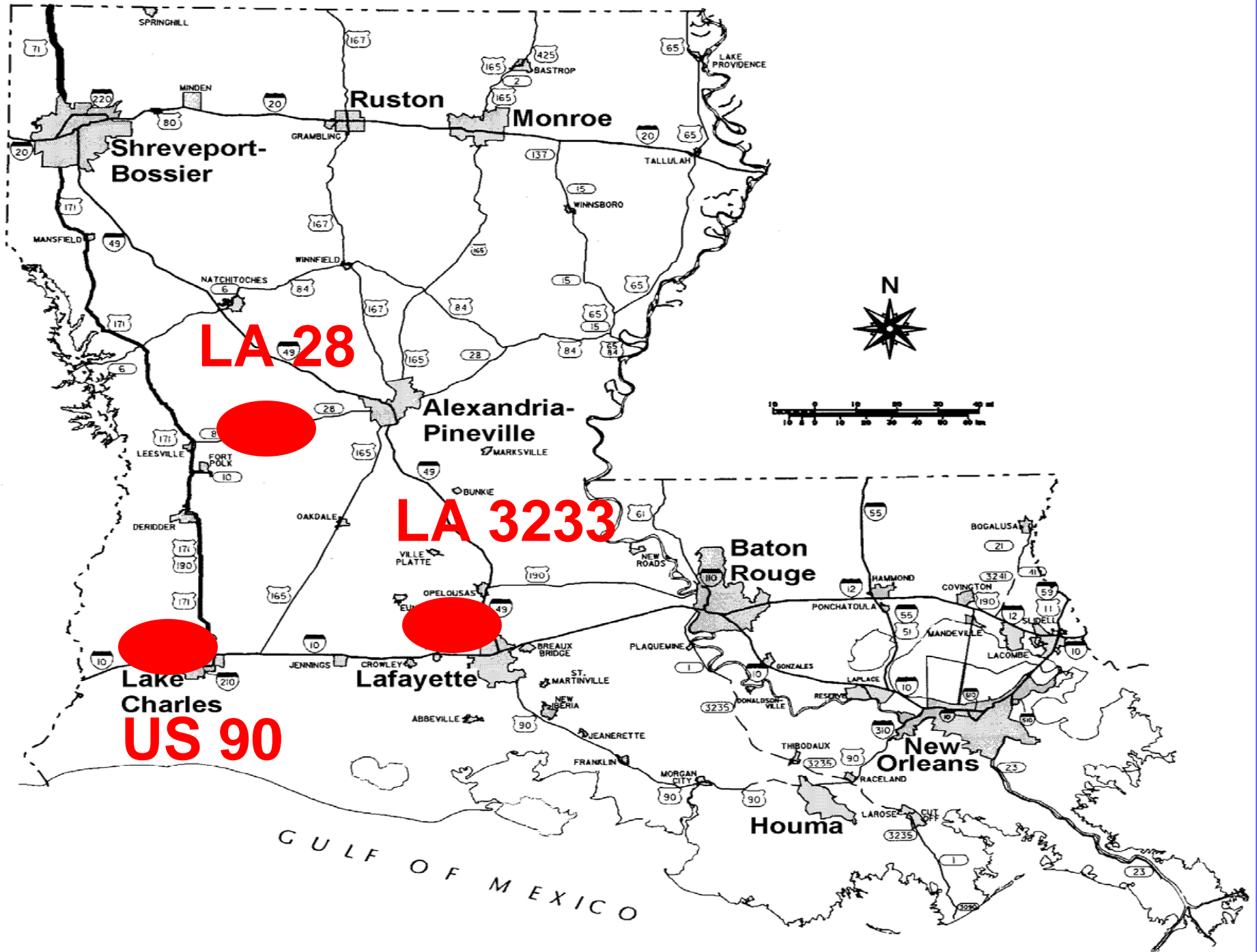


Case studies with the DCP





LA 28 Vernon Parish

- 3" AC
- 12" Stone
- 12" lime treated layer

- Failures and ruts up to 1.5"

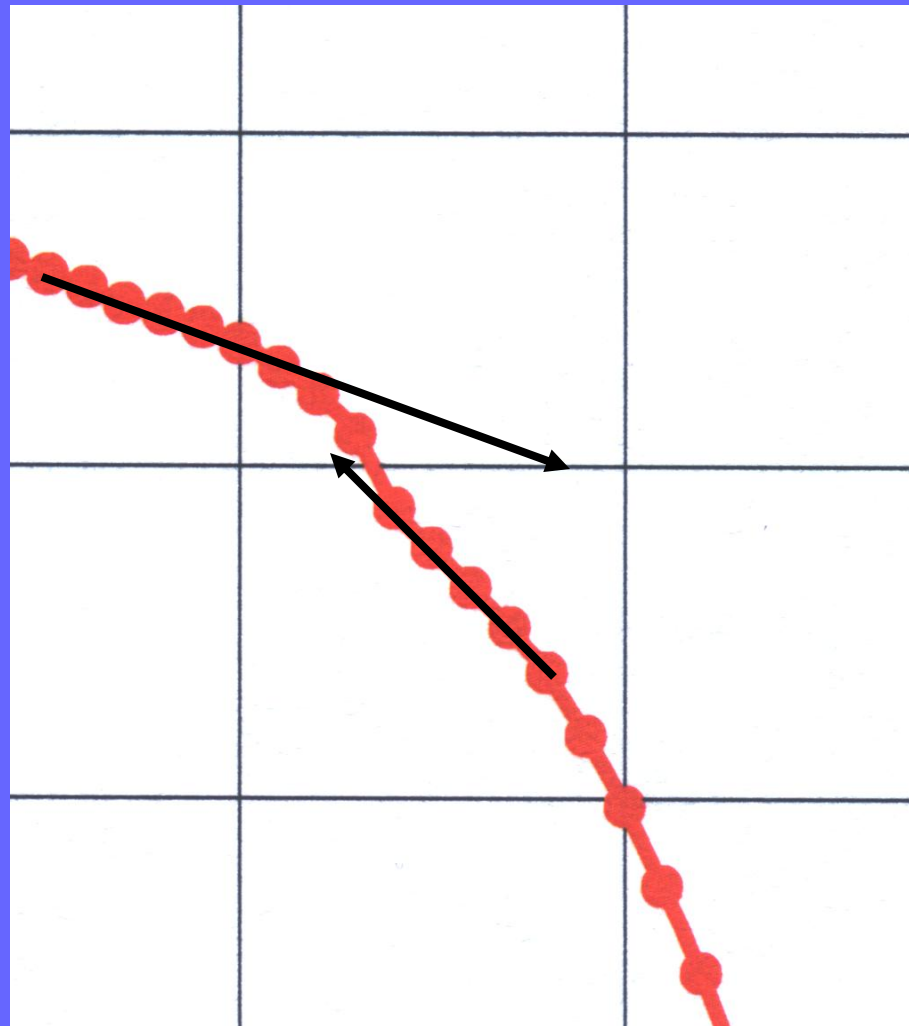
STA 14+044 Trench site

- Stone 11.5''
- Top layer 1.5'' Clay A-7-6(30) 31.1%
- Lime 9.0'' Clay A-7-6(29) 19.2 %

