Form 3160-5 (June 1990)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

KICENYÉD DLM /

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

Expires: March 31, 1993

BUREAU OF L	AND MANAGEMENT	5. Lease Designation and Serial No.
Do not use this form for proposals to dril	AND REPORTS ON WELLS I or to deepen or reentry to a different reservoir. PERMIT—" for such proposals	SF-078147 6. If Indian, Allottee or Tribe Name
	IN TRIPLICATE	7. If Unit or CA, Agreement Designation
Type of Well Oil Oil Well Other Name of Operator Amoco Production Company Address and Telephone No. P.O. Box 800, Denver, Colorado Location of Well (Footage, Sec., T., R., M., or Survey De		8. Well Name and No. Moore LS 4R 9. API Well No. 3CC45292C 10. Field and Pool, or Exploratory Area Blanco Mesaverde 11. County or Parish, State San Juan, New Mexico
2. CHECK APPROPRIATE BOX(S	s) TO INDICATE NATURE OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION	TYPE OF ACTION	
Notice of Intent Subsequent Report	Abandonment Recompletion Plugging Back	Change of Plans New Construction Non-Routine Fracturing
Final Abandonment Notice	Casing Repair Altering Casing Other Complete APD	Water Shut-Off Conversion to Injection Dispose Water (Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)
Amoco Production Company	al depths for all markers and zones pertinent to this work.)* requests your approval of the a ete the sundry sent on 4/20/95.	ttached casing
		MAY 1 5 1995 DIV. DIL COM. DIV. DIST. 9
14. I hereby ceruify that the foregoing is true and correct	Title Sr. Staff Admin.	Date 5/5/95
(This space for Federal or State office use) Approved by Conditions of approval, if any:	Title	AP"PROVED

CEMENTING PROGRAM

Moore LS #4R

Well Name: N

Moore LS #4R

1070' FNL X 1430' FEL, Sec 23, T32N, R12W

San Juan

County:

Cementing Program:

Location:

New Mexico

Field:

API No.

30-045-29200

Well Flac

Formation:

Mesa Verde

KB Elev. (est.)

6290 ft.

GL Elev. (est.) 6278 ft.

Casing Progra	m:							
Casing String	Est. Depth	Hole Size	Casing Size	Casing Weight	Casing Grade	Thread	TOC	
	(ft.)	(in.)	(in.)	(lb/ft.) .			(ft.)	
Conductor	50	12.25	8.625	24	J-55	8R, ST&C	Surface	
Surface	3,265	7.88	5.500	14	J-55	8R, ST&C	Surface	
Production	5,450	4.75	2.875	6.5	N-80	8R, EUE	3000	
Casing Proper	ties: (No Safety Fa	ctor Included)					
Casing String	Casing Weight	Burst	Collapse	Joint St.	Capacity	Torque(ft. lbs.)	Drift
	(lb/ft.)	(psi.)	(psi.)	(1000 lbs.)	(bbl/ft.)	Opt/Mi	n/Max	(in.)
Conductor	24	2950.00	1370	244	0.0636			7.972
Surface	14	4270	3120	172	0.0244			6.241
Production	6.4	10570	11160	144	0.00579			2.347

Mud Program	1:			
Apx. Interval	Mud Type	Mud Weight	Recommend	ed Mud Properties Prior Cementing:
(ft.)		(lb/gal)	PV	<20
			YP	<10
0 - SCP	Spud	8,6-9.2	Fluid Loss	<15
SCP - TD	Air/Gas	NA		

Cellienting Frogram.	Surface	Production
Excess %, Bit	60	30
Excess %, Caliper	NA	20
BHST (est. deg. F)	100	140
Pipe Movement	NA	NA
Rate, Max. (bpm)	6	. 4
Rate, Recommended (bpm)	6	4
Pressure, Max. (psi)	200	2000
Shoe Joint	80	40
Batch Mix	NA	NA
Circulating prior emtng (hr.)	1.5	1
Time Between Stages,(hr.)	NA	NA
Special Instructions	1,6,8	2,4,6

- 1 Do not wash pumps and lines
- 2 Wash pumps and lines.
- 3 Do not reverse out
- 4 Run Blend Test on Cement
- 5 Record Rate , Pressure, and Density on 3.5" disk
- 6 Confirm densometer with pressurized mud scales
- 7 1" cement to surface if cement is not circulated.
- 8 If cement is not circulated to the surface, run temp. survey 10-12 hr. after landing plug.

