



Southland Royalty Company

January 18, 1984

Mr. Joe Ramey
New Mexico Dept. of Energy &
Minerals, Oil & Gas Division
P.O. Box 2088
Santa Fe, New Mexico

Re: SRC-Reid #19

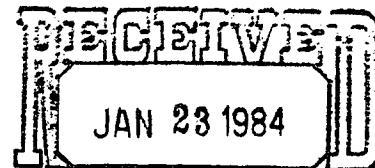
Dear Mr. Ramey,

Southland Royalty Co. hereby requests administrative approval of downhole commingling of the Basin Dakota and Blanco Mesaverde zones in the subject well which is located in the NW/NE of Section 18, T28N, R9W, San Juan County, New Mexico.

A workover to correct a packer leak after the well failed the 1983 packer leakage test found a casing leak. The lower zone is currently logged off with drilling mud and will not produce. In a separate sundry, we have proposed remedial work to return the two zones to production.

The necessary costs of the required repairs will make the Mesaverde uneconomical to produce based on Southland's economic parameters. Although the casing leak is above the Mesaverde and separated from the Dakota by a permanent packer, a liberal allocation of only fifty percent of the workover cost was used in the economic evaluation of the Mesaverde. This estimated \$24,000 would payout in 2.1 years with full-time production, but the income is \$8,000 below our return goal and does not meet the corporate rate of return objective. Without commingling, the Mesaverde will be uneconomical to produce and would have to be plugged. The projected recovery of 14500 MCF and 700 BO would be lost.

The fluids from the zones are compatible. The oil from each zone is a light, high API gravity (DK=56.6, MV=46.6 degree API as reported by Plateau Refinery). Gas analyses are attached and show the Mesaverde to have a specific gravity of .7530 and BTU content of 1317 with the Dakota having a specific gravity of .7171 and BTU content of 1239. Water samples are not available because water production has been negligible. Recent water production is assumed to be from the casing leak.



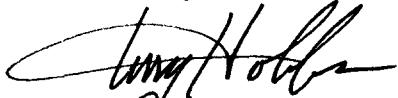
A proposed allocation formula is shown in Exhibit No. 4. Additional supporting data (production decline curves and production histories) are also attached.

The calcualted BHP's for each zone are shown in Exhibit No. 5 and indicate the lower pressured Mesaverde to be eighty-four per cent of the Dakota. Therefore, there should be no cross flow between zones and the zones should produce together. As mentioned earlier, it is anticipated the additional pressure and volume from the Dakota should assist in maintaining increased production from the Mesaverde by removing the Mesaverde oil.

Southland's land department has verified that all ownership and royalty interests are equal in the Dakota and Mesaverde intervals.

The BLM and all offset operators have been notified by copy of this letter.

Sincerely,



Terry Hobbs

XC: Frank Chavez
BLM
Offset Opr.

CTH:bgw

CERTIFIED MAIL



January 18, 1984

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New Mexico Dept. of Energy &
Minerals, Oil & Gas Division
P.O. Box 2088
Santa Fe, New Mexico

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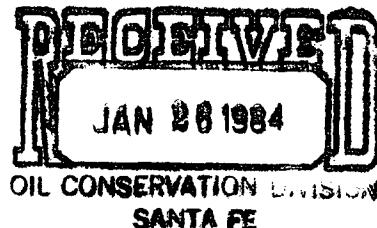
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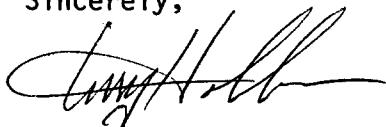
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Sincerely,



Terry Hobbs

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BLM
Offset Opr.

CTH:bgw

WAIVER

E1 Paso Natural Gas Co. hereby waives objection to Southland Royalty Company's application for downhole commingle for their Reid #19 as proposed above.

