OPERATOR'S COPY

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.
NM-0997

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [XX] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME

2. NAME OF OPERATOR
Southland Royalty Company

8. FARM OR LEASE NAME
Aztec "22" Federal

3. ADDRESS OF OPERATOR
21 Desta Drive, Midland, Tx 79705

9. WELL NO.
1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
1980' FN & FWL, Sec. 22, T-18-S, R-33-E

10. FIELD AND POOL, OR WILDCAT
S. Corbin (Bone Springs)

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 22, T-18-S, R-33-E

14. PERMIT NO.
30-025-29216

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
3855.1' GR

12. COUNTY OR PARISH
Lea

13. STATE
N.M.

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) New Well Completion			[XX]
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. 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.)*

1. MIRUCU. Rlse pkr & POH. RU Welex & set CIBP @ 12,350'.
2. RIH w/ tbg. Displ hole w/2% KCL wtr. POH.
3. Ran GR-CCL from 11,500-8400'. [redacted] (67 holes). RIH w/RBP, pkr & SN. RIH w/tbg. Tag RBP @ 12,350'. Set RBP @ 11,413'. Spotted 300 gals NEFE 15% HCl @ 11,332'. Set pkr @ 11,135'. Pmp acid. Had communication. Reset pkr. Drop standing valve. Test tbg in hole to 9000#.. Spot 300 gals 15% NEFE HCl @ 11,332'. Set pkr @ 11,135'. Break form 1/2 BPM @ 4000#. Pmp acid away.
4. Trip for pkr. POH w/tbg & pkr. Change out pkr & set @ 11,135'. Swb test. Reset pkr @ 11,008'. Open by-pass. Swbd. Close by-pass. Swbd. EFL @ 2500'. Swbg.
5. SITP 275#. Ran temp background logs. Swb. RU & started pmpg 15% NEFE HCl acid. POH w/tbg & pkr. RIH w/tbg. Swb test. RIH w/pkr & tbg. Set pkr @ 10,945'. Swb test.
6. Acdz w/5000 gals 15% NEFE HCl acid using 140 BS. Balled out @ 7000#. Swb test.
7. Rlse pkr. RIH w/RBP, SN & tbg. Set RBP @ 10,908'. Test to 1500#. Spot 200 gals 15% NEFE HCl acid @ 10,782'. POH w/tbg. [redacted]. RIH w/pkr, SN & tbg. Rev acid. Set pkr @ 10,695'. Test annulus. Break form @ 3320#. Pmp 200 gals spot acid away. Swb test. Acdz w/2000 gals 15% NEFE HCl using 48 BS. Swb test. Set RBP @ 10,316'. Spot 300 gals 15% NEFE HCl acid @ 10,216'. [redacted] (53 holes). Swb testing.
8. RIH w/pkr, SN & tbg. Set pkr @ 9909'. Pmp 300 gals 15% NEFE HCl acid. Acdz w/4000 gals 15% NEFE HCl using 95 BS. Balled out @ 6600#.
9. Rlse pkr. NU BOP. Retrieve & set RBP @ 9947'. POH w/33 jts tbg. Tbg @ 8942'. Displ csg w/2% KCl wtr. Test RBP to 1500#. Spot 200 gals 15% NEFE HCl @ 8942'. POH w/tbg. [redacted] (32 holes). RIH w/pkr, SN & tbg. Set pkr @ 8809'. Pmp acid away. Swb Testing.
10. Acdz w/2000 gals 15% NEFE HCl using 60 BS. Good ball action. Rlse pkr. Start out w/tbg. SITP 0#. NU BOP. RIH w/tbg to catch RBP. POH w/tbg & RBP. [redacted] by WL. RIH w/mud anchor bull plugged, shoe, Baker TAC & tbg. Btm tbg @ 10,298'. Shoe @ 10,257'. ND BOP. NU WH. RD unit.
11. RIH w/RHBM pmp, pony polish rods spaced out. Clamp off. RDCU. Pmpg.

BUREAU OF LAND MANAGEMENT
RECEIVED
MAY 01 1986

ACCEPTED FOR RECORD
MAY 5 1986
CARLSBAD, NEW MEXICO

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

SIGNED Cathy Nokes TITLE Engineering Tech III DATE 4/30/86

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

E. Parker
Cathy Nokes
Dennis Sledge
G. Slaughter
J. Fequa
WellFile
B. Noland
Bill Dawson
Donny Davis
Sandy Houston
Date 5-9-86

*See Instructions on Reverse Side

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.

