submitted in lieu of Form 3160-5

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-077282

6. **If Indian, All. or Tribe Name**

7. **Unit Agreement Name**

2. **Name of Operator**
Southland Royalty

8. **Well Name & Number**
Grenier A #3M

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

9. **API Well No.**
30-045-25833

4. **Location of Well, Footage, Sec., T, R, M**
1110'FNL, 930'FWL Sec.34, T-30-N, R-10-W, NMPM

10. **Field and Pool**
Blanco MV/Basin Dk

11. **County and State**
San Juan Co, NM

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

Type of Submission	Type of Action	
_x_ Notice of Intent	___ Abandonment	___ Change of Plans
	___ Recompletion	___ New Construction
___ Subsequent Report	___ Plugging Back	___ Non-Routine Fracturing
	___ Casing Repair	___ Water Shut off
___ Final Abandonment	___ Altering Casing	___ Conversion to Injectio
	_x_ Other - pay add	

13. **Describe Proposed or Completed Operations**

It is intended to perforate and test the Burro Canyon, and perforate and test additional bypassed sands with the lower Dakota per the attached procedure and wellbore diagram.

RECEIVED
APR 18 1994
OIL CON. DIV.
DIST. 3

RECEIVED
94 APR 13 PM 2:43
070 FARMINGTON NM

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

Signed Peggy Bradfield (JK) Title Regulatory Affairs Date 4/6/94

(This space for Federal or State Office use)
APPROVED BY _____ Title _____ Date APPROVED
CONDITION OF APPROVAL, if any: APR 11 1994
for DISTRICT MANAGER

NMOCD

Pertinent Data Sheet - Grenier A #3M

Location: 1110' FNL, 930' FWL, Section 34, T30N, R10W, San Juan County, New Mexico

Field: Blanco Mesaverde
Basin Dakota

Elevation: 6049' GL

TD: 7194'
COTD: 7140'

Spud: 01-02-84

Lease #: SF-077282

DP #: 25673

Casing/Liner Record:

Hole Size	Csg Size	Wt. & Grade	Depth Set	Cement	Top/Cement
13 3/4"	10 3/4"	40.5# H-40	243'	155 sx	Circ/Surface
9 7/8"-7 7/8"	5 1/2"	15.50#/17.0# K-55	7194'	1255 sx	3 Stages
		DV Tool @	5296'		TOC @ 5220' TS
		DV Tool @	2862'		TOC @ 750' TS

Float Collar @ 7140' GL
Baker Model "R3" Packer @ 5259'.

Tubing Record:

	Csg Size	Wt. & Grade	Depth Set	No. Joints
MV	2 1/2"	2.9# J-55 10R IJ	4881'	153
DK	2 1/2"	2.9# J-55 10R IJ	7028'	14 Blast/10 Pup

Formation Tops:

Ojo Alamo:	1245'	Pt. Lookout:	4809'
Fruitland:	2115'	Mancos:	5053'
Pictured Cliffs:	2530'	Gallup:	6042'
Cliffhouse:	4082'	Dakota:	6965'

Logging Record: Temp. Survey, CBL, CDL, Ind. Electric.

Stimulation:

DK: Perf'd: 6888' - 7040'. Total of 12 holes.
Frac'd: w/108,720 gal 40# Polaris 1% KCL & 63,000# 20/40 sand.

