

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special						Test Date 9/25/82			
Company Hexagon Oil & Gas Inc.				Connection Conoco Inc.					
Pool Maljamer				Formation Morrow				Unit	
Completion Date 9/22/82		Total Length 13848'		Plug Back TD 13795'		Elevation 4207'GL		Farm or Lease Name New Mexico 28 State	
Cas. Size 4 1/2"	Wt. 13.5	d 3.920	Set At 13848'	Perforations: From 13509' To 13536'				Well No. 1	
Tub. Size 2 3/8"	Wt. 4.7	d 1.995	Set At 13408'	Perforations: Open Ended From To				Unit Sec. Twp. Hgt. I 28 16s 33e	
Type Well - Single - Bradenhead - G.C. or G.O. Multiple Single						Packer Set At 13408'		County Lea	
Producing Thru Tubing		Reservoir Temp. °F 180° 13055		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico	
L 13523'	H -	G _g 0.6551	% CO ₂ 0.534	% N ₂ 1.057	% H ₂ S -	Prover	Meter Run 2.067	Taps Flange	

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. DWT	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							4077	60	PACKER		46.0 hrs
1.	2.067	8/64	1.500	22	6.48	76	2731				1.0 hr
2.	2.067	6.5/64	1.500	22	4.50	78	2844				1.0 hr
3.	2.067	5/64	1.500	22	2.00	84	2945				1.0 hr
4.	2.067	3.5/64	1.500	22	0.50	84	3109				1.0 hr
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	12.76	15.10	35.2	0.9850	1.236	-	235
2	12.76	12.59	35.2	0.9831	1.236	-	195
3	12.76	8.39	35.2	0.9777	1.236	-	129
4	12.76	4.20	35.2	0.9777	1.236	-	65
5							

NO.	R _i	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio 52.000 Mcf/ubl.
1	0.05	536	1.46	-	A.P.I. Gravity of Liquid Hydrocarbons - Deg.
2	0.05	538	1.46	-	Specific Gravity Separator Gas 0.6551 XXXXX
3	0.05	544	1.48	-	Specific Gravity Flowing Fluid XXXXX
4	0.05	544	1.48	-	Critical Pressure 671 P.S.I.A. - P.S.I.A.
5					Critical Temperature 368 R - R

F _c 6822.2 P _c ² 46542.4		(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 2.56$		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 1.829$	
NO.	P _i ²	P _w ²	P _c ²	P _c ² - P _w ²	
1	5326.2	28368.4	18174.0		
2	5723.2	32755.0	13787.4		
3	6256.2	39140.0	7402.4		
4	6636.2	44039.2	2503.2		
5					

