

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

Form C-122
Revised 9-1-6

Type Test ☐ Initial ☐ Annual ☒ Special					Test Date 1/19/77	
Company Koch Industries				Connection New Well		
Pool Blanco				Formation Mesa Verde		Unit
Completion Date		Total Depth 6100		Plug Back TD		Elevation 6516
Farm or Lease Name Gardner		Well No. #2				
Csg. Size 4.500	Wt. 10.5	d 4.052	Set At 6100	Perforations: From 5078 To 5862		Unit #2
Tbg. Size 2.375	Wt. 4.7	d 1.995	Set At 5741	Perforations: From To		Unit Sec. Twp. Rge. 31 32 8
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Gas - Single				Packer Set At 5054'		County San Juan
Producing Thru Tubing		Reservoir Temp. °F 8		Mean Annual Temp. °F		State New Mexico
Baro. Press. - P _a 12.0						
L	H	Gg .60	% CO ₂	% N ₂	% H ₂ S	Prover 2"
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
SI							1019				SIP
1.	2"	X	1/8"	990		46°	990				2hrs.
2.	2"	X	3/16"	939		51°	939				2hrs.
3.	2"	X	1/4"	856		52°	856				2hrs.
4.	2"	X	5/16"	746		50°	746				2hrs.
5.	2"	X	5/16"	609		54°	609				12hrs.

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	0.2648		1002	1.014	1.291	1.109	385
2	0.6082		951	1.009	1.291	1.102	830
3	1.087		868	1.008	1.291	1.095	1344
4	1.672		758	1.010	1.291	1.079	1783
5	1.672		621	1.006	1.291	1.066	1438

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

NO.	P _c	P _w	P _w ²	P _c ² - P _w ²
1	1031	1002	1004004	58957
2		951	904401	158560
3		868	753424	309537
4		758	574564	488397
5		621	385641	677320

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

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

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

Absolute Open Flow	1,910	Mcf @ 15.025	Angle of Slope	37°	Slope, n	.75
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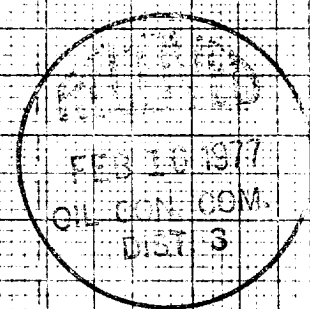
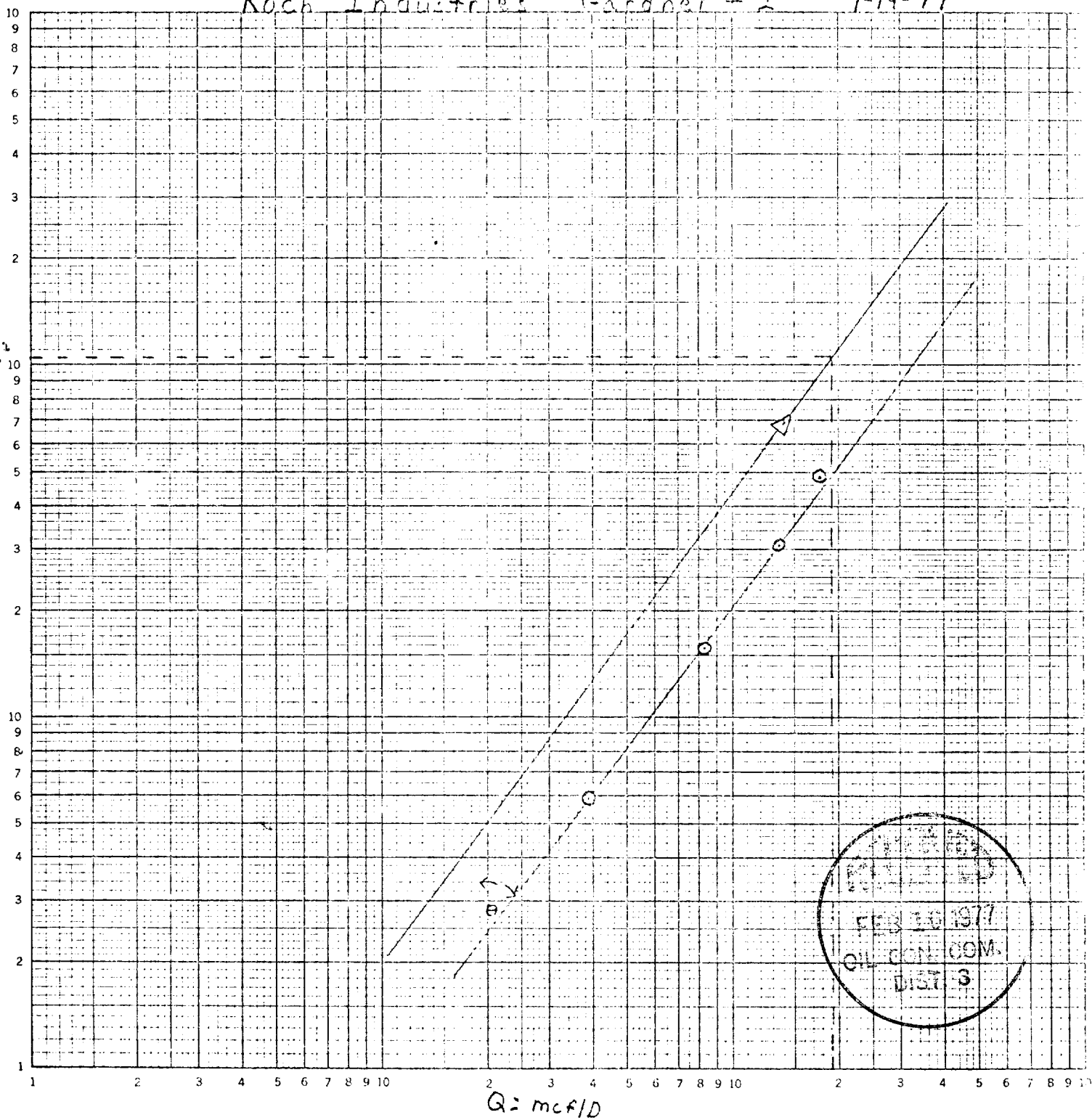
Remarks: Well was completed as dual completion, PC & MV. PC was non-commercial, vented 1119 mcf while testing.

