

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
BLM MAIL ROOM

30-045-27004

5. LEASE DESIGNATION AND SERIAL NO.
NM-2996

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Middle Mesa SWD

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat MORRISON/ENTRADA

11. SEC., T., R., M., OR BLE.
AND SURVEY OR AREA
Sec. 25, T-32-N, R-7-W
NMMP

12. COUNTY OR PARISH
San Juan

13. STATE
NM

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

PLUG BACK ☐

b. TYPE OF WELL

OIL WELL ☐

GAS WELL ☐

OTHER SWD

FARMINGTON FIELD AREA
SINGUO ZONE ☐ MULTIPLE ZONE ☐

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
1555'S, 1210'W

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

11 miels from Navajo Dam, NM

15. DISTANCE FROM PROPOSED*

LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drig. unit line, if any)

1210'

16. NO. OF ACRES IN LEASE

320

17. NO. OF ACRES ASSIGNED
TO THIS WELL

n/a

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

680'

19. PROPOSED DEPTH

9450'

20. ROTARY OR CABLE TOOLS

Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

6642' GL

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED

22. APPROX. DATE WORK WILL START*

23. PROPOSED PROGRAM

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal, 43 CFR 3165.4.

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	
26"	20"	133.0#	500'	1500 cf. circulated
17 1/2"	13 3/8"	61&68#	3760'	3900 cf-2 st; circ. surf
12 1/4"	9 5/8"	40#	3600-6500	1175 cf-circ. liner top
8 3/4"	7"	23#	9450'	1350 cf- circ. liner base

Drill and test an 9450' wildcat disposal well. The zones of interest
will be tested for disposal potential.

BOP's will be inspected and operated daily, and pressure tests will be
conducted as required.

Subject to concurrence by NMOCC

RECEIVED

AUG 03 1988

OIL CON. DIV.
DIST. 9

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true depths. Give blowout preventer program, if any.

24. SIGNED [Signature] TITLE Regulatory Affairs DATE 07-20-88

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

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

[Signature]

NMOCC

*See Instructions On Reverse Side

JUL 29 1988

AREA MANAGER

All distances must be from the outer boundaries of the Section.

