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

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.
SF 078096

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 "A" #1

2. Name of Operator
Amoco Production Company ATTN: J.L. HAMPTON

9. API Well No.
30-045-23951

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

10. Field and Pool, or Exploratory Area
Basin Dakota

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
890' FSL, 1015' FWL "M" Sec.9, T31N,R11W

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 Sidetracking	☐ 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 intends to plug back the subject well from the Dakota formation and Recomplete into the Fruitland Coal formation per the attached sidetracking procedure.

Please contact Cindy Burton (303) 830-5119 if you have any questions.

RECEIVED
OCT 10 1991
OIL CON. DIV.
DIST. 3

14. I hereby certify that the foregoing is true and correct
Signed J.L. Hampton/ceb Title Sr. Staff Admin. Supervisor Date 9/27/91

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

SC Well Log for 102

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, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NMOCD

*See Instruction on Reverse Side

PROCEDURE
MUDGE /A/ 1 (Sidetrack)

9/20/91

1. MIRUSU
2. Kill well.
3. Clean out hole to PBTD. TOH.
4. Run a GR/CBL from PBTD to surface. Determine TOC for both 4 1/2" liner and 7" casing. Make additional passes at higher pressures if the TOC is unclear.
5. If TOC for the 4 1/2" liner is not above the Mesaverde, it will be necessary to conduct a block squeeze across the MV to ensure isolation. Contact office for squeeze procedure.
6. Set a continuous cement plug from PBTD to 3000'. Est. volume is 73 bbl.
7. If TOC for the 7" casing is not above the Fruitland Coal, it will be necessary to conduct a cement squeeze to bring cement above the coal and also to the surface. Contact office for squeeze procedure.
8. TIH with RBP and set at 30'.
9. RD wellhead and weld on a 4000# casing head for 7" casing. (Note: set at ground level).
10. NU tubing head and TIH with retrieving head and retreive RBP.
11. Modify location to accept a top set location.
12. TIH with whipstock and starting mill for 7" casing and set such that the top of the sidetracked window will be at 2700' (casing collar at 2696').
13. Commence cutting window with starting mill. Mill up lug bolt and TOH.
14. TIH with window cutting and watermellon mills and cut window plus 3-5' of formation. TOH.
15. TIH with taper and watermelon mills and elongate window and smooth out any burrs left in window. Mill 5'. TOH.
16. Drill out to a new TD of only 2748' with expected coal from 2718'-48'. Note: Mud logger is not necessary.
17. Run open hole procedure until coal stabilizes. If open hole proves unsuccesful, a fracture stimulation will be performed here. Contact office.
18. TIH with RBP and set at 2690'. Test RBP and casing to 3500 psi.
19. Run a cased hole neutron density / GR log from the RBP to 2350'.
20. Swab fluid level down to 1500' from surface.
21. TIH with a 4 1/2" casing gun and perforate the Fruitland Coal over the following intervals with 8 JSPF and 90 deg. phasing. Entry holes should be .5" in diameter or greater.

PERFORATE

2598' - 2605' 2562' - 68' 2504' - 08'

Please check these depths with the engineer and the results of step 19.

Depths are correlated from the Thermal Neutron Decay Time/CCL log dated June 10, 1980.

22. Rig up frac company, and frac well down casing at 60 BPM according to the attached schedule. Max treating pressure is 3500 psi.
23. Leave well shut in overnight.
24. TIH with mule shoe, seating nipple, and 2 3/8" tubing. Clean out to RBP, and slowly flow back load water from frac attempting to avoid sand production.
25. Once load water has been recovered, retrieve RBP.
26. If necessary, reset RBP at 30' and install the original wellhead.
27. Set bottom of tubing at 2700'.
28. Turn well over to production department.

FRACTURE STIMULATION PROCEDURE

Well Name : Mudge /A/ 1 Upper Stage Frac
Formation : Fruitland Coal
Frac down : 7" casing/liner.
Frac with : 40/70 & 20/40 mesh. Use Brady.
Packer set at : -

PERFORATIONS :

