	0.00	0.00	0.00
6,000.0	3.58	228.35	5,991.1	-191.2	-214.9	-182.6	0.00	0.00	0.00
6,100.0	3.58	228.35	6,090.9	-195.3	-219.6	-186.5	0.00	0.00	0.00
6,200.0	3.58	228.35	6,190.7	-199.5	-224.2	-190.5	0.00	0.00	0.00
6,300.0	3.58	228.35	6,290.5	-203.6	-228.9	-194.5	0.00	0.00	0.00
6,400.0	3.58	228.35	6,390.3	-207.7	-233.6	-198.4	0.00	0.00	0.00
6,500.0	3.58	228.35	6,490.1	-211.9	-238.2	-202.4	0.00	0.00	0.00
6,600.0	3.58	228.35	6,589.9	-216.0	-242.9	-206.3	0.00	0.00	0.00
6,700.0	3.58	228.35	6,689.7	-220.2	-247.5	-210.3	0.00	0.00	0.00
6,800.0	3.58	228.35	6,789.5	-224.3	-252.2	-214.3	0.00	0.00	0.00
6,900.0	3.58	228.35	6,889.3	-228.5	-256.9	-218.2	0.00	0.00	0.00
7,000.0	3.58	228.35	6,989.1	-232.6	-261.5	-222.2	0.00	0.00	0.00
7,100.0	3.58	228.35	7,088.9	-236.8	-266.2	-226.1	0.00	0.00	0.00
7,200.0	3.58	228.35	7,188.7	-240.9	-270.9	-230.1	0.00	0.00	0.00
7,300.0	3.58	228.35	7,288.5	-245.1	-275.5	-234.1	0.00	0.00	0.00
7,400.0	3.58	228.35	7,388.4	-249.2	-280.2	-238.0	0.00	0.00	0.00
7,500.0	3.58	228.35	7,488.2	-253.4	-284.8	-242.0	0.00	0.00	0.00
7,600.0	3.58	228.35	7,588.0	-257.5	-289.5	-245.9	0.00	0.00	0.00
7,700.0	3.58	228.35	7,687.8	-261.7	-294.2	-249.9	0.00	0.00	0.00
7,800.0	3.58	228.35	7,787.6	-265.8	-298.8	-253.9	0.00	0.00	0.00
7,900.0	3.58	228.35	7,887.4	-269.9	-303.5	-257.8	0.00	0.00	0.00
8,000.0	3.58	228.35	7,987.2	-274.1	-308.1	-261.8	0.00	0.00	0.00
8,100.0	3.58	228.35	8,087.0	-278.2	-312.8	-265.7	0.00	0.00	0.00
8,200.0	3.58	228.35	8,186.8	-282.4	-317.5	-269.7	0.00	0.00	0.00
8,300.0	3.58	228.35	8,286.6	-286.5	-322.1	-273.7	0.00	0.00	0.00
8,400.0	3.58	228.35	8,386.4	-290.7	-326.8	-277.6	0.00	0.00	0.00
8,500.0	3.58	228.35	8,486.2	-294.8	-331.4	-281.6	0.00	0.00	0.00
8,600.0	3.58	228.35	8,586.0	-299.0	-336.1	-285.5	0.00	0.00	0.00
8,700.0	3.58	228.35	8,685.8	-303.1	-340.8	-289.5	0.00	0.00	0.00
8,800.0	3.58	228.35	8,785.6	-307.3	-345.4	-293.5	0.00	0.00	0.00
8,900.0	3.58	228.35	8,885.4	-311.4	-350.1	-297.4	0.00	0.00	0.00
9,000.0	3.58	228.35	8,985.2	-315.6	-354.8	-301.4	0.00	0.00	0.00
9,100.0	3.58	228.35	9,085.0	-319.7	-359.4	-305.3	0.00	0.00	0.00
9,200.0	3.58	228.35	9,184.8	-323.8	-364.1	-309.3	0.00	0.00	0.00
9,259.1	3.58	228.35	9,243.8	-326.3	-366.8	-311.6	0.00	0.00	0.00
9,300.0	2.76	228.35	9,284.7	-327.8	-368.5	-313.1	2.00	-2.00	0.00
9,400.0	0.76	228.35	9,384.6	-329.8	-370.8	-315.0	2.00	-2.00	0.00
9,437.9	0.00	0.01	9,422.5	-330.0	-371.0	-315.2	2.00	-2.00	0.00
KOP(GG 1 SC #723H)									
9,450.0	1.45	359.87	9,434.6	-329.8	-371.0	-315.0	12.00	12.00	0.00
