



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

TONY ANAYA
GOVERNOR

RECEIVED
AUG 06 1984
OIL CON. DIV.
DIST. 3

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-5800

August 15, 1984

Administrative Order No. DHC-481

Lobo Production Company
P.O. Box 2364
Farmington, New Mexico 87499

Attention: R. E. Lauritsen, Partner

Re: Scorpio #1
Unit A, Sec. 15, T-32N,
R-13W, Basin Dakota and
Undesignated Gallup Pools,
San Juan County, NM

Gentlemen:

Reference is made to your recent application for an exception to Rule 303-A of the Division Rules and Regulations to permit the subject well to commingle the production from both pools in the wellbore.

It appearing that the subject well qualifies for approval for such exception pursuant to the provisions of Rule 303-C, and that reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above.

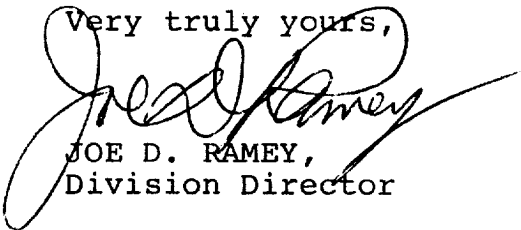
In accordance with the provisions of Rule 303.C.4., total commingled oil production from the subject well shall not exceed 20 barrels per day, and total water production from the well shall not exceed 40 barrels per day. The maximum amount of gas which may be produced daily from the well shall be determined by the allowables established by the Oil Conservation Division prorationing schedules for these pools.

Assignment of allowable to the well and allocation of production from the well shall be on the following basis:

Basin Dakota Pool:	Oil	0%,	Gas	63%
Undesignated GallupPool:	Oil	100 %,	Gas	37%

Pursuant to Rule 303-C 5, the commingled authority granted by this order may be rescinded by the Division Director if, in his opinion, conservation is not being best served by such commingling.

Very truly yours,



JOE D. RAMEY,
Division Director



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 25, 1984

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

Gentlemen:

I have examined the application dated July 25, 1984
for the Lobo Production Scorpio #1 A-15-32N-13W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve

Yours truly,

Frank T. Day

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

July 20, 1984

Mr. Joe Ramey
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: Administrative Approval
Down Hole Commingling
SF 078818-A
A, Sec 15, T32N, R13W
#1 Scorpio
San Juan County, New Mexico

Dear Mr. Ramey:

Lobo Production is hereby requesting down hole commingling of the Gallup and Dakota in the above referenced well. Data from tests and reports are being submitted with this letter.

The interest owners (Royalty, Overriding Royalty, and working interest) are the same for both the Gallup and Dakota formations.

Enclosed you will find bottom hole pressure test data from the #1 Scorpio. Bottom hole pressures were as follows:

Gallup 4000'	1386 PSI
DAKOTA 4530'	928 PSI

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

Northwest Energy is preparing deliverability studies on both the Gallup and Dakota zones. It is felt that the deliverability analysis would be the best data for the allocation of production from each zone.

The Dakota has made only dry gas during production tests and it is recommended that all oil production be allocated to the Gallup.

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DIST. 3

Surrounding mineral owners were notified by certified letter of the request for commingling. Production tests have indicated that it is not economically feasible to drill single zone wells in this area as the reserves from a single zone are not sufficient to "pay out" a well in a reasonable amount of time. Also both zones appear to be gas producers only with very little if any fluids.

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

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "R.E. Lauritsen". The signature is fluid and cursive, with a large loop at the end of the last name.

R.E. Lauritsen
Partner

REL:ab

Enclosure

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

July 20, 1984

#1 SCORPIO

A, Sec 15, T32N, R13W

San Juan County, New Mexico

Rule 303 C.2 Down Hole Commingling.

(a) Operator:

Lobo Production
P.O. Box 2364
Farmington, NM 87499

(b) Lease:

USA SF 078818-A
#1 Scorpio
A, Sec 15, T32N, R13W
San Juan County, New Mexico
Wildcat Gallup-Basin Dakota

(c) Plat:

Attached-Plat of acreage and offset leases

(d) Productivity Tests:

C-116 attached for Gallup and Dakota zones

(e) Production History:

No production history as it is a new completion. No decline curves because production history not available.

