

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-015-45324
5. Indicate Type of Lease STATE ☒ FEE ☐
6. State Oil & Gas Lease No. VB-0693, VB-0815, VB-0807
7. Lease Name or Unit Agreement Name Golden Graham 1 State Com
8. Well Number 721H
9. OGRID Number 7377
10. Pool name or Wildcat 98220 Purple Sage; Wolfcamp (Gas)

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well ☐ Gas Well ☒ Other ☐	
2. Name of Operator EOG Resources, Inc.	
3. Address of Operator P.O. Box 2267 Midland, Texas 79702	
4. Well Location Unit Letter <u>M</u> : <u>221'</u> feet from the SOUTH <u>732'</u> feet from the WEST <u>7377</u> line Section <u>1</u> Township <u>26S</u> Range <u>28E</u> NMPM <u>Eddy</u> County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 2940'	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL. ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: <u>AMEND APD</u> ☒		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

EOG Resources, Inc. respectfully requests to amend Permit 258488 for the Golden Graham 1 State Com 721H to change the bottom hole location of the proposed well. Attached please find the following revised forms:

- 1) C-102 form
- 2) Additional Points form
- 3) Casing/cement/mud program
- 4) Proposed Wellbore Diagram
- 5) Proposed Directional Plot
- 6) Proposed Directional Survey

Spud Date: Estimated 11/1/18

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Sarah Mitchell TITLE Regulatory Contractor DATE 10/22/18

Type or print name Sarah Mitchell E-mail address: sarah_mitchell@eogresources.com PHONE: 432-848-9133

For State Use Only

APPROVED BY Raymond W. Godany TITLE Geologist DATE 10-29-18
Conditions of Approval (if any):

Rev 10-28-18

Intent ☒ As Drilled ☐

API #
30-015-45324

Operator Name: EOG Resources, Inc.	Property Name: Golden Graham 1 State Com	Well Number 721H
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Kick Off Point (KOP)

UL M	Section 1	Township 26S	Range 28E	Lot	Feet 63	From N/S SOUTH	Feet 1003	From E/W WEST	County EDDY
Latitude 32.0645492					Longitude -104.0460328			NAD 83	

First Take Point (FTP)

UL M	Section 1	Township 26S	Range 28E	Lot	Feet 330	From N/S South	Feet 1003	From E/W West	County EDDY
Latitude N 32.0652795					Longitude W -104.0460318			NAD 83	

Last Take Point (LTP)

UL D	Section 36	Township 25S	Range 28E	Lot	Feet 330	From N/S North	Feet 1002	From E/W West	County EDDY
Latitude N 32..0930317					Longitude W -104.0458913			NAD 83	

Is this well the defining well for the Horizontal Spacing Unit? ☐ No

Is this well an infill well? ☐ Yes

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

API #
30-015-45322

Operator Name: EOG Resources, Inc.	Property Name: Golden Graham 1 State Com	Well Number 701H
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KZ 06/29/2018

Revised Permit Information 10/19/18:

Well Name: Golden Graham 1 State Com No. 721H

Location:

SHL: 221' FSL & 732' FWL, Section 1, T-26-S, R-28-E, Eddy Co., N.M.

BHL: 230' FNL & 1002' FWL, 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 – 936'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0' – 8,565'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' – 20,044'	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
936'	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
8,565'	300	9.0	3.5	Class C + 5% Gypsum + 3% CaCl ₂ (TOC @ Surface)
	550	14.4	1.20	50:50 Class H:Poz + 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P
20,044'	800	14.2	1.31	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 8,065)

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 936'	Fresh - Gel	8.6-8.8	28-34	N/c
936' – 8,565'	Brine	8.8-10.0	28-34	N/c
8,565' – 9,405'	Oil Base	10.0-11.5	58-68	3 - 6
9,405' – 20,044' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

Design B

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 – 936'	13.375"	54.5#	J-55	STC	1.125	1.25	1.60
12.25"	0-2,530'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0 – 8,565'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0'-20,044'	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
936'	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)
2,530'	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
8,565'	375	10.8	3.67	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 2,030')
	400	14.8	2.38	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800
20,044'	950	14.8	1.31	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 8,065')

Mud Program:

