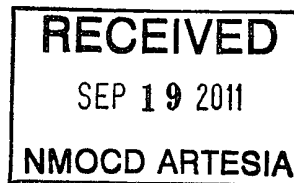


District I  
1625 N French Dr, Hobbs, NM 88240  
Phone (575) 393-6161 Fax (575) 393-0720  
District II  
811 S First St, Artesia, NM 88210  
Phone (575) 748-1283 Fax (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone (505) 334-6178 Fax (505) 334-6170  
District IV  
1220 S St Francis Dr, Santa Fe, NM 87505  
Phone (505) 476-3460 Fax (505) 476-3462

State of New Mexico  
Energy Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-101  
Revised August 1, 2011



Permit

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

<sup>1</sup> Operator Name and Address <b>COG Operating, LLC 550 W. Texas Suite 100 Midland, Texas 79701</b>		<sup>2</sup> OGRID Number 229137
		<sup>3</sup> API Number 30-015-25118
<sup>4</sup> Property Code 308204	<sup>5</sup> Property Name M C State	<sup>6</sup> Well No 1

**<sup>7</sup> Surface Location**

UL - Lot J	Section 23	Township 17S	Range 28E	Lot Idn	Feet from 2310	N/S Line South	Feet From 2310	E/W Line East	County Eddy
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**<sup>8</sup> Pool Information**

Yeso	
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**Additional Well Information**

<sup>9</sup> Work Type D/P	<sup>10</sup> Well Type O	<sup>11</sup> Cable/Rotary R	<sup>12</sup> Lease Type S	<sup>13</sup> Ground Level Elevation 3700
<sup>14</sup> Multiple N	<sup>15</sup> Proposed Depth 5400	<sup>16</sup> Formation Yeso	<sup>17</sup> Contractor	<sup>18</sup> Spud Date As soon as approved
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

**<sup>19</sup> Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12-1/4	8-5/8	24	499	350	0
Int	7-7/8	5-1/2	17	3506	700	0
Prod	4-3/4	4	11.3	5400	125	3306

**Casing/Cement Program: Additional Comments**

--

**Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram Manually Operated	3000 psi	1000 psi	Townsend

I hereby certify that the information given above is true and complete to the best of my knowledge and belief I further certify that the drilling pit will be constructed according to NMOCD guidelines <input type="checkbox"/> , a general permit <input type="checkbox"/> , or an (attached) alternative OCD-approved plan <input type="checkbox"/> .		OIL CONSERVATION DIVISION Approved By: <i>[Signature]</i> Title: <i>Geologist</i> Approved Date: <i>SEP 26 2011</i> Expiration Date:	
Printed name: Netha Aaron			
Title: Regulatory Analyst			
E-mail Address: <a href="mailto:oaaron@concho.com">oaaron@concho.com</a>			
Date: 9/14/11	Phone: 432-818-2319	Conditions of Approval Attached	