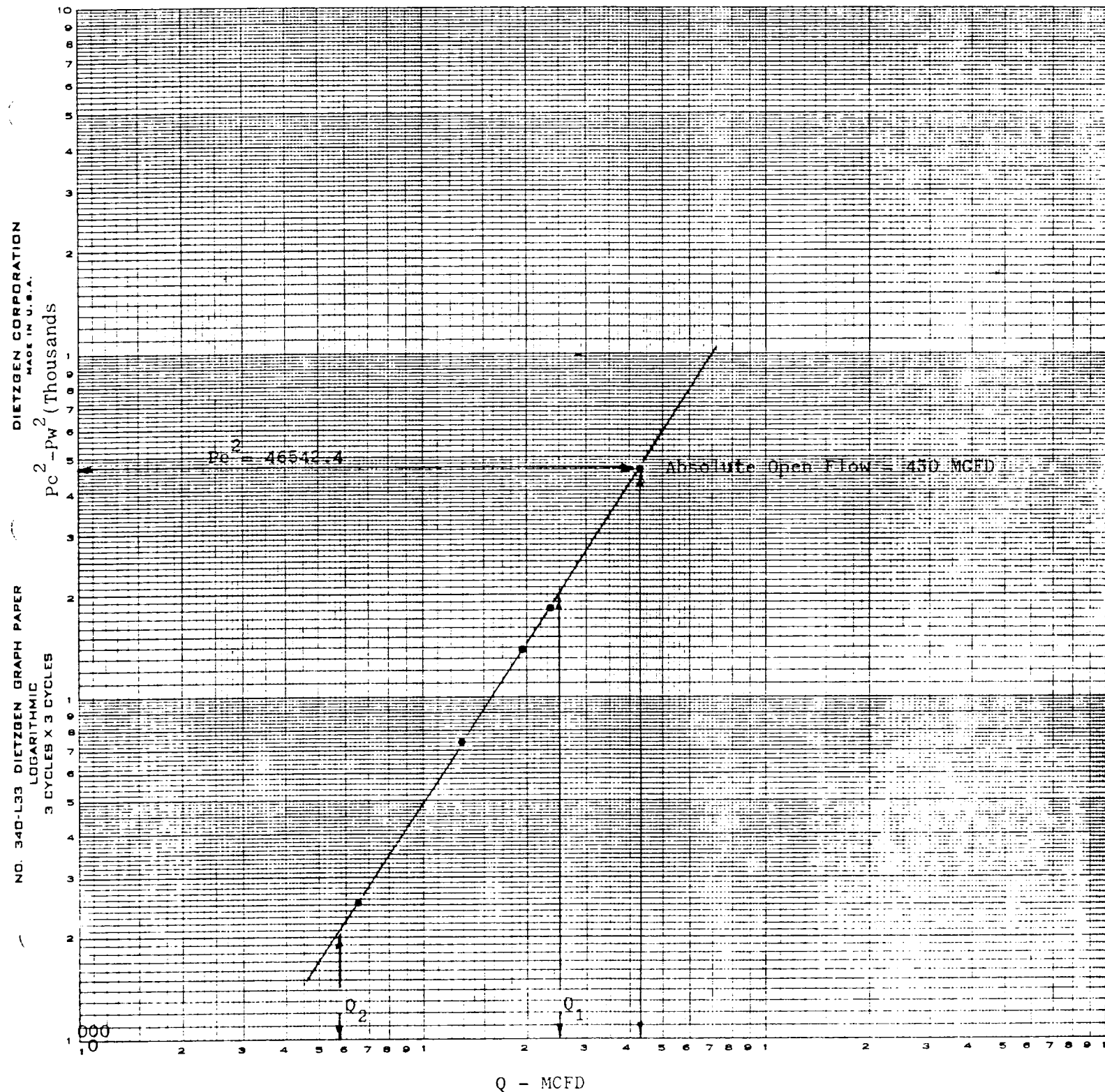
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 430$

Absolute Open Flow 430 Mcfd @ 15.025	Angle of Slope @ 57° 18'	Slope, n 0.642
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Remarks: * BOTTOM HOLE PRESSURE @ (-9316) 13523' USED FOR PRESSURE CALCULATIONS
WELL PRODUCED 0.50 BBLS CONDENSATE IN 4.0 HOURS = 3.0 BC/D

Approved By Division	Conducted By: JARREL WELL TESTING INC	Calculated By: Joe A. Coleman	Checked By: PE #2208 Joe A. Coleman
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COMPANY: Hexagon Oil & Gas Inc.
 WELL: New Mexico 28 State, No. 1
 LOCATION: I 28 16s 33e
 COUNTY: Lea
 DATE: September 25, 1982



$$Q_1 = 250 \text{ MCFD}; \text{Log } Q_1 = 2.39794$$

$$Q_2 = 57 \text{ MCFD}; \text{Log } Q_2 = 1.75588$$

$$N = 0.64206 = 0.642$$

NEW-TEX LAB

PHONE 505/393-3561

P. O. BOX 1161

611 W. SNYDER

HOBBS, NEW MEXICO 88240

ANALYSIS CERTIFICATE

CLIENT: JARREL SERVICES INC
ADDRESS: BOX 1654
CITY, STATE: HOBBS NM 88240

ANALYSIS NUMBER: 8365
DATE OF RUN: 09/27/82
DATE SECURED:

SAMPLE IDENT: HEXAGON OIL & GAS - 28 STATE #1
SAMPLING PRESS: SAMPLING TEMP:

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

	MOLE PERCENT	GAL/ MCF
NITROGEN	1.057	
CARBON DIOXIDE	0.534	
METHANE	86.236	
ETHANE	7.720	2.059
PROPANE	2.826	0.776
ISO-BUTANE	0.406	0.132
NORMAL BUTANE	0.734	0.231
ISO-PENTANE	0.167	0.061
NORMAL PENTANE	0.134	0.048
HEXANES	0.071	0.029
HEPTANES PLUS	0.115	0.053
TOTAL	100.000	3.339

PROPANE GPM:	0.78	BUTANES GPM:	0.36
ETHANE GPM:	2.06	PENTANES PLUS GPM:	0.19

SPECIFIC GRAV (CALC): 0.6553
MOLE WEIGHT: 13.99

HHV-BTU/CU FT	PRESSURE (PSIA)	WET	DRY
14.696	1118		1138
14.650	1114		1134
14.732	1120		1140
14.733	1121		1141

ANALYZED BY:

R H HAMILTON

APPROVED BY

[Signature]

JARREL SERVICES, INC.

POST OFFICE BOX 1654

PHONE 505 393-5396

HOBBS, NEW MEXICO 88240

COMPANY: Hexagon Oil & Gas Inc.

WELL: New Mexico 28 State, No. 1

FIELD: Maljamer - Morrow

CHRONOLOGICAL PRESSURE DATA

DATE	STATUS OF WELL	TIME	ELAPSED TIME		SURFACE PRESSURE		BHP @ (-9316) 13523'PSIG
			HRS.	MIN.	TBG	CSG	
1982							
9/25	Shut in 46.0 hrs. Run						
	Static Gradient w/						
	Tandem Bombs & hung						
	Bombs @ 13523'	10:30 AM	-	-	4077 DWT	PKR	6809
	Started 1st Rate	12:45	2	15	4077	MCF/D	6809
	Finished 1st Rate	1:45	1	00	2731	235	5313
	& Started 2nd Rate						
	Finished 2nd Rate	2:45	1	00	2844	195	5710
	& Started 3rd Rate						
	Finished 3rd Rate	3:45	1	00	2945	129	6243
	& Started 4th Rate						
	Finished 4th Rate	4:45	1	00	3109	65	6623
	& Pulled Bombs						

JARREL SERVICES, INC.

