

## LITHOLOGIC LOG

Project: McCoyHole: 28-18 864-66

Elevation: \_\_\_\_\_

Date Drilled: 5/27/81-7/6/82Location: SW 1/4 SW 1/4 Sec 18 T22N R40E MDBM Method: air/foam and mudGeologist: Deymonaz

Gamma: \_\_\_\_\_

Depth (m)	Description
124-134	<u>Latite</u> - Brick red, hard, 10% phenocrysts of clear tabular plagioclase (1-4mm). Small magnetite common and rare biotite and hornblende. Groundmass mostly aphanitic with some small feldspar or quartz visible. No fracturing evident in cuttings but minor fractures noted in drilling.
134-137	<u>Crystal Lithic Tuff</u> - Pink, well indurated, 25% phenocrysts of white plagioclase and biotite (1-3mm) with smaller anhedral quartz. Groundmass of argillized ash and lithic fragments. Darker red stains common along fractures and extend several mm from fracture surface.
137-152	<u>Tuff</u> - Light gray to white, moderately well indurated, 5-10% phenocrysts of biotite and plagioclase (0.5-1.0mm). Minor manganese along some small tight fractures. Groundmass of argillized ash and small lithic fragments. Unidentified yellow clay mineral common. Below 137m argillic alteration more intense and phenocrysts decrease to less than 5%. Yellow limonite staining common 143-146m, minor in rest of interval.
152-163	<u>Tuff</u> - Moderate to well indurated, light gray, pervasive limonitic staining and common manganese deposited, argillized plagioclase phenocrysts and minor biotite. Numerous prismatic cavities from dissolved plagioclase.
163-180	<u>Tuff</u> - As above except much less limonite staining and rock appears less fractured. Common plagioclase and minor biotite, phenocrysts. Samples contaminated with fractured interval above. Yellow unidentified clay mineral as in 137-152m interval common around some feldspar crystals.
180-186	<u>Tuff</u> - As above except fractured and pervasive pink to red hematite staining. First water encountered at about 183 meters.
186-216	<u>Tuff</u> - As 163-180 except light to med. gray.
216-253	<u>Lithic Crystal Tuff</u> - Med. gray to brownish gray, 30% small red and black aphytic lithic fragments, 25% crystals of plagioclase, biotite and rare quartz in ash matrix. Poorly to moderately well indurated. Moderate hematite staining and unidentified yellow clay mineral as above.

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253-274	<u>Lithic Crystal Tuff</u> - Similar to above except mostly tuffaceous material with little of red and black lithic material. Common flattened glass shards. Minor limonitic staining. Moderate to well indurated.
274-284	<u>Welded Crystal Lithic Tuff</u> - Light greenish gray, hard. Phenocrysts of plagioclase in welded glassy partly silicified aphanitic matrix. Common small lithic fragments and small angular cavities filled with soft green clay.
284-299	<u>Crystal Lithic Tuff</u> - Non-welded argillized tuff similar in composition to above interval. Moderately well indurated.
299-302	<u>Lithic Crystal Tuff</u> - Light gray to greenish gray. Poorly indurated, abundant devitrified glass and relic pumice. 5-15% phenocrysts of plagioclase. Matrix and phenocrysts extensively argillized.
302-326	<u>Lithic Crystal Tuff</u> - Medium gray to gray green. Well indurated, composed almost entirely of obsidian, pumice and glass shards in tuffaceous matrix. Glass mostly devitrified but common fresh appearing glass fragments. Some chips have abundant quartz and plagioclase crystals. 320-326 has welded aphanitic matrix with 25% glass and phenocrysts. Highly fractured 314-326.
326-332	<u>Tuff</u> - Light gray, 3-5% small lithic fragments and plagioclase crystals, possibly some quartz (< 0.5mm).
332-343	<u>Welded(?) Crystal Lithic Tuff</u> - Lavender, well indurated tuff with 20-30% crystals of plagioclase (0.5-2.0mm), minor biotite, and common small lithic and pumice fragments. Finely crystalline to aphanitic groundmass.
343-366	<u>Tuff</u> - Green, argillized to clay, abundant (20-40%) angular chert fragments.

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366-409

Chert or Lithic Tuff - Various shades of green and brown, drilled as a soft rock but fine competent cuttings retrieved, may be continuation of 343-366m unit with clay matrix material washed from cuttings. Chert cuttings much finer than in 343-366m interval.

409-428

Shale and Chert - Black, laminated, minor calcite filled fractures. Chert as above 20-50% and decreasing with depth. Some or all of chert may be from sluffing up hole.

428-594

Drilled with no returns - Drilled as: 409-428 with intermittent hard zones.