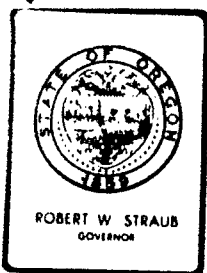


Ray Griesenauer Log

Surface	0	3
Brown clay	3	28
Sand	28	37
Yellow clay	37	47
Brown sand	47	58
Cement gravel	58	69
Blue clay	69	75
Sand & small gravel	75	82
Blue clay	82	83
Sand & gravel	83	85
Large gravel	85	95
Blue clay	95	100
id & gravel	100	104
Blue clay	104	144
Sand	144	155
Gray clay	155	160
Blue sandy clay	160	163
nd	163	167
Blue clay	167	175
Gray clay	175	186
Sandy gray clay	186	190
Gray clay	190	230
Black sandy clay	230	235
Gray clay	235	248
Sandy clay	248	250
Blue clay	250	255
Sandy clay	255	258
Sand	258	261
Gray clay	261	288
Sandy clay	288	295
Wood	295	300
Small gravel	300	302
Blue sandy clay	302	360
rown clay	360	366
Blue clay	366	375



Water Resources Department

MILL CREEK OFFICE PARK

555 13th STREET N.E., SALEM, OREGON 97310

PHONE 378-8455

May 24, 1978

Milo Schneider
Schneider Equipment, Inc.
21881 River Road N.E.
St. Paul, Oregon 97137

Dear Mr. Schneider:

Please accept my apologies for the delay in responding to your recent letter requesting special standards for the use of concrete instead of cement grout as a sealing material in large diameter wells that provide excessive space between the drill hole wall and the outside casing of the well. You are hereby granted special permission to use concrete instead of neat cement with the following provisions and conditions:

- 1) Concrete shall consist of clean, hard, endurable aggregate, and not less than five sacks of Portland cement per cubic yard of concrete. Maximum diameter of the aggregate shall not exceed 3/4 of an inch in diameter.
- 2) If the well bore hole to be sealed is not dry, concrete shall be pumped from the bottom of the seal zone upward in one continuous operation to land surface.
- 3) In the event that the well bore annular space to be sealed is dry, concrete shall be placed through a tremie pipe to prevent segregation of the aggregate and cement mixture and to prevent bridging.
- 4) The space between the sealing surfaces of all casings and between all casings and the bore hole shall exceed 3-inches or more.

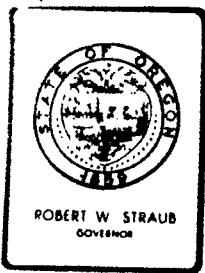
Special standards to construct a well as described above shall be considered to apply to all wells constructed in such a manner. Please refer to these special standards on the well reports of all well constructed in this manner.

Sincerely,


WILLIAM B. MCCALL
Hydrogeologist

WBM:clh

cc: Clifton R. King, Watermaster, District #16



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