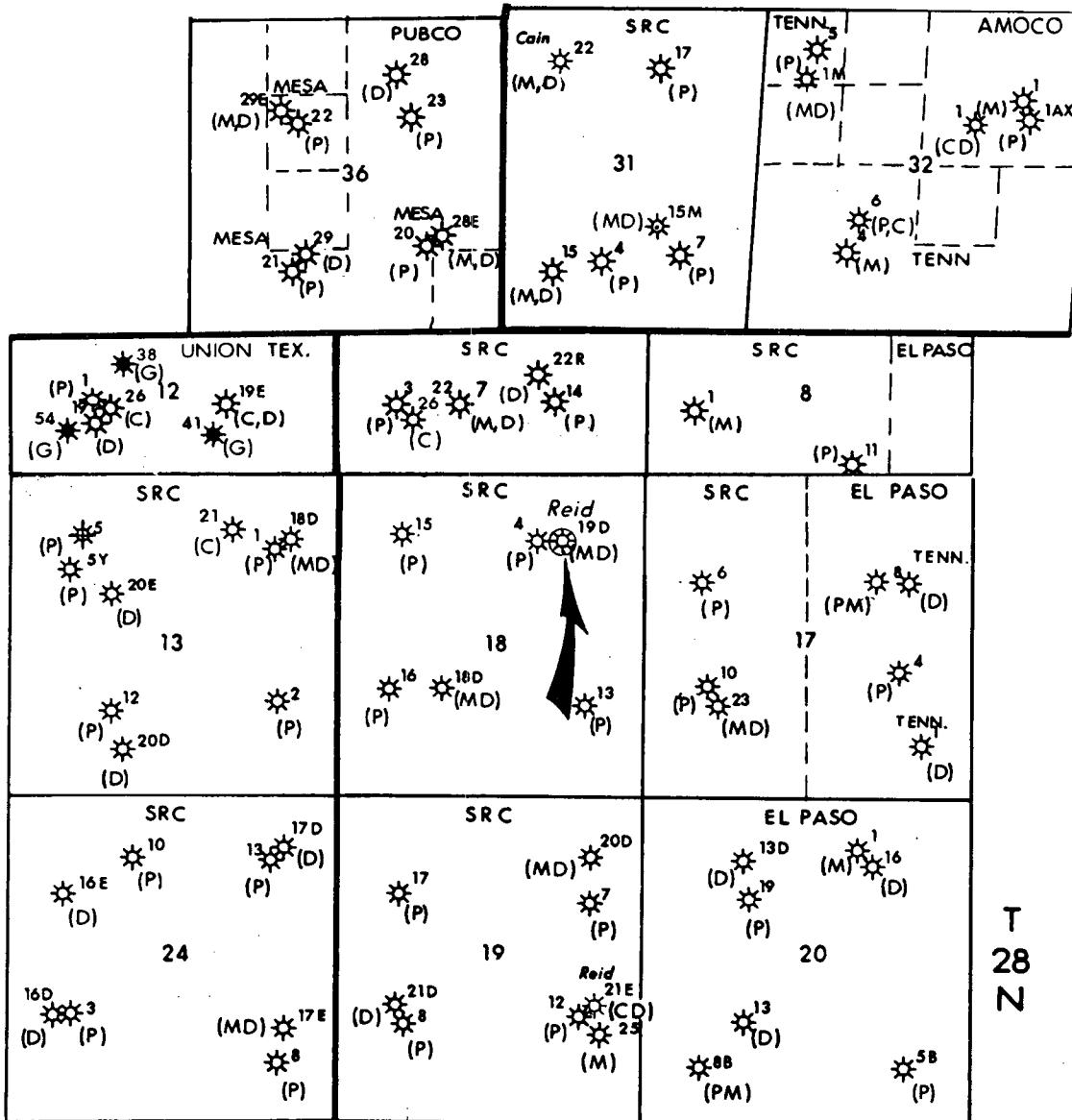
1 - 23 - 84
Date

Donald R. Read
By

EXHIBIT No. 1

R 10W

R 9 W



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29
N

T
28
N

 <p>Southland Royalty Company FARMINGTON DISTRICT FARMINGTON, NEW MEXICO</p>
<p>REQUEST FOR DOWNHOLE COMMINGLING</p> <p>S.R.C. Reid #79 1030' FNL & 1470' FEL SEC. 18 - T28N - R 9 W SAN JUAN COUNTY NEW MEXICO</p>
<p>BY: Terry Hobbs 1" = 3000' Jan. 15, 1984</p>

NEW MEXICO OIL CONSERVATION COMMISSION

Well Location and Acreage Dedication Plat

Section A.

Date August 25, 1960

Operator Artec Oil and Gas Company Lease Raid
 Well No. 19-D Unit Letter B Section 18 Township 28N Range 9W NMFM
 Located 1030 Feet From North Line, 1470 Feet From East Line
 County San Juan G. L. Elevation 5790 Dedicated Acreage 300.99 Acres
 Name of Producing Formation Dakota Pool Angel Peak Extension

1. Is the Operator the only owner* in the dedicated acreage outlined on the plat below? Yes XX No _____.
2. If the answer to question one is "no," have the interests of all the owners been consolidated by communization agreement or otherwise? Yes _____ No _____. If answer is "yes," Type of Consolidation _____
3. If the answer to question two is "no," list all the owners and their respective interests below:

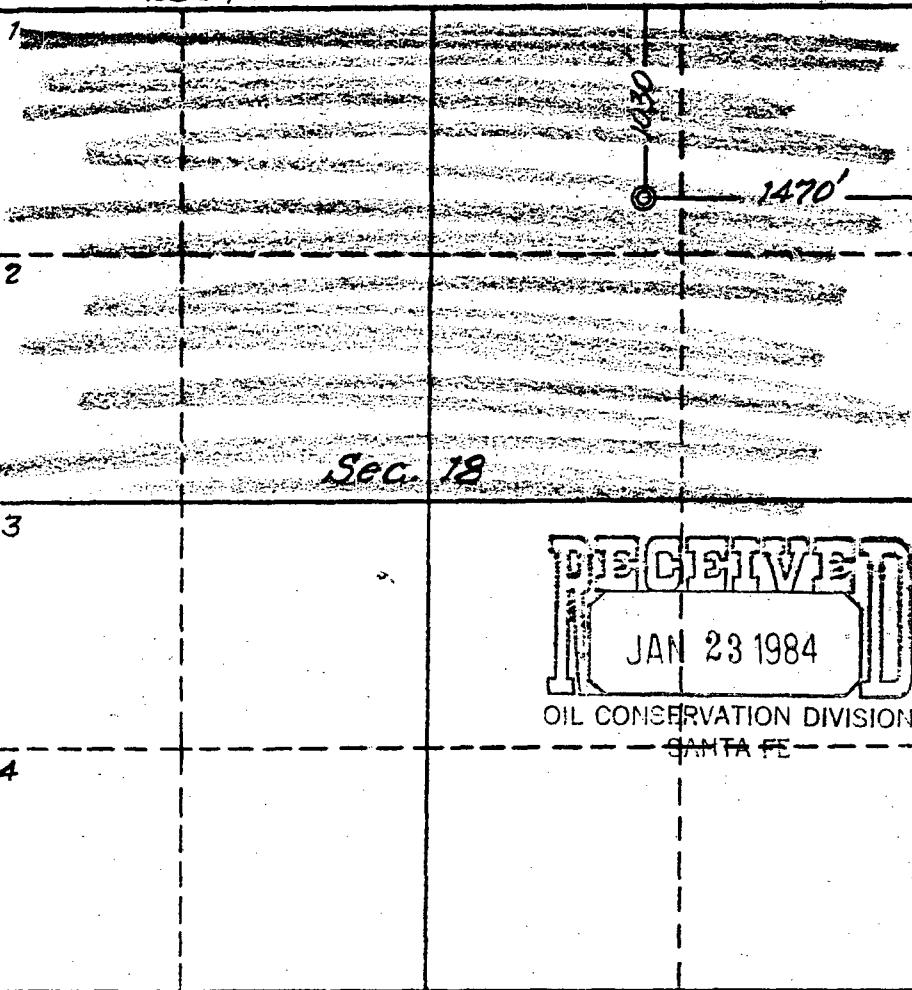
Owner

Land Description

Section. B

2324'

2640'



This is to certify that the information in Section A above is true and complete to the best of my knowledge and belief.

Artec Oil and Gas Company
(Operator)

ORIGINAL SIGNED BY J.C. SALMON
(Representative)

Drawer 570, Farmington, N.M.

This is to certify that the well location and acreage dedication plat in Section A was prepared from the notes of a land survey made by me under my supervision and that the same is true and correct to the best of my knowledge and belief.

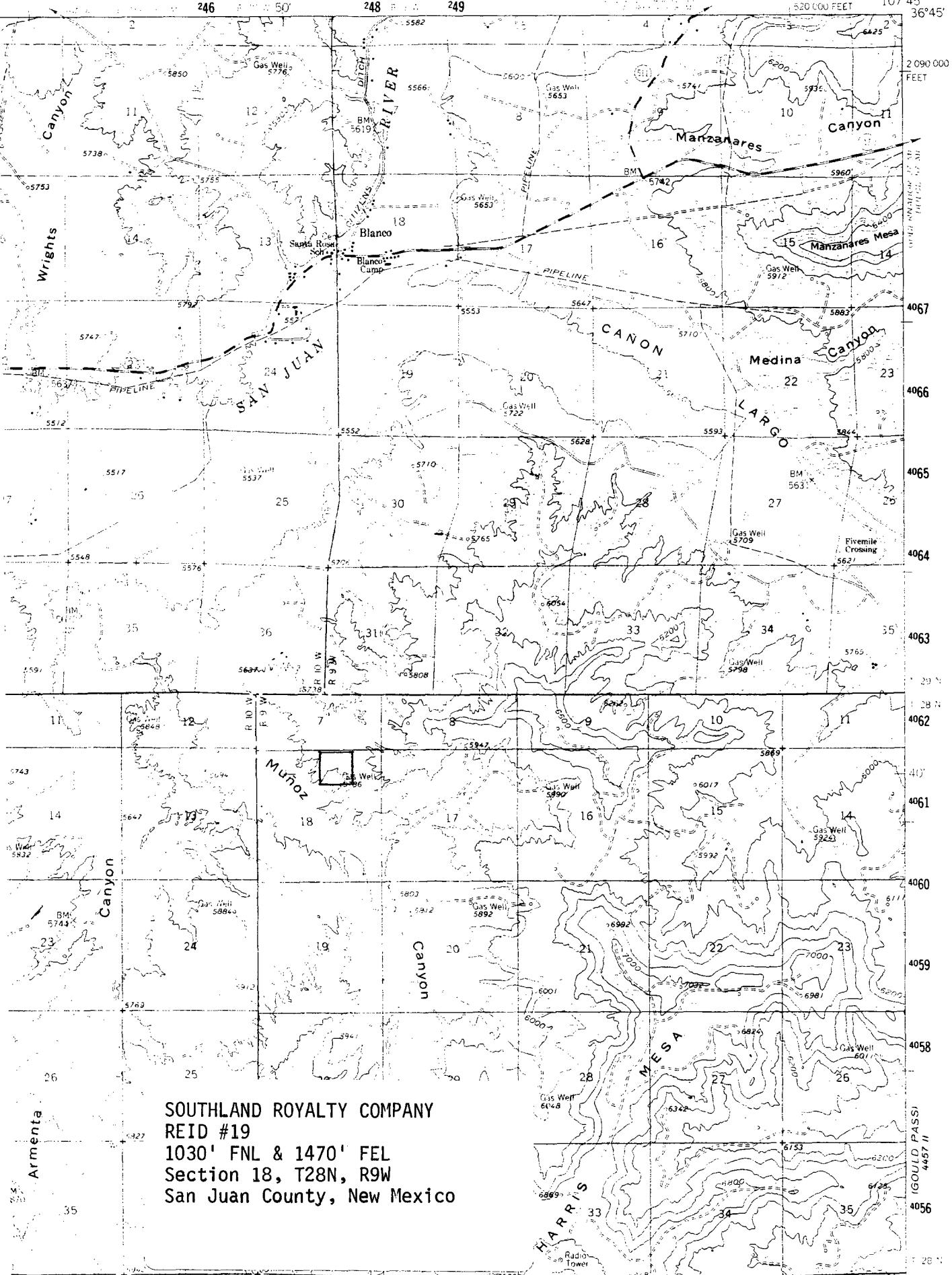
Date Surveyed Aug. 24, 1960

Ernest V. Echohawk
Ernest V. Echohawk
Registered Land Surveyor.

Certificate No. 1545

BLOOMFIELD QUADRANGLE
NEW MEXICO-SAN JUAN CO.
15 MINUTE SERIES (TOPOGRAPHIC)

NAVAJO DAM



SOUTHLAND ROYALTY COMPANY
REID #19
1030' FNL & 1470' FEL
Section 18, T28N, R9W
San Juan County, New Mexico

EXHIBIT No. 2

GAS ANALYSIS: TRANSCRIPTION OF TAPE FROM AUTOMATIC CHROMATOGRAPH

NAME/LOCATION: Reid #19 mv : 3 10 81
STREAM NO. 10 826

STATION NO. 293221.

SPECIFIC GRAVITY 0.7530 BTU/CF 14.73/60F/DRY: 1317.3✓

COMPONENT	MOL %	G.P.M.
CARBON DIOXIDE	0.438	0.0000
NITROGEN	0.257	0.0000
METHANE	76.060	0.0000
ETHANE	12.500	3.3450
PROPANE	6.519	1.7940
ISOBUTANE	0.955	0.3120
N-BUTANE	1.521	0.4730
ISOPENTANE	0.491	0.1790
N-PENTANE	0.406	0.1470
HEXANE +	0.763	0.3360
TOTAL	100.020	5.5920

(ECETU/074)

EXHIBIT No. 3

GAS ANALYSIS: TRANSCRIPTION OF TAPE FROM AUTOMATIC CHROMATOGRAPH

NAME/LOCATION: *Rail #19 DK* TEC: 3 10 51
STREAM NO. 9 (826)

STATION NO. 258430.

SPECIFIC GRAVITY 0.7171 STU/CF 14.73/60F/DRY: 1239.0 ✓

COMPONENT	MOL %	G.P.M.
CARBON DIOXIDE	1.002	0.0000
NITROGEN	0.362	0.0000
METHANE	79.700	0.0000
ETHANE	11.730	3.1330
PROPANE	4.141	1.1390
ISOBUTANE	0.828	0.2710
N-BUTANE	1.007	0.3170
ISOPENTANE	0.471	0.1720
N-PENTANE	0.269	0.0970
HEXANE +	0.507	0.2230
TOTAL	100.017	5.3570

(CECSTU/074)

EXHIBIT No. 4

ALLOCATION OF PRODUCTION

A. Cumulative production through 1982:

	Gas	%	Oil	%
Mesaverde	292628 MCF	19.3	11745 BO	41.6
Dakota	1220190 MCF	80.7	16496 BO	58.4

B. Cumulative production since Mesaverde completed (1972):

Mesaverde	292628 MCF	38.9	11745 BO	59.0
Dakota	460179 MCF	61.1	8159 BO	41.0

C. Projected production rates from decline curve:

Mesaverde	545 MCFM	19.2	18 BOPM	56.0
Dakota	2300 MCFM	80.8	14 BOPM	44.0

D. Recommended production allocation:

Mesaverde	20%	55%
Dakota	80%	45%

EXHIBIT No. 5

CALCULATED BOTTOMHOLE PRESSURES

A. Formula:

$$BHP = SIWHP \times e^{.0000347 G L}$$

Where:

G = gas gravity

L = depth to formation

SIWHP = shut in wellhead pressure from latest packer
leakage test.

B. Dakota

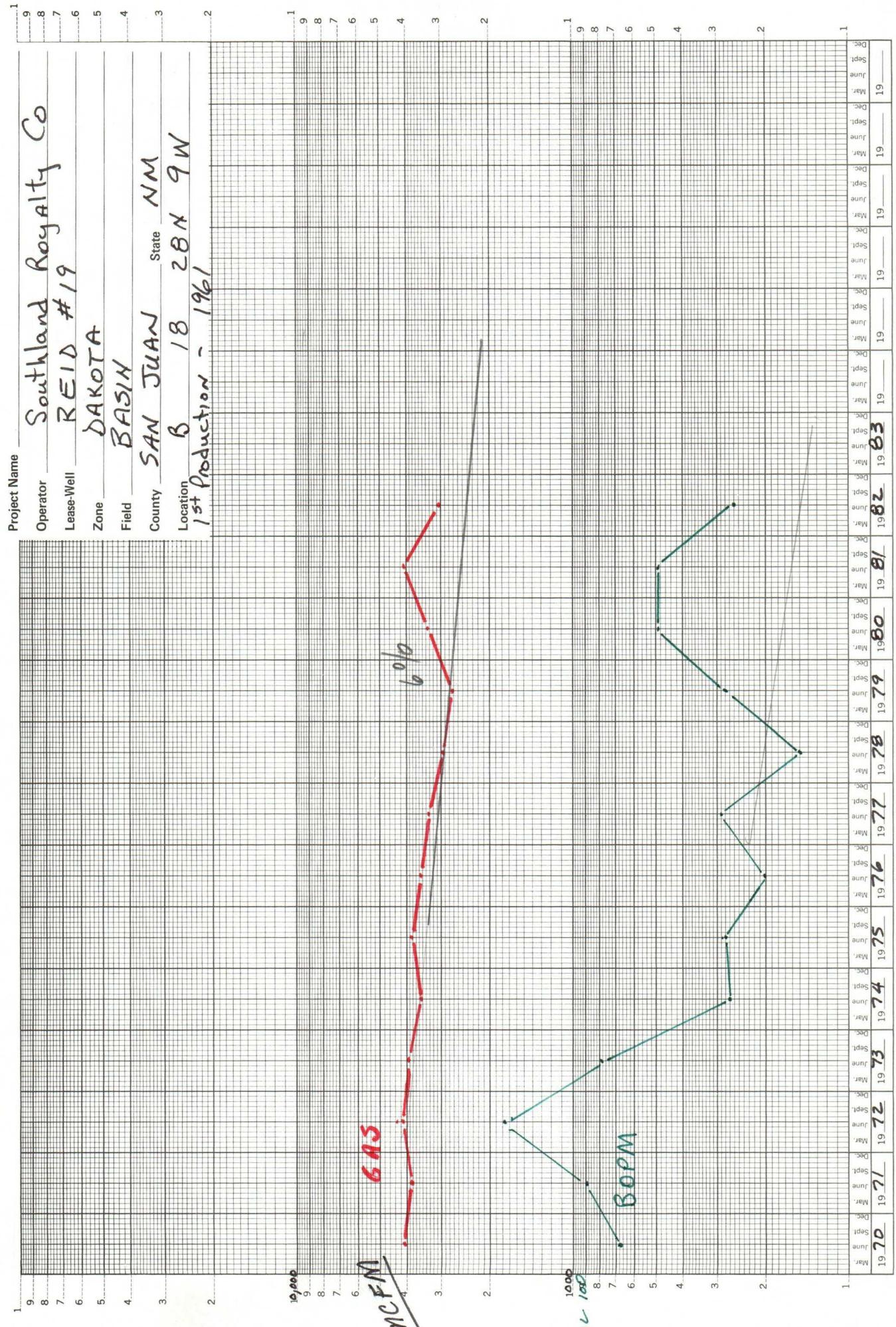
$$\begin{aligned} BHP &= 585 \times e^{.0000347} \times .7171 \times 6513 \\ &= 688 \text{ psi} \end{aligned}$$

C. Mesaverde

$$\begin{aligned} BHP &= 515 \times e^{.0000347} \times .7530 \times 4377 \\ &= 577 \text{ psi} \end{aligned}$$

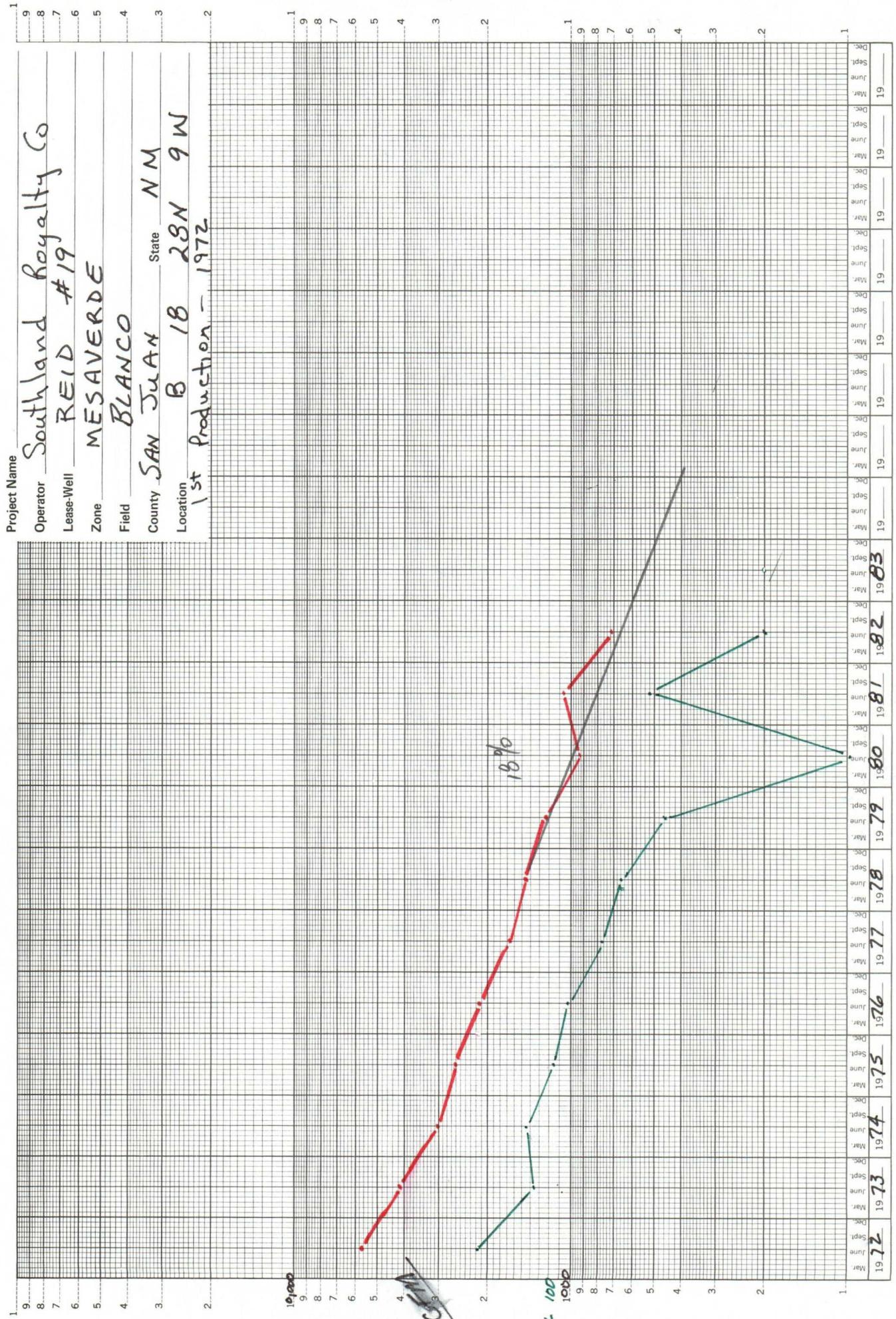
Southland Royalty Company

EXHIBIT No. 6



Southland Royalty Company

EXHIBIT No. 7



RUN 01/16/84 TIME 08:43

RIGHTS IDENT. # 30428N09W18B00P0

**SOUTHLAND ROYALTY COMPANY
DWIGHTS PRODUCTION HISTORY REPORT**

PAGE 3
DWI 170AP-A

RUN 01/16/84 TIME 00:00:00

DWIGHTS IDENT. # 34000

DWIGHTS' HLAND ROALTY COMPANY PRODUCTION HISTORY RECOR

Water (°C)	Daily Cond. (BBLS/DAY)
10	10
15	15
20	20
25	25
30	30
35	35
40	40
45	45
50	50
55	55
60	60
65	65
70	70
75	75
80	80
85	85
90	90
95	95
100	100

PAGE 4
DWI 170AP-A

RUN 01/16/84 TIME 08:43

EXHIBIT No. 8
SOUTHLAND ROYALTY COMPANY
DWIGHT'S PRODUCTION HISTORY REPORT

DWIGHT'S IDENT. #	SOUTH LAND ROYALTY COMPANY DWIGHT'S PRODUCTION HISTORY REPORT	PAGE 1 DWT 170AP-A
WELL NAME	REID	STATUS ACT
WELL #	19	STATUS DATE 00-00-00
OPERATOR NAME	SOUTHLAND ROYALTY CO	LIQ GATHERER PLA
OPERATOR #	683355	GAS GATHERER SUG
FIELD NAME	BASIN DAKOTA (FFRATED GAS)	COMPLETION DATE 10-18-60
FLD #	008004974	1ST GAS FROD 02-61
FIELD DISCOVERY DT	00-00-00	TOTAL DEPTH 6652
LOCATION	18B28N 09W	UPPER PERF 6432
STATE ABBREVIATION	NM	LOWER PERF 6598
STATE LSE CTRL #	12150	LIQ GRAVITY .0
STATE DISTRICT #	4	GAS GRAVITY 1.00
COUNTY NAME	SAN JUAN	GAS-LIQ RATIO 0
COUNTY #	045	TEMP GRADIENT .000
API #	0750200	N-FACTOR 50.000
LEASE TYPE	GAS	TC PC

RUN 01/16/84 TIME 08:43

EXHIBIT No. 9
SOUTHLAND ROYALTY COMPANY
DWIGHTS PRODUCTION HISTORY REPORT

PAGE 5
DWI170AP-A

DWIGHTS IDENT. #	SOUTHLAND ROYALTY COMPANY	STATUS	ACT
WELL NAME	DWIGHTS	STATUS DATE	00-00-00
WELL #	30428N09418X000M	REID	
OPERATOR NAME	SOUTHLAND ROYALTY CO	LIQ GATHERER	PLA
OPERATOR #	683355	GAS GATHERER	SUG
FIELD NAME	BLANCO MESAVERDE (FRACURATED GAS)	COMPLETION DATE	10-18-71
FLD #	MV	1ST GAS PROD	01-72
FIELD DISCOVERY DT	00-00-00	TOTAL DEPTH	0
LOCATION	18B28N 09W	UPPER PERF	4338
STATE ABBREVIATION	NM	LOWER PERF	4415
STATE LSE CTRL #	12150	LIQ GRAVITY	.0
STATE DISTRICT #	4	GAS GRAVITY	5.00
COUNTY NAME	SAN JUAN	GAS-LIQ RATIO	0
COUNTY #	045	TEMP GRADIENT	.000
API #	0750200	N-FACTOR	50.000
LEASE TYPE	GAS	TC	
		PC	

RUN 01 / 16 / 84 TIME 08:43

SOUTHLAND ROYALTY COMPANY DWIGHTS PRODUCTION HISTORY REPORT

DWIGHTS IDENT. #: 30428N09W1 BROOMSV

'AGE
1170AP-A

RUN 01/16/84 TIME 08:43

DWIGHTS IDENT. # 30428N9W18R00M

SOUTHLAND ROYALTY COMPANY
DWIGHTS PRODUCTION HISTORY REPORT

PAGE 7
DW178AP-A

	JAN	FEB	MARCH	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	ANNUAL
1980	1027	1148	1118	1296	1287	1082	974	845	629	1237	1059	11095	
OIL	1	1	1	1	1	1	1	1	1	1	1	1	
GAS	0	0	0	0	0	0	0	0	0	0	0	0	
WATER	0	0	0	0	0	0	0	0	0	0	0	0	
OIL WELLS	1	1	1	1	1	1	1	1	1	1	1	1	
1981	1405	1274	1141	899	67	1156	952	1260	1135	868	1169	1029	
OIL	1	1	1	1	1	1	1	1	1	1	1	1	
GAS	0	0	0	0	0	0	0	0	0	0	0	0	
WATER	0	0	0	0	0	0	0	0	0	0	0	0	
OIL WELLS	1	1	1	1	1	1	1	1	1	1	1	1	
1982	132	119	942	935	510	0	0	0	0	0	0	0	
OIL	1	1	1	1	1	0	0	0	0	0	0	0	
GAS	0	0	0	0	0	0	0	0	0	0	0	0	
WATER	0	0	0	0	0	0	0	0	0	0	0	0	
OIL WELLS	1	1	1	1	1	0	0	0	0	0	0	0	
1983	0	0	0	0	0	0	0	0	0	0	0	0	
OIL	0	0	0	0	0	0	0	0	0	0	0	0	
GAS	0	0	0	0	0	0	0	0	0	0	0	0	
WATER	0	0	0	0	0	0	0	0	0	0	0	0	
OIL WELLS	1	1	1	1	1	0	0	0	0	0	0	0	
TOTAL OIL PRODUCTION TO DATE :	11,757	1200	100	100	7	242	153	12	838	17	293,466		
TOTAL GAS PRODUCTION TO DATE :					3	1	0	0	0	0			

RUN 01/16/84 TIME 08:43

SOUTHLAND ROYALTY COMPANY
DWIGHT'S PRODUCTION HISTORY REPORT

DWIGHT'S IDENT. # 30428N09W18E00MV

PAGE 8
DWI170AP-A

GAS TEST INFORMATION	CUM TO TEST	WH/SIP	BHP	T	POTENTIAL	WH FLOW	BBLs/DAY	COND	BBLs/DAY	WATER
10-18-71	0	893	1012	2	916	0	0	0	0	0
69-25-72	53147	658	742	2	169	181	0	0	0	0
68-17-73	98941	638	719	2	126	193	0	0	0	0
68-01-74	138247	693	734	2	87	175	0	0	0	0
68-01-75	138294	665	668	2	75	172	0	0	0	0
67-06-78	239334	592	554	2	53	174	0	0	0	0