

OCD-ARTESIA

Form 3160-4
(April 2004)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

FORM APPROVED
OMB NO. 1004-0137
Expires: March 31, 20071a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Otherb. Type of Completion: ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.,
Other _____2. Name of Operator **COG Operating LLC**3. Address **550 W. Texas, Suite 1300, Midland, TX 79701**3a. Phone No. (include area code)
432-685-4340

4. Location of Well (Report location clearly and in accordance with Federal requirements)

At surface **2310' FNL & 330' FWL, Unit E**

At top prod. interval reported below

At total depth

14. Date Spudded
09/25/200615. Date T.D. Reached
10/10/200616. Date Completed **11/02/2006**
☐ D & A ☒ Ready to Prod.17. Elevations (DF, RKB, RT, GL)*
3744' GL18. Total Depth: MD **6160'**
TVD19. Plug Back T.D.: MD **5725'**
TVD20. Depth Bridge Plug Set: MD **5760'**
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)

CN / HNGS, Micro CFL / HNGS22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit report)
Directional Survey? ☒ No ☐ Yes (Submit copy)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17-1/2	13-3/8	48		439		980 sx CI C		Surface	
12-1/4	8-5/8	24		1571		800 sx CI C		Surface	
7-7/8	5-1/2	17		6150		1430 sx CI C		Surface	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
None	None							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) Yeso			5044.5' - 5227.5'	2 SPF	42	Open
B) Yeso			5321' - 5662'	2 SPF	72	Open
C) Yeso			5777.5' - 5912'	2 SPF	38	Open
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material
5044.5' - 5227.5'	See Attachment
5321' - 5662'	See Attachment
5777.5' - 5912.5'	See Attachment

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
11/08/2006	11/08/2006	24	→	106	233	334	38.4		Flowing
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→					Producing	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

*(See instructions and spaces for additional data on page 2)

ACCEPTED FOR RECORD

DEC 21 2006

WESLEY W. INGRAM
PETROLEUM ENGINEER

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
Queen	2327				
Grayburg	2732				
San Andres	3042				
Glorieta	4535				
Yeso	4587				

32. Additional remarks (include plugging procedure):

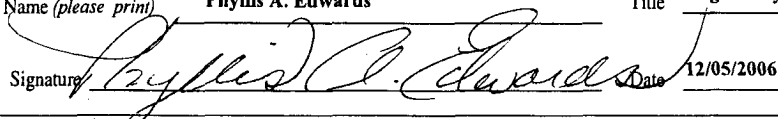
33. Indicate which items have been attached by placing a check in the appropriate boxes:

- ☐ Electrical/Mechanical Logs (1 full set req'd.)
 ☐ Geologic Report
 ☐ DST Report
 ☐ Directional Survey
☐ Sundry Notice for plugging and cement verification
☐ Core Analysis
☒ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) **Phyllis A. Edwards**Title **Regulatory Analyst**

Signature


Date **12/05/2006**

Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

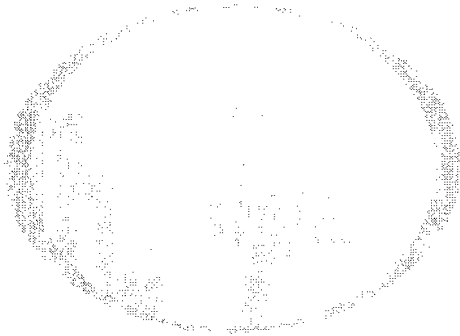
HARVARD FEDERAL #6
API#: 30-015-35124
EDDY, NM

C-105 (#27) ADDITIONAL INFORMATION

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.	
DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
5044.5' - 5227.5'	Acidize w/ 2500 gals acid.
	Frac w/ 96,041 gals gel, 8011# LiteProp,
	& 93,020# 16/30 sand.

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.	
DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
5321' - 5662'	Acidize w/ 3000 gals acid.
	Frac w/ 32,500 gals 30# gel, 58,112 gals 40#
	gel, 8367# LiteProp, & 75,028# 16/30 white
	sand.

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.	
DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
5777.5' - 5912.5'	Acidize w/ 2500 gals acid.



Silver Oak Drilling, LLC

PO Box 1370
Artesia, NM 88211-1370
505/748-1288

October 25, 2006

COG, LLC
Fasken Center, Tower II
550 West Texas Ave, Suite 1300
Midland, TX 79701

RE: Harvard Federal #6
2310' FNL & 330' FWL
Sec. 12, T47S, R30E
Eddy County, New Mexico

Dear Sir,

The following is the Deviation Survey for the above captioned well.

<u>DEPTH</u>	<u>DEVIATION</u>	<u>DEPTH</u>	<u>DEVIATION</u>
245'	1/4°	3848'	1°
747'	1/2°	4345'	1/2°
1079'	3/4°	4841'	1°
1962'	1°	5341'	1°
2454'	1/4°	5874'	1°
2952'	1°	6122'	1°
3445'	1°		

Very truly yours,

Eddie C. LaRue
Operations Manager

State of New Mexico }
County of Eddy }

The foregoing was acknowledged before me this 25th day of October, 2006.

Notary Public