NEW MEXICO OIL CONSERVATION COMMSSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-6

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 5-4-82	
Company: M G F Oil Corporation		Connection			
Pool		Formation: Seven Rivers			Unit
Completion Date: 4-30-82	Total Depth: 3200	Plug Back TD: 3155	Elevation: 3582 GL.		Farm or Lease Name: J. Speight
Csg. Size: 4½" / Wt.: 10.5# / d: 4.052 / Set At: 3200		Perforations: From 3018 To 3046			Well No.: 1
Tbg. Size: 2 3/8" / Wt.: 4.7# / d: 1.995 / Set At: 2927		Perforations: From OPENENDED To			Unit: P / Sec.: 31 / Twp.: 19S / Rge.: 39E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: 2927		County: Lea
Producing Thru: Tubing	Reservoir Temp. °F: 85° @ 3032	Mean Annual Temp. °F: 60°	Baro. Press. – P_a: 13.2		State: New Mexico

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
3032	3032	.7531	.338	20.817				

NO.	FLOW DATA: Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	TUBING DATA: Press. p.s.i.g.	Temp. °F	CASING DATA: Press. p.s.i.g.	Temp. °F	Duration of Flow
SI							1617				24 Hou
1.	2	x	1/16"			68°	1572	66°	1562		1 Hr
2.	2	x	1/8"			69	1420	69	1410		1 Hr.
3.	2	x	7/32"			68	1004	71	1008		1 Hr.
4.	2	x	1/4"			71	842	76	858		1 Hr.
5.											

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	.06405		1572.2	.9924	1.133	1.113	126
2	.2648		1423.2	.9915	1.133	1.105	468
3	.8393		1021.1	.9924	1.133	1.080	1041
4	1.087		871.2	.9896	1.133	1.068	1134
5							

NO.	P_t	Temp. °R	T_r	Z
1	2.53	528	1.53	.807
2	2.29	529	1.53	.819
3	1.64	528	1.53	.858
4	1.40	531	1.53	.876
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg
Specific Gravity Separator Gas .7792 XXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure 622 P.S.I.A. _____ P.S.I.
Critical Temperature 346 R

P_c 1624 P_c^2 2629

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		1578	2491	148
2		1453	2112	527
3		1151	1325	1314
4		956	914	1725
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2}$ = 1.52986 (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1.36610

AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n$ = 1,549

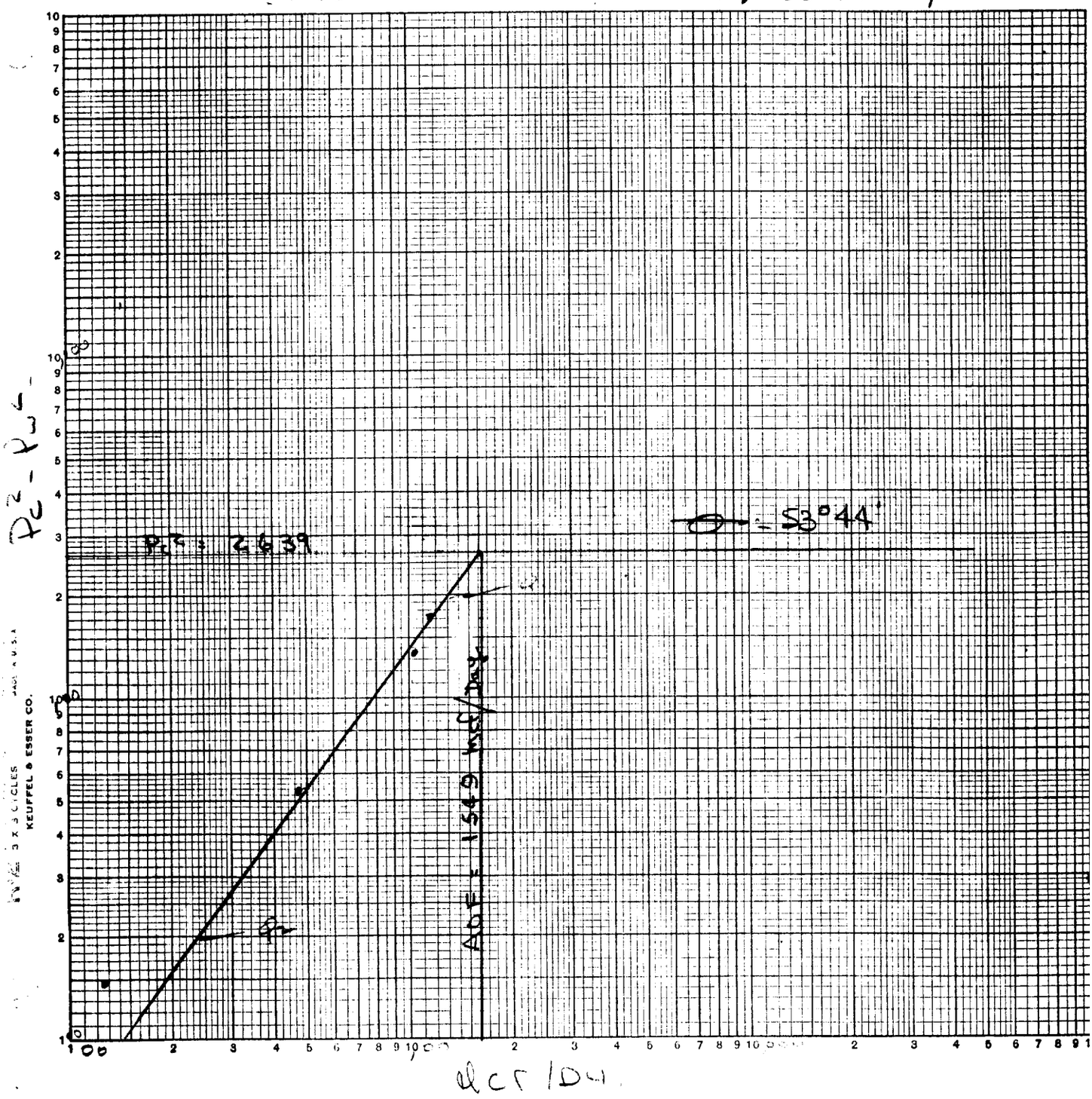
Absolute Open Flow 1,549 Mcfd @ 15.025 | Angle of Slope θ 53° 44' | Slope, n .7337

Remarks: calculated from known bottom hole pressures.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	R.W.	W.S.	M.K.

MGF OIL CORP. J. Speight No. 1 5-4-82

$Q_1 = 3.11394$
$Q_2 = 2.38021$
$Q_2 = .73373$ $= 1134\left(\frac{2639}{1725}\right)^{.73373}$ $53°44' - 1,549$



WORK SHEET FOR CALCULATION OF WELLHEAD PRESSURES (P_c or P_w)

Form C-122F
Adopted 9-1-65

FROM KNOWN BOTTOM HOLE PRESSURE (P_f or P_s)

COMPANY M.G.F. Oil Corp LEASE J. Speight WELL NO. J. Speight DATE 5-4-82

LOCATION: Unit _____ Section _____ Township _____ Range _____

L 3032 H 3032 L/H _____ G .7531 % CO_2 .338 % N_2 20.817 % H_2S _____

GH _____ P_{CT} _____ (TABLE IX & X) T_{CT} _____ (TABLE IX & X)

