

0+6-NMOCD- 1-File

2-Midland-JA/LR 1-Engr. DW

1-Foreman-*cm* NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELLForm C-122
Revised 9-1-65

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 2-10-84	
Company <u>Getty Oil Company</u>				Connection <u>Llano, Inc.</u>		
Pool <u>Undesignated</u>				Formation <u>Morrow</u>		
Completion Date <u>3/31/83</u>		Total Depth <u>15,092'</u>		Plug Back TD <u>14,855'</u>		Elevation <u>3548.2GR</u>
Csg. Size <u>4 1/2"</u> Wt. <u>13.5#</u>		d <u>3.920"</u> Set At <u>15,092'</u>	Perforations: <u>From 14,768' To 14,786'</u>		Farm or Lease Name <u>Fed 15 Com B</u>	
Tbg. Size <u>2 3/8"</u> Wt. <u>4.7#</u>		d <u>1.995"</u> Set At <u>14,347'</u>	Perforations: <u>From 14,768' To 14,786'</u>		Well No. <u>1</u>	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple <u>Single</u>				Packer Set At <u>14,347'</u>		County <u>Lea</u>
Producing Thru <u>Tubing</u>		Reservoir Temp. °F <u>216° @ 15,085</u>		Mean Annual Temp. °F <u>60</u>		State <u>New Mexico</u>
L <u>14,347'</u> H <u>14,347'</u> Gg <u>.6067</u>		% CO ₂ <u>.724</u>	% N ₂ <u>.300</u>	% H ₂ S <u>--</u>	Prover <u>3"</u>	Meter Run <u>Flange</u>

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
SI	3" x 1"					82	5650		Packer		
1.	3" x 1"			560	4.0"	72	5150				120 min
2.	3" x 1"			560	9.0"	65	5100				30 min
3.	3" x 1"			560	20.0"	68	4700				45 min
4.	3" x 1"			570	40.0"	64	3425				135 min
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	4.789	47.88	573.2	.9887	1.284	1.048	305
2	4.789	71.82	573.2	.9952	1.284	1.051	462
3	4.789	107.07	573.2	.9924	1.284	1.049	685
4	4.789	152.73	583.2	.9962	1.284	1.051	983
5.							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1	.849	532	1.473	.910	A.P.I. Gravity of Liquid Hydrocarbons <u>46°</u> Deg.
2	.849	525	1.454	.906	Specific Gravity Separator Gas <u>.6067</u> <u>XXXXXXXXXX</u>
3	.849	528	1.463	.908	Specific Gravity Flowing Fluid <u>XXXXXX</u>
4	.864	524	1.452	.905	Critical Pressure <u>675</u> P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature <u>361</u> R _____ R

