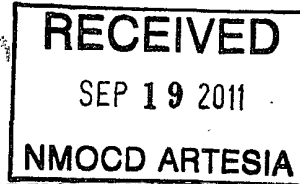


District I
1625 N French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-0720
District II
811 S First St., Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170
District IV
1220 S St Francis Dr., Santa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

¹ Operator Name and Address COG Operating, LLC 550 W. Texas Suite 100 Midland, Texas 79701		² OGRID Number 229137
		³ API Number 30-015-30744
⁴ Property Code 308221 ✓	⁵ Property Name Moncrief State ✓	⁶ Well No 2 ✓

⁷ Surface Location

UL - Lot L	Section 23	Township 17S	Range 28E	Lot Idn	Feet from 2310	N/S Line South	Feet From 531	E/W Line West	County Eddy ✓
---------------	---------------	-----------------	--------------	---------	-------------------	-------------------	------------------	------------------	------------------

⁸ Pool Information

Yeso	
------	--

Additional Well Information

⁹ Work Type D/P	¹⁰ Well Type O	¹¹ Cable/Rotary R	¹² Lease Type S	¹³ Ground Level Elevation 3593
¹⁴ Multiple N	¹⁵ Proposed Depth 5400	¹⁶ Formation Yeso	¹⁷ Contractor	¹⁸ Spud Date As soon as approved
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

¹⁹ 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	532	300	0
Int	7-7/8	5-1/2	17	4012	775	0
Prod	4-3/4	4	11.3	5400	115	3812

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"/> . <i>Netha Aaron</i>		OIL CONSERVATION DIVISION	
Printed name. Netha Aaron		Approved By <i>T. C. Shepard</i>	
Title Regulatory Analyst		Title <i>Geologist</i>	
E-mail Address <i>oaron@concho.com</i>		Approved Date. <i>9/26/2011</i>	Expiration Date
Date 9/14/11	Phone 432-818-2319	Conditions of Approval Attached	

Moncrief State #2 Deepening

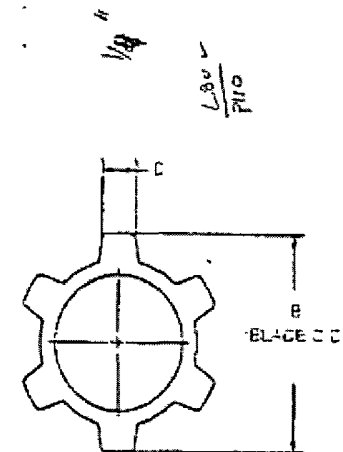
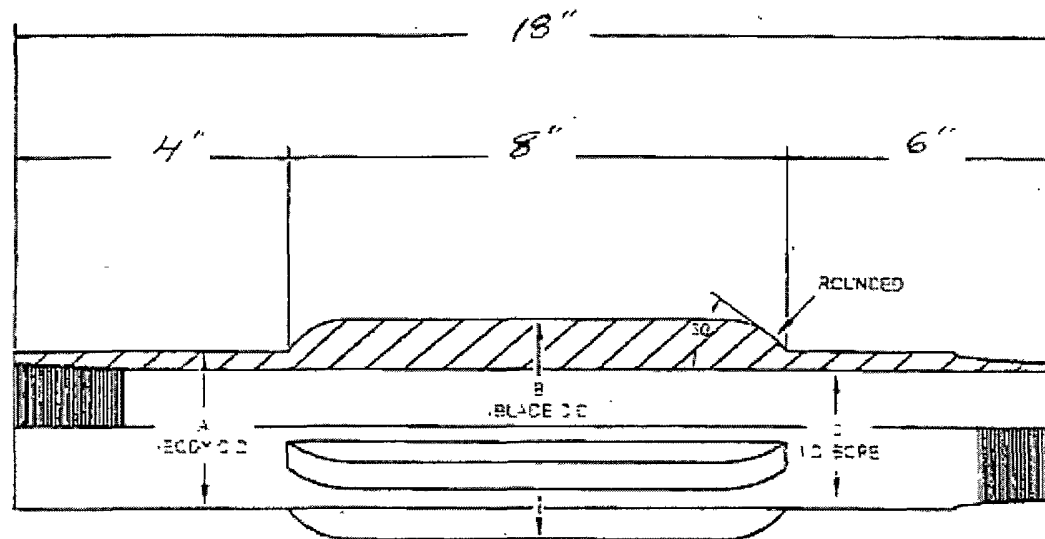
Deepening Procedure

1. MIRU rig.
2. Sqz Yeso w/ +/- 300 sx of Class C neat. Drill out squeeze.
3. PU 4-3/4" bit and drill 4-3/4" hole from 4025' to 5400'.
4. POOH w/ bit and drillstring.
5. RIH w/ logs and log from TD to 3900'.
6. RIH w/ 4", 11.3# casing. See section 11 for general centralizer program.
7. Cement casing from TD to 3812' w/ 115 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.
8. RIH and drill out plug at 4550', and 4850'.
9. RIH and cut or back off 4" casing at 3812'. POOH w/ 4" casing. Leave 4" liner from 3812' to 5400' (TD).
10. RIH w/ tbg and locate end of tbg at 3750'.
11. RIH w/ rods and pump.
12. RDMO rig.

Centralizer Diagram



SIZE	A	B	C	D	E	F	G	DRIFT
4" x 4 3/4" 11.6"	4.050	4.750	3.347"	2 1/4"				3-303"

 RAY OIL TOOL CO.	
STAND OFF 3"	
1 CENTRALIZED INTERCASING	
CLIENT	CONCHO RES
WELL NAME & NO	
CASING	4" P145 11.6"
MATERIAL	4 3/4" x 3 1/4" x 18" Q125