Form 3160-5 (June 1990)

## UNITED STATES DEPARTMENT OF THE INTERIOR RUREAU OF LAND MANAGEMENT

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

BUREAU OF LAND MANAGEMENT	5. Lease Designation and Serial No.		
DONEAU OF EARLY MARKOEMERY	*		
SUNDRY NOTICES AND REPORTS ON WELLS	SF-078095		
	6. If Indian, Allonee or Tribe Name		
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	1		
- The state of the	7. If Unit or CA, Agreement Designation		
SUBMIT IN TRIPLICATE	7. If Unit of CA, Agreement Designation		
i. Type of Well 「「Oil 「又」Gas 「」	8. Well Name and No.		
Well Well Other			
2. Name of Operator	Mudge LS 23		
Amoco Production Company Attn: John Hampton	9. API Well No.		
3. Address and Telephone No.	30 045 11078		
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)	Basin Dakota		
·	11. County or Parish, State		
1030' FNL, 1555' FEL Sec. 5, T31N-R11W	San Juan, New Mexico		
12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPO	ORT. OR OTHER DATA		
TYPE OF SUBMISSION TYPE OF ACTION	N		
Notice of Intent	Change of Plans		
Recompletion	New Construction		
□ <sup>30 20</sup> 00 7 2 1 1002 □ '	Non-Routine Fracturing		
	Water Shut-Off		
Final Abandonment Notice Cold. DIV. Casing Repair Altering Casing			
Final Abandonment Notice Altering Casing	Conversion to Injection		
DIST. 3 Nother BradenHead Repair	Dispose Water [Note: Report results of multiple completion on We		
	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 start	ting any proposed work. If well is directionally dri		
give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*			
Amoco intends to perform the attached workover procedure required t	o eliminate		
bradenhead pressure.	•		
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 comple	tion of this procedure.		
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If you have any questions please call Julie Acevedo at 303-830-6003.	# G		
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14. I hereby cortily that the foregoing is true and correct	APPROVED		
( Staff Admin Super	000		
Signed Title Sr. Staff Admin. Supv.	Date		
(This space for Federal or State office use)	A MAN		
• ·	10/1 <del>2</del> /		
Approved by Title Title Title NMOCD	AREA MANAGER		

## REMEDIAL CEMENT PROCEDURE MUDGE LS 23

- 1. MIRUSU.
- 2. Install BOP.
- 3. TOH with 2 3/8" tubing, lay down bull plug, perfed pup joint, and any bad joints.
- 4. Make a scraper run and clean out to PBTD (7710').
- 5. TIH with RBP and set at 7400'.
- 6. Run GR/CBL from RBP to 3100'. Determine TOC.
- 7. Pressure test casing to 6000 psi. If test fails, contact Paul Edwards in the Denver office.
- 8. TOH with RBP.
- 9. Load intermediate annulus with water.
- 10. Frac well down casing according to the attached procedure. Shut well in overnight.
- 11. Flow back frac fluid slowly until well dies.
- 12. TIH with 2 3/8" tubing including sawtooth collar and seating nipple. Clean out to PBTD, set tubing bottom at 7625' and continue to flow test the well.
- 13. Once sand entry into the wellbore has ceased, flow test the well and obtain steady gas and water production rates and the corresponding tubing and casing pressures.
- 14. At this point a decision will be made to keep the well or to plug it. If the decision is to keep the well, continue on; otherwise a PxA procedure will be forthcoming.
- 15. TIH with RBP and set at 7400'. Cap with 5 sacks of sand.
- 16. Blow down intermediate casing pressure.
- 17. Perf one squeeze hole 50'-100' above the TOC for the  $5 \frac{1}{2}$ " casing.
- 18. Establish circulation between the squeeze perf and the surface. Annular volume may be estimated using .01487 bbl/ft.
- 19. Conduct a cement squeeze by pumping 200 sacks of Halliburton light, with additives to help prevent cement from penetrating the highly fractured Mesaverde formation.
- 20. Drill out cement, pressure test to 500 psi, and resqueeze if necessary.
- 21. Determine free point of  $5 \frac{1}{2}$  casing.
- 22. TIH with string shot and back off of 5 1/2" casing 100'-200' above the 7 5/8" casing shoe at 3205'.
- 23. TOH with 5 1/2" casing. Inspect and replace any bad joints. Note any worthy findings of pipe condition.
- 24. Clean out hole to 5 1/2" casing top. Use casing scraper for 7 5/8" 26.4 lb/ft casing.
- 25. TIH with a 7 5/8" RBP and set just above 5 1/2" casing top. Cap with 5 sacks of sand.
- 26. Pressure test the 7 5/8" casing to 1000 psi.
- 27. If casing does not hold pressure, locate leak(s), and notify Paul Edwards in the Denver office before proceeding with any squeeze work.
- 28. Run a GR/CBL from the 5 1/2" casing top to surface. Make several passes if necessary at consecutively higher pressures if the bonding is not well defined.
- 29. TIH with a casing gun and perforate one hole 50'-100' above the TOC.
- 30. TIH with packer and set 200'-300' above the squeeze hole. Establish circulation to the surface until returns are clean; reverse circulate. Check volumes with a dye.
- 31. Conduct a cement squeeze by pumping 200% of the annular volume of Halliburton light cement. Note returns to surface
- 32. Release packer, TOH, and hold pressure on squeeze. WOC.
- 33. Drill out cement to RBP. Pressure test squeeze perfs and resqueeze if

- 35. TIH with 5 1/2" casing, a screw in joint and a DV tool. Screw into 5 1/2" casing top.
- 36. TOH with RBP at 7400'.
- 37. TIH with open ended 2 3/8" tubing, mule shoe, and seating nipple one joint off bottom. Land tubing at 7625'.
- 38. Return well to production.

Muda	Amoco Production Company  ENGINEERING CHART  TMUdge LS 23 DK			any	Sheet No. Of File	
UBJECT			410 410	740 (10)	By	
7%", 26.40 #/- J-55 CSG	ft_				Toc= Results of the second of	Cool
Perfs: 23/8", 4.7 #4+, 7 56", 17#4+, N	7655' J-55 786		0000	5280 Dako	saverde	SA 76% SA 772