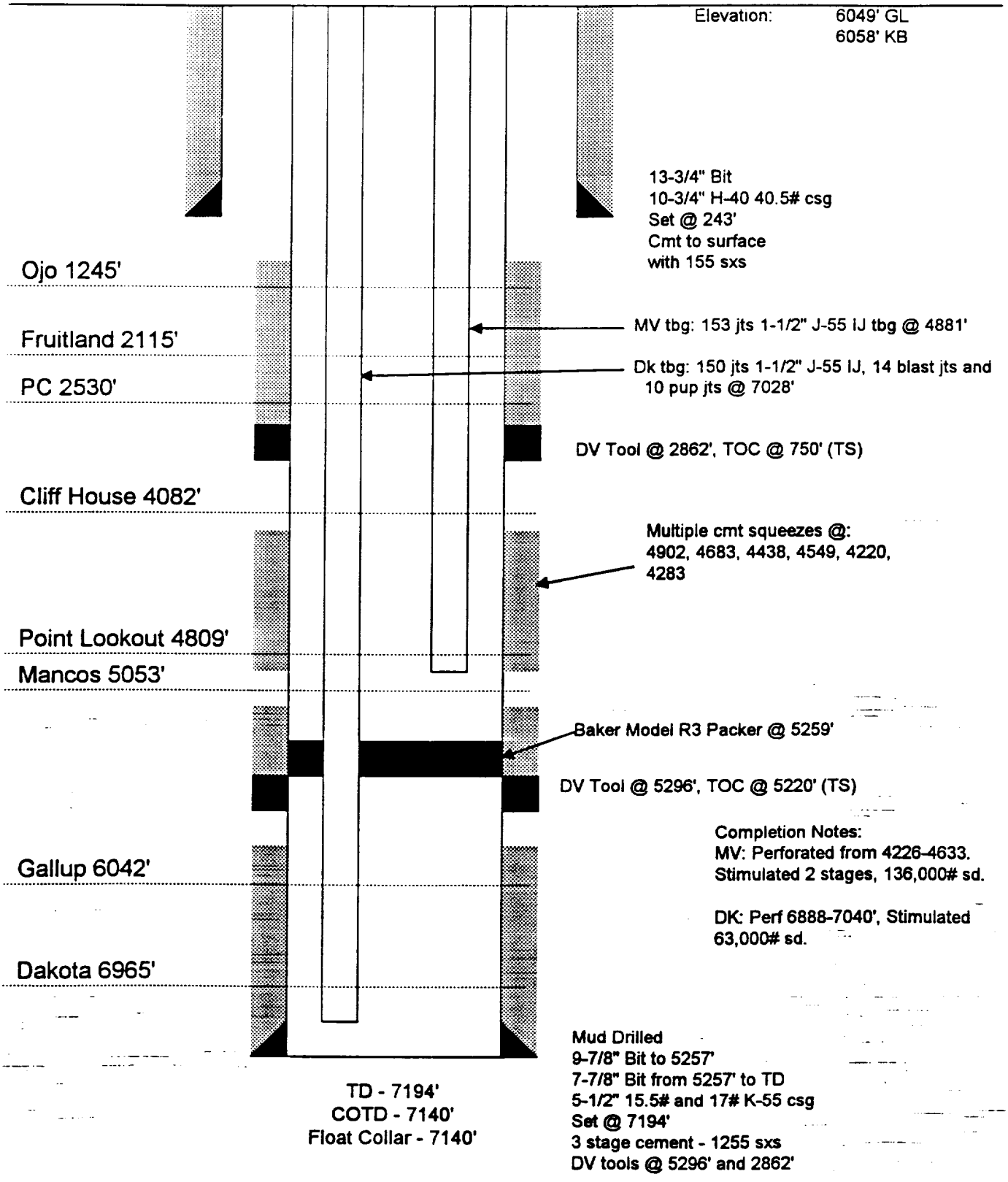
Pt L.: Perf'd: 4683' - 4902'. Total of 9 holes.
Frac'd: w/100,600 gal fresh water & 54,000# 20/40 sand.
Sqz'd: Cement @ 4902', 4683', 4438', 4549', 4220' & 4283'.

MV: Perf'd: 4226' - 4633'. Total of 10 holes.
Frac'd: w/142,235 gal fresh water & 82,220# sand.

