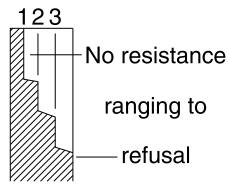


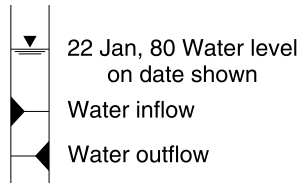
EXPLANATION SHEET FOR ENGINEERING LOGS

Borehole and excavation log

Penetration



Water



Notes - samples and tests

U50	Undisturbed sample 50mm diameter
D	Disturbed sample
N	Standard penetrometer blow count for 300mm
N*	SPT + Sample

Material classification

Based on Unified Soil Classification System.
In Graphic Log materials are represented by clear contrasting symbols consistent for each project.

Moisture content

D	Dry, looks and feel dry
M	Moist, no free water on hand when remoulding
W	Wet, free water on hand when remoulding
LL	Liquid limit
PL	Plastic limit
PI	Plasticity index

e.g. M>PL - Moist, moisture content greater than the plastic limit

Consistency

		: hand penetrometer
VS	Very soft	<25 (kPa)
S	Soft	25 - 50
F	Firm	50 - 100
St	Stiff	100 - 200
VSt	Very stiff	200 - 400
H	Hard	>400
Fb	Friable	

Notes: X on log is test result
— is range of results

Density index

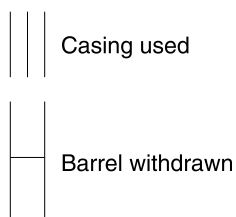
		%
VL	Very loose	0 - 15
L	Loose	15 - 35
MD	Medium dense	35 - 65
D	Dense	65 - 85
VD	Very dense	85 - 100

Fracture description

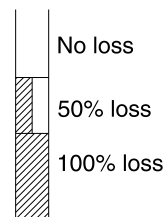
RP	Rough planar
RL	Rough irregular
SP	Smooth planar
SL	Smooth irregular

Cored borehole log

Case - lift



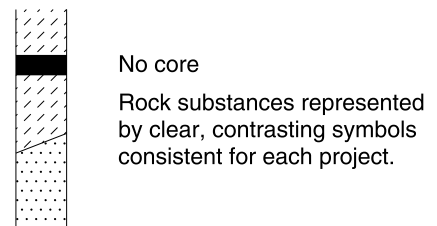
Fluid loss



Lugeons

Lugeon units (uL) are a measure of rock mass permeability. For a 46 to 74mm diameter borehole 1 Lugeon is defined as a rate of loss of 1 litre per metre per minute. 1 Lugeon is roughly equivalent to a permeability of 1×10^{-4} mm / sec.

Graphic log



Weathering

Fr	Fresh
SW	Slightly weathered
HW	Highly weathered
EW	Extremely weathered

Strength

		point load strength index $1.5^{(50)}$ (MPa)
EL	Extremely low	< 0.03
VL	Very low	0.03 - 0.1
L	Low	0.1 - 0.3
M	Medium	0.3 - 1
H	High	1 - 3
VH	Very high	3 - 10
EH	Extremely high	>10

Notes: X on log is test result.

Significant defects

Significant defects shown graphically

