

## LAMPIRAN 1

Tabel Data Pengukuran Hasil Uji CPT (kedalaman 0-7,8 m)

CPT V.2.0							
Cone Penetration Test							
Project : PT NAGA MAS							
Location : KIC BLOK 27 SEMARANG							
Job M	Job No : 3						
Point	: :	3		~			
Test	No :	3		/ A `			
Test	By :	andhi	-	1	No. of Concession, name		
Test	Date :	10 FEB 2	017		The second second	-	
No.	Depth	R1	R2	LF	LFF	TF	FR
	(m)		- 1	1 A B	100	Contraction of the local division of the loc	
0	0.0	0.00	0.00	0.00	0.00	0.00	0.00
1	0.2	0.00	0.00	0.00	0.00	0.00	0.00
2	0.4	9.00	17.00	0.80	16.00	16.00	8.89
3	0.6	11.00	17.00	0.60	12.00	28.00	5.45
4	0.8	11.00	17.00	0.60	12.00	40.00	5.45
5	1.0	11.00	17.00	0.60	12.00	52.00	5.45
6	1.2	9.00	17.00	0.80	16.00	68.00	8.89
7	1.4	20.00	27.00	0.70	14.00	82.00	3.50
8	1.6	30.00	37.00	0.70	14.00	96.00	2.33
9	1.8	20.00	30.00	1.00	20.00	116.00	5.00
10	2.0	15.00	25.00	1.00	20.00	136.00	6.67
11	2.2	15.00	25.00	1.00	20.00	156.00	6.67
12	2.4	25.00	35.00	1.00	20.00	176.00	4.00
13	2.6	30.00	40.00	1.00	20.00	196.00	3.33
14	2.8	35.00	45.00	1.00	20.00	216.00	2.86
15	3.0	30.00	40.00	1.00	20.00	236.00	3.33
16	3.2	30.00	40.00	1.00	20.00	256.00	3.33
17	3.4	30.00	40.00	1.00	20.00	276.00	3.33
18	3.6	30.00	40.00	1.00	20.00	296.00	3.33
19	3.8	30.00	40.00	1.00	20.00	316.00	3.33
20	4.0	25.00	35.00	1.00	20.00	336.00	4.00
21	4.2	25.00	35.00	1.00	20.00	356.00	4.00
22	4.4	25.00	35.00	1.00	20.00	376.00	4.00
23	4.6	25.00	35.00	1.00	20.00	396.00	4.00
24	4.8	25.00	35.00	1.00	20.00	416.00	4.00
25	5.0	25.00	35.00	1.00	20.00	436.00	4.00
26	5.2	25.00	35.00	1.00	20.00	456.00	4.00
27	5.4	25.00	35.00	1.00	20.00	476.00	4.00
28	5.6	25.00	35.00	1.00	20.00	496.00	4.00
29	5.8	25.00	35.00	1.00	20.00	516.00	4.00
30	6.0	25.00	35.00	1.00	20.00	536.00	4.00
31	6.2	25.00	35.00	1.00	20.00	556.00	4.00
32	6.4	25.00	35.00	1.00	20.00	576.00	4.00
33	6.6	25.00	35.00	1.00	20.00	596.00	4.00
34	6.8	25.00	35.00	1.00	20.00	616.00	4.00
35	7.0	25.00	35.00	1.00	20.00	636.00	4.00
36	7.2	40.00	50.00	1.00	20.00	656.00	2.50
37	7.4	35.00	45.00	1.00	20.00	676.00	2.86
38	7.6	30.00	40.00	1.00	20.00	696.00	3.33
39	7.8	30.00	40.00	1.00	20.00	716.00	3.33

## Lanjutan Tabel Data Pengukuran Hasil Uji CPT (kedalaman 8-18 m)

10	0 0	20.00	10 00	1 00	00 00	776 00	2 22
40	8.0	30.00	40.00	1.00	20.00	136.00	3.33
41	8.2	30.00	40.00	1.00	20.00	756.00	3.33
42	8.4	45.00	55.00	1.00	20.00	776.00	2.22
43	8.6	45.00	55.00	1.00	20.00	796.00	2.22
44	8.8	50.00	60.00	1.00	20.00	816.00	2.00
45	9.0	50.00	60 00	1 00	20 00	836 00	2 00
46	9 2	50 00	60.00	1 00	20.00	856 00	2.00
10	0.4	50.00	60.00	1.00	20.00	030.00	2.00
41	9.4	50.00	60.00	1.00	20.00	876.00	2.00
48	9.0	50.00	60.00	1.00	20.00	896.00	2.00
49	9.8	60.00	70.00	1.00	20.00	916.00	1.67
50	10.0	50.00	60.00	1.00	20.00	936.00	2.00
51	10.2	60.00	70.00	1.00	20.00	956.00	1.67
52	10.4	70.00	80.00	1.00	20.00	976.00	1.43
53	10.6	55.00	65.00	1.00	20.00	996.00	1.82
54	10.8	65.00	75.00	1.00	20.00	1016.00	1.54
55	11.0	60.00	70.00	1.00	20.00	1036.00	1.67
56	11.2	65.00	75.00	1.00	20.00	1056 00	1 54
57	11 4	45.00	55.00	1 00	20.00	1076.00	2 22
50	11 6	50.00	60.00	1.00	20.00	1006 00	2.22
50	11.0	50.00	60.00	1.00	20.00	1090.00	2.00
59	11.8	50.00	60.00	1.00	20.00	1116.00	2.00
60	12.0	50.00	60.00	1.00	20.00	1136.00	2.00
61	12.2	60.00	70.00	1.00	20.00	1156.00	1.67
62	12.4	50.00	60.00	1.00	20.00	1176.00	2.00
63	12.6	50.00	60.00	1.00	20.00	1196.00	2.00
64	12.8	65.00	75.00	1.00	20.00	1216.00	1.54
65	13.0	60.00	70.00	1.00	20.00	1236.00	1.67
66	13.2	60.00	70.00	1.00	20.00	1256.00	1.67
67	13.4	50.00	60.00	1.00	20.00	1276.00	2.00
68	13.6	50.00	60.00	1.00	20.00	1296.00	2.00
69	13.8	45 00	55 00	1 00	20.00	1316 00	2 22
70	14.0	15.00	55.00	1 00	20.00	1336 00	2 22
71	14.0	50.00	50.00	1.00	20.00	1256.00	2.00
71	14.2	50.00	60.00	1.00	20.00	1350.00	2.00
12	14.4	50.00	60.00	1.00	20.00	1376.00	2.00
13	14.6	50.00	60.00	1.00	20.00	1396.00	2.00
74	14.8	51.00	60.00	0.90	18.00	1414.00	1.76
75	15.0	51.00	60.00	0.90	18.00	1432.00	1.76
76	15.2	50.00	60.00	1.00	20.00	1452.00	2.00
77	15.4	50.00	60.00	1.00	20.00	1472.00	2.00
78	15.6	60.00	70.00	1.00	20.00	1492.00	1.67
79	15.8	60.00	70.00	1.00	20.00	1512.00	1.67
80	16.0	60.00	70.00	1.00	20.00	1532.00	1.67
81	16.2	60.00	70.00	1.00	20.00	1552.00	1.67
82	16.4	60.00	70.00	1.00	20.00	1572.00	1.67
83	16 6	60.00	70.00	1 00	20.00	1592 00	1 67
81	16.9	60.00	71.00	1.10	22.00	1614 00	1 07
04	17.0	66.00	71.00	1.10	22.00	1624.00	1.05
00	17.0	05.00	75.00	1.00	20.00	1654.00	1.54
00	17.2	70.00	80.00	1.00	20.00	1654.00	1.43
81	1/.4	65.00	75.00	1.00	20.00	16/4.00	1.54
88	17.6	65.00	75.00	1.00	20.00	1694.00	1.54
89	17.8	70.00	80.00	1.00	20.00	1714.00	1.43
90	18.0	70.00	80.00	1.00	20.00	1734.00	1.43

Keterangan notasi (Lampiran 1):

R1 = 
$$q_c$$
 = Tahanan konus (kg/cm<sup>2</sup>)

- $= q_c + q_f =$  Mengukur resistansi total dari kerucut dan batang (kg/cm<sup>2</sup>) R2
- = Batang resistensi (*shaft friction resistance*) (kg/cm<sup>2</sup>)  $q_f$

$$L_f = Local friction (kg/cm^2)$$

$$=((q_c+q_f)-(q_c))/10$$

= *Skin friction* (kg/cm<sup>2</sup>)  $f_s$ 

$$= q_f (A_c/A_s)$$

$$L_{ff} = 20L_f$$
 (Karena yang diamati setiap kedalaman 20 cm) (kg/cm<sup>2</sup>)

