

0023

EarthFax Engineering, Inc.
7324 South 1300 East, Suite 100
Midvale, Utah 84047

March 2, 1988

INVOICE NO. 19

Client: Utah Division of Oil, Gas and Mining
EarthFax Project No.: C-30

Pay Item 02 (Contract Extension)

Labor:

Vicky S. Bailey	6.50 hr @ \$17.40	\$ 113.10
Randolph B. Gainer	7.50 hr @ \$40.00	300.00

Expenses:

V. S. Bailey Expense Report	\$ 8.75	
In-house Photocopies	2.95	
Chemtech	150.00	161.70

Total

\$ 574.80

RECEIVED
MAR 07 1988

DIVISION OF
OIL, GAS & MINING



EarthFax

**EarthFax
Engineering Inc.**
Engineers/Scientists

7324 South 1300 East
Suite 100
Midvale, Utah 84047
Telephone 801-561-1555

March 3, 1988

Mr. Rick Summers
Utah Division of Oil, Gas, and Mining
355 West North Temple
Salt Lake City, UT 84180-1203

Sub: Contract 85-5323

February Report

Dear Rick:

The project tasks completed on Contract 85-5323 in February include: chart changes on the water level recorders and the recording rain gage, and the water levels were measured in the Old and New Wells.

Stream Stations

Charts were changed on the Chalk Creek and intermittent stream water level recorders. The ice on Chalk Creek has decreased by 50% since the last report. The flow in SS-4 was a "trickle". The water level at SS-6 on Chalk Creek was high enough to reach the standpipe of the recorder. Copies of the charts are included in Appendix A.

Recording Rain Gage

The rain gage had 1 1/4" of water in the bucket. The mechanism seem to respond properly to pressure on the scale, however the 1 1/4" of water was not recorded. A copy of the chart is included in Appendix B.

Water Quality

The analysis report for the January 29, 1988 sampling is included in this report.

Old Well

The standing water in the Old Well is 56.37' below the top of the casing.

New Well

The standing water level in the new well is 66.95' below the top of the casing. The pump was not on during measurement.

We plan on removing the two stream gages and recording rain gage at the end of March. We will contact you prior to actual removal

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Utah Division of Oil, Gas and Mining

to ensure that no desirable data are lost. In addition, we will strive to collect additional samples from both the Morby and the Bowyer wells. If you want us to collect a sample from the old well let us know.

If you have any questions please call.

Sincerely,

Randolph B. Gainer
10/15

Randolph B. Gainer
Project Manager

Enclosures

COPY LOG

Date	No. Copies	Project	Initials
2/26/88	8	PERSONAL	USB
2/29/88	252	C-81	
✓	4	OPTT SOFT	DW
2/29/88	46	C-27	USB
	14	C-30-02	
	18	C-43	
	6	C-67	
	14	C-20-18	
	20	C-20-17	
	42	C-20-16	
	28	C-20-14	
	6	C-20-11	
	22	C-20-02	
	36	C-83	
	8	C-82	
	16	C-81	

pd 3/1/88

Results from
Chemtech?
for Tool Design

COPY LOG

Date	No. Copies	Project	Initials
11 Feb 1988	156	C-20-02	R&W
2-10-88	490	C-27	USB
2-10-88	10	Optisoft	J.P.
2-11-88	11	C-20-14	R&W
2-11-88	85	C-27	JPT
2-12-88	160	C-27	USB
2-15-88	20, 67	C-27	JPT
2/15/88	40	C-83	R&W
2/16/88	6 + 4	C-20-16	USB
2/16/88	1	Optisoft	J.P.
2/16/88	180	C-27	R&W
2/16/88	30	-	EDDY
2/17/88	3	OPTISOFT	DW
2/18/88	42	C-30-02	USB
2/18/88	1	Optisoft	JP
	3	C-30-02	USB
2/18/88	254	Optisoft	JB
2/22/88	2	"	JP
2/23/88	2+3	Hill-USA	LPH
" "	10	C-20-(1617)	JDG
2/24/88	6	Optisoft	J.P.
2/25/88	1	Optisoft	J.P.
2/25/88	36	Optisoft	J.P.

C-30-02

INVOICE NO.

3705

CHEMTECH

367 S. Commerce Loop
Orem, UT 84057
(801) 226-8822

SOLD TO Earthfax Engineering			SHIPPED TO		
STREET & NO. 7324 So . 1300 E.			STREET & NO.		
CITY Midvale, UT 84047	STATE	ZIP	CITY	STATE	ZIP

INVOICE

CUSTOMER'S ORDER	SALESMAN	TERMS	F.O.B.	DATE		
1-29-88 - Boyer Mine, New Well, Lab #U024780		Net 30		2-17-88	150	00

Net 10 days: 1½% per month interest charge (18% A.P.R.)

CHEMTECH

CHEMICAL AND BACTERIOLOGICAL ANALYSES

367 SOUTH COMMERCE LOOP
OREM, UTAH 84057
(801) 226-8822

2875 MAIN
SUITE #101
SALT LAKE CITY, UTAH 84115
(801) 483-1162

CERTIFICATE OF ANALYSIS

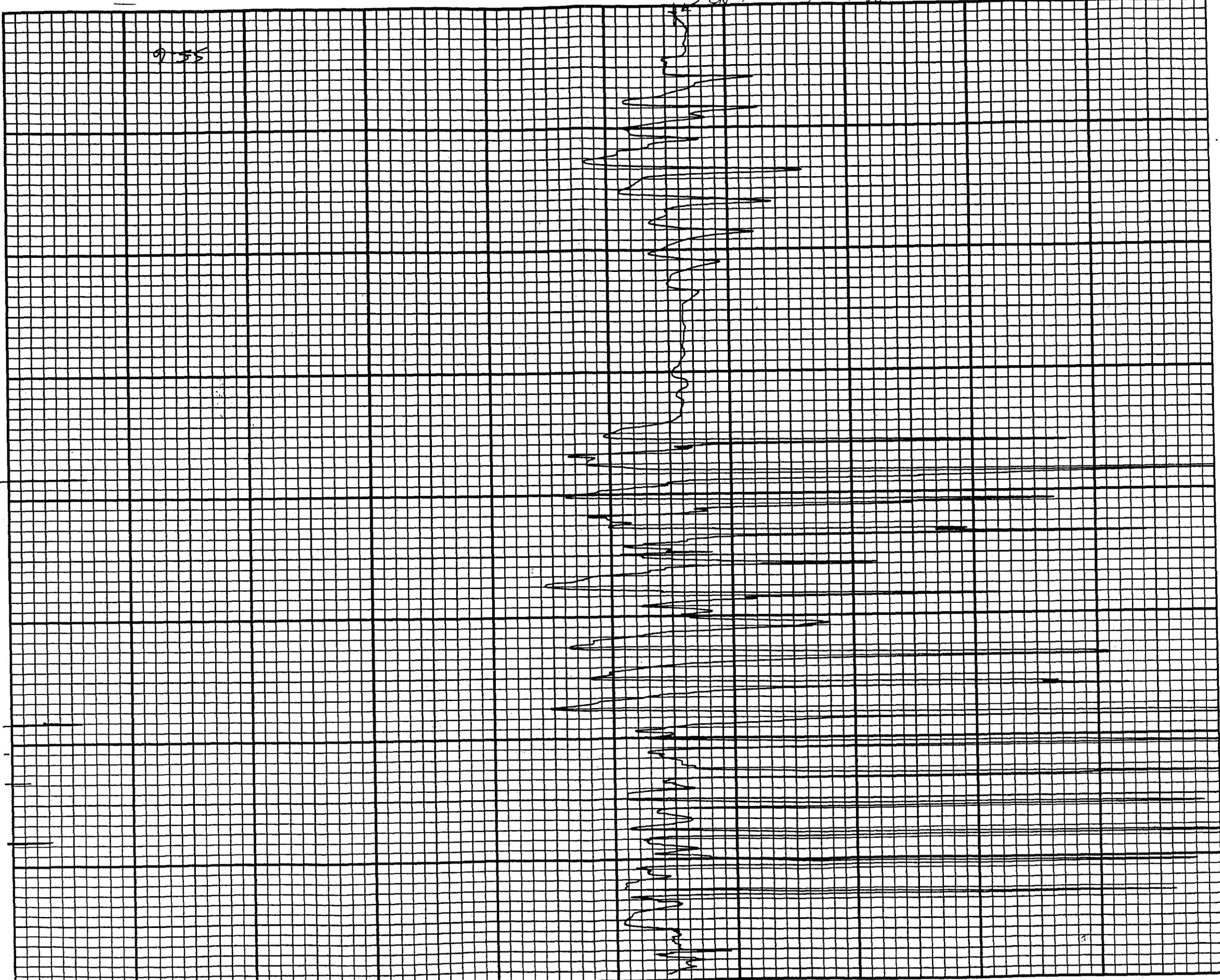
SAMPLE IDENTIFICATION	:	PARAMETER	LEVEL
CLIENT: Earthfax Engineering	:	Conductivity, umhos/cm.....	1,450
7324 So. 1300 E.	:	Copper as Cu, mg/l.....	<.01
Midvale, UT 84047	:	Fluoride as F, mg/l.....	1.72
LAB NO: U024780	:	Hardness as CaCO ₃ , mg/l.....	200
DATE SAMPLED: 1-29-88	:	Hydroxide as OH, mg/l.....	0
TIME SAMPLED:	:	Iron as Fe (Diss), mg/l.....	<.01
SAMPLED BY: JDG	:	Iron as Fe (Tot), mg/l.....	0.055
LOCATION: Boyer Mine	:	Lead as Pb, mg/l.....	<.01
New Well	:	Magnesium as Mg, mg/l.....	15.5
COMMENTS: Metals - Dissolved	:	Manganese as Mn, mg/l.....	0.038
.....	:	Mercury as Hg, mg/l.....	<.0002
PARAMETER	LEVEL	Nickel as Ni, mg/l.....	0.020
Alkalinity as CaCO ₃ , mg/l.....	334	Nitrate as NO ₃ -N, mg/l.....	<.01
Ammonia as NH ₃ -N, mg/l.....	3.96	Nitrite as NO ₂ -N, mg/l.....	<.005
Arsenic as As, mg/l.....	0.011	Phosphate as PO ₄ -P, mg/l.....	<.01
Barium as Ba, mg/l.....	0.118	Potassium as K, mg/l.....	4.9
Bicarbonate as HCO ₃ , mg/l.....	407	Selenium as Se, mg/l.....	<.002
Boron as B, mg/l.....	0.15	Silica as SiO ₂ (Diss), mg/l.....	7.78
Cadmium as Cd, mg/l.....	<.01	Silver as Ag, mg/l.....	<.01
Calcium as Ca, mg/l.....	48.2	Sodium as Na, mg/l.....	273
Carbonate as CO ₃ , mg/l.....	0	Sulfate as SO ₄ , mg/l.....	149
Chloride as Cl, mg/l.....	227	Total Dissolved Solids, mg/l.....	905
Chromium as Cr (Hex), mg/l.....	<.01	Turbidity, NTU.....	0.17
Chromium as Cr (Tot), mg/l.....	<.01	Zinc as Zn, mg/l.....	0.075
Aluminum as Al, mg/l.....	<.1	pH Units.....	7.76
Molybdenum as Mo, mg/l.....	<.01		
Sulfide as S, mg/l.....	<.1		

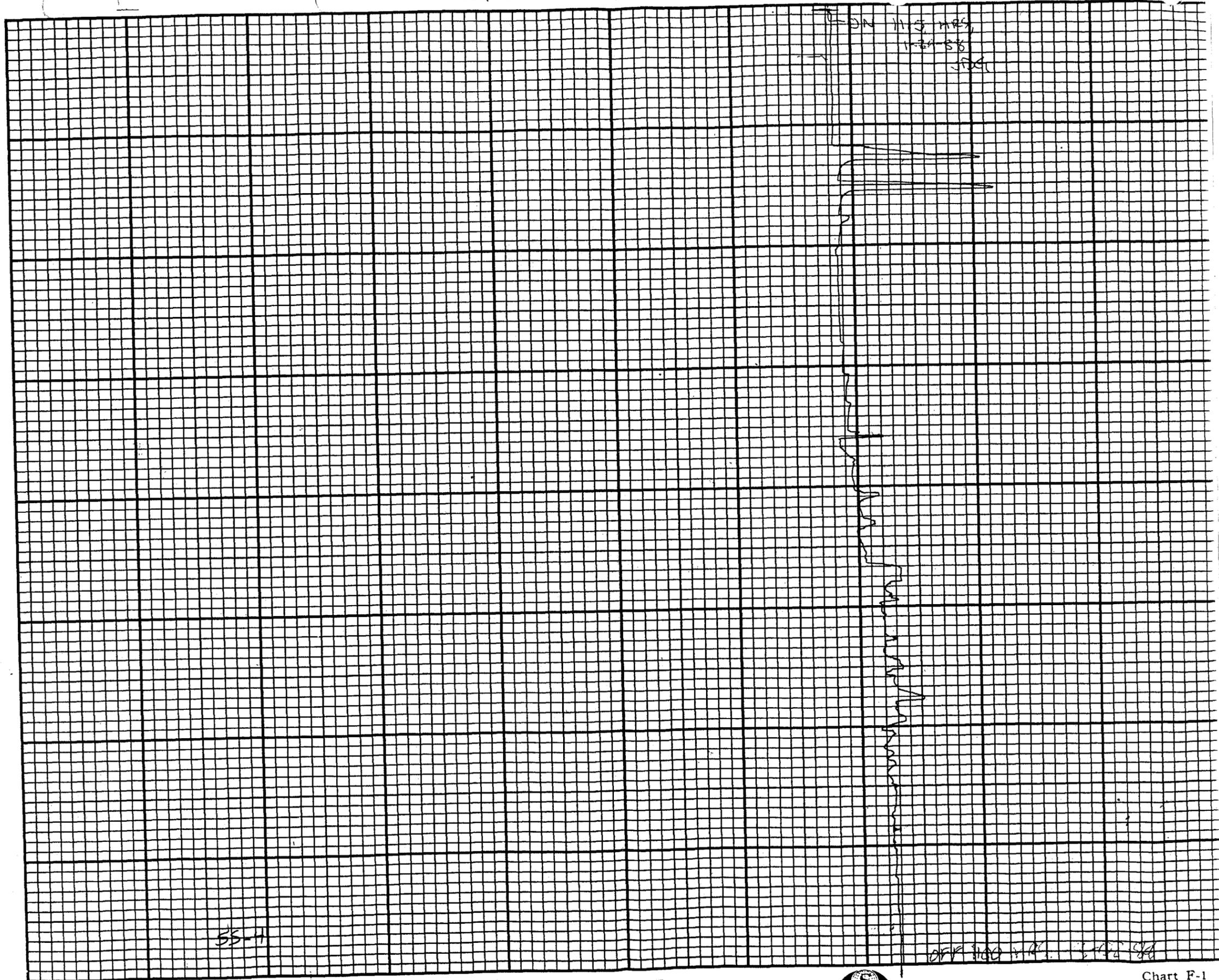


Rex Henderson

Appendix A
Streamflow Information

9-55





Appendix B
Rain Gage Chart

PRINTED IN U.S.A.

CHART NO. 15668

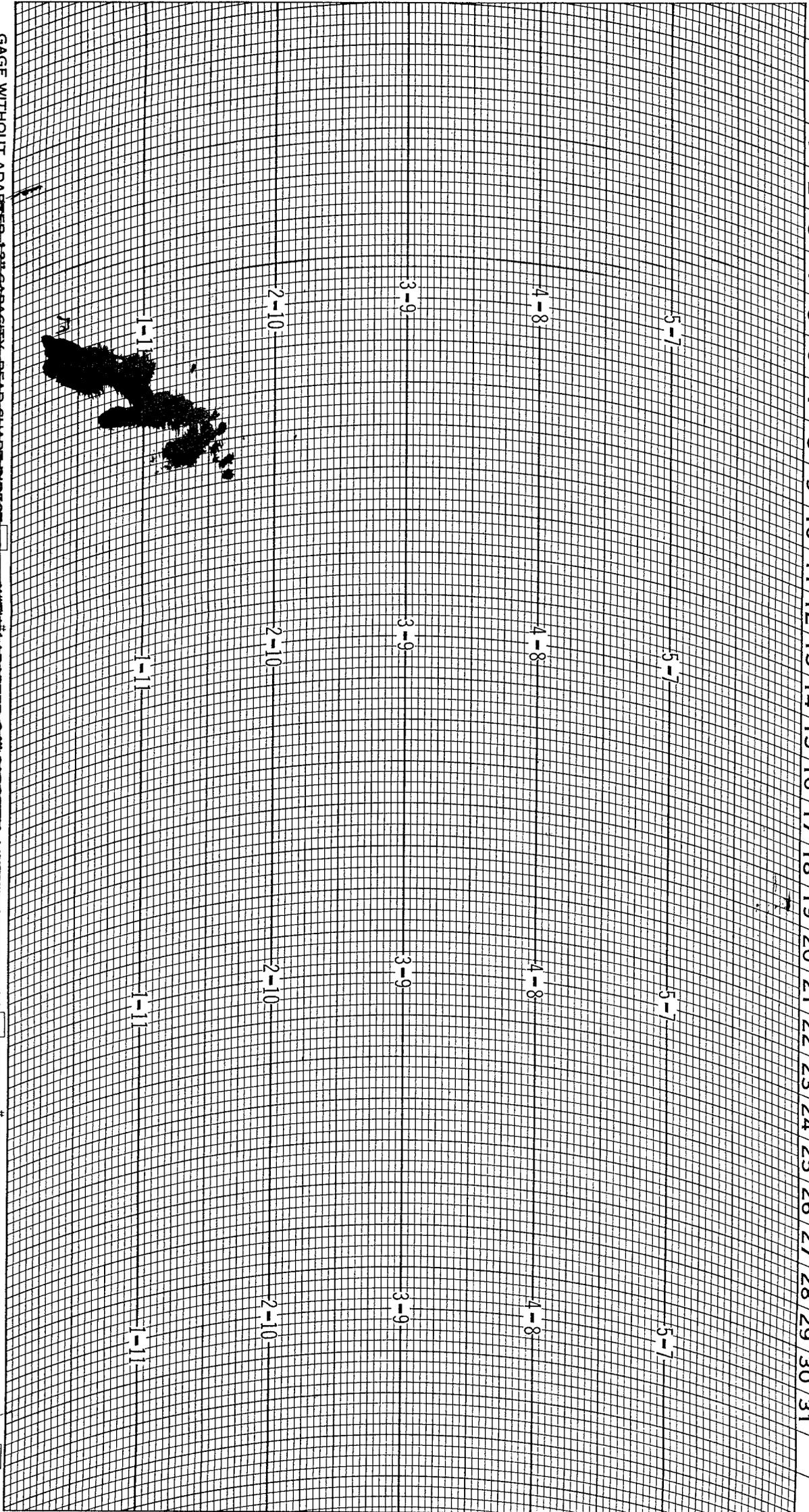
12-INCH DUAL TRAVERSE MONTHLY-861 HRS.
UNIVERSAL RAIN GAGE

BELFORT INSTRUMENT COMPANY
BALTIMORE, MARYLAND, U.S.A.

GAGE WITHOUT ADAPTER-12" CAPACITY, READ CHART DIRECT

WITH ADAPTER, 24" CAPACITY, MULTIPLY CHART X 2

WITH ADAPTER, 48" CAPACITY, MULTIPLY X 4



OBSERVER _____ ON _____

STATION RAIN GAUGE SDG

ON _____ A.M. _____ P.M. _____ 19 _____

OFF 1130 A.M. 3-02 P.M. _____ 1988

Appendix C
Water Quality Data

CHEMTECH

CHEMICAL AND BACTERIOLOGICAL ANALYSES

367 SOUTH COMMERCE LOOP
 OREM, UTAH 84057
 (801) 226-8822

2875 MAIN
 SUITE #101
 SALT LAKE CITY, UTAH 84115
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LAB NO: U024780		Hardness as CaCO ₃ , mg/l.....	200
DATE SAMPLED: 1-29-88		Hydroxide as OH, mg/l.....	0
TIME SAMPLED:		Iron as Fe (Diss), mg/l.....	<.01
SAMPLED BY: JDG		Iron as Fe (Tot), mg/l.....	0.055
LOCATION: Boyer Mine		Lead as Pb, mg/l.....	<.01
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Chromium as Cr (Tot), mg/l.....		pH Units.....	7.76
Aluminum as Al, mg/l.....			
Molybdenum as Mo, mg/l.....			
Sulfide as S, mg/l.....			



 Rex Henderson

**NEW WELL
FIELD DATA**

SWL:42'
pH:7.76
EC:1450 umhos @ 10.4°C

Information reflects 1-29-88 sample.