

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division

Sundry Notices and Reports on Wells

1. Type of Well
GAS

2. Name of Operator
Southland Royalty

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

4. Location of Well, Footage, Sec., T, R, M
990'FSL, 990'FWL Sec.22, T-32-N, R-12-W, NMPM, San Juan County

API # (assigned by owner)
30-045-

5. Lease Number
Fee

6. State Oil & Gas Tax
Fee

7. Lease Name/Well Name
Culpepper Main

8. Well No.
5

9. Pool Name or Name of
Blanco MV/Blanco

10. Elevation: 6100'

Type of Submission

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment

Type of Action

☐ Abandonment

☐ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

☒ Other - plug Dk, open additional

☐ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

☐ Water Shut off

☐ Conversion to Injection

13. Describe Proposed or Completed Operations

We propose to plug the Dakota formation and open additional Mesa Verde pay per the attached procedure and wellbore diagram.

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DIST. 3

SIGNATURE  (MP) Regulatory Affairs December 1, 1992

(This space for State Use)

Approved by ORIGINAL SIGNED BY ERNIE BUSCH

DEPUTY OIL & GAS INSPECTOR, DIST. #3
Title

Date DEC 03 1992

CULPEPPER MARTIN #5 DK/MV
Procedure To Plug DK & Open Additional MV
M 22 32 12

1. Comply to all NMOCD, BLM, & MOI, rules & regulations. MOI and RU completion rig. Blow well down. NU 6" 900 series BOP with flow tee and stripping head. Test operation of rams. NU blooie line and 2-7/8" relief line.
2. TOH W/7125' 1-1/2" tbg, blast jts, & Mod "D" seal assembly. Run 4-1/2" csg scraper on 2-3/8" tbg work string to 7099' (50' above top Dakota perf). TOH. Run 4-1/2" cmt ret on 2-3/8" tbg & set @ 7099'. Sting out of cmt ret & pressure test tbg to 4500 psi. Est rate into Dakota perfs & sq w/25 sx Cl G cmt (this will fill csg & Dakota perfs w/100% excess cmt). Sting out of ret & dump 5 sx cmt on top ret. Reverse out.
3. Spot 28 bbl mud from 7099'-5200': 15# sodium bentonite w/non-fermenting polymer, 9# gal weight, & 50 qs vis or greater. TOH.
4. Perf 2 sq holes @ 6152' (50' below top Gallup). Run 4-1/2" cmt ret on 2-3/8" tbg & set @ 6142'. Est rate into sq perfs & sq w/19 sx Cl G cmt. This will fill behind csg from 6152' to 6052' (50' above Gallup) w/100% excess. Sting out of ret & dump 11 sx cmt on top ret (this will fill inside csg from 6152' to 6052' w/50% excess cmt).
5. Set 4-1/2" drillable BP @ 5200' & top w/2 sx sand. Run dual spaced neutron log from 5200' to 4000' & CBL from 5200' to above top of cmt. Run pkr on 2-3/8" tbg, set @ 5150', & pressure test BP @ 5200' to 2500 psi. TOH.
6. Using both logs, Prod Engr Dept will pick Lower Point Lookout perfs in intervals having good cmt bond. Since 16 holes of unknown size are already open, only 9 additional holes should be perfed to insure a limited entry frac job. Perf w/3-1/8" HCG w/10 gr Owen 316 charges which have an average penetration in Berea of 14.7" & average perf diameter of 0.28".
7. Fill 9 - 400 bbl. frac tanks with 2% KCL water. Filter all water to 25 microns. Eight tanks for frac and one for breakdown. Usable water required for frac is 2886 bbls.
8. TIH w/4-1/2" pkr on 2-3/8" tbg & set @ 4956'. Pressure test tbg to 4500 psi. Load & monitor 4-1/2" X 7" annulus during breakdown and frac. With 750 psi on backside, breakdown & attempt to balloff Lower Point Lookout perfs w/2500 gal 15% HCL acid & 50 perf balls. Max pressure = 4500 psi. Acid to contain 1 gal/1000 aqua flow, 2 gal/1000 LT-21 (clay & silt suspenders), 5 gal/1000 XA-2L (Fe control), and 2 gal/1000 I17 (corrosion inhibitor). Lower pkr to below bottom perf to knock off balls. TOH.
9. Run 4-1/2" pkr on 2-7/8" NU N-80 rental frac string & set @ 4956'. Frac Lower Point Lookout with 80,000# 20/40 Arizona sand in 2% KCL 30# gel water @ 30 BPM or greater. All sand to be tagged with 0.40 mCi/1000# Ir-192 tracer. Max. pressure is 5000 psi and estimated