Notes:

- *** Displace top plug on the production casing job with 0.2% Clay Fix II or 2% KCI water.
- *** Do not wash up on top of plug. Wash pumps and lines. We want to do rig less completions.

Form 3160-5 (June 1990)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT STATES

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

	MCGCIATA		
SUNDRY NOTICES AND		6. Lease Designati	on and Serial No. SF-078147
Do not use this form for proposals to drill or to Use "APPLICATION FOR PERI	and the second s	6. If Indian, Allotte	
	OTO FIGURINATION, I	7. If Unit or CA,	Agreement Designation
I. Type of Well Oil Well Well Other		8. Well Name and	No.
2. Name of Operator	Attention:	Moore	LS 4R
Amoco Production Company	Julie L. Acevedo	9. API Well No.	-77 - 111
3. Address and Telephone No.			2004520200
P.O. Box 800, Denver, Colorado 80201			3004529200 , or Exploratory Area
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)		В	lanco Mesaverde
1170FNL 1430FEL Sec	. 23 T 32N R 12W	11. County or Par	
		San .	Juan New Mexico
2. CHECK APPROPRIATE BOX(s)	TO INDICATE NATURE OF NO	TICE, REPORT, OR	OTHER DATA
TYPE OF SUBMISSION	TYPE OF		
THEOLOGISTON	1112.01	AOTION	
Notice of Intent	Abandonment	Change of Plans	
Motice of ment	Recompletion	New Construction	
Subsequent Report	Plugging Back	Non-Routine Fractu	ring
	Casing Repair Altering Casing	Water Shut-Off	
Final Abandonment Notice	Other	Conversion to Inject	tion
	Other	/Note: Report results of multiple	completion on Well Completion or
		Recompletion Report and Log fo	
13. Describe Proposed or Completed Operations (Clearly state all pertinen subsurface locations and measured and true vertical depths for all m		ate of starting any proposed work	. If well is directionally drilled, give
Amoco Production Company requests your a	pproval of the attached casing and ce	menting revisions for t	he application for permit
to drill approved on October 26, 1994.		· ·	
1			
14. I hereby certify that the foregoing is true and correct			
11.10	C- 1	Staff Appintant	04-20-1995
Signed July & Mareour	Title Sr. 3	Staff Assistant	Date 04-20-1999
This space for Foderal or State office use)			
//			
v			OVEN
Approved by	Title	A	POVED

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, jecticing

representations as to any matter within its jurisdiction.

