

McKay

Drilling & Pump Service, Inc.

Serving Northern Nevada Since 1960
Nevada Contractors License #14170
690 Starlight Circle • Reno, Nevada 89509

(702) 825-8692
826-1032
826-5365

December 29, 1987

Permit Officer
Division of Environmental Protection
Capitol Complex
Carson City, NV 89710

Dear Sirs: RE: WARREN ESTATES

This report is regarding permit #40310, 49057, and 30013.
This report includes July through December of 1987.
The totalizing flow meter readings and the gallons per minute
instantaneous flow measurements were taken, by Gordon McKay.

Sincerely,

Gordon McKay

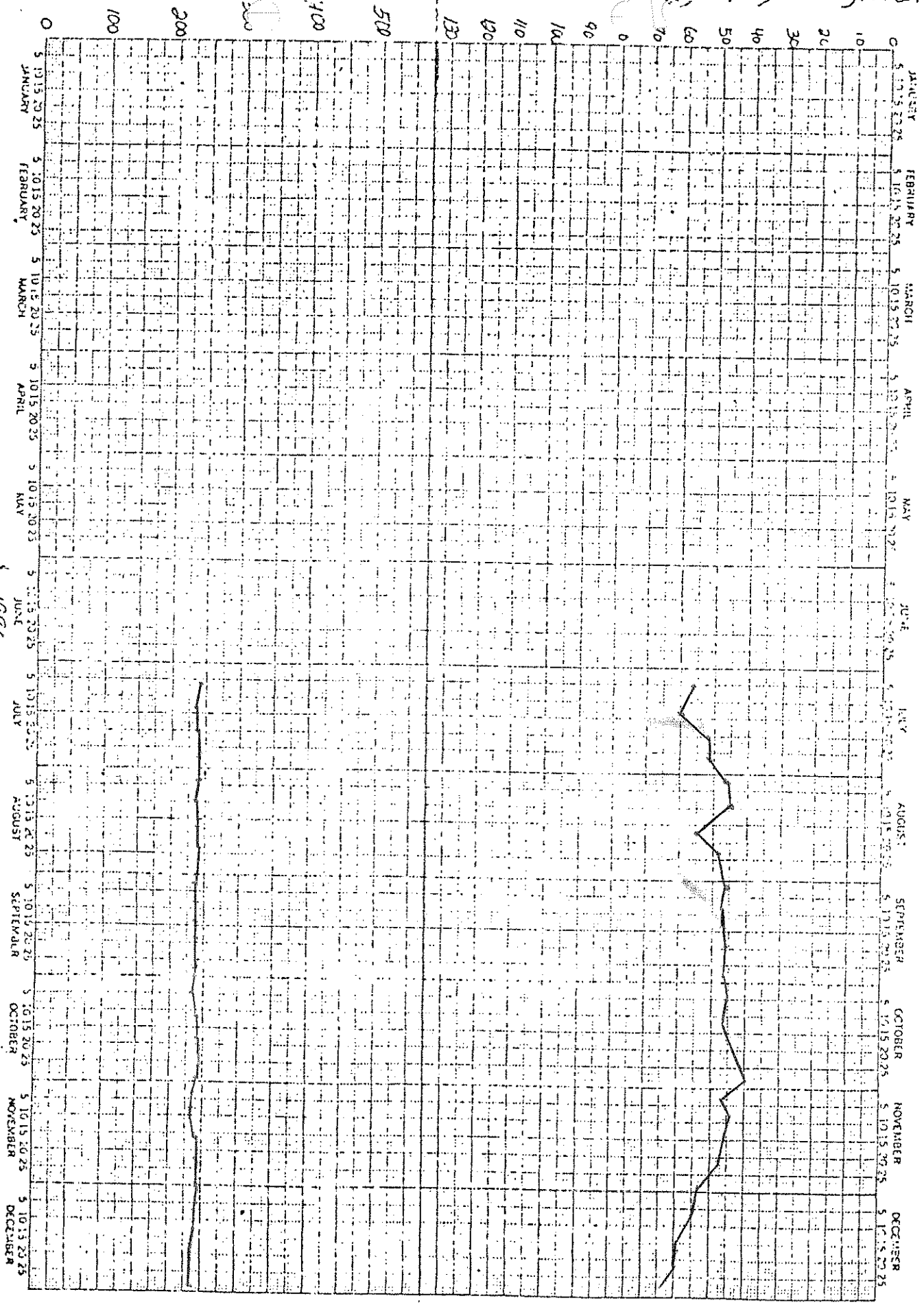
ATTACHMENT 1

Weekly measurements of production and injection activities at Warren Estates.

