

AMAX EXPLORATION, INC.

A SUBBIDIARY OF AMAX INC.

222 S.W. HARRISON STREET · SUITE G-10 · PORTLAND, OREGON 97201 · (503) 243-1022 OR 1023

October 27, 1975

Mr. Vernon C. Newton, Jr.
Geologist - Petroleum Engineer
Department of Geology & Mineral Industries
1069 State Office Bldg.,
Portland, Oregon 97201

Dear Mr. Newton:

In reply to your letter of October 14, 1975 regarding status of our temperature gradient drilling in the following areas:

1. La Grande area --- As stated in my letter of July 14, 1975, we completed a total of 14 out of the proposed 18 temperature gradient holes. On July 15, 1975 I requested, by telephone, permission to carry out some additional temperature gradient drilling; however, these holes have not been drilled, and AMAX does not plan to drill them at the present time.
2. Vale area --- In my letter of February 18, 1975, I requested a permit to drill a minimum of 36 temperature gradient holes in the Vale area. The permit was approved on March 7, 1975. AMAX EXPLORATION, INC. hereby notifies you that total of 36 temperature gradient drill holes in the Vale area have been completed and abandoned. The location, depth, geologic log and water zones are shown in Table I.
3. Beulah area --- On February 26, 1975 I requested a permit to drill a minimum of 8 temperature gradient holes in the Beulah area. The permit was issued on March 10, 1975. AMAX EXPLORATION, INC. hereby notifies you that a total of 14 holes have been drilled and abandoned in the Beulah area. All holes were located on federal lands. The location, depth, geologic log and water zones are shown in Table II.

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4. Burns area --- On March 10, 1975 we requested a permit to carry out a drilling program for a minimum of 8 temperature gradient holes in the Burns area. The permit was issued on March 26, 1975. AMAX EXPLORATION, INC. hereby notifies you that a total of 13 holes have been drilled and abandoned in the Burns area. All holes except one were located on federal lands. The location, depth, geologic log, and water zones are shown on Table III.
5. Paisley area --- You were notified by letter on July 14, 1975 that AMAX EXPLORATION, INC. had cancelled the drilling program in the Paisley area. No change in status on this project.

The holes have all been abandoned as described in our permit request. We may elect to come back at a later date and re-log some of the holes; however all sites will be restored to the original condition when the log has been completed.

Sincerely,



H. Dean Pilkington,
District Geothermal Geologist

HDP:mf

Encl: 3

Table I.

Drill Hole	Location	Lithology	Depth	H ₂ O at Depth
V-1	SW½ NW¼ 26 T18S R45E	Tuffaceous siltstone	50m	45m
V-2	SE½ NE¼ 6 T19S R45E	Tuffaceous sandstone, thin conglomerates	30m	19m
V-3	NW¼ NW¼ 29 T19S R45E	Tuffaceous siltstone and sandstone	50m	none
V-4	NW¼ SE¼ 35 T19S R45E	Tuffaceous siltstone and sandstone	50m	none
V-5	NE½ NE¼ 9 T19S R46E	Tuffaceous siltstone and sandstone	50m	none
V-6	NE½ NE¼ 32 T19S R46E	Tuffaceous siltstone, congl. tuffaceous ss	50m	none
V-7	NW¼ SW¼ 17 T20S R46E	Sand and gravel	21m	14m
V-8	SE½ SE¼ 12 T20S R44E	Tuffaceous siltstone and sandstone	50m	none
V-9	SW¼ SE¼ 29 T20S R45E	Tuffaceous ss, basalt, tuffaceous silt	50m	none
V-10	SW¼ NW¼ 6 T21S R45E	Basalt, tuffaceous silt, basalt	50m	none
V-11	SE½ NW¼ 36 T21S R45E	Basalt with interflow scoria & cinders	30m	none
V-12	SE½ NE¼ 32 T19S R46E	Tuffaceous ss, congl. and siltstone	30m	none
V-13	SE½ SW¼ 32 T19S R46E	Tuffaceous siltstone, minor congl.	30m	none
V-14	NE½ NW¼ 5 T20S R46E	Tuffaceous siltstone minor congl.	30m	none
V-15	SW¼ SW¼ 5 T20S R46E	Tuffaceous congl., and siltstone	30m	none
V-16	SE½ SE¼ 6 T20S R46E	Tuffaceous siltstone	30m	none
V-17	NE½ NE¼ 12 T20S R45E	Tuffaceous siltstone and congl.	30m	none
V-18	SW¼ SW¼ 6 T20S R45E	Tuffaceous siltstone and congl.	30m	none

Table I cont'd.