9,475.0	4.45	359.87	9,459.6	-328.6	-371.0	-313.7	12.00	12.00	0.00
9,500.0	7.45	359.87	9,484.4	-326.0	-371.0	-311.2	12.00	12.00	0.00
9,525.0	10.45	359.87	9,509.1	-322.1	-371.0	-307.3	12.00	12.00	0.00
9,550.0	13.45	359.87	9,533.6	-316.9	-371.0	-302.1	12.00	12.00	0.00
9,575.0	16.45	359.87	9,557.7	-310.4	-371.0	-295.7	12.00	12.00	0.00
9,600.0	19.45	359.87	9,581.5	-302.7	-371.1	-288.0	12.00	12.00	0.00
9,625.0	22.45	359.87	9,604.9	-293.8	-371.1	-279.0	12.00	12.00	0.00



Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Eddy County, NM (NAD 83 NME)
 Site: Golden Graham 1 State Com
 Well: #723H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #723H
 TVD Reference: KB = 25 @ 3000.0usft
 MD Reference: KB = 25 @ 3000.0usft
 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)
9,650.0	25.45	359.87	9,627.7	-283.7	-371.1	-268.9	12.00	12.00	0.00
9,675.0	28.45	359.87	9,650.0	-272.3	-371.1	-257.6	12.00	12.00	0.00
9,700.0	31.45	359.87	9,671.6	-259.8	-371.2	-245.1	12.00	12.00	0.00
9,725.0	34.45	359.87	9,692.6	-246.2	-371.2	-231.5	12.00	12.00	0.00
9,750.0	37.45	359.87	9,712.9	-231.6	-371.2	-216.8	12.00	12.00	0.00
9,775.0	40.45	359.87	9,732.3	-215.9	-371.3	-201.1	12.00	12.00	0.00
9,800.0	43.45	359.87	9,750.9	-199.1	-371.3	-184.4	12.00	12.00	0.00
9,825.0	46.45	359.87	9,768.6	-181.5	-371.3	-166.8	12.00	12.00	0.00
9,850.0	49.45	359.87	9,785.3	-162.9	-371.4	-148.2	12.00	12.00	0.00
9,875.0	52.45	359.87	9,801.1	-143.5	-371.4	-128.8	12.00	12.00	0.00
9,900.0	55.45	359.87	9,815.8	-123.3	-371.5	-108.6	12.00	12.00	0.00
9,925.0	58.45	359.87	9,829.4	-102.3	-371.5	-87.7	12.00	12.00	0.00
9,950.0	61.45	359.87	9,841.9	-80.7	-371.6	-66.1	12.00	12.00	0.00
9,975.0	64.45	359.87	9,853.3	-58.4	-371.6	-43.8	12.00	12.00	0.00
9,998.1	67.22	359.87	9,862.7	-37.4	-371.7	-22.8	12.00	12.00	0.00
FTP(GG 1 SC #723H)									
10,000.0	67.45	359.87	9,863.5	-35.6	-371.7	-21.0	12.00	12.00	0.00
10,025.0	70.45	359.87	9,872.4	-12.3	-371.7	2.3	12.00	12.00	0.00
10,050.0	73.45	359.87	9,880.2	11.5	-371.8	26.1	12.00	12.00	0.00
10,075.0	76.45	359.87	9,886.7	35.6	-371.8	50.2	12.00	12.00	0.00
10,100.0	79.45	359.87	9,891.9	60.1	-371.9	74.6	12.00	12.00	0.00
10,125.0	82.45	359.87	9,895.8	84.8	-372.0	99.3	12.00	12.00	0.00
10,150.0	85.45	359.87	9,898.5	109.6	-372.0	124.1	12.00	12.00	0.00
10,175.0	88.45	359.87	9,899.8	134.6	-372.1	149.1	12.00	12.00	0.00
10,187.9	90.00	359.87	9,900.0	147.5	-372.1	161.9	12.00	12.00	0.00
10,200.0	90.00	359.87	9,900.0	159.6	-372.1	174.1	0.00	0.00	0.00
10,300.0	90.00	359.87	9,900.0	259.6	-372.4	274.0	0.00	0.00	0.00