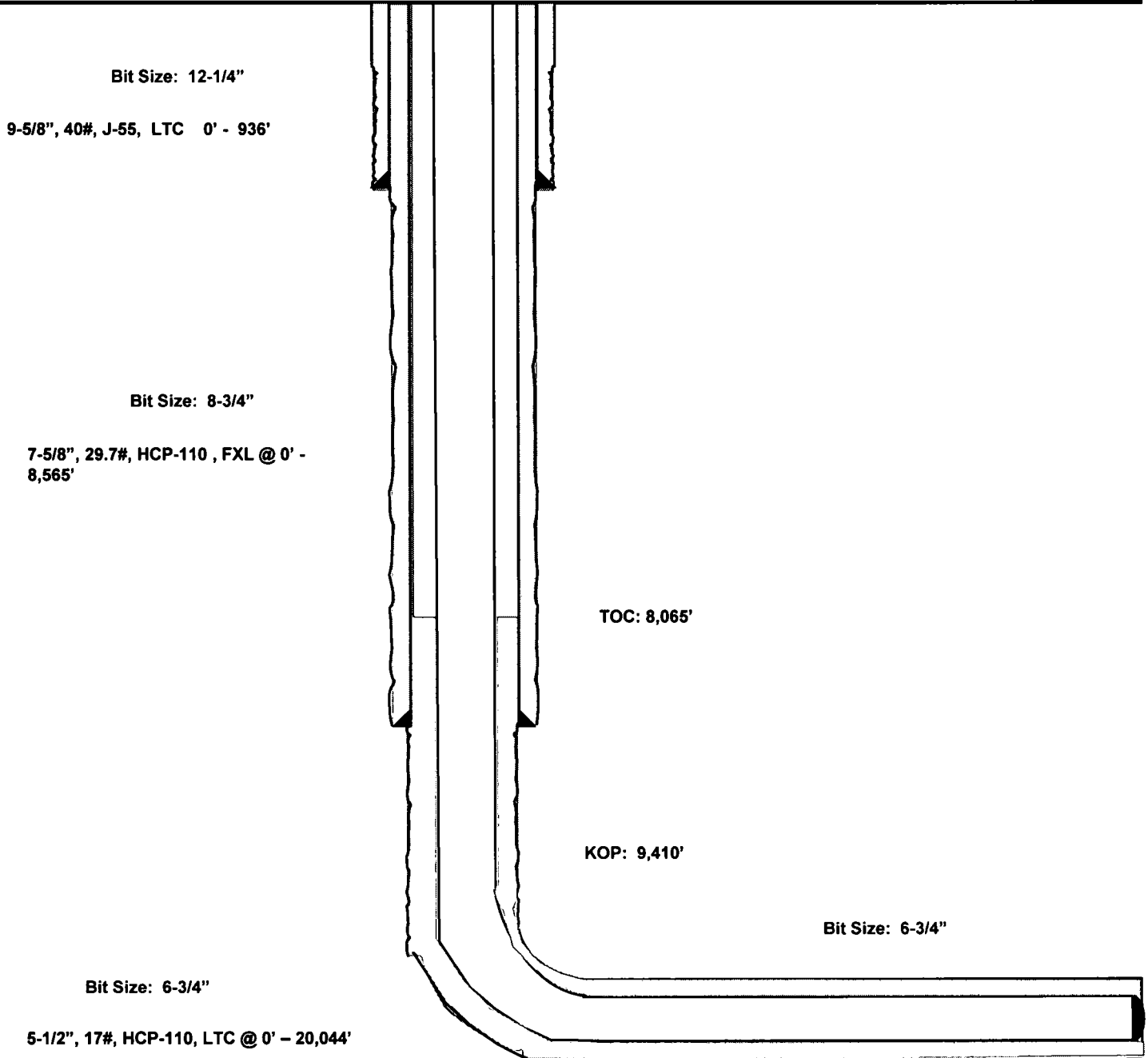
Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 936'	Fresh - Gel	8.6-8.8	28-34	N/c
936' – 2,530'	Brine	10.0-10.2	28-34	N/c
2,530' – 8,565'	Oil Base	8.7-9.4	58-68	N/c - 6
8,565' – 20,044' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

**Golden Graham 1 State Com #721H
Eddy County, New Mexico**

**221' FSL
732' FWL
Section 1
T-26-S, R-28-E**

**Proposed Wellbore Design A
Revised 10/19/18
API: 30-015-45324**

**KB: 2,965'
GL: 2,940'**



Lateral: 20,044' MD, 9,880' TVD

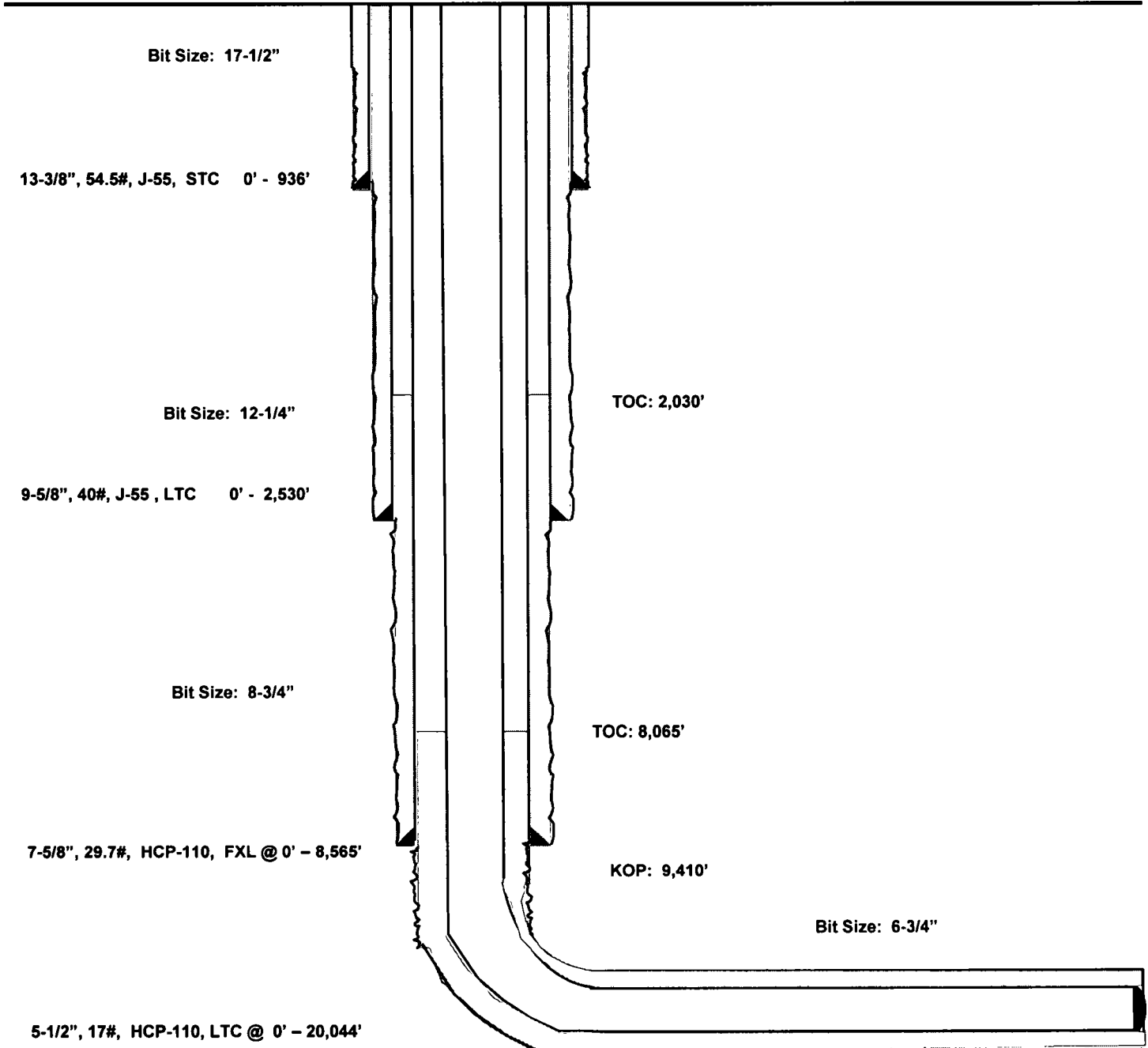
**BH Location: 230' FNL & 1002' FWL
Section 36
T-25-S, R-28-E**

