

## District I

1625 N. French Dr., Hobbs, NM 88240

## District II

1301 W Grand Avenue, Artesia, NM 88210

## District III

1000 Rio Brazos Road, Aztec, NM 87410

## District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-101

May 27, 2004

## Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

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

<sup>1</sup> Operator Name and Address COG OPERATING LLC 550 W. Texas, Suite 1300 Midland, TX 79701		<sup>2</sup> OGRID Number 299137
		<sup>3</sup> API Number 30-015-30831
<sup>4</sup> Property Code 302502	<sup>5</sup> Property Name Harper State	<sup>6</sup> Well No 1
<sup>9</sup> Proposed Pool 1 Loco Hills; Glorieta, Yeso 96718		<sup>10</sup> Proposed Pool 2

<sup>7</sup> Surface Location

UL or lot no. P	Section 16	Township 17S	Range 30E	Lot Idn	Feet from the 430	North/South line South	Feet from the 330	East/West line East	County Eddy
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<sup>8</sup> Proposed Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
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## Additional Well Information

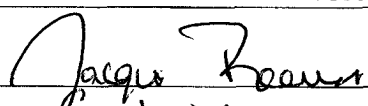
<sup>11</sup> Work Type Code D	<sup>12</sup> Well Type Code O	<sup>13</sup> Cable/Rotary Rotary	<sup>14</sup> Lease Type Code S	<sup>15</sup> Ground Level Elevation 3677
<sup>16</sup> Multiple N	<sup>17</sup> Proposed Depth 6100	<sup>18</sup> Formation Yeso	<sup>19</sup> Contractor	<sup>20</sup> Spud Date As soon as approved
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
Pit: Liner. Synthetic <input type="checkbox"/> _____ mils thick Clay <input type="checkbox"/> Pit Volume _____ bbls Drilling Method: Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/> Closed-Loop System <input checked="" type="checkbox"/>				

<sup>21</sup> Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2	13-3/8	54.5	445	450	
12-1/4	8-5/8	24	1110	475	
7-7/8	5-1/2	17	4870	1011	
4-3/4	4	11.3	6100	115	

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

See Attachments

<sup>23</sup> 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	
Printed name Kanicia Carrillo		Approved by 	
Title. Regulatory Analyst		Title. Geologist	
E-mail Address kcarriilo@conchoresources.com		Approval Date: 11/17/2009 Expiration Date: 11/17/2011	

Date 10/19/09	Phone 432-685-4332	Conditions of Approval Attached <input type="checkbox"/>
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COG Operating, LLC  
Harper State 1 Deepening  
Unit P, Sec 16, T17S, R30E  
430 FSL & 330 FEL  
API# 30-015-30831  
Eddy County, NM

#### Deepening Procedure

1. MIRU rig.
2. PU 4-3/4" bit and drill 4-3/4" from 4888' to 6100'.
3. POOH w/ bit and drillstring.
4. RIH w/ logs and log from TD to 4800'.
5. RIH w/ 4", 11.3# casing.
6. Cement casing from TD to 4825' w/ 115 sxs Class C cmt.
7. RDMO rig.

#### Completion Procedure

1. MIRU rig.
2. RIH/ w/ perforating guns and perforate Yeso from 5800 – 5600 w/ 2 spf, 30 holes.
3. Acidize w/ 2500 gals of 15% HCl. Frac zone w/ 190,000 # of sand. Set plug at 5550'.
4. RIH w/ perforating guns and perforate Yeso from 5500' – 5300'.
5. Acidize w/ 2500 gals of 15% HCl. Frac zone w/ 190,000 # of sand. Set plug at 5350'.
6. RIH w/ perforating guns and perforate Yeso from 5200' – 5000'.
7. Acidize w/ 2500 gals of 15% HCl. Frac zone w/ 190,000 # of sand.
8. RIH and drill out plug at 5350' and 5550'.
9. RIH and cut 4" casing at 4825'. POOH w/ 4" casing. Leave 4" liner from 4825' to 6100' (TD).
10. RIH w/ tbg and locate end of tbg at 4800'.
11. RIH w/ rods and pump.
12. RDMO rig.

## DISTRICT I

P.O. Box 1980, Hobbs, NM 88241-1980

## DISTRICT II

P.O. Drawer DD, Artesia, NM 88211-0719

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## DISTRICT IV

P.O. Box 2088, Santa Fe, NM 87504-2088

## State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-30831	Pool Code 96718	Pool Name Loco Hills; Glorieta, Yeso
Property Code 302502	Property Name HARPER STATE	Well Number 1
OGRD No. 229137	Operator Name COG Operating, LLC	Elevation 3677

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	16	17 S	30 E		430	SOUTH	330	EAST	EDDY

## Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<b>OPERATOR CERTIFICATION</b>  I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.   Signature Kanicia Carrillo Printed Name Regulatory Analyst Title 10/19/09 Date
	<b>SURVEYOR CERTIFICATION</b>  I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.  NOVEMBER 2, 1999 Date Surveyed JLP
	Signature of Surveyor  Professional Surveyor State of New Mexico License No. 89-15908 Seal No. RONALD E. EDSON, 3239 GARY E. EDSON, 12841 JASON McDONALD, 12185