Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

5. Lease Designation and Serial No.
SF-078040

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
Mudge LS 9A

2. Name of Operator
Amoco Production Company

Attention:
Dallas C. Kalahar

9. API Well No.
3004523062

3. Address and Telephone No.
P.O. Box 800, Denver, Colorado 80201

10. Field and Pool, or Exploratory Area

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
1000'FSL 1695'FEL Sec. 3 T 31N R 11W

11. County or Parish, State
San Juan New Mexico

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☒ Notice of Intent	☐ Abandonment	☐ Change of Plans
☐ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Workover & Bradenhead Rep	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Amoco Production Company intents to perform the attached workover procedure required to eliminate bradenhead pressure.

See attached for workover procedure.

In addition, Amoco also requests approval to construct a temporary 15'x15'x5' blow pit for return fluids. This pit will be reclaimed if utilized, upon completion of this procedure.

If any questions, please contact Dallas Kalahar at 303-830-5129.

RECEIVED
OCT 25 1993
OIL CON. DIV.
DIST. 3

RECEIVED
93 OCT 13 PM 3:37
070 FARMINGTON NM

14. I hereby certify that the foregoing is true and correct
Signed Dallas Kalahar Title Staff Business Analyst Date 10-11-1993

(This space for Federal or State office use)

Approved by _____ Title _____ Date APPROVED OCT 14 1993
Conditions of approval, if any:

DISTRICT MANAGER

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

* See Instructions on Reverse Side
NMOCD

WORKOVER PROCEDURE
MUDGE LS 9A

October 5, 1993 (1st version)

1. Record TP, SICP, and SIBHP.
2. MIRUSU.
3. TOH with tubing.
4. TIH with RBP and set at 4100'.
5. Run a GR/CBL from 4100' to surface and determine top of cement for 7" casing and 4 1/2" liner. Verify that the PC, FT, and Ojo Alamo are isolated.
6. Pressure test casing and liner top to 500 psig. Locate leaks if necessary.
   a) If leaks exist inside 4 1/2" liner, conduct cement squeeze(s) until hole(s) will test to 500 psig.
   b) If leaks exist inside 7" casing, contact Paul Edwards in the Denver office before proceeding.
7. TIH with RBP and set within 100' of the TOC in the 7" casing, cap with sand.
8. Perf 2 squeeze holes within 100' of the TOC.
9. Establish circulation to surface, calculate annular volume with a dye, and pump 200% of annular volume of cement. Note returns to surface.
10. WOC.
11. Drill out cement to RBP.
12. Pressure test squeeze perfs to 500 psig.
13. Resqueeze until pressure test holds, and cement is to surface.
14. TOH with upper RBP.
15. Swab fluid level down to 3500' from surface.
16. TOH with lower RBP.
17. If several holes were shot in the 7" casing, contact office for the possibility of running 4 1/2" or 5 1/2" casing to the liner top.
18. Using lubricator, TIH with 3 1/8" casing gun and perforate the following intervals with 2 JSPF and 120 degree phasing. Depths are correlated from Schlumberger's Compensated Formation Density Log dated 78/10/18.

MV Point Lookout Perforations

4762' - 64'	4890' - 4917'	4948' - 55'
4961' - 64'	4968' - 74'	4993' - 95'
5010' - 12'	5050' - 53'	5203' - 05'

MV Cliffhouse & Menefee Perforations

4252' - 56'	4287' - 92'	4300' - 04'
4316' - 18'	4342' - 44'	4366' - 68'
4382' - 88'	4394' - 4416'	4422' - 30'
4469' - 71'	4489' - 92'	

19. TIH with RBP, packer and tubing. Set RBP at 5025' and packer at 4880'.
20. Pump the following acid job at no greater than 2 bbl/min:

Pre-flush	: 2350 gal 15% HCl
Treatment	: 2350 gal 35% ASOL, 65% (3% HF / 12% HCl) solution
After-flush	: 2350 gal 15% HCl
Displacement	: 900 gal 0.2% clay fix II / water

21. Reset RBP to 4510' and packer to 4240'.

October 5, 1993 (1st version)

22. Pump the following acid job at no greater than 2 bbl/min:

Pre-flush	: 3000 gal 15% HCl
Treatment	: 3000 gal 35% ASOL, 65% (3% HF / 12% HCl) solution
After-flush	: 3000 gal 15% HCl
Displacement	: 860 gal 0.2% clay fix II / water

23. TIH with open ended 2 3/8" tubing with a seating nipple one joint off bottom. Land tubing at 5015'
24. Swab back load ASAP.
25. Tie well back into surface equipment and return to production.

Note: All water which will contact the MV during this procedure should contain clay fix. Try to use clay fix throughout the entire procedure and avoid KCl water altogether.

KCl water, when in contact with HF acid, will form unwanted precipitates. The pre-flush will ensure that any downhole KCl is displaced prior to the pumping of HF acid.

All acid must contain 50 lb. of citric acid per 1000 gal. of solution to serve as an iron sequestering agent.

The time between pumping acid and swabbing back the load should be kept to a minimum.