CULPEPPER MARTIN #5 - PLUG DK OPEN ADDITIONAL MV PAY
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treating pressure is 4089 psi. Treat per the following schedule:

<u>Stage</u>	<u>Fluid (Gals.)</u>	<u>Sand Vol. (lbs.)</u>
Pad	40,000	----
0.5 ppg	20,000	10,000
1.0 ppg	40,000	40,000
1.5 ppg	20,000	30,000
<u>Flush</u>	<u>1,200</u>	<u>----</u>
Totals	120,000	80,000#

If well is on a vacuum, underflush by about 25%. TOH.
Treat frac fluid with the following additives per 1000 gallons:

- * 30#/1000 (Guar Gel)
- * 1.0 gal. LOSURF-300 (Surfactant)
- * 2% KCL

10. TOH w/frac string and pkr. Set 4-1/2" ret BP @ 4900' on wireline. Run pkr on 2-3/8" tbg, set @ 4850', & pressure test BP @ 5200' to 2500 psi. TOH.
11. Using both logs, Prod Engr Dept will pick 25 Menefee perfs (about 4750'-4800'). Perf w/3-1/8" HCG w/10 gr Owen 316 charges which have an average penetration in Berea of 14.7" & average perf diameter of 0.28".
12. Fill 9 - 400 bbl. frac tanks with 2% KCL water. Filter all water to 25 microns. Eight tanks for frac and one for breakdown. Usable water required for frac is 2886 bbls.
13. TIH w/4-1/2" pkr on 2-3/8" tbg & set 200' above top Menefee perf. Pressure test tbg to 4500 psi. Load and monitor 4-1/2" X 7" annulus during breakdown and frac. With 750 psi on backside, breakdown & attempt to balloff Menefee perfs w/2500 gal 15% HCL acid & 50 perfballs. Max pressure = 4500 psi. Acid to contain 1 gal/1000 aqua flow, 2 gal/1000 LT-21 (clay & silt suspenders), 5 gal/1000 XA-2L (Foam control), and 2 gal/1000 I17 (corrosion inhibitor). Lower pkr to below bottom perf to knock off balls. TOH.
14. Run 4-1/2" pkr on 2-7/8" NU N-80 rental frac string & set 100' above top Menefee perf. Frac Menefee with 80,000# 20/40 Arizona sand in 2% KCL 30# gel water @ 30 BPM. All sand to be tagged with 0.40 mCi/1000# Ir-192 tracer. Max. pressure is 5000 psi and estimated treating pressure is 3934 psi. Treat per the following schedule:

<u>Stage</u>	<u>Fluid (Gals.)</u>	<u>Sand Vol. (lbs.)</u>
Pad	40,000	----
0.5 ppg	20,000	10,000
1.0 ppg	40,000	40,000
1.5 ppg	20,000	30,000
<u>Flush</u>	<u>1,020 (est.)</u>	<u>----</u>
Totals	120,000	80,000#

If well is on a vacuum, underflush by about 25%. TOH.