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$$T_f = Total friction (kg/cm)$$

$$f_r = Friction Ratio (\%)$$

$$= (L_{f}/q_{c}) \frac{100\%}{100\%}$$

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Lab Mektan **CONE PENETRATION TEST** FT Sipil Page 1 of 2 Project : PT NAGA MAS Capacity G.W.L Location : KIC BLOK 27 SEMARANG : 2.5 t Test Point : 4 X-coord: 0.000 m : 0.00 m : 10 FEB 2017 Test Date Y-coord: 0.000 m Depth-H 18.00 m : Test By : andhi Z-coord : 0.000 m Final-Qc : 150.00 kg/cm2 Depth 10% 9% 8% 4% 30% 2% 1% Friction Ratio 7% (m) 1.00 2.00 3.00 4.00 5.00 6.00 7.00 R 8.00 9.00 10.00 160 80.0 4800 End-Qc Local Fr Total Fr 80 40.0 2400 120 60.0 3600 200 100.0 6000 240 120.0 7200 0000 kg/cm2 kg/cm2 kg/cm

Grafik dari data Uji CPT (kedalaman 0-10 m)



#### Lanjutan Grafik dari data Uji CPT (kedalaman 10-20 m)



# LAMPIRAN 2



#### Data N-SPT



## LAMPIRAN 3

#### Kode List Menu Halaman Utama

Dim db As ADODB.Connection Dim rs As ADODB.Recordset Public sql As String Sub koneksi() Set db = New ADODB.Connection A Sdb.CursorLocation = adUseClient db.Open "proyek\_ta" End Sub Private Sub tampilanCPT() Dim sql As String Set rs = New ADODB.Recordset sql = "SELECT id titik, Kedalaman, Conus, ConusCleeve, FR, ket tanah FROM tabel cpt WHERE id\_titik ='" & Combo2 & "' AND id\_proyek ='" & Text6 & rs.Open sql, db, adOpenDynamic, adLockOptimistic Set DataGrid1.DataSource = rs GI End Sub A Private Sub tampilanSPT() Dim sql As String Set rs = New ADODB.Recordset sql = "SELECT id\_titik, Kedalaman, N1, N2, N3, N, ket\_tanah FROM tabel\_spt WHERE id\_titik ="" & Combo3 & "' AND id\_proyek ="" & Text6 & "' " rs.Open sql, db, adOpenDynamic, adLockOptimistic Set DataGrid2.DataSource = rsEnd Sub Private Sub TambahDataCPT() Dim awal, akhir, interval As Variant



awal = CDec(Text19.Text)
akhir = CDec(Text9.Text)
interval = CDec(Text10.Text)

Do While awal <= akhir

Adodc1.Recordset.AddNew

Adodc1.Recordset.Fields("id\_proyek") = Text6.Text

 $Adodc1.Recordset.Fields("id\_titik") = Combo2.Text$ 

Adodc1.Recordset.Fields("Kedalaman") = awal

Adodc1.Recordset.Fields("Conus") = 0

Adodc1.Recordset.Fields("ConusCleeve") = 0

Adodc1.Recordset.Fields("FR") = 0

Adodc1.Recordset.Fields("ket\_tanah") = None

awal = awal + interval Loop Set DataGrid1.DataSource = Adodc1.Recordset End Sub Private Sub TambahDataSPT() Dim awal2, akhir2, interval2 As Variant

awal2 = CDec(Text13.Text)
akhir2 = CDec(Text14.Text)
interval2 = CDec(Text15.Text)

Do While awal2 <= akhir2 AdodcSPT.Recordset.AddNew AdodcSPT.Recordset.Fields("id\_proyek") = Text6.Text AdodcSPT.Recordset.Fields("id\_titik") = Combo3.Text AdodcSPT.Recordset.Fields("Kedalaman") = awal2 AdodcSPT.Recordset.Fields("N1") = 0 AdodcSPT.Recordset.Fields("N2") = 0

PR



AdodcSPT.Recordset.Fields("N3") = 0AdodcSPT.Recordset.Fields("N") = None AdodcSPT.Recordset.Fields("ket\_tanah") = None awal2 = awal2 + interval2Loop Set DataGrid2.DataSource = AdodcSPT.Recordset End Sub Private Sub TambahDataPondasiCPT() 'simpan data **Dim SQLTambah As String SQLT**ambah tabel\_pondasi Into (id\_proyek,id\_titik,kedalaman\_p,panjang\_p,lebar\_p,kedalaman\_maks,kedalaman\_interval) values (" & Text6 & "," & Text7 & "," & Text19 & "," & Text19 & "," & Text12 & "',"" & Text9 & "'," & Text10 & "')" db.Execute SQLTambah 'Adodc2.Recordset.AddNew 'Adodc2.Recordset.Fields("id\_proyek") = Text6.Text 'Adodc2.Recordset.Fields("id\_titik") = Text7.Text 'Adodc2.Recordset.Fields("kedalaman\_p") = 0 'Adodc2.Recordset.Fields("panjang\_p") = 0 pR 'Adodc2.Recordset.Fields("lebar\_p") = Text12 'Adodc2.Recordset.Fields("kedalaman\_maks") = Text9 'Adodc2.Recordset.Fields("kedalaman\_interval") = 0.2

End Sub Sub kolomCPT()

DataGrid1.Columns(0).Caption = "ID Titik CPT" DataGrid1.Columns(0).Width = "1200" DataGrid1.Columns(1).Caption = "Kedalaman (m)"



DataGrid1.Columns(1).Width = "1005" DataGrid1.Columns(2).Caption = "Conus (kg/cm2)" DataGrid1.Columns(2).Width = "1005" DataGrid1.Columns(3).Caption = "Conus + Cleeve (kg/cm2)" DataGrid1.Columns(3).Width = "1200" DataGrid1.Columns(4).Caption = "FR" DataGrid1.Columns(4).Width = "1005" DataGrid1.Columns(5).Caption = "Keterangan Tanah" DataGrid1.Columns(5).Width = "2000"

End Sub Sub kolomSPT()

DataGrid2.Columns(0).Caption = "ID Titik SPT"

DataGrid2.Columns(0).Width = "1200"

DataGrid2.Columns(1).Caption = "Kedalaman (m)"

DataGrid2.Columns(1).Width = "1005"

DataGrid2.Columns(2).Caption = "N1"

DataGrid2.Columns(2).Width = "500"

DataGrid2.Columns(3).Caption = "N2"

DataGrid2.Columns(3).Width = "500"

DataGrid2.Columns(4).Caption = "N3"

DataGrid2.Columns(4).Width = "500"

DataGrid2.Columns(5).Caption = "N spt (N2+N3)"

R

DataGrid2.Columns(5).Width = "1080"

DataGrid2.Columns(6).Caption = "Keterangan Tanah"

DataGrid2.Columns(6).Width = "2000"

### End Sub

Private Sub KosongkanTextCPT()

Text9.Text = ""

Text11.Text = ""



```
Text12.Text = ""
End Sub
Private Sub KosongkanTextSPT()
  Text14.Text = ""
  Text15.Text = ""
  Text16.Text = ""
  Text17.Text = ""
End Sub
Private Sub Enable_trueIsiSPT()
  Text14.Enabled = True
  Text15.Enabled = True
                                         AS
                                                 KA
                                      T
  Text16.Enabled = True
  Text17.Enabled = True
End Sub
Private Sub Enable_trueIsiCPT()
  Text9.Enabled = True
  Text11.Enabled = True
  Text12.Enabled = True
End Sub
Private Sub Enable_falseIsiCPT()
                                                     -
  Text9.Enabled = False
                                   JAPR
  Text11.Enabled = False
  Text12.Enabled = False
End Sub
Private Sub Enable falseIsiSPT()
  Text14.Enabled = False
  Text15.Enabled = False
  Text16.Enabled = False
  Text17.Enabled = False
End Sub
```

'atur kondisi awal saat form dipanggil Private Sub KondisiawalCPT() KosongkanTextCPT Enable\_falseIsiCPT btn\_editCPT.Enabled = False btn\_hapusCPT.Enabled = False End Sub Private Sub KondisiawalSPT() KosongkanTextSPT Enable\_falseIsiSPT btn\_editSPT.Enabled = False KA ASbtn\_hapusSPT.Enabled = False End Sub Private Sub btn\_baruCPT\_Click() If btn\_baruCPT.Caption = "Data Baru" Then btn\_baruCPT.Caption = "&Simpan" btn\_batalCPT.Enabled = True btn\_cariCPT.Enabled = False btn\_editCPT.Enabled = False Enable\_trueIsiCPT GIJA -KosongkanTextCPT PR Else 'mencegah data kosong sebelum disimpan If Combo2 = "" Or Text9 = "" Then MsgBox "Data Belum Lengkap...!" Else Text9 = Text9.Text + 0.2Call TambahDataCPT