**Golden Graham 1 State Com #721H
Eddy County, New Mexico**

**221' FSL
732' FWL
Section 1
T-26-S, R-28-E**

**Proposed Wellbore Design B
Revised 10/19/18
API: 30-015-45324**

**KB: 2,965'
GL: 2,940'**

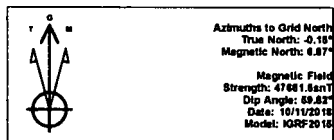


Lateral: 20,044' MD, 9,880' TVD

**BH Location: 230' FNL & 1002' FWL
Section 36
T-25-S, R-28-E**



Eddy County, NM (NAD 83 NME)
Golden Graham 1 State Com #721H
Plan #0.1



To convert a Magnetic Direction to a Grid Direction, Add 6.87°
To convert a Magnetic Direction to a True Direction, Add 1.02° East
To convert a True Direction to a Grid Direction, Subtract 0.15°

PROJECT DETAILS: Eddy County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELL DETAILS: #721H

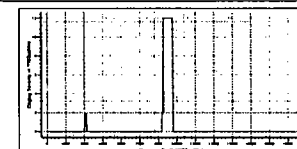
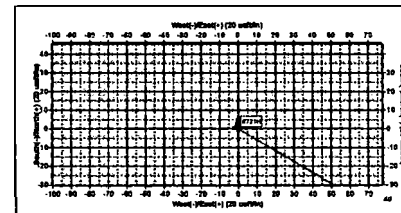
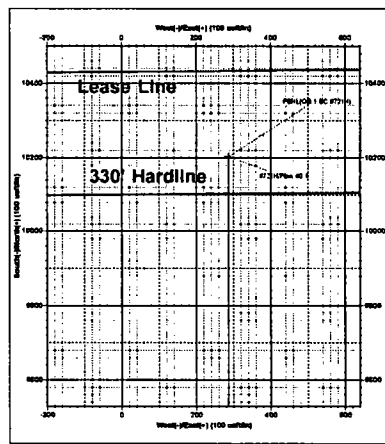
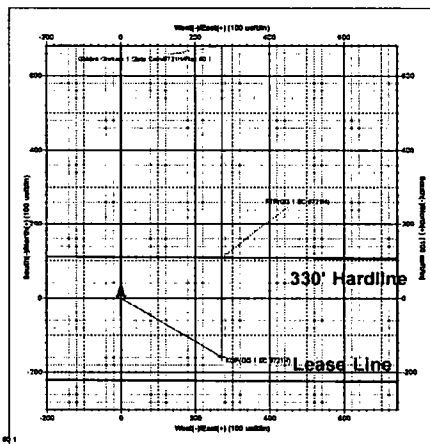
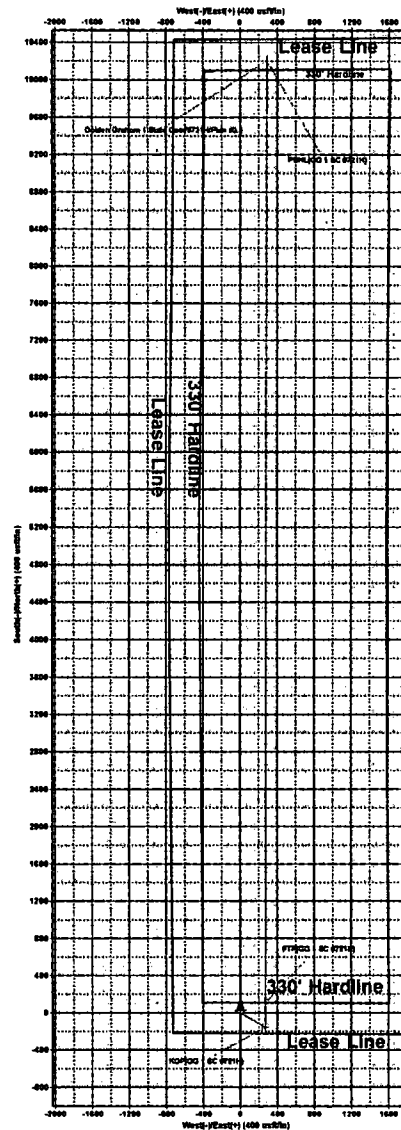
KB = 26 @ 2966.0usft 2940.0
Northing 387487.00 Easting 630064.00 Latitude 31° 3' 53.947 N Longitude 104° 2' 48.982 W