Approved by Commission:	Conducted By: Gerald C. Haysleb	Calculated By: Fred S. Hamrick	Checked By: R A R
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Koch Industries Gardner # 2 1-19-77

46 7400

LOGARITHMIC 3 X 3 CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.



○ 2 hr flow points

△ 12 hr. extended flow

$\theta = 37^\circ$

$\tan \theta = .75$

$N = .75$

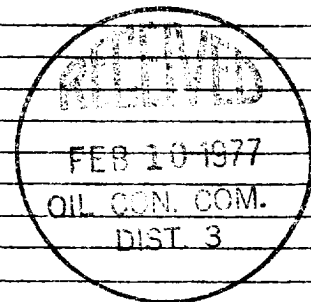
$AOF = 1910 \text{ mcf/D}$

SUGGESTED FIELD DATA SHEET (Not Required To File)							
Type Test		☐ Initial ☐ Annual ☒ Special		Test Date		1/19/77	
Company		Koch Industries		Connection		New Well	
Field		Reservoir		Location		Unit	
Completion Date		Total Depth		Plug back TD		Elevation	
Csg. Size		Wt.	d	Set At	Perforations: From	To	Well No.
Tiq. Size		Wt.	d	Set At	Perforations: From	To	#2 Sec. 31 Twp. 32 Rgn. 8
Type Completion (Describe)						Packer Set At	
Producing thru		Reservoir Temp. F		Mean Annual Temp. F		Baro. Press. - P _a	
		H		C _g .60 % CO ₂		% H ₂ % H ₂ S Prover 2" Meter Run Tops	

DATE	ELAP. TIME	Wellhead Working Pressure			METER OR PROVER				REMARKS
Time of Reading	Hrs.	Tiq. Psg.	Csg. Psg.	Temp. F	Pressure Psg.	Diff.	Temp. F	Orifice	(Include liquid production data: Type-A.P.L. Gravity-Amount)
7:00am		1019	Packer					1/8"	Initial SIP - Start Flow #1
:15		1009			1009		40°		
:30		1006			1006		44°		
:45		1003			1003		42°		
8:00		999			999		42°		
:15		997			997		44°		
:30		995			995		44°		
:45		993			993		44°		
9:00	2hr	990			990		46°		End Flow #1 - No liquid
11:00am	2hr	1016						3/16"	2hr. SIP - Start Flow #2
:15		978			978		50°		
:30		966			966		50°		
:45		961			961		50°		
12:00N		954			954		50°		
:15		948			948		50°		
:30		945			945		50°		
:45		942			942		51°		
1:00pm	2hr	939			939		51°		End Flow #2 - No Liquid
3:00pm	2hr	996						1/4"	2hr. SIP - Start Flow #3
:15		924			924		50°		
:30		905			905		50°		
:45		891			891		51°		
4:00		879			879		51°		
:15		874			874		52°		
:30		866			866		52°		
:45		862			862		52°		
5:00	2hr	856			856		52°		End Flow #3 - No Liquid
7:00am	2hr.	983						5/16"	2hr. SIP - Start Flow #4
:15		860			860		50°		
:30		823			823		49°		Very light mist
:45		804			804		49°		" " "
8:00		792			792		50°		" " "
:15		781			781		50°		" " "

SUGGESTED FIELD DATA SHEET (Not Required To File)									
Type Test ☐ Initial ☐ Annual ☒ Special Test Date <u>1/19/77</u>					Lease No. or Serial No.				
Company <u>Koch Industries</u> Connection <u>New Well</u>					Allottee				
Field <u>Reservoir</u> Location					Unit				
Completion Date		Total Depth		Plug back TD		Elevation		Form or Lease Name	
								<u>Gardner</u>	
Csg. Size		Wt.	d	Set At	Perforations From		To	Well No. <u>#2</u>	
Tbg. Size		Wt.	d	Set At	Perforations From		To	Sec. Twp. - R14 Range	
								<u>31 32 8</u>	
Type Completion (Describe)					Packer Set At		County or Parish		
							<u>San Juan</u>		
Producing thru		Reservoir Temp. F		Mean Annual Temp. F		Baro. Press. - P _o		State	
								<u>New Mexico</u>	
L		H		G _g .60		% CO ₂		% H ₂	
								% H ₂ S	
								Prover <u>2</u> Meter Run Taps	

DATE	ELAP. TIME	Wellhead Working Pressure			METER OR PROVER				REMARKS
		Tbg. Psig.	Csg. Psig.	Temp. F	Pressure Psig.	Diff.	Temp. F	Orifice	
Time of Reading	Hrs.								(Include liquid production data: Type-A.P.L. Gravity-Amount)
8:30am		769			769		50°	5/16	Very light mist
:45		754			754		50°		" " "
9:00PM	2hr	746			746		50°		End Flow #4 - Start Extended Flow
10:00	1	720			720*				
11:00	2	702			702*				*Pres. estimate from Pres. records
12:Noon	3	685			685*				
1:00am	4	672			672*				
2:00	5	660			660*				
3:00	6	652			652*				
4:00	7	645			645*				
5:00	8	638			638*				
6:00	9	630			630*				
7:00	10	623			623*				
8:00	11	616			616*				Collected gas samples
9:00am	12	609			609				Shut-in @ 9:00AM. Start of build-
:05		703							
:10		724							
:15		741							
:20		753							
:25		762							
:30		766							
:40		782							
:50		793							
10:00	1hr	803							
:10		811							
:20		819							
:30		825							
:40		830							
:50		835							
11:00	2hr	840							
:15		847							
:30		856							
:45		862							
12:Noon	3hr	867							
:30		875							
1:00	4hr	879							



SUGGESTED FIELD DATA SHEET (Not Required To File)						
Type Test		☐ Initial ☐ Annual ☒ Special		Test Date		Lease No. or Serial No.
				1/19/77		
Company		Koch Industries		Connection		Allottee
				New Well		
Field		Reservoir		Location		Unit
Completion Date		Total Depth		Log Back ID		Form of Lease Name
						Gardner
Csg. Size		Wt.	d	Set At	Perforations: From	Well No.
					To	
Tbg. Size		Wt.	d	Set At	Perforations: From	Sec. Twp. R14
					To	8
Type Completion (Describe)					Parker Set At	County or Parish
						San Juan
Producing Thru		Reservoir Temp. F		Mean Annual Temp. F	Baro. Press. - P _o	State
						New Mexico
L	H	C _g	% CO ₂	% H ₂	% H ₂ S	Prover
		.60				2"
						Meter Run
						Taps

[illegible]

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