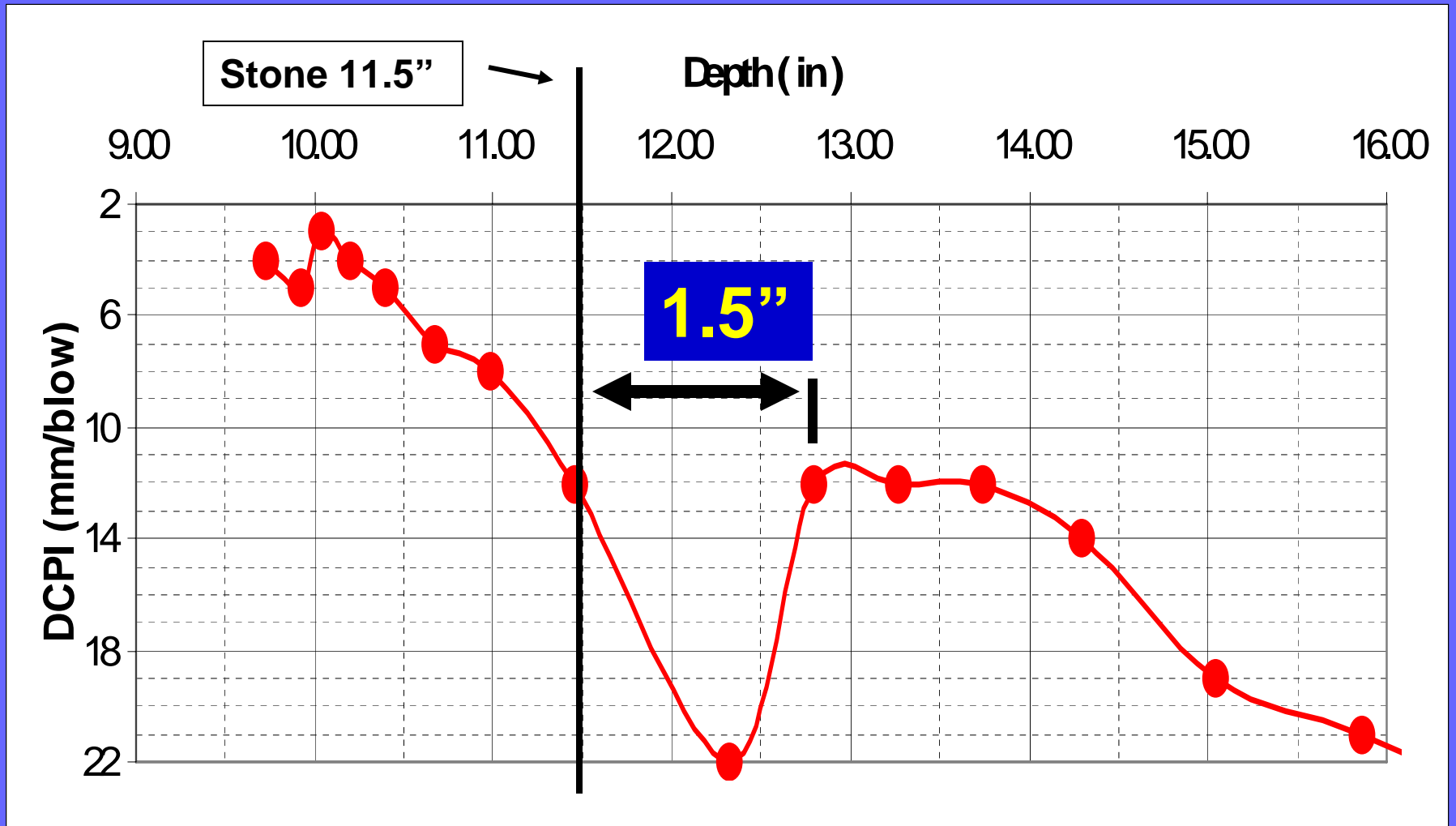
DCP Curve



Stone – Lime Treat interface



Depth vs DCPI



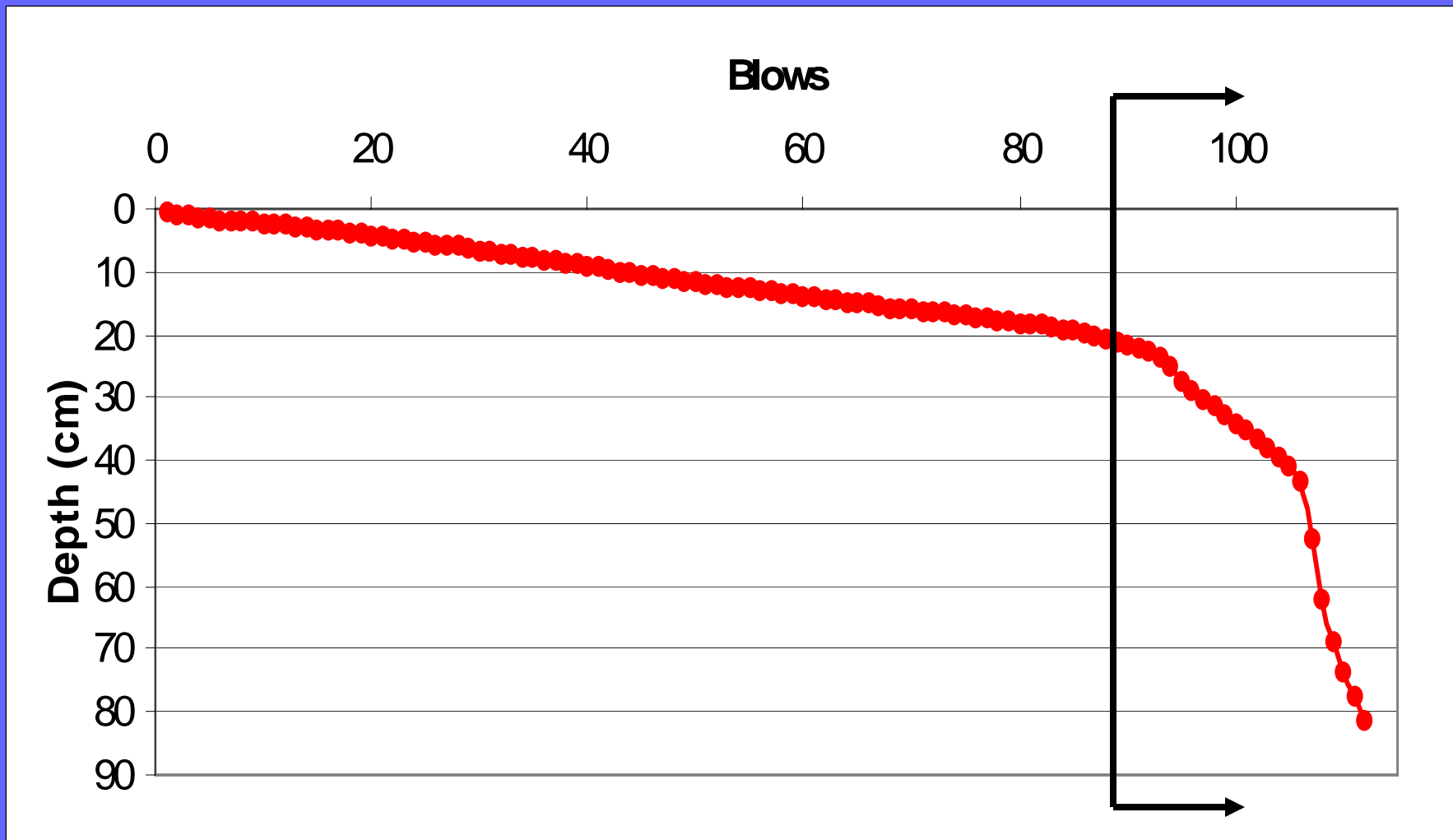
Depth vs DCPI

Penetration	DCPI
cm	mm/blow
21.5	5
22.1	6
22.7	6
23.6	9
24.8	12
27.3	24
28.8	15
30.1	13
31.5	14
32.7	12
34	13
35.3	13
36.5	12

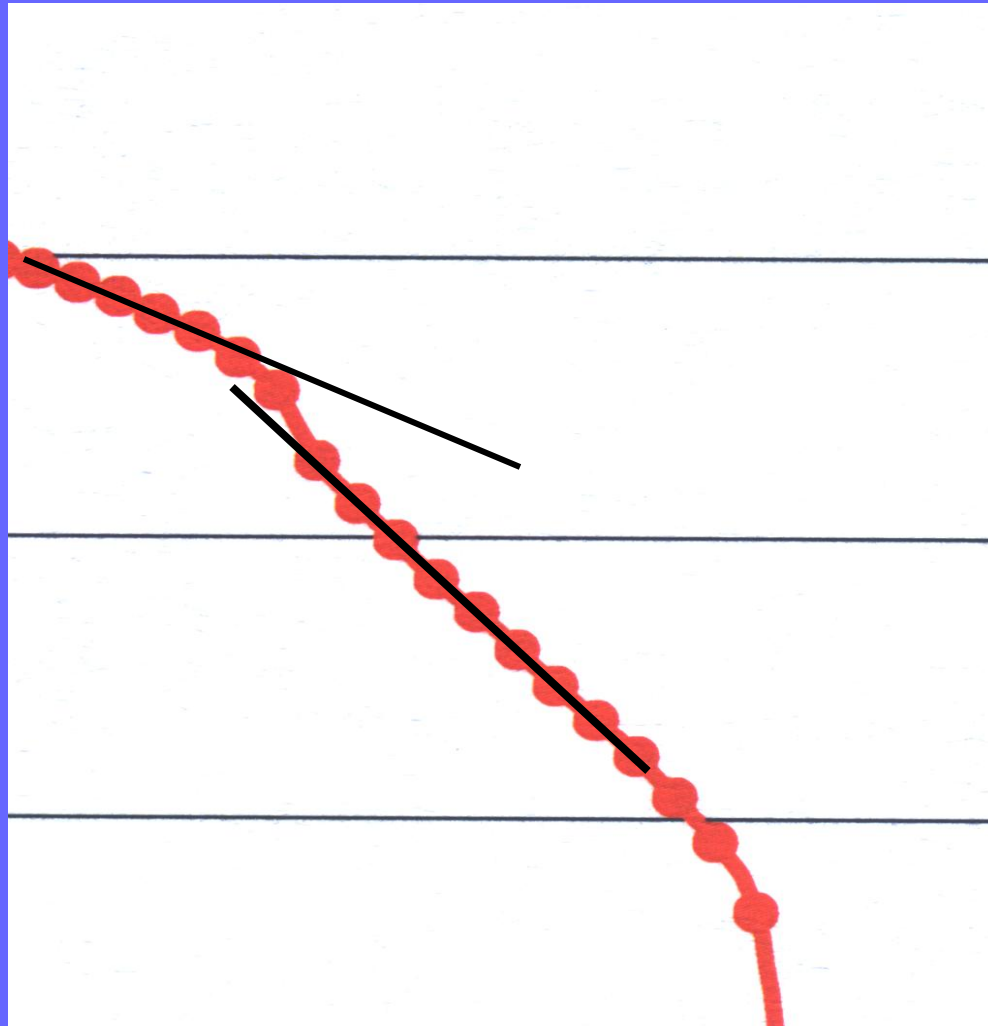
15+830 Trench site

- Stone 9.5''
- Top layer 1.5'' CI Loam A-7-6 27.7%
- Lime Tr 9.0'' CI Loam A-7-5 22.5%

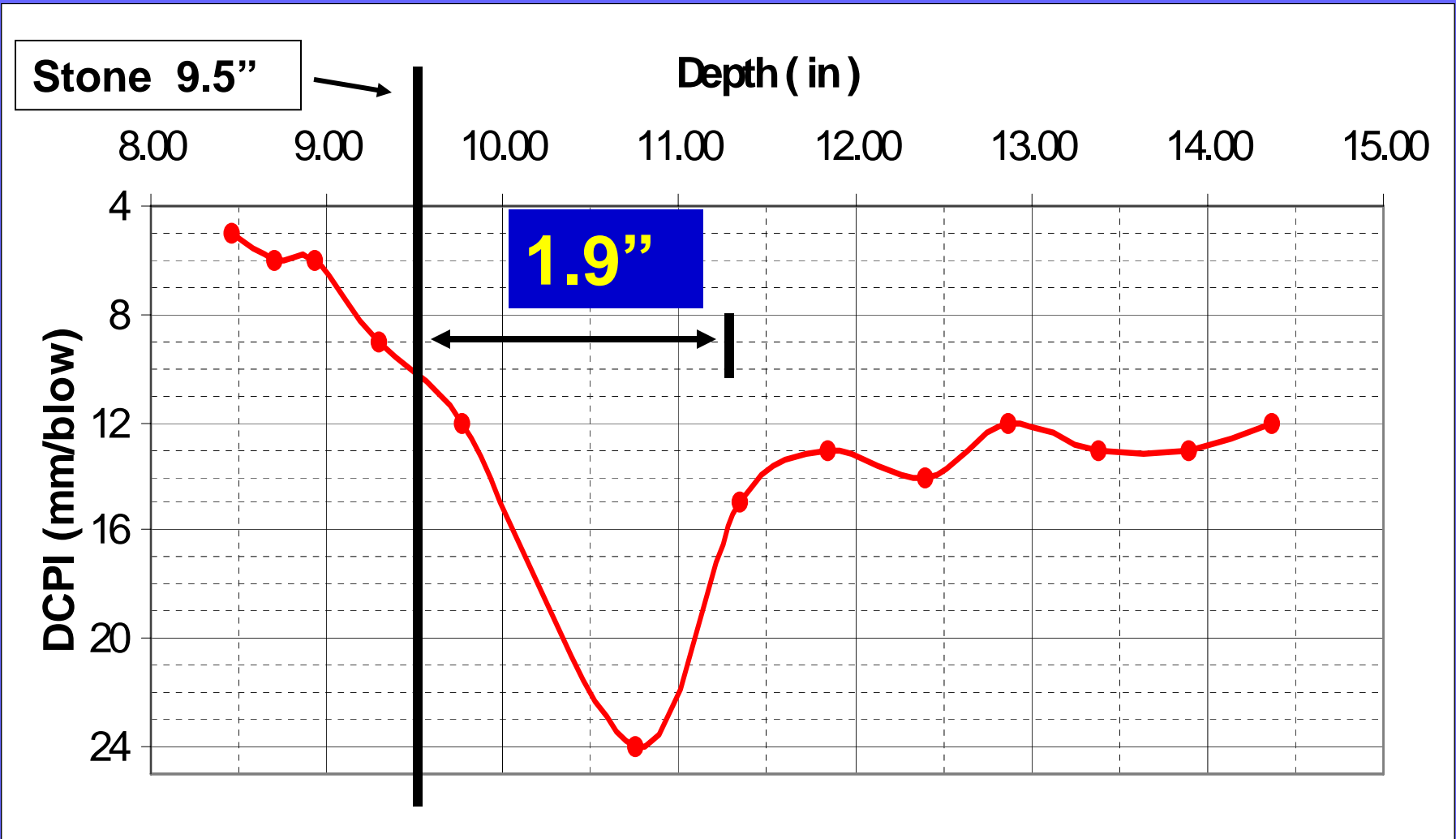
DCP chart



Stone – Lime transition



Depth vs DCPI

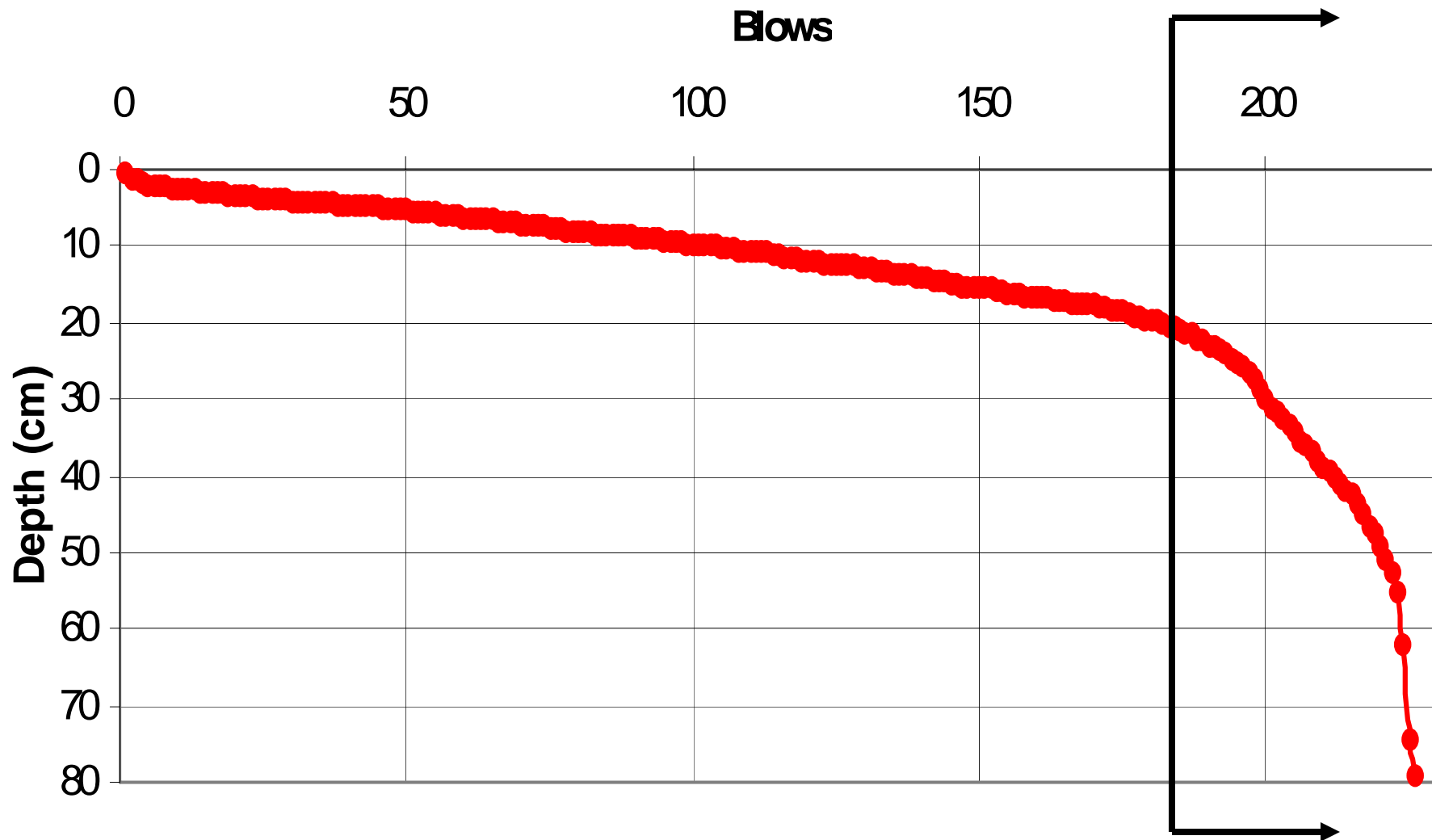


Penetration vs DCPI

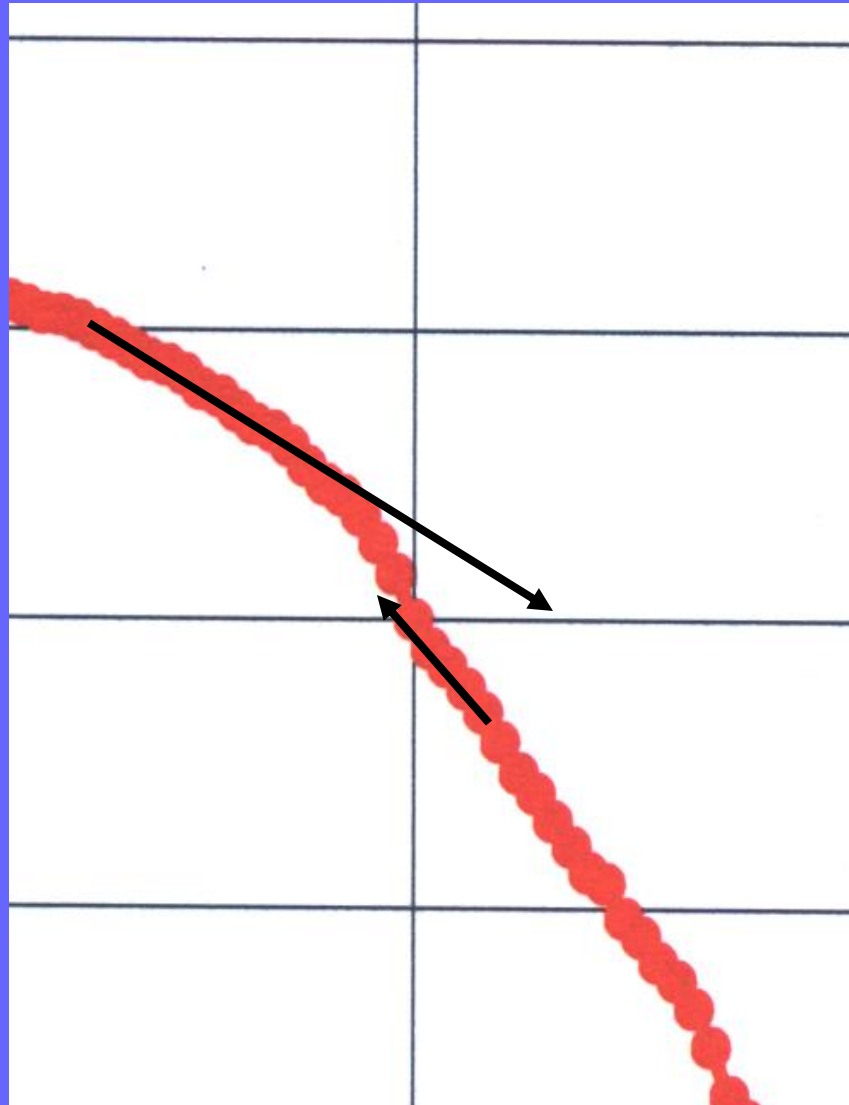
Penetration	DCPI
cm	mm/blow
21.5	5
22.1	6
22.7	6
23.6	9
24.8	12
27.3	24
28.8	15
30.1	13
31.5	14
32.7	12
34	13
35.3	13
36.5	12