POST OFFICE BOX 1654

PHONES 505 393-5396 — 393-8274

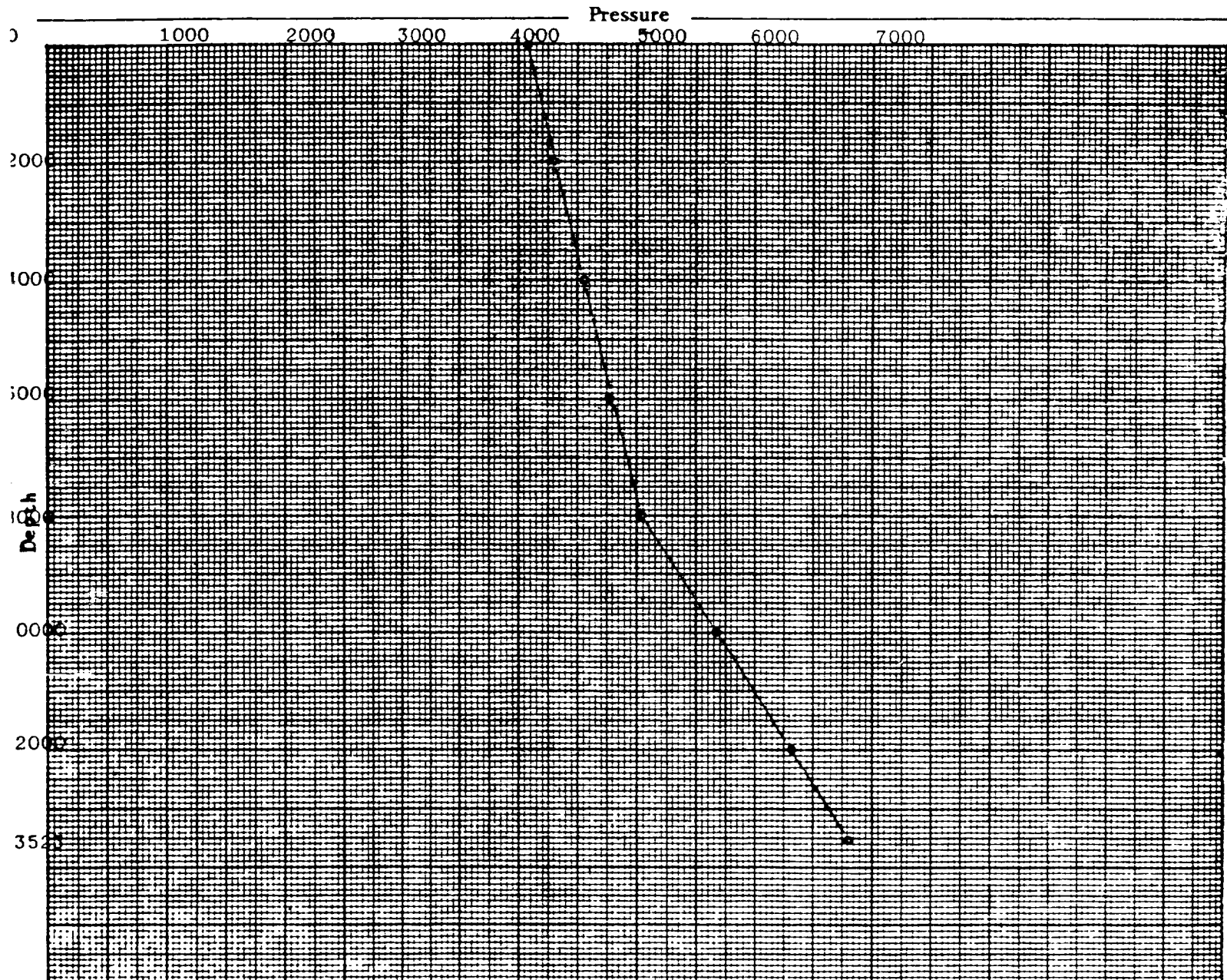
HOBBS, NEW MEXICO 88240

OPERATOR Hexagon Oil & Gas Inc.
 FIELD Maljamer
 FORMATION Morrow
 LEASE New Mexico 28 State WELL #1
 COUNTY Lea STATE New Mexico
 DATE 9/25/82 TIME 10:30 AM
 Status Shut in
 Test Depth 13523'
 Time S. I. 46.0 hrs. Last test date -
 Tub Pres. 4077 DWT BHP last test -
 Cas. Pres. PKR BHP change -
 Elev. 4207' GL Fluid top 8000'
 Datum (-9316)** Water top None
 Temp. @ - Run by JSI #16
 Cal. No. A14637N Chart No. 1

BOTTOM HOLE PRESSURE RECORD

Depth	Pressure	Gradient
0	4077	-
2000	4314	.119
4000	4552	.119
6000	4790	.119
8000	5030	.120
10000	5670	.320
12000	6316	.323
13523 (-9316)	6809 * **	.324

** MIDPOINT OF CASING PERFORATIONS



RECEIVED
OCT 14 1982
FBI
RECEIVED