

STITHEM ASBESTOS

Greenhorn

Grant County

DRILL LOG - GEOLOGY

Location: Grant County (Bates), Oregon  
Date started: October 28, 1952  
Date completed:  
Total depth: 128' to November 11, 1952.

Elevation of collar:  
Elevation of bottom:  
Bearing:  
Dip: 90°

HOLE NO. S-1  
PROPERTY: Stithem

SHEET NO. 1

Footage	Run	Core recovered	Remarks
0 - 3			Humus and serpentine rubble.
3 - 10			NK core. Very highly serpentinized peridotite. Light green weathering. Light green serpentine veins. Texture, largely destroyed by alteration.
10- 25			10 - 15' BK darker, fresher mottled by lighter green spots. Minor disseminated. Fe, Cr. 27-29 Highly altered, sheared.
25- 45			Mottled serpentine.
45- 53			Caving area - casing to 60 feet.
53- 61			Mottled serpentine.
61- 64			Strong alteration and shear.
64- 68			Dark, solid core. Sample.
68- 80			Fairly solid.
80- 90			Numerous light green serpentine veinlets. Strong alteration at 85 feet.
90-100			Core very solid breaks into 2-foot pieces. Considerably more altered to light green serpentine and sheared. Caving area.
		Core lost:	116-120 121-125 cementing here. 126-128

/s/ J. C. Gill.

Geologic map showing drill holes in map file (DOGAMI).

DRILL LOG - GEOLOGY

Location: Grant County, Bates, Oregon  
Date started: October 28, 1952  
Date completed: November 22, 1952  
Total depth: 284 feet.

Elevation of collar: 4560  
Elevation of bottom: 4276  
Bearing:  
Dip: 90°

HOLE NO. S-1  
PROPERTY: Stithem

SHEET NO. 2

Footage	Run	Core recovered	Remarks
128-130			Dark serpentine. Thread veins.
130-150			Brittle, light green alteration, grinds easily. High core loss.
150-176			Core more solid. Good recovery. Thread veins.
176-201			Numerous thread veins, irregular slips.
201-211			Broken core.
211-213			Core more solid. Carbonate streaks at 212'.
213-223			Strong solid medium peridotite, spotted lighter serpentine (pyroxenes?).
223-225			Carbonate streaks, spots. Brecciated at 224'.
225-248			Numerous light serpentine altered zones in a medium serpentinized peridotite.
248-284			Considerably coarser grained. 4mm. Spotted, in part streaky texture. Better fiberized. 263-265 - Brecciated and carbonatized.

END OF HOLE.

/s/ J. C. Gill.

DRILL LOG - GEOLOGY AND FIBRE

Location: Grant County (Bates), Oregon  
Date started: November 24, 1952,  
                  May 23, 1953  
Date completed: June 5, 1953  
Total depth: 84 feet

Elevation of collar: 4495'  
Elevation of bottom: 4411'  
Bearing:  
Dip: 90°

HOLE NO. S-2  
PROPERTY: Stithem

SHEET NO. 1

Footage	Run	Core recovered	Remarks
0-10	10	5	0 - 28 NX core, considerable ground and lost frequent cementing of open faults.
10-20	10	5	
20-30	10	5	Strongly serpentinized peridotite, cut by light green serpentine veinlets in all directions. Fibre veinlets under 1/16.
30-40	10	7	AX core, numerous veinlets up to 1/16.
40-50	10	6	
50-60	10	5	Cementing.
60-70	10	3	Cementing.
70-80	10	2.5	
80-84	4	0	Fault gouge - Aquagel was used, leaked away. Blasting also failed.
TOTAL	84	38.5	

Percent recovery - 46%

/s/ J. C. Gill.

DRILL LOG - GEOLOGY AND FIBRE

Location: Grant County (Bates), Oregon  
Date started: June 11, 1953  
Date completed: July 31, 1953  
Total depth: 290 feet

Elevation of Collar: 4495'  
Elevation of bottom: 4205'  
Bearing:  
Dip: 90°

HOLE NO. S-3  
PROPERTY: Stithem

SHEET NO. 1

Footage	Run	Core recovered	Remarks
0- 10	10	1.5	Mottled green serpentine NX core.
10- 20	10	4.0	Numerous fibre veinlets under 1/16" from 0 - 230.
20- 30	10	5.0	Casing 0 - 13, then used aquagel to 247'.
30- 40	10	7.0	EX core started at 13'. Short sections of
40- 50	10	6.0	solid core over entire hole (up to 1').
50- 60	10	7.0	50 - 80 considerable loss of aquagel.
60- 70	10	5.0	Considerable caving 50 - 80.
70- 80	10	5.5	Numerous faults (gouge and breccia) from 60 -
80- 90	10	4.0	230.
90-100	10	5.0	
100-110	10	5.0	1/8" fibres found in fault zone at 107 (not as
110-120	10	6.0	veins). Fault zone 115-120.
120-130	10	1.0	Dark serpentine, not mottled.
130-140	10	3.0	
140-150	10	2.0	Started to use carboley bit.
150-160	10	4.0	Fault breccia 157 - 160.
160-170	10	4.0	
170-180	10	7.0	Calcite stringer at 187'.
180-190	10	10.0	
190-200	10	8.0	
200-210	10	7.0	Diamond bit used from 215'.

DRILL LOG - GEOLOGY AND FIBRE (Cont.)

HOLE NO. S-3  
PROPERTY: Stithem

SHEET NO. 2

Footage	Run	Core recovered	Remarks
210-220	10	5.0	Strong fault zone 210 - 215. At 217, 1/8"
220-230	10	7.0	needles of a soft whitish mineral appear in the mottled green serpentine. Thin flakes of calcite appear along fractures, as does magnetite with minor amounts of pyrrhotite.
230-240	10	2.0	Considerable caving and some loss of mud from 227 - 245, 227 - 230, gouge and breccia. 229 - 262, fairly hard, medium to light grey green colored rock, with irregular to elongate serpentine inclusions in a fine-grained ground-mass. (carbonitized serpentine).
240-250	10	3.0	243 - 245, chopped. AX casing put down to 246, and AX bit used. Water now used instead of aquagel.
250-260	10	8.0	Good drilling 250 - 289 (3 days).
260-270	10	7.0	262 - mottled green serpentine again intersected. 262 - 268, many picrolite veins.
270-280			270 - 290, mottled green serpentine with white needles.
280-290			287 - 290, caving, so that rods would not turn so stopped hole.
TOTALS	290	139	

(Sheets 1 and 2) percent recovery - 48%.

/s/ J. C. Gill.

DRILL LOG - GEOLOGY AND FIBRE

Location: Grant County, Bates, Oregon  
Date started: August 5, 1953  
Date completed: September 15, 1953  
Total depth: 268 feet

Elevation of collar: 4600'  
Elevation of bottom: 4332'  
Bearing:  
Dip: 90°

HOLE NO. S-4  
PROPERTY: Stithem

SHEET NO. 1

Footage	Run	Core recovered	Remarks
0- 35	35	1.0	Bad caving. 0 - 165 is a highly sheared and broken serpentine with numerous closely spaced slip surfaces and faults (gouge and breccia). NX bit 0 - 25. BX casing driven from 25 - 35, BX bit used from 35 - 141. Sludge indicates fibre up to 1/8".
35- 70	35	5.0	35 - 80, no fibre in sludge. Abundant talc and gouge. 0 - 190, heavy mud loss.
70- 90	20	3.0	80 - 90, 1/16" fibres in sludge. BX carboloy
90-100	10	2.0	bit used 70 - 141.
100-110	10	5.0	Very little fibre in sludge, 100 - end of hole.
110-120	10	5.0	0 - 190, much time lost in mixing mud.
120-130	10	1.5	
130-140	10	2.0	136 - 139, no mud return. Tried to plug, but
140-150	10	6.0	not successful, so put AX casing to 141 and used
150-160	10	2.0	AX bit.
160-170	10	8.0	A more solid mottled green serpentine from 165. Pyrrhotite mineralization around 170.
170-180	10	8.0	Asbestos veins have very irregular or jagged boundaries throughout hole. Pumping mud is difficult with AX bit and casing.
180-190	10	9.5	Very heavy loss of mud around 180, so plugged. Thin flakes of calcite and small carbonated zones up to 1" diameter. Numerous small specks of chromite up to 1/16" diameter.

DRILL LOG - GEOLOGY AND FIBRE (Cont.)

HOLE NO. S-4  
PROPERTY: Stithem

SHEET NO. 2

Footage	Run	Core recovered	Remarks
190-200	10	9.0	Numerous talc seams. Little loss of mud from 190. 200 - 204, numerous carbonate zones up to 1/4" diameter. 204 - 209, talcose rock.
200-210	10	6.0	
210-220	10	3.0	209 - 213, serpentine breccia (angular light green serpentine fragments cemented by dark green serpentine). Mottled green serpentine starts again at 213.
220-230	10	5.0	
230-240	10	3.0	Numerous light green slip surfaces throughout hole. Thread veins, numerous up to 200, are scarce from 200 to end of hole.
240-250	10	4.0	
250-260	10	5.0	
260-268	8	4.0	
TOTALS	268	97.0	

SHEETS 1 and 2 - Percent recovery 36%

/s/ J. W. Hogan.