

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

30-045-27644

RECEIVED

FEB 16 1990

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL

1b. TYPE OF WELL
GAS

2. OPERATOR
SOUTHLAND ROYALTY CO.

3. ADDRESS & PHONE NO. OF OPERATOR
P O BOX 4289
FARMINGTON, NM 87499

4. LOCATION OF WELL
1150'S 1670'W

5. LEASE NUMBER
SF-078040A

6. IF INDIAN, ALL. OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
LAWSON

9. WELL NO.
1R

10. FIELD, POOL, OR WILDCAT
BLANCO MESA VERDE

11. SEC. T. R. M OR BLK.
✓ SEC. 12 T31N R11W NMPM

14. DISTANCE IN MILES FROM NEAREST TOWN
3 MILES SW OF CEDAR HILL

12. COUNTY
SAN JUAN

13. STATE
NM

15. DISTANCE FROM
PROPOSED LOCATION 1150'
TO NEAREST PROPERTY
OR LEASE LINE.

16. ACRES IN LEASE
360

17. ACRES ASSIGNED TO WELL
w/ 320.00

18. DISTANCE FROM
PROPOSED LOCATION
TO NEAREST WELL DR. 800'
COMPL., OR APPLIED
FOR ON THIS LEASE.

19. PROPOSED DEPTH
5300'

20. ROTARY OR CABLE TOOLS
ROTARY

21. ELEVATIONS (DF, FT, GR, ETC.)
5815'GL

22. APPROX. DATE WORK WILL START

23. PROPOSED CASING AND CEMENTING PROGRAM

*SEE OPERATIONS PLAN

24. AUTHORIZED BY: [Signature]
REG. DRILLING ENGR.

2/15/90
DATE

PERMIT

RECEIVED

APPROVAL DATE

APPROVED

APPROVED BY MAR 16 1990

TITLE

DATE

AS AMENDED

OIL CON. DIV.]

MAR 12 1990

NOTE: THIS PERMIT IS ISSUED IN LIEU OF US BLM FORM 3160-3.

AREA MANAGER

Submit to Appropriate
District Office
State Leases - 4 copies
Fee Leases - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

RECEIVED

FEB 16 1990

BUREAU OF LAND MANAGEMENT
SANTA FE, NEW MEXICO

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Southland Royalty Co.			Lease Lawson		Well No. 1R
Unit Letter N	Section 12	Township 31 North	Range 11 West	County San Juan	
Actual Footage Location of Well: 1150 feet from the South line and 1670 feet from the West line					
Ground level Elev. 5815'		Producing Formation Mesa Verde		Pool Blanco Mesa Verde	Dedicated Acreage 320.00 Acres

- Outline the acreage dedicated to the subject well by colored pencil or inkline marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?
☒ Yes ☐ No If answer is "yes" type of consolidation I-SEC No. 922(3-25-52) amended
If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) (11-22-78)
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Peggy Bradfield
Signature

Peggy Bradfield
Printed Name

Position

Regulatory Affairs

Company

Southland Royalty

Date

1-9-90

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes or actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