10,400.0	90.00	359.87	9,900.0	359.6	-372.6	373.9	0.00	0.00	0.00
10,500.0	90.00	359.87	9,900.0	459.6	-372.8	473.8	0.00	0.00	0.00
10,600.0	90.00	359.87	9,900.0	559.6	-373.1	573.8	0.00	0.00	0.00
10,700.0	90.00	359.87	9,900.0	659.6	-373.3	673.7	0.00	0.00	0.00
10,800.0	90.00	359.87	9,900.0	759.6	-373.5	773.6	0.00	0.00	0.00
10,900.0	90.00	359.87	9,900.0	859.6	-373.7	873.6	0.00	0.00	0.00
11,000.0	90.00	359.87	9,900.0	959.6	-374.0	973.5	0.00	0.00	0.00
11,100.0	90.00	359.87	9,900.0	1,059.6	-374.2	1,073.4	0.00	0.00	0.00
11,200.0	90.00	359.87	9,900.0	1,159.6	-374.4	1,173.4	0.00	0.00	0.00
11,300.0	90.00	359.87	9,900.0	1,259.6	-374.7	1,273.3	0.00	0.00	0.00
11,400.0	90.00	359.87	9,900.0	1,359.6	-374.9	1,373.2	0.00	0.00	0.00
11,500.0	90.00	359.87	9,900.0	1,459.6	-375.1	1,473.2	0.00	0.00	0.00
11,600.0	90.00	359.87	9,900.0	1,559.6	-375.4	1,573.1	0.00	0.00	0.00
11,700.0	90.00	359.87	9,900.0	1,659.6	-375.6	1,673.0	0.00	0.00	0.00
11,800.0	90.00	359.87	9,900.0	1,759.6	-375.8	1,773.0	0.00	0.00	0.00
11,900.0	90.00	359.87	9,900.0	1,859.6	-376.1	1,872.9	0.00	0.00	0.00
12,000.0	90.00	359.87	9,900.0	1,959.6	-376.3	1,972.8	0.00	0.00	0.00
12,100.0	90.00	359.87	9,900.0	2,059.6	-376.5	2,072.8	0.00	0.00	0.00
12,200.0	90.00	359.87	9,900.0	2,159.6	-376.8	2,172.7	0.00	0.00	0.00
12,300.0	90.00	359.87	9,900.0	2,259.6	-377.0	2,272.6	0.00	0.00	0.00
12,400.0	90.00	359.87	9,900.0	2,359.6	-377.2	2,372.6	0.00	0.00	0.00
12,500.0	90.00	359.87	9,900.0	2,459.6	-377.4	2,472.5	0.00	0.00	0.00
12,600.0	90.00	359.87	9,900.0	2,559.6	-377.7	2,572.4	0.00	0.00	0.00
12,700.0	90.00	359.87	9,900.0	2,659.6	-377.9	2,672.3	0.00	0.00	0.00
12,800.0	90.00	359.87	9,900.0	2,759.6	-378.1	2,772.3	0.00	0.00	0.00
12,900.0	90.00	359.87	9,900.0	2,859.6	-378.4	2,872.2	0.00	0.00	0.00
13,000.0	90.00	359.87	9,900.0	2,959.6	-378.6	2,972.1	0.00	0.00	0.00



Planning Report

Database: EDM 5000.14
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 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)
13,100.0	90.00	359.87	9,900.0	3,059.6	-378.8	3,072.1	0.00	0.00	0.00
13,200.0	90.00	359.87	9,900.0	3,159.6	-379.1	3,172.0	0.00	0.00	0.00
13,300.0	90.00	359.87	9,900.0	3,259.6	-379.3	3,271.9	0.00	0.00	0.00
13,400.0	90.00	359.87	9,900.0	3,359.6	-379.5	3,371.9	0.00	0.00	0.00
13,500.0	90.00	359.87	9,900.0	3,459.6	-379.8	3,471.8	0.00	0.00	0.00
13,600.0	90.00	359.87	9,900.0	3,559.6	-380.0	3,571.7	0.00	0.00	0.00
13,700.0	90.00	359.87	9,900.0	3,659.6	-380.2	3,671.7	0.00	0.00	0.00
13,800.0	90.00	359.87	9,900.0	3,759.6	-380.4	3,771.6	0.00	0.00	0.00
