

67L07305-5

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RRGE-2 FLOW TEST

2-21-77

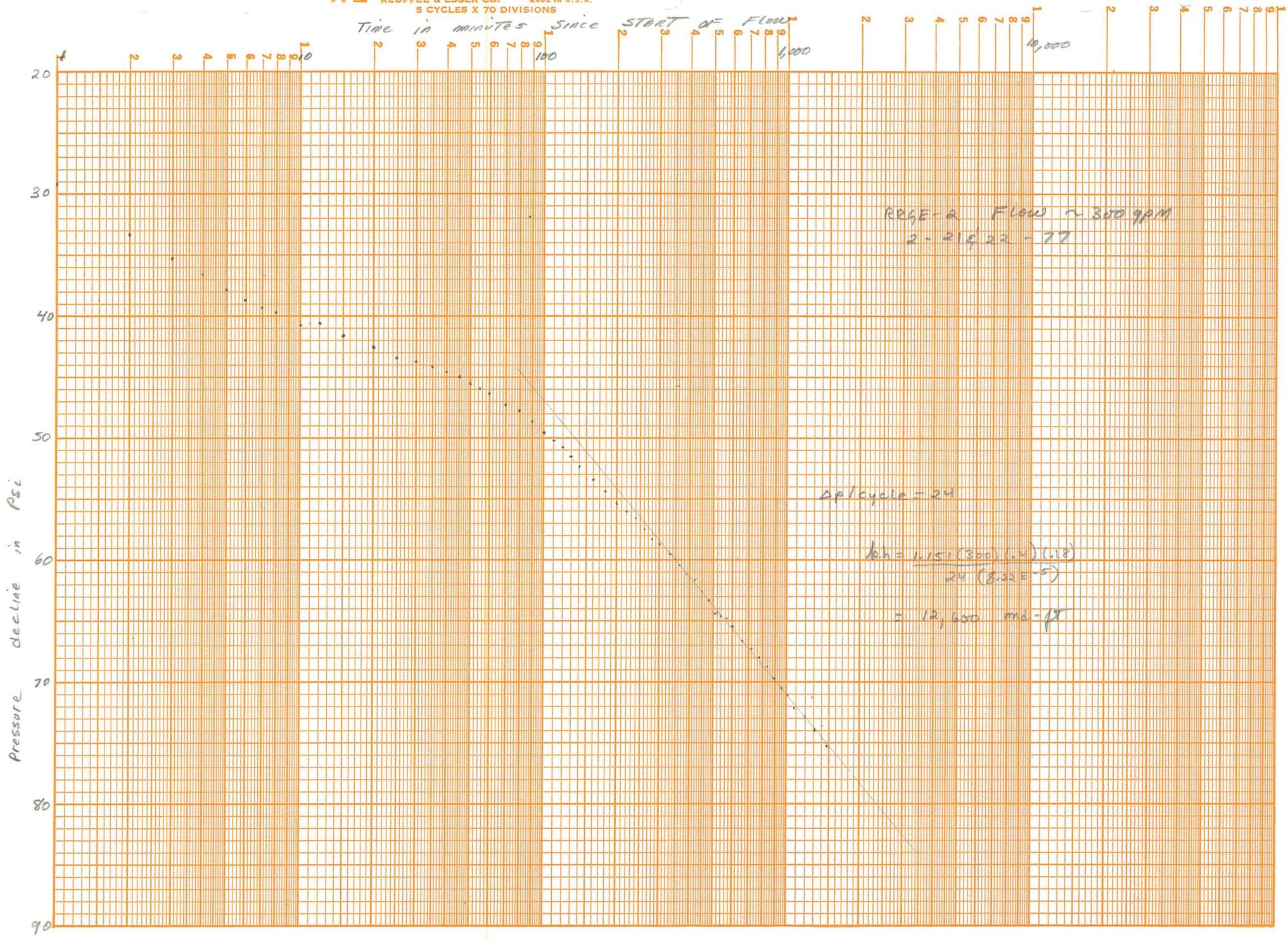
Q = 300 gpm

162.235 - WHP

	Time (min)	WHP (PSIA)	Δ Time (min)	ΔWHP (PSI)	Comments
2-21-77	12:00	162.235	0		Flow Begin
	12:01	133.003	1	29.232	
	12:02	128.882	2	33.353	
	12:03	126.932	3	35.303	
	12:04	125.564	4	36.671	
	12:05	124.329	5	37.906	
	12:06	123.620	6	38.615	
	12:07	122.987	7	39.248	
	12:08	122.506	8	39.729	
	12:10	121.623	10	40.612	
	12:12	121.076	12	40.475	←
	12:15	120.511	15	41.724	
	12:20	119.681	20	42.554	
	12:25	118.965	25	43.27	
	12:30	118.576	30	43.659	
	12:35	118.084	35	44.151	
	12:40	117.506	40	44.729	
	12:45	117.183	45	45.052	
	12:50	116.813	50	45.422	
	12:55	116.236	55	45.999	
	13:00	115.908	60	46.327	
	13:10	115.004	70	47.231	
	13:20	114.452	80	47.783	
	13:30	113.526	90	48.709	
	13:40	112.689	100	49.546	
	13:50	112.079	110	50.156	
	14:00	111.428	120	50.807	
	14:10	110.610	130	51.525	
	14:20	109.941	140	52.294	
	14:40	108.712	160	53.523	
	15:00	107.830	180	54.405	
	15:20	106.866	200	55.369	
	15:40	106.188	220	56.047	
	16:00	105.583	240	56.552	
	16:20	104.662	260	57.573	
	16:40	103.973	280	58.262	
	17:00	103.475	300	58.760	
	17:30	102.696	330	59.539	
	18:00	101.787	360	60.448	
	18:30	101.128	390	61.107	
	19:00	100.486	420	61.749	
	19:30	99.530	450	62.705	

