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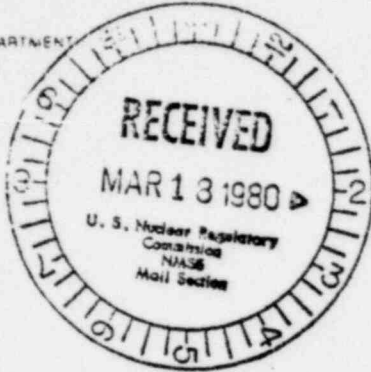
40-8064

**EXXON** MINERALS COMPANY, U.S.A.

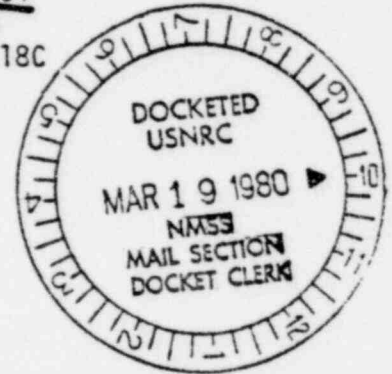
POST OFFICE BOX 2180 · HOUSTON TEXAS 77001

OPERATIONS DEPARTMENT

March 11, 1980



Re: Second Monthly Progress Report  
 Restoration of Water Quality Affected  
 By Casing Leak in Well I-1  
 Uranium Solution Mining R&D Pilot  
 Converse County, Wyoming  
 NRC Docket No. 40-8064  
 License No. SUA-1064  
 Wyoming Permit No. 218C



Ms. Rebecca L. Mathisen  
 District 1 Engineer  
 Wyoming Department of Environmental Quality  
 Land Quality Division  
 State Office Building  
 Cheyenne, Wyoming 82002

Dear Ms. Mathisen:

Attached are the latest results of weekly sampling of Well M-3. This well is completed in the Highland Upper Sand and offsets I-3 by 10' 2" to the SSW. M-3 was produced throughout February at an average rate of 8 gpm. A total of 784,000 gallons of ground water had been produced as of February 25. Sampling and analysis of ground water production during February confirms stabilization of excursion parameters at what we believe to be acceptable levels.

Chloride, sulfate, and bicarbonate concentrations are shown graphically in Figures 1 and 2. The decline trends and stabilization of concentrations which were evident by late January continued during February. Table I lists sample analysis for all parameters. Data reported for the first time begins with the 1/28/80 analysis. Stabilized concentrations shown on Tables I and II were developed by averaging the sample analyses from the 1/28/80 to 2/25/80 samples because of the minimal variation during the period. The stabilized concentration of chloride, sulfate, uranium, arsenic, selenium, radium, and pH are at drinking water quality. Carbonate, bicarbonate, and sodium are within range of baseline concentrations established for wells completed in the Lower Highland Sand (the ore zone sand in the pilot area). Table II is a summary comparing the highest concentration since testing began with the calculated stabilized concentration.

We plan to discontinue pumping from M-3 on March 31, 1980, unless DEQ requests that pumping be continued. At that time, the well will be put on the twice monthly monitor well sampling schedule with results included in future quarterly reports. Excursion parameter analysis will include carbonate, bicarbonate, uranium, chloride, conductivity, and pH.

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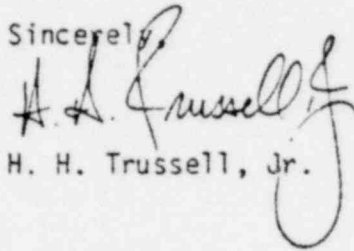
**FEE EXEMPT**

Add'l info

March 11, 1980

If you have any questions or need additional information, please call me at 713/656-1504.

Sincerely,

A handwritten signature in cursive script, appearing to read "H. H. Trussell, Jr.", written in dark ink. The signature is fluid and somewhat stylized, with a large loop at the end of the last name.

H. H. Trussell, Jr.

MWH:dh  
Attachments

- cc: Mr. K. E. Barrett
- Mr. G. D. Ortloff
- Mr. J. B. Shannon
- USNRC - Division of Waste Management, Washington, D. C.
- USNRC - Office of Inspection and Enforcement, Arlington, Texas

TABLE I

HIGHLAND R&D PROGRAM  
SOLUTION MINE PILOT  
CONVERSE COUNTY, WYOMING

	Upper Highland Sand "Baseline" Data from Water Supply Well #3 (1500' S-SW of of Well I-3)		Lower Highland Sand Baseline Range	EPA Drinking Water Standard	WATER SAMPLE ANALYSES FOR WELL M-3: UPPER HIGHLAND SAND								Stabilized Concen-(1) trations
	9/78	12/13/79			1/7/80	1/14/80	1/21/80	1/28/80	2/4/80	2/11/80	2/18/80	2/25/80	
	Carbonate-mg/l	0			0	1-60	NA	0	0	0	0	0	
Bicarbonate-mg/l	159	146	110-268	NA	270	239	233	208	221	196	196	209	206
Chloride-mg/l	10	12	6-81	250 <sup>(2)</sup>	51	40	31	33	25	23	21	27	26
Sulfate-mg/l	190	188	62-213	250 <sup>(2)</sup>	262	243	191	211	194	170	245	266	217
Uranium-mg/l	<1	<.001	.001-.94	5 <sup>(3)</sup>	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sodium-mg/l	94	92	61-139	NA	132	125	102	90	96	95	NA	NA	94
Arsenic-mg/l	NA	<.01	ND-.02	.05	.01	.01	ND	ND	.01	ND	NA	NA	-
Selenium-mg/l	NA	<.01	ND-.01	.01	ND	ND	ND	ND	ND	ND	NA	NA	ND
Radium-pCi/l	0.5	NA	3-320	5	6.1	12.0	8.9	3.5	NA	NA	NA	NA	-
pH	8.1	7.1	7.9-10.1	6.5-8.5	7.91	7.76	7.28	7.54	7.57	6.92	7.24	7.50	7.35
Conductivity-µmhos	NA	645	340-875	NA	925	875	360	730	810	850	890	830	822

NA - Not available or not applicable

ND - Not detectable at .01 (Arsenic and Selenium)

Carbonate, Bicarbonate, Chloride, Sulfate, Uranium, pH, and Conductivity analysis by Exxon Metallurgical Lab

Sodium, Arsenic and Selenium analysis by Chemical and Geological Laboratories

Radium by Exxon Environmental Lab.

(1) Average of samples 1/28/80 through 2/25/80

(2) Secondary standard

(3) EPA has not established a uranium concentration standard; the 5 mg/l value is the standard proposed by the Wyoming Department of Environmental Quality.

MHH:dh  
3/5/80

TABLE II

CONCENTRATIONS OF GROUND WATER PARAMETERS  
 HIGHLAND R&D PROGRAM  
 SOLUTION MINE PILOT  
 CONVERSE COUNTY, WYOMING

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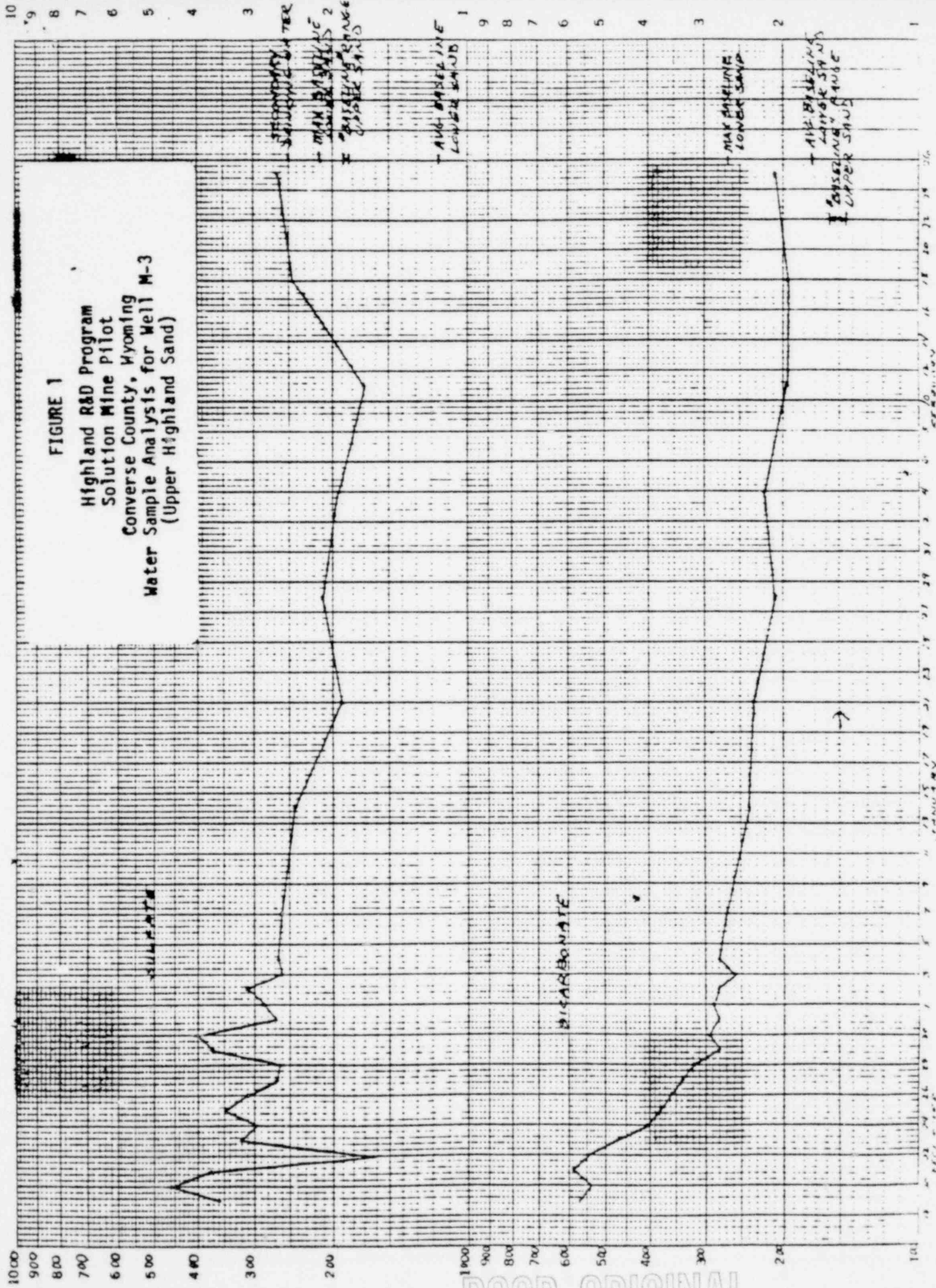
	<u>Highest Concentration</u>		<u>Stabilized Concentration</u> *
	<u>(mg/l)</u>	<u>(date)</u>	<u>(mg/l)</u>
Chloride	240	12/21/79	26
Sulfate	459	12/20/79	217
Bicarbonate	586	12/21/79	206
Sodium	269	12/21/79	94
Uranium	<1	12/19/79	<1
Arsenic	<.01	12/19/79	<.01 to .01
Selenium	<.01	12/19/79	<.01
Radium	69.0	12/23/79	3.5 <sup>(1)</sup>
pH	7.98	12/22/79	7.35
Conductivity-( $\mu$ mhos)	2000	12/19/79	822

\* Arithmetic average of sample analysis for period 1/28/80 through 2/25/80

(1) Most recent data

FIGURE 1

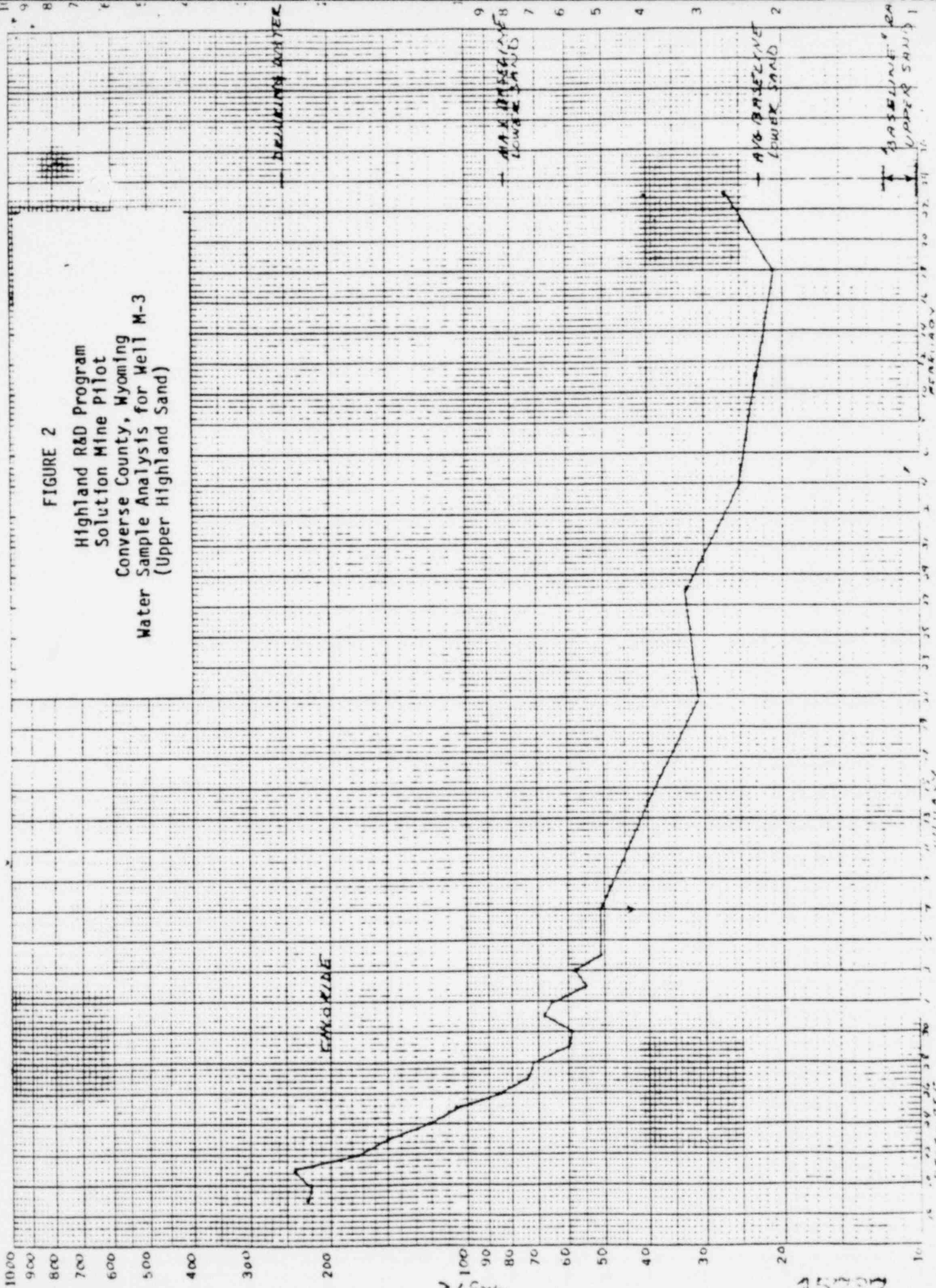
Highland R&D Program  
Solution Mine Pilot  
Converse County, Wyoming  
Water Sample Analysis for Well M-3  
(Upper Highland Sand)



POOR ORIGINAL



FIGURE 2  
 Highland R&D Program  
 Solution Mine Pilot  
 Converse County, Wyoming  
 Water Sample Analysis for Well M-3  
 (Upper Highland Sand)



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