LOBO PRODUCTION
R.E. Lauritsen & Gary Roberts
P.O. BOX 2364
FARMINGTON, NEW MEXICO 87499
TELEPHONE: (505) 327-0331

July 5, 1984

Mr Joe Ramey
Oil Conservation Division
PO Box 2088
Santa Fe, New Mexico 87501

RE: Administrative Approval
Down Hole Commingling
on NM 27024
D, Sec 30, T30N, R14W
#1 Mesa-Twin Mounds-30
L, Sec 30, T30N, R14W
#2 Mesa-Twin Mounds-30
D, Sec 31, T30N, R14W
#1 Mesa-Twin Mounds-31
San Juan County, New Mexico

Dear Mr. Raney:

In our letter dated June 18, 1984, Lobo Production requested down hole commingling of the Gallup and Dakota in the above three referenced wells. In addition to the data submitted with the original application, data from further tests and reports is being submitted with this letter. Because of the similarity of the logs and test on the three wells, it believed that the data from one well will be applicable to all wells in the area.

It is hereby requested that commingling of the Gallup (Mancos)and Dakota zones be granted on the above three wells and on any future wells to be drilled in Section 30 and the N/2 Section 31, T30N, R14W, San Juan County, New Mexico.

The interest owners (Royalty, Overriding Royalty, and working interest) is the same for both the Gallup and Dakota formations in all the wells and will also be the same for future wells.

Enclosed you will find bottom hole pressure test data from the #2 Mesa-Twin Mounds-30. Bottom hole pressures were as follows:

Gallup 4825'	1100 PSI
Dakota 5550'	1331 PSI

The pressures fall within the 50% limitation and qualifies for commingling on that basis.

Northwest Energy has prepared deliverability studies on both the Gallup and Dakota zones in the #1-30 Mesa Twin Mounds and the #2-30 Mesa-Twin Mounds. It is felt that the Deliverability analysis would be the best data for the allocation of production from each zone. Deliverabilities as per Northwest Energy are as follows:

#1 Mesa-Twin Mounds-30

Dakota	210 MCFPD	74%
Gallup	75 MCFPD	26%

#2 Mesa-Twin Mounds-30

Dakota	52 MCFPD
Gallup	75 MCFPD

#1 Mesa-Twin Mounds-31

Dakota	58 MCFPD
Gallup	63 MCFPD

The Dakota was making 1 Barrel of Oil per day(46 gravity) from the #1-30 Mesa-Twin Mounds during production tests. It is recommended that 1 BOPD be allocated to the Dakota formation in each well unless production tests of the wells indicate they are producing other quantities of oil.

Surrounding mineral oweners were notified by certified letter of the request for commingling. The #1-30 Mesa-Twin Mounds has been hooked up to the El Paso Pipeline system. The Dakota formation will not be produced on a continuous basis because it "logs off" with water and the well has to be blown to the atmosphere in order to unload the water causing a considerable waste of gas besides limiting the amount of gas which can be produced. By commingling the Gallup and Dakota it can be pumped and the gas from the two zones compressed, alleviating the problem of "logging off". The amount of hydrocarbons recovered would definitely be enhanced by the commingling of the two zones.

If you need additional information or have any questions in reguard to the data submitted, please feel free to contact me. Thank you for your consideration of this matter.

Respectfully submitted,

R.E. Lauritsen
Partner

RULE 303 C.2 DOWN HOLE COMMINGLING

(a) OPERATOR

Lobo Production
PO Box 2364 (505) 327-0331
Farmington, NM 87499

(b) Mesa Twin Mounds
Lease # NM 27024
Well # 1-30, 2-30, 1-31
All Section 30, T30N, R14W
N/2 Section 31, T30N, R14W
San Juan County, New Mexico

(c) Figure 1 Attached

(d) Forms C-116 attached for Gallup zones on all three wells
No production history

(e) No decline curves because production history not available.

(f) Bottom hole pressures on the #2-30

Graneros-Dakota	5550'	1331 PSI
Gallup	4825'	1100 PSI

(per Tefteller, Inc, report attached)

Because of the closeness in depth and the similarity in the logs from all three wells, it is assumed that the bottom hole pressures on all three wells would be close to the above pressures.