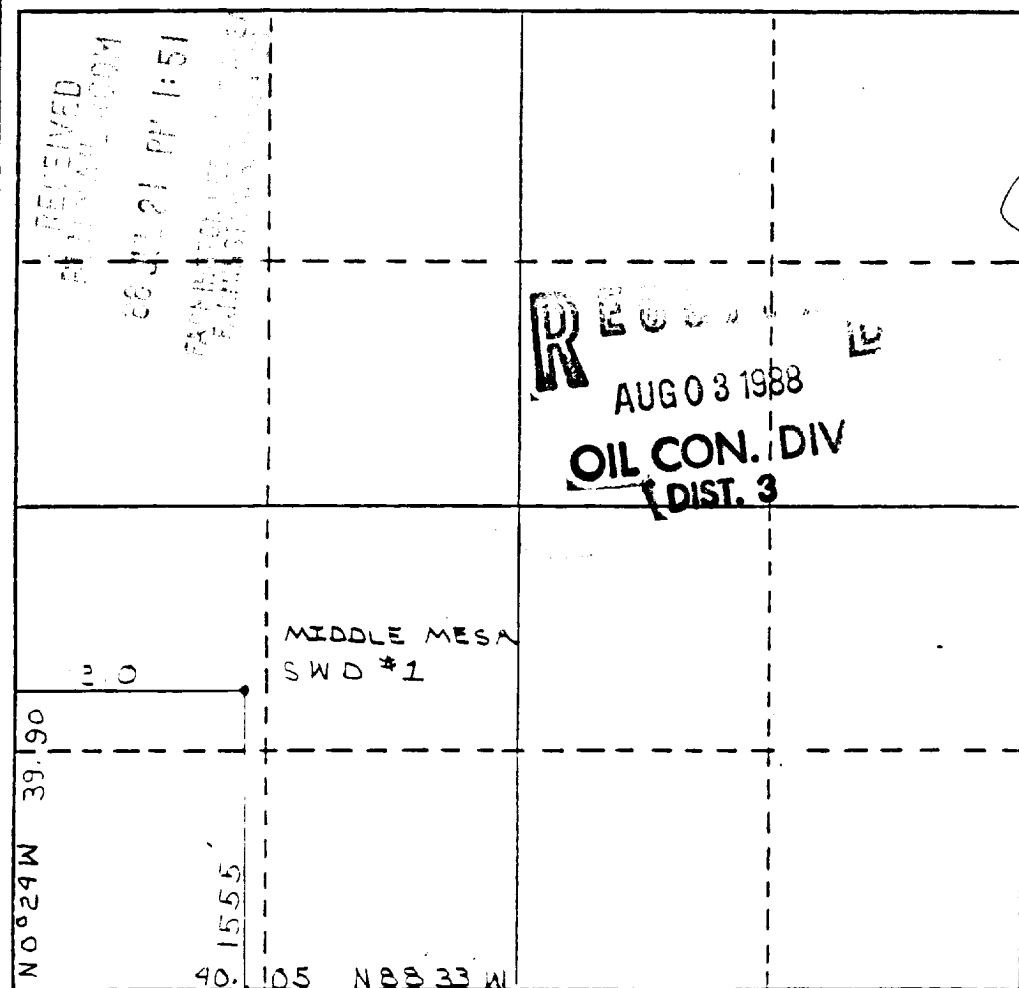
Operator Southland Royalty Co.		Lease Middle Mesa SWD NM-2996		Well No. 1
Unit Letter L	Section 25	Township T32N	Range R7W	County San Juan
Actual Footage Location of Well: 1555 feet from the South line and 1210 feet from the West line				
Ground Level Elev. 6642	Producing Formation SWD	Pool SUBS. HARRISON ENTRADA	Dedicated Acreage: Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Division.



CERTIFICATION

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

Name
Drilling Clerk
Position
Southland Royalty Co
Company
7-20-88

Date

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

Registered Professional

Date Surveyed
June 3, 1988

Registered Land Surveyor
R. Howard Daggett

Certificate No.
9679

Operations Plan
Middle Mesa SWD #1

Location: 1555'S, 1210'W, Sec. 25, T-32-N, R-7-W, San Juan Co., NM

Formation: Morrison/Entrada Wildcat Disposal Well

Elevation: 6642'GL

I. Geology:

A. Formation Tops:	Surface	San Jose	Point Lookout	5886'
	Ojo Alamo	2472'	Mancos	6393'
	Kirtland	2575'	Gallup	7262'
	Fruitland	3107'	Greenhorn	7944'
	Pic.Cliffs	3456'	Graneros	7992'
	Lewis	3672'	Dakota	8110'
	Chacra	5277'	Morrison	8307'
	Mesa Verde	5657'	Todilto	9132'
	Menefee	4239'	Entrada	9192'
			Carmel	9392'
			Total Depth	9450'

B. Logging Program:

GR-Neutron: TD - surface.

Induction-Density: TD - intermediate casing
± 15 sidewall cores across injection interval

Mud loggers from Dakota to TD

Natural gauges at 5270', 5260', 5880', 6390', 7260', 7930',
7990', 8110', 8190'

II. Drilling

A. Mud Program:

1. 26" surface hole: 0 - 500' spud mud
2. 17 1/2" intermediate hole: 500' - 3075' fresh water based mud system
3. 12 1/4" drilling liner: 3075' - 5540' air
4. 8 3/4" long string: 5540' - 8535' air through the Dakota to ± 8320'. Fresh water based mud system to TD.

B. BOP Program:

1. 26" hole: none required
2. 17 1/2" hole: 20" 3000 psi double gate BOP with 20" 3000 psi rotating head (see Figure #BOP 1)
3. 12 1/4" hole: 13 5/8" 3000 psi double gate BOP with 13 5/8" 3000 psi rotating head (see Figure #BOP 2)
4. 8 3/4" hole: 13 5/8" 3000 psi double gate BOP with 13 5/8" 3000 psi rotating head (see Figure #BOP 2)

Operations Plan - Middle Mesa SWD #1

III. Casing Program:

<u>A. Hole Size</u>	<u>Csg. Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Interval</u>
26"	20"	133.0#	K-55	0-500'
17 1/2"	13 3/8"	61.0#&68.0#	K-55	0-3760'
12 1/4"	9 5/8"	40.0#	N-80	3600-6500'
8 3/4"	7"	23.0#	N-80	0-9450'

B. Float Equipment:

20" surface - cement nose float shoe equipped for inner string cementing.

13 3/8" intermediate - cement nose guide shoe, float collar and multiple stage cementer equipped for two stage cementing. Set tool for second stage at $\pm 2600'$. Ten centralizers, one every other joint off bottom for a total of five, one below and four above the stage tool every other joint.

9 5/8" liner - cement nose guide shoe, float collar and five centralizers every other joint off bottom. A 9 5/8" x 13 3/8" liner hanger with packoff will be used to isolate the top of the liner.

7" long string - cement nose guide shoe, float collar and centralizers every other joint as required to centralize casing across injection intervals.

C. Injection string:

8400' of 4 1/2", 10.5#, K-55 8rd tubing with a 7" x 4 1/2" Baker Model "FA-1" production packer and Baker Model "K" seal assembly on bottom.

D. Wellhead Equipment:

13 3/8" weld on x 7" x 4 1/2" 3000 psi xmas tree assembly single completion for standard service.

IV. Cementing:

20" surface - cement with 1270 sacks Class "B" neat with 1/4# cello-flake/sack and 3% calcium chloride (1500 cu.ft. of slurry, 100% excess to circulate to surface). WOC 12 hours. Test casing to 600 psi for 30 minutes.

13 3/8" intermediate -

First stage - cement with 500 sacks of 65/35 Class "B" Pozmix with 6% gel, 2% calcium chloride, and 1/2 cu.ft. perlite/sack. Tail in with 200 sacks class "B" with 2% calcium chloride, 1/4#/sack flocele (1200 cu.ft. of slurry, 50% excess to circulate to stage tool). Drop opening bomb, wait 30 minutes, open stage tool and circulate for three hours.

Operations Plan - Middle Mesa SWD #1

13 3/8" intermediate - (cont'd)

Second stage - cement with 1280 sacks of 65/35 Class "B" Pozmix with 6% gel, 2% calcium chloride, and 1/2 cu.ft. perlite/sack. Tail in with 200 sacks Class "B" with 2% calcium chloride, 1/4#/sack flocele (2700 cu.ft. of slurry, 50% excess to circulate to surface). Run temperature survey at 8 hours if cement does not circulate to surface. WOC 12 hours. Test casing to 1200 psi for 30 minutes.

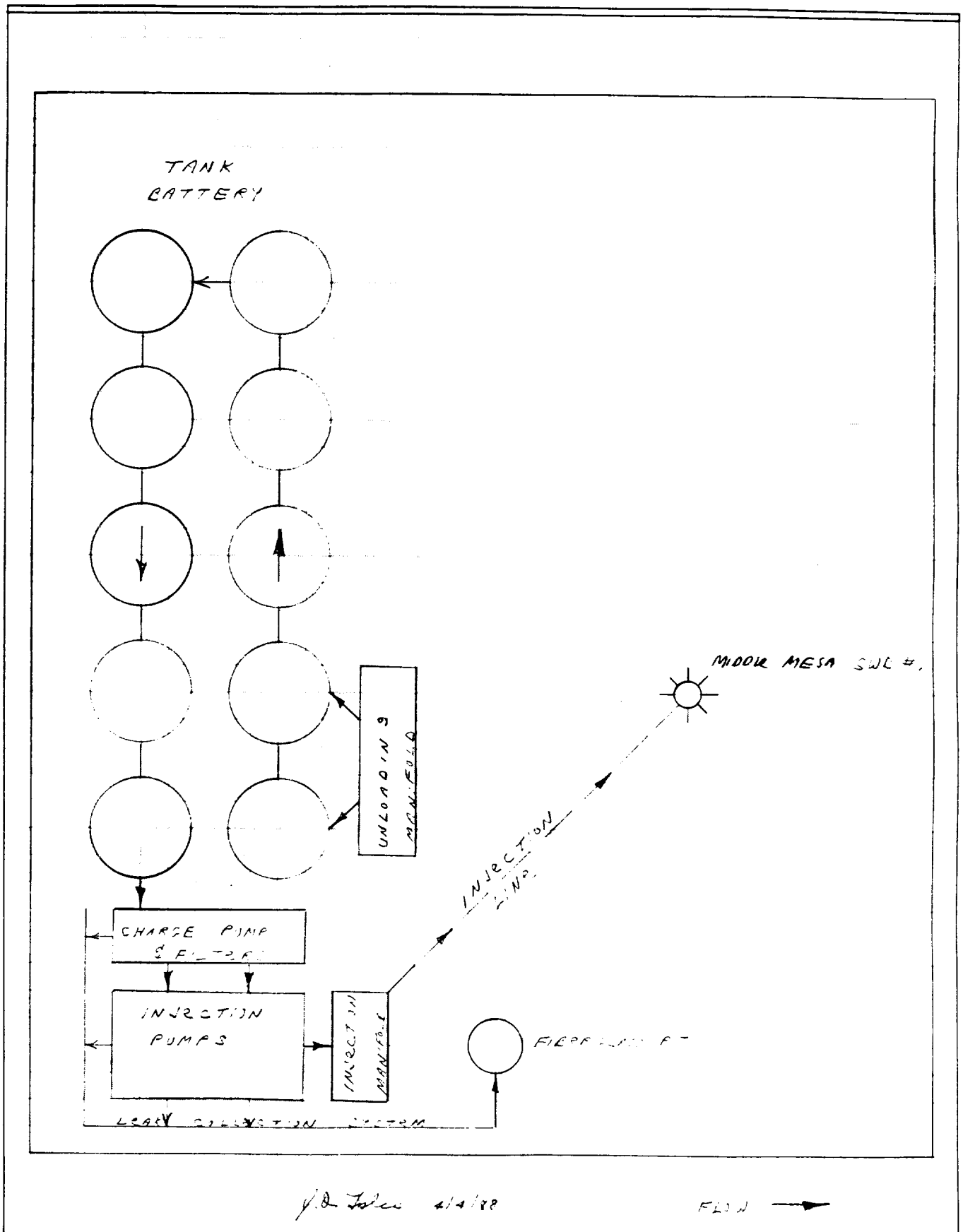
9 5/8" liner - lead with 820 sacks of 50/50 Class "B" Pozmix with 2% gel, 10% salt, 1% Halad-9, 1/4#/sack flocele. Tail in with 100 sacks Class "B" with 1/4#/sack flocele, and 0.4% Halad-22A (1175 cu.ft. of slurry, 70% excess to circulate liner). WOC 12 hours. Test casing to 1200 psi for 30 minutes.

7" long string - lead with 600 sacks 50/50 Premium Poz, 2% gel, 10% salt, 1% Halad-22A, 35% silica flour, 1/4#/sack flocele. Tail with 200 sacks Premium cement, 35% silica flour, 1% Halad-22A, 1/4#/sack flocele (1350 cu.ft. of slurry, 200% excess to circulate to bottom of 9 5/8" liner). Run temperature survey at 8 hours. WOC 18 hours.

MERIDIAN OIL CO.
ENGINEERING CALCULATION

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Date: 07/15/88
By: JDS
File: MMSW01

ANTICIPATED INJECTION FACILITIES.
MIDDLE MESA SWL #1



Map #1