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Treat frac fluid with the following additives per 1000 gallons:

- * 30#/1000 (Guar Gel)
- * 1.0 gal. LOSURF-300 (Surfactant)
- * 2% KCL

15. TOH w/frac string and pkr.
16. TIH w/retrieving tool on 2-3/8" tbg & C.O. w/gas/mist to ret BP @ 4900'. Take pitot gauges when possible.
17. When wellbore is sufficiently clean, ret BP @ 4900' & TOH.
18. TIH w/notched collar on 2-3/8" tbg & C.O. w/air/mist to below bottom perf.
19. When wellbore is sufficiently clean, TOH laying down 2-3/8" tbg, and run after frac gamma-ray log from 5200'-4000'.
20. TIH with tested 1-1/2" tbg with standard seating nipple one joint off bottom. Again C.O. to below bottom perf w/air/mist & land tbg @ 5050'. Take final pitot gauges, water & oil samples, and gas samples.
21. Replace bad valves on wellhead w/rebuilt valves. ND BOP and NU wellhead. Rig down & release rig.

Approved: _____

J. A. Howieson

VENDORS:

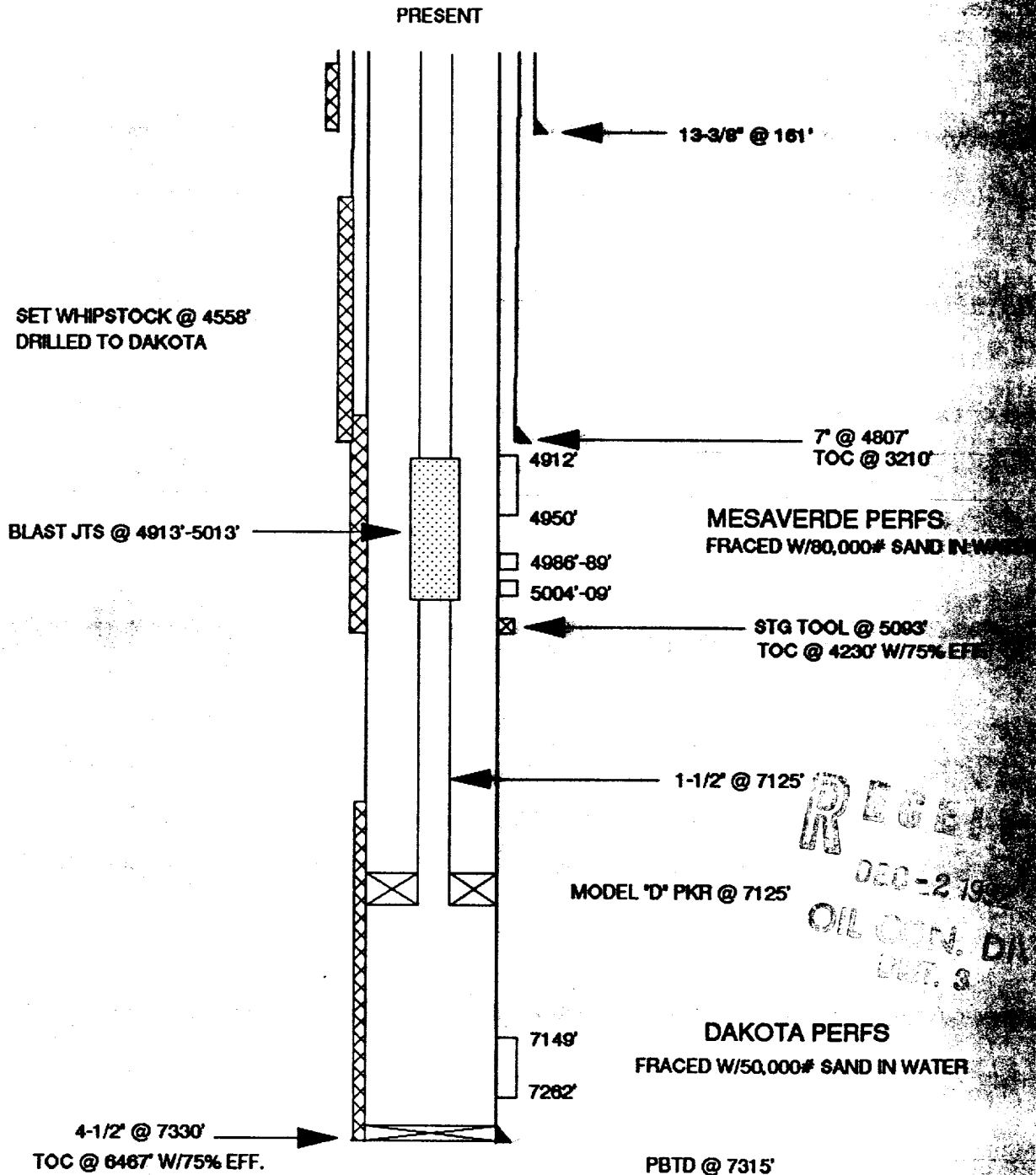
Wireline:	Blue Jet	325-5584
Frac & Cmt:	Western	327-6222
RA Tagging:	Pro-Technics	326-7133

