

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

Form C-122
Revised 5-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special		Test Date 8-18-77		SEP 1 1977	
Company Tom L. Ingram		Connection None		O. C. C.	
Prod. Undesignated		Formation Pennsylvanian		ARTESIA, OFFICE	
Completion Date 8-18-77		Total Depth 9135' <i>COT 8937</i>		Flow Back TL 8432'	
Elevation 3885' KB		Well No. 1		Name or Lease Name Jubilee	
Grp. Size 5"	Wt. 15.50	a 4.950	Set At 8937'	Perforations: From 8380' To 8387'	
Tub. Size 2 3/8"	Wt. 4.7	d 1.995	Set At 8340'	Perforations: Open Ended To	
Type Well - Single - Brokenhead - G.G. or G.O. Multiple Single			Packer Set At 8340'		County Chaves
Producing Thru Tubing		Reservoir Temp. °F 168 @ 8300'		Mean Annual Temp. °F 60	
Burg. Press. - P _b 13.2		State New Mexico		Unit E 28 10s 29e	
L 8384'	H -	Gg 0.7117	% CO ₂ 0.696	% N ₂ 1.837	% H ₂ S 0.000
Provd. X			Meter Run F		

FLOW DATA							TUBING DATA		CASING DATA		Duration of Flow
NO.	Provd. Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Provd. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
1.	4	8/64	1.250	220	12	110	2103	95			122.0
2.	4	9/64	1.250	220	18	115	1450		Packer		1.0
3.	4	11/64	1.250	220	24	105	1220				1.0
4.	4	13/64	1.250	220	30	105	1170				2.0
5.							945				1.0

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, F _{pv}	Rate of Flow Q, Mcf/d
1	7.469	52.90	233.2	0.9551	1.185	1.020	456.12
2	7.469	64.83	233.2	0.9510	1.185	1.020	556.59
3	7.469	74.81	233.2	0.9594	1.185	1.021	648.58
4	7.469	83.64	233.2	0.9594	1.185	1.021	725.14
5							

NO.	P _t	Temp. °F	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcf/cst.
1	0.35	570	1.47	0.961	A.P.I. Gravity of Liquid Hydrocarbons	-	
2	0.35	575	1.48	0.962	Specific Gravity Separator Gas	0.7117	X X X X X X X X
3	0.35	565	1.46	0.960	Specific Gravity Flowing Fluid	X X X X X	
4	0.35	565	1.46	0.960	Critical Pressure	669	P.S.I.A.
5					Critical Temperature	388	R

P _t 2711.2 P _c ² 7350.6				
NO.	P _t ²	P _w *	P _w ²	P _c ² - P _w ²
1		2278.2	5190.2	2160.4
2		2061.2	4248.5	3102.1
3		1833.2	3361.2	3989.4
4		1549.2	2400.2	4950.6
5				

$$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 3.402$$

$$AOF = C \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 912$$

$$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 2.000$$

Absolute Open Flow	912	Mcf/d @ 15.025	Angle of Slope	60° 30'	Slope, n	0.566
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Remarks: * BHP @ (-4499) 8384' Used for Pressure Calculations

