## Yarrow 32 State #202H Lea County, New Mexico

## **Proposed Wellbore**

454' FSL 501' FEL Section 32 T-23-S, R-33-E OCD - HOBBS 07/31/2019 RECEIVED

KB: 3,692' GL: 3,667'

Bit Size: 17-1/2" 13-3/8", 54.5#, J-55, STC 0' - 1,390' Bit Size: 12-1/4" TOC: 4,860' 9-5/8", 40#, J-55 , LTC 0' - 4000' 9-5/8", 40#, HCL-80, LTC 4000' - 5,360' Bit Size: 8-3/4" KOP: 9,404' Bit Size: 8-3/4" 5-1/2", 17#, P-110 or HCP110, LTC @ 0' - 14,808'

> Lateral: 14,808' MD, 9,835' TVD BH Location: 100' FNL & 1115' FEL Section 32 T-23-S, R-33-E

#### **Permit Information**:

Well Name: Yarrow 32 State #202H

Location:

SHL: 454' FSL & 501' FEL, Section 32, T-23-S, R-33-E, Lea Co., N.M. BHL: 100' FNL & 1115' FEL, Section 32, T-23-S, R-33-E, Lea Co., N.M.

## **Casing Program:**

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF <sub>min</sub> Collapse	DF <sub>min</sub> Burst	DF <sub>min</sub> Tension
17.5"	0'-1,390'	13.375"	54.5#	J-55	STC	1.125	1.25	1.60
12.25"	0'-4,000'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
12.25"	4000' – 5,360'	9.625"	40#	HCL-80	LTC	1.125	1.25	1.60
8.75"	0'- 14,808'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

## **Cement Program:**

	No.	Wt.	Yld	
Depth	Sacks	ppg	Ft <sup>3</sup> /ft	Slurry Description
1,390'	870	13.5	1.73	Lead: Class C + 4.0% Bentonite + 0.5% CaCl <sub>2</sub> + 0.25 lb/sk
				Cello-Flake (TOC @ Surface)
	160	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2%
				Sodium Metasilicate
5,360'	540	9.0	3.5	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx
				(TOC @ Surface)
	380	14.4	1.20	Tail: Class C + 10% NaCl + 3% MagOx
14,808'	470	11.0	3.21	Lead: Class C + 3% CaCl2 + 3% Microbond (TOC @ 4,860')
	1,430	14.4	1.2	Tail: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3%
				Microbond

## **Mud Program**:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0'-1,390'	Fresh - Gel	8.6-8.8	28-34	N/c
1,390' – 5,360'	Brine	10.0-10.2	28-34	N/c
5,360' - 9,404'	Cut Brine	8.4-9.0	28-34	N/c
9,404' - 14,808'	Oil Base	9.0-9.5	40-42	8-10
Lateral				

## **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/Escape 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.

#### ■ 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.

# **Emergency Assistance Telephone List**

Emergency Assistance Telephon	e 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
C.S. Dept. of Euron		(373) 007 1171
EOG Resources, Inc.		
EOG / Midland	Office	(432) 686-3600
LOG / Wildiand	Office	(+32) 000-3000
Company Drilling Congultants		
Company Drilling Consultants: David Dominque	Cell	(985) 518-5839
Mike Vann	Cell	(817) 980-5507
Wire vaiii	Cen	(817) 980-3307
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Drilling Engineer	O.CC.	(122) (06 2600
Steve Munsell		(432) 686-3609
D. III. 14	Cell	(432) 894-1256
Drilling Manager	0.00	(100) (0 ( 07.51
Aj Dach		(432) 686-3751
	Cell	(817) 480-1167
Drilling Superintendent		
Domingo Lopez		(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
Zimi Cimidici (iiozi iimimgoi)	Cell	(817) 239-0251
	COII	(017) 237 0231