(g) Specific gravities of the oils are as follows:

Graneros-Dakota	46
Gallup	42

Both oils are paraffin based.

(h) Problems in producing the Dakota are bing encountered because the Dakota logs off and has to be blown to the atmosphere. Combined production should be greatly enhanced since the wells will be pumped, eliminating the need to blow off the Dakota.

(i) Northwest Energy (gas purchaser) has done reservoir evaluations of the wells in order to calculate the economics of pipeline hookups. They're deliverability studies are as follows:

WELL	ZONE	1st. Yr. Stab. DELIVERABILITY	TOTAL RESERVES
1-30	Gp	75 MCFGPD	140,000 MCF
1-30	Kd	210 MCFGPD	360,000 MCF
2-30	Gp	75 MCFGPD	140,000 MCF
2-30	Kd	52 MCFGPD	260,000 MCF
1-31	Gp	63 MCFGPD	145,000 MCF
1-31	Kd	58 MCFGPD	250,000 MCF

It is proposed that the gas production be allocated on a percentage basis, based on the first year stabilized deliverabilities.
The formula qould be as follows:

$$\text{Total Produced} \times \frac{\text{Gallup deliverability}}{\text{Total Gp-Kd deliverability}} = \text{Total Gallup Gas}$$

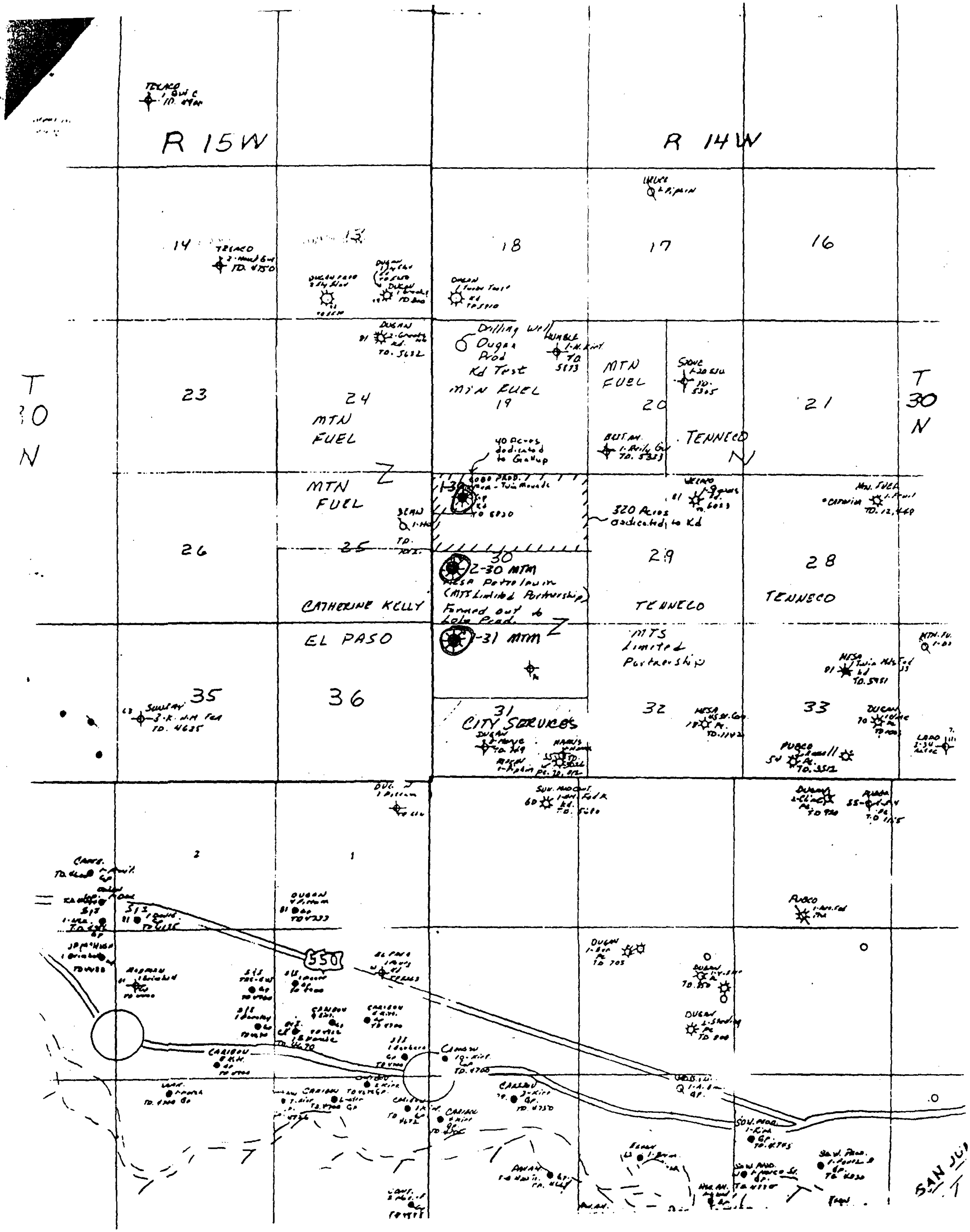
(j) All offset operators and owners including the BLM were notified on 2-15-84 by certified letter of Lobo Productions intention to commingle Gallup and Dakota zones.