PMP

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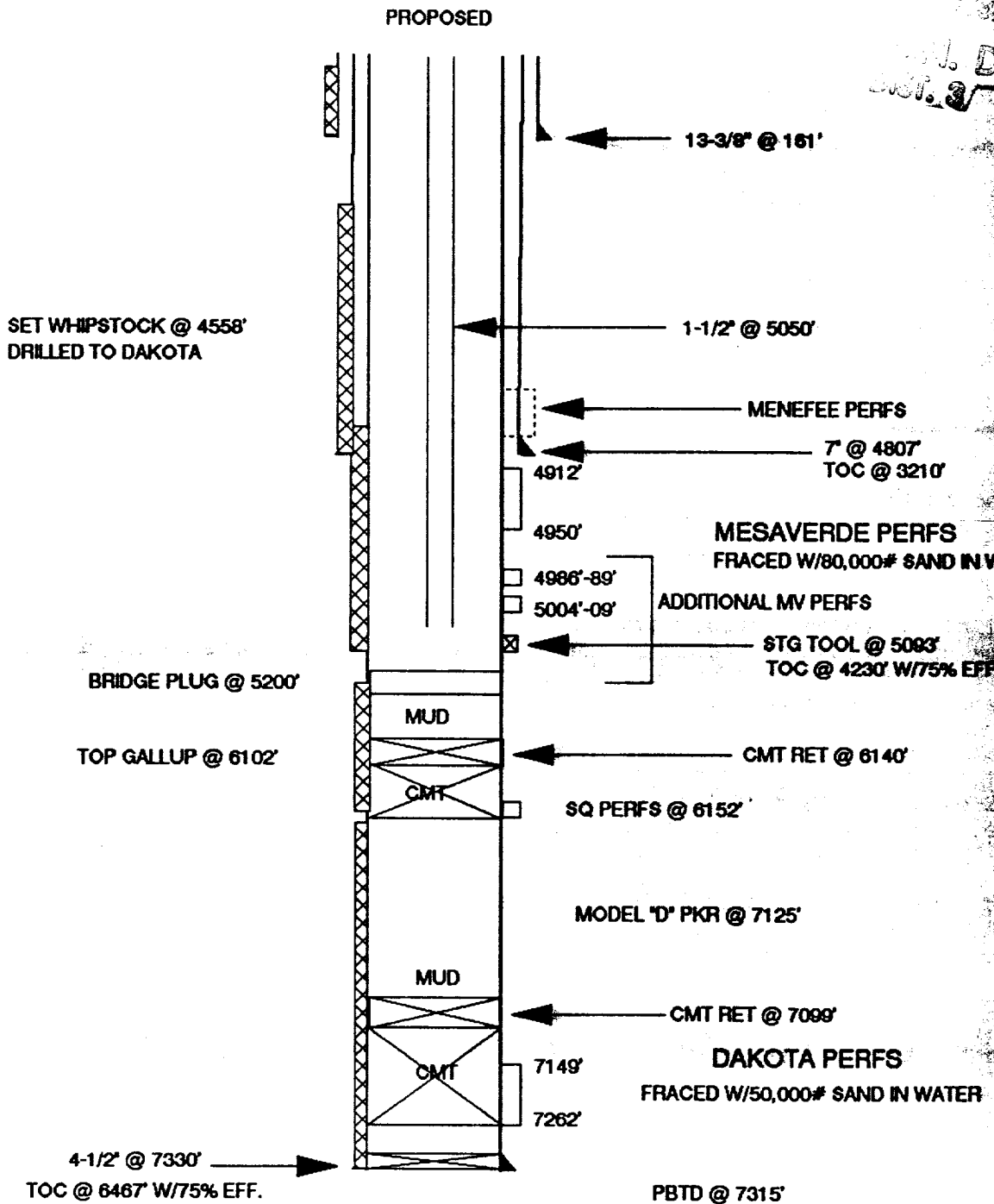
CULPEPPER MARTIN #5 MV/DK