Workover History: N/A

tdg/02-24-94

Grenier A #3M Wellbore Diagram
NW/4 Section 34, T30N-R10W



Preliminary Procedure
Final Procedure will come under separate cover.
JBK

Grenier A #3M- Mesaverde/Dakota Dual
Burro Canyon and Lower Dakota Pay Add
NW/4 Section 34, T30N-R10W

1. Contact H2S safety services vendor and have Grenier A #3M tested for H2S concentrations, radius of exposure and proper location setup of equipment relative to wind direction. Submit H2S contingency plan to MOI safety department for approval and, if necessary, submit contingency plan to regulatory agency.

2. Hold safety meeting. Everyone on location must read H2S contigency plan before preceeding with workover. All MOI operations must comply with H2S contingency plan and MOI (and regulatory) rules and regulations as stated in MOI Drilling Department Safety manual.

3. MIRU. Install safety equpiment and fire extinguishers in strategic locations. Kill well if necessary with water. ND WH, NU BOPs.

4. RU wellhead tubing inspetcion service company. Inspect tubing while TOOH.

5. TOOH with 4869' of 1-1/2" 2.76# IJ Mesaverde tubing set @ 4881'. PU on Dakota tubing, allow pressures to equalize across Baker Model R3 retrievable packer (set @ 5219') then PU on tubing again to release packer. TOOH with 7012' of Dakota tubing string with packer assembly (string consists of 9 jts 1-1/2" tail pipe, packer, 1-1/2" tubing, 1-1/2" seating nipple and 2-1/6" blast joints across Mesaverde perforations; bottom of tubing is set @ 7021' KB). Replace bad tubing joints as needed.

6. RD wellhead tubing inspection service.

7. PU 2-7/8" workstring (referred to as workstring from this point forward). PU 4-3/4" bit. TIH to COTD and drill float collar, cement and casing shoe. Stop drilling at bottom of casing shoe. TOOH.

8. Lay down bit, PU casing scraper. Make scraper run to COTD. Circulate with air on bottom to clean hole. TOOH. Lay down casing scraper.

9. RU wireline. Run GR-CCL-TDT from COTD to 6000'. Use this run for correlation strip to open hole logs when perforating. Wireline set a CIBP at the top of the casing shoe. Wireline set a RBP at 4200'. RD wireline. Have TDT sent to computing center for immediate processing. Have field copy brought to MOI's office immediately.

10. Pressure test casing to 800 psi for 15 minutes. If pressure test fails, TIH with packer and locate failure (test RBP first). If RBP fails, replace with new one. If casing fails, locate failure and contact engineering for squeeze procedure.

11. TIH and retrieve RBP set at 4200' in step 6. TOOH, lay down RBP.

Burro Canyon Completion Procedure:

12. Contact engineering 2 hours before commencing with following perforating steps. RU wireline. Perforate the following intervals at 2 SPF with 0.38" diameter holes and 90 degree phasing: (6 holes total)

    7163'
    7169'
    7174'

    Inspect guns on surface to ensure all charges fired properly. RD wireline.

13. PU straddle packer assembly with 4' spacing on workstring and TIH. RU BJ and perform injection test on each perforation set with 2% KCl filtered (25 micron) water conaining 2 gpt InFlo-50 surfactant, 2 gpt Clatrol-6 stabilizer, and 10 pgt Ferrotrol-900L chelating agent as follows:

    a. Pump 1 bbl fluid at lowest steady rate possible. Shut down, obtain ISIP, and monitor decline for closure.

    b. Repeat injection test at same rate with 2 bbls fluid.

    c. Repeat injection test with 5 bbls fluid at 2 bpm, steady rate.

    TOOH with straddle packer and tubing. Laydown straddle packer.

14. RU wireline. Perforate the following intervals underbalanced at 4 SPF with 0.5" diameter holes and 90 degree phasing: (56 holes total)

    7172-7186' (14')

    Record fluid level when going in hole with perforating guns and contact engineering if fluid level is below 5000'.

    Inspect guns on surface to ensure all charges fired properly. RD wireline.

15. TIH with packer and workstring. Set packer at 7142'. Flow test well if possible. Report to engineering before proceeding.

16. RU BJ. Open packer bypass and spot 3% Ammonium Chloride water across packer followed by 1000 gallons of 10% HCl and 1500 gallons 7.5:1.5% HCl:HF acid. Close bypass. Inject 1000 gallons of 10% HCl and 1500 gallons 7.5:1.5% HCl:HF acid, flush and overflush (250 gallons) with 3% Ammonium Chloride water. Do not exceed BHTP values derived from injection tests at 7174'.

17. Flow well back to tank. If well logs off, swab until well kicks off. When fluid returns have diminished, flow test well for 3 hours. Record rate every 15 minutes, report results to engineering every hour. SI well.

18. RU slick line. RIH with bottom hole pressure gauge to top of packer. SI well for 12 hours once pressure bomb is on bottom. Monitor surface pressure, recording pressures every 15 minutes. Report pressures to engineering every four hours. TOOH.

19. At this point a decision will be made whether or not to fracture stimulate the Burro Canyon. If the decicision is made **not** to stimulate, skip to the Lower Dakota completion procedure, otherwise, TIH with 2-7/8" tubing and packer (include 2 Baker bottom-hole pressure gauges good to 10,000 psi BHTP mounted on an exterior assembly below bottom packer monitoring BHP at 1 minute sample rates). Set packer at 7174'.

20. RU BJ with surface equipment and tubulars rated to at least 6000 psi working pressure. Pressure test all surface lines to 6000 psi. **Maximum allowable treating pressure is 5000 psi.** Fracture stimulate Burro Canyon as described below:

    a. Pump 2000 gallons 30# gelled water at 5 bpm (steady rate) then shut-in to obtain closure.

    b. Pump 2500 gallons 30# gelled water (enough volume to obtain steady BHTP) at 10 bpm (steady rate). Shut-in and obtain closure.

    c. Fracture stimulate with 20,000 gallons Spectra Frac G-300 and 50,000 lbs 20/40 EconoProp at 10 bpm, 3340 psi estimated surface treating pressure (pad stage).

    d. Shut-in for 24 hours following the treatment to obtain bottom-hole pressure information. Continue to monitor BHTP on surface until fracture closure occurs.

    Note: Trace pad fluids with Antimony and trace all sands with Iridium.

21. Flow-back well naturally as long as possible. When either flow has ceased or returns have reached a level allowing release of the packer, release the packer and TOOH. Send pressure bombs to Baker office for immediate download of information.

22. TIH with tubing and clean out to PBTD with air.

23. When returns have diminished (both sand and water), TOOH. PU packer and TIH. Set packer @ 7174'. Flow test well for 6 hours. Record rate every 15 minutes and report to engineering every two hours. Release packer and TOOH.

Lower Dakota Completion Procedure:

24. RU wireline. Wireline set a RBP at 7160' (above perforation @ 7163').

25. Contact engineering 2 hours before commencing with following perforating steps. Perforate the following intervals at 2 SPF with 0.38" diameter holes and 90 degree phasing: (16 holes total)

    7153'
    7142'
    7137'
    7128'
    7119'
    7110'
    7087'
    7066'

    Inspect guns on surface to ensure all charges fired properly. RD wireline.

26. PU straddle packer with 4' spacing. TIH to RBP. Pressure test RBP.

27. RU BJ. Perform injection test on each perforation set with 2% KCl water containing 2 gpt InFlo-50 surfactant, 2 gpt Clatrol-6 clay stabilizer, and 10 gpt Ferrotrol-900L chelating agent as follows:

    a. Pump 1 bbl fluid at lowest steady rate possible. Shut-down, obtain ISIP, and monitor decline for closure.

    b. Repeat injection test at same rate with 2 bbls fluid.

    c. Repeat injection test with 5 bbls fluid at 2 bpm, steady rate.

    TOOH, laydown straddle packer.

    At this point, a decision will be made whether to perforate intervals 7146-50' ("F" zone) based on results of TDT. Contact engineering for instructions.

28. RU Wireline. Perforate the following intervals underbalanced at 4 SPF with 0.5" diameter holes and 90 degree phasing: (96 holes)

    7104-20' (16')
    7135-39' (4')
    7146-50' (4')

    Record fluid level when going in hole with perforating guns and contact engineering if fluid level is below 5000'.

    Inspect guns on surface to ensure all charges fired properly. RD wireline.

29. TIH with 2-7/8" tubing and packer (include 2 Baker bottom-hole pressure gauges good to 10,000 psi BHTP mounted on an exterior assembly below bottom packer monitoring BHP at 1 minute sample rates). Set packer at 7050'. Flow test well if possible. Report to engineering before proceeding.

30. RU BJ and acidize Lower Dakota intervals with 2500 gallons 15% HCl containing 100 Select-O-Balls (1.1 s.g., 7/8" dia.) Flush and overflush (500 gallons) with 2% KCl water. Release packer and TIH to unseat balls. PUH and reset packer at 7050'.

31. RU BJ with surface equipment and tubulars rated to at least 6000 psi working pressure. Pressure test all surface lines to 6000 psi. **Maximum allowable treating pressure is 5000 psi.** Fracture stimulate Lower Dakota as described below:

    a. Pump 2000 gallons 35# gelled water at 5 bpm (steady rate) then shut-in to obtain closure.

    b. Pump 4000 gallons 35# gelled water (enough volume to obtain steady BHTP) at 20 bpm (steady rate). Shut-in and obtain closure.

    c. Fracture stimulate with 37,000 gallons Sepctra Frac G-3500 and 100,000 lbs 20/40 EconoProp at 20 bpm, 4755 psi estimated surface treating pressure (pad stage).

    d. Shut-in for 24 hours following the treatment to obtain bottom-hole pressure information. Continue to monitor BHTP on surface until fracture closure occurs.

    Note: Trace pad fluids with Scandium and trace all sands with Iridium.

32. Flow-back well naturally as long as possible. When either flow has ceased or returns have reached a level allowing release of the packer, release the packer and TOOH. Send pressure bombs to Baker office for immediate download of information.

33. TIH with tubing and clean out to PBTD with air.

34. When returns have diminished (both sand and water), TOOH. PU RBP retrieving head, packer and TIH with workstring. Set packer @ 7050'. Flow test well for 6 hours. Record rate every 15 minutes and report to engineering every two hours. Release packer and TIH. Release RBP and TOOH. Laydown packer and RBP. TIH with tubing and clean out to COTD. Blow well until sand production has ceased and water production has diminished. TOOH.

35. RU wireline. Run multi-isotope after frac gamma ray from COTD to 6850'. RD wireline.

36. PU Baker Model "D" permanent packer and TIH with workstring to TD. Pull up hole (laying down workstring) to 5000'. Set Model "D" permanent packer @ 5000'. TOOH with remaining workstring, laying down workstring. PU Dakota tubing string and TIH with 1900' of 1-1/2" 2.76# IJ tubing (addtional tubing will be needed over what was retrieved from the well). PU packer seal assembly, no-go locator, and TIH with 5000' of 1-1/2" 2.76# IJ tubing. Land Dakota tubing string. PU Mesaverde 1-1/2" 2.76# IJ tubing string and TIH. Land Mesaverde tubing at 4881'.

37. ND BOP's, NU WH. RDMO. Return well to production.

Approval: _____
J. A. Howieson
see font page of procedure.

Vendors:

Stimulation - BJ Services (325-6961)
Perforating - Basin Perforators (327-5244)
Multi-Isotope After Frac Gamma Ray - Halliburton Wireline (325-3544)
Radioactive Tagging - Pro_technics (326-7133)