Note: The Greenhorn and Graneros-Dakota zones were mistakenly commingled in the #1-30 Mesa-Twin Mounds. Pressure test on the #2-30 Mesa-Twin Mounds indicate that the Gallup pressures are within 50% of the Dakota pressures.

Prepared by:

R E Lauritsen

R.E. Lauritsen
Partner, Lobo Production



R 15W
R 14W
T 30 N
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32
33
MTN FUEL
Drilling well Dugan Prod Kd Test
40 Acres dedicated to Gallup
320 Acres dedicated to Kd
TENNECO
2-30 MTM
MESA Petroleum (MTS Limited Partnership)
Farmed out to Lola Prod.
1-31 MTM
CATHERINE KELLY
EL PASO
MTS Limited Partnership
CITY SERVICES
550

FIGURE 1

BHP • BU • PI • DD • GWT • RFS • GOR • FL • TS

TEFTELLER, INC.

reservoir engineering data

MIDLAND, TEXAS / FARMINGTON, NEW MEXICO
GRAND JUNCTION, COLORADO

P. O. Box 5247
Midland, Texas 79704
(915) 682-5574

May 9, 1984

Lobo Production Company
Box 2364
Farmington, New Mexico 87499

Attention: Mr. R. E. Lauritsen

Subject: Bottom Hole Pressure Measurement,
Fluid Level Measurement and Packer
Leakage Test
Mesa Twin Mounds 30 No. 2
San Juan County, New Mexico
Our File No. 2-15419-P,FL&PL

Gentlemen:

Attached hereto are the results of the bottom hole pressure measurement, fluid level measurement and packer leakage test which were conducted on the above captioned well April 27, 1984.

The data presented are in tabular and graphical form.

It has been our pleasure to have conducted this service for you. If we may be of further assistance, please call us at any time.

Respectfully submitted,

TEFTELLER, INC.

G. W. Taylor
Operations Manager

GWT/lw

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : MESA TWIN MOUNDS "30" NO. 2 Page 1 of 4

Field : File 2-15419-P,FL&PL

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1984 Date	Status of Well	Time	Elapsed Time Hrs.	Min.	Daily Rate Gas MCF/D	Wellhead Pressure Dakota Tubing	Gallup Casing	BHP @ 5250' Psig	BHP @ 5550' Psig
4-27	Arrived on location								
"	shut-in 7 days				Not measured				
"	Rig up to run gradient								
"	traverse to 5200'								
"	On bottom	11:25				789	497	1197	1331
"	Open gallup to flow								
"	(casing)	12:45	0	00					
"	"	13:00	0	15		796	266	1197	1331
"	"	13:15	0	30		795	201	1197	1331
"	"	13:30	0	45		794	160	1197	1331
"	"	13:45	1	00		793	138	1197	1331
"	"	14:00	1	15		792	125	1197	1331
"	"	14:15	1	30		791	118	1197	1331
"	"	14:30	1	45		790	113	1197	1331
"	"	14:45	2	00		788	109	1197	1331
"	"	15:00	2	15		788	105	1197	1331
"	"	15:15	2	30		789	101	1197	1331
"	"	15:30	2	45		789	100	1197	1331
"	Off bottom	15:45	3	00		789	98	1197	1331