Text9 = Text9.Text - 0.2 btn\_baruCPT.Caption = "Data Baru"



```
Enable_falseIsiCPT
  btn_batalCPT.Enabled = False
  btn_cariCPT.Enabled = True
  End If
End If
kolomCPT
tampilanCPT
btn editCPT.Enabled = True
End Sub
Private Sub btn_baruSPT_Click()
                                          A S
If btn_baruSPT.Caption = "Data Baru" Then
  btn_baruSPT.Caption = "&Simpan"
  btn_batalSPT.Enabled = True
  btn_cariSPT.Enabled = False
  btn_editSPT.Enabled = False
  Enable_trueIsiSPT
  KosongkanTextSPT
Else
                      ÷1
  'mencegah data kosong sebelum disimpan
  If Combo3 = "" Or Text14 = "" Or Text15 = "" Then
                                                     -
  MsgBox "Data Belum Lengkap...!"
  Else
  Text14 = CDec(Text14) + CDec(Text15)
  Call TambahDataSPT
  Text14 = CDec(Text14) - CDec(Text15)
  btn_baruSPT.Caption = "Data Baru"
  Enable_falseIsiSPT
  btn_batalSPT.Enabled = False
  btn_cariSPT.Enabled = True
  End If
```



End If kolomSPT tampilanSPT End Sub

Private Sub btn\_batalCPT\_Click() KosongkanTextCPT Enable falseIsiCPT btn\_baruCPT.Caption = "Data Baru" btn\_editCPT.Caption = "Edit Data" btn\_cariCPT.Enabled = True KA ASDataGrid1.AllowUpdate = False DataGrid2.AllowUpdate = False btn\_hapusCPT.Enabled = False btn\_baruCPT.Enabled = False KondisiawalCPT btn\_batalCPT.Enabled = False End Sub Private Sub btn\_batalSPT\_Click() KosongkanTextSPT Enable\_falseIsiSPT PR btn\_baruSPT.Caption = "Data Baru" btn\_editSPT.Caption = "Edit Data" btn\_cariSPT.Enabled = True DataGrid1.AllowUpdate = False DataGrid2.AllowUpdate = False btn\_hapusSPT.Enabled = False btn\_baruSPT.Enabled = False KondisiawalSPT btn\_batalCPT.Enabled = False



Private Sub btn\_cariCPT\_Click() If btn\_cariCPT.Caption = "CARI" Then btn\_cariCPT.Caption = "OK" Text7.Text = "" btn\_baruCPT.Enabled = False btn\_editCPT.Enabled = False Text7.Enabled = True Text7.SetFocus ElseIf Text7.Text = "" Then MsgBox "Anda Harus Mengisi Kode Titik.", vbInformation, "Cari" Text7.SetFocus Else kolomCPT Call tampilanCPT With rs If .EOF And .BOF Then MsgBox "Data CPT tidak ditemukan", vbOKOnly rs.Requery 'refresh data Text7.Text = "Cari ID Titik CPT" End If GIJA End With θ. Text7.Enabled = False PR btn\_baruCPT.Enabled = True btn\_editCPT.Enabled = True btn\_cariCPT.Caption = "CARI" End If End Sub Private Sub btn\_cariSPT\_Click() If btn\_cariSPT.Caption = "CARI" Then

btn\_cariSPT.Caption = "OK"

Text8.Text = ""

btn\_baruSPT.Enabled = False btn\_editSPT.Enabled = False Text8.Enabled = TrueText8.SetFocus ElseIf Text8.Text = "" Then MsgBox "Anda Harus Mengisi Kode Titik.", vbInformation, "Cari" Text8.SetFocus Else kolomSPT Call tampilanSPT With rs If .EOF And .BOF Then a. MsgBox "Data SPT tidak ditemukan", vbOKOnly rs.Requery 'refresh data Text8.Text = "Cari ID Titik SPT" End If End With Text8.Enabled = False btn\_baruSPT.Enabled = True btn\_editSPT.Enabled = True btn\_cariSPT.Caption = "CARI" 1 JAPR End If End Sub

```
Private Sub btn_editCPT_Click()
```

'mencegah data kosong sebelum disimpan

If Text7 = "" Then

MsgBox "Data Belum Lengkap ... !"

btn\_editCPT.Caption = "Edit Data"

End If

If btn\_editCPT.Caption = "Edit Data" Then

btn\_editCPT.Caption = "Simpan"



DataGrid1.AllowUpdate = True btn\_hapusCPT.Enabled = True Else On Error Resume Next Adodc1.Recordset.Update Adodc1.Recordset.Update 'Adodc2.Recordset.Update btn hapusCPT.Enabled = False DataGrid1.AllowUpdate = False btn\_editCPT.Caption = "Edit Data" MsgBox "Data telah diperbaharui", vbInformation, "Data CPT End If End Sub Private Sub btn\_editSPT\_Click() 'mencegah data kosong sebelum disimpan If Text8 = "" Then MsgBox "Data Belum Lengkap...!" btn\_editSPT.Caption = "Edit Data" End If If btn\_editSPT.Caption = "Edit Data" Then btn\_editSPT.Caption = "Simpan" PR DataGrid2.AllowUpdate = True btn\_hapusSPT.Enabled = True Else On Error Resume Next AdodcSPT.Recordset.Update AdodcSPT.Recordset.Update 'Adodc2.Recordset.Update btn\_hapusSPT.Enabled = False DataGrid2.AllowUpdate = False btn\_editSPT.Caption = "Edit Data"



MsgBox "Data telah diperbaharui", vbInformation, "Data SPT" End If End Sub Private Sub btn\_hapusCPT\_Click() Dim sql1, sql2 As String Dim pesan As Integer pesan = MsgBox("Anda yakin menghapus data tersebut?", vbInformation + vbYesNo, "Hapus Data !") If pesan = vbYes Then On Error Resume Next sql1 = "DELETE FROM tabel\_cpt WHERE id\_titik ="" & Combo2.Text & "' AND id\_proyek ='" & Text6.Text & "' ' db.Execute (sql1) sql2 = "DELETE FROM tabel\_pondasi WHERE id\_titik =" & Combo2.Text & " AND id\_proyek ='" & Text6.Text & "' " db.Execute (sql2) 'Adodc2.Recordset.Delete Text9.Text = "" GIJA Text11.Text = "" -Text12.Text = "" End If **On Error** Resume Next Adodc1.Recordset.Update Adodc2.Recordset.Update btn\_hapusCPT.Enabled = False DataGrid1.AllowUpdate = False btn\_editCPT.Caption = "Edit Data" Call tampilanCPT Call kolomCPT End Sub

Private Sub btn\_hapusSPT\_Click() Dim sql1, sql2 As String Dim pesan As Integer pesan = MsgBox("Anda yakin menghapus data tersebut?", vbInformation + vbYesNo, "Hapus Data !") If pesan = vbYes Then On Error Resume Next sql1 = "DELETE FROM tabel\_spt WHERE id\_titik ="" & Combo3.Text & "' AND id\_proyek ='" & Text6.Text & "" " db.Execute (sql1) sql2 = "DELETE FROM tabel\_pondasi WHERE id\_titik =" & Combo3.Text & " AND id\_proyek ='" & Text6.Text & ' db.Execute (sql2) 'AdodcSPT.Recordset.Delete Text14.Text = ""Text15.Text = "" Text16.Text = "" Text17.Text = "" OPGIJAPR End If Call tampilanSPT θ. Call kolomSPT End Sub

Private Sub btn\_inputCPT\_Click() Form1.Enabled = False FormUjiCPT.Show End Sub

Private Sub btn\_inputSPT\_Click() Form1.Enabled = False FormUjiSPT.Show End Sub

Private Sub btn\_projek\_Click() Unload Me Form2.Show End Sub

Private Sub Combo1\_Click()

Set rs = New Recordset

rs.Open "select \* from tabel\_projek where id\_proyek='" & Left(Combo1.Text, 5) & "' ", db, adOpenDynamic, adLockOptimistic

