

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-808597

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.  
Arnold Federal A #1

2. Name of Operator  
Amoco Production Company Attn: Lori Arnold

9. API Well No.

3. Address and Telephone No.  
P. O. Box 800, Denver, CO 80201 (303) 830-5651

10. Field and Pool, or Exploratory Area  
Basin Dakota, Wildcat PC

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
960 FNL 1190 FWL S 27 T 30N R 8W

11. County or Parish, State  
San Juan, New Mexico

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Plugging Back
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input checked="" type="checkbox"/> Other <u>APD Revision</u>
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> 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 requests your review of the attached casing, liner and cementing revisions to the application for permit to drill on the subject well.

If you have any questions or need more information please contact Lori Arnold at the number listed above.

RECEIVED  
AUG - 2 1993  
OIL CON. DIV  
DIST. 3

RECEIVED  
BLM  
93 JUL - 9 AM 11:46  
070 FARMINGTON, NM

14. I hereby certify that the foregoing is true and correct

Signed Lori Arnold Title Business Analyst Date 7/8/93

(This space for Federal or State office use)

Approved by \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_  
Conditions of approval, if any:

APPROVED

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.

JUL 12 1993  
DISTRICT MANAGER

Lease: Arnold Federal "A"  
County: San Juan, New Mexico  
Formerly Reference Well #11

Well No. 1  
Location: 960' FNL x 1190' FWL, Sec. 27, 30N-8W

Field: Basin Dakota

OBJECTIVE: Evaluate and develop Pictured Cliff, Mesa Verde and Dakota reserves.

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER		
TYPE OF TOOLS	DEPTH OF DRILLING	5,879 Est. GL Elev.		5,891 Est. KB Elev.
Rotary	0 - TD	Marker	Depth (ft)	SS Elev. (ft)
<b>LOG PROGRAM</b>		Ojo Alamo	1,879	4,012
Type	Depth Interval	Fruitland	2,251	3,640
DIL-CAL-NGT-GR	SFC to TD	Pictured Cliffs *	2,651	3,240
FDC-CNL	SFC to TD	Lewis Shale	2,780	3,111
MICROLOG	TD + 1000'	Cliff House	4,394	1,497
MRI	ICP to Top Fruitland	Menefee	4,518	1,373
		Point Lookout	4,850	1,041
		Mancos Shale	4,971	920
		Greenhorn	6,870	(979)
		Dakota #	6,980	(1,089)
		<b>TOTAL DEPTH:</b>	<b>7,330</b>	<b>(1,439)</b>

REMARKS:  
Magnetic Resonance Image (MRI), pulls at 7'/min.  
(409) 836 - 2955 (Numar, Brenham District).

# Probable completion interval  
\* Possible pay.

SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE	DEPTH INTERVAL, ETC	FREQUENCY	DEPTH	FREQUENCY	DEPTH
None		20'	6980' - TD	Geologist	0 - TD

Remarks:  
Mudlogging Program:  
Mudlogger to monitor chromatograph 100' above Cliff House to TD.  
Full one man mudlogging services for Dakota Mud Up to TD.

MUD PROGRAM:					
Approx Interval	Type Mud	Weight, #/gal	Vis, sec/qt	W/L, cc's/30 min	
0' - 400'	SPUD	8.5 - 9.0	Sufficient to clean hole and maintain hole conditions for logs.		
400' - INT CSG	LSND	8.8 - 11.0			
INT CSG- T. Dakota	AIR	-			
T. Dakota - TD	LSND	9.5 - 10			

REMARKS:  
\* Use minimum mud weight to control formation pressures.

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CASING PROGRAM:				
Casing String	Estimated Depth (ft)	Casing Size	Hole Size	Landing Point, Cement, Etc
Conductor				
Surface	400	13-3/8"	17-1/2"	1,2
Intermediate	2,930	9-5/8"	12-1/4"	1,2,3
Protective	6,890	7"	8-3/4"	2,4
Production	7,330	4-1/2"	6-1/4"	2,5

- Remarks:
1. Circulate cement to surface.
  2. Southern Rockies Drilling Team to design cement programs.
  3. Casing set 100' - 150' into Lewis Shale.
  4. Casing set 20' into Greenhorn Limestone.
  5. Casing set 50' into Morrison.

GENERAL REMARKS:  
Southern Rockies Dakota Engineer to design completion program.

REVISED FOR LARGER CASING PROGRAM & TO ADD MRI LOG.

Form 46 Reviewed by:	Logging program reviewed by:	APPROVED:	APPROVED:
PREPARED BY: F. Seidel/R. Gierhart/H. TerBest Form 46 7-84bw	APPROVED: <i>J. R. Pantalis</i> For Production Dept	<i>7/8/93</i> <i>ZuS</i>	For Exploration Dept

RW #11

Amoco proposes to drill the well to further develop the Dakota reservoir. The well will be drilled to the surface casing point using native mud. The well will then be drilled to the intermediate casing point with a non-dispersed mud system. The protective hole will be drilled with air to the top of the Greenhorn where protective casing will be set. The production hole will be drilled with a non-dispersed mud system to TD.

Surface Casing:

Quantity (ft)	Size (in)	Weight (ppf)	Description	Cement program
400	13.375	68	J-55, ST&C	625 cf Class B, 2% CaCl2 + 0.25 #/sx Flocele. 1.18 cf/sx, 15.6 ppg

Hole size 17.5", 125% excess, circulate cement to surface.

Intermediate Casing:

Quantity (ft)	Size (in)	Weight (ppf)	Description	Cement program
2930	9.625	36	J-55, LT&C	* 2 stage

\* 1st Stg Tail: 537 cf Class B, 0.4% CFR-3, 0.4% Halad 344, 5 #/sx Gilsonite, + 0.25 #/sx Flocele. 1.29 cf/sx, 15.11 ppg.

Top of Fruitland Coal 2251 ft  
Stage tool depth 2151 ft, 100' above top of Fruitland Coal.

\* 2nd Stg Lead: 1353 cf Class B, 65:35:6, 7 #/sx salt, 0.375 #/sx Flocele, 5% Calseal, 2% Microbond. 1.8 cf/sx, 13.0 ppg.

\* 2nd Stg Tail: 129 cf Class B, 0.4% CFR-3, 0.4% Halad 344, 5 #/sx Gilsonite, + 0.25 #/sx Flocele. 1.29 cf/sx, 15.6 ppg.

Hole size 12.25", 120% excess, circulate cement to surface.

Protective Casing:

Quantity (ft)	Size (in)	Weight (ppf)	Description	Cement program
6890	7	23	J-55, LT&C	* 2 stage

\* 1st Stg Tail: 720 cf Class B, 50/50 poz, 2% gel, 0.4% Halad 413, 0.1% SCR 100, 5 #/sx Gilsonite, 5% Microbond HT, 0.4% VersaSet, 0.25 #/sx Flocele. 1.35 cf/sx, 13.4 ppg.

Top Picture Cliffs 2651 ft Est Top Cmt 2551  
Top of Mesa Verde 4394 ft  
Stage tool depth 3894 ft, 500' above top of Mesa Verde.

\* 2nd Stg Tail: 295 cf Class B, 50/50 poz, 2% gel, 0.4% Halad 413, 5 #/sx Gilsonite, 5% Microbond HT, 0.4% VersaSet, 0.25 #/sx Flocele. 1.35 cf/sx, 13.4 ppg.

Hole size 8.75", 60% excess, circulate cement to surface.

Production Liner:

Quantity (ft)	Size (in)	Weight (ppf)	Description	Cement program
540	4.5	11.6	N-80, LT&C	* single stage

\* 1st Stg Tail: 108 cf Class G, 35% SSA 1, 1.0% CFR 3, 0.5% Halad 24, 0.25 #/sx Flocele. 1.56 cf/sx, 15.6 ppg.

Estimated Total Depth 7330 ft  
Estimated Top of Liner 6790 ft 100' overlap into intermediate casing.

Hole size 6.25", 60% excess, tie cement back.

BY: FRANK SEIDEL/BARRY PEISER 07/08/93  
= input depths from form 46 in shaded areas to calculate cement volumes.  
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