Aztec "22" Federal #1
Recompletion/Testing of Wolfcamp & Bone Spring

Detail Tests of Recompleted Zones:

1) Lower Wolfcamp (Perf @ 11,072-332'):
Swab 7 BO + 67 BLW/10 hrs with FFL @ 10,500'. 1st FL @ 2500'.
Swab 8 BO + 8 BW/4 hrs with FFL @ 9500'. SITP = 275#.
Acidized w/5000 gals.
Swab 115 BLW/8 hrs with FFL @ 5400'.
Swab 9 BO + 47 BLW/10 hrs with FFL @ 10,400'.
Swab 30 BO + Tr Wtr/8 hrs with FFL @ 10,500'. SITP = 700#.
1st FL @ 3000'.
Swab 25 BO + Tr Wtr/25 hrs with FFL @ 10,500'.

2) Upper Wolfcamp (Perf @ 10,745-82'):
Swab 2 BO + 70 BLW/5 hrs with FFL @ 10,300'.
Acidized w/2000 gals.
Swab 2 BO + 71 BLW/5 1/2 hrs with FFL @ 10,500'.
Swab 5 BO + 5 BW/3 hrs with FFL @ 9200'.

3) Lower Bone Spring (Perf @ 10,024-216'):
Swab 28 BO + 73 BLW/6 hrs with FFL @ 3400'.
Flow 20 BO + 0 BW/4 hrs. Died. FTP = 150 psi.
Swab 30 BO + 0 BW/4 1/2 hrs with FFL @ 9000'.
Flow 26 BO/12 hrs by heads.
Acidized w/4000 gals.
Swab Tr oil + 98 BLW/7 hrs with FFL @ 4200'.
Swab 5 BO + 20 BLW/6 hrs with FFL @ 6000'.
Swab 23 BO + 73 BLW/9 1/2 hrs with FFL @ 5900'. SITP = 0.
1st FL @ 3000'.
Swab 40 BO + 31 BLW/7 1/2 hrs with FFL @ 6000'.

4) Upper Bone Spring (Perf @ 8927-42'):
Swab Tr oil + 50 BLW/4 hrs.
Acidized w/2000 gals.
Swab Tr oil + 80 BLW with FFL @ 6000'.
Flow 4 BO + 2 BLW/40 min. Died.
Swab 13 BO + 4 BW/6 hrs with FFL @ 8500'.
Flow 7 BO + 0 BW/41 hrs.

Actual Bone Spring (Upper & Lower) Production:

Month (1986)	Monthly Volumes				Average Daily Rates		
	BO	BW	MCF	# Days On	BO	BW	MCF
April	138	114	92	13	10.6	8.8	7
May	115	82	117	31	3.7	2.6	3.8
June	109	65	NA	30	3.6	2.2	NA

Projected Wolfcamp Production:

Pump 40 BO + 1 BW + 50 MCF/Day

Estimated Bottom-hole Pressure Calculations

Wolfcamp (Perfs 11,072-332')

SITP (overnight) = 700 psi, 1st fluid level = 3000' FS
Swabbed 30 BO + Tr wtr/8 hrs. Final fluid level = 10,400'.

Prsrv = PSIBHP = Pliq. Hydr. + PSITP + Pgas Hydr.

Pliq. Hydr. = (Liquid Gradient) x (Liquid Head)

Liquid - oil (40.9° API) only
Gradient = 0.356 psi/ft
Head = (11,072-3000') = 8072'
Pliq. Hydr. = (0.356 psi/ft) (8072')
= 2874 psi

PSITP = 700 psi (measured)

Pgas Hydr.: Neglected due to not having adequate gas gravity data and usually is negligible. Also, it is accounted for by using the whole liquid gradient which usually is gas cut.

Prsrv = 2874 + 700 + NA = 3574 psi

Bone Spring (Perfs 10,024-216')

SITP (Overnight) = 0, 1st fluid level = 3000' FS
Swabbed 23 BO + 73 BLW/9 1/2 hrs. Final fluid level = 10,400'

Prsrv = PSIBHP = Pliq. Hydr + PSITP + Pgas Hydr.

Pliq. Hydr = Liquid Gradient x Liquid Head

Liquid Gradient:

$$\% \text{ oil} = \frac{23}{23+73} = 24\%$$

% water = 76%
oil gradient (38.7° API) = 0.360 psi/ft
water gradient (2% KCl load) = 0.438 psi/ft
Average Gradient = (.24 x .360) x (.76 x .438) = 0.419 psi/ft

Liquid Head = 10,120-3000' = 7120'
Pliq. Hydr. = 0.419 psi/ft x 7120' = 2983 psi

PSITP = 0

Pgas Hydr = Neglected (See previous explanation)

Psrv = 2983 + 0 + NA = 2983 psi