\*

pR

rs.Requery

With rs

If .EOF And .BOF Then

MsgBox "ID tidak ditemukan", vbOKOnly

Exit Sub

Else

Text1.Text = rs.Fields("nama\_projek")

Text2.Text = rs.Fields("test\_oleh")

Text3.Text = rs.Fields("test\_tanggal")

Text4.Text = rs.Fields("lokasi\_projek")

Text5.Text = rs.Fields("Keterangan")

Text6.Text = rs.Fields("id\_proyek")

End If

End With

rs.Close

Text7.Text = "Cari ID Titik CPT" Text8.Text = "Cari ID Titik SPT"

Call kolomCPT

'Call tampilanCPT Call kolomSPT 'Call tampilanSPT btn\_baruCPT.Enabled = True btn\_baruSPT.Enabled = True End Sub Private Sub Combo2\_Click() Call koneksi Set rsCPT = New Recordset rsCPT.CursorLocation = adUseClient rsCPT.Open "Select id\_titik, Kedalaman, Conus, ConusCleeve, FR, ket\_tanah from tabel\_cpt where id\_titik like '%" & Combo2 & "%' AND id\_proyek like '%" & Text6 & "%' ", db, adOpenDynamic, adLockOptimistic If Not rsCPT.EOF Then With rsCPT With DataGrid1 Set .DataSource = rsCPT.Refresh End With đ End With GIJA End If With rsCPT R If .EOF And .BOF Then MsgBox "Data CPT tidak ditemukan", vbOKOnly rsCPT.Requery 'refresh data End If End With btn\_editCPT.Enabled = True End Sub Private Sub Combo3\_Click()

Call koneksi

Set rsSPT = New Recordset rsSPT.CursorLocation = adUseClient rsSPT.Open "SELECT id\_titik, Kedalaman, N1, N2, N3, N, ket\_tanah from tabel\_spt where id\_titik like '%" & Combo3 & "%' AND id\_proyek like '%" & Text6 & "%' ", db, adOpenDynamic, adLockOptimistic If Not rsSPT.EOF Then With rsSPT With DataGrid2 Set .DataSource = rsSPT .Refresh End With KA ITAS End With End If With rsSPT If .EOF And .BOF Then MsgBox "Data SPT tidak ditemukan", vbOKOnly rsSPT.Requery 'refresh data End If End With -D btn\_editSPT.Enabled = True GIJAPR -End Sub Private Sub Form\_Load() Text10.Text = "0.2" Text13.Text = "0"Text19.Text = "0"Text9.Text = "" Text14.Text = "" Text15.Text = ""

Combo2.AddItem "CPT01"

Combo2.AddItem "CPT02" Combo2.AddItem "CPT03" Combo2.AddItem "CPT04" Combo2.AddItem "CPT05" Combo2.AddItem "CPT06" Combo2.AddItem "CPT07" Combo2.AddItem "CPT08" Combo2.AddItem "CPT09" Combo2.AddItem "CPT10" Combo3.AddItem "SPT01" Combo3.AddItem "SPT02" Combo3.AddItem "SPT03" Combo3.AddItem "SPT04" Combo3.AddItem "SPT05" Combo3.AddItem "SPT06" Combo3.AddItem "SPT07" Combo3.AddItem "SPT08" Combo3.AddItem "SPT09" Combo3.AddItem "SPT10"

Call koneksi Combo1.Clear

Set rs = New Recordset rs.Open "SELECT \* FROM tabel\_projek", db, adOpenDynamic, adLockOptimistic

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Do Until rs.EOF Combo1.AddItem rs!id\_proyek & Space(5) & rs!nama\_projek rs.MoveNext Loop

rs.Close



```
____
Call koneksi
Call tampilanCPT
Call kolomCPT
Call tampilanSPT
Call kolomSPT
                                                                  _____
____
Adodc1.Visible = False
Adodc2.Visible = False
                                     TAS
                                                KA
AdodcSPT.Visible = False
End Sub
Private Sub Text7 Change()
Call koneksi
Set rsCPT = New Recordset
rsCPT.CursorLocation = adUseClient
rsCPT.Open "Select id_titik, Kedalaman, Conus, ConusCleeve, FR, ket_tanah from
tabel_cpt where id_titik like '%" & Text7 & "%' AND id_proyek like '%" & Text6 & "%' ",
db
                            GIJA
If Not rsCPT.EOF Then
                                         PR
  With rsCPT
    With DataGrid1
      Set .DataSource = rsCPT
         .Refresh
    End With
  End With
End If
End Sub
Private Sub Text8_Change()
Call koneksi
```



Set rsSPT = New Recordset rsSPT.CursorLocation = adUseClient rsSPT.Open "SELECT id\_titik, Kedalaman, N1, N2, N3, N, ket\_tanah from tabel\_spt where id\_titik like '%" & Text8 & "%' AND id\_proyek like '%" & Text6 & "%' ", db If Not rsSPT.EOF Then With rsSPT With DataGrid2 Set .DataSource = rsSPT .Refresh ITAS KATO End With End With End If End Sub d) GIJAPRA \*

## Kode List Program CPT

Dim db As ADODB.Connection Dim rs As ADODB.Recordset Dim SkalaX, SkalaY As Integer Sub koneksi() Set db = New ADODB.Connection db.CursorLocation = adUseClient db.Open "proyek\_ta" End Sub AS KA Private Sub TampilLapisanTanah() pasir1.Visible = False lempung1.Visible = False pasir2.Visible = False lempung2.Visible = False pasir3.Visible = False lempung3.Visible = False pasir4.Visible = False lempung4.Visible = False pasir5.Visible = False GIJAPR lempung5.Visible = False pasir6.Visible = False lempung6.Visible = False pasir7.Visible = False lempung7.Visible = False pasir8.Visible = False lempung8.Visible = False pasir9.Visible = False lempung9.Visible = False pasir10.Visible = False lempung10.Visible = False

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pasir11.Visible = False lempung11.Visible = False pasir12.Visible = False lempung12.Visible = False pasir13.Visible = False lempung13.Visible = False pasir14.Visible = False lempung14.Visible = False pasir15.Visible = False lempung15.Visible = False pasir16.Visible = False lempung16.Visible = False pasir17.Visible = False lempung17.Visible = False pasir18.Visible = False lempung18.Visible = False pasir19.Visible = Falselempung19.Visible = False pasir20.Visible = False lempung20.Visible = False pasir21.Visible = False GIJAPR lempung21.Visible = False pasir22.Visible = False lempung22.Visible = False pasir23.Visible = False lempung23.Visible = False pasir24.Visible = False lempung24.Visible = False pasir25.Visible = False lempung25.Visible = False pasir26.Visible = False lempung26.Visible = False

pasir27.Visible = False lempung27.Visible = False pasir28.Visible = False lempung28.Visible = False pasir29.Visible = False lempung29.Visible = False pasir30.Visible = False lempung30.Visible = False End Sub Private Sub btn\_cekLapisan\_Click() Call JenisLapisanTanah AS KA T End Sub Private Sub btn\_kembali\_Click() Form1.Enabled = True Unload Me End Sub Private Sub btn\_lihat\_Click() FormUjiCPT.Enabled = False GIJA LihatDataCPT.Show θ. PR End Sub Private Sub btn\_print\_Click() Dim sql As String FrmPrintCPT.Show FrmPrintCPT.CurrentX = 2200FrmPrintCPT.CurrentY = 400FrmPrintCPT.FontSize = FormUjiCPT.FontSize

FrmPrintCPT.Print FormUjiCPT.Caption

FrmPrintCPT.CurrentX = 1000



FrmPrintCPT.Print "-----

-----"

FrmPrintCPT.CurrentX = 2200

FrmPrintCPT.FontSize = 14

FrmPrintCPT.Print Text10.Text

FrmPrintCPT.Print ""

FrmPrintCPT.FontName = "arial"

FrmPrintCPT.FontSize = 10

FrmPrintCPT.CurrentX = 1000

FrmPrintCPT.Print "Identitas titik (CPT)" & vbTab & vbTab & ":" & vbTab & Text1.Text

FrmPrintCPT.FontName = "arial"

FrmPrintCPT.FontSize = 10

FrmPrintCPT.CurrentX = 1000

FrmPrintCPT.Print "ID Proyek" & vbTab & vbTab & vbTab & ":" & vbTab &

FormUjiCPT.Text3.Text & ""

FrmPrintCPT.FontName = "arial"

FrmPrintCPT.FontSize = 10

FrmPrintCPT.CurrentX = 1000

FrmPrintCPT.Print "Kedalaman pondasi (Df)" & vbTab & ":" & vbTab & Text2.Text & " (m)"