DCP 12+661 WB

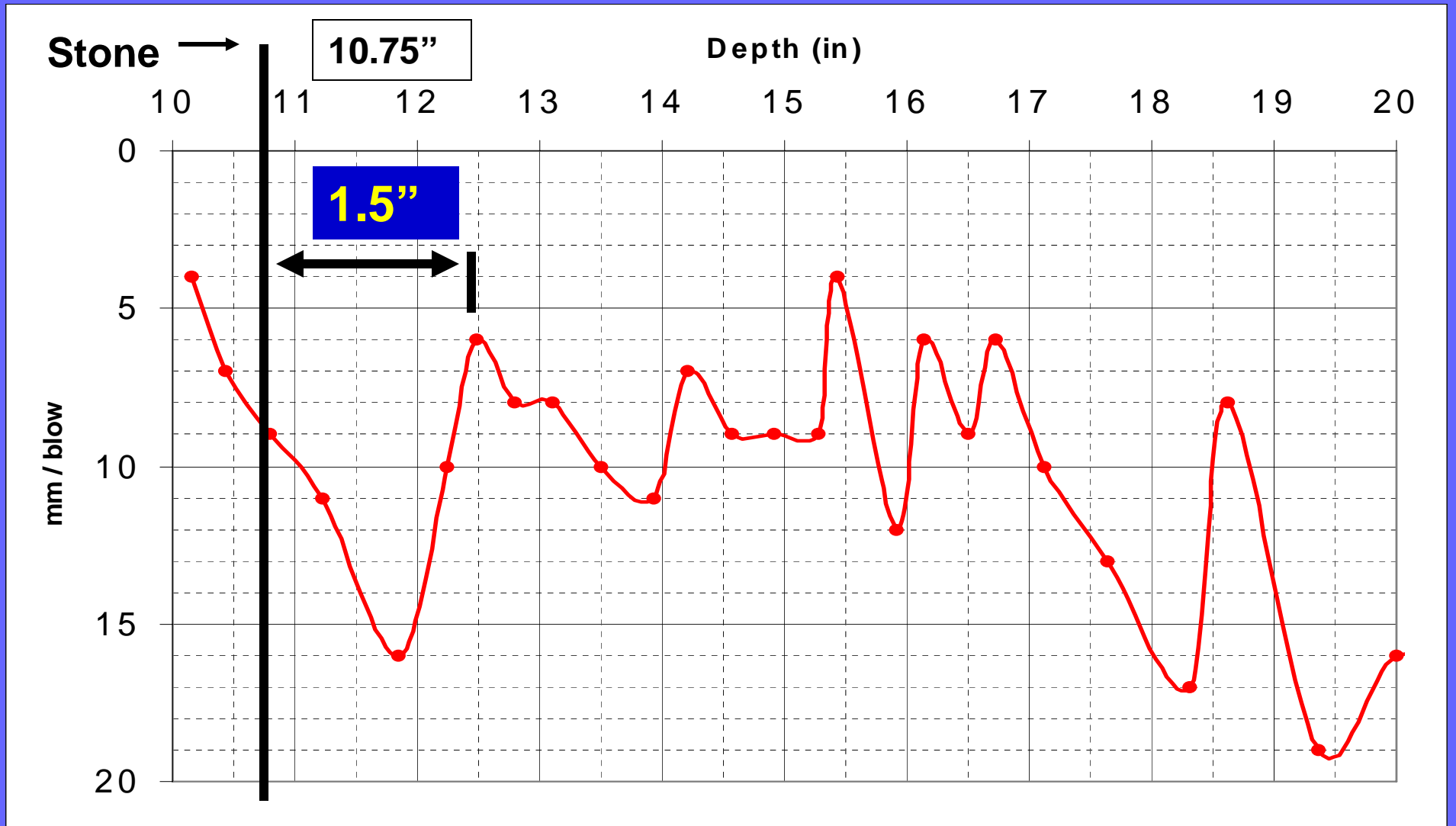
- **Stone 10.75 inches**



Stone – Lime Interface



Stone – Lime Interface



Penetration	DCPI
cm	mm/blow
23.6	3
24.1	5
24.8	7
25.4	6
25.8	4
26.5	7
27.4	9
28.5	11
30.1	16
31.1	10
31.7	6
32.5	8
33.3	8
34.3	10
35.4	11
36.1	7

LA 28 Conclusions

- **Determine layer depths**
- **Locate transition zones**
- **Identify layers (Stone, Lime tr...)**
- **Good for forensic analysis**
- **Reliable and Repeatable**

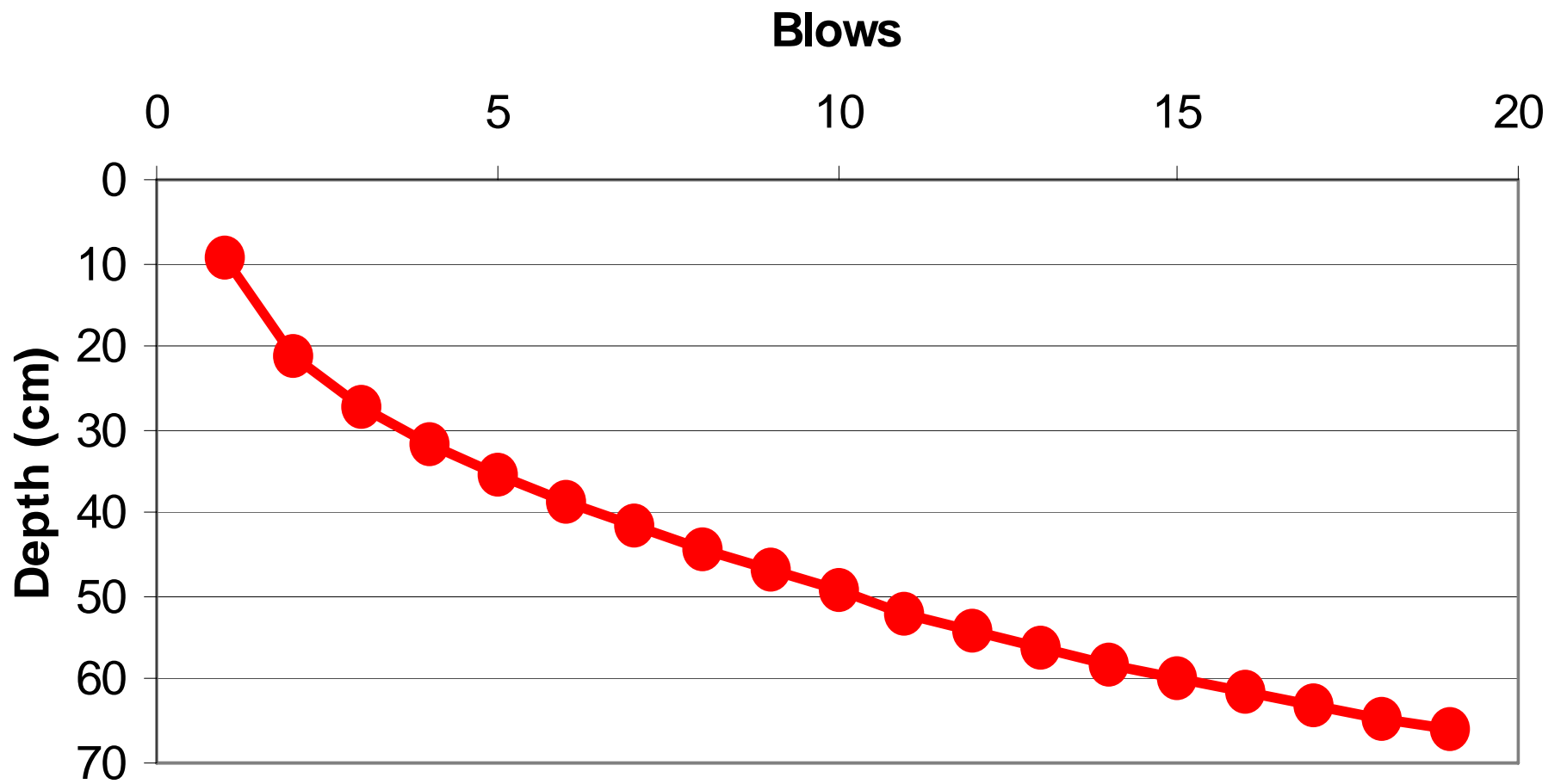
US 90 Calcasieu

- Can it be Rubblized?
- 2" AC / 9" PCC / 6" select mat.
- Soil Type (Fine grain) (Saturated?)
- Modulus (> 3.5 ksi) (< 34 mm/blow)
- Condition of base course / subgrade

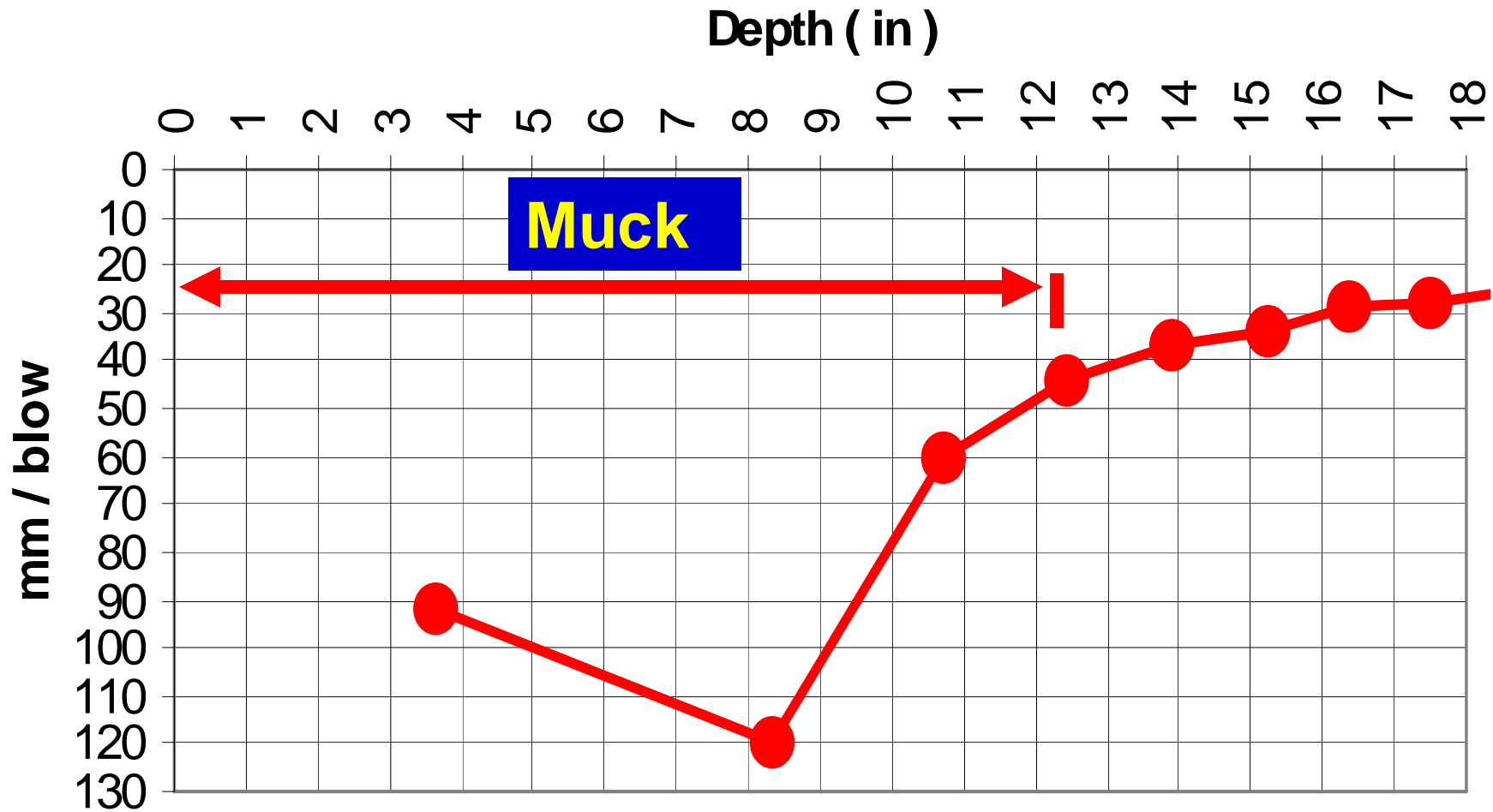
Sta 133+07

- **Sandy Loam (0 to 4 in.)**
- **Clay (A-7-6) PI 33 LL 50**
- **FWD Mr (12.2 / 5.4 ksi)**