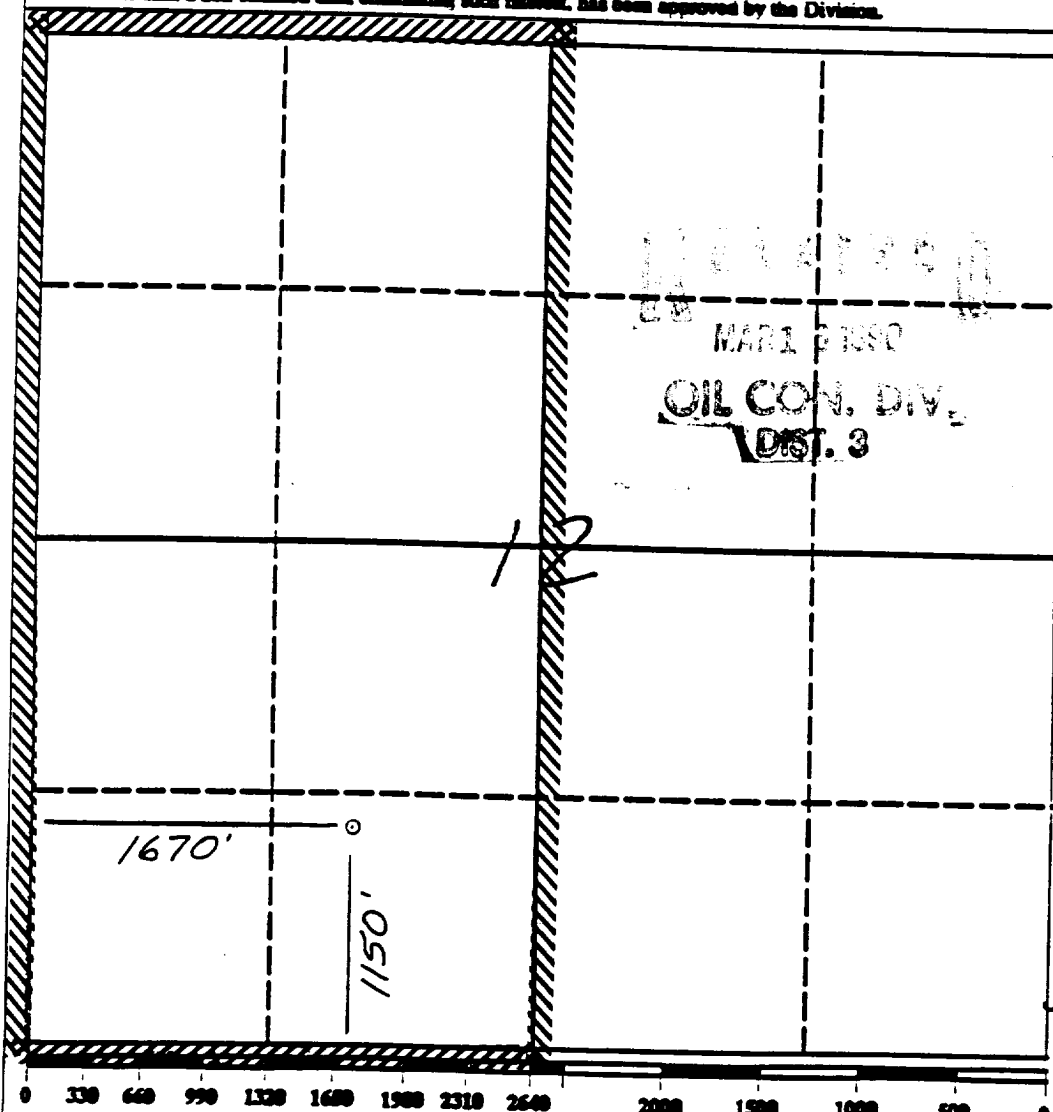
NEALE C. EDWARDS

Signature of Sealer
Professional Surveyor

NEALE C. EDWARDS
REGISTERED LAND SURVEYOR

Certificate No.

6857



OPERATIONS PLAN

Well Name - LAWSON #1R

Date: 13-Feb-90

I. Location: 1150'FSL, 1670'FWL, Sec. 12, T31N, R11W San Juan County, NM

Field: BLANCO MESA VERDE

Elevation: 5815 'GL

II. Geology:

A. Formation Tops:	Animas	Surface	Chacra	3623 '
	Ojo Alamo	903 '	Mesa Verde	4148 '
	Kirtland	918 '	Menefee	4323 '
	Fruitland	2103 '	Pt. Lookout	4793 '
	Pictured Cliffs	2528 '	Intermediate TD	2900 '
	Lewis	2723 '	Total Depth	5300 '

B. Logging Program: Inter Depth logs: NONE
Total Depth Logs: GR-IND, D, N, TEMP.

C. Coring: None

D. Natural Gauges: 3250', 3575', 4050', 4250', 4300', 4760', 4850',
5300'. Also gauge any noticeable increase in gas.
Record all gauges in IADC daily drilling report and
on MERIDIAN OIL morning report.