DATE	TIME	TEMP. OF PRODUCED FLUID (°F)	INSTANTANEOUS FLOW MEASUREMENT (gpm)	INJECTION WELL WATER-LEVEL (ft.)	TOTALIZING FLOW METER READING (gal)	DATA READ AND RECORDED BY
7-6-87	1:55	202°	240	52-60	55,527,000	ECR/DOV
7-13-87	1:20	202°	230	55-65	57,930,000	
7-20-87	12:20	202°	230	52	60,328,000	
7-27-87	1:11	202°	240	51	62,745,000	
8-3-87	12:55	202°	240	46	65,150,000	
8-10-87	12:50	202°	230	45	67,562,000	
8-17-87	1:15	202°	235	55	69,982,000	
8-24-87	1:00	202°	235	47	72,394,000	
8-31-87	1:10	202°	230	46	74,805,000	
9-8-87	12:55	202°	240	47	77,558,000	
9-14-87	1:30	202°	240	48	79,629,000	
9-20-87	12:55	202°	240	46	82,030,000	
9-28-87	12:30	202°	240	47	84,428,000	
10-5-87	12:31	202°	235	45	86,838,000	
10-12-87	12:35	202°	240	47	89,248,000	
10-19-87	12:15	202°	240	45	91,660,000	
10-26-87	12:30	202°	245	40	94,100,000	
11-2-87	12:34	202°	245	46	96,521,000	
11-9-87	12:30	202°	230	44	98,956,000	
11-16-87	1:00	202°	240	46	101,394,000	
11-23-87	12:30	202°	240	47	103,808,000	
11-30-87	12:35	202°	245	54	106,219,000	
12-7-87	2:15	202°	240	55	108,655,000	
12-14-87	12:10	202°	240	58	111,048,000	
12-21-87	3:25	202°	230	60	113,521,000	
12-28-87	1:15	202°	230	65	115,915,000	

WARREN ESTATES
Attachment 2

Injection Rate (gpm) Depth to Water (ft) in Injection Well



Plots of injection rate and depth to water in injection well 200-20-11
1986

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July 20, 1987

Permit Officer
Division of Environmental Protection
Capitol Complex
Carson City, NV 89710

Dear Sirs: RE: WARREN ESTATES

This report is regarding permit numbers 40310, 49057, and 30013.

This report includes January through June of 1987.

The totalizing flow meter readings and the gallons per minute instantaneous flow measurements were taken weekly, by Gordon McKay.