FrmPrintCPT.FontName = "arial"

FrmPrintCPT.FontSize = 10

FrmPrintCPT.CurrentX = 1000

FrmPrintCPT.Print "Lebar / sisi pondasi" & vbTab & vbTab & ":" & vbTab & Text4.Text & " (m)"

FrmPrintCPT.FontName = "arial"

FrmPrintCPT.FontSize = 10

FrmPrintCPT.CurrentX = 1000

FrmPrintCPT.Print "Daya Dukung (qa)" & vbTab & vbTab & ":" & vbTab & Text8.Text

& " (kg/cm2)"

FrmPrintCPT.Print ""

FrmPrintCPT.CurrentX = 1600



```
FrmPrintCPT.Print "Kedalaman (m)" & vbTab & "Conus (kg/cm2)"
Set rs = New ADODB.Recordset
sql = "SELECT Kedalaman, Conus FROM tabel_cpt WHERE id_titik ='" & Text1.Text &
"' AND id_proyek ='" & Text3.Text & "'"
rs.Open (sql), db, adOpenDynamic, adLockOptimistic
Do Until rs.EOF
  'Debug.Print rs.Fields("Conus").Value
  X1 = rs.Fields("Kedalaman").Value
  Y1 = rs.Fields("Conus").Value
  rs.MoveNext
FrmPrintCPT.CurrentX = 2200
FrmPrintCPT.Print X1 & vbTab & vbTab & vbTab & Y1
Loop
FrmPrintCPT.CurrentX = 1000
FrmPrintCPT.Print "------
FrmPrintCPT.CurrentX = 1200
FrmPrintCPT.FontName = "Comic Sans MS"
FrmPrintCPT.FontSize = 10
FrmPrintCPT.Print "printed at : " & Date
End Sub
                                           PR
Private Sub btn_analisa_Click()
Dim sql As String
Dim B, df, alas, sfQu, sfQs As Single
Dim qa As Single
Dim az1, az2 As Currency
Call koneksi
On Error GoTo eror
B = Text4.Text
df = Text2.Text
az1 = df - (8 * B)
```



If Text4.Text = "" Then MsgBox "Lebar (B) tidak boleh kosong", vbExclamation, "Kesalahan" Else Text5.Text = az1Combo3.Text = az2'CDec(Text5.Text) = az1 'CDec(Combo3.Text) = az2Set rs = New Recordset sql = "SELECT AVG(Conus) FROM tabel\_cpt WHERE id\_titik ='" & Text1.Text & "' AND id\_proyek ="" & Text3.Text & "" AND Kedalaman >="" & CDec(Text5.Text) & "" AND Kedalaman <="" & CDec(Combo3.Text) & "" " Set rs = db.Execute(sql) Text7.Text = rs.Fields("AVG(Conus)") qc = Text7.TextB = Text4.Textdf = Text2.Textđ

sfQu = Combo1.Text sfQs = Combo2.Text

alas = Text6.Text

az2 = df + (4 \* B)

'====mencari qf kohesif lapisan 1===='

sqlR1 = "SELECT AVG(Conus) FROM tabel\_cpt WHERE id\_titik ="" & Text1.Text & "" AND id\_proyek ="" & Text3.Text & "' AND Kedalaman >"" & Text9 & "' AND Kedalaman <="" & Text11 & "' "

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Set rs = db.Execute(sqlR1)

rtR1 = rs.Fields("AVG(Conus)")

sqlR2 = "SELECT AVG(ConusCleeve) FROM tabel\_cpt WHERE id\_titik ='" & Text1.Text & "' AND id\_proyek ='" & Text3.Text & "' AND Kedalaman >'" & Text9 & "' AND Kedalaman <='" & Text11 & "' "



Set rs = db.Execute(sqlR2) rtR2 = rs.Fields("AVG(ConusCleeve)") qf1 = (rtR2 - rtR1) '======mencari qf kohesif lapisan 1====='

'=====mencari qc kohesif lapisan 2====='

sqlR1Lap2 = "SELECT AVG(Conus) FROM tabel\_cpt WHERE id\_titik ="" & Text1.Text & "' AND id\_proyek ="" & Text3.Text & "' AND Kedalaman >"" & Text12 & "' AND Kedalaman <="" & Text13 & "' "

Set rs = db.Execute(sqlR1Lap2)

rtR1Lap2 = rs.Fields("AVG(Conus)")

sqlR2Lap2 = "SELECT AVG(ConusCleeve) FROM tabel\_cpt WHERE id\_titik =" & Text1.Text & " AND id\_proyek =" & Text3.Text & " AND Kedalaman >" & Text12 & " AND Kedalaman <= & Text13 & " "

```
Set rs = db.Execute(sqlR2Lap2)
```

rtR2Lap2 = rs.Fields("AVG(ConusCleeve)")

qf2 = (rtR2Lap2 - rtR1Lap2)

'=====mencari qc kohesif lapisan 2====

'=====mencari qc kohesif lapisan 3=====

sqlR1Lap3 = "SELECT AVG(Conus) FROM tabel\_cpt WHERE id\_titik ='" & Text1.Text & "' AND id\_proyek ='" & Text3.Text & "' AND Kedalaman >'" & Text21 & "' AND Kedalaman <='' & Text22 & "' "

Set rs = db.Execute(sqlR1Lap3)

rtR1Lap3 = rs.Fields("AVG(Conus)")

```
sqlR2Lap3 = "SELECT AVG(ConusCleeve) FROM tabel_cpt WHERE id_titik ='" &
```

Text1.Text & "' AND id\_proyek ='" & Text3.Text & "' AND Kedalaman >'" & Text21 & "'

AND Kedalaman <=''' & Text22 & "' "

Set rs = db.Execute(sqlR2Lap3)

rtR2Lap3 = rs.Fields("AVG(ConusCleeve)")

qf3 = (rtR2Lap3 - rtR1Lap3)

'=====mencari qc kohesif lapisan 3====='

'=====mencari qc kohesif lapisan 4====='

sqlR1Lap4 = "SELECT AVG(Conus) FROM tabel\_cpt WHERE id\_titik ='" & Text1.Text & "' AND id\_proyek ='" & Text3.Text & "' AND Kedalaman >'" & Text23 & "' AND Kedalaman <='' & Text24 & "' "

- Set rs = db.Execute(sqlR1Lap4)
- rtR1Lap4 = rs.Fields("AVG(Conus)")

sqlR2Lap4 = "SELECT AVG(ConusCleeve) FROM tabel\_cpt WHERE id\_titik ="" & Text1.Text & "' AND id\_proyek ="" & Text3.Text & "' AND Kedalaman >"" & Text23 & "' AND Kedalaman <="" & Text24 & "' "

Set rs = db.Execute(sqlR2Lap4)

rtR2Lap4 = rs.Fields("AVG(ConusCleeve)"

qf4 = (rtR2Lap4 - rtR1Lap4)

'=====mencari qc kohesif lapisan 4====

sqlqc1 = "SELECT AVG(Conus) FROM tabel\_cpt WHERE id\_titik ="" & Text1.Text & "" AND id\_proyek ="" & Text3.Text & "' AND Kedalaman >"" & Text9 & "' AND Kedalaman <="" & Text11 & "' "

Set rs = db.Execute(sqlqc1)

```
qclap1 = rs.Fields("AVG(Conus)")
```

Text17.Text = qclap1

```
sqlqc2 = "SELECT AVG(Conus) FROM tabel_cpt WHERE id_titik ="" & Text1.Text & ""
AND id_proyek ="" & Text3.Text & "' AND Kedalaman >="" & Text12 & "' AND
Kedalaman <="" & Text13 & "' "
```

Set rs = db.Execute(sqlqc2)

qclap2 = rs.Fields("AVG(Conus)")