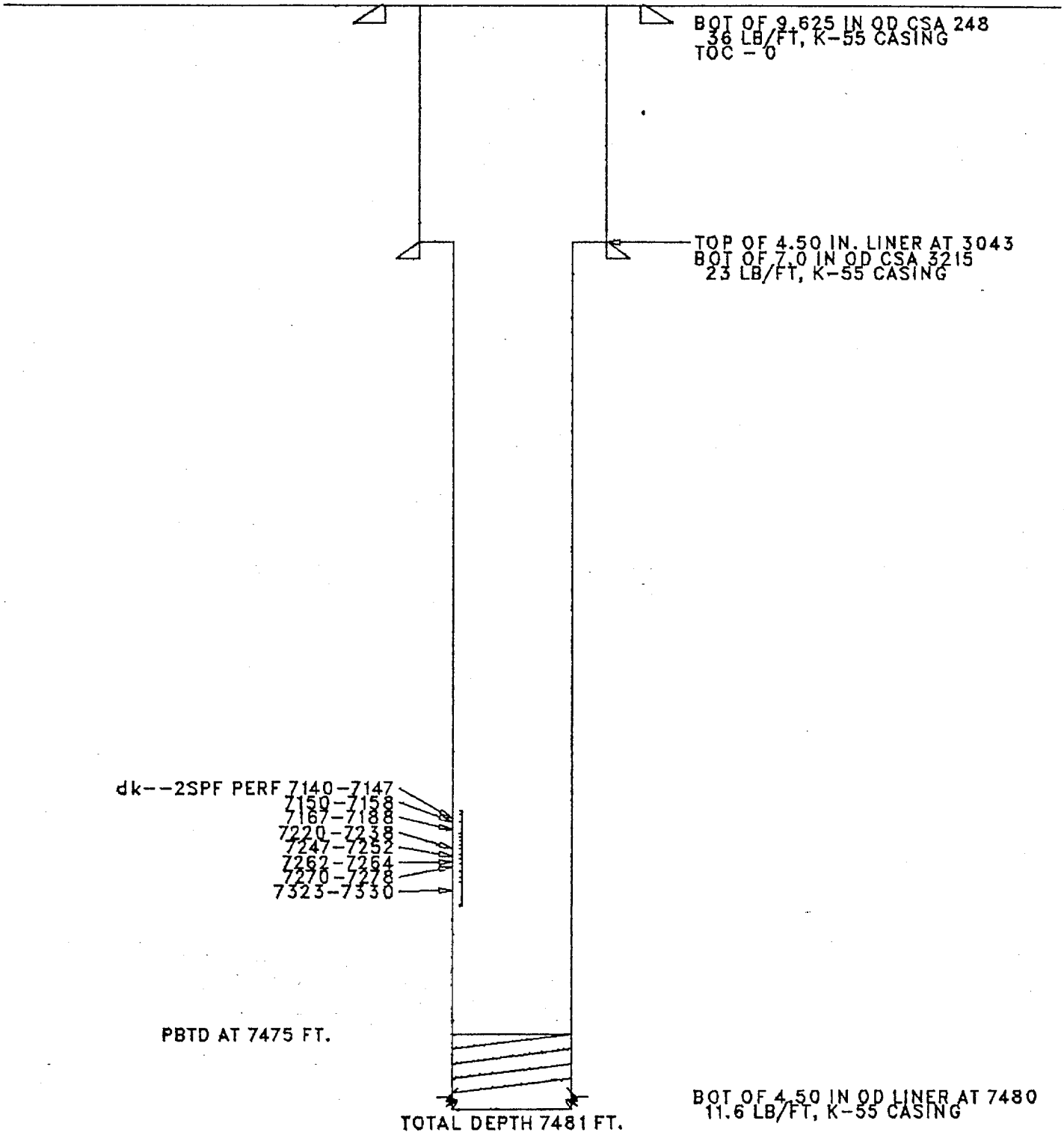
	INTERVALS top		bottom	FEET PERFED
top perf	2504	-	2508	4
	2562	-	2568	6
	2598	-	2605	7
		-		0
		-		0
		-		0
		-		0
		-		0
		-		0
		-		0
		-		0
		-		0
		-		0
		-		0
		-		0
		-		0
		-		0
	total feet of perforations			17

STAGE		FLUID TYPE (water)	FLUID VOLUME (gal.)	PROPPANT TYPE (mesh)	PROPPANT CONC. (ppg)	PROPPANT VOLUME (lb)	CUM. PROPPANT (lb)	BOTTOM HOLE RATE (bpm)
(pad)	1	slick	60,600	-	-	-	0	60
	2	slick	6,800	40/70	1	6,800	6,800	60
	3	slick	21,533	20/40	2	43,067	49,867	60
	4	slick	1,511	20/40	3	4,533	54,400	60
	5	slick	1,133	20/40	4	4,533	58,933	60
	6	slick	907	20/40	5	4,533	63,467	60
	7	slick	756	20/40	6	4,533	68,000	60
Total			93,000	gallons		68,000	lbs	

NOTE: All slick water used in this procedure should contain 0.75 gal / 1000 gal of Western FR-28 friction reducer or equivalent. No other additives are required.

Casing capacity = 0.0394 bbl/ft.
Liner capacity = bbl/ft. If no liner exists, leave blank.
Liner top = ft. If no liner exists, leave blank.
Casing vol. to top perf = 98.7 bbl.
Flush w/ 94 barrels of water

MUDGE A 001 237
Location - 9M- 31N-11W
SINGLE dk
Orig.Completion - 07/80
Last File Update - 1/89 by MSB



Cathodic Protection - N