AMOCO PRODUCTION COMPANY

DRILLING and COMPLETION PROGRAM

.ease:							
	Moore LS	Mana 44 and a		Well No.	#4R		
ounty: ormer name:	San Juan	New Mexico		Surface Location: Field:	10/0 FNL & 1430	" FEL of Section 23, T3	2N, K12W
BJECTIVE:	Single MV				-144		
ETHOD OF DRIL				APPROXIMATE DEPTI	IS OF GEOLOGICA	L MARKER	
YPE OF TOOLS		DEPTH OF DRILLIN	1G	Actual GLEstima		6278	6290
otary		Ground Level - T	D	Marker		Depth (ft.)	SS Elev. (ft.)
OGGING PROC	SRAM			Ojo Alamo			
YPE			DEPTH	Kirtland		2,057	4,233
and Hala OD and	h.		Lewis to TD	Fruitland Coal		2,250	4,040
ased Hole GR onl	ly.		Lewis to 1D	PC Lewis Shale		2,765	3,525
				Cliff House *		3,115 4,550	3,175 1,740
				Menefee Shale *		4,650	1,640
				Point Lookout *		5,075	1,215
ogging Program R	Remarks:			Mancos			,
				Gallup		ĺ	
				Greenhorn			
				Dakota			
				TOTAL DEPTH		5,450	840
				* Possible pay			
				**Probable completion Ojo Alamo is possible u	nabla water		
PECIAL TESTS	S			DRILL CUTTING SA	Sable Water	DRILLING TI	ve
YPE	-	DEPTH INTERVAL	ETC	FREQUENCY	DEPTH	FREQUENCY	WE DEPTH
one				None		Geolograph	Surf - TD
				Remarks:		 	
emarks:				Mud Logging Program:	None		
				Coring Program:	None		
IUD PROGRAM							
Approx. Interval	Type Mud		Weight, #/gal	Vis, sec/qt		W/L, cc's/30 min.	
50' - 3265' (1) (2) 3265' - TD (3) Mud Program Rem			8.6 - 9.2	Sufficient to clean hole		N/C	***************************************
265' - TD (3) fud Program Rem - The hole will rec - If required to me	Air/Gas narks: quire sweeps to kee ud up, mud up with	a LSND designed for ge	water drilling. Let	Sufficient to clean hole hole conditions dictate frequ API WL between 10 -15.	lency.	N/C	
tud Program Rem - The hole will rec - If required to mo	Air/Gas narks: quire sweeps to kee ud up, mud up with ud up, mud up with	a LSND designed for ge	water drilling. Let	nole conditions dictate frequ	ency.	N/C	
ud Program Rem - The hole will red - If required to me	Air/Gas marks: quire sweeps to kee ud up, mud up with ud up, mud up with	a LSND designed for gr a LSND designed for gr	water drilling. Let bod hole cleaning, bod hole cleaning,	nole conditions dictate frequ API WL between 10 -15.			
lud Program Rem - The hole will red - If required to me - If required to me	Air/Gas narks: quire sweeps to kee ud up, mud up with ud up, mud up with	a LSND designed for gr a LSND designed for gr	water drilling. Let	nole conditions dictate frequ	lency. Landing Point, Ce		
tud Program Rem - The hole will rec - If required to me - If required to me - If required to me	Air/Gas marks: quire sweeps to kee ud up, mud up with ud up, mud up with	a LSND designed for gr a LSND designed for gr	water drilling. Let bod hole cleaning, bod hole cleaning,	nole conditions dictate frequ API WL between 10 -15. Hole Size			
ud Program Rem - The hole will rec - If required to me - If required to me - If sequired to me - If sequired to me	Air/Gas narks: quire sweeps to kee ud up, mud up with ud up, mud up with RAM: Estimated Depth	a LSND designed for gr a LSND designed for gr	water drilling. Let bood hole cleaning, bood hole cleaning,	nole conditions dictate frequ API WL between 10 -15.			
tud Program Rem - The hole will rec - If required to me - If required to me - If required to me - If reduired to me - If reduired to me - If reduired to me	Air/Gas marks: quire sweeps to kee ud up, mud up with ud up, mud up with RAM: Estimated Depth	a LSND designed for gr a LSND designed for gr	water drilling. Let bood hole cleaning, bod hole cleaning, Casing Size 8-5/8"	hole conditions dictate frequ API WL between 10 -15. Hole Size 12.25"	Landing Point, Ce		
Aud Program Rem - The hole will red - If required to me - Casing Program - Circulate cemen - Set casing 150'	Air/Gas narks: quire sweeps to kee ud up, mud up with ud up, mud up with Estimated Depth 50 3,265 5,450 emarks: nt to surface. into the Lewis Sha	a LSND designed for g	water drilling. Let bood hole cleaning, bood hole cleaning, Casing Size 8-5/8" 5-1/2" 2-7/8"	nole conditions dictate frequ API WL between 10 -15. Hole Size 12.25" 7.875"	Landing Point, Ce		
ud Program Rem - The hole will rec - If required to me - If required to me - If required to me - ASING PROGRASING String - Conductor urface - reduction - Set casing 150' - Circulate cement	Air/Gas harks: quire sweeps to kee ud up, mud up with ud up, mud up with Estimated Depth 50 3,265 5,450 emarks: nt to surface. into the Lewis Sha nt at least 200' into	a LSND designed for grant LSND	water drilling. Let bood hole cleaning, bod hole cleaning, Casing Size 8-5/8" 5-1/2" 2-7/8"	nole conditions dictate frequ API WL between 10 -15. Hole Size 12.25" 7.875"	Landing Point, Ce		
iud Program Rem - The hole will rec - If required to me - ASING PROGRATION - Casing String - Conductor - Circulate cemen - Set casing 150' - Circulate cemen	Air/Gas harks: quire sweeps to kee ud up, mud up with ud up, mud up with Estimated Depth 50 3,265 5,450 emarks: nt to surface. into the Lewis Sha nt at least 200' into	a LSND designed for grant LSND	water drilling. Let bood hole cleaning, bod hole cleaning, Casing Size 8-5/8" 5-1/2" 2-7/8"	nole conditions dictate frequ API WL between 10 -15. Hole Size 12.25" 7.875"	Landing Point, Ce		
ud Program Rem - The hole will rec - If required to me - If required to me - If required to me - ASING PROGRA - ASING PROGRA - Circulate cemer - Set casing 150' - Circulate cemer - Set casing 150' - Circulate cemer	Air/Gas harks: quire sweeps to kee ud up, mud up with ud up, mud up with Estimated Depth 3,265 5,450 emarks: ht to surface. into the Lewis Sha ht at least 200' into	a LSND designed for grant LSND	water drilling. Let bood hole cleaning, bod hole cleaning, Casing Size 8-5/8" 5-1/2" 2-7/8"	hole conditions dictate frequence API WL between 10 -15. Hole Size 12.25" 7.875" 4.75"	Landing Point, Ce	ernent, Etc	
ud Program Rem The hole will rec If required to me ASING PROGRAMING PROGRAMING PROGRAMING String CONTROLLED TO THE CONTR	Air/Gas harks: quire sweeps to kee ud up, mud up with ud up, mud up with Exam: Estimated Depth 50 3,265 5,450 emarks: nt to surface. into the Lewis Sha nt at least 200' into	a LSND designed for grant LSND	water drilling. Let bood hole cleaning, bood hole cleaning, Casing Size 8-5/8" 5-1/2" 2-7/8"	hole conditions dictate frequence API WL between 10 -15. Hole Size 12.25" 7.875" 4.75"	Landing Point, Ce		
tud Program Rem - The hole will rec - If required to me - ASING PROGRETATION - Casing String - Conductor - Casing Program Rec - Circulate cemen - Set casing 150' - Circulate cemen	Air/Gas harks: quire sweeps to kee ud up, mud up with ud up, mud up with Exam: Estimated Depth 50 3,265 5,450 emarks: nt to surface. into the Lewis Sha nt at least 200' into	a LSND designed for grant LSND	water drilling. Let bood hole cleaning, bod hole cleaning, Casing Size 8-5/8" 5-1/2" 2-7/8"	nole conditions dictate frequence API WL between 10 -15. Hole Size 12.25" 7.875" 4.75"	Landing Point, Ce	ernent, Etc	