Text18.Text = qclap2

```
sqlqc3 = "SELECT AVG(Conus) FROM tabel_cpt WHERE id_titik ='" & Text1.Text & "'
```

```
AND id_proyek ='" & Text3.Text & "' AND Kedalaman >='" & Text21 & "' AND Kedalaman <='" & Text22 & "' "
```

```
Set rs = db.Execute(sqlqc3)
```

qclap3 = rs.Fields("AVG(Conus)")



sqlqc4 = "SELECT AVG(Conus) FROM tabel\_cpt WHERE id\_titik ='" & Text1.Text & "' AND id\_proyek ='" & Text3.Text & "' AND Kedalaman >='" & Text23 & "' AND Kedalaman <='" & Text24 & "' " Set rs = db.Execute(sqlqc4) qclap4 = rs.Fields("AVG(Conus)") 'pondasi bentuk segitiga  $ap1 = (alas ^ 2) / 4 * Math.Sqr(3)$ qu1 = (ap1 \* qc) \* 10000as1 = (3 \* B) \* 10000 If CLapisan1.Value = Checked Then fs11 = qf1 / 10ElseIf CLapisan1.Value = Unchecked Then fs11 = qclap1 / 200End If If CLapisan2.Value = Checked Then fs12 = qf2 / 10ElseIf CLapisan2. Value = Unchecked Then fs12 = qclap2 / 200End If If CLapisan3.Value = Checked Then fs13 = qf3 / 10PR A ElseIf CLapisan3.Value = Unchecked Then fs13 = qclap3 / 200End If If CLapisan4.Value = Checked Then fs14 = qf4 / 10ElseIf CLapisan4.Value = Unchecked Then fs14 = qclap4 / 200End If lapisan1 = CDec(Text11.Text) - CDec(Text9.Text) lapisan2 = CDec(Text13.Text) - CDec(Text12.Text)



$$\begin{split} lapisan3 &= CDec(Text22.Text) - CDec(Text21.Text) \\ lapisan4 &= CDec(Text24.Text) - CDec(Text23.Text) \\ fs1 &= ((fs11 * lapisan1) + (fs12 * lapisan2) + (fs13 * lapisan3) + (fs14 * lapisan4)) \\ qs1 &= as1 * fs1 \\ qa1 &= (qu1 / sfQu) + (qs1 / sfQs) \end{split}$$

'Pondasi bentuk kotak  $ap2 = B^{2}$ qu2 = (ap2 \* qc) \* 10000as2 = (4 \* B) \* 10000 If CLapisan1.Value = Checked Then fs21 = qf1 / 10ElseIf CLapisan1.Value = Unchecked Then fs21 = qclap1 / 200End If If CLapisan2.Value = Checked Then fs22 = qf2 / 10ElseIf CLapisan2. Value = Unchecked Then fs22 = qclap2 / 200End If If CLapisan3.Value = Checked Then fs23 = qf3 / 10PR ElseIf CLapisan3.Value = Unchecked Then fs23 = qclap3 / 200End If If CLapisan4.Value = Checked Then fs24 = qf4 / 10ElseIf CLapisan4.Value = Unchecked Then fs24 = qclap4 / 200End If lapisan21 = CDec(Text11.Text) - CDec(Text9.Text) lapisan22 = CDec(Text13.Text) - CDec(Text12.Text)



$$\begin{split} lapisan23 &= CDec(Text22.Text) - CDec(Text21.Text) \\ lapisan24 &= CDec(Text24.Text) - CDec(Text23.Text) \\ fs2 &= ((fs21 * lapisan21) + (fs22 * lapisan22) + (fs23 * lapisan23) + (fs24 * lapisan24)) \\ qs2 &= as2 * fs2 \\ qa2 &= (qu2 / sfQu) + (qs2 / sfQs) \end{split}$$

#### 'Pondasi bentuk Lingkaran

ap3 = 0.25 \* (22 / 7) \* (B ^ 2) qu3 = (ap3 \* qc) \* 10000as3 = ((22 / 7) \* B) \* 10000If CLapisan1.Value = Checked Then fs31 = qf1 / 10ElseIf CLapisan1.Value = Unchecked Then fs31 = qclap1 / 200End If If CLapisan2.Value = Checked Then fs32 = qf2 / 10ElseIf CLapisan2. Value = Unchecked Then fs32 = qclap2 / 200End If If CLapisan3.Value = Checked Then fs33 = qf3 / 10PR ElseIf CLapisan3.Value = Unchecked Then fs33 = qclap3 / 200End If If CLapisan4.Value = Checked Then fs34 = qf4 / 10ElseIf CLapisan4.Value = Unchecked Then fs34 = qclap4 / 200End If lapisan31 = CDec(Text11.Text) - CDec(Text9.Text) lapisan32 = CDec(Text13.Text) - CDec(Text12.Text)



$$\begin{split} lapisan33 &= CDec(Text22.Text) - CDec(Text21.Text) \\ lapisan34 &= CDec(Text24.Text) - CDec(Text23.Text) \\ fs3 &= ((fs31 * lapisan31) + (fs32 * lapisan32) + (fs33 * lapisan33) + (fs34 * lapisan34)) \\ qs3 &= as3 * fs3 \\ qa3 &= (qu1 / sfQu) + (qs3 / sfQs) \end{split}$$

If Option1.Value = True Then Text8.Text = qa1 / 1000Text14.Text = fs11Text20.Text = fs12Text25.Text = fs13KA AS T Text26.Text = fs14Text15.Text = qs1Text16.Text = qu1ElseIf Option2.Value = True Then Text8.Text = qa2 / 1000Text14.Text = fs21Text20.Text = fs22Text25.Text = fs23d) Text26.Text = fs24CIJAPR Text15.Text = qs2Text16.Text = qu2ElseIf Option3.Value = True Then Text8.Text = qa3 / 1000Text14.Text = fs31Text20.Text = fs32Text25.Text = fs33Text26.Text = fs34Text15.Text = qs3Text16.Text = qu3End If End If



If Check\_lap2.Value = Unchecked Then Text20.Text = 0End If Exit Sub eror: MsgBox "Ada kesalahan dalam pengisian data, periksa kembali data anda", vbExclamation, "Kesalahan" End Sub Private Sub Command5\_Click() On Error GoTo eror TAS Dim sql As String Set rs = New Recordset sql = "SELECT AVG(Conus) FROM tabel\_cpt WHERE kode\_cpt ='" & Combo14.Text & "' AND Kedalaman >='" & Text2.Text & "' AND Kedalaman <='" & Combo3.Text & "' " Set rs = db.Execute(sql)Text7.Text = rs.Fields("AVG(Conus)") Exit Sub eror: GIJA MsgBox Err.Description End Sub Private Sub tampilan() Dim sql As String Set rs = New ADODB.Recordset sql = "SELECT Kedalaman, Conus, ConusCleeve, FR, ket\_tanah FROM tabel\_cpt WHERE id\_titik ='" & Text1.Text & "' AND id\_proyek ='" & Text3.Text & "' " rs.Open sql, db, adOpenDynamic, adLockOptimistic Set DataGrid1.DataSource = rs

End Sub

Private Sub Check\_lap1\_Click() If Check\_lap1.Value = Checked Then Text9.Visible = True Text11.Visible = TrueCLapisan1.Visible = True Else Text9.Visible = False Text11.Visible = False CLapisan1.Visible = False SITAS End If KA End Sub Private Sub Check\_lap2\_Click() If Check\_lap2.Value = Checked Then Text12.Visible = True Text13.Visible = True CLapisan2.Visible = True Else đ Text12.Visible = False CIJAPR Text13.Visible = False -CLapisan2.Visible = False Text12.Text = "0" Text13.Text = "0"Text20.Text = 0End If End Sub

Private Sub Check\_lap3\_Click() If Check\_lap3.Value = Checked Then Text21.Visible = True Text22.Visible = True



CLapisan3.Visible = True Else Text21.Visible = False Text22.Visible = False CLapisan3.Visible = False Text21.Text = "0"Text22.Text = "0"Text25.Text = 0End If End Sub AS KA Private Sub Check\_lap4\_Click() If Check\_lap4.Value = Checked Then Text23.Visible = True Text24.Visible = True CLapisan4.Visible = True Else Text23.Visible = False Text24.Visible = False CLapisan4.Visible = False Text23.Text = "0" GIJAPR -Text24.Text = "0"Text26.Text = 0End If End Sub Private Sub Command6\_Click() On Error GoTo eror pic\_pondasiA.Visible = True pic\_pondasiB.Visible = True

Label13.Visible = True

Label13.Caption = "Df"