13,900.0	90.00	359.87	9,900.0	3,859.6	-380.7	3,871.5	0.00	0.00	0.00
14,000.0	90.00	359.87	9,900.0	3,959.6	-380.9	3,971.5	0.00	0.00	0.00
14,100.0	90.00	359.87	9,900.0	4,059.6	-381.1	4,071.4	0.00	0.00	0.00
14,200.0	90.00	359.87	9,900.0	4,159.6	-381.4	4,171.3	0.00	0.00	0.00
14,300.0	90.00	359.87	9,900.0	4,259.6	-381.6	4,271.3	0.00	0.00	0.00
14,400.0	90.00	359.87	9,900.0	4,359.6	-381.8	4,371.2	0.00	0.00	0.00
14,500.0	90.00	359.87	9,900.0	4,459.6	-382.1	4,471.1	0.00	0.00	0.00
14,600.0	90.00	359.87	9,900.0	4,559.6	-382.3	4,571.1	0.00	0.00	0.00
14,700.0	90.00	359.87	9,900.0	4,659.6	-382.5	4,671.0	0.00	0.00	0.00
14,800.0	90.00	359.87	9,900.0	4,759.6	-382.8	4,770.9	0.00	0.00	0.00
14,900.0	90.00	359.87	9,900.0	4,859.6	-383.0	4,870.8	0.00	0.00	0.00
15,000.0	90.00	359.87	9,900.0	4,959.6	-383.2	4,970.8	0.00	0.00	0.00
15,100.0	90.00	359.87	9,900.0	5,059.6	-383.4	5,070.7	0.00	0.00	0.00
15,200.0	90.00	359.87	9,900.0	5,159.6	-383.7	5,170.6	0.00	0.00	0.00
15,300.0	90.00	359.87	9,900.0	5,259.6	-383.9	5,270.6	0.00	0.00	0.00
15,400.0	90.00	359.87	9,900.0	5,359.6	-384.1	5,370.5	0.00	0.00	0.00
15,500.0	90.00	359.87	9,900.0	5,459.6	-384.4	5,470.4	0.00	0.00	0.00
15,600.0	90.00	359.87	9,900.0	5,559.6	-384.6	5,570.4	0.00	0.00	0.00
15,700.0	90.00	359.87	9,900.0	5,659.6	-384.8	5,670.3	0.00	0.00	0.00
15,800.0	90.00	359.87	9,900.0	5,759.6	-385.1	5,770.2	0.00	0.00	0.00
15,900.0	90.00	359.87	9,900.0	5,859.6	-385.3	5,870.2	0.00	0.00	0.00
16,000.0	90.00	359.87	9,900.0	5,959.6	-385.5	5,970.1	0.00	0.00	0.00
16,100.0	90.00	359.87	9,900.0	6,059.6	-385.8	6,070.0	0.00	0.00	0.00
16,200.0	90.00	359.87	9,900.0	6,159.6	-386.0	6,170.0	0.00	0.00	0.00
16,300.0	90.00	359.87	9,900.0	6,259.6	-386.2	6,269.9	0.00	0.00	0.00
16,400.0	90.00	359.87	9,900.0	6,359.6	-386.5	6,369.8	0.00	0.00	0.00
16,500.0	90.00	359.87	9,900.0	6,459.6	-386.7	6,469.8	0.00	0.00	0.00
16,600.0	90.00	359.87	9,900.0	6,559.6	-386.9	6,569.7	0.00	0.00	0.00
16,700.0	90.00	359.87	9,900.0	6,659.6	-387.1	6,669.6	0.00	0.00	0.00
16,800.0	90.00	359.87	9,900.0	6,759.6	-387.4	6,769.6	0.00	0.00	0.00
16,900.0	90.00	359.87	9,900.0	6,859.6	-387.6	6,869.5	0.00	0.00	0.00
17,000.0	90.00	359.87	9,900.0	6,959.6	-387.8	6,969.4	0.00	0.00	0.00
17,100.0	90.00	359.87	9,900.0	7,059.6	-388.1	7,069.3	0.00	0.00	0.00
17,200.0	90.00	359.87	9,900.0	7,159.6	-388.3	7,169.3	0.00	0.00	0.00
17,300.0	90.00	359.87	9,900.0	7,259.6	-388.5	7,269.2	0.00	0.00	0.00
17,400.0	90.00	359.87	9,900.0	7,359.6	-388.8	7,369.1	0.00	0.00	0.00
17,500.0	90.00	359.87	9,900.0	7,459.6	-389.0	7,469.1	0.00	0.00	0.00