*[Handwritten mark]*

# MC State #1 Deepening

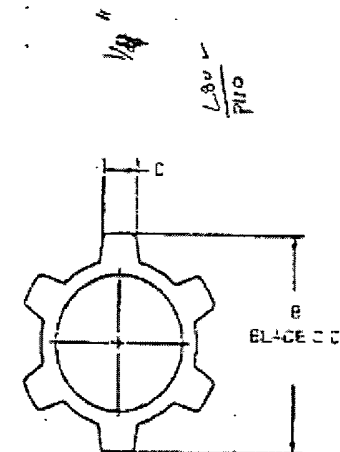
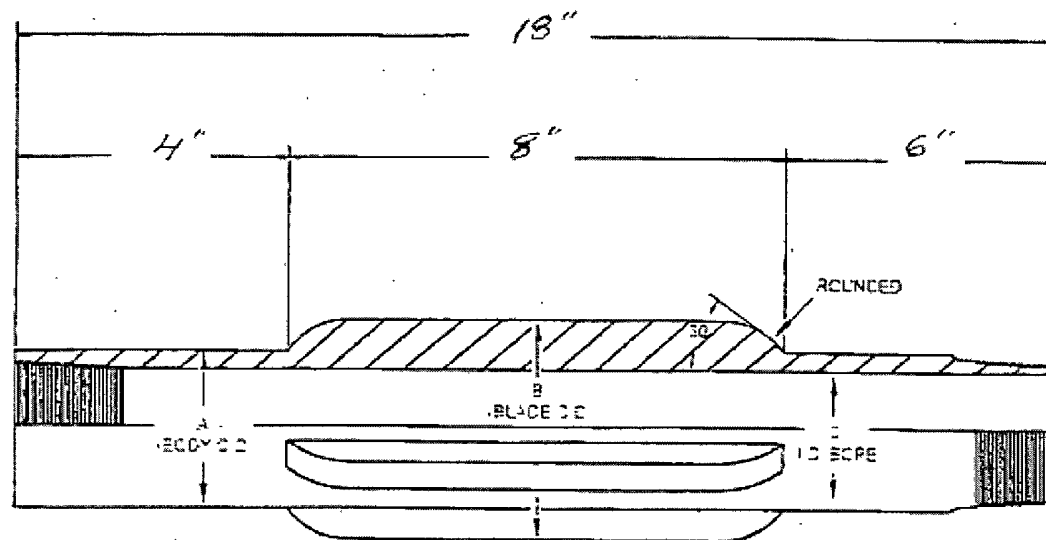
## Deepening Procedure

1. MIRU rig.
2. Sqz Grayburg/San Andres w/ +/- 300 sx of Class C neat. Drill out squeeze.
3. PU 4-3/4" bit and drill 4-3/4" hole from 3525' to 5400'.
4. POOH w/ bit and drillstring.
5. RIH w/ logs and log from TD to 3400'.
6. RIH w/ 4", 11.3# casing. See section 11 for general centralizer program.
7. Cement casing from TD to 3306' w/ 125 sxs Class C cmt. Drop plug and open DV tool. Circ cmt off DV tool. Drop plug to close DV tool.
8. PU workstring and RIH and drill out DV tool. POOH and LD workstring.
9. RDMO rig.

## Completion Procedure


1. MIRU rig.
2. RIH/ w/ perforating guns and perforate Yeso from 4900 – 5100 w/ 2 spf, 30 holes.
3. Acidize w/ 2500 gals of 15% HCl. Frac zone w/ 179,800 # of sand. Set plug at 4850'.
4. RIH w/ perforating guns and perforate Yeso from 4600' – 4800'.
5. Acidize w/ 2500 gals of 15% HCl. Frac zone w/ 179,800 # of sand. Set plug at 4550'.
6. RIH w/ perforating guns and perforate Yeso from 4300' – 4500'.
7. Acidize w/ 2500 gals of 15% HCl. Frac zone w/ 179,800 # of sand. Set plug at 4200'.
8. RIH w/ perforating guns and perforate Yeso from 3800' – 4100'.
9. Acidize w/ 2500 gals of 15% HCl. Frac zone w/ 129,600 # of sand.
10. RIH and drill out plug at 4200', 4550', and 4850'.
11. RIH and cut or back off 4" casing at 3306'. POOH w/ 4" casing. Leave 4" liner from 3306' to 5400' (TD).
12. RIH w/ tbg and locate end of tbg at 3250'.
13. RIH w/ rods and pump.
14. RDMO rig.

Centralizer Diagram



$\pm 0.00$   $\pm 0.00$   $\pm 0.00$   
0.00 0.00 0.00

SIZE	A	B	C	D	E	F	G	DRIFT
4" x 4 3/4 11.6"	4.050	4.750	3.347"	3/4"				3.303"

 RAY OIL TOOL CO. STAND OFF	
CENTRALIZED INTERCASING	
CLIENT	Concho Res
WELL NAME & NO	
CASING	4" P145 11.6"
MATERIAL	4 3/4 x 3/4 x 18" Q135
DATE	