Label25.Caption = "Muka Air Tanah"

```
Dim delta As Single
B = Text4.Text
delta = CDec(Text2.Text)
ab = delta * SkalaY
pondasiA = 255 + ab
pondasiB = 720 + ab
labelDf = 0 + ab
pic_pondasiA.Height = pondasiA
pic_pondasiB.Top = pondasiB
                                          A S
Label13.Top = labelDf
Shape3.Height = 0 + B '* SkalaY
Shape3.Top = delta * SkalaY
Label25.Top = CDec(Text27.Text) * SkalaY
LineMAT1.Y1 = CDec(Text27.Text) * SkalaY
LineMAT1.Y2 = CDec(Text27,Text) * SkalaY
Pic_MAT.Top = 840 + (CDec(Text27.Text) * SkalaY)
Picture1.Refresh
Set rs = New ADODB.Recordset
sql = "SELECT Kedalaman, Conus FROM tabel_cpt WHERE id_titik ='" & Text1.Text &
"' AND id_proyek ='" & Text3.Text & """
```

rs.Open (sql), db, adOpenDynamic, adLockOptimistic

rs.MoveFirst

Do Until rs.EOF

- X1 = rs.Fields("Conus").Value
- Y1 = rs.Fields("Kedalaman").Value

rs.MoveNext

If rs.EOF = False Then



X2 = rs.Fields("Conus").Value Y2 = rs.Fields("Kedalaman").Value End If

Picture1.Line (X1 \* SkalaX, Y1 \* SkalaY)-(X2 \* SkalaX, Y2 \* SkalaY), vbRed Loop '====== Exit Sub eror: MsgBox Err.Description End Sub KA AS T Private Sub Form\_Load() 8 Text6.Text = 1Text2.Text = "" Text4.Text = "" Text9.Text = "" Text11.Text = "" Text12.Text = "0"Text13.Text = "0"đ OPGIJAPR Text7.Text = "" Text14.Text = "" -Text16.Text = "" Text15.Text = "" Text8.Text = "" Text20.Text = "" Text21.Text = "0"Text22.Text = "0"Text23.Text = "0" Text24.Text = "0"Text25.Text = "" Text26.Text = "" Text27.Text = "0"

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Combo1.AddItem "2.5" Combo1.AddItem "3" Combo1.AddItem "5" Combo2.AddItem "2.5" Combo2.AddItem "3"

Option2.Value = True

Text1.Text = Form1.Combo2.Text Text3.Text = Form1.Text6.Text Text10.Text = Form1.Text1.Text

Call koneksi Call TampilLapisanTanah

'\_\_\_\_\_

'nilai skala dalama menggambar pada VB SkalaX = 30.3125 SkalaY = 300 'Titik acuan sumbu Y, sebagai titik nol sumbu Y

End Sub Private Sub kelompok\_tiang\_Click() FormUjiCPT.Enabled = False FrmTiangCPT.Show End Sub

Private Sub Option1\_Click() If Option1.Value = True Then Label6.Visible = True



Text6.Visible = True Text6.Text = "0"End If End Sub Private Sub Option2\_Click() Label6.Visible = False Text6.Visible = False Text6.Text = 1End Sub KAZ TAS 5 Private Sub Option3\_Click() ę. Label6.Visible = False Text6.Visible = False End Sub Private Sub pasir60\_Click() End Sub d) OP GIJAPRA \*

## Kode List Program CPT

Dim db As ADODB.Connection Dim rs As ADODB.Recordset Dim sql As String Dim SkalaX, SkalaY As Integer Sub koneksi() Set db = New ADODB.Connection db.CursorLocation = adUseClient db.Open "proyek\_ta" ITAS End Sub Private Sub tampilan() Set rs = New ADODB.Recordset sql = "SELECT Kedalaman, N1, N2, N3, N, ket\_tanah FROM tabel\_spt WHERE id\_titik ="" & Text1.Text & "" AND id\_proyek ="" & Text3.Text & "" " rs.Open sql, db, adOpenDynamic, adLockOptimistic Set DataGrid1.DataSource = rs đ End Sub Private Sub btn\_analisa\_Click() JA Dim sql As String Dim B, df, alas, sfQa As Single Dim az1, az2 As Currency Call koneksi On Error GoTo eror B = Text7.Textdf = Text8.Textaz1 = df - (1 \* B) $az^{2} = df - 2$ az2 = df + (2 \* B)If Text7.Text = "" Or Text8.Text = "" Then



MsgBox "Kesalahan dalam Pengisian Data", vbExclamation, "Kesalahan"

Else

Text2.Text = az1

Combo14.Text = az2

Set rs = New Recordset

sql = "SELECT AVG(N) FROM tabel\_spt WHERE id\_titik ='" & Text1.Text & "' AND id\_proyek ='" & Text3.Text & "' AND Kedalaman<='" & CDec(Text8.Text) & "' AND Kedalaman>='" & CDec(Combo14.Text) & "'"

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Set rs = db.Execute(sql)

Text5.Text = rs.Fields("AVG(N)")

Nb = Text5.Text B = Text7.Text df = Text8.Text alas = Text9.Text sfOa = Combo1.Text

```
sqlNrt1 = "SELECT AVG(N) FROM tabel_spt WHERE id_titik =" & Text1.Text & "'
AND id_proyek =" & Text3.Text & " AND Kedalaman >" & Combo5.Text & " AND
Kedalaman <='' & Text8.Text & "'"
Set rs = db.Execute(sqlNrt1)
NrtLap1 = rs.Fields("AVG(N)")</pre>
```

'Mencari Nilai qa, untuk bentuk segitiga ap1 = (alas ^ 2) / 4 \* Math.Sqr(3) qu1 = 40 \* Nb \* ap1 as1 = 3 \* B 'If CLapisan1.Value = Checked Then 'xm11 = 0.5 'ElseIf CLapisan1.Value = Unchecked Then 'xm11 = 0.2



```
'End If
'If CLapisan2.Value = Checked Then
xm12 = 0.5
'ElseIf CLapisan2.Value = Unchecked Then
xm12 = 0.2
'End If
'lapisan11 = Text11.Text - Text10.Text
'lapisan12 = Text13.Text - Text12.Text
qs1 = NrtLap1 * as1 * (0.2 * df)
qa1 = (qu1 + qs1) / sfQa
                                                   KA
                                           A S
'Mencari Nilai qa, untuk bentuk kotak
ap2 = B^{2}
qu2 = 40 * Nb * ap2
as2 = 4 * B
'If CLapisan1.Value = Checked Then
xm21 = 0.5
'ElseIf CLapisan1.Value = Unchecked Then
xm21 = 0.2
'End If
'If CLapisan2.Value = Checked Then
xm22 = 0.5
                                            PR
                                         A
'ElseIf CLapisan2.Value = Unchecked Then
xm22 = 0.2
'End If
'lapisan21 = Text11.Text - Text10.Text
'lapisan22 = Text13.Text - Text12.Text
qs2 = NrtLap1 * as2 * (0.2 * df)
qa2 = (qu2 + qs2) / sfQa
```

'Mencari Nilai qa, untuk bentuk Lingkaran  $ap3 = 0.25 * (22 / 7) * (B ^ 2)$ 

qu3 = 40 \* Nb \* ap3as3 = (22 / 7) \* B'If CLapisan1.Value = Checked Then xm31 = 0.5'ElseIf CLapisan1.Value = Unchecked Then xm31 = 0.2'End If 'If CLapisan2.Value = Checked Then xm32 = 0.5'ElseIf CLapisan2.Value = Unchecked Then xm32 = 0.2'End If 'lapisan31 = CDec(Text11) - CDec(Text10) 'lapisan32 = CDec(Text13) - CDec(Text12) qs3 = NrtLap1 \* as3 \* (0.2 \* df)qa3 = (qu3 + qs3) / sfQaIf Option1.Value = True Then Text6.Text = qa1Text14.Text = qu1EGIJA Text15.Text = NrtLap1 Text16.Text = qs1ElseIf Option2.Value = True Then Text6.Text = qa2Text14.Text = qu2Text15.Text = NrtLap1 Text16.Text = qs2ElseIf Option3.Value = True Then Text6.Text = qa3Text14.Text = qu3Text15.Text = NrtLap1 Text16.Text = qs3



End If End If Exit Sub eror: MsgBox Err.Description End Sub

Private Sub btn\_grafik\_Click() Dim delta As Single B = Text7.Text pic\_pondasiA.Visible = True pic\_pondasiB.Visible = True Label17.Visible = True Label17.Caption = "Df"

delta = Text8.Text ab = delta \* 120 pondasiA = 255 + ab pondasiB = 1080 + ab pic\_pondasiA.Height = pondasiA pic\_pondasiB.Top = pondasiB Shape3.Height = 0 + B \*\* SkalaY Shape3.Top = delta \* SkalaY Label17.Top = delta \* SkalaY

'=====

Picture1.Refresh

Set rs = New ADODB.Recordset

sql = "SELECT Kedalaman, N FROM tabel\_spt WHERE id\_titik ='" & Text1.Text & "' AND id\_proyek ='" & Text3.Text & "'"

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rs.Open (sql), db, adOpenDynamic, adLockOptimistic

rs.MoveFirst Do Until rs.EOF

- X1 = rs.Fields("N").Value
- Y1 = rs.Fields("Kedalaman").Value

rs.MoveNext

If rs.EOF = False Then

X2 = rs.Fields("N").Value

Y2 = rs.Fields("Kedalaman").Value

End If

Picture1.Line (X1 \* SkalaX, Y1 \* SkalaY)-(X2 \* SkalaX, Y2 \* SkalaY), vbBlue

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θ.