SI

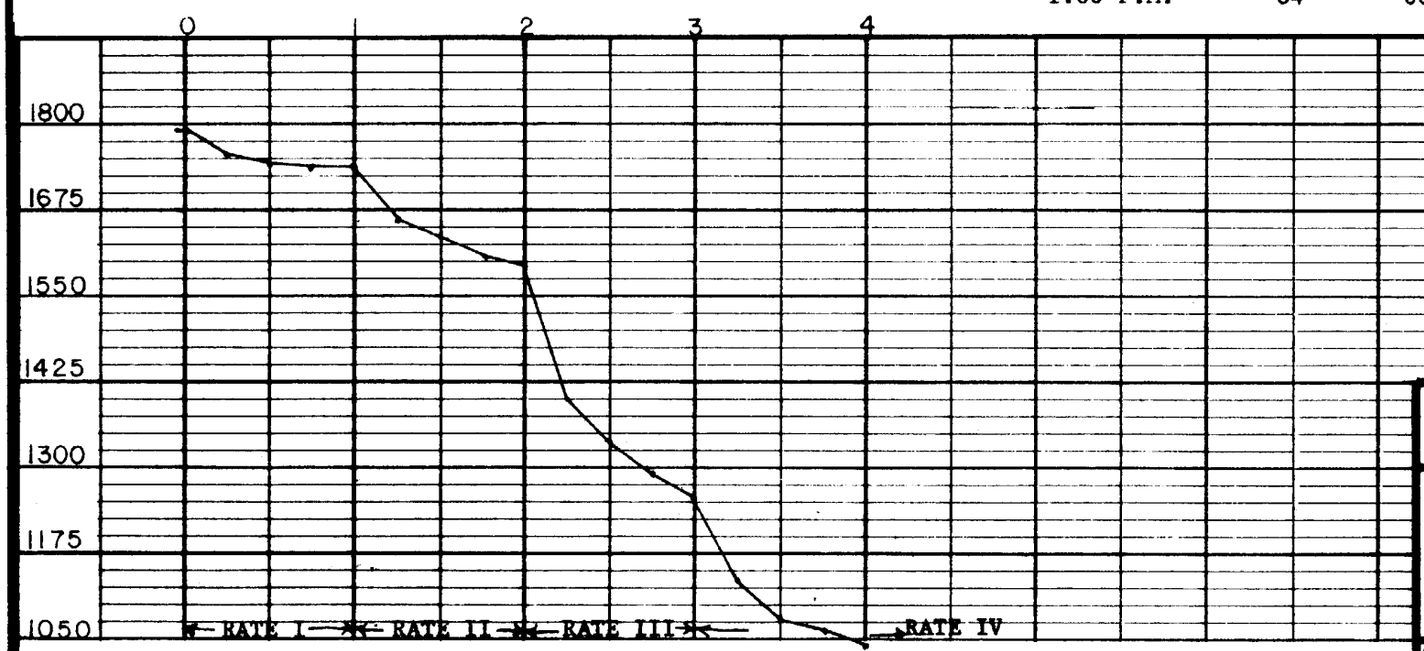
LINE		#	#1	#2	#3	#4	6	7	8
1	T_w(W.H. °R)	528	528	529	528	531			
2	T_s(B.H. °R)	545	545	545	545	545			
3	$T=(\frac{T_w + T_s}{2})$	536.5	537	537	536.5	538			
4	Z (Est.)	.808	.811	.820	.846	.866			
5	TZ	433.49	435.50	440.34	453.88	465.91			
6	GH/TZ	5.45	5.42	5.36	5.20	5.07			
7	e^s(Table XIV)	1.226	1.225	1.222	1.215	1.209			
8	P_f or P_s	1799.2	1747.2	1607.2	1269.2	1051.2			
9	P_f^2 or P_s^2	3237.12	3052.71	2583.09	1610.87	1105.02			
10	$P_c^2 = P_f^2/e^s$ or $P_w^2 = P_s^2/e^s$	2638.76	2490.79	2112.32	1325.22	913.67			
11	P_c or P_w	1624.42	1578.22	1453.38	1151.18	955.86			
12	$P=(\frac{P_w + P_s}{2})$ or $(\frac{P_c + P_f}{2})$								
13	$P_r = (P/P_{CT})$	2.75	2.67	2.46	1.94	1.61			
14	$T_r = (T/T_{CT})$	1.55	1.55	1.55	1.55	1.55			
15	Z (Table XI)								

TEST DATE: MAY 4, 1982
TEST DEPTH: 3032 FEET

ELEMENT NO: 18129
RANGE: 0-2500 PSI
CLOCK NO: RPG-3
RANGE: 0-12 Hour

TEST CONDUCTED BY:
JOHN WEST ENGINEERING CO.