III. Drilling:

A. Mud Program: Mud from surface to ITD@ 2900 '. Gas from intermediate casing to Total Depth.

IV. Materials:

A. Casing Program:	Hole Size	Depth	Csg Size	Weight	Grade
	12 1/4"	200 '	9 5/8"	32.3#	H-40
	8 3/4"	2900 '	7"	20.0#	K-55
	6 1/4"	5300 '	4 1/2"	10.5#	K-55

B. Float Equipment: 9 5/8" surface casing - Saw Tooth guide shoe.

7" intermediate casing - guide shoe and self-fill insert float valve.
Five centralizers run every other joint above shoe. Run float two
joints above the guide shoe.

4 1/2" production casing - liner hanger with neoprene packoff. Cement
nose guide shoe and float collar run above a 6' shoe joint.

C. Tubing: 5300 ' of 2 3/8", 4.7#, J-55 8rd EUE tubing with a seating
nipple one joint off bottom and expendable check valve on bottom.

D. Wellhead Equipment: 9 5/8" x 11" 2000 psi xmas tree assembly.

LAWSON # 1R

1150' FSL, 1670' FWL

SEC. 12 - T31N - R11W

SAN JUAN Co. NM

400' NEW CONSTRUCTION

MAP # 1

SF07B040A

13

SIPHON

SIPHON

GAS FIELD

SIPHON

24

FLUME

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

MAY 04 1990

SUNDRY NOTICES AND REPORTS ON WELLS

OIL CON. DIV.
DIST. 3

1. TYPE OF WELL GAS		5. LEASE NUMBER SF-078040A	
2. OPERATOR SOUTHLAND ROYALTY CO.		6. IF INDIAN, ALL. OR TRIBE NAME	
3. ADDRESS & PHONE NO. OF OPERATOR P O BOX 4289 FARMINGTON, NM 87499		7. UNIT AGREEMENT NAME	
4. LOCATION OF WELL 1150' FSL 1670' FWL		8. FARM OR LEASE NAME LAWSON	
		9. WELL NO. 1R	
		10. FIELD, POOL, OR WILDCAT BLANCO MESA VERDE	
		11. SEC. T. R. M OR BLK. SEC. 12 T31N R11W NMPM	
14. PERMIT NO.	15. ELEVATIONS 5815' GL	12. COUNTY SAN JUAN	13. STATE NM

16. SUBSEQUENT REPORT OF: SPUD

17. Describe proposed or completed operations

SPUD DATE: 040990 SPUD TIME: 1515

TD 235' Ran 5 jts of 9 5/8" 40.0# N-80 casing, 215' set @ 227'. Cemented with 160 sacks of Class B cement with 1/4# Flocele/sack and 3% CaCl₂ (190 cu. ft.). Circulated 15 bbls to surface. WOC 12 hours. Pressure tested to 600 psi for 30 minutes. Held OK.

DATE: 041190

TD 2900' Set guide shoe @ 2899'. Set float collar @ 2858'. Ran 72 jts of 7" 23.0# K-55 casing, 2887' set @ 2899'. Set ECP @ 1950' and stage tool @ 1945'. First stage lead with 75 sacks of Class B 65/35 Poz, 6% gel, 2% CaCl₂ and .5 cuft Perlite/sack (119 cu. ft.), followed by 100 sacks of Class B cement with 2% CaCl₂ (118 cu. ft.). Second stage lead with 340 sacks of Class B 65/35 Poz with 6% gel, 2% CaCl₂ and .5 cuft Perlite/sack (541 cu. ft.). Tail with 50 sacks of Class B cement with 2% CaCl₂ (59 cu. ft.). Circulated 20 bbls to surface.