(f) Bottom Hole Pressures:

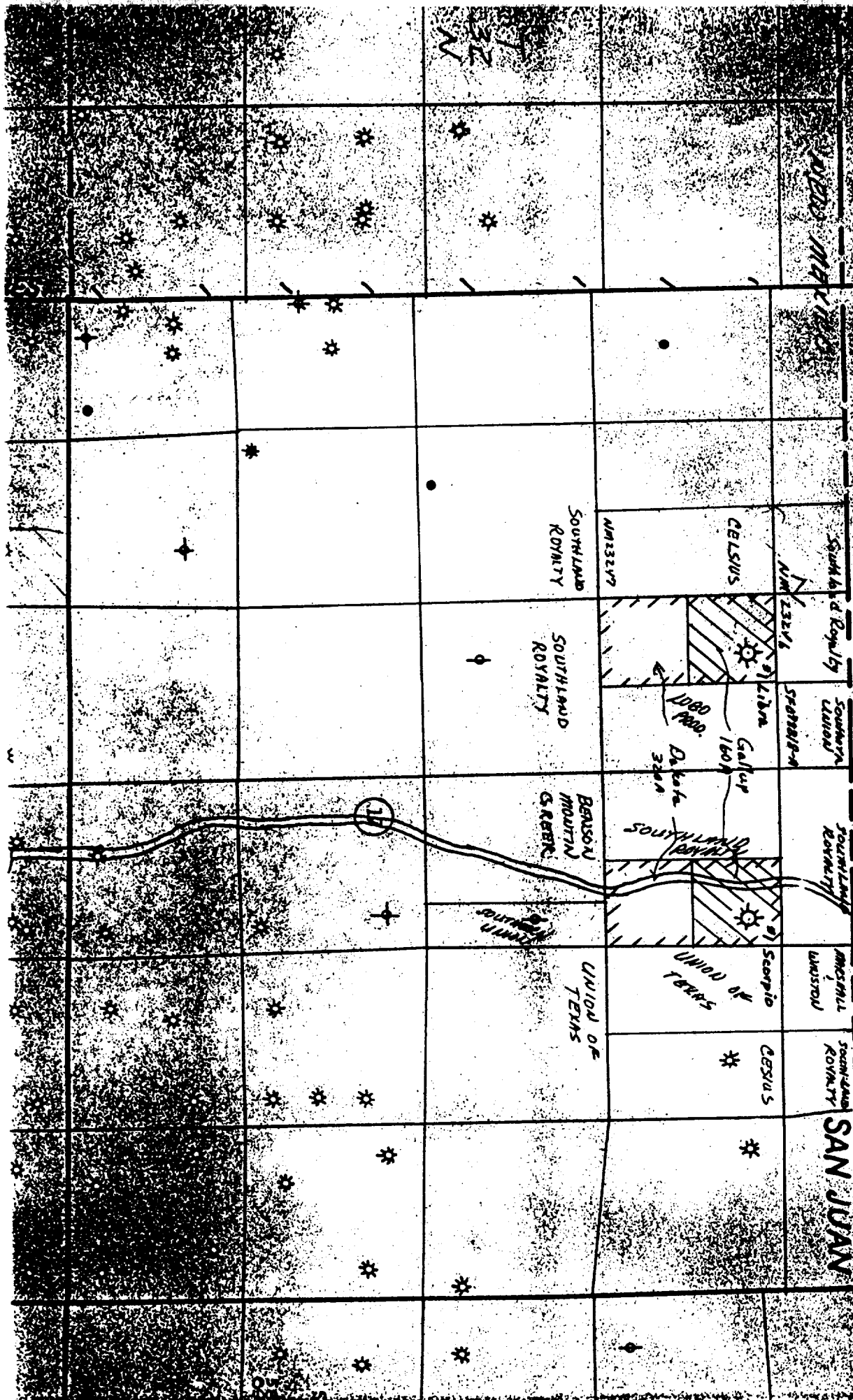
Bottom hole pressures as follows:

#1 Scorpio

Graneros-Dakota	4530'	928 PSI
Gallup-Mancos	4000'	1386 PSI
	3800'	1298 PSI (Mid Perfs)

(Per Tefteller, Inc., reports attached)

R 13 W



Figure

NEW MEXICO
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
JUL 25 1984
OIL CON. DIV.
DIST. 3