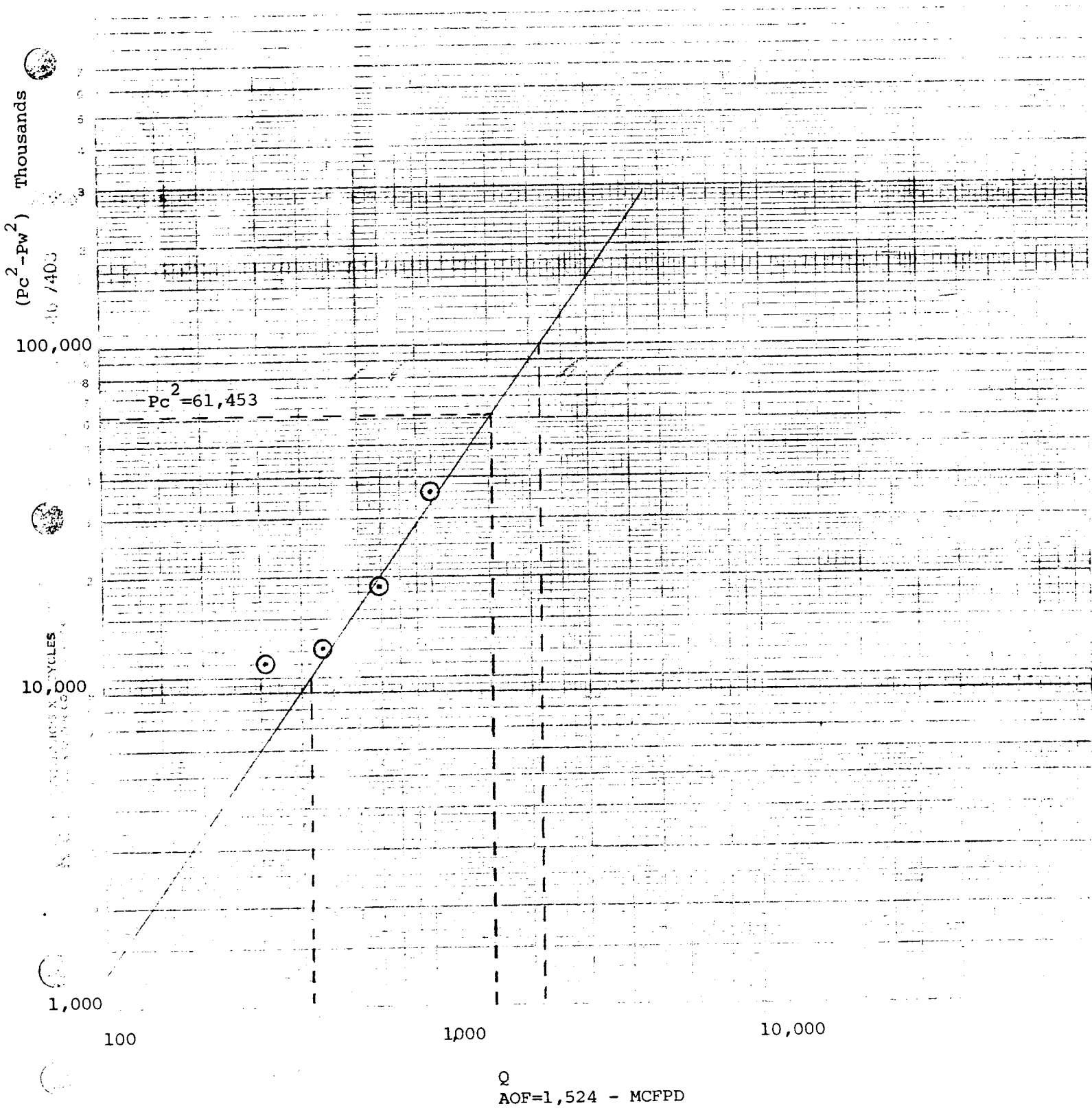
$P_c = 7839.2$ $P_c^2 = 61,453,056.6$					$\frac{P_c^2}{P_c^2 - P_w^2} = 1.706$	$\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.460$
NO.	P _t ²	P _w [*]	P _w ² **	P _c ² - P _w ² **		
1		7100.2	50,412	11,040		
2		7022.2	49,311	12,141		
3		6530.2	42,643	18,809		
4		5043.2	25,433	36,019		
5						

$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1,524 \text{ MCFPD}$		
Absolute Open Flow <u>1,524</u> Mcfd @ 15.025	Angle of Slope Θ _____	Slope, n <u>.708</u>

Remarks: <u>*From BHP date ** Thousands of Pounds. Recovered 3 barrels of condensate during test 46° @ 60°F</u>		
Approved By Commission:	Conducted By: <u>W.F. Krafft</u>	Calculated By: <u>Dennis B. Wehmeyer</u>
		Checked By: <u>[Signature]</u>

$(P_C^2 - P_W^2)$ vs. Q PLOT

FED 15 COM B NO. 1



**NEW-TEX
LAB**

PHONE 505/393-3561

P. O. BOX 1161

611 W. SNYDER

HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT: GETTY OIL COMPANY
ADDRESS: BOX 730
CITY, STATE: HOBBS NM 88240

ANALYSIS NUMBER: 2537
DATE OF RUN: 2 13 84
DATE SECURED: 2 10 84

SAMPLE IDENT: MORROW GAS - FEDERAL 15 COM-B
SAMPLING PRESS: SAMPLING TEMP:

***** GAS ANALYSIS *****

	MOLE PERCENT	GAL/ MCF
NITROGEN	0.300	
CARBON DIOXIDE	0.724	
METHANE	92.340	
ETHANE	4.722	1.259
PROPANE	1.367	0.375
ISO-BUTANE	0.201	0.066
NORMAL BUTANE	0.260	0.082
ISO-PENTANE	0.086	0.031
NORMAL PENTANE	0.000	0.000
HEXANES	0.000	0.000
HEPTANES PLUS	0.000	0.000
TOTAL	100.000	1.813

PROPANE GPM: 0.37 BUTANES GPM: 0.15
ETHANE GPM: 1.26 PENTANES PLUS GPM: 0.03

SPECIFIC GRAV (CALC): 0.6067
MOLE WEIGHT: 17.57

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
14.696	1050	1069	
14.650	1047	1066	
14.730	1053	1071	
14.735	1053	1072	

DEANE SIMPSON

0+6-MMS-Roswell

1-File

1-Engr DW

WELL NAME AND NUMBER Federal "15" Com B # 1N. H. ON AND EXHIBITION
P. O. BOX 22
HOBBY, NEW MEXICO 88324LOCATION Section 15, T-22-S, R-33-E, Lea County, New Mexico
(New Mexico give U, S, T & R; Texas give S, Blk., Sur. & Twp. when required)OPERATOR Getty Oil CompanyDRILLING CONTRACTOR Sharp Drilling Company, Inc.

The undersigned hereby certifies that he is an authorized representative of the drilling contractor who drilled the above-described well and that he has conducted deviation tests and obtained the following results:

Degrees @ Depth	Degrees @ Depth	Degrees @ Depth	Degrees @ Depth
$1/4^{\circ}$ 225'	3° 4101'	$1/4^{\circ}$ 9274'	$1/2^{\circ}$ 15092'
$1/2^{\circ}$ 600'	3° 4245'	$1 3/4^{\circ}$ 9747'	
$1 1/4^{\circ}$ 1,100'	3° 4432'	$2 1/2^{\circ}$ 9940'	
$1 1/4^{\circ}$ 1,548'	$2 3/4^{\circ}$ 4781'	$2 3/4^{\circ}$ 10431'	
$1 1/2^{\circ}$ 2,073'	$1 1/2^{\circ}$ 4998'	$2 1/2^{\circ}$ 10905'	
$2 3/4^{\circ}$ 2600'	2° 5329'	$1 1/2^{\circ}$ 11,500'	
3° 2,943'	1° 5460'	$1 3/4^{\circ}$ 12,430'	
$3 1/4^{\circ}$ 3,100'	$1 1/4^{\circ}$ 5996'	$1 3/4^{\circ}$ 12,810'	
$3 1/4^{\circ}$ 3,221'	$1 1/2^{\circ}$ 6,500'	$1 3/4^{\circ}$ 13,510'	
4° 3430'	$1 3/4^{\circ}$ 7,000'	2° 13,662'	
$3 1/2^{\circ}$ 3523'	1° 7,500'	$1 1/4^{\circ}$ 14,069'	
$3 3/4^{\circ}$ 3741'	$1 1/4^{\circ}$ 7998'	$1 1/2^{\circ}$ 14,360'	
$3 1/2^{\circ}$ 3877'	1° 8,230'	$1 1/2^{\circ}$ 14,622'	
$3 1/2^{\circ}$ 3982'	1° 8,730'	$1 1/2^{\circ}$ 14,900'	

ACCEPTED FOR RECORD
(ORIG. SGD.) DAVID R. GLASS, Drilling Contractor Sharp Drilling Co., Inc.
APR 20 1983

ROSWELL, NEW MEXICO

Subscribed and sworn to before me this 12 day of April 19 83

RECEIVED

By Robert K. ShafferPat Buchanan
Notary Public

My Commission Expires:

6-30-84

APR 25 1983

Midland County, TexasNOTARY PUBLIC
STATE OF NEW MEXICO