18. AUTHORIZED BY: [Signature]
REGULATORY AFFAIRS

4-23-90
DATE

NOTE: THIS FORMAT IS ISSUED IN LIEU OF US BLM FORM 3160-5. ACCEPTED FOR RECORD

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(This space for Federal or State office use)

MAY 01 1990

APPROVED BY _____
CONDITION OF APPROVAL, IF ANY:

TITLE _____

FARMINGTON RESOURCE AREA
DATE 12

HMCCD

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

1. TYPE OF WELL GAS		5. LEASE NUMBER SF-078040A	
2. OPERATOR SOUTHLAND ROYALTY CO.		6. IF INDIAN, ALL. OR TRIBE NAME	
3. ADDRESS & PHONE NO. OF OPERATOR P O BOX 4289 FARMINGTON, NM 87499		7. UNIT AGREEMENT NAME	
4. LOCATION OF WELL 1150' FSL 1670' FWL		8. FARM OR LEASE NAME LAWSON	
		9. WELL NO. 1R	
		10. FIELD, POOL, OR WILDCAT BLANCO MESA VERDE	
		11. SEC. T. R. M OR BLK. SEC. 12 BLANCO NMPM	
14. PERMIT NO.	15. ELEVATIONS 5815' GL	12. COUNTY SAN JUAN	13. STATE NM
16. SUBSEQUENT REPORT OF: Running Casing			
17. Describe proposed or completed operations			

DATE: 041490

TD 5305', ran 62 jts of 4 1/2" 10.5# K-55 casing, 2553' set @ 5305'.
Liner top @ 2752, PBTD @ 5261'. Lead with 50 sacks of Class B
50/50 Poz, 2% gel, and .6 fluid loss additive (62 cu ft.). Tail
with 280 sacks of Class B 50/50 Poz, 2% gel, 6.25# gilsonite/sack,
1/4# Flocele/sack, and .6% fluid loss additive. (392 cu ft.). Reversed
out 0 bbls of cement.

RECEIVED

MAY 29 1990

OIL CON. DIV.
DIST. 3

ACCEPTED FOR RECORD

MAY 10 1990

FARMINGTON RESOURCE AREA

BY MA
DATE 4-22-90

18. AUTHORIZED BY: [Signature]
REGULATORY AFFAIRS

NOTE: THIS FORMAT IS ISSUED IN LIEU OF US BLM FORM 3160-5.

=====
(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITION OF APPROVAL, IF ANY: _____

MAJCD

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 6/14/90									
Company SOUTHLAND ROYALTY COMPANY		Connection									
Pool BLANCO		Formation MESA VERDE									
Completion Date 6/7/90		Total Depth 5305'	Plug Back TD 5255'								
		Elevation 5815' GL	Farm or Lease Name LAWSON								
Csg. Size 4.5	Wt. 10.5#	d 4.052	Set At 5305'								
Tbg. Size 2.375	Wt. 4.7#	d 1.995	Set At 5123'								
Perforations From To		Perforations From To									
		4113' To 5120'									
Type Well - Single - Drillinghead - G.C. or G.O. Multiple SINGLE		Pecker Set At									
Producing thru TUBING		Baro. Press. - P _a 12.2									
Reservoir Temp. °F 8		Mean Annual Temp. °F									
County SAN JUAN		State NEW MEXICO									
L	H	Cg	% CO ₂								
		% N ₂	% H ₂ S								
Prover		Meter Run									
		Taps									
FLOW DATA											
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI			.750				530		533		
1.							147		520		1 HR.
2.							147		520		2 HRS.
3.							146		510		3 HRS.
4.											
5.											
RATE OF FLOW CALCULATIONS											
NO.	Coefficient (24 Hour)	$\sqrt{P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd				
1	12.365	158.2		1.0000	.9258	1.0000	1811				
2.											
3.											
4.											
5.											
RECEIVED JUN 28 1990 OIL CON. DIV. DIST. 3											
NO.	P ₁	P ₂	P ₃	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.							
1.				A.P.T. Gravity of Liquid Hydrocarbons _____ Deg.							
2.				Specific Gravity Separator Gas _____ X X X X X X X X							
3.				Specific Gravity Flowing Fluid _____ X X X X X							
4.				Critical Pressure _____ P.S.I.A. _____ P.S.I.A.							
5.				Critical Temperature _____ R _____ R							
P ₁ 545.2 P ₂ 297243.0											
NO.	P ₁	P ₂	P ₃	(1) $\frac{P_1^2}{P_2^2 - P_3^2} = 12.108$ (2) $\left[\frac{P_1^2}{P_2^2 - P_3^2} \right]^n = 6.491$							
1	522.2	272692.8	24550.2								
2											
3											
4											
5											
AOF = Q $\left[\frac{P_1^2}{P_2^2 - P_3^2} \right]^n = 11,755$											
Absolute Open Flow 11,755 Mcfd @ 15.025				Angle of Slope @ _____		Slope, n .75					
Remarks _____											
Approved By Division _____ Conducted By STEVE ADAMS (TECH) Calculated By CONNIE CHANDLER Checked By SCM											