Loop

End Sub

```
Private Sub btn_kembali_Click()
Form1.Enabled = True
Unload Me
End Sub
Private Sub btn_lihat_Click()
```

FormUjiSPT.Enabled = False LihatDataSPT.Show End Sub

Private Sub btn\_print\_Click()

Dim sql As String

FrmPrintSPT.Show

FrmPrintSPT.CurrentX = 2200

FrmPrintSPT.CurrentY = 400

FrmPrintSPT.FontSize = FormUjiSPT.FontSize

FrmPrintSPT.Print FormUjiSPT.Caption

FrmPrintSPT.CurrentX = 1000



FrmPrintSPT.Print "-----\_\_\_\_\_ \_\_\_\_\_" FrmPrintSPT.CurrentX = 2200FrmPrintSPT.FontSize = 14 FrmPrintSPT.Print Text4.Text FrmPrintSPT.Print "" FrmPrintSPT.FontName = "arial" FrmPrintSPT.FontSize = 10FrmPrintSPT.CurrentX = 1000FrmPrintSPT.Print "Identitas titik (SPT)" & vbTab & vbTab & ":" & vbTab & Text1.Text FrmPrintSPT.FontName = "arial" TAS FrmPrintSPT.FontSize = 10 FrmPrintSPT.CurrentX = 1000":" & vbTab & FrmPrintSPT.Print "ID Proyek" & vbTab & vbTab & vbTab & FormUjiSPT.Text3.Text FrmPrintSPT.FontName = "arial" FrmPrintSPT.FontSize = 10 FrmPrintSPT.CurrentX = 1000 FrmPrintSPT.Print "Kedalaman pondasi (Df)" & vbTab & "." & vbTab & FormUjiSPT.Text8.Text & " (m)" FrmPrintSPT.FontName = "arial" FrmPrintSPT.FontSize = 10 FrmPrintSPT.CurrentX = 1000 FrmPrintSPT.Print "Lebar / sisi pondasi" & vbTab & vbTab & ":" & vbTab & FormUjiSPT.Text7.Text & " (m)" FrmPrintSPT.FontName = "arial" FrmPrintSPT.FontSize = 10FrmPrintSPT.CurrentX = 1000FrmPrintSPT.Print "Daya Dukung (qa)" & vbTab & vbTab & ":" & vbTab & FormUjiSPT.Text6.Text & " (kg/cm2)" FrmPrintSPT.Print "" FrmPrintSPT.CurrentX = 1600

```
FrmPrintSPT.Print "Kedalaman (m)" & vbTab & " N spt (N2+N3)"
Set rs = New ADODB.Recordset
sql = "SELECT Kedalaman, N FROM tabel_spt WHERE id_titik ='" & Text1.Text & ""
AND id_proyek ="" & Text3.Text & """
rs.Open (sql), db, adOpenDynamic, adLockOptimistic
Do Until rs.EOF
  'Debug.Print rs.Fields("Conus").Value
  X1 = rs.Fields("Kedalaman").Value
  Y1 = rs.Fields("N").Value
  rs.MoveNext
                                         AS
FrmPrintSPT.CurrentX = 2200
FrmPrintSPT.Print X1 & vbTab & vbTab & vbTab & Y1
Loop
FrmPrintSPT.CurrentX = 1000
FrmPrintSPT.Print "------
FrmPrintSPT.CurrentX = 1200
FrmPrintSPT.FontName = "Comic Sans MS"
FrmPrintSPT.FontSize = 10
FrmPrintSPT.Print "printed at : " & Date
                                                     -
                                       APR
End Sub
Private Sub Check_lap1_Click()
If Check_lap1.Value = Checked Then
Text10.Visible = True
Text11.Visible = True
'CLapisan1.Visible = True
Else
Text10.Visible = False
Text11.Visible = False
'CLapisan1.Visible = False
```



End If End Sub

Private Sub Check\_lap2\_Click() If Check\_lap2.Value = Checked Then Text12.Visible = True Text13.Visible = True 'CLapisan2.Visible = True Else Text12.Visible = False Text13.Visible = False KA TAS ER 'CLapisan2.Visible = False Text12.Text = "0"Text13.Text = "0"End If End Sub Private Sub Form\_Load() Text10.Text = "0"ep: OFGIJAPR Combo5.Text = "0"Text9.Text = 1-Text8.Text = "" Text7.Text = "" Text10.Text = "" Text11.Text = "" Text12.Text = "0"Text13.Text = "0"Text14.Text = "" Text5.Text = "" Text6.Text = "" Text15.Text = "" Text16.Text = ""

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Combo1.AddItem "2.5" Combo1.AddItem "3" Combo1.AddItem "5" 'Combo2.AddItem "2.5" 'Combo2.AddItem "3"

Call koneksi

Text3.Text = Form1.Text6.Text Text4.Text = Form1.Text1.Text Text1.Text = Form1.Combo3.Text Label3.Visible = False Text9.Visible = False

'nilai skala dalam menggambar pada VB SkalaX = 60.25 SkalaY = 120.3 'Titik acuan sumbu Y, sebagai titik nol sumbu Y End Sub

Private Sub kelompok\_tiang\_Click() FormUjiSPT.Enabled = False FrmTiangSPT.Show End Sub

Private Sub Option1\_Click() If Option1.Value = True Then Label3.Visible = True Text9.Visible = True End If End Sub



Private Sub Option2\_Click() Label3.Visible = False Text9.Visible = False End Sub

Private Sub Option3\_Click() Label3.Visible = False Text9.Visible = False End Sub





# LAMPIRAN 4

#### Tutorial menggunakan Program Visual Basic 6.0

1. Langkah pertama membuka aplikasi XAMPP Control Panel.

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2. Setelah membuka XAMPP *Control Panel*, klik tombol "*start*" pada *module* Apache dan *module* MySQL.





3. Langkah berikutnya membuka aplikasi program Visual Basic 6.0.



4. Setelah membuka program *Visual Basic* 6.0, langkah awal yaitu membuat data proyek dengan klik tombol "Proyek Baru". Kemudian mengisi data-data proyek sesuai data yang diperoleh. Setelah mengisi data dengan lengkap, klik tombol "Simpan Data" dan klik tombol "SELESAI".





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5. Data proyek Rumah Sakit Tlogorejo sudah jadi. Klik proyek Rumah Sakit Tlogorejo pada tombol pilihan "DATA PROYEK", kemudian mulai mengisi data-data CPT maupun SPT. Langkah utama mengisi data CPT adalah klik tombol pilihan pada "Kode Titik CPT", kemudian coba klik pada pilihan "CPT01" maka akan muncul kalimat "Data CPT tidak ditemukan" karena data masih kosong dan klik "OK". Langkah berikutnya klik tombol "Data baru". Isi data kedalaman maksimal uji CPT sesuai data yang diperoleh pada kolom "Kedalaman Maks", kemudian klik tombol "Simpan"

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6. Langkah berikutnya klik tombol "Edit Data", kemudian mengisi R1 (*Conus*), R2 (*Conus* + *Cleeve*), FR pada kolom yang disediakan. Cara mengisi data harus tiap kolom diselesaikan terlebih dahulu baru ke kolom berikutnya. Pertama mengisi data R1 (*Conus*) terlebih dahulu sampai selesai kemudian klik tombol "Simpan", berlaku untuk



pengisian data R2 (*Conus* + *Cleeve*) sampai FR. Setelah selesai mengisi data dengan lengkap, maka mulai menganalisis dengan klik tombol "ANALISA".



7. Pilih bentuk dimensi yang diinginkan, kemudian mengisi data pada kolom "Kedalaman pondasi" untuk kedalaman pondasi yang diinginkan, kolom "Lebar/sisi pondasi", kolom "Alas (a)", kolom "Safety Factor", data muka air tanah pada kolom "M.A.T.", mengisi



*interval* lapisan dan klik tombol "Kohesif" apabila tanah berjenis lempung. Setelah lengkap mengisi data, kemudian klik "Analisa" untuk mengetahui hasilnya, klik "Cek Jenis Lapisan" untuk mengetahui karakteristik tanah dari data uji CPT, klik "Tampilkan grafik" untuk melihat grafik q<sub>c</sub> dan gambar pondasi tiang. Hasