

DRILLING HISTORY
ALUM 24-33

June 25th Moving rig from Fishlake to Alum. Day shift only.

26th Repairs to rig and rigging up. Drilled surface hole 9 7/8" to 209 feet.

27th Installed 9 joints of casing to 209' and cemented with 76 sacks class "B" cement. W.O.C.

28th Welded flange to casing, installed and tested B.O.P. for 10 minutes at 300 psi on both pipe and blind rams. Drilled from 209' to 826' with air for a total footage of 617 feet.

29th Drilled from 826' to 1206' for a total footage of 380 feet. Encountered hot water zone at 1131'.

30th Drilled from 1206' to 1226', could no longer lift cuttings. Rented another compressor but still not enough to lift cuttings. Ordered booster and compressor from Western Air at noon. Out temp. 72° C.

July 1st Waiting on booster and compressor.

2nd Waiting on booster and compressor. Drilled from 1226' to 1286 for a total footage of 60 feet.

3rd Drilled from 1286' to 1353' for a total of 67 feet. Lost cone on bit, attempted to fish it out with a 5 1/2" basket, no luck cause hole is caving.

4th Installed rotary head on B.O.P. Made attempt to fish out cone; still could not get down hole with smaller basket; decided to go to mud to clean hole; 12 hours spent mixing muds and getting circulation back at 745'.

5th Mixed muds all day and never regained circulation.

6th Mixed muds and lost circulation materials and went into clean hole. Got to 1250' with no returns. Tripped out. Mixed cement and lost circulation materials, poured in hole and let set overnight.

7th Went in hole and never hit cement, no returns.

8th Cleaned out hole to 1340', installed tubing, rigged down and released rig.

GEOTHERMAL BRANCH

August 2, 1982

Mr. Bernie Moroz
District Supervisor,
Minerals Management Service
4600 Kietzkie Lane
Bldg. D., Suite 137
Reno, Nevada 89502

Re: Geothermal Drilling Permit 0177.
Well 24-33, Alum Unit, Nevada.

Dear Bernie:

Pursuant to GRO Order No. 2, the enclosed analyses are for water samples collected from the flow line while well 24-33 was blowing about 100 gpm from a depth of 1,226 feet. The samples were collected after the well had been flowing, by air lift, long enough for the water to become clear and free of any foaming agents.

Sincerely,

AMAX EXPLORATION, INC.



H. D. Pilkington
Chief Geologist, Geothermal Branch

HDP/cc

enclosures (2)

cc: J. E. Deymonaz w/o enclosures
J. L. Emerson

ANALYTICAL REPORT

DATE 7/26/82

REQ. NO. 9172 JOB NO. _____

ANALYST T.C.

PROJECT 1186 (24-33)

TYPE SAMPLES GEOTHERMAL WATER

REQUESTED BY H.D. PILKINGTON

SAMPLE	Na	K	Ca	Mg	SiO ₂	SAMPLE	Li	B	SO ₄	Cl	F		
	PPM	PPM	PPM	PPM	PPM		PPM	PPM	PPM	PPM	PPM		
01	W-14280	2500	290	150	45	150	31	W-	9.5	40	160	3600	4.8
02	14282	2400	280	160	46	140	32		9.3	36	170	3600	4.8
03							33						
04							34						
05							35						
06							36						
07							37						
08							38						
09							39						
10	W-						40	W-					
11							41						
12							42						
13							43						
14							44						
15							45						
16							46						
17							47						
18							48						
19							49						
20	W-						50	W-					
21							51						
22							52						
23							53						
24							54						
25							55						
26							56						
27							57						
28							58						
29							59						
30							60						

METHODS:

Determination- Na,K,Ca,Mg,SiO₂,Li: AA
 B: CARMINIC ACID COLORIMETRIC
 F: SPECIFIC ION ELECTRODE
 Cl: MERCURIMETRIC TITRATION
 SO₄: TURBIDIMETRIC

REMARKS:

W14280 collected from flow line at 1226' depth - well flowing at
 & W14282 about 100 gpm (well 24-33) sample taken 15' apart after
 blowing well until clear water was obtained

NOTE: Mail Original to
 AMAX Exploration, Inc.,
 P. O. Box C
 Denver, Colorado 80226

- Copies to: DENVER-LAB
- J.E. DEMONAZ At GEOTHERMAL
 - H.J. OLSON At "
 - H.D. PILKINGTON At "
 - GEOTHERMAL OFFICE "
 - E.J. RAWIE W. CEDAR DEN 12197A

LAB AMAX - DENVER

ANALYTICAL REPORT

DATE 7/26/82
 ANALYST TC J.W.
 TYPE SAMPLES GEOHERMAL WATER

REQ. NO. 9172 JOB NO. _____
 PROJECT 1186
 REQUESTED BY H.D. PILKINGTON

SAMPLE	Cu PPB	Mo PPB	Cond. µmhos/cm	SAMPLE	pH	CO ₃ PPM	HCO ₃ PPM
02	22	125	12,000	32	7.6	0	240
03				33			
04				34			
05				35			
06				36			
07				37			
08				38			
09				39			
10				40			
11				41			
12				42			
13				43			
14				44			
15				45			
16				46			
17				47			
18				48			
19				49			
20				50			
21				51			
22				52			
23				53			
24				54			
25				55			
26				56			
27				57			
28				58			
29				59			
30				60			

METHODS: Digestion- Sample Weight-
 Determination- Cu, Mo - Colorimetric
 pH - Electrometric
 REMARKS: CO₃, HCO₃ - Electrometric Titration

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 Denver, Colorado 80226

Copies to:
 1. J.E. DEYMONAZ At Geothermal
 2. H.J. OLSON At "
 3. H.D. PILKINGTON At "
 4. GEOHERMAL OFFICE "
 5. ELSIE ROWE W. CEDAR
 DEN 121974