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

1. Type of Well
GAS

2. Name of Operator
Meridian Oil Inc. *Smithland*

3. Address & Phone No. of Operator
Box 4289, Farmington, NM 87499 (505) 326-9700

4. Location of Well, Footage, Sec, T, R, M.
1150'S, 1670'W Sec. 12, T-31-N, R-11W, NMPM

5. Lease Number
SF-078040A

6. If Indian, All. or
Tribe Name

7. Unit Agreement Name

8. Well Name & Number
Lawson #1R

9. API Well No.

10. Field and Pool
Blanco Mesa Verde

11. County and State
San Juan County, NM

12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA

Type of Submission

Type of Action

☐ Notice of Intent

☐ Abandonment

☐ Change of Plans

☒ Subsequent Report

☐ Recompletion

☐ New Construction

☐ Final Abandonment

☐ Plugging Back

☐ Non-Routine Fracturing

☐ Casing Repair

☐ Water Shut Off

☐ Altering Casing

☐ Conversion to Injection

☐ Other

13. Describe Proposed or Completed Operations

05-29-90 Ran GR-CCL-CBL at 4850-2750'. Perf 2 squeeze holes @ 4500' and 2770'. TIH w/fullbore pkr set @ 2808'. Could not break circ. Release pkr. TIH to 4587'. PT down tbg 3000#/15 min, ok. Release pkr, pull up to 3971'. Pump 2 bbl. of 7.5% HCl, followed by 38 BW. Release pkr. TIH w/cmt retainer set @ 4433'. Preceded cmt w/4 bbl. 7.5% HCl acid w/1 gal CI-15/1000 gal, 30 BW. Cement squeezed w/200 sx Class "B" 50/50 Poz w/2% gel, 2% calcium chloride, 6.25#/sx gilsonite, and 0.3% FL-19 (252 cu.ft.) followed by 50 sx Class "B" w/2% calcium chloride (59 cu.ft.). WOC. TIH w/bit. Broke circ @ liner top - no cmt.

05-30-90 TIH, drl 10' cmt 4429', & circ clear on top of cmt. retainer. Ran GR-CCL-VDL-CBL 4429-3850'. Perf 2 squeeze holes @ 4120'. TIH w/4 1/2" full bore pkr set @ 2838'. Broke circ thru holes @ 4120' out 2770'. Pull pkr @ 2710', unload hole. TOOH w/tbg & pkr. TIH w/Baker cmt retainer @ 4034'. Sting into retainer. Pump 2 bbl. 7.5% HCl, 20 bbls mud, 5 BW. Cmt w/200 sx Class "B" 50/50 Poz w/2% calcium chloride, 6.25#/sx gilsonite, 0.4% FL-19 (252 cu.ft.), followed by 50 sx Class "B" w/2% calcium chloride (59 cu.ft.). Dump 5 bbl. cmt on retainer. TOOH. WOC.