17,600.0	90.00	359.87	9,900.0	7,559.6	-389.2	7,569.0	0.00	0.00	0.00
17,700.0	90.00	359.87	9,900.0	7,659.6	-389.5	7,668.9	0.00	0.00	0.00
17,800.0	90.00	359.87	9,900.0	7,759.6	-389.7	7,768.9	0.00	0.00	0.00
17,900.0	90.00	359.87	9,900.0	7,859.6	-389.9	7,868.8	0.00	0.00	0.00
18,000.0	90.00	359.87	9,900.0	7,959.6	-390.1	7,968.7	0.00	0.00	0.00
18,100.0	90.00	359.87	9,900.0	8,059.6	-390.4	8,068.7	0.00	0.00	0.00
18,200.0	90.00	359.87	9,900.0	8,159.6	-390.6	8,168.6	0.00	0.00	0.00
18,300.0	90.00	359.87	9,900.0	8,259.6	-390.8	8,268.5	0.00	0.00	0.00
18,400.0	90.00	359.87	9,900.0	8,359.6	-391.1	8,368.5	0.00	0.00	0.00

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MD Reference: KB = 25 @ 3000.0usft.
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)
18,500.0	90.00	359.87	9,900.0	8,459.6	-391.3	8,468.4	0.00	0.00	0.00
18,600.0	90.00	359.87	9,900.0	8,559.6	-391.5	8,568.3	0.00	0.00	0.00
18,700.0	90.00	359.87	9,900.0	8,659.6	-391.8	8,668.3	0.00	0.00	0.00
18,800.0	90.00	359.87	9,900.0	8,759.6	-392.0	8,768.2	0.00	0.00	0.00
18,900.0	90.00	359.87	9,900.0	8,859.6	-392.2	8,868.1	0.00	0.00	0.00
19,000.0	90.00	359.87	9,900.0	8,959.6	-392.5	8,968.1	0.00	0.00	0.00
19,100.0	90.00	359.87	9,900.0	9,059.6	-392.7	9,068.0	0.00	0.00	0.00
19,200.0	90.00	359.87	9,900.0	9,159.6	-392.9	9,167.9	0.00	0.00	0.00
19,300.0	90.00	359.87	9,900.0	9,259.6	-393.2	9,267.8	0.00	0.00	0.00
19,400.0	90.00	359.87	9,900.0	9,359.6	-393.4	9,367.8	0.00	0.00	0.00
19,500.0	90.00	359.87	9,900.0	9,459.6	-393.6	9,467.7	0.00	0.00	0.00
19,600.0	90.00	359.87	9,900.0	9,559.6	-393.8	9,567.6	0.00	0.00	0.00
19,700.0	90.00	359.87	9,900.0	9,659.6	-394.1	9,667.6	0.00	0.00	0.00
19,800.0	90.00	359.87	9,900.0	9,759.6	-394.3	9,767.5	0.00	0.00	0.00
19,900.0	90.00	359.87	9,900.0	9,859.6	-394.5	9,867.4	0.00	0.00	0.00
20,000.0	90.00	359.87	9,900.0	9,959.6	-394.8	9,967.4	0.00	0.00	0.00
20,100.4	90.00	359.87	9,900.0	10,060.0	-395.0	10,067.8	0.00	0.00	0.00

PBHL(GG 1 SC #723H)

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target - Shape KOP(GG 1 SC #723H) - plan hits target center - Point	0.00	0.01	9,422.5	-330.0	-371.0	387,323.00	632,241.00	32° 3' 52.168-N	104° 2' 23.568 W
FTP(GG 1 SC #723H) - plan misses target center by 40.8usft at 9998.1usft MD (9862.7 TVD, -37.4 N, -371.7 E) - Point	0.00	0.01	9,900.0	-54.0	-371.0	387,599.00	632,241.00	32° 3' 54.899 N	104° 2' 23.559 W
PBHL(GG 1 SC #723H) - plan hits target center - Point	0.00	0.00	9,900.0	10,060.0	-395.0	397,713.00	632,217.00	32° 5' 34.989 N	104° 2' 23.518 W