

PRODUCTS

EQUIPMENTS

TECHNICAL SERVICES

Special Foundations

Horizontal drilling and tunneling

Vertical drilling and deviated wells

Grouting

Mud treatment

Mud treatment for REGENERATION

Mud treatment for DEWATERING

1 Product Definition & Equipment selection

2 Project Startup & Problem solving

3 Fluid and mud Regeneration

4 Mud dewatering for Disposal

5 Internships

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Fluid Dewatering for Disposal

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Sample TEST BORING LOG

CLIENT: _____

GROUND ELEV.: MSL. DATE STARTED: 2-28-94 SAMPLER/CORE SIZE: SOIL: 2" SS ROCK: 2-1/8"

OVERBURDEN: 33.6 FT. DATE COMPLETED: 3-4-94 SAMPLE HAMMER WT./FALL: 140 lbs/30"

ROCK: 13.6 FT. DRILL MODEL/NO.: S & H / 40C DEPTH/ELEV. GROUND WATER: 6.0

TOTAL DEPTH: 46.5 FT. DRILLER: _____ 0 HR _____

BORING LOG: STA 10+64.8'R WEATHER: COLD, CLEAR

ELEV.	DEPTH	DESCRIPTION AND CLASSIFICATION	REMARKS AND COMMENTS
1.5	0.0 - 1.5'	Orange-brown clay with some sandstone fragments - moist - hard	S-1 1.5 23-11-91.5
3.0	1.5 - 4.0'	Red-brown clay with some limestone fragments - moist - firm to soft	S-2 3.0 10-6-68.8
4.5	4.0 - 6.0'	Red-brown sandy clay with some red shale & limestone fragments - moist - soft	S-3 4.5 4-3-48.9
6.0	6.0 - 10.0'	Red-brown silty clay - moist - very soft to hard to very hard	S-4 6.0 8-3-91.8
7.5	10.0 - 16.6'	Red-brown silty clayey gravel (highly weathered shale) - moist - very hard	S-5 7.5 6.0
9.0	16.6 - 33.5'	Red-brown silty clayey gravel (weathered shale with hard and soft seams) - moist - very hard	S-6 9.0 4-4-14
10.5			S-7 10.5 21-31-35
12.0			S-8 12.0 14-24-60
13.5			S-9 13.5 49-70-100/
16.5			C-4 16.5 0.0/0
17.2			S-10 17.2 60/1NR
20.5			S-11 20.5 21.25/100/280
24.7			S-12 24.7 28/28/11
27.2			S-13 27.2 50/16.1
30.6			S-14 30.6 33/16.1
35.5			C-2 35.5 1.5/75
38.5			C-3 38.5 0.8/80

NOTES ON: WATER LEVELS, WATER LOSS, ROD CHARACTER OF DRILLING, ETC.

Advanced casing from: 0.0' - 6.0'

0.0' - 10.5'

10.5' - 16.5'

16.5' - 26.5'

26.5' - 32.5'

Casing Blows: 0.0' - 1.0' = 23

1.0' - 2.0' = 28

2.0' - 3.0' = 11

3.0' - 4.0' = 10

4.0' - 5.0' = 11

5.0' - 6.0' = 11

ROD = 0%

(1) Dates spoon recovery in feet

WOR = Weight of Rod

NR = No Recovery

Truncated from 30.6' to 33.5'

Attempted spoon sample @ 33.5' but encountered refusal after 0.1' penetration

RCD = 0%

RCD = 0%

Depth (feet)	Lithology	Dry Density (pcf)	Moisture Content (%)	Additional Test
0.0 - 1.5'	Orange-brown clay with some sandstone fragments - moist - hard			
1.5 - 4.0'	Red-brown clay with some limestone fragments - moist - firm to soft			
4.0 - 6.0'	Red-brown sandy clay with some red shale & limestone fragments - moist - soft			
6.0 - 10.0'	Red-brown silty clay - moist - very soft to hard to very hard			
10.0 - 16.6'	Red-brown silty clayey gravel (highly weathered shale) - moist - very hard			
16.6 - 33.5'	Red-brown silty clayey gravel (weathered shale with hard and soft seams) - moist - very hard			
33.5 - 46.5'	Gray limestone - partly weathered - broken to competent - medium hard			

Product and equipment selection based on the study and interpretation of the technical report

Soils Investigation Report
 Soil Boring Report
 Water analysis report

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Project start up

- ✓ Water adjustment
- ✓ Mixing procedure
- ✓ Fluid control

Project follow up

- ✓ On site tests
- ✓ Jobsite Lab.

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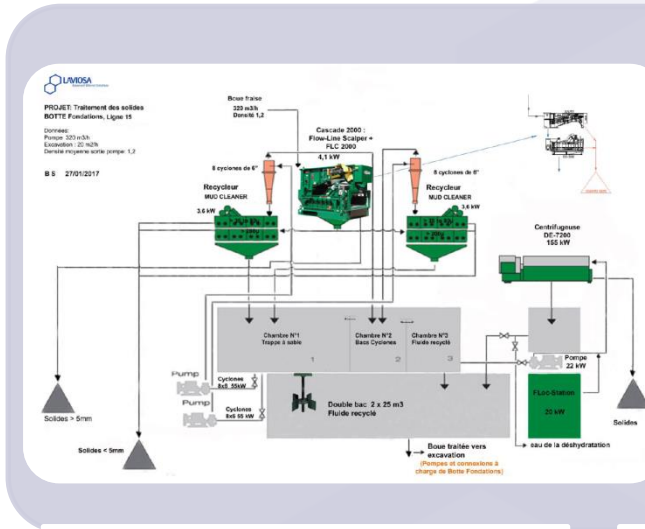
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Equipment choice & plan

Plant dimension and layout

Correct equipment and set up for efficient solids separation

Performance optimization

Mud additive

Rheological tests

Screens types & Mesh sizes combination

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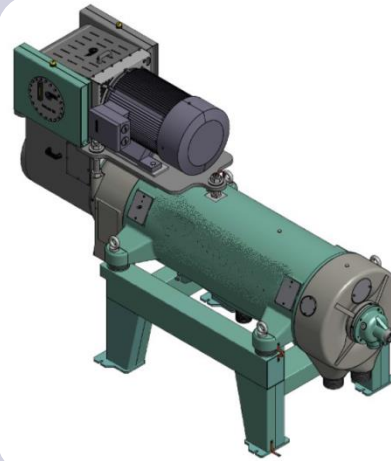
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Equipment choice



Small or Big bowl centrifuge



15 or 20 ft Floc Unit

Flocculant and coagulant mix design



Correct product



Correct dosage

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Internship for foreman and operator

Our company promotes training courses on mud and drilling fluids