

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

API: 30-025-*****

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

Bit Size: 12-1/4"
9-5/8", 40#, J-55, LTC 0' - 936'

Bit Size: 8-3/4"
7-5/8", 29.7#, HCP-110, FXL @ 0' -
8,565'

TOC: 8,065'

KOP: 9,405'

Bit Size: 6-3/4"

Bit Size: 6-3/4"
5-1/2", 17#, HCP-110, LTC @ 0' - 20,048'

Lateral: 20,048' MD, 9,880' TVD

BH Location: 230' FNL & 654' FWL
Section 36
T-25-S, R-28-E

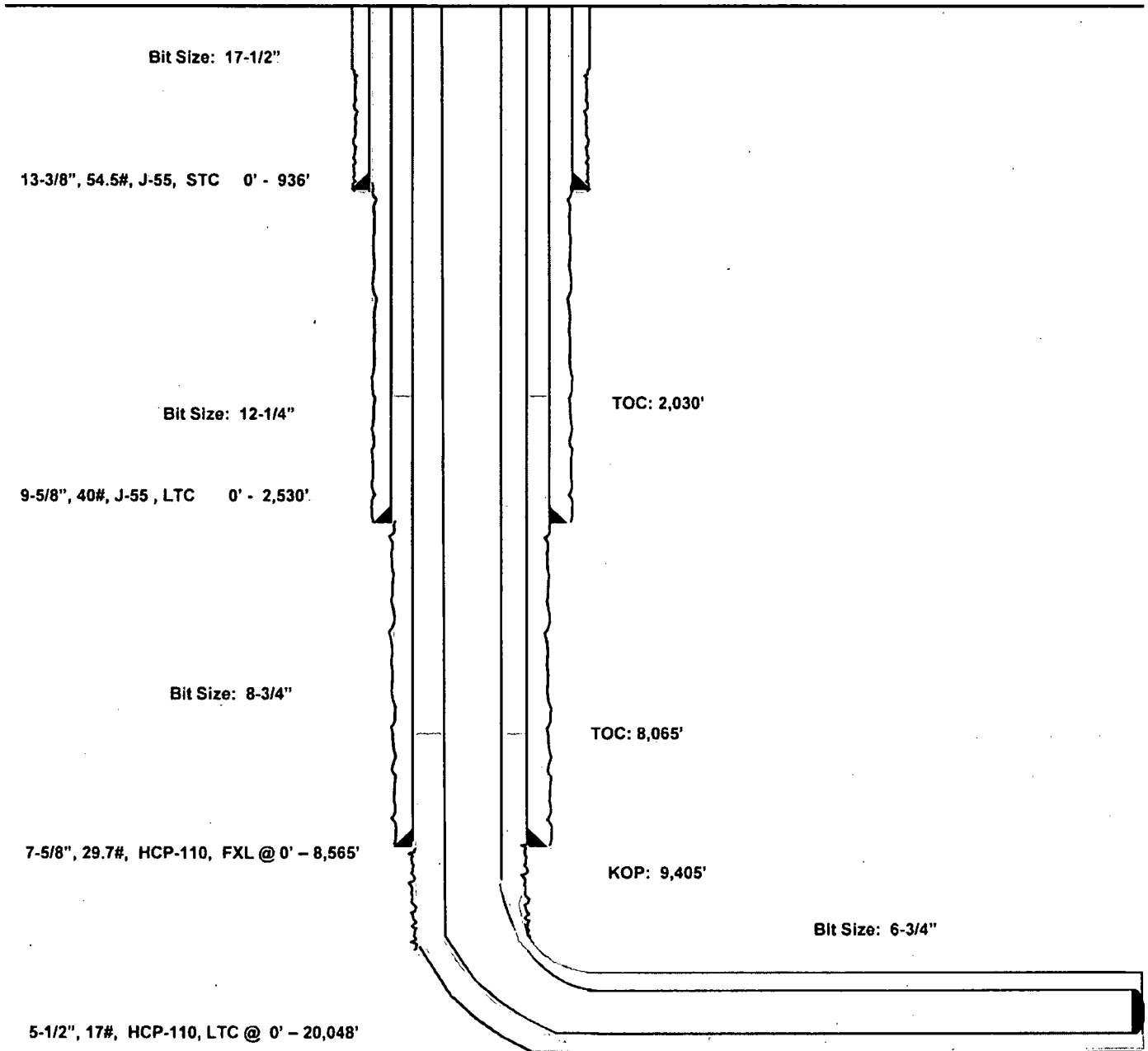
Golden Graham 1 State Com #721H
Eddy County, New Mexico

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

Proposed Wellbore Design B

API: 30-025-*****

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



Lateral: 20,048' MD, 9,880' TVD

BH Location: 230' FNL & 654' FWL
Section 36
T-25-S, R-28-E

Permit Information:

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 & 654' 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' - 20,048'	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
20,048'	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' - 20,048' 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'-20,048'	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
20,048'	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' - 20,048' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

EOG RESOURCES, INC.
GOLDEN GRAHAM 1 STATE COM #721H

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.

EOG RESOURCES, INC.
GOLDEN GRAHAM 1 STATE COM #721H

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	(432) 686-3751
	(817) 480-1167

Drilling Superintendent

Todd Hamilton	(432) 848-9029
	(210) 413-9569

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