

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

Form C-122
 Revised 9-1-65

Type Test ☐ Initial ☐ Annual ☒ Special						Test Date 1/25/77			
Company Koch Industries				Connection New Well					
Pool Blanco				Formation Mesa Verde				Unit	
Completion Date		Total Depth 6105		Plug Back TD		Elevation 6515		Farm or Lease Name Gardner	
Csq. Size 4.500	Wt. 10.5	d 4.052	Set At 6105	Perforations: From 5059 To 5996		Well No. #3			
Tbg. Size 2.375	Wt. 4.70	d 1.995	Set At 6030	Perforations: From To		Unit Sec. Twp. Rye. SW 31 32 8			
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single Gas						Packer Set At None		County San Juan	
Producing Thru Tubing		Reservoir Temp. °F @		Mean Annual Temp. °F		Baro. Press. - P _a 12.0		State New Mexico	
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							954		956		SIP
1.	2" X 1/4"			850		53°	850		886		2 hrs.
2.	2" X 5/16"			789		58°	789		846		2 hrs.
3.	2" X 3/8"			713		58°	713		801		2 hrs.
4.	2" X 7/16"			603		60°	603		749		2 hrs.
5.	2" X 7/16"			496		63°	496		665		12 hrs.

RATE OF FLOW CALCULATIONS							
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	1.087		862	1.007	1.291	1.093	1331
2	1.672		801	1.002	1.291	1.077	1866
3	2.378		725	1.002	1.291	1.073	2393
4	3.408		615	1.000	1.291	1.062	2874
5	3.408		508	.9971	1.291	1.043	2324

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
2.					Specific Gravity Separator Gas _____ X X X X X X X X
3.					Specific Gravity Flowing Fluid _____ X X X X X
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
5.					Critical Temperature _____ °R _____ °R

P _c 968 P _c ² 937024		(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$ _____		(2) $\left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n =$ _____	
NO.	P _t ²	P _w	P _w ²	P _c ² - P _w ²	
1		898	806404	130620	
2		858	736164	200860	
3		813	660969	276055	
4		761	579121	357903	
5		677	458329	478695	

