

Mc Kay Drilling, Inc.

Serving Northern Nevada Since 1960

Nevada Contractors Licenses #147170, #22763

2290 Pioneer Dr.
Reno, Nevada 89509
(702) 825-8692
852-1620
826-5365

RECEIVED

JAN 23 1991

Dept. of Minerals

COPY

January 11, 1991

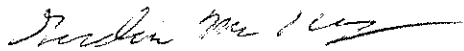
Permit Officer
Division of Environmental Protection
Capitol Complex
Carson City, NV 89710

Dear Sirs:

RE: Warren Estates

This report is regarding permit #40310, 49057, and 30013.
This report includes July through December of 1990.
The totalizing flow meter readings and the gallons per minute
instantaneous flow measurements were taken, by Gordon McKay.

Sincerely,



Sierra Environmental Monitoring Inc.
 47 Glen Carran Circle
 Sparks, NV 89431
 (702)356-3868

Laboratory
 Analysis Report

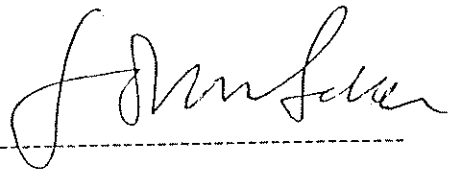
Page: 1

Date : 1/15/91
 Invoice #: 3936
 Client #: WAR-163 PO#:
 Name : Warren Estates
 Address : P.O. Box 915
 City : Rancho Sante Fe State: CA Zip: 92067
 Taken by : McKay Drilling-Gordon

Sample	Collection		ALKALINITY	CONDUCTIVITY	pH	TOTAL DISSOL.	ARSENIC	BORON	CALCIUM
	Date	Time	MG/L CaCO3	UMHO/CM	(S.U.)	MG/L	MG/L	MG/L	MG/L
PRODUCTION WELL	12/10/90	14:00	81	1400	7.9	875	0.13	2.5	26.9

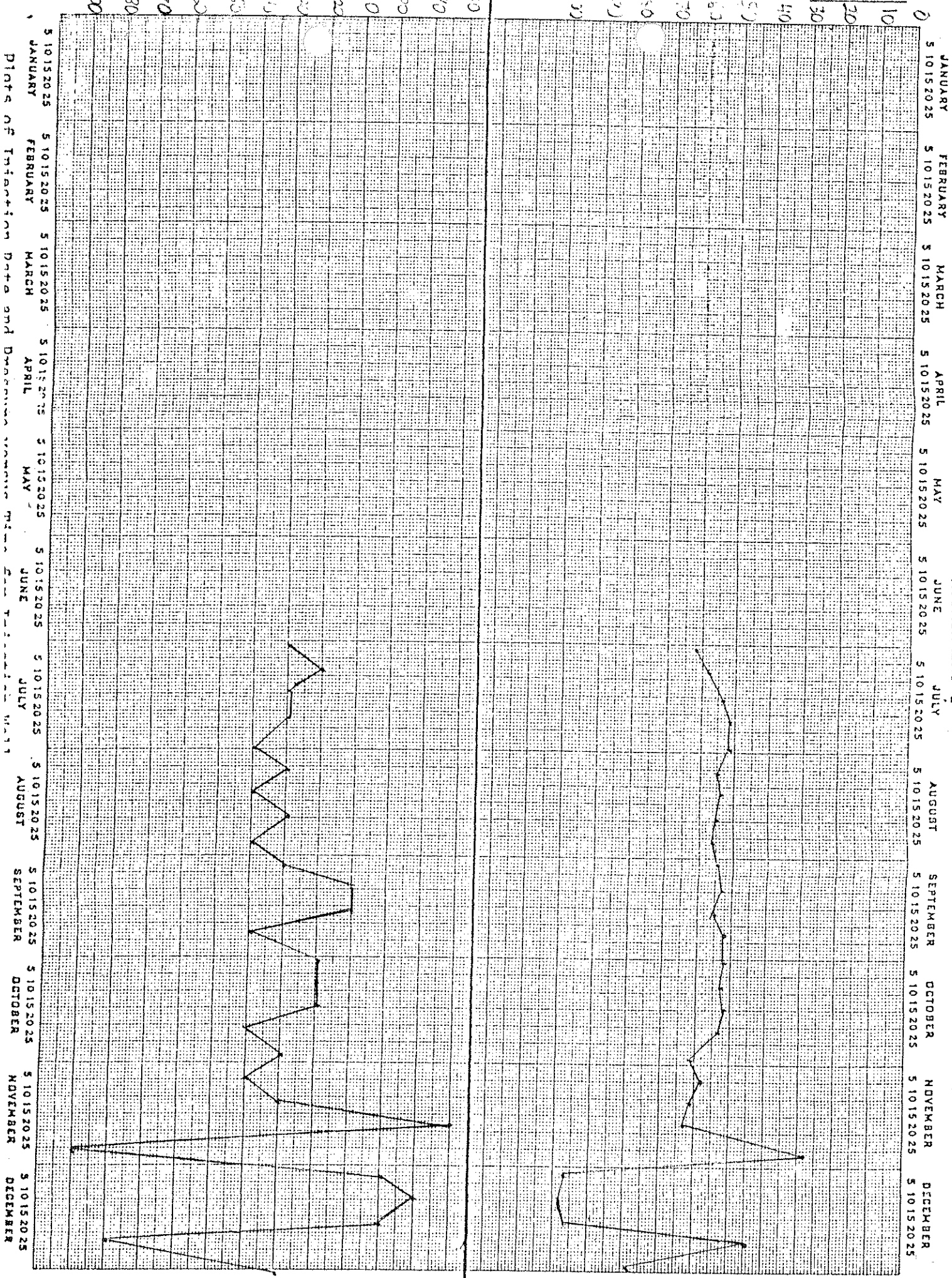
Sample	Collection		MAGNESIUM	POTASSIUM	SODIUM	CHLORIDE	FLUORIDE	SILICA	SULFATE
	Date	Time	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L	MG/L
PRODUCTION WELL	12/10/90	14:00	0.2	8.9	261	51	5.9	104	558

*Copy to
 FRANCIS
 MCKAY*

Approved By: 

ATTACHMENT I

WAVEN



5 10 15 20 25 JANUARY 5 10 15 20 25 FEBRUARY 5 10 15 20 25 MARCH 5 10 15 20 25 APRIL 5 10 15 20 25 MAY 5 10 15 20 25 JUNE 5 10 15 20 25 JULY 5 10 15 20 25 AUGUST 5 10 15 20 25 SEPTEMBER 5 10 15 20 25 OCTOBER 5 10 15 20 25 NOVEMBER 5 10 15 20 25 DECEMBER

Date of Initiation Date and Duration

ATTACHMENT 1

Weekly measurements of production and injection activities at Warren Estates.

DATE	TIME	TEMP. OF PRODUCED FLUID (°F)	INSTANTANEOUS FLOW MEASUREMENT (bbl)	INJECTION WELL WATER-LEVEL (ft.)	TOTALIZING FLOW METER READING (gal) X 1,000	DATA READ AND RECORDED BY
7-2-90	12:15	202	230	62	427,309	Gordon
7-9-90	12:40	202	220	58	429,642	
7-16-90	12:00	202	230	54	431,198	
7-23-90	12:50	202	230	52	434,323	
7-30-90	12:55	202	240	53	436,528	
8-6-90	12:05	202	230	55	438,847	
8-13-90	11:08	202	240	54	441,172	
8-20-90	1:23	202	230	55	443,497	
8-27-90	12:38	202	240	56	445,805	
9-3-90	11:55	202	230	55	448,108	
9-10-90	12:35	202	210	53	450,334	
9-17-90	1:25	202	210	55	452,436	
9-24-90	11:45	202	240	52	454,556	
10-1-90	2:05	202	220	52	456,708	
10-8-90	11:30	202	220	53	458,828	
10-15-90	5:30	202	220	52	461,060	
10-22-90	9:13	202	240	54	463,119	
10-29-90	11:30	202	240	61	465,314	
11-5-90	3:53	202	240	58	467,509	
11-12-90	1:04	202	230	61	469,778	
11-19-90	12:00	202	180	64	472,209	
11-26-90	12:04	202	300	28	474,964	
12-3-90	1:00	202	200	97	476,776	
12-10-90	1:16	202	190	98	478,496	
12-17-90	12:41	202	200	97	480,324	
12-24-90	11:03	202	280	45	482,478	
12-31-90	12:35	202	230	78	484,796	

