



TONEY ANAYA
GOVERNOR

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

July 19, 1984

Mr. Terry Hobbs
Southland Royalty Co.
P.O. Drawer 570
Farmington, NM 87499

Re: Johnson #1 I-7-25N-3W

Dear Terry:

Your recommended allocation of commingled production to the referenced well is hereby approved as follows:

	<u>Oil</u>	<u>Gas</u>
Mesaverde	17%	87%
Dakota	83%	13%

If you have any questions, please contact this office.

Sincerely,

Frank T. Chavez
District Supervisor

FTC/dj

xc: EPG
PER
Santa Fe
Well File ✓



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE March 20, 1984

RE: Proposed MC _____
Proposed DHC X _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated March 15, 1984
for the Southland Royalty Johnson #1 I-7-25N-3W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Docket for Leasing. Mesaverde zone is non-marginal
and is overproduced by 2 1/2 times March allowable.

Yours truly,

Frank T. Chang



Southland Royalty Company

March 14, 1984

Joe D. Ramey
New Mexico Dept. of Energy &
Minerals, Oil and Gas Division
P.O. Box 2088
Santa Fe, New Mexico 87501

Re: SRC Johnson #1

Southland Royalty Co. hereby requests administrative approval of down-hole commingling of the Ojito Gallup/Dakota with the Blanco Mesaverde in the subject well, which is located in the NE/SE of section 7, T25N, R3W, Rio Arriba County, New Mexico.

The SRC - Johnson #1 was completed in 1980 and first delivered in 1982. The two zones were produced for the second half of 1982, but the Dakota did not produce in 1983. A plunger lift was installed, but would not operate successfully because of excessive oil production. Installation of a pumping unit will be required to produce the Gallup/Dakota, but the 5½" casing will not allow installation of two strings large enough to pump the Gallup/Dakota and to produce the Mesaverde separately. Approval to commingle the Mesaverde with the Gallup/Dakota will allow production of an estimated 15,000 BO and 54,000 MCFG, which cannot be recovered with current production equipment that will fit in the 5½" casing.

The gases and fluids from each zone are compatible. The oil is light, high API gravity (Mesaverde=48.1, Gallup/Dakota=56.6 degrees API). The attached gas analyses (Exhibit Nos. 2 and 3) show the Mesaverde to have a BTU content of 1240 and specific gravity of .714 with the Gallup/Dakota specific gravity of .715 and BTU content of 1239. Water analyses were not taken because of the negligible water production.

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

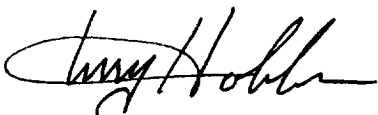
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DIST. 3

The BHP's for each zone are shown in Exhibit No. 5 and indicate the lower pressured Mesaverde to be 90 percent of the Gallup/Dakota. Therefore, there should be no crossflow between the zones.

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

The NMOCC at Aztec, BLM and offset operators are being notified by certified copy of this letter and operators are hereby requested to forward a signed waiver to Santa Fe.