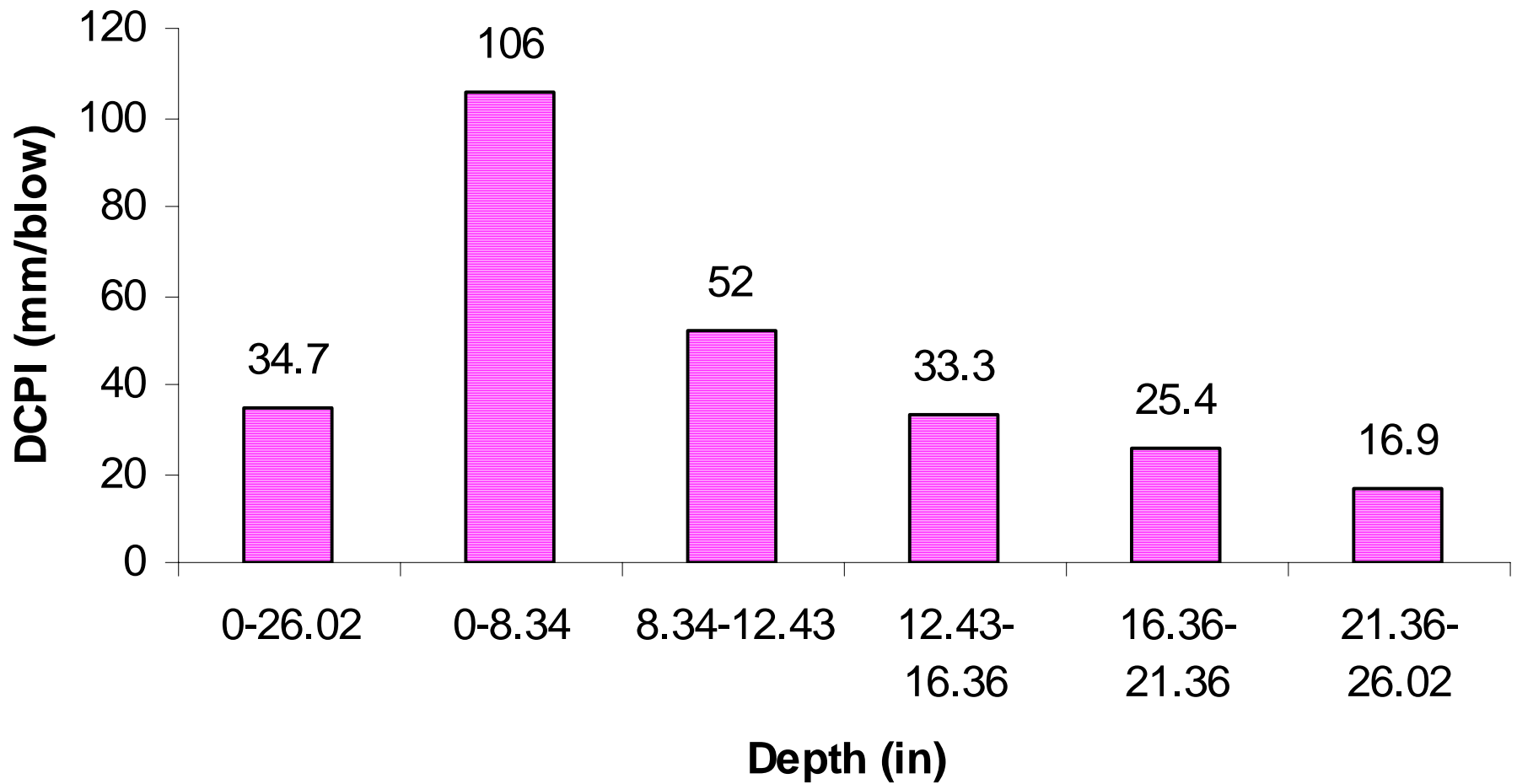
DCP Curve



Depth vs mm/blow



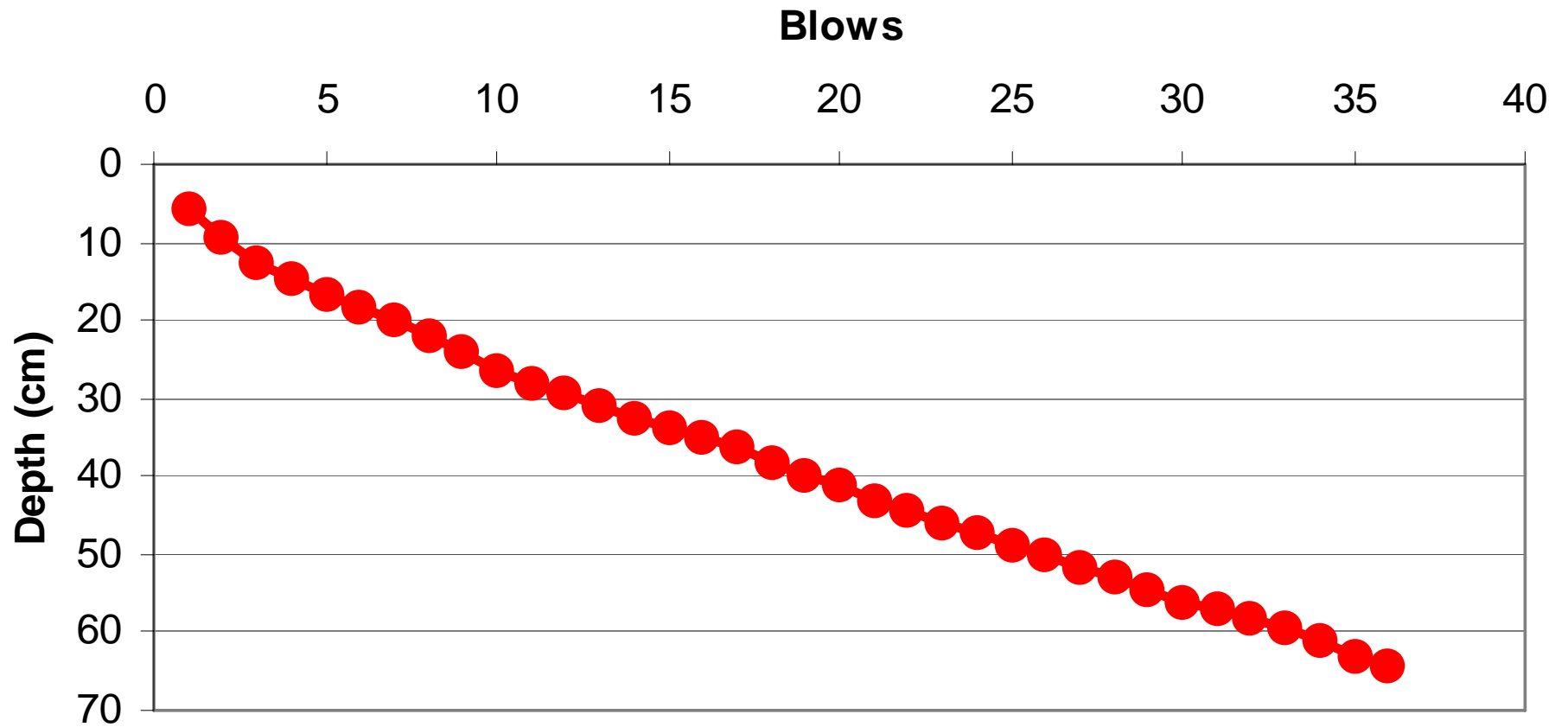
Bar chart



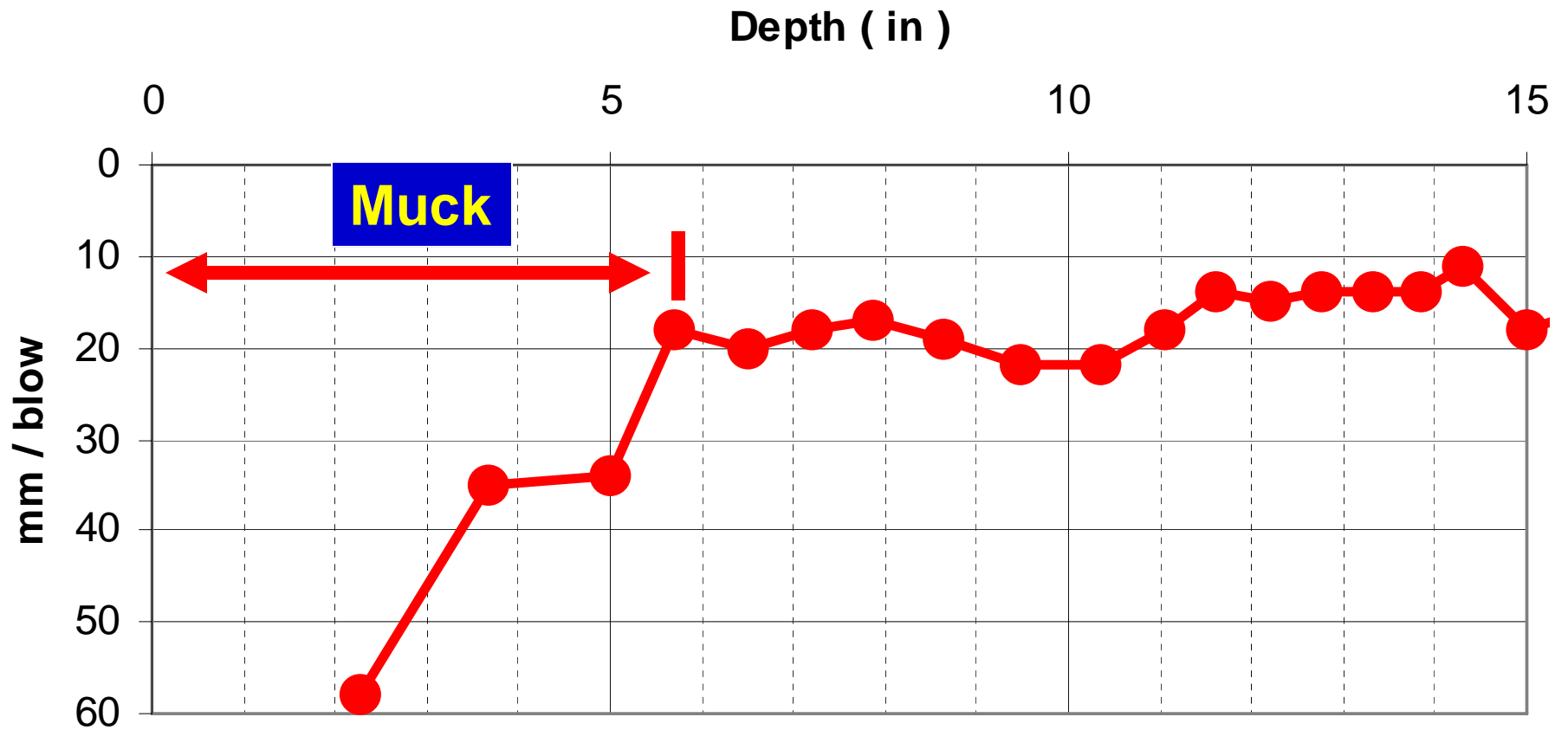
STA 52 + 00

- **Soft layer (0 to 4.92 in)**
- **A-6 PI 20 LL 30**
- **FWD (21.6 / 9.1 ksi)**

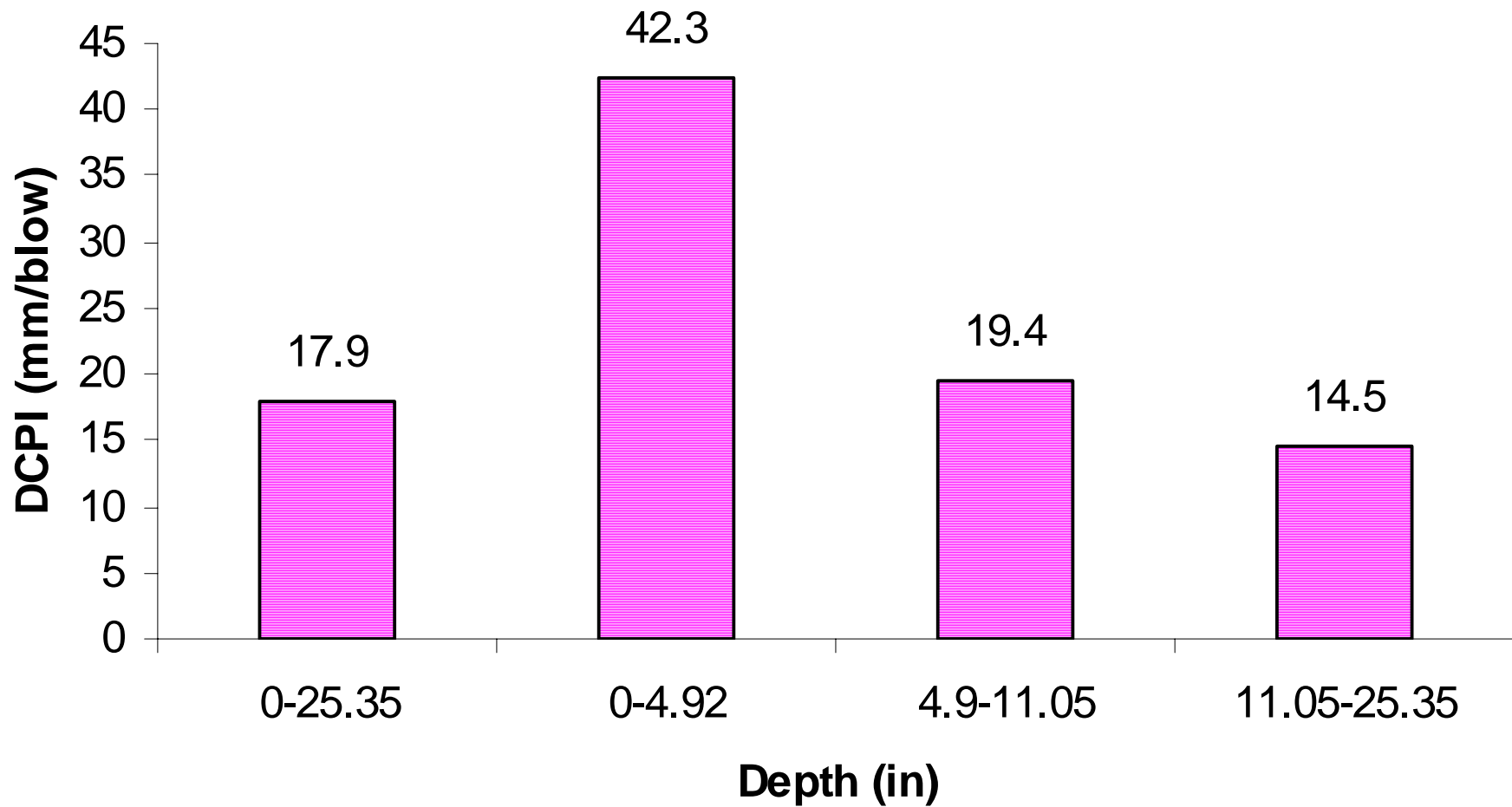