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

Signed *[Signature]* Title Regulatory Affairs Date *6-8-90*

ACCEPTED FOR RECORD

(This space for Federal or State office use)

JUN 28 1990

APPROVED BY
CONDITION OF APPROVAL, IF ANY:

TITLE

FARMINGTON RESOURCE AREA

BY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____

b. TYPE OF COMPLETION:

NEW WELL ☒ WORK OVER ☐ DEEP EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____

2. NAME OF OPERATOR

Southland Royalty Company

3. ADDRESS OF OPERATOR

PO Box 4289, Farmington, NM 87499

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements):

At surface

1150'S, 1670'W

At top prod. interval reported below

At total depth

14. PERMIT NO.

DATE ISSUED

30-045-27677

15. DATE SPUDDED

16. DATE T.D. REACHED

17. DATE COMPL. (Ready to prod.)

18. ELEVATIONS (OF. RKB, RT. GR, ETC.)*

19. ELEV. CASINGHEAD

04-09-90

4-14-90

06-07-90

5815'GL

20. TOTAL DEPTH, MD & TVD

21. PLUG. BACK T.D., MD & TVD

22. IF MULTIPLE COMPL. HOW MANY*

23. INTERVALS DRILLED BY

ROTARY TOOLS

CABLE TOOLS

5305'

5255'

1

yes

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*

(Mesa Verde) 4113-5120'

25. WAS DIRECTIONAL SURVEY MADE

no

26. TYPE ELECTRIC AND OTHER LOGS RUN

DIL-LDT-CNL-Temp.GR

27. WAS WELL CORRED

no

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT FULLED
9 5/8"	40.0#	227'	12 1/4"	190 cu.ft.	
7"	23.0#	2899'	8 3/4"	600 cu.ft.	
				837	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
4 1/2"	2752'	5305'	452 cu.ft.		2 3/8"	5123'	

31. PERFORATION RECORD (Interval, size and number)

4113-15', 4144-48', 4156-58', 4181-84', 4188-92',
4196-4200', 4253-56', 4270-74', 4278-82', 4286-88',
4292-4300', 4306-10', 4314-16', 4328-38', 4350-58',
4396-4402', 4458-62', 4498-4500', 4530-32', 4536-
42', 4546-54', 4646-56', 4683-87', 4702-08', 4788-
4802', 4828-36', 4850-60', 4870-80', 4890-94', 4904-06,

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD) AMOUNT AND KIND OF MATERIAL USED
4113-5120' 322,500#sand; 461,867 gal.
fluid
squeeze cmt'd w/622 cu.ft.

33.* (cont'd on back) PRODUCTION

DATE FIRST PRODUCTION PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) WELL STATUS (Producing or shut-in)

06-10-90 flowing-capable of commercial hydrocarbon prod. shut in

DATE OF TEST HOURS TESTED CHOKES SIZE PROD'N. FOR TEST PERIOD OIL—BSL. GAS—MCF. WATER—BSL. GAS-OIL RATIO

06-14-90 3 hrs 3/4" 1811

FLOW. TUBING PRESS. CASING PRESSURE CALCULATED 24-HOUR RATE OIL—BSL. GAS—MCF. WATER—BSL. OIL GRAVITY-API (CORR.)

146 510 1811

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

to be sold

35. LIST OF ATTACHMENTS

none

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

Regulatory Affairs

SIGNED

TITLE

DATE

*(See Instructions and Spaces for Additional Data on Reverse Side)

GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
Ojo Alamo	926'	946'	White, cr-gr ss..	Ojo Alamo	926'	
Kirtland	946'	2061'	Gry sh interbedded w/tight, gry, fine-gr ss.	Kirtland	946'	
Fruitland	2061'	2552'	Dk gry-gry carb sh, coal, grn silts, light-med gry, tight, fine gr ss.	Fruitland	2061'	
Pictured Cliffs	2552'	3310'	Bn-Gry, fine grn, tight ss.	Pic.Cliffs	2552'	
Chacra	3310'	4267'	Gry fn grn silty, glauconitic sd stone w/drck gry shale	Chacra	3310'	
Mesa Verde	4267'	4364'	Light gry, med-fine gr ss, carb sh & coal	Mesa Verde	4267'	
Menefee	4364'	4786'	Med-dark gry, fine gr ss, carb sh & coal	Menefee	4364'	
Point Lookout	4786'	5305'	Med-light gry, very fine gr ss w/frequent sh breaks in lower part of formation	Pt.Lookout	4786'	
erf's cont'd from front: 33-86', 5106-10', 5116-20'	4937-39'	4986-90', 5014-16', 5032-34', 5046-48', 5060-62', 5078-80',				