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2290 Pioneer Dr.
Reno, Nevada 89509
(702) 825-8692
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July 9, 1990

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 January through June of 1990.
The totalizing flow meter readings and the gallons per minute
instantaneous flow measurements were taken, by Gordon McKay.

Sincerely,



Sierra Environmental Monitoring Inc.
47 Glen Carran Circle
Sparks, NV 89431
(702)356-3868

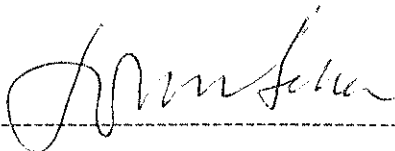
Laboratory
Analysis Report

Date : 6/18/90
Invoice #: 3172
Client # : WAR-163 PO#:
Name : Warren Estates
Address : P.O. Box 915
City : Rancho Santa Fe State: CA Zip: 92067
Taken by : McKay Drilling-Gordon

Page: 1

Sample	Collection		CONDUCTIVITY		TOTAL	ARSENIC	FLUORIDE		
	Date	Time	UMHO/CM	IS.U.	DISSOL.	MG/L	MG/L		
WARREN ESTATES PRODUCTION WELL	6/04/90	13:00	1400	8.2	1032	0.12	4.7		

Approved By: _____



ATTACHMENT 1

Weekly measurements of production and injection activities at Warren Estates.

DATE	TIME	TEMP. OF PRODUCED FLUID (°F)	INSTANTANEOUS FLOW MEASUREMENT (cpm)	INJECTION WELL WATER-LEVEL (ft.)	TOTALIZING FLOW METER READING (gal)	DATA READ & RECORDED BY
1-1-90	11:25	202	225	60	366,576,000	Gooden
1-8-90	11:16		230	64	368,948,000	
1-15-90	12:07		220	68	371,261,000	
1-22-90	12:02		225	71	373,633,000	
1-29-90	11:15		230	78	375,961,000	
2-5-90	12:55		240	76	378,355,000	
2-12-90	2:27		240	79	380,740,000	
2-19-90	11:15		235	81	383,134,000	
2-26-90	12:58		240	80	385,528,000	
3-5-90	11:50		240	71	387,918,000	
3-12-90	11:19		245	81	390,304,000	
3-19-90	11:30		210	76	392,696,000	
3-26-90	12:36		240	71	394,729,000	
4-2-90	2:30		240	70	397,067,000	
4-9-90	12:00		220	72	399,358,000	
4-16-90	10:45		230	70	401,651,000	
4-23-90	11:55		225	67	403,948,000	
4-30-90	12:15		230	66	406,325,000	
5-7-90	12:05		240	69	408,648,000	
5-14-90	1:00		230	65	410,961,000	
5-21-90	1:15		240	62	413,261,000	
5-28-90	12:20		220	65	415,633,000	
6-4-90	1:10		230	68	417,979,000	
6-11-90	1:45		240	63	420,317,000	Stone
6-18-90	12:10		220	62	422,626,000	Gooden
6-25	11:20		230	60	424,957,000	

Injection Rate-units GPM

Injection Pressure-units Point in feet

Plots of Injection Rate and Pressure Versus Time for Injection Well

ATTACHMENT 1

WAVYFORM