UNIT M SECTION 22 T32N R12W
SAN JUAN COUNTY, NEW MEXICO



CULPEPPER MARTIN #5 MV/DK

UNIT M SECTION 22 T32N R12W
SAN JUAN COUNTY, NEW MEXICO



Pertinent Data Sheet - CULPEPPER MARTIN #5

Location: 990' FSL 990' FWL SEC. 22 T32N R12W, SAN JUAN COUNTY, N.M.

Field: Basin Dakota
Blanco Mesaverde

Elevation: 6107' TD: 7330'
11' KB PSTD: 7315'

DP#: 10668
GWI: 25.00% (100% SRC Truss)
NRI: 21.19%

Completed: 9-21-51

Initial Potential:

MV: 1951 AOF=1238 MCF/D 1090 psi
DK: 9-5-66 AOF=1892 MCF/D, Q=1785 MCF/D, SIP=1944 PSI
MV: 9-15-66 AOF=8787 MCF/D, Q=6102 MCF/D, SIP=810 PSI

Casing Record:

Hole Size	Csg. Size	Wt. & Grade	Depth Set	Cement	Top/Csg.
17-1/4"	13-3/8"	48.0# H-40	161'	75 sx	
9"	7"	20.0# J-55	4807'	250 sx	3210' Surve
6-1/4"	4-1/2"	11.6, 10.5# K-55	7330'	100 sx	6467' @ 7330'
		Stg Tool @	5093'	100 sx	4230' @ 7330'

Tubing Record: 1-1/2" 2.9# IJ 7125' 225 jts
Baker Mod "D" Pkr @ 7125'
Blast Jts @ 4914'-5013'

Formation Tops:

Ojo Alamo	550'
Kirtland	605'
Fruitland	2143'
Pictured Cliffs	2540'
Point Lookout	4910'
Gallup	6102'
Dakota	7233'

Logging Record: Electric Log '51, Csg Insp Log, Induction

Stimulation: SOH 4854'-5188' w/1390 qts.

Workover History: 1-18-55: CO & fraced OH w/ 9200# sand in oil. 12-11-55: ... mud from open hole. 7-31-66: Pulled & replaced parted 7" csg @ 970'. Set ... @ 4558'. Milled window @ 4561'-4572' & drilled thru DK. Perfed DK @ 7149'-... 7154'-62', 7236'-44', 7248'-62' & fraced w/50,000# sand in water. Perfed MV @ 4912'-50', 4986'-89', 5004'-09' & fraced w/80,000# sand in water.

Production History: MV 1st Delivery= 3-1-52. Cumulative=1745 MCF & 3644 BO. Capacity =50 MCF/D. MV csg pressure = 418 psi. DK tbg pressure = 403 psi. Bradenhead = 0 psi. DK 1st Delivery = 12-30-66. DK capacity = 0 MCF/D. Line pressure = 417 psi.

Pipeline: Sunterra

PMP