	Time (min)	WHP (PSIA)	Δ Time (min)	Δ WHP (PSI)	Comments
2-21-77	20:00	99.003	480	63.232	
	20:30	97.881	510	64.354	
	21:00	97.656	540	64.579	
	21:30	97.424	570	64.811	
	22:00	96.799	600	65.486	
	23:00	95.629	660	66.606	
2-22-77	00:00	94.9145	720	67.3208	
	01:00	94.152	780	68.083	
	02:00	93.375	840	68.86	
	03:00	92.408	900	69.827	
	04:00	91.784	960	70.451	
	05:00	91.139	1020	71.096	
	06:00	90.108	1080	72.127	
	08:00	89.350	1200	72.885	
	10:00	88.308	1320	73.927	
	12:00	87.022	1440	75.213	

Time in minutes since START of Flow



RBGE-2 FLOW ~ 300 gpm  
 2-21-22-77

$\Delta p/cycle = 24$

$$\begin{aligned}
 \Delta h &= \frac{1.15 \cdot (300) \cdot (1.4) \cdot (1.8)}{24 \cdot (8.32 \times 10^{-5})} \\
 &= 12,600 \text{ md-ft}
 \end{aligned}$$

2-26-77 ~~1977~~

Open Valve flow RRG#2 ~ 32 PSI DP  
300 gpm

1200.00 hrs. 2-21-77

Reserve Pif ~ 17 inches

Gage disconnected 1.5 PSI

TIME	Pressure	$\Delta$ Time	Press Abs	Temp.	DP	flow
1145	150.0		162.230	224		~20 gpm
	20 gpm	Hot flow off		about 30 sec	after	300 gpm started
1201	118		130.420	231	32	
1203	116		127.122	234	32	
1205	113		124.010	236	32	
1207	111		122.776	238	32	
1209	110.5		121.836	240	32	
1214	110		120.554	241	32	
1220	109		119.681	243	32	
1231	107.5		118.647	250	32	
1240	106.5	55	117.506	252	32	
1253	105		116.324	259	32	

(2)

2-21-77 ~~Q4~~

TIME	Back Pressure	Wellhead Abs Press	Temp.	AP Flow
1310	104	115.004	261	32
1340	101 <sup>105</sup>	112.689	263	32
1400	100	111.428	266	32
1420	98.5	109.941	266	32
1440	97.5 <sup>105</sup>	108.712	266	32
1500	96.5	107.830	268	32
1520	95.5	106.866	268	32
1540	95.0 <sup>25</sup>	106.188	268	32
1600	94.5	105.583	270	32
1620	94.0	104.662	269	32
1640	92.5 <sup>285</sup>	103.973	267	32
1700	92.0	103.475	267	32
1720	91.5	102.957	268	32
1740	91.0 <sup>345</sup>	102.433	268	32
1800	90.0	101.787	268	32
1820	90.0	101.181	267	32
1840	89.5 <sup>405</sup>	100.750	267	32

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2-21-77 DLS

TIME	Back Pressure	Abs Press	Temp.	SP	flow
1900	89 535	100.480 <del>99.650</del>	267	31.8	
1920	89 525	99.650	267	32	
1940	88 465	99.360	267	32	
2000	88	99.0030	269	32	
2020	86.5	98.2680	267	32	
2040	86.0 525	98.0244	270	32	
2100	86.0	97.6561	268	32	
2120	86.0	97.5342	268	32	
2140	86.0 585	97.0652	268	32	
2200	86.0	96.7994	269	32	
2220	85.0	96.3880	268	32	
2240	85.0 645	96.0934	268	32	
2300	85.0	95.6287	268	32	
2320	84.5	95.4916	268	32	
2340	84.0 705	95.1766	269	32	
2400	84.0	94.9145	269	32	

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2-22-77 OMB

TIME	Back Pressure	Wall Head Pressure	Temp.	ΔP	Flow
0020	84	94.6375	269	32	
0040	83	765 94.2621	269	32	
0100	82.5	94.1518	268	32	
0120	82.5	93.8901	269	32	
0140	82.5	825 93.7484	270	32	
0200	82.0	93.3752	269	32	
0220	82.0	43.0975	269	32	
0240	82.0	885 92.7440	269	37	
				32	
0300	81.0	905 92.4078	269	32	
0400	80.5	965 91.7836	269	32	
0500	79.5	1025 91.1388	268	32	
0600	79				
0600	79	1085 90.1079	269	32	
0640	79	90.1438	270	32	
0700	79	1145 89.9252	270	32	
0740	78.5	89.6112	269	32	
0740	78.0	89.4633	—	32	
0800	78.0	1205 89.3496	—	32	

(5)  
2-22-77 RAB

TIME	Back Press.	Whead Press	Temp.	BP	flow
0820	78.0	89.3391	268	32	
0840	78.0	89.2025	271	32	
0900	77.5	88.7472	269	32	
0920	77.5	88.5203	270	32	
0940	77.0	88.3100	268	32	
1000	77.0	88.3082	270	32	
1020	77.0	88.0338	273	32	
1040	77.0	87.9663	269	32	
1100	76.5	87.7786	270	32	
1120	76.5	87.5321	274	32	
1140	76.0	86.7410	268	32	
1200	Closed 32 BP flow - started 20gpm flow Reserve Pt ~ 25 inches No Flow $\Delta P$ 1.5 psi				