DCP curve



Depth vs mm/blow



Bar chart



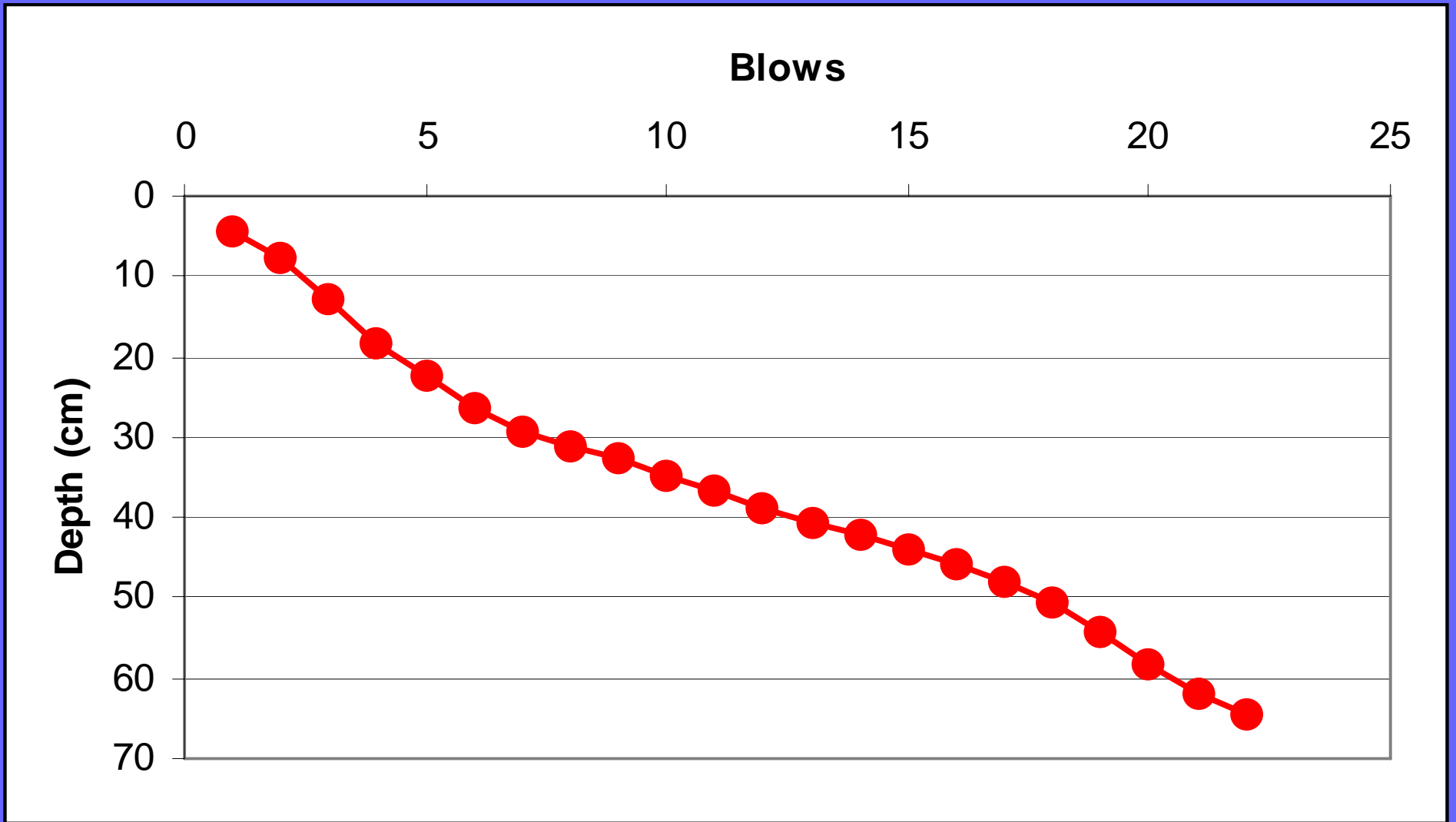
Conclusions

- **Very weak clay layer (2 to 12.5 in)**
- **Rubbilization (No)**

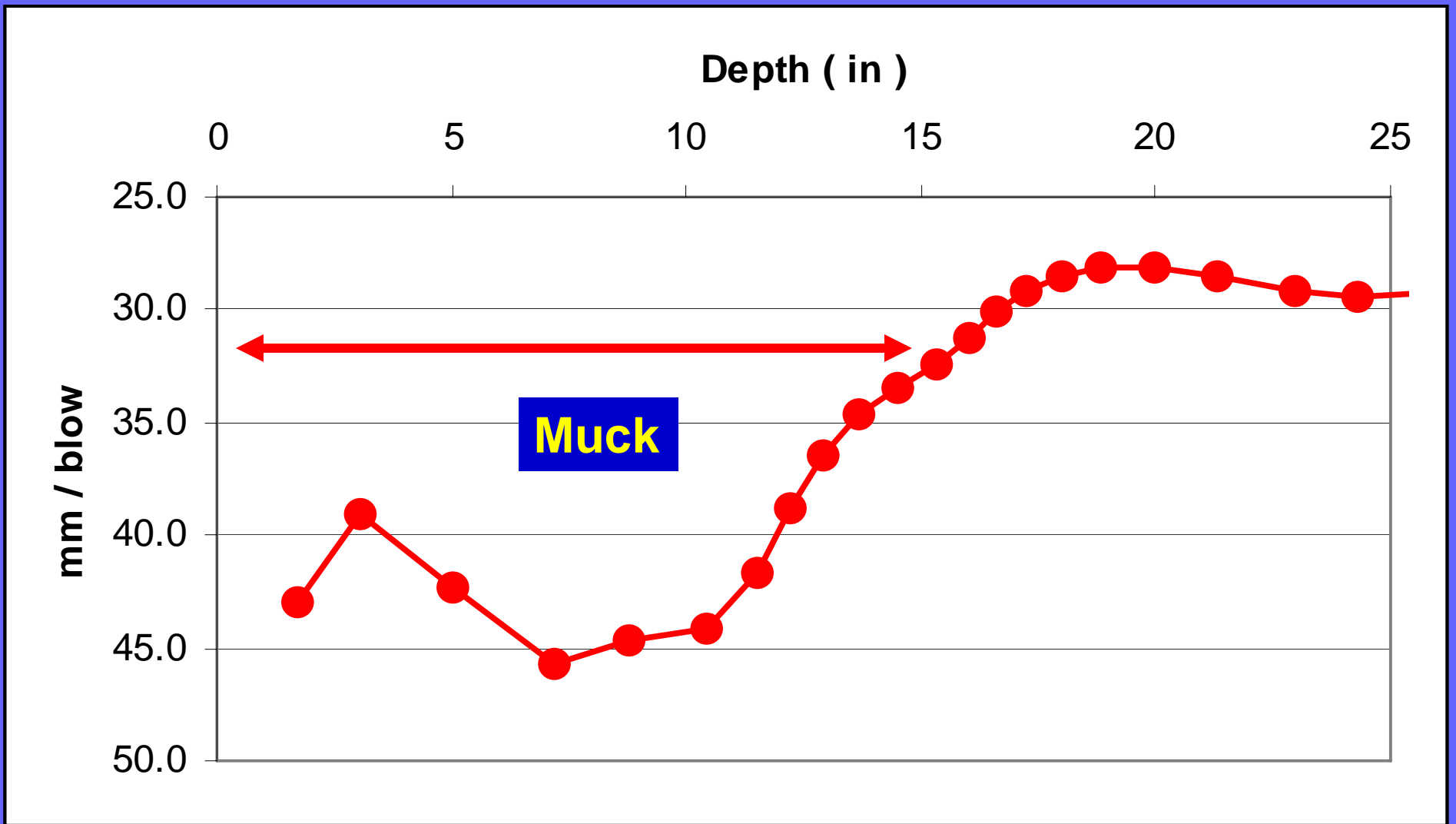
LA 3233 St Landry Parish

- 3.5" AC 8.5" SC

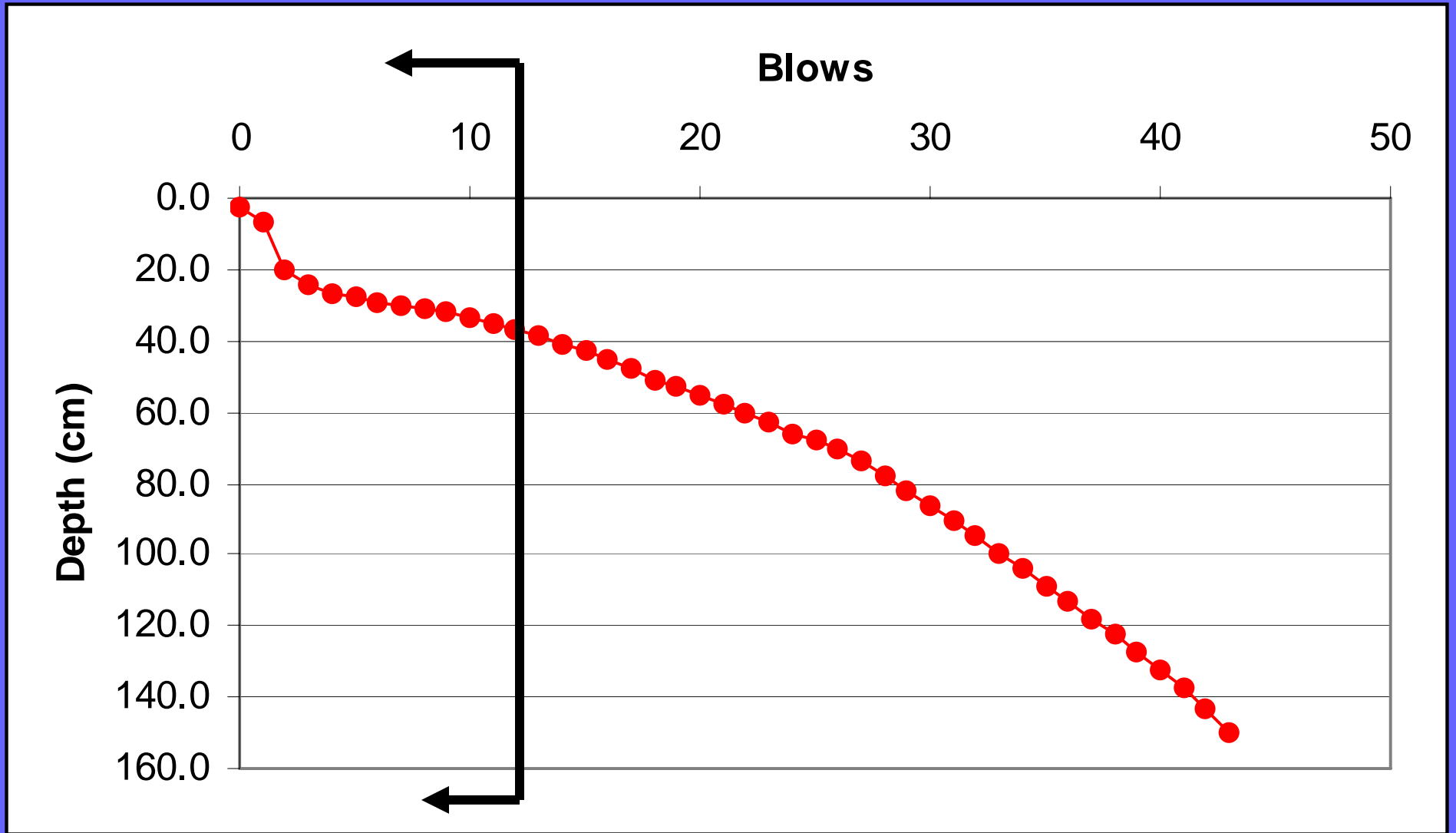
Sta 22+012



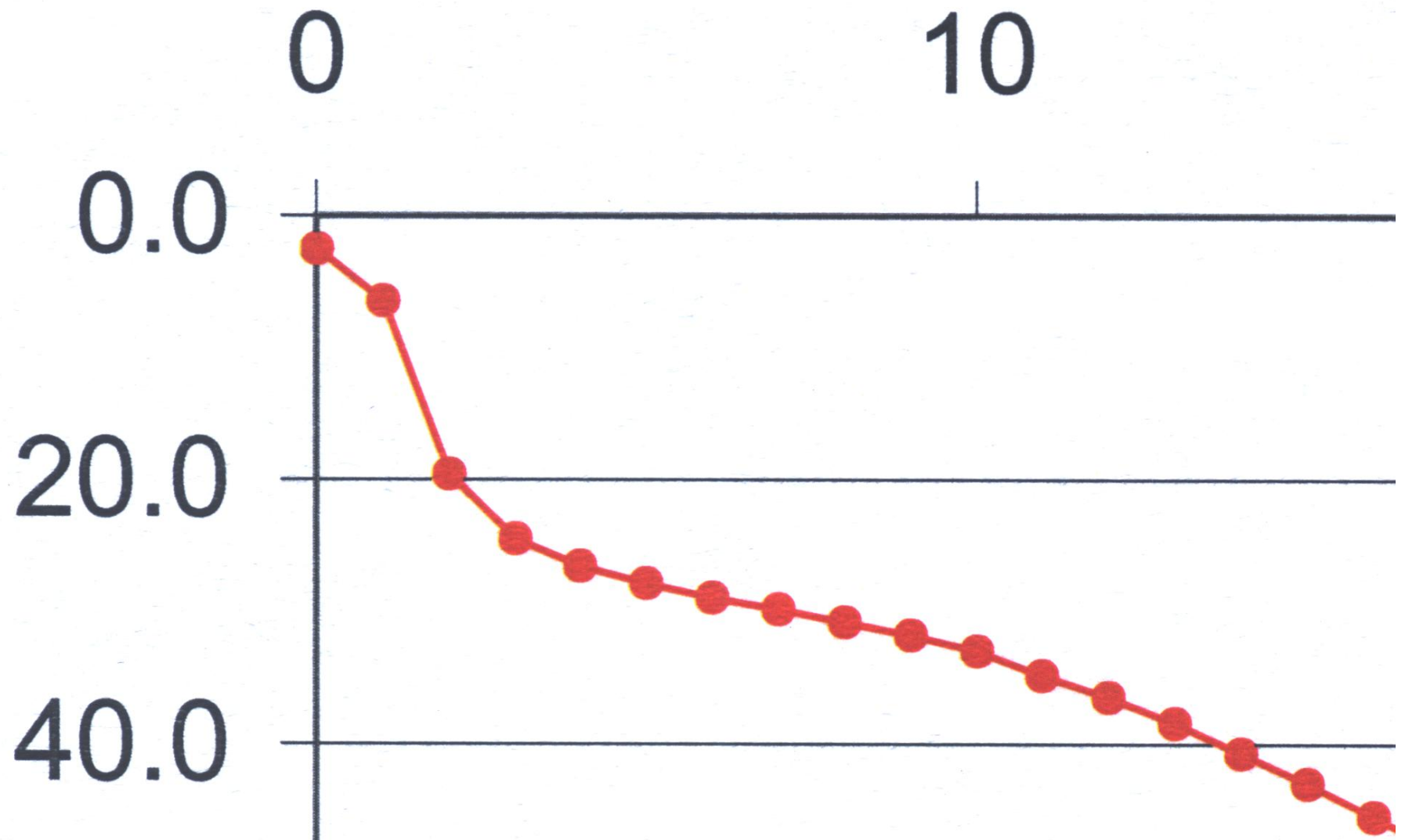
Depth vs mm/blow



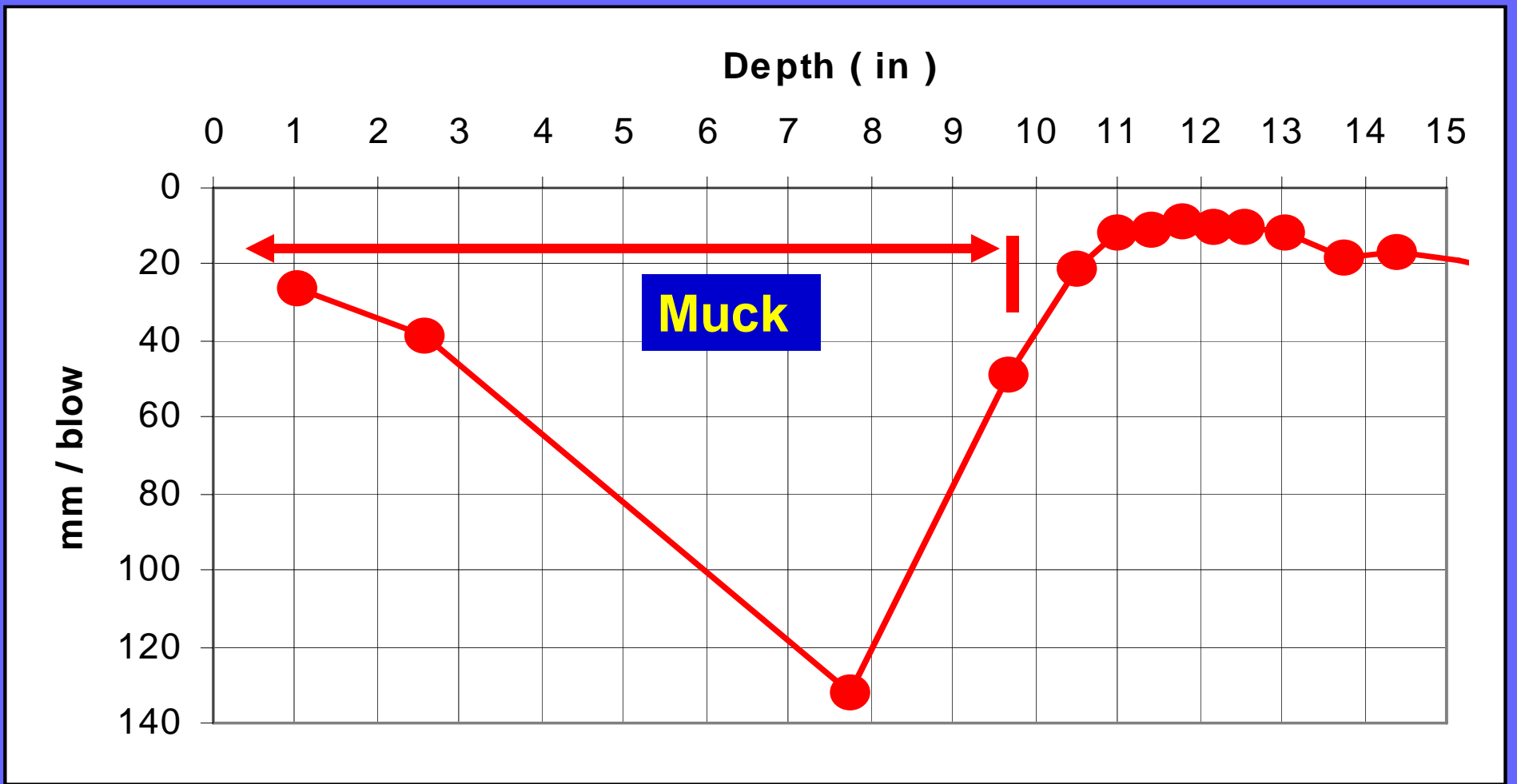
Sta 27+120



Close up



Depth vs mm/blow



Conclusions LA 3233

- Weak area (1.2 to 9.7 in.)
- (31 to 62 DCPI)

Depth (in)

10 11 12 13 14 15 16 17 18 19 20