SECTION DETAILS

Sec	MD	Inc	Azl	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3143.5	2.87	120.24	3143.4	-1.8	3.1	2.00	120.24	-1.7	
4	9266.8	2.87	120.24	9259.1	-156.2	267.9	0.00	0.00	-148.6	
5	9410.3	0.00	0.00	9402.5	-158.0	271.0	2.00	180.00	-150.3	KOP(GG 1 SC #721H)
6	10160.3	90.00	0.00	9880.0	319.5	271.7	12.00	0.00	327.0	
7	20043.8	90.00	0.00	9880.0	10203.0	287.0	0.00	0.00	10207.0	PBHL(GG 1 SC #721H)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(GG 1 SC #721H)	9402.5	-158.0	271.0	387338.00	630338.00
FTP(GG 1 SC #721H)	9880.0	108.0	271.0	387608.00	630338.00
PBHL(GG 1 SC #721H)	9880.0	10203.0	287.0	387700.00	630381.00





EOG Resources - Midland

Eddy County, NM (NAD 83 NME)

Golden Graham 1 State Com

#721H

OH

Plan: Plan #0.1

Standard Planning Report

19 October, 2018

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Eddy County, NM (NAD 83 NME)
 Site: Golden Graham 1 State Com
 Well: #721H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #721H
 TVD Reference: KB = 25 @ 2965.0usft
 MD Reference: KB = 25 @ 2965.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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:		Northing:	387,494.00 usft	Latitude:	32° 3' 53.919 N
From:	Map	Easting:	630,031.00 usft	Longitude:	104° 2' 49.246 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.15 °

Well	#721H				
Well Position	+N/-S	3.0 usft	Northing:	387,497.00 usft	Latitude: 32° 3' 53.947 N
	+E/-W	33.0 usft	Easting:	630,064.00 usft	Longitude: 104° 2' 48.862 W
Position Uncertainty	0.0 usft		Wellhead Elevation:		Ground Level: 2,940.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	10/11/2018	7.02	59.82	47,661.45733976

Design	Plan #0.1			
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	1.61

Plan Survey Tool Program	Date	10/19/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	20,043.8 Plan #0.1 (OH)	MWD	
			OWSG MWD - Standard	

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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,143.5	2.87	120.24	3,143.4	-1.8	3.1	2.00	2.00	0.00	120.24	
9,266.8	2.87	120.24	9,259.1	-156.2	267.9	0.00	0.00	0.00	0.00	
9,410.3	0.00	0.00	9,402.5	-158.0	271.0	2.00	-2.00	0.00	180.00	KOP(GG 1 SC #721H
10,160.3	90.00	0.09	9,880.0	319.5	271.7	12.00	12.00	0.01	0.09	
20,043.8	90.00	0.09	9,880.0	10,203.0	287.0	0.00	0.00	0.00	0.00	PBHL(GG 1 SC #721H



Planning Report

Database: EDM 5000.14
 Company: EOG Resources - Midland
 Project: Eddy County, NM (NAD 83 NME)
 Site: Golden Graham 1 State Com
 Well: #721H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #721H
 TVD Reference: KB = 25 @ 2965.0usft
 MD Reference: KB = 25 @ 2965.0usft
 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)
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	2.00	120.24	3,100.0	-0.9	1.5	-0.8	2.00	2.00	0.00
3,143.5	2.87	120.24	3,143.4	-1.8	3.1	-1.7	2.00	2.00	0.00
3,200.0	2.87	120.24	3,199.9	-3.2	5.5	-3.1	0.00	0.00	0.00
3,300.0	2.87	120.24	3,299.7	-5.8	9.9	-5.5	0.00	0.00	0.00
3,400.0	2.87	120.24	3,399.6	-8.3	14.2	-7.9	0.00	0.00	0.00
3,500.0	2.87	120.24	3,499.5	-10.8	18.5	-10.3	0.00	0.00	0.00
3,600.0	2.87	120.24	3,599.4	-13.3	22.8	-12.7	0.00	0.00	0.00
3,700.0	2.87	120.24	3,699.2	-15.8	27.2	-15.1	0.00	0.00	0.00
3,800.0	2.87	120.24	3,799.1	-18.4	31.5	-17.5	0.00	0.00	0.00
3,900.0	2.87	120.24	3,899.0	-20.9	35.8	-19.9	0.00	0.00	0.00
4,000.0	2.87	120.24	3,998.9	-23.4	40.1	-22.3	0.00	0.00	0.00
4,100.0	2.87	120.24	4,098.7	-25.9	44.5	-24.7	0.00	0.00	0.00
4,200.0	2.87	120.24	4,198.6	-28.4	48.8	-27.1	0.00	0.00	0.00
4,300.0	2.87	120.24	4,298.5	-31.0	53.1	-29.5	0.00	0.00	0.00
4,400.0	2.87	120.24	4,398.4	-33.5	57.4	-31.9	0.00	0.00	0.00
4,500.0	2.87	120.24	4,498.2	-36.0	61.8	-34.3	0.00	0.00	0.00
4,600.0	2.87	120.24	4,598.1	-38.5	66.1	-36.7	0.00	0.00	0.00
4,700.0	2.87	120.24	4,698.0	-41.1	70.4	-39.1	0.00	0.00	0.00
4,800.0	2.87	120.24	4,797.9	-43.6	74.7	-41.5	0.00	0.00	0.00
4,900.0	2.87	120.24	4,897.7	-46.1	79.1	-43.9	0.00	0.00	0.00
5,000.0	2.87	120.24	4,997.6	-48.6	83.4	-46.3	0.00	0.00	0.00
5,100.0	2.87	120.24	5,097.5	-51.1	87.7	-48.7	0.00	0.00	0.00
5,200.0	2.87	120.24	5,197.4	-53.7	92.0	-51.0	0.00	0.00	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: #721H
 Wellbore: OH
 Design: Plan #0.1

Local Co-ordinate Reference: Well #721H
 TVD Reference: KB = 25 @ 2965.0usft
 MD Reference: KB = 25 @ 2965.0usft
 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	2.87	120.24	5,297.2	-56.2	96.4	-53.4	0.00	0.00	0.00
5,400.0	2.87	120.24	5,397.1	-58.7	100.7	-55.8	0.00	0.00	0.00
5,500.0	2.87	120.24	5,497.0	-61.2	105.0	-58.2	0.00	0.00	0.00
5,600.0	2.87	120.24	5,596.9	-63.7	109.3	-60.6	0.00	0.00	0.00
5,700.0	2.87	120.24	5,696.7	-66.3	113.7	-63.0	0.00	0.00	0.00
5,800.0	2.87	120.24	5,796.6	-68.8	118.0	-65.4	0.00	0.00	0.00
5,900.0	2.87	120.24	5,896.5	-71.3	122.3	-67.8	0.00	0.00	0.00
6,000.0	2.87	120.24	5,996.4	-73.8	126.6	-70.2	0.00	0.00	0.00
6,100.0	2.87	120.24	6,096.2	-76.3	131.0	-72.6	0.00	0.00	0.00
6,200.0	2.87	120.24	6,196.1	-78.9	135.3	-75.0	0.00	0.00	0.00
6,300.0	2.87	120.24	6,296.0	-81.4	139.6	-77.4	0.00	0.00	0.00
6,400.0	2.87	120.24	6,395.9	-83.9	143.9	-79.8	0.00	0.00	0.00
6,500.0	2.87	120.24	6,495.7	-86.4	148.3	-82.2	0.00	0.00	0.00
6,600.0	2.87	120.24	6,595.6	-89.0	152.6	-84.6	0.00	0.00	0.00
6,700.0	2.87	120.24	6,695.5	-91.5	156.9	-87.0	0.00	0.00	0.00
6,800.0	2.87	120.24	6,795.4	-94.0	161.2	-89.4	0.00	0.00	0.00
6,900.0	2.87	120.24	6,895.2	-96.5	165.5	-91.8	0.00	0.00	0.00
7,000.0	2.87	120.24	6,995.1	-99.0	169.9	-94.2	0.00	0.00	0.00
7,100.0	2.87	120.24	7,095.0	-101.6	174.2	-96.6	0.00	0.00	0.00
7,200.0	2.87	120.24	7,194.9	-104.1	178.5	-99.0	0.00	0.00	0.00
7,300.0	2.87	120.24	7,294.7	-106.6	182.8	-101.4	0.00	0.00	0.00
7,400.0	2.87	120.24	7,394.6	-109.1	187.2	-103.8	0.00	0.00	0.00
7,500.0	2.87	120.24	7,494.5	-111.6	191.5	-106.2	0.00	0.00	0.00
7,600.0	2.87	120.24	7,594.4	-114.2	195.8	-108.6	0.00	0.00	0.00
7,700.0	2.87	120.24	7,694.2	-116.7	200.1	-111.0	0.00	0.00	0.00
7,800.0	2.87	120.24	7,794.1	-119.2	204.5	-113.4	0.00	0.00	0.00
7,900.0	2.87	120.24	7,894.0	-121.7	208.8	-115.8	0.00	0.00	0.00
8,000.0	2.87	120.24	7,993.9	-124.3	213.1	-118.2	0.00	0.00	0.00
8,100.0	2.87	120.24	8,093.7	-126.8	217.4	-120.6	0.00	0.00	0.00
8,200.0	2.87	120.24	8,193.6	-129.3	221.8	-123.0	0.00	0.00	0.00
8,300.0	2.87	120.24	8,293.5	-131.8	226.1	-125.4	0.00	0.00	0.00
8,400.0	2.87	120.24	8,393.4	-134.3	230.4	-127.8	0.00	0.00	0.00
8,500.0	2.87	120.24	8,493.2	-136.9	234.7	-130.2	0.00	0.00	0.00
8,600.0	2.87	120.24	8,593.1	-139.4	239.1	-132.6	0.00	0.00	0.00
8,700.0	2.87	120.24	8,693.0	-141.9	243.4	-135.0	0.00	0.00	0.00
8,800.0	2.87	120.24	8,792.8	-144.4	247.7	-137.4	0.00	0.00	0.00
8,900.0	2.87	120.24	8,892.7	-146.9	252.0	-139.8	0.00	0.00	0.00
9,000.0	2.87	120.24	8,992.6	-149.5	256.4	-142.2	0.00	0.00	0.00
9,100.0	2.87	120.24	9,092.5	-152.0	260.7	-144.6	0.00	0.00	0.00
9,200.0	2.87	120.24	9,192.3	-154.5	265.0	-147.0	0.00	0.00	0.00
9,266.8	2.87	120.24	9,259.1	-156.2	267.9	-148.6	0.00	0.00	0.00
9,300.0	2.21	120.24	9,292.2	-156.9	269.2	-149.3	2.00	-2.00	0.00
9,400.0	0.21	120.24	9,392.2	-158.0	271.0	-150.3	2.00	-2.00	0.00
9,410.3	0.00	0.00	9,402.5	-158.0	271.0	-150.3	2.00	-2.00	0.00
KOP(GG 1 SC #721H)									
9,425.0	1.76	0.09	9,417.2	-157.8	271.0	-150.1	12.00	12.00	0.00
9,450.0	4.76	0.09	9,442.2	-156.4	271.0	-148.7	12.00	12.00	0.00
9,475.0	7.76	0.09	9,467.0	-153.6	271.0	-145.9	12.00	12.00	0.00
9,500.0	10.76	0.09	9,491.7	-149.6	271.0	-141.9	12.00	12.00	0.00
9,525.0	13.76	0.09	9,516.1	-144.3	271.0	-136.6	12.00	12.00	0.00
9,550.0	16.76	0.09	9,540.2	-137.7	271.0	-130.0	12.00	12.00	0.00
9,575.0	19.76	0.09	9,564.0	-129.9	271.0	-122.2	12.00	12.00	0.00
9,600.0	22.76	0.09	9,587.3	-120.8	271.1	-113.1	12.00	12.00	0.00

