

DRILLING PROGNOSIS

30-C15-33062

MARBOB ENERGY CORPORATION

Wild Cap State Com #1

Sec. 36-T19S-R31E

1980 FSL 660 FEL

Eddy County, New Mexico

Ground Level Elevation = 3502'

Kelly Bushing Elevation = 3518'

DIRECTIONS: East of Artesia 31 miles to SR 529. Proceed SE 7 miles to CR 126. Turn South 12.2 miles. Turn West on lease road 1.7 miles, then South .7 mile to location.

SURFACE HOLE: 17 ½" HOLE SIZE SURFACE TO 900'

Sfce – 900' MW 8.4-9.4 ppg Vis 32-36 pH 7-8 WL-NC

1. 13 3/8" casing will come from George Young Supply.
George Young: 748-1333 or 1-800-748-1907
2. Drill 17 ½" hole to 850' (match to casing) using fresh water spud mud circulating through steel pits. Mix fresh water gel, soda ash and paper as needed. Should we encounter lost circulation mix pill of LCM material and dry drill to TD if required.
3. **Notify Artesia OCD @748-1283** to witness cement job.
4. RU Halliburton to cement 13 3/8" 48# casing as per Halliburton recommendation. Circulate excess cement to pits (**Must circulate**).
5. Wait at least 6 hours before cutting off casing. Wait on cement 18 hours before drilling on formation. Jet steel pits into outer reserve pit.
6. Catch 100' water samples at flowline and report chlorides from surface to 4500'.

INTERMEDIATE HOLE: 12 ¼" HOLE FROM SURFACE PIPE TO 4500'

900' - 4500' MW 9.8 – 10.0 ppg Vis 28-32 pH 9.5-10.5 WL NC

1. Drill out in 12 ¼" hole (match to casing) using **saturated brine** water system circulating through inner reserve and working pits. Maintain pH of 9.5 to 10 with a viscosity of 28-32. Possible lost circulation in the Capitan Reef from 2800' – 4100'. Minor fluid loss to be handled with paper sweeps and bad lost circulation to be handled with viscous gel slurries as per NOVA recommendation. For full return loss, dry drill to casing point occasionally sweeping hole with viscous gel sweeps using FRESH water to cut down on costs. Spot 100 bbl viscous slug on bottom prior to running intermediate casing.
2. RU casing crew & PU 4500' of 9 5/8" 36#/ft J55 STC Buttress casing .

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ESTIMATED TOPS

KB 3518'

GL 3502'

Rustler	820'
Top of Salt	980'
Base of Salt	2480'
Yates	2735'
Seven Rivers	3010'
Reef	3108'
Delaware	4400'
Bone Spring	7260'
1 st Sand	8429'
2 nd Sand	9028'
3 rd Sand	10003'
Wolfcamp	10598'
Strawn	11394'
Atoka	11852'
Morrow Clastics	12452'
Lower Morrow	12774'
TD	13100'

MARBOB ENERGY:	Martin Joyce	(505)748-3303	Artesia
		(505)748-5980	Mobile
		(505)746-8897	Home
	Brent May	(505)748-3303	Artesia
		(505)748-6274	Mobile
		(505)746-3304	Home
	Sheryl Baker	(505)748-2396	Artesia
		(505)748-5489	Mobile
		(505)748-2396	Home
	J.C. Gray	(505)748-3303	Artesia
		(505)748-5982(3)	Mobile
	Shane Gray	(505)748-3303	Artesia
		(505)748-5959	Mobile
		(505)746-0860	Home

- NOTIFY Artesia OCD @748-1283** to witness cement job.
3. RU Halliburton to cement 9 5/8" casing as per Halliburton recommendation. Circulate excess cement to pit (**If cement not circulated to surface, must tie 50' into surface pipe by CBL or Temperature Survey**).
 4. Wait on cement 18 hours. Wait at least 6 hours before cutting off casing and installing wellhead & BOPE.
 5. Nipple up 9 5/8" wellhead and minimum 5000# BOPE & test with independent tester before drilling out shoe. Notify Marbob to witness the BOP test. **RECORD ALL BOP TEST RESULTS IN DRILLERS LOG.**

LONG STRING HOLE: 7 7/8" HOLE FROM 4500 TO 13,100'