NV-1	SW $\frac{1}{4}$	SW $\frac{1}{4}$	11	T17S	R44E	Tuffaceous siltstone minor tuffaceous congl.	38m	37m
NV-2	NW $\frac{1}{4}$	NE $\frac{1}{4}$	18	T17S	R44E	Tuffaceous siltstone	50m	24m
NV-3	SW $\frac{1}{4}$	SW $\frac{1}{4}$	29	T16S	R44E	Tuffaceous siltstone	50m	none
NV-4	NE $\frac{1}{4}$	NE $\frac{1}{4}$	10	T16S	R43E	Tuffaceous siltstone and sandstone	50m	none
NV-5	NE $\frac{1}{4}$	SW $\frac{1}{4}$	27	T15S	R43E	Tuffaceous sandstone some tuffaceous sh	50m	none
NV-6	SE $\frac{1}{4}$	SE $\frac{1}{4}$	4	T16S	R44E	Tuffaceous siltstone some tuffaceous congl.	50m	40m
NV-7	NW $\frac{1}{4}$	SW $\frac{1}{4}$	31	T15S	R45E	Tuffaceous siltstone some congl.	50m	12m
NV-8	NE $\frac{1}{4}$	NE $\frac{1}{4}$	20	T15S	R44E	Tuffaceous ss, siltstone	50m	none
NV-9	NE $\frac{1}{4}$	NE $\frac{1}{4}$	32	T16S	R43E	Tuffaceous siltstone	50m	30m
NV-10	SE $\frac{1}{4}$	NW $\frac{1}{4}$	22	T17S	R43E	Terrace gravel, tuffaceous siltstone	44m	none
NV-11	NW $\frac{1}{4}$	SW $\frac{1}{4}$	33	T17S	R44E	Tuffaceous siltstone, sandstone & minor congl.	50m	none
NV-12	SE $\frac{1}{4}$	SE $\frac{1}{4}$	25	T16S	R44E	Tuffaceous siltstone and minor congl.	50m	none
NV-13	NW $\frac{1}{4}$	SE $\frac{1}{4}$	2	T17S	R45E	Tuffaceous siltstone and shale	50m	none
NV-14	SE $\frac{1}{4}$	SW $\frac{1}{4}$	23	T17S	R45E	Tuffaceous siltstone and sandstone	50m	none
NV-15	SW $\frac{1}{4}$	SE $\frac{1}{4}$	4	T18S	R45E	Tuffaceous siltstone and sandstone	50m	43m
NV-16	SW $\frac{1}{4}$	NE $\frac{1}{4}$	5	T18S	R46E	Tuffaceous siltstone and sandstone	50m	19m
NV-17	NW $\frac{1}{4}$	NE $\frac{1}{4}$	25	T17S	R42E	Tuffaceous siltstone	50m	none
NV-18	NE $\frac{1}{4}$	SW $\frac{1}{4}$	13	T18S	R43E	Tuffaceous siltstone basalt	50m	none

Table II.