Type Test ☒ Initial ☐ Annual ☐ Special										Test Date	
Company LOBO PRODUCTION					Connection					Oil Con. Div. DIST. 3	
Pool WILDCAT GALLUP					Formation GALLUP						
Completion Date			Total Depth		Plug Back TD 4406		Elevation		Farm or Lease Name SCORPIO		
Csg. Size 5 1/2	Wt.	d	Set At		Perforations: From To				Well No. 1		
Ing. Size 1 1/4	Wt.	d	Set At		Perforations: From 2530 To 4381				Unit Soc. Twp. Rye. 15 32 13		
Type Well - Single - Bradenhead - G.G. or G.O. Multiple							Packer Set At 4406		County SAN JUAN		
Producing Thru			Reservoir Temp. °F		Mean Annual Temp. °F		Baro. Press. - P ₀ 12.0		State NEW MEXICO		
L	H	G ₀	% CO ₂		% N ₂		% H ₂ S		Prover 6" Pos. CHOKER		Meter Run Taps

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
1.	2" X 3/4"						660		658		3 HRS.
2.							11	60	100		
3.											
4.											
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1.	*						260
2.							
3.							
4.							
5.							

NO.	P ₁	Temp. °R	T ₁	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas _____ X X X X X X X X
3.					Specific Gravity Flowing Fluid _____ X X X X X
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ R _____ R

NO.	P ₁ ²	P _w ²	P ₂ ²	P ₂ ² - P _w ²	$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 1.0286$ $(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.0214$ $ACF = 0 \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1265$
1.		112	12544	439040	
2.					
3.					
4.					

Absolute Open Flow 265 Mcfd @ 15.025		Angle of Slope θ 53.13	Slope, n .75
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Remarks: *** ORIFICE WELL TESTER RATE**

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
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This form is not to
be used for reporting
packer leakage tests
in Southeast New Mexico

NORTHWEST NEW MEXICO PACKER-LEAKAGE TEST

RECEIVED
JUL 25 1984
OIL CON. DIV.
DIST. 3

Page 1
Revised 10/01/78

Operator LOBO PRODUCTION Lease SCORPIO Well No. 1
Location: Unit 15 Sec. 32 Twp. 13 Rge. 13 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 Cag.)
or ation	<u>WILDCAT GALLUP</u>	<u>GAS</u>	<u>Flow</u>	<u>TBG.</u>
or ation	<u>Basin DAKOTA</u>	<u>GAS</u>	<u>Flow</u>	<u>TBG</u>

PRE-FLOW SHUT-IN PRESSURE DATA

Hour, date shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
or ation: <u>7-1-84</u>	<u>9 DAYS</u>	<u>635</u>	<u>YES</u>
Hour, date shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
or ation: <u>7-1-84</u>	<u>9 DAYS</u>	<u>813</u>	<u>YES</u>

FLOW TEST NO. 1

Initiated at (hour, date)*		7-10-84		Zone producing (Upper or Lower):		LOWER	
TIME (hour, date)	LAPSED TIME SINCE*	PRESSURE		PROD. ZONE TEMP.		REMARKS	
		Upper Completion	Lower Completion				
10:15	15 min	647	74				
10:30	30 "	647	49				
10:45	45 "	647	43				
11:00	1 HR.	646	37				
12:00	2 HRS.	644	26				
1:00	3 HRS.	644	21				

Production rate during test

BOPD based on _____ Bbls. in _____ Hours. _____ Grav. _____ GOR _____

MCFPD; Tested thru (Orifice or Meter): _____

MID-TEST SHUT-IN PRESSURE DATA

Hour, date shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
or ion: <u>7-1-84</u>		<u>660</u>	<u>YES</u>
Hour, date shut-in	Length of time shut-in	SI press. psig	Stabilized? (Yes or No)
or ion: <u>7-10-84</u>		<u>774</u>	<u>YES</u>

(Continue on reverse side)

NEW MEXICO
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED
JUL 25 1984

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 7-10-84	
Company LOBO PRODUCTION		Connection	
Pool BASIN DAKOTA		Formation DAKOTA	
Completion Date		Total Depth 4628	Elevation
Csg. Size 5 1/2		Set At	Perforations: From 4625 To 4445
Tub. Size 2 3/8		Set At 4438	Perforations: From To
Type Well - Single - Bradenhead - G.G. or G.O. Multiple DUAL G.G.		Packer Set At 4406	County SAN JUAN
Producing Thru TB9		Reservoir Temp. °F	Mean Annual Temp. °F
Baro. Press. - P _a 12.0		State N.M.	
Prover 6"		Meter Run	Taps
H		6" POS. CHONG NIPPLE	

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. hw	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
1	9 DAYS						813		PKE	
2							21			
3										
4										
5										

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1	11.00		33	1.000	1.240	1.000	450
2							
3							
4							
5							

