Form 3160-4
(March 2012)

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Farmington Field Office
Bureau of Land Management

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: October 31, 2014

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
Jicarilla Tribal #424

1a. Type of Well ☑ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion: ☑ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.,
Other:

6. If Indian, Allottee or Tribe Name
Jicarilla Apache

7. Unit or CA Agreement Name and No.

2. Name of Operator
Logos Capital Management, LLC

8. Lease Name and Well No.
Logos #2

3. Address 4001 North Butler, Building 7101
Farmington, NM 87401

3a. Phone No. *(include area code)*
505-436-2627

9. API Well No.
30-043-21120

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

At surface 1930' FSL & 730' FEL

10. Field and Pool or Exploratory
WC 22N5W6; Gallup(O) 97989

11. Sec., T., R., M., on Block and Survey or Area Sec. 6, T22N, R5W

At top prod. interval reported below Same as above.

12. County or Parish
Sandoval

13. State
NM

At total depth Same as above.

14. Date Spudded
09/28/2012

15. Date T.D. Reached
10/04/2012

16. Date Completed 11/02/2012
☐ D & A ☐ Ready to Prod.

17. Elevations (DF, RKB, RT, GL)*
6901' GL

18. Total Depth: MD 6639'
TVD

19. Plug Back T.D.: MD 6622'
TVD

20. Depth Bridge Plug Set: MD
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
GR/CCL/CBL/Neutron/Density/Electric

22. 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
12-1/4"	8-5/8" J-55	24#	0	351'	N/A	242	65	surface	0
7-7/8"	5-1/2" P-110	17#	0	6639'	2557', 4473'	1076	321	surface	0

RCVD NOV 29 '12
OIL CONS. DIV.
DIST. 3

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
To be	reported on	1st delivery date.						

25. Producing Intervals / 26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) Upper Gallup	4932'	5160'	2 SPF	0.43"	40	open
B) Lower Gallup**	5191'	6134'	1 SPF	0.43"	65	open
C)						
D)						

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

Depth Interval	Amount and Type of Material
4932'-5160'	Frac'ed the Upper Gallup with 2,000 gal 15% HCL, 10,000 lbs of 100 mesh sand,
	followed by 105,340 lbs of 40/70 sand, and 7,754 bbls of slick-water. AIP at 3540 PSI.
5191'-5640'	Frac'ed the Lower Gallup with 2,000 gal 15% HCL, 10,000 lbs of 100 mesh sand, followed by 189,725 lbs of 40/70 sand,
	in a 60Q Foam with 10# linear gel, and 4,870 bbls of slick-water, and 3.2 MMSCF of N2. AIP at 2100 PSI.

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
									To be reported on 1st delivery date.

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status

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

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BY

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

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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 *(Solid, used for fuel, vented, etc.)*
Flowing well back, Gas TSTM.

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
Ojo Alamo	1340				
Kirtland	1620				
Pictured Cliffs	1853				
Lewis Shale	1944				
Chacra	2276				
Cliffhouse	3375				
Menefee	3413				
Point Lookout	4102				
Mancos	4297				
Niobrara A	5027		Niobrara B top 5130, Niobrara C top 5247		
Greenhorn	6093				
Graneros	6140				
Dakota	6160				
Morrison	6604				

32. Additional remarks (include plugging procedure):

**The lower Gallup perforations were frac'd with the Dakota based on the rock properties.

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)* Kristy Graham Title Director of Administration and Engineering Support

Signature [signature] Date 11/21/2012

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.

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