Version No. 2 04/17/95 559A2.XLS

CEMENTING PROGRAM

Moore LS #4R

Well Name:

Moore LS #4R

Location:

1070' FNL X 1430' FEL, Sec 23, T32N, R12W

San Juan

County: State:

New Mexico

Field:

API No.

30-045-29200

Well Flac

Formation: Mesa Verde

KB Elev. (est.)

NA

2,4,6

6290 ft.

6279 ft

G	L	Ele	٧.	(esi	t.)	
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Casing Progra	m:		Total di e e e e e e e e e e e e e e e e e e					
Casing String	Est. Depth	Hole Size	Casing Size	Casing Weight	Casing Grade	Thread	TOC	
•	(ft.)	(in.)	(in.)	(lb/ft.)			(ft.)	
Conductor	50	12.25	8.625	24			Surface	
Surface	3,265	7.88	5.500	14			Surface	
Production	5,450	4.75	2.875	6.5	N-80	8R, EUE	3000	
Casing Proper	ties:	(No Safety Fac	ctor included)		······································		2	
Casing String	Casing Weight	Burst	Collapse	Joint St.	Capacity	Torque(ft. lbs.)	Drift
	(lb/ft.)	(psi.)	(psi.)	(1000 lbs.)	(bbl/ft.)	Opt/Mi	n/Max	(in.)
Conductor	24	•	•	•		•		7.972
Surface	14							6.241
Production	6.4	10570	11160	144	0.00579			2.347
Mud Program Apx. Interval		Mud Weight		Recommended	I Mud Properties	Prior Cament	ina:	
(ft.)	widd Type	(lb/gal)		PV	<20	THOI COMON	iii Hi	
(14.)		(ID) gail)		YP	<10			
O - SCP	Spud				< 10			
		8.6-9.2		Fluid Loss	<15			
SCP - TD	Air/Gas	8.6-9.2 NA		Fluid Loss				
	Air/Gas							
	Air/Gas		Surface	Fluid Loss	<15	in the second of		
Cementing Pr	Air/Gas ogram:		Surface 60	Fluid Loss	<15 Production			
Comenting Pr	Air/Gas ogram:		Surface 60 NA	Fluid Loss	<15			
Cementing Pr Excess %, Bi Excess %, Ca	Air/Gas ogram: t		60	Fluid Loss	<15 Production 30			
Cementing Pr Excess %, Bi Excess %, Ca BHST (est. de	Air/Gas ogram: t sliper eg. F)		60 NA	Fluid Loss	Production 30 20			
Cementing Pr Excess %, Bi Excess %, Ca BHST (est. do Pipe Moveme	Air/Gas ogram: t aliper ag. F) nt		60 NA 100	Fluid Loss	<15 Production 30 20 140			
Cementing Pr Excess %, Bi Excess %, Ca BHST (est. do Pipe Moveme Rate, Max. (b	Air/Gas ogram: t sliper eg. F) nt opm)		60 NA 100 NA	Fluid Loss	Production 30 20 140 NA			
Cementing Pr Excess %, Bi Excess %, Ca BHST (est. do Pipe Moveme Rate, Max. (b Rate, Recomi	Air/Gas ogram: teliper eg. F) nt pm) mended (bpm)		60 NA 100 NA 6	Fluid Loss	Production 30 20 140 NA 4			
Cementing Pr Excess %, Bi Excess %, Ca BHST (est. do Pipe Moveme Rate, Max. (b Rate, Recomi Pressure, Ma	Air/Gas ogram: teliper eg. F) nt pm) mended (bpm)		60 NA 100 NA 6 6	Fluid Loss	Production 30 20 140 NA 4 4			
	Air/Gas ogram: teliper eg. F) nt pm) mended (bpm)		60 NA 100 NA 6 6 200	Fluid Loss	Production 30 20 140 NA 4 4 2000			