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

Absolute Open Flow 3,800	Mcf/d @ 15.025	Angle of Slope @ 37°	Slope, n .75
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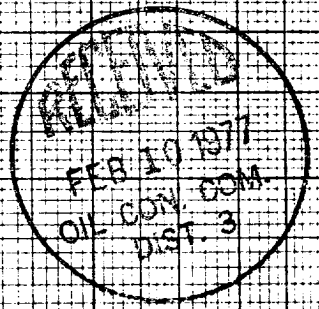
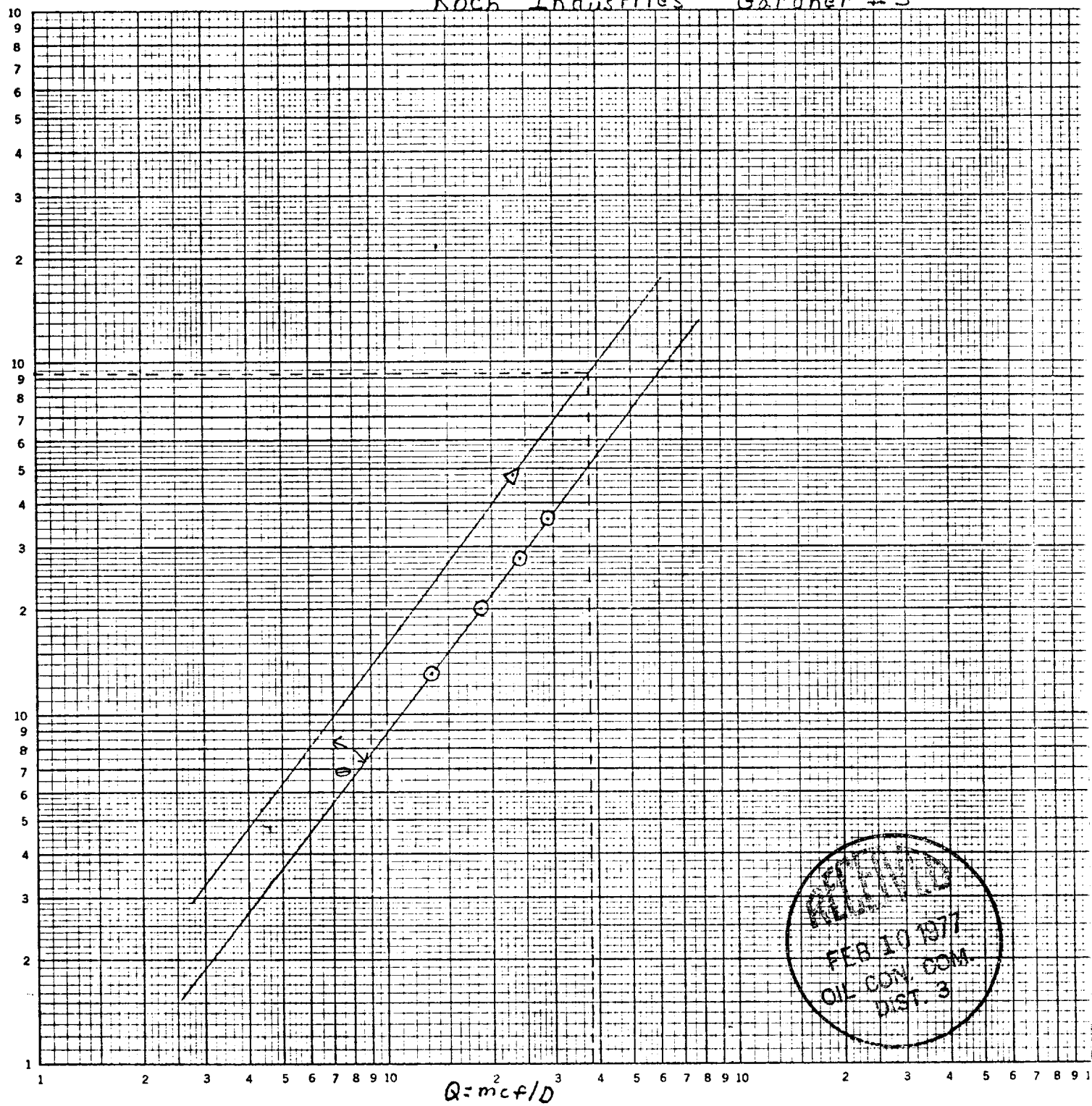
Remarks: Vented 1867 mcF while testing.

Approved By Commission:	Conducted By: Fred S. Hamrick	Calculated By: B. Broughton	Checked By:
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46 7400

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

Koch Industries Gardner #3



○ 2 hr. flow Points
△ 12 hr. extended Flow

$\theta = 37^\circ$
 $\tan \theta = .75$
 $N = .75$
 $AOF = 3,800 \text{ mcf/D}$

SUGGESTED FIELD DATA SHEET (Not Required To Fill)

Type Test ☐ Initial ☐ Annual ☒ Special	Test Date 1/25/77	Lease No. or Serial No.
Company Koch Industries	Connection New Well	Allottee
Field Reservoir	Location	Unit
Completion Date	Total Depth	Plug back To
Elevation	Perforations: From	To
Coq. Size	Wt.	d
Set At	Perforations: From	To
Thq. Size	Wt.	d
Set At	Perforations: From	To
Type Completion (Describe)	Porter Set At	County or Parish San Juan
Producing Thru	Reservoir Temp. F	Mean Annual Temp. F
Hard. Press. - P ₀	State New Mexico	Prove It
L	H	C _g .60
% CO ₂	% H ₂	% H ₂ S
Prove It	Water Run	Test