Database: EDM 5000.14
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 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)
9,625.0	25.76	0.09	9,610.0	-110.5	271.1	-102.9	12.00	12.00	0.00
9,650.0	28.76	0.09	9,632.3	-99.1	271.1	-91.4	12.00	12.00	0.00
9,675.0	31.76	0.09	9,653.9	-86.5	271.1	-78.8	12.00	12.00	0.00
9,700.0	34.76	0.09	9,674.8	-72.8	271.1	-65.1	12.00	12.00	0.00
9,725.0	37.76	0.09	9,694.9	-58.0	271.2	-50.3	12.00	12.00	0.00
9,750.0	40.76	0.09	9,714.3	-42.2	271.2	-34.5	12.00	12.00	0.00
9,775.0	43.76	0.09	9,732.8	-25.4	271.2	-17.7	12.00	12.00	0.00
9,800.0	46.76	0.09	9,750.4	-7.6	271.2	0.0	12.00	12.00	0.00
9,825.0	49.76	0.09	9,767.0	11.1	271.3	18.7	12.00	12.00	0.00
9,850.0	52.76	0.09	9,782.6	30.6	271.3	38.2	12.00	12.00	0.00
9,875.0	55.76	0.09	9,797.2	50.8	271.3	58.5	12.00	12.00	0.00
9,900.0	58.76	0.09	9,810.8	71.9	271.4	79.5	12.00	12.00	0.00
9,925.0	61.76	0.09	9,823.2	93.6	271.4	101.2	12.00	12.00	0.00
9,950.0	64.76	0.09	9,834.4	115.9	271.4	123.5	12.00	12.00	0.00
9,961.1	66.10	0.09	9,839.0	126.0	271.4	133.6	12.00	12.00	0.00
FTP(GG 1 SC #721H)									
9,975.0	67.76	0.09	9,844.5	138.8	271.5	146.4	12.00	12.00	0.00
10,000.0	70.76	0.09	9,853.3	162.2	271.5	169.7	12.00	12.00	0.00
10,025.0	73.76	0.09	9,860.9	186.0	271.5	193.5	12.00	12.00	0.00
10,050.0	76.76	0.09	9,867.3	210.1	271.6	217.7	12.00	12.00	0.00
10,075.0	79.76	0.09	9,872.4	234.6	271.6	242.2	12.00	12.00	0.00
10,100.0	82.76	0.09	9,876.2	259.3	271.6	266.9	12.00	12.00	0.00
10,125.0	85.76	0.09	9,878.7	284.2	271.7	291.7	12.00	12.00	0.00
10,150.0	88.76	0.09	9,879.9	309.2	271.7	316.7	12.00	12.00	0.00
10,160.3	90.00	0.09	9,880.0	319.5	271.7	327.0	12.00	12.00	0.00
10,200.0	90.00	0.09	9,880.0	359.2	271.8	366.7	0.00	0.00	0.00
10,300.0	90.00	0.09	9,880.0	459.2	272.0	466.6	0.00	0.00	0.00
10,400.0	90.00	0.09	9,880.0	559.2	272.1	566.6	0.00	0.00	0.00
10,500.0	90.00	0.09	9,880.0	659.2	272.3	666.6	0.00	0.00	0.00
10,600.0	90.00	0.09	9,880.0	759.2	272.4	766.5	0.00	0.00	0.00
10,700.0	90.00	0.09	9,880.0	859.2	272.6	866.5	0.00	0.00	0.00
10,800.0	90.00	0.09	9,880.0	959.2	272.7	966.5	0.00	0.00	0.00
10,900.0	90.00	0.09	9,880.0	1,059.2	272.9	1,066.4	0.00	0.00	0.00
11,000.0	90.00	0.09	9,880.0	1,159.2	273.0	1,166.4	0.00	0.00	0.00
11,100.0	90.00	0.09	9,880.0	1,259.2	273.2	1,266.4	0.00	0.00	0.00
11,200.0	90.00	0.09	9,880.0	1,359.2	273.3	1,366.3	0.00	0.00	0.00
11,300.0	90.00	0.09	9,880.0	1,459.2	273.5	1,466.3	0.00	0.00	0.00
11,400.0	90.00	0.09	9,880.0	1,559.2	273.7	1,566.2	0.00	0.00	0.00
11,500.0	90.00	0.09	9,880.0	1,659.2	273.8	1,666.2	0.00	0.00	0.00
11,600.0	90.00	0.09	9,880.0	1,759.2	274.0	1,766.2	0.00	0.00	0.00
11,700.0	90.00	0.09	9,880.0	1,859.2	274.1	1,866.1	0.00	0.00	0.00
11,800.0	90.00	0.09	9,880.0	1,959.2	274.3	1,966.1	0.00	0.00	0.00
11,900.0	90.00	0.09	9,880.0	2,059.2	274.4	2,066.1	0.00	0.00	0.00
12,000.0	90.00	0.09	9,880.0	2,159.2	274.6	2,166.0	0.00	0.00	0.00
12,100.0	90.00	0.09	9,880.0	2,259.2	274.7	2,266.0	0.00	0.00	0.00
12,200.0	90.00	0.09	9,880.0	2,359.2	274.9	2,366.0	0.00	0.00	0.00
12,300.0	90.00	0.09	9,880.0	2,459.2	275.0	2,465.9	0.00	0.00	0.00
12,400.0	90.00	0.09	9,880.0	2,559.2	275.2	2,565.9	0.00	0.00	0.00
12,500.0	90.00	0.09	9,880.0	2,659.2	275.4	2,665.9	0.00	0.00	0.00
12,600.0	90.00	0.09	9,880.0	2,759.2	275.5	2,765.8	0.00	0.00	0.00
12,700.0	90.00	0.09	9,880.0	2,859.2	275.7	2,865.8	0.00	0.00	0.00
12,800.0	90.00	0.09	9,880.0	2,959.2	275.8	2,965.8	0.00	0.00	0.00
12,900.0	90.00	0.09	9,880.0	3,059.2	276.0	3,065.7	0.00	0.00	0.00
13,000.0	90.00	0.09	9,880.0	3,159.2	276.1	3,165.7	0.00	0.00	0.00



Planning Report

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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	0.09	9,880.0	3,259.2	276.3	3,265.6	0.00	0.00	0.00
13,200.0	90.00	0.09	9,880.0	3,359.2	276.4	3,365.6	0.00	0.00	0.00
13,300.0	90.00	0.09	9,880.0	3,459.2	276.6	3,465.6	0.00	0.00	0.00
13,400.0	90.00	0.09	9,880.0	3,559.2	276.7	3,565.5	0.00	0.00	0.00
13,500.0	90.00	0.09	9,880.0	3,659.2	276.9	3,665.5	0.00	0.00	0.00
13,600.0	90.00	0.09	9,880.0	3,759.2	277.0	3,765.5	0.00	0.00	0.00
13,700.0	90.00	0.09	9,880.0	3,859.2	277.2	3,865.4	0.00	0.00	0.00
13,800.0	90.00	0.09	9,880.0	3,959.2	277.4	3,965.4	0.00	0.00	0.00
13,900.0	90.00	0.09	9,880.0	4,059.2	277.5	4,065.4	0.00	0.00	0.00
14,000.0	90.00	0.09	9,880.0	4,159.2	277.7	4,165.3	0.00	0.00	0.00
14,100.0	90.00	0.09	9,880.0	4,259.2	277.8	4,265.3	0.00	0.00	0.00
14,200.0	90.00	0.09	9,880.0	4,359.2	278.0	4,365.3	0.00	0.00	0.00
14,300.0	90.00	0.09	9,880.0	4,459.2	278.1	4,465.2	0.00	0.00	0.00
14,400.0	90.00	0.09	9,880.0	4,559.2	278.3	4,565.2	0.00	0.00	0.00
14,500.0	90.00	0.09	9,880.0	4,659.2	278.4	4,665.1	0.00	0.00	0.00
14,600.0	90.00	0.09	9,880.0	4,759.2	278.6	4,765.1	0.00	0.00	0.00
14,700.0	90.00	0.09	9,880.0	4,859.2	278.7	4,865.1	0.00	0.00	0.00
14,800.0	90.00	0.09	9,880.0	4,959.2	278.9	4,965.0	0.00	0.00	0.00
14,900.0	90.00	0.09	9,880.0	5,059.2	279.1	5,065.0	0.00	0.00	0.00
15,000.0	90.00	0.09	9,880.0	5,159.2	279.2	5,165.0	0.00	0.00	0.00
15,100.0	90.00	0.09	9,880.0	5,259.2	279.4	5,264.9	0.00	0.00	0.00
15,200.0	90.00	0.09	9,880.0	5,359.2	279.5	5,364.9	0.00	0.00	0.00
15,300.0	90.00	0.09	9,880.0	5,459.2	279.7	5,464.9	0.00	0.00	0.00
15,400.0	90.00	0.09	9,880.0	5,559.2	279.8	5,564.8	0.00	0.00	0.00
15,500.0	90.00	0.09	9,880.0	5,659.2	280.0	5,664.8	0.00	0.00	0.00
15,600.0	90.00	0.09	9,880.0	5,759.2	280.1	5,764.8	0.00	0.00	0.00
15,700.0	90.00	0.09	9,880.0	5,859.2	280.3	5,864.7	0.00	0.00	0.00
15,800.0	90.00	0.09	9,880.0	5,959.2	280.4	5,964.7	0.00	0.00	0.00
15,900.0	90.00	0.09	9,880.0	6,059.2	280.6	6,064.7	0.00	0.00	0.00
16,000.0	90.00	0.09	9,880.0	6,159.2	280.8	6,164.6	0.00	0.00	0.00
16,100.0	90.00	0.09	9,880.0	6,259.2	280.9	6,264.6	0.00	0.00	0.00
16,200.0	90.00	0.09	9,880.0	6,359.2	281.1	6,364.5	0.00	0.00	0.00
16,300.0	90.00	0.09	9,880.0	6,459.2	281.2	6,464.5	0.00	0.00	0.00
16,400.0	90.00	0.09	9,880.0	6,559.2	281.4	6,564.5	0.00	0.00	0.00
16,500.0	90.00	0.09	9,880.0	6,659.2	281.5	6,664.4	0.00	0.00	0.00
16,600.0	90.00	0.09	9,880.0	6,759.2	281.7	6,764.4	0.00	0.00	0.00
16,700.0	90.00	0.09	9,880.0	6,859.2	281.8	6,864.4	0.00	0.00	0.00
16,800.0	90.00	0.09	9,880.0	6,959.2	282.0	6,964.3	0.00	0.00	0.00
16,900.0	90.00	0.09	9,880.0	7,059.2	282.1	7,064.3	0.00	0.00	0.00
17,000.0	90.00	0.09	9,880.0	7,159.2	282.3	7,164.3	0.00	0.00	0.00
17,100.0	90.00	0.09	9,880.0	7,259.2	282.5	7,264.2	0.00	0.00	0.00
17,200.0	90.00	0.09	9,880.0	7,359.2	282.6	7,364.2	0.00	0.00	0.00
17,300.0	90.00	0.09	9,880.0	7,459.2	282.8	7,464.2	0.00	0.00	0.00
17,400.0	90.00	0.09	9,880.0	7,559.2	282.9	7,564.1	0.00	0.00	0.00
17,500.0	90.00	0.09	9,880.0	7,659.2	283.1	7,664.1	0.00	0.00	0.00
17,600.0	90.00	0.09	9,880.0	7,759.2	283.2	7,764.1	0.00	0.00	0.00
17,700.0	90.00	0.09	9,880.0	7,859.2	283.4	7,864.0	0.00	0.00	0.00
17,800.0	90.00	0.09	9,880.0	7,959.2	283.5	7,964.0	0.00	0.00	0.00
17,900.0	90.00	0.09	9,880.0	8,059.2	283.7	8,063.9	0.00	0.00	0.00
18,000.0	90.00	0.09	9,880.0	8,159.2	283.8	8,163.9	0.00	0.00	0.00
18,100.0	90.00	0.09	9,880.0	8,259.2	284.0	8,263.9	0.00	0.00	0.00
18,200.0	90.00	0.09	9,880.0	8,359.2	284.2	8,363.8	0.00	0.00	0.00
18,300.0	90.00	0.09	9,880.0	8,459.2	284.3	8,463.8	0.00	0.00	0.00
18,400.0	90.00	0.09	9,880.0	8,559.2	284.5	8,563.8	0.00	0.00	0.00

Database: EDM 5000.14
Company: EOG Resources - Midland
Project: Eddy County, NM (NAD 83 NME)
Site: Golden Graham 1 State Com
Well: #721H
Wellbore: OH
Design: Plan #0.1

Local Co-ordinate Reference: Well #721H
TVD Reference: KB = 25 @ 2965.0usft
MD Reference: KB = 25 @ 2965.0usft
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	0.09	9,880.0	8,659.2	284.6	8,663.7	0.00	0.00	0.00
18,600.0	90.00	0.09	9,880.0	8,759.2	284.8	8,763.7	0.00	0.00	0.00
18,700.0	90.00	0.09	9,880.0	8,859.2	284.9	8,863.7	0.00	0.00	0.00
18,800.0	90.00	0.09	9,880.0	8,959.2	285.1	8,963.6	0.00	0.00	0.00
18,900.0	90.00	0.09	9,880.0	9,059.2	285.2	9,063.6	0.00	0.00	0.00
19,000.0	90.00	0.09	9,880.0	9,159.2	285.4	9,163.6	0.00	0.00	0.00
19,100.0	90.00	0.09	9,880.0	9,259.2	285.5	9,263.5	0.00	0.00	0.00
19,200.0	90.00	0.09	9,880.0	9,359.2	285.7	9,363.5	0.00	0.00	0.00
19,300.0	90.00	0.09	9,880.0	9,459.2	285.9	9,463.5	0.00	0.00	0.00
19,400.0	90.00	0.09	9,880.0	9,559.2	286.0	9,563.4	0.00	0.00	0.00
19,500.0	90.00	0.09	9,880.0	9,659.2	286.2	9,663.4	0.00	0.00	0.00
19,600.0	90.00	0.09	9,880.0	9,759.2	286.3	9,763.3	0.00	0.00	0.00
19,700.0	90.00	0.09	9,880.0	9,859.2	286.5	9,863.3	0.00	0.00	0.00
19,800.0	90.00	0.09	9,880.0	9,959.2	286.6	9,963.3	0.00	0.00	0.00
19,900.0	90.00	0.09	9,880.0	10,059.2	286.8	10,063.2	0.00	0.00	0.00
20,000.0	90.00	0.09	9,880.0	10,159.2	286.9	10,163.2	0.00	0.00	0.00
20,043.8	90.00	0.09	9,880.0	10,203.0	287.0	10,207.0	0.00	0.00	0.00

PBHL(GG 1 SC #721H)

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP(GG 1 SC #721H) - plan hits target center - Point	0.00	0.00	9,402.5	-158.0	271.0	387,339.00	630,335.00	32° 3' 52.377 N	104° 2' 45.718 W
PBHL(GG 1 SC #721H) - plan hits target center - Point	0.00	0.01	9,880.0	10,203.0	287.0	397,700.00	630,351.00	32° 5' 34.910 N	104° 2' 45.211 W
FTP(GG 1 SC #721H) - plan misses target center by 44.8usft at 9961.1usft MD (9839.0 TVD, 126.0 N, 271.4 E) - Point	0.00	0.01	9,880.0	108.0	271.0	387,605.00	630,335.00	32° 3' 55.009 N	104° 2' 45.709 W