Sincerely,

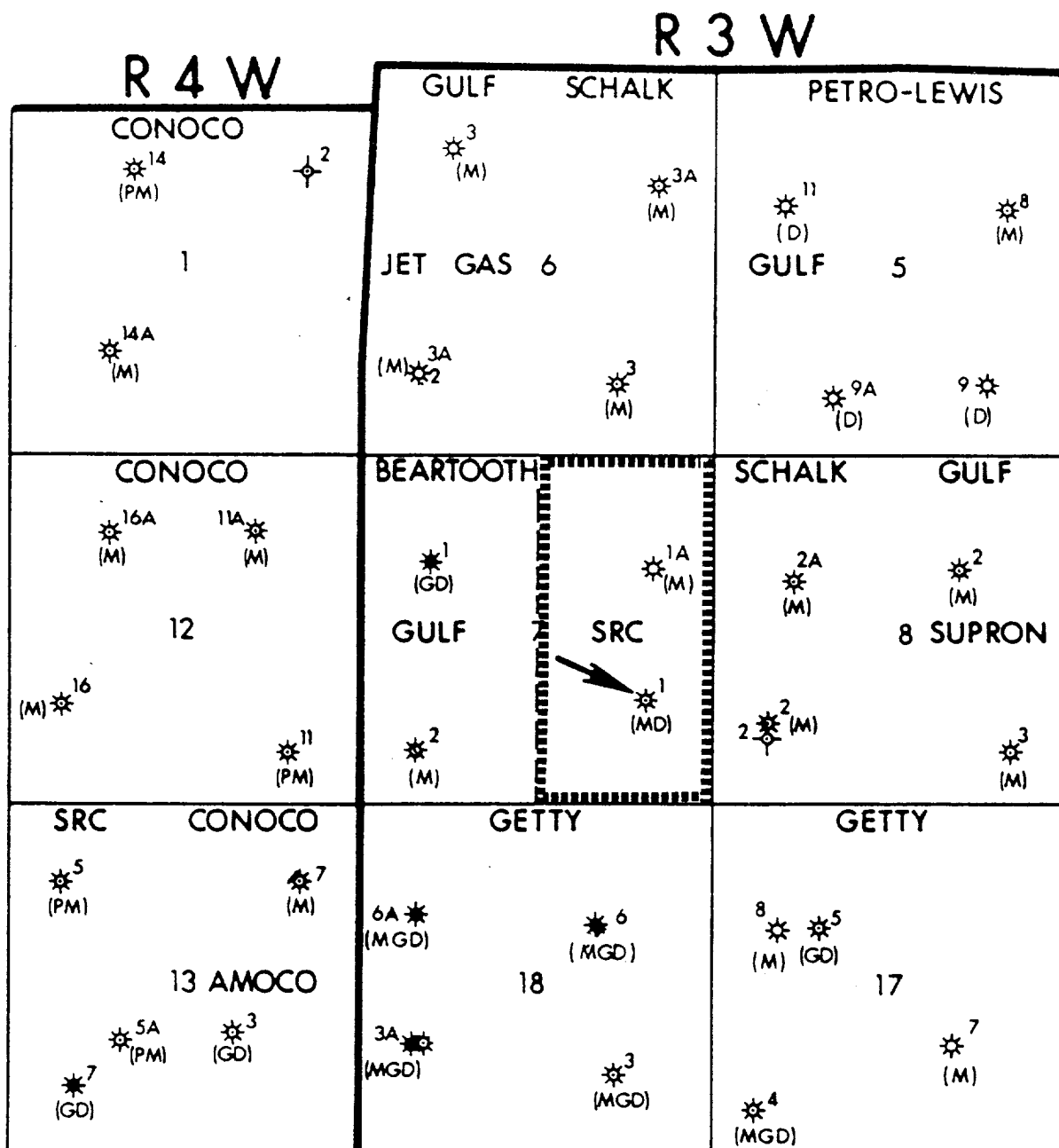


C. Terry Hobbs
Petroleum Engineer

Enclosures

cc: NMOCC
BLM
Offset Operators

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..... PRORATION UNIT

EXHIBIT No. 1

Southland Royalty Company
FARMINGTON DISTRICT
FARMINGTON, NEW MEXICO

OFFSET OPERATOR MAP
SRC
Johnson #1
1590' FSL , 1000' FEL
Sec. 7 - T.25N.-R.3 W.

RIO ARriba COUNTY, NEW MEXICO
2" = 1 mile
Terry Hobbs

March 12, 1984

07/09/82

EL PASO NATURAL GAS COMPANY
MEASUREMENT DEPARTMENT
POST OFFICE BOX 1492
EL PASO, TEXAS 79999

CHROMATOGRAPHIC GAS ANALYSIS REPORTS

SOUTHLAND ROYALTY CO.
P.O. DRAWER 570
FARMINGTON, NM 87401

ANAL DATE 07 09 82	METER STATION NAME	METER STA	94335
	JOHNSON #1 MV	OPEK	8367

TYPE CODE	SAMPLE DATE	EFF. DATE	USE MUS.	SCALE	H2S GRAINS	LOCATION
00	07 02 82	07 09 82	04			4 F 01

	NORMAL MOL%	GPM
C O 2	.48	.000
H 2 S	.00	.000
N2	.55	.000
METHANE	80.93	.000
ETHANE	10.00	2.673
PROPANE	4.72	1.298
ISO-BUTANE	.86	.281
NORM-BUTANE	1.29	.406
ISO-PENTANE	.46	.166
NORM-PENTANE	.32	.116
HEXANE PLUS	.39	.170
TOTALS	100.00	5.112

SPECIFIC GRAVITY .714

MIXTURE HEATING VALUE
(BTU/CF AT 14.73 PSIA, 60 DEGREES, DRY) 1,240

RATIO OF SPECIFIC HEATS 1.280

EXHIBIT No. 2
Mesaverde
Gas AnalysisMAR 15 1984
OIL CON. DIV.
DIST. 3

07/30/82

EL PASO NATURAL GAS COMPANY
MEASUREMENT DEPARTMENT
POST OFFICE BOX 1492
EL PASO, TEXAS 79999

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FARMINGTON DISTRICT

CHROMATOGRAPHIC GAS ANALYSIS REPORTS

SOUTHLAND ROYALTY CO.
P.O. DRAWER 570
FARMINGTON, NM 87401

ANAL DATE 07 29 82

METER STATION NAME
JOHNSON #1 GL/DK

METER STA 94334
OPER 8367

TYPE CODE	SAMPLE DATE	EFF. DATE	USE MDS.	SCALE	H2S GRAINS	LOCATION
42	07 29 82	07 30 82	06			4 E 01

	NORMAL MOL%	GPM
C O 2	.43	.000
H 2 S	.00	.000
N2	.81	.000
METHANE	80.96	.000
ETHANE	9.82	2.625
PROPANE	4.54	1.249
ISO-BUTANE	.87	.284
NORM-BUTANE	1.23	.388
ISO-PENTANE	.51	.187
NORM-PENTANE	.35	.127
HEXANE PLUS	.48	.210

TOTALS	100.00	5.070
--------	--------	-------

SPECIFIC GRAVITY	.715
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MIXTURE HEATING VALUE (BTU/CF AT 14.73 PSIA, 60 DEGREES, DRY)	1,239
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EXHIBIT No. 3
Gallup/Dakota
Gas Analysis

RATIO OF SPECIFIC HEATS	1.281
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MAR 15 1984

OIL CON. DIV.
DIST. 3

EXHIBIT No. 4
PRODUCTION ALLOCATION

A. 1982 Production Data

<u>GALLUP/DAKOTA</u>				<u>MESAVERDE</u>		
<u>Month</u>	<u>Days On</u>	<u>MCF</u>	<u>Bbls Oil</u>	<u>Days On</u>	<u>MCF</u>	<u>Bbls Oil</u>
June	30	0	13	12	2,694	29
July	2	440	229	31	4,574	29
Aug	17	1140	227	17	2,601	19
Sept	28	536	39	26	2,873	25
Oct	31	841	339	31	3,326	16
Nov	30	132	0	0	0	3
<u>Dec</u>	<u>31</u>	<u>411</u>	<u>81</u>	<u>21</u>	<u>3,122</u>	<u>30</u>
Total	169	3500	928	137	19,190	151
Avg.		20.7	5.5		140	1.1

B. Percentage Split Recommendation

Mesaverde:

$$\text{Oil} = \frac{1.1}{1.1+5.5} = 16.7\%$$

$$\text{Gas} = \frac{140}{140+20.7} = 87.1\%$$

Dakota:

$$\text{Oil} = \frac{5.5}{5.5+1.1} = 83.3\%$$

$$\text{Gas} = \frac{20.7}{140+20.7} = 12.9\%$$

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DIST. 3

EXHIBIT No. 5
BOTTOMHOLE PRESSURES

A. Mesaverde:

Perf @ 5856'-5886'

Mid Point = 5871'

BHP measured at 5850' = 973 psi
(See Exhibit No. 10)

B. Gallup/Dakota:

Perf @ 7878'-8120'

Mid Point = 7999'

BHP measured at 5650' = 1004 psi
(See Exhibit No. 11)

Calculated BHP at midpoint
(7999'-5650') .035 psi/ft. + 1004 psi = 1086 psi

C. Comparison

MV	<u>973</u>	= 90%
DK	1086	

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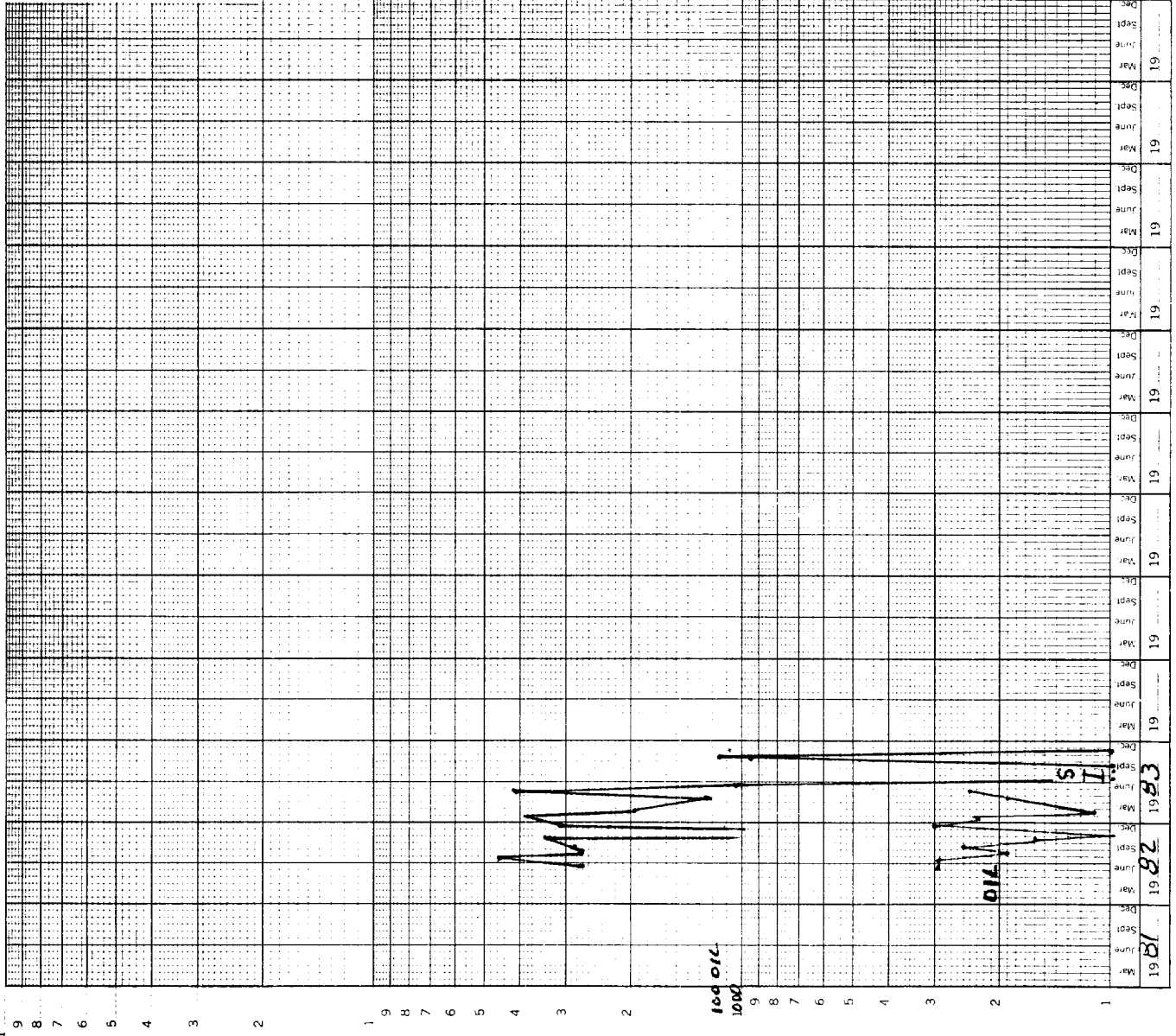
Southland Royalty Company

EXHIBIT No. 6

MAR 15 1984

OIL CON. DIV.

Project Name SRC DIST. 3
Operator JOHNSON #1
Lease-Well MESAVERDE
Zone BLANCO
Field Rio Arriba State NM
County I Location 7-25N-3W





Southland Royalty Company

EXHIBIT No. 7

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Project Name C OIL CON. DIV.

Operator SRC DIST. 3

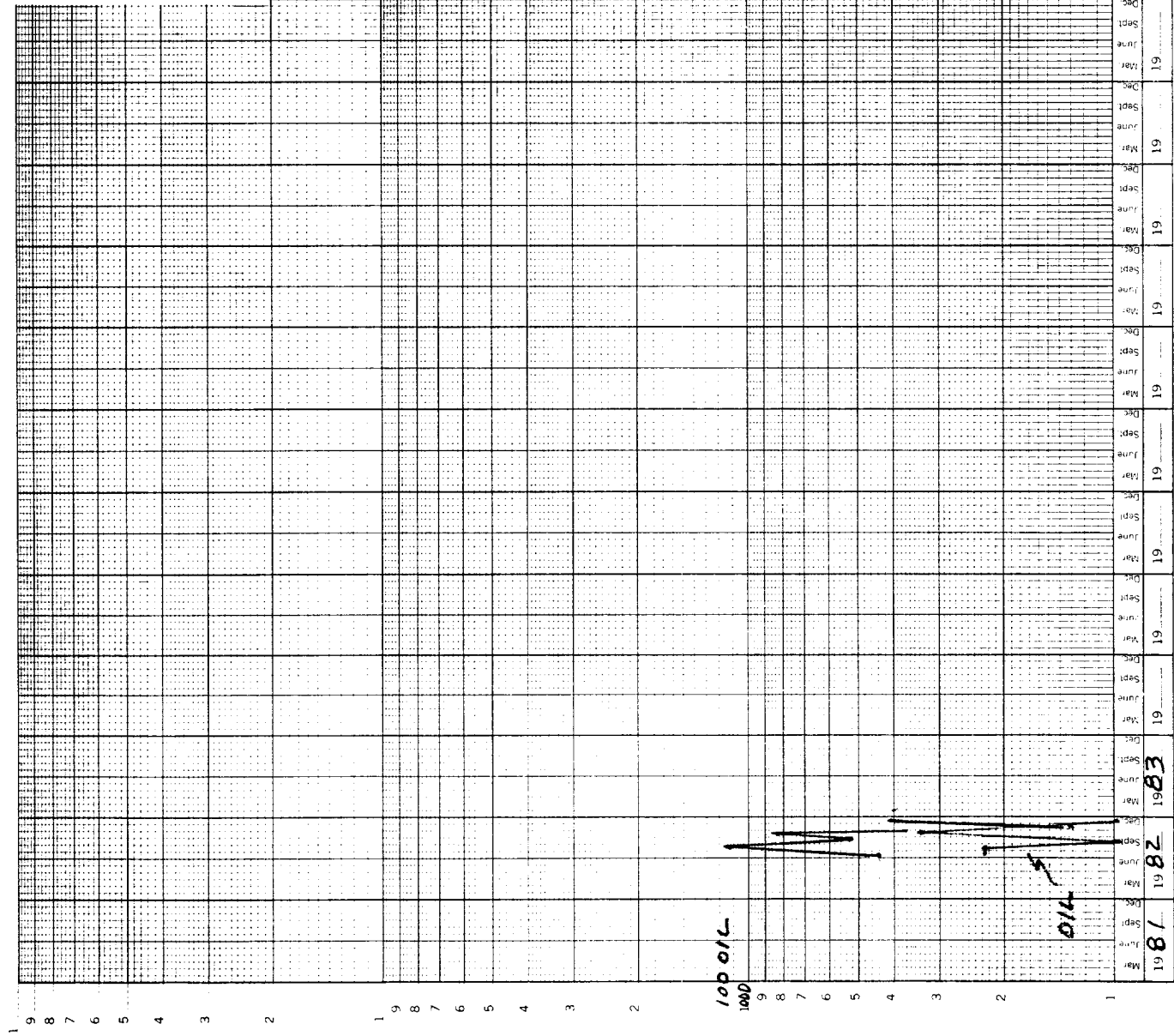
Lease-Well JOHNSON #1

Zone GALLUP DAKOTA

Field OJITO

County Rio Arriba State NM

Location I 7-25N-3W



DWIGHT'S ENERGY DATA, INC.
 GAS WELL HISTORY
 NEW MEXICO GAS NORTH WEST N.
 ACCESS RUN DATE: 84/03/12
 DATA CURRENT THRU: 83/11/30
 (#251.039, 25N03W07100MV)

OPERATOR (#683355)		WELL NAME		WELL #	
SOUTHLAND ROYALTY CO		JOHNSON		000001	
IDENT. NUMBER	STATE	DIST	COUNTY (#039)	LOCATION	
25N03W07100MV	NM	004	RIO ARriba	071 25N 03W	
API #	FIELD (# 8007074)		RESERVOIR		
BLANCO MESAVERDE (PRORATED GAS) M					
TD	U/PERF	L/PERF	GAS GATH	LIQ GATH	TEMP
			GAS GRAV	LIQ GRAV	GRAD
			EPG	PER	N-FACTOR
COMP DATE	1ST PROD DATE	LAST PROD DATE	STATUS DATE		STATUS
	8206	8311			ACT
CUM THRU LPD GAS/MCF	GAS CUM SINCE DATE	CUM THRU LPD COND/BBLS	COND CUM SINCE DATE		
32550					435

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 OIL CON. DIV.
 DIST. 3

DWIGHT'S ENERGY DATA, INC.
SOUTHLAND ROYALTY CO
JOHNSON

ACCESS RUN DATE: 84/03/12
DATA CURRENT THRU: 83/11/30
(#251,039,25N03W07100MV)

EXHIBIT No. 8 (Cont'd)

*** GAS TEST INFORMATION ***

TEST DATE	CUM TO TEST	WHSIP	BHP	BHP/Z	T	POTENTIAL	FLOW	WATER	WH	BBLS/DAY	BBLS/DAY	COND
820813			1062		C2		116		169			

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OIL CON. DIV

DWIGHT'S ENERGYDATA, INC.
SOUTHLAND ROYALTY CO
JOHNSON

ACCESS RUN DATE: 84/03/12
DATA CURRENT THRU: 83/11/30
(#251,039,25N03M07100MV)

EXHIBIT No. 8 (Cont'd)

*** MONTHLY PRODUCTION HISTORY ***

YEAR	ANNL/MONTH	GAS/MCF	COND/BBL	WATER/BBL
82	JAN	0	0	0
82	FEB	0	0	0
82	MAR	0	0	0
82	APR	0	0	0
82	MAY	0	0	0
82	JUN	2694	29	0
82	JUL	4574	29	0
82	AUG	2601	19	0
82	SEP	2873	25	0
82	OCT	3326	16	0
82	NOV	0	3	0
82	DEC	3122	30	11
82	ANNUAL	19190	151	11
83	JAN	3800	23	16
83	FEB	1967	11	7
83	MAR	0	0	0
83	APR	1241	19	3
83	MAY	4105	24	12
83	JUN	1035	4	2
83	JUL	0	0	0
83	AUG	0	0	0
83	SEP	0	0	0
83	OCT	1152	95	2
83	NOV	60	103	2
83	YTD	13360	284	44

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OIL CON. DIV
DIST. 3

DWIGHT'S ENERGYDATA, INC.
OIL LEASE HISTORY
NEW MEXICO OIL NORTH WEST N.

ACCESS RUN DATE: 84/03/12
DATA CURRENT THRU: 83/11/30
(#151,039,25N03W07100GD)

EXHIBIT No. 9

OPERATOR (#683355)		LEASE NAME		WELL #
SOUTHLAND ROYALTY CO		JOHNSON		000001
IDENT. NUMBER	STATE	DIST	COUNTY (#039)	LOCATION
25N03W07100GD	NM	004	RIO ARRIBA	071 25N 03W
API #	FIELD (# 8054136)		RESERVOIR	
CUITO GALLUP DAKOTA G				
GAS GATH	LIQ GATH	GAS GRAV	LIQ COMP DATE	1ST PROD DATE
EPG	FER			8206
CUM THRU LPD OIL/BBL		CUM THRU LPD CSQHD GAS/MCF		8308
930		3544		ACT
OIL CUM SINCE DATE		CASINGHEAD CUM SINCE DATE		

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DWIGHT'S ENERGY DATA, INC.
SOUTHLAND ROYALTY CO
JOHNSON

ACCESS RUN DATE: 84/03/12
DATA CURRENT THRU: 83/11/30
(#151,039,25N03W07100GD)

EXHIBIT NO. 9 (Cont'd)

*** MONTHLY PRODUCTION HISTORY ***

YEAR	ANNL/MONTH	OIL/BBL	CASINOHEAD GAS/MCF	# WELLS	WATER/BBL
82	JAN	0	0	0	0
82	FEB	0	0	0	0
82	MAR	0	0	0	0
82	APR	0	0	0	0
82	MAY	0	0	0	0
82	JUN	15	13	1	0
82	JUL	229	440	1	0
82	AUG	227	1140	1	0
82	SEP	39	536	1	0
82	OCT	339	841	1	0
82	NOV	0	132	1	0
82	DEC	81	411	1	0
82	ANNUAL	930	3513	1	0
83	JAN	0	0	1	34
83	FEB	0	0	1	11
83	MAR	0	0	0	0
83	APR	0	0	1	14
83	MAY	0	4	1	14
83	JUN	0	0	1	7
83	JUL	0	0	0	0
83	AUG	0	27	1	0
83	YTD	0	31	1	80

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DIST. 3



WIRELINE SERVICE
P. O. BOX 303
FARMINGTON, NEW MEXICO 87499

TELEPHONE NO: 505-327-2364
RADIO SERVICE: 505-325-5033
UNIT NO. 244 & 245

PAGE _____ OF _____

SUBSURFACE PRESSURE SURVEY

COMPANY SOUTHLAND ROYALTY CO. LEASE JOHNSON WELL NO. #1

FIELD _____ COUNTY RIO ARRIBA STATE NEW MEXICO

FORMATION MESA VERDE TEST DATE 01-22-84

ELEVATION	FEET	CASING	PSIG
SUBSEA DATUM	FEET	TUBING PRESSURE	PSIG
TOTAL DEPTH	FEET	OIL LEVEL	FEET
PERFORATIONS	FEET	WATER LEVEL	FEET
TUBING SIZE	TO	TEMPERATURE	F AT
CASING SIZE	TO	ATMOSPHERIC TEMPERATURE	F
PACKER	FEET	AMERADA ELEMENT NUMBER	
BOTTOM HOLE CHOKE	FEET	ELEMENT RANGE	
MAXIMUM SAFE TEST DEPTH	FEET	OPERATOR	UNIT NO.

WELL STATUS

<u>DEPTH</u> FEET	<u>PRESSURE</u> PSIG	<u>GRADIENT</u> PSI/FT.
0'	820	
2000'	873	0.030
4000'	926	0.030
5450'	963	0.030
5650'	968	0.030
5850'	973	0.030

EXHIBIT NO. 10
Mesaverde
B.H.P.

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OIL CON. DIV.
DIST. 3.

HH

WIRELINE SERVICE
P. O. BOX 303
FARMINGTON, NEW MEXICO 87499

TELEPHONE NO: 505-327-2364
RADIO SERVICE: 505-325-5033
UNIT NO. 244 & 245

PAGE _____ OF _____

SUBSURFACE PRESSURE SURVEY

COMPANY SOUTHLAND ROYALTY CO. LEASE JOHNSON WELL NO. #1

FIELD _____ COUNTY RIO ARRIBA STATE NEW MEXICO

FORMATION DAKOTA AND GALLUP TEST DATE 01-22-84

ELEVATION _____	FEET	CASING _____	PSIG
SUBSEA DATUM _____	FEET	TUBING PRESSURE _____	PSIG
TOTAL DEPTH _____	FEET	OIL LEVEL _____	FEET
PERFORATIONS _____	FEET	WATER LEVEL _____	FEET
TUBING SIZE _____ TO _____	FEET	TEMPERATURE _____ F AT _____	FEET
CASING SIZE _____ TO _____	FEET	ATMOSPHERIC TEMPERATURE _____	F
PACKER _____	FEET	AMERADA ELEMENT NUMBER _____	
BOTTOM HOLE CHOKE _____	FEET	ELEMENT RANGE _____	
MAXIMUM SAFE TEST DEPTH _____	FEET	OPERATOR _____	UNIT NO. _____

WELL STATUS

<u>DEPTH</u> FEET	<u>PRESSURE</u> PSIG	<u>GRADIENT</u> PSI/FT.
0'	834	
2000'	894	0.030
4000'	954	0.030
5250'	991	0.030
5450'	997	0.030
5650'	1004	0.035

EXHIBIT No. 11
Gallup/Dakota
B.H.P.

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DIST. 3