EFTELLER, INC.
reservoir engineering data
MIDLAND, TEXAS

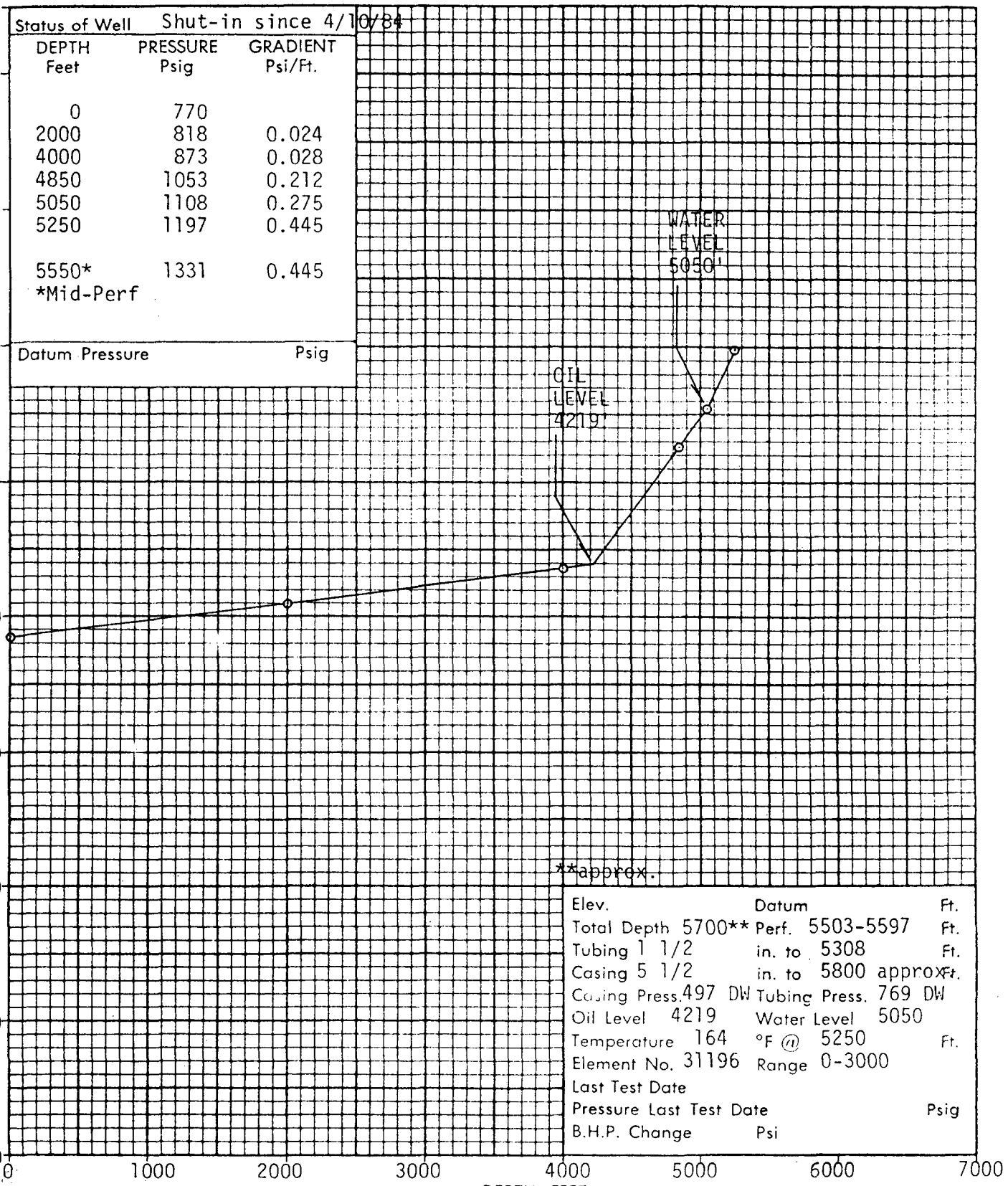
Company LOBO PRODUCTION COMPANY Lease MESA TWIN MOUNDS "30" Well No. 2
Field _____ County SAN JUAN State NEW MEXICO
Formation DAKOTA Test Date APRIL 27, 1984