4500' – 9000' MW 8.6 – 8.8 ppg	Vis 28-30	pH 9.5-10	WL NC
9000' – 9600' MW 8.8 – 9.0 ppg	Vis 28-32	pH 9.5-10	WL NC

Drill out of intermediate w/cut brine system circulating through the outer reserve pit. Maintain 9.5 – 10 pH. Mix paper for sweeps and seepage control. Mix MF55 to clear drilling water. MW 8.8-8.9, Vis 28-30, WL n/c, pH 9.5-10, Cl +40000. **By 9000'** have 8.8-9.0 ppg **cut brine** running through the reserve pit. **At 9700'** add nitrates for 50-70 ppm & maintain this level through the morrow. Have mud/gas separator, linear shaker, centrifuge, and rotating head functioning for mud gas and solids control in Wolfcamp and Strawn.

9,600 '– 11,500'	MW 9.0–9.2ppg	Vis 30-32	pH 9-10	WL NC
11,500'–13,100'	MW 9.0–9.2ppg	Vis 30-32	pH 9-10	WL 6-8cc

By 11,500' switch into steel pits – start mud-up – mix Soda Ash/White Starch/Pac-R to maintain water loss between 8-10 viscosity of 30 to 32. Maintain pH with caustic, run STC for starch preservation. Linear shaker, centrifuge, separator and rotating head will all be functioning properly. Maintain viscosity and water loss with starch and Pac. Drop water loss for the Atoka through Morrow pay sections and maintain 6cc control or below in Morrow.

DST FOR BONE SPRINGS, STRAWN, ATOKA & MORROW

For DST, mix viscous pill as per mud man orders, circulate hole for 1 bottoms up, then sweep hole with 1/2 of pill & spot remainder of pill on bottom. TOO, strapping out. On DST, we will probably run 5" initial flow, 6" initial Shut-In, 60" Second Flow, 180" Second Shut-In. This may be modified as conditions dictate.

Schlumberger will be first call on DST Schlumberger: 393-4107

SAMPLES: Rig crews to catch 10' samples from 2400' to TD. Note any shows of oil or gas in tour sheets.

MUDLOGGER: Rig up logging unit for 2400' to TD. Logging will be by a 2-man unit keeping 2 sets of 10' samples & capturing 1' drill time. E-mail daily logs to Marbob-Artesia (505) 746-2523 to geology@marbob.com, computing@marbob.com &

mjoyce@marbob.com at 0600 hrs every day and upon request.
Mudlogging phone number is 505-706-4512.

DRILLING REPORTS: FAX daily to Marbob-Artesia (746-2523) or E-MAIL to geology@marbob.com . Daily drilling reports should include daily and CUM mud costs, fresh and brine water loads, descriptions of downtime, trips, casing and cement information.

DRILLING BREAKS: Below 9000' cut a maximum of 4' of any drilling break (drill rate doubles or drills under 2mpf), stop and check for flow. Cut no more than 15' of a carbonate or 10' of sandstone before circulating samples out. On breaks of under 10' drill through break and call Brent May or Martin Joyce to get orders on circulating or drilling ahead. On breaks or sections w/good sample show and/or gas increases notify Brent or Martin for orders.

Martin Joyce: Office 748-3303 / Mobile 748-5980 / Home 746-8897

Brent May: Office 748-3303 / Mobile 748-6274 / Home 746-3304

ELECTRIC LOGGING

At TD, mix pill and circulate 2 complete rounds, sweep hole with 1/2 pill and spot the other 1/2 on bottom. TOO H for logs. RU Halliburton for e-logs.

Plan Run 1 Triple Combo

Michael Escriva - Office 505-392-7543 / Cell 505-631-4017

Keith Drake - Office 505-392-7543 / Cell 505-390-1098

PRODUCTION CASING

Production string will consist of 13,100' of 5 1/2" 17# P-110 LT&C. Cement procedure to be determined at TD. Should well be plugged, lay down drill collars and go back to bottom open ended and wait on plugging orders from the BLM.

CONTRACTOR: Patriot Drilling Company (432) 686-2780
Rig #2 (505) 706-1387
Tool Pusher: Terry Anthony (505) 706-4104