NO.	P	Temp. °R	T _i	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2					Specific Gravity Separator Gas _____ XXXXXXXXXX
3					Specific Gravity Flowing Fluid _____ XXXXX
4					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5					Critical Temperature _____ R _____ R

NO.	P ₁ ²	P _w	P _w ²	P _c ² - P _w ²	(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$	(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$
1	825	680	625	17776	1.0268	1.0200
2						
3						
4						
5						

Absolute Open Flow 459 Mcfd @ 15.025		Angle of Slope θ	Slope, n .75
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Approved By Commission:	Conducted By: RICHARD Housh	Calculated By: NEIL TEETELLER	Checked By:
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DUAL COMPLETION - (GALLUP/DAKOTA)

Company Long Production Lease Scorpion Well No. 1 Element No. 44537 Range 0-3000
Field Basin Dakota County SAN JUAN State NEW MEXICO Clock 4788 Rotation 3 u/c
Formation DAKOTA Elevation Datum P. I. Depth 4400 Unit No. 2-215 Operator RENNAN

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

Date	Status of Well	Time	Elapsed		Tank	Interval	Dally Rate	Wellhead		BHP @	Psig
			Time	Hrs. Min.	Gauge	Prod.	Oil B/D	Gas MCF/D	Pressure	Ext:	
7/10/64	A.O.L. Shut in 9:00	08:15									
	Run Static GMAOIENT										
	TRAVELSE @ 4400'	09:00									
	OPEN WELL TO FLOW										
	Then 3/4" x 6" x 2" Ceramic Head	10:00									
	Locate SHEALAIR, 5' Pacific Test	10:00		0 00							
	*	10:15		0 15				1173	74	647	
		10:30		0 30				832	49	647	
		10:45		0 45				750	43	647	
		11:00		1 00				668	37	646	
		11:30		1 30				587	31	645	
		12:00		2 00				518	26	644	
		13:00		3 00				450	21	644	
	Shut Well in	13:00		0 00							

Bols/Inch Tank Size Separator Pressure psig at °F Water Production B/D
Remarks: DAY GAS TURN OUT TEST

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

[illegible]

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : SCORPIO NO. 1

Page 1 of 3

Field :

File 2-15547-BU

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1984 Date	Status of Well	Time	Elapsed Time Hrs.Min.	Wellhead Pressure Tbg Csg	BHP @ 4500' Psig
6-9	Arrived on location				
"	flowing	21:45		* TSTM	
"	Tagged bottom 4554'				
"	Tandem instruments @				
"	4500'	22:30			58
"	"	23:00			58
"	Shut-in for build up	23:00	0 00		
"	"	23:06	0 06		83
"	"	23:12	0 12		99
"	"	23:18	0 18		118
"	"	23:24	0 24		136
"	"	23:30	0 30		155
"	"	23:36	0 36		172
"	"	23:42	0 42		188
"	"	23:48	0 48		203
"	"	23:54	0 54		217
6-10	"	00:00	1 00		231
"	"	00:15	1 15		265
"	"	00:30	1 30		296
"	"	00:45	1 45		322
"	"	01:00	2 00		343
"	"	01:30	2 30		386
"	"	02:00	3 00		424
"	"	03:00	4 00		484
"	"	04:00	5 00		527
"	"	05:00	6 00		572
"	"	06:00	7 00		610
"	"	07:00	8 00		642
"	"	08:00	9 00		676
"	"	09:00	10 00		705
"	"	10:00	11 00		727
"	"	11:00	12 00		748
"	"	12:00	13 00		763
"	"	13:00	14 00		773
"	"	14:00	15 00		777
"	**	14:30	15:30		787