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
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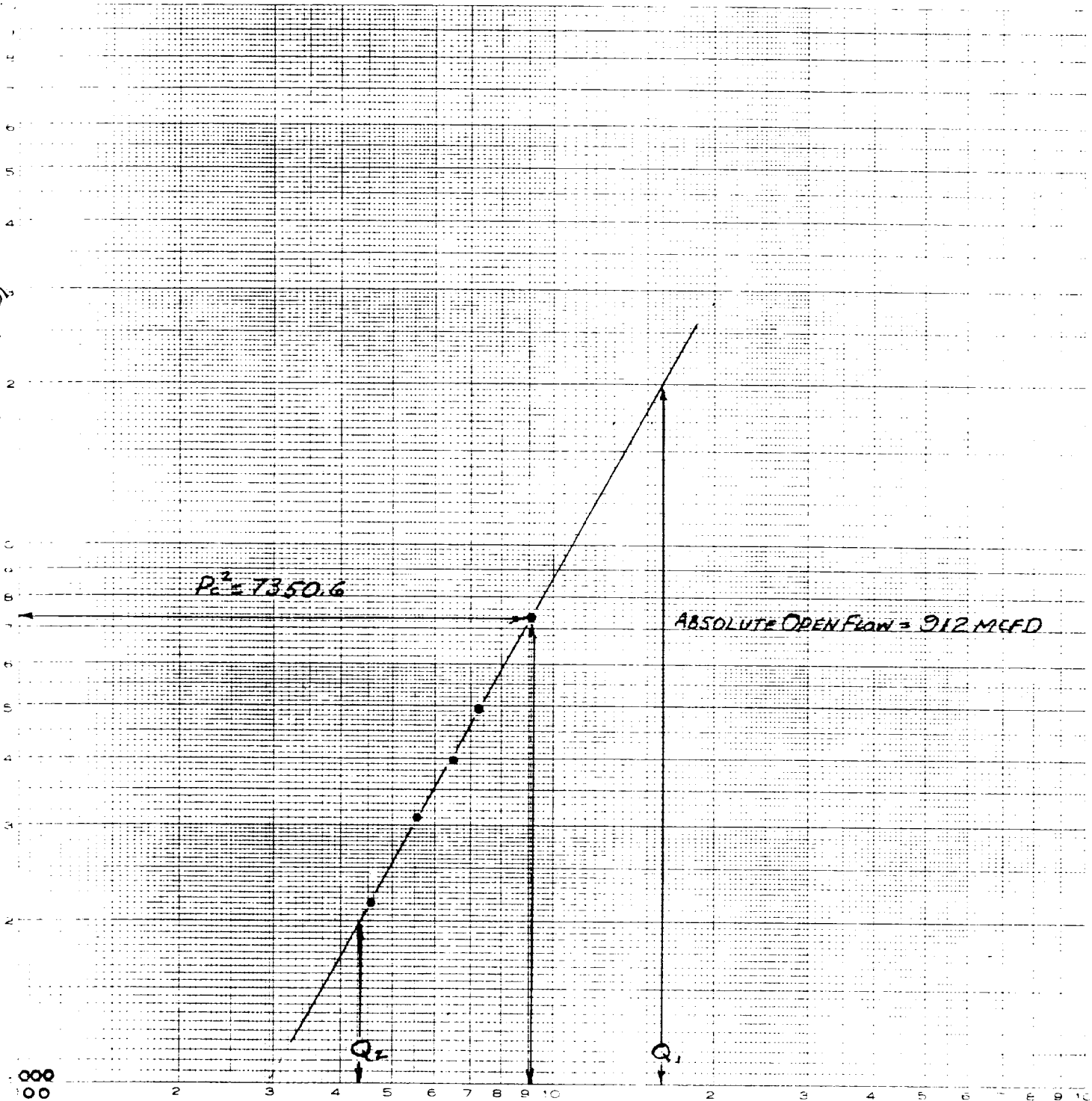
COMPANY: Tom L. Ingram
 WELL: Jubilee, No.1
 LOCATION: Unit E, Sec 28 10s 29e
 COUNTY: Chaves
 DATE: August 18, 1977

DIETZGEN CORPORATION

$P_e^2 - P_w^2$ (THOUSANDS)

NO. 3416 (22 DIETZGEN READING) 1000000

LOGARITHMIC 2 CYCLES X 2 CYCLES



$Q_1 = 1600 \text{ MCFD}; \text{LOG } Q_1 = 3.20412$
 $Q_2 = 435 \text{ MCFD}; \text{LOG } Q_2 = 2.63849$
 $n = 0.56563 = 0.566$



OF NEW MEXICO

P. O. BOX 1499

PHONE (505) 393-7751

HOBBS, NEW MEXICO 88240

No. 6435
Run No. _____
Date of Run 8-19-77
Date Secured 8-18-77

CERTIFICATE OF ANALYSIS

A Sample of Tom L. Ingram Undesignated Penn
Secured from Jarrell Services
At P. O. Box 1654 Secured by _____
Hobbs, New Mexico 88240 Time _____ Date _____
Sampling conditions _____ Press _____
Temp. _____ Jubilee #1
Chaves County

FRACTIONAL ANALYSIS

Percentage Composition

MOL % LIQ. % G.P.M.

Carbon Dioxide	.696	
Argon		
Nitrogen	1.837	
Oxygen		
Hydrogen sulfide		
Hydrogen		
Methane	82.449	
Ethane	7.143	1.905
Propane	3.820	1.052
Butanes		
iso Butane	.994	.324
n-Butane	1.352	.425
Pentanes		
iso-Pentane	.544	.199
n-Pentane	.361	.130
Hexanes	.329	.135
Heptanes	Plus .475	.202
TOTAL	100.000	4.372

Calc. Sp. Gr. 0.7117
Calc. A.P.I. _____
Calc. Vapor Press. _____ PSIA
Sp. Gr. _____
Mol. Wt. 20.67

LIQUID CONTENT (GAL./MCF)

Propane Calc. G.P.M. 1.052
Butanes Calc. G.P.M. .749
Pentanes Plus G.P.M. .666
Ethane Calc. G.P.M. 1.905
RVP Gasoline G.P.M. _____

B.T.U./Cu. Ft. @ 14.696 P.S.I.A.
Dry Basis 1207
Wet Basis 1186

Sulfur Analysis by Titration
Gr./100 Cu. Ft. _____
Hydrogen Sulfide _____
Mercaptans _____
Sulfides _____
Residual Sulfur _____
Total Sulfur _____

Run by Debbie Moutray Checked by _____ Approved by *Debbie Moutray*

Additional Data and Remarks

823dh

JARREL SERVICES, INC.

POST OFFICE BOX 1654

PHONE 505 393.5396

HOBBS, NEW MEXICO 88240

COMPANY: Tom L. Ingram

WELL: Jubilee, No. 1

FIELD: Undesignated Pennsylvanian

CHRONOLOGICAL PRESSURE DATA

DATE	STATUS OF WELL	TIME	ELAPSED TIME		SURFACE PSI		PRODUCTION	BHP @ (-4499
1977			HRS.	MIN.	TBG	CSG	MCF/D	8384' PSIG
8-18	Shut in 120.0 hours.							
	Run static gradient &							
	on bottom with Bomb							
	for 4-Point Test.	12:00 N	120	00	2103 DWT	PKR		2698
	Started 1st Rate.	2:00 PM	2	00	2103 "	-		2698
	Finished 1st Rate &							
	Started 2nd Rate.	3:00	1	00	1450 "	-	456.12	2265
	Finished 2nd Rate &							
	Started 3rd Rate.	4:00	1	00	1220 "	-	556.59	2048
	Finished 3rd Rate &							
	Started 4th Rate.	6:00	2	00	1170 "	-	648.58	1820
	Finished 4th Rate &							
	Shut in for Buildup.	7:00	1	00	945 "	-	725.14	1536
	SHUT IN	7:15	0	15	-	-	-	2009
	"	7:30	0	30	-	-	-	2317
	"	8:00	1	00	-	-	-	2572
	"	9:00	2	00	-	-	-	2629
	"	10:00	3	00	-	-	-	2638
	Clock run out.	11:00	4	00	-	-	-	2644
8-19	Pulled Bomb.				2054 DWT	-		

The Jarrel Company

POST OFFICE BOX 1654 PHONES (505) 393-3813 - 393-5396
HOBBS, NEW MEXICO 88240

Well Testing Division

Instrument Service

BOTTOM HOLE PRESSURE RECORD

OPERATOR Tom L. Ingram
FIELD Undesignated FORMATION Pennsylvanian
LEASE Jubilee WELL No. 1
COUNTY Chaves STATE New Mexico
DATE August 18, 1977 TIME 11:00 AM
Status Shut In Test depth 8384'
Time S. I. 120 Hours Last test date August 3, 1977
Tub Pres. 2103 DWT BHP last test 2769
Cas. Pres. Packer BHP change 71# Loss
Elev. 3885' DF Fluid top None
Datum (-4499) ** Water top None
Temp. @ 168° F Run by Jarrel Services, Inc.
Cal. No. A36826N Chart No. 1

Depth	Pressure	Gradient
0	2103	-
2000	2240	.069
4000	2382	.071
6000	2526	.072
8000	2670	.072
8384 (-4499)	2698 **	.073

** MIDPOINT OF CASING PERFORATIONS