Amoco Production Company

ENGINEERING CHART

Sheet No. Of

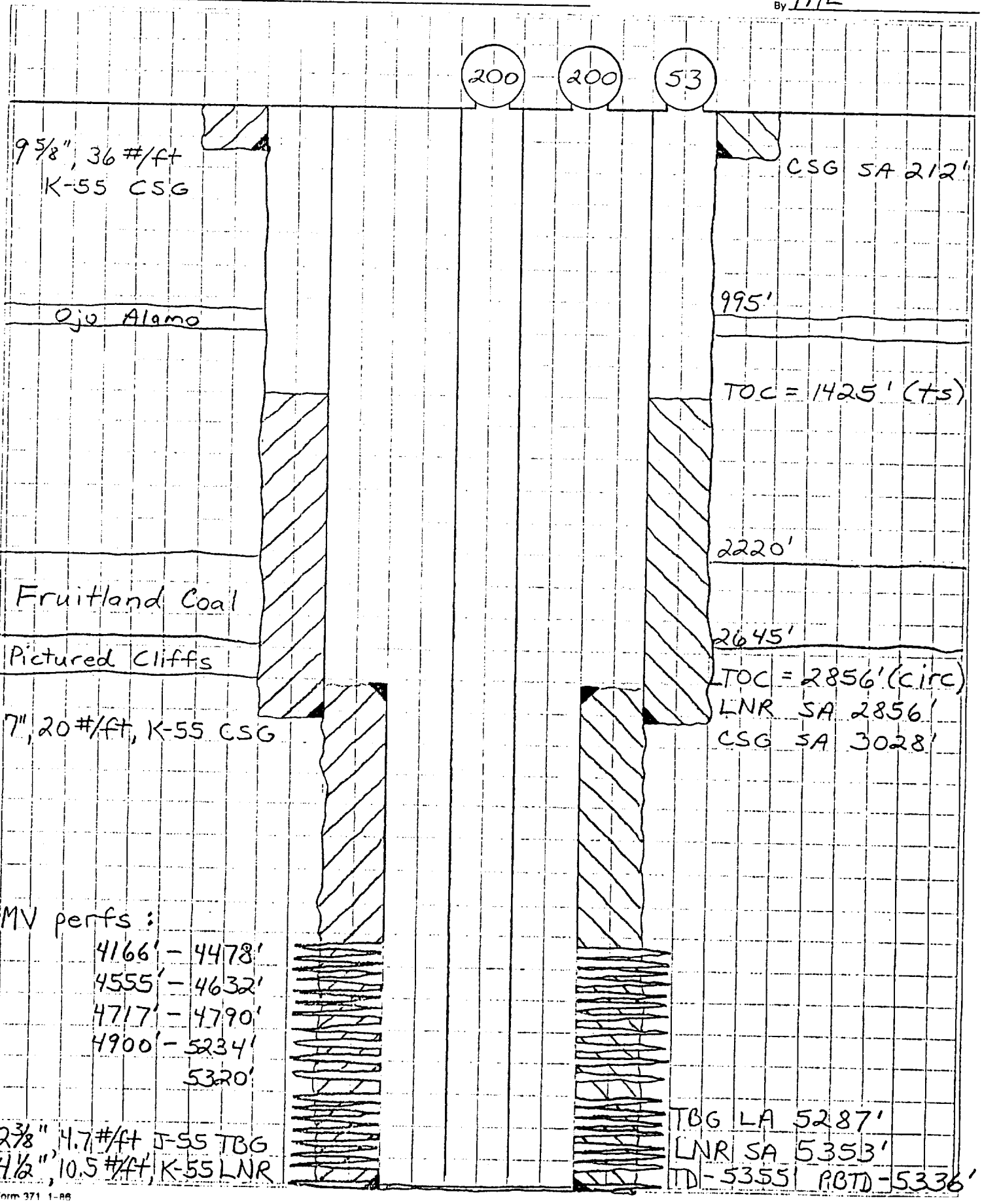
File

Appn

Date

By PAE

SUBJECT Mudge LS 9A



Form 371 1-86

BRADENHEAD TEST REPORT

of Test 8/11/93 Operator AMOCO PRODUCTION CO.

Lease Name MUDGE LS Well No. 9A Formation(s) MESA VERDE

S 03 Unit O Township 31 N Range 11 W

INITIAL PRESSURE (psi)

Well Status (Circle One) (SHUT-IN) FLOWING

No. of Casing Strings (Circle one) (TWO (Production and Surface)) THREE (Intermediate, Production and Surface)

Pressure: Tubing 203 (psi) Intermediate — (psi) Casing 203 (psi) Bradenhead 58 (psi)

INSTRUCTIONS FOR TESTING WELLS WITH TWO (2) CASING STRINGS:

A. *Open bradenhead to atmosphere.*
B. *Record casing pressure every 5 minutes.*
C. *Note characteristics of bradenhead flow.*
D. *Describe any water flow.*

INSTRUCTIONS FOR TESTING WELLS WITH THREE (3) CASING STRINGS:

A. *Open intermediate casing to atmosphere.*
B. *Record casing and bradenhead pressure every 5 minutes.*
C. *Note characteristics of intermediate flow.*
D. *Describe any water flow from the intermediate.*
Shut in intermediate valve.
E. *Open bradenhead to the atmosphere.*
F. *Record casing and intermediate pressures every 5 minutes.*
G. *Note characteristics of bradenhead flow.*
H. *Describe any water flow from the bradenhead.*

PRESSURE (psi)

Time	Bradenhead	Casing	Intermediate	Casing
5 min	0	203		
10 min	0	203		
15 min	0	203		
20 min				
25 min				
30 min				

FLOW CHARACTERISTICS

	Bradenhead	Intermediate
Steady Flow	✓	
Surges	✓	
Down to nothing		
No Flow		
Gas		
Water		
Gas & Water	✓	

DESCRIBE ANY WATER FLOW

	Bradenhead	Intermediate
Clear	X	
Fresh		
Salty		
Sulfur		
Black		
Muddy		

SAMPLE TAKEN

REMARKS:

BRADENHEAD BLEW DOWN IN 10 SECONDS - WATER FLOW STARTED 35 SECONDS LATER - FLOWED W/SURGES TO START WITH - INTO A STEADY 1" FLOW

DATE: 9/11/93

BY: [signature]