Status of Well Shut-in since 4/10/84

DEPTH Feet	PRESSURE Psig	GRADIENT Psi/Ft.
0	770	
2000	818	0.024
4000	873	0.028
4850	1053	0.212
5050	1108	0.275
5250	1197	0.445
5550*	1331	0.445

*Mid-Perf

Datum Pressure Psig



**approx.

Elev.		Datum	Ft.
Total Depth	5700**	Perf. 5503-5597	Ft.
Tubing	1 1/2	in. to 5308	Ft.
Casing	5 1/2	in. to 5800 approx	Ft.
Casing Press.	497 DW	Tubing Press.	769 DW
Oil Level	4219	Water Level	5050
Temperature	164	°F @ 5250	Ft.
Element No.	31196	Range 0-3000	
Last Test Date			
Pressure Last Test Date			Psig
B.H.P. Change		Psi	

File 2-15419-P,FL&PL

COMPANY LOBO PRODUCTION COMPANY LEASE MESA TWIN MOUNDS "30" WELL NO. 2
FIELD COUNTY SAN JUAN STATE NEW MEXICO
FORMATION GALLUP TEST DATE APRIL 27, 1984 TIME

FLUID LEVEL REPORT

WELL DATA

Elevation ft. Datum feet subsea Total Depth feet

Perforations 4607-5044 feet Test Depth 4825 feet Packer 5100 feet

Tubing Size 2 1/16 in. to 4963 feet Tubing Pressure psig

Casing Size in. to feet Casing Pressure 497 D.W.T. psig

Oil Level 1362 feet Water Level feet Average Tubing Joint 31.0 feet

Well Makes 100 % Oil, % Water Atmospheric Temperature °F

Status of Well Shut-in Operator Unit No

PRESSURE DATA

	Feet	Gradient Psig/Ft.	Psi
Casing Pressure			497
GAS			
Average Tubing Joints 31.0 ft. Joints to Fluid 102 Feet to Fluid.	3162	0.020	63
OIL			
Fluid Column Length 1663 ft. % Oil 100 Oil Column Length.	1663	0.325	540
WATER			
Fluid Column Length Ft. % Water Water Column Length.			
	4825		1100

PRESSURE AT TEST DEPTH

Calculated subsurface pressure at datum depth of feet subsea is psig
Last Test Date Pressure Last Test psig BHP Change psi
Remarks:

STATE OF NEW MEXICO
RGY AND MINERALS DEPARTMENT

This form is not to be used for reporting packer leakage tests in Southeast New Mexico

OIL CONSERVATION DIVISION

Revised 10/1/78

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

rator LOBO PRODUCTION COMPANY Lease MESA TWIN MOUNDS "30" Well No. 2

ation
Well: Unit ____ Sec. ____ Twp. ____ Rge. ____ County SAN JUAN

	Name of Reservoir or Pool	Type of Prod. (Oil or Gas)	Method of Prod. (Flow or Art. Lift)	Prod. Medium (Tbg. or Csg.)
er pletion	Gallup	Oil	Pump	Tubing
er pletion	Dakota	Gas	Flow	Tubing

PRE-FLOW SHUT-IN PRESSURE DATA

er pl	Hour, date Shut-in	Length of time shut-in 15 days	SI press. psig 598	Stabilized? (Yes ~~or No~~)
er pl	Hour, date Shut-in	Length of time shut-in months	SI press. psig 901	Stabilized? (Yes ~~or No~~)

