Form 3160-4
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: March 31, 2007

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. **NMSF- 078390**

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

2004 OCT 7 PM 3
RECEIVED
070 FARMINGTON NM

6. If Indian, Allottee or Tribe Name **NA**

7. Unit or CA Agreement Name and No. **9642**

2. Name of Operator **Richardson Operating Company**

8. Lease Name and Well No. **Federal 41-11 #3**

3. Address **3100 La Plata Highway, Farmington, NM 87401**

3a. Phone No. (include area code) **505-564-3100**

9. AFI Well No. **30-045-31943**

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

At surface **540' FSL & 2245' FEL Sec 11 T28N - R8W**

At top prod. interval reported below

At total depth

OCT 2004
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OIL CONS. DIV.
DIST. 3

10. Field and Pool, or Exploratory **Basin Fruitland Coal**

11. Sec., T., R., M., on Block and Survey or Area **Sec. 11 T28N - R8W**

12. County or Parish **San Juan**

13. State **NM**

14. Date Spudded **05/20/2004**

15. Date T.D. Reached **05/30/2004**

16. Date Completed ☐ D & A ☑ Ready to Prod. **09/27/2004**

17. Elevations (DF, RKB, RT, GL)* **6267' GL**

18. Total Depth: MD **2918' GL** TVD

19. Plug Back T.D.: MD **2882' GL** TVD

20. Depth Bridge Plug Set: MD TVD

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

Compensated Neutron Log

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
8 3/4"	**7" K-55**	**20#**	**-1' GL**	**282'**		**125sx Class B**	**26 bbl**	**Surface**	**12 bbl circ.**
6 1/4"	**4.5" J-55**	**11.6#**	**+1' GL**	**2908'**		**225sx Class B**	**113 bbl**		
						100sx Class B	**21 bbl**	**Surface**	**32 bbl circ.**

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 3/8"	**2769'**							

25. Producing Intervals / 26. Perforation Record

	Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A)	**Basin Fruitland Coal**	**2638'**	**2770'**	**2641'; 2653'; 2657'; 2704'**	**0.38"**	**4**	**Open**
B)				**2708'; 2710'; 2715'; 2720'**	**0.38"**	**4**	**Open**
C)				**2724'-2728'; 2739**	**0.38"**	**2spf, 8; 1spf**	**Open**
D)				**2759'-2769'**	**0.38"**	**4spf, 40**	**Open**

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

Depth Interval	Amount and Type of Material
2641'-2769'	**Two Stage Frac;**
	1st Stage: Spearhead w/ 1,000gal 15% HCl. Frac w/ 73,359gal gelled fluid, 134,032# 20/40 sand, and 1,158,778scf
	N2, in six stages. Flush w/1,260gal AquaSafe L20. 2nd stage: Spearhead w/ 1,000gal 15% HCl. Frac w/34,952gal
	gelled fluid; 64,943# 20/40 sand, and 56,9511scf N2, in five stages. Flush w/ 2,625gal 60Q N2Foam/AquaSafeL20

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
									Sundry of tests to follow
Choke Size	**Tbg. Press. Flwg. SI**	**Csg. Press.**	**24 Hr. Rate →**	**Oil BBL**	**Gas MCF**	**Water BBL**	**Gas/Oil Ratio**	**Well Status**	
									SI:WOPL

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 12 2004
FARMINGTON FIELD OFFICE
BY

NMOCD

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.)*

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
Fruitland Coal	**2638'**	**2770'**			

32. Additional remarks (include plugging procedure):

33. Indicate which itmes 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)* **Charles H. Williams** Title **Engineering Operations Manager**

Signature Charles H. Williams Date **10/05/2004**

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.