DATE	TIME	CUM HRS./MIN.	PSIG @ 3032 FEET
5-4-82	8:55 A.M.		1786 Gauge reached 3032 '
	9:00 A.M.	00 Hrs. 00 Min.	1786 Open Choke, Begin Test.
	9:15 A.M.	00 15	1756
	9:30 A.M.	00 30	1747
	9:45 A.M.	00 45	1741
	10:00 A.M.	01 00	1734 End Rate I
	10:15 A.M.	01 15	1660
	10:30 A.M.	01 30	1629
	10:45 A.M.	01 45	1609
	11:00 A.M.	02 00	1594 End Rate II
	11:15 A.M.	02 15	1400
	11:30 A.M.	02 30	1338
	11:45 A.M.	02 45	1294
	12:00 Noon	03 00	1256 End Rate III
	12:15 P.M.	03 15	1163
	12:30 P.M.	03 30	1104
	12:45 P.M.	03 45	1067
	1:00 P.M.	04 00	1038 End Rate IV



M G F OIL CORPORATION

J. SPEIGHT NO. 1

4 -POINT BACK PRESSURE TEST.

JOHN W. WEST ENGINEERING CO. HOBBS, NEW MEXICO

Date: 5-5-82 Drawn by: bgm Scale: as shown

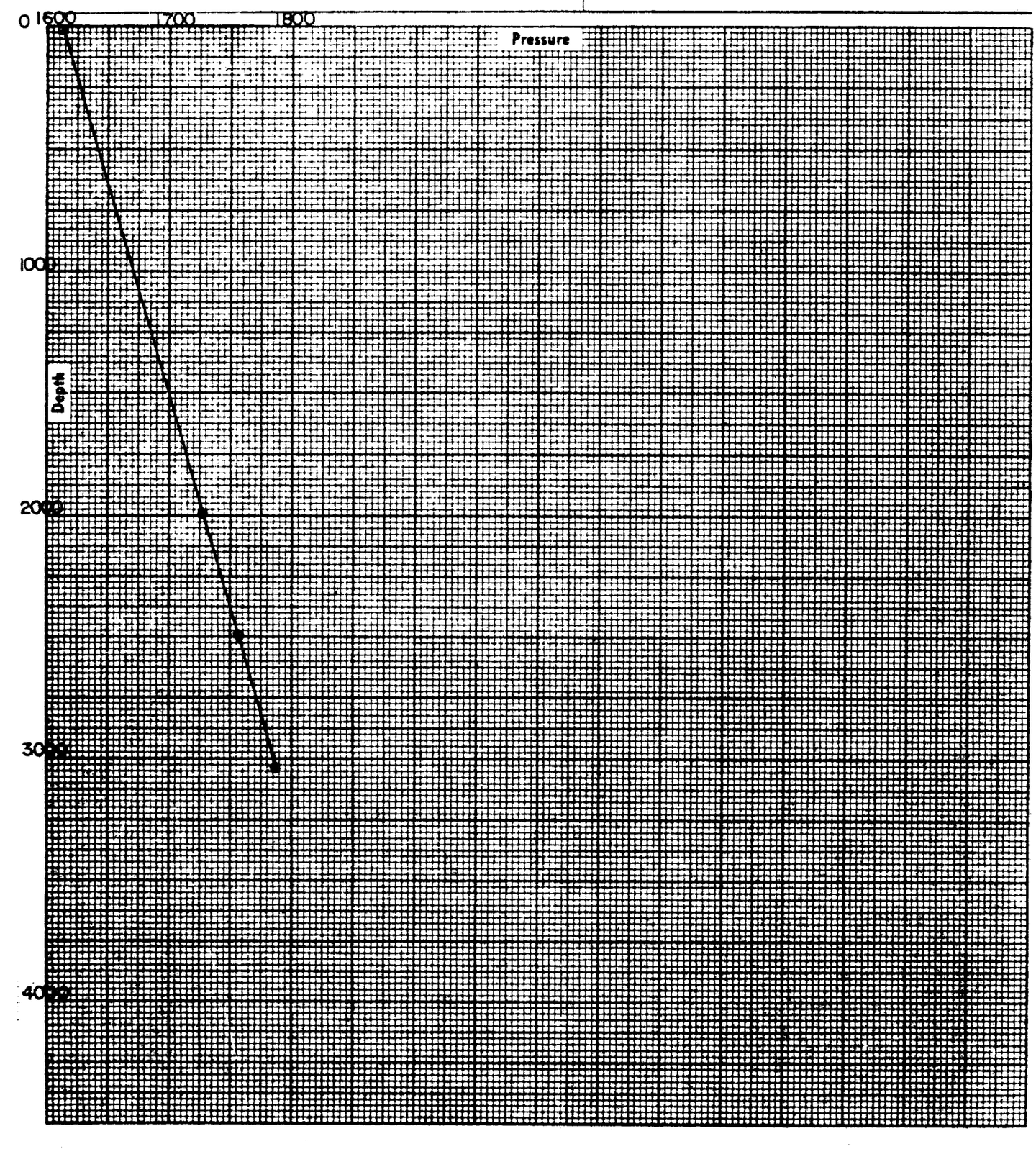
JOHN W. WEST ENGINEERING COMPANY
412 NORTH DAL PASO, HOBBS, NEW MEXICO
TELEPHONES 393-3942
393-3117

BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR M G F OIL CORPORATION
LEASE J. SPEIGHT
WELL NO. 1
FIELD
DATE 5-4-82 TIME 9:00 A.M.

STATUS Shut-In TEST DEPTH 3032'
TIME S.I. LAST TEST DATE
CAS. PRES. BHP LAST TEST
TUB. PRES. BHP CHANGE
ELEV. FLUID TOP
DATUM WATER TOP
TEMP RUN BY Rusty Weaver
CLOCK NO. RPG-3 GAUGE NO. 19389
ELEMENT NO. 18129 (0-2500 psi)

DEPTH	PRESSURE	GRADIENT
000	1613	
2000	1727	.057
2500	1756	.058
3032	1786	.056



NEW-TEX LAB

PHONE 505/393-3561 • P. O. BOX 1161 • 611 W. SNYDER • HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT: WEST ENGINEERING
ADDRESS: 412 NO. DAL PASO ST.
CITY, STATE: HOBBS NM 882440

ANALYSIS NUMBER : 7332
DATE OF RUN : 5/05/82
DATE SECURED : 5/04/82

SAMPLE IDENT: MGF OIL - SPEIGHT #1
SAMPLING PRESS: SAMPLING TEMP:

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

	MOLE PERCENT	GAL/ MCF
NITROGEN	20.816	
CARBON DIOXIDE	0.338	
METHANE	64.947	
ETHANE	8.345	2.226
PROPANE	3.532	0.970
ISO-BUTANE	0.359	0.117
NORMAL BUTANE	0.888	0.279
ISO-PENTANE	0.176	0.064
NORMAL PENTANE	0.219	0.079
HEXANES	0.151	0.062
HEPTANES PLUS	0.229	0.105
TOTAL	100.000	3.902

PROPANE GPM: 0.97 BUTANES GPM: 0.40
ETHANE GPM: 2.23 PENTANES PLUS GPM: 0.31

SPECIFIC GRAV (CALC): 0.7532
MOLE WEIGHT: 21.84

HHV-BTU/CU FT PRESSURE (PSIA)	WET	DRY
14.696	952	969
14.650	949	966
14.730	954	971
14.735	955	972

ANALYZED BY: DEANE SIMPSON

APPROVED BY D. Simpson