DATE	ELAP. TIME	Wellhead Working Pressure			METER OR PROVER				REMARKS
		Thq. Psig.	Coq. Psig.	Temp. F	Pressure Psig.	Diff.	Temp. F	Orifice	
7: AM		914	940					1/4"	SIP - Start Flow #1
:15		878	917		878		48°		
:30		866	913		866		49°		
:45		859	907		859		49°		
8:		852	904		852		50°		Blowing light to med. mist.
:15		851	899		851		52°		" " " " "
:30		850	895		850		53°		" " " " "
:45		852	891		852		53°		" " " " "
9:	2hr	850	886		850		53°		End Flow #1
11:	2hr.	904	923					5/16"	2 hr. SIP - Start Flow #2
:15		811	892		811		53°		
:30		798	881		798		54°		Blowing light to med. mist.
:45		807	870		807		55°		" " " " "
12:noon		804	864		804		56°		" " mist.
:15		799	856		799		57°		" " " " "
:30		796	852		796		57°		" " " " "
:45		791	850		791		58°		" " " " "
1: PM	2hr.	789	846		789		58°		End Flow #2
3: PM	2hr.	897	902					3/8"	2 hr. SIP - Start Flow #3
:15		746	865		746		54°		
:30		748	848		748		56°		Blowing light mist.
:45		742	835		842		56°		" " " " "
4:		736	827		736		57°		" " " " "
:15		728	821		728		57°		" " " " "
:30		725	817		725		57°		" " " " "
:45		718	806		718		58°		" " " " "
5:	2hr	713	801		713		58°		End Flow #3
7: PM	2hr.	883	885					7/16"	2 hr. SIP - Start Flow #4
:15		644	832		644		54°		Blowing light mist.
:30		660	815		660		56°		" " " " "
:45		645	791		645		57°		" " " " "
8:		639	780		639		59°		" " " " "
:15		625	771		625		59°		" " " " "

SUGGESTED FIELD DATA SHEET (Not Required To File)									
Type Test ☐ Initial ☐ Annual ☒ Special Test Date 1/25/77									
Company Koch Industries Connection New Well									
Field Reservoir Location									
Completion Date Total Depth Plug Back To Elevation									
Csg. Size Wt. d Set At Perforations: From To									
Tbg. Size Wt. d Set At Perforations: From To									
Type Completion (Describe) Porters Set At									
Producing Thru Reservoir Temp. F Mean Annual Temp. F Baro. Press. - P ₀									
L H C _g .60 % CO ₂ % H ₂ % H ₂ S Prover 2" Meter Run Taps									

DATE	ELAP. TIME	Wellhead Working Pressure			METER OR PROVER				REMARKS (Include liquid production data: Type-A, P, L, Gravity-Amount)
		Tbg. Psig.	Csg. Psig.	Temp. F	Pressure Psig.	Diff.	Temp. F	Orifice	
8:30PM		616	763		616		59°	7/16"	Blowing light mist
:45		610	755		610		60°		
9:	2hr.	603	749		603		60°		End Flow #4 - Start Extended flo
10:	1hr.	578	730		578*				*Estimate from Pres. recorder.
11:	2hr.	567	715		567*				
12:AM	3hr.	558	700		558*				
1:	4	549	690		549*				
2:	5	537	680		539*				
3:	6		670		*				*Recorder freeze to Prover.
4:	7		660		*				
5:	8		652		*				
6:	9		645		*				
7:	10		638		*				
8:	11		632		*				Collected gas samples
9:	12hr	496	627		496		63°		Shut-in @ 9:AM. Start of field-u
:05		649	648						
:10		668	665						
:15		676	675						
:20		683	683						
:25		687	687						
:30		694	694						
:40		703	704						
:50		709	710						
10:		712	720						
:10		718	726						
:20		720	731						
:30		724	735						
:40		727	739						
:50		730	744						
11:		734	747						
:15		737	751						
:30		741	755						
:45		745	760						
12:		749	764						
:15		753	767						
:30		756	772						