FLOW TEST NO. 1

menced at (hour, date)* 10:00 4-10-84 | Zone producing (~~Upper~~ or Lower):

Time ur, date)	Lapsed time since*	Pressure Upper Compl.	Pressure Lower Compl.	Prod. Zone Temp.	Remarks
15 4-10-84	15 min.	598	35		Heavy oil & water
30 4-10-84	30 min.	601	65		"
45 4-10-84	45 min.	601	52		"
00 4-10-84	1 hour	602	48		"
00 4-10-84	2 hours	602	47		"
00 4-10-84	3 hours	602	43		"

duction rate during test
: ____ BOPD based on ____ Bbls. in ____ Hrs. ____ Grav. ____ GOR ____
: ____ MCFPD; Tested thru (Orifice or Meter): ____

MID-TEST SHUT-IN PRESSURE DATA

er pl	Hour, date Shut-in	Length of time shut-in 32 days	SI press. psig 497	Stabilized? (Yes ~~or No~~)
er pl	Hour, date Shut-in 4-10-84 13:00	Length of time shut-in 17 days	SI press. psig 789	Stabilized? (Yes ~~or No~~)

FLOW TEST NO. 2

menced at (hour, date)** 12:45 4-27-84 | Zone producing (Upper ~~or Lower~~):

Time ur, date)	Lapsed time since **	Pressure Upper Compl.	Pressure Lower Compl.	Prod. Zone Temp.	Remarks
00 4-27-84	15 min.	266	786		Bottom hole pressure Dakota Zone
15 4-27-84	30 min.	201	795		@ 5250', 1197 Psig
30 4-27-84	45 min.	160	794		throughout flow test,
45 4-27-84	1 hour	138	793		flowing casing only with BHP
45 4-27-84	2 hours	109	788		lubricator on dakota tubing.
45 4-27-84	3 hours	98	789		

duction rate during test
: ____ BOPD based on ____ Bbls. in ____ Hrs. ____ Grav. ____ GOR ____
: ____ MCFPD; Tested thru (Orifice or Meter): ____

ARKS: ____

eby certify that the information herein contained is true and complete to the best of my edge.

ved: ____ 19____
Conservation Division

Operator ____

By ____

Title ____

Date ____

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-116
Revised 10-1-78

GAS – OIL RATIO TESTS

Operator	Pool	County
Lobo Production	Wildcat Gallup	San Juan

Address	TYPE OF TEST – (X)			
PO Box 2364 Farmington, NM 87499	Scheduled [X]	Completion [ ]	Special [ ]	

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS – OIL RATIO CU.FT/BBL
(1) #1 Mesa-Twin Mounds-30	1	D	30	30N	14W	6/23-84	P	1/8"	50#		24	0	42.8	4.6	49.1	10,674:1
#2 Mesa-Twin Mounds-30	2	L	30	30N	14W	6/13-84	P	1/4"	60#		24	0	42.8	7.0	100.9	1,514:1
#1 Mesa-Twin Mounds-31	1	D	31	30N	14W	6/23/84	P	1/4"	25#		24	0	42.8	12.9	53.2	4,124:1

(1) Gas is currently being sold from both Gallup and Dakota Formation (into ElPaso Pipelines)