Drill Hole	Location	Lithology	Depth	H ₂ O at Depth
B-1	NW $\frac{1}{4}$ NW $\frac{1}{4}$ 17 T20S R38E	Terrace gravel, tuffaceous siltstone, ss basalt flow	50m	none
B-2	SE $\frac{1}{4}$ SW $\frac{1}{4}$ 10 T20S R37E	Valley fill, basalt flows	50m	none
B-3	SE $\frac{1}{4}$ SW $\frac{1}{4}$ 18 T19S R38E	Tuffaceous siltstone basalt flows	50m	15m
B-4	SW $\frac{1}{4}$ SE $\frac{1}{4}$ 25 T18S R37E	Tuffaceous siltstone and diatomite	50m	12m
B-5	SE $\frac{1}{4}$ SW $\frac{1}{4}$ 15 T18S R37E	lag gravel tuffaceous siltstone	50m	none
B-6	SW $\frac{1}{4}$ SE $\frac{1}{4}$ 12 T18S R30E	Tuffaceous siltstone, sandstones, tuffs	50m	none
B-7	NW $\frac{1}{4}$ SE $\frac{1}{4}$ 29 T19S R37E	Tuffaceous diatomite	50m	15m
B-8	NE $\frac{1}{4}$ SW $\frac{1}{4}$ 4 T19S R37E	Alternating basalt and tuffs	37m	17m
B-9	SE $\frac{1}{4}$ SE $\frac{1}{4}$ 11 T20S R36E	Diatomite and tuffaceous siltstone	50m	15m
B-10	NE $\frac{1}{4}$ NE $\frac{1}{4}$ 21 T19S R36E	Terrace gravel, tuffaceous siltstone	50m	none
B-11	NE $\frac{1}{4}$ SW $\frac{1}{4}$ 27 T18S R36E	xtl tuff tuffaceous siltstone	35m	none
B-12	SE $\frac{1}{4}$ SE $\frac{1}{4}$ 25 T17S R36E	fractured basalt	35m	9m
B-13	NE $\frac{1}{4}$ NE $\frac{1}{4}$ 11 T19S R38E	Basalt flows, tuffaceous siltstone	50m	none
B-14	SW $\frac{1}{4}$ SE $\frac{1}{4}$ 7 T19S R37E	Basalt tuffaceous siltstone basalt	50m	12m

Table III.

Drill Hole	Location	Lithology	Depth	H ₂ O at Depth
Bn-1	SW $\frac{1}{4}$ NW $\frac{1}{4}$ 23 T22S R31E	Phyolitic welded tuff, tuffaceous siltstone	50m	none
Bn-2	SW $\frac{1}{4}$ SW $\frac{1}{4}$ 34 T21S R31E	Rhyolitic welded tuff, tuffaceous siltstone	50m	none
Bn-3	SE $\frac{1}{4}$ SW $\frac{1}{4}$ 31 T22S R32E	Lake sediments siltstone and shale	50m	1m
Bn-4	SW $\frac{1}{4}$ NW $\frac{1}{4}$ 20 T22S R32E	Welded tuff, tuffaceous siltstone	50m	none
Bn-5	SW $\frac{1}{4}$ NE $\frac{1}{4}$ 6 T22S R32E	Welded tuff tuffaceous siltstone	50m	none
Bn-6	NE $\frac{1}{4}$ NE $\frac{1}{4}$ 15 T22S R32E	Tuffaceous siltstone	50m	none
Bn-7	NW $\frac{1}{4}$ NW $\frac{1}{4}$ 21 T22S R33E	Tuffaceous siltstone	50m	none
Bn-8	NW $\frac{1}{4}$ NW $\frac{1}{4}$ 14 T21S R31E	Welded tuffs tuffaceous siltstone	50m	none
Bn-9	SE $\frac{1}{4}$ NE $\frac{1}{4}$ 8 T21S R32E	Boulders basalt flows	50m	none
Bn-10	NW $\frac{1}{4}$ SW $\frac{1}{4}$ 26 T21S R32E	Basalt flows, tuffaceous siltstone	50m	none
Bn-11	NE $\frac{1}{4}$ SE $\frac{1}{4}$ 32 T21S R32 $\frac{1}{2}$ E	Welded tuff tuffaceous siltstone	50m	none
Bn-12	NE $\frac{1}{4}$ SE $\frac{1}{4}$ 14 T22S R30E	Welded tuff tuffaceous siltstone	50m	none
Bn-13	NW $\frac{1}{4}$ SW $\frac{1}{4}$ 26 T21S R30E	Welded tuff tuffaceous siltstone tuffs	50m	none