*No tubing in well

**Pressure bled off on blowout preventer allowing 10' tubing sub to slip up to upset and collar on bottom of sub.

TEFTELLER, INC.
RESERVOIR ENGINEERING DATA
Midland, Texas

Well : SCORPIO NO. 1

Page 2 of 3

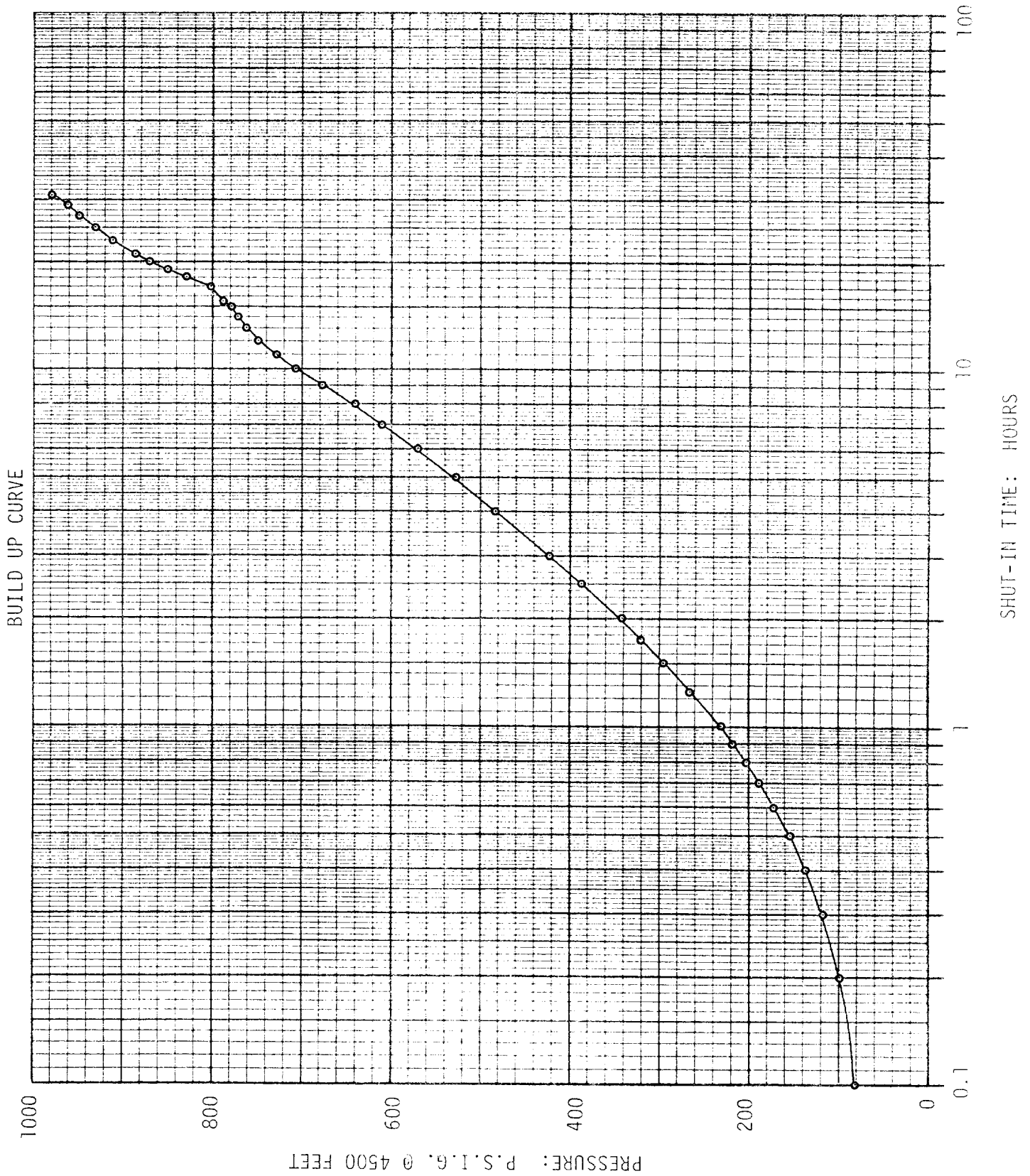
Field :

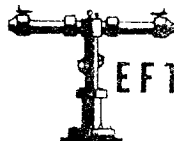
File 2-15547-BU

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1984 Date	Status of Well	Time	Elapsed Time Hrs.Min.	Wellhead Pressure Tbg Csg	BHP @ 4500' Psig
6-10	Continued shut-in	16:00	17 00		802
"	"	17:00	18 00		829
"	"	18:00	19 00		851
"	"	19:00	20 00		870
"	"	20:00	21 00		885
"	"	22:00	23 00		911
6-11	"	00:00	25 00		932
"	"	02:00	27 00		949
"	"	04:00	29 00		963
"	Pulled instruments	05:45	30 45	856	978

Company LOBO PRODUCTION COMPANY Formation
Well SCORPIO NO. 1 County SAN JUAN
Field State NEW MEXICO





EFTELLER, INC.

reservoir engineering data
MIDLAND, TEXAS

Page 2 of 2
File 2-15616-P&FL

Company LOBO PRODUCTION COMPANY Lease SCORPIO Well No. 1
Field County SAN JUAN State NEW MEXICO
Formation CO. MINGUEU GALLUP MANCOS Test Date JUNE 20, 1984