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

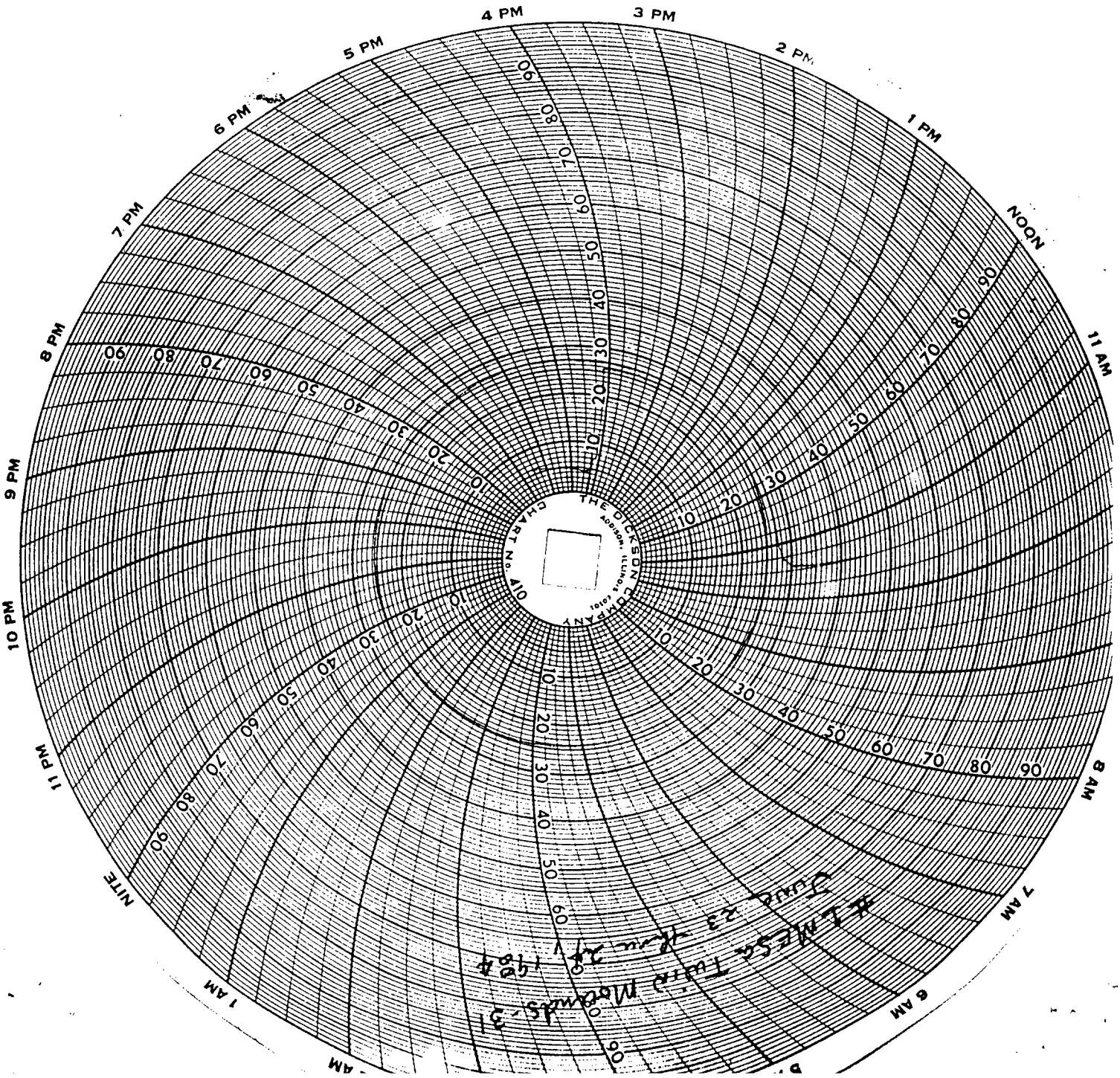
Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 301 and appropriate pool rules.

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

(Signature)
Operator
(Title)
7-6-84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THE DICKSON COMPANY
CHART No. 010

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

TONEY ANAYA
GOVERNOR

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

February 29, 1984

Mr. R. E. Lauritson
Lobo Production
P.O. Box 2364
Farmington, NM 87499

Re: Downhole Commingle Request for Mesa Twin Mounds #1
D-30-30N-14W

Dear Dick:

The referenced request cannot be approved administratively because of inadequate data. We will allow ninety day authority to produce this well as a commingled well, while you gather bottom hole pressure data from an offset well. This authority will expire May 15, 1984.

If you have any questions, please contact this office.

Sincerely,

Frank T. Chavez
District Supervisor

FTC/dj

cc: Gilbert Quintana

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 July 26, 1984

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

Gentlemen:

I have examined the application dated July 5, 1984

for the Lobo Production Mesa Twin Mounds 31 #1 O-31-30n-14w
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve

Yours truly,