Sincerely,

Gordon McKay

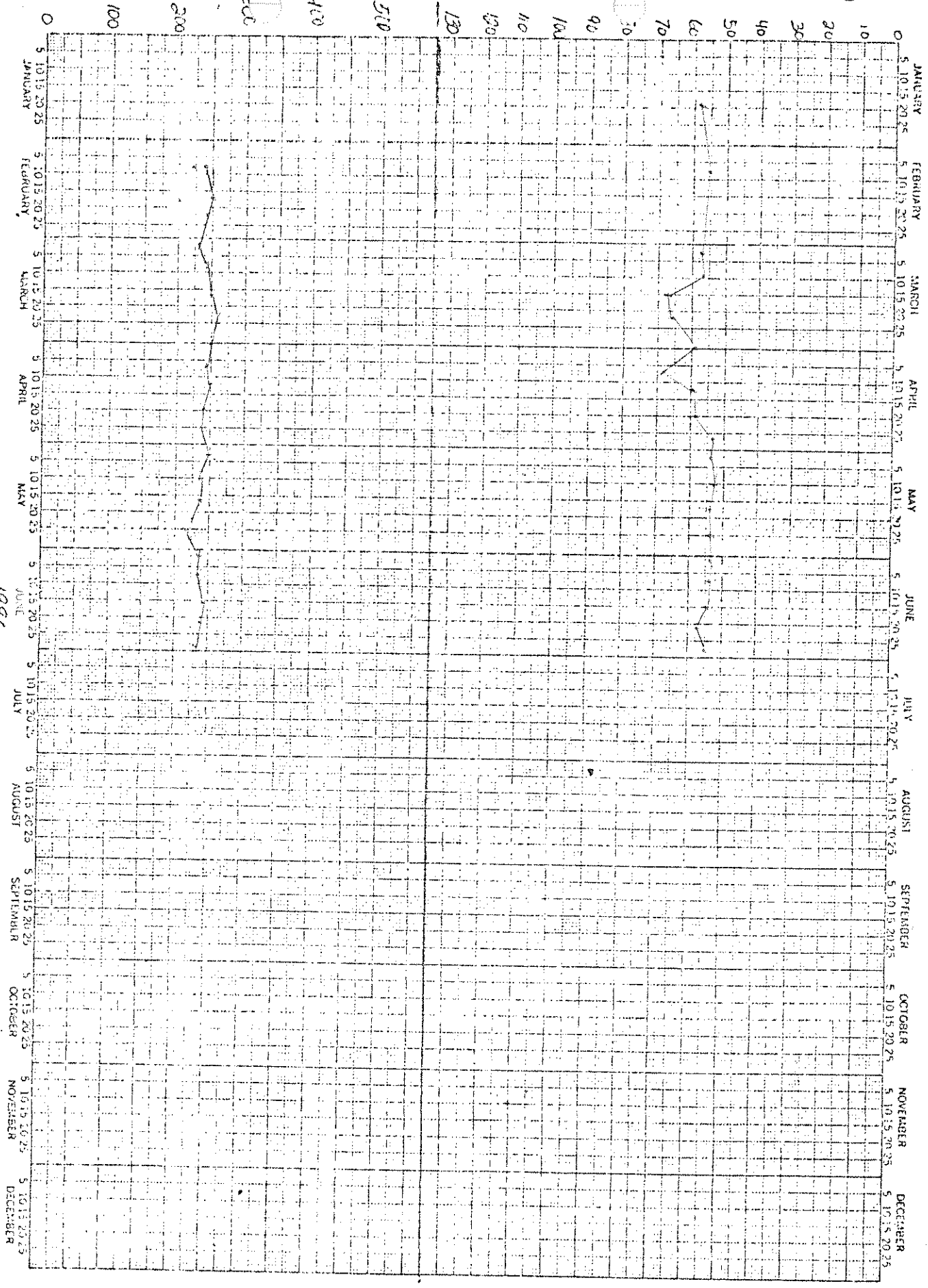
ATTACHMENT 1

Weekly measurements of production and injection activities at Warren Estates.

DATE	TIME	TEMP. OF PRODUCED FLUID (°F)	INSTANTANEOUS FLOW MEASUREMENT (gpm)	INJECTION WELL WATER-LEVEL (ft.)	TOTALIZING FLOW METER READING (gal)	DATA READ AND RECORDED BY	
8-7							
1-5	1:15	199°				Goodman 1/8/64	
1-12	2:00	198°					
1-19	1:42	195°		56-62			
1-26	1:00	199°					
2-2	1:00	195°			2,555,000		
2-9	3:30	200°	240	51-60	5,041,000		
2-16	2:23	195°	250		7,427,000		
2-23	2:13	199°	245		9,563,000		
3-2	10:50	198°	230	52-64	12,252,000		
3-9	12:00	199°	245	54-62	14,698,200		
3-16	1:05	199°	250	64-65	17,149,000		
3-23	1:40	200°	260	63-65	19,596,000		
3-30	1:27	199°	250	53-55	22,025,000		
4-6	1:39	200°	240	52-64	24,466,000	Steele 1/9/64	
4-13	1:41	202°	250	45-70	26,558,000	Steele	
4-20	1:05	199°	230	54-66	29,692,000	Steele 1/9/64	
4-27	1:00	200°	240	50-56	32,664,000		
5-4	2:04	201°	250	51-57	34,457,000		
5-11	2:00	202°	235	51-57	36,554,000		
5-18	2:00	202°	240	52-56	39,291,000		
5-25	1:15	200°	220	52-55	41,511,000		
6-1	1:31	202°	230	52-55	43,741,000		
6-8	1:30	202°	230	51-56	45,845,000		
6-15	12:45	200°	245	51-57	48,238,000		
6-22	1:00	201°	240	55-58	50,701,000		
6-29	12:30	202°	230	55-57	53,106,000		
					Total for 6 months	53,109,000	Steele 1/9/64

Injection Rate (gpm)

Depth to Water (ft) in Injection Well



Plots of injection rate and depth to water in injection well WUE-3, Wilson Estab. Franklin, Tenn. 1986



SIERRA ENVIRONMENTAL MONITORING

WATER QUALITY ANALYSIS RECORD

PROJECT NAME	Warren Estates - Warren Properties	J.N. WAR - 163
P. O. Box 915 Rancho Sante Fe, CA 92067		

SAMPLE IDENTIFICATION		PARAMETER	PARAMETER	PARAMETER	PARAMETER	PARAMETER	
Sample Collection Date	Station ID.	pH	Conductivity	Total Diss Solids	Fluoride	Arsenic	
MON DAY YR	0-2400	S. U.	umho/cm	mg/l	mg/l	mg/l	
		UNITS	UNITS	UNITS	UNITS	UNITS	
6-1-87	09:00	prod. well 1	8.0	1430	1000	4.9	0.11

SAMPLES BY: Mc Kay Drilling - G. Mc Kay
ANALYSIS BY: SEM - G. Gross - J. Seher

APPROVED BY: *J. Seher*