- 1 Do not wash pumps and lines
- 2 Wash pumps and lines.
- 3 Do not reverse out

Time Between Stages,(hr.)

Special Instructions

- 4 Run Blend Test on Cement
- 5 Record Rate, Pressure, and Density on 3.5" disk
- 6 Confirm densometer with pressurized mud scales
- 7 1" cement to surface if cement is not circulated.
- 8 If cement is not circulated to the surface, run temp. survey 10-12 hr. after landing plug.

NA

1,6,8

Notes:

^{***} Displace top plug on the production casing job with 0.2% Clay Fix II or 2% KCI water.

^{***} Do not wash up on top of plug. Wash pumps and lines. We want to do rig less completions.

Moore LS #4R

Conductor:

Preflush

10 bbl.

Fresh Water

Slurry 1

TOC@Surface

30 sk

Standard Cement

+ 2% CaCl2 (not mixed)

or 1.5 cu. yard Ready Mix

Slurry Properties:

density

(lb/gal)

yield (ft3/sk)* water

slurry 1

15.60

(gal/sk)

1.18

5.20

Casing Equipment:

(Halliburton) 8 5/8", 8R, ST&C

1 Top Wooden Plug

Surface:

Preflush

20 bbl. 20 bbl.

Mud Flush

Fresh Water + dye marker

Lead

Slurry 1

50/50 Standard Cement/Blended Silicalite

776 cu. ft.

129 cu. ft.

36 cu. ft.

TOC@Surface

+ 02% gel (total) + 0.5% Versaset

+ 0.4% Halad-344

+ 02% CaCl2

+ 1/4 lb/sk flocele

Tail

slurry 2

100 sk

Standard Cement

+ 0.4% Halad-344

+ 0.4% CFR-3

+ 2.0% Microbond + 5 lb/sk gilsonite

+ 1/4 lb/sk flocele

Slurry Properties:

density

(lb/gal)

yield (ft3/sk)

water (gal/sk)

slurry 1 slurry 2

12.00

15.11

2.03 1.29

11.45 5,40

Casing Equipment:

(Halliburton) 5 1/2", 8R, ST&C

1 Type Regular Guide Shoe

1 Super Seal II Float Collar

1 Weld A

14 S-4 Centralizer

1 ea. on 1st 12 joints, 1 ea. above and below Ojo Alamo

1 Top Rubber Plug

Version No. 2 04/17/95 559A2.XLS

CEMENTING PROGRAM

Moore LS #4R

blp

229 cu. ft.

Production:

Preflush

10 bbl. 05 bbl.

Chemical Wash Fresh Water

Lead Cement

Slurry 1

TOC @ 3000 ft.

50/50 Std. Cmt/Poz A

+ 2% gel (total)

+ 5 lb/sk gilsonite

+ 0.4% Halad-344

+ 1/4 lb/sk flocele

Slurry Properties:

density (lb/gal) yield (ft3/sk)

water (gal/sk)

slurry 1

13.50

1.32

5.59

Note:

The job should be pumped at 4 bpm max rate. Do not exceed 2 bpm on displacement. Slow to 2 bpm for the displacement. Displace with 2% KCl or 0.2% Clay Fix II water.

This is to be a rigless completion. Wash pumps and lines before displacing.

Casing Equipment:

Halliburton

2 7/8", 8R, EUE, (no need to cut long pin)

1 Super Seal II Float Shoe

10 S-4 Fluidmaster Centralizer

1 Lock Clamp

1 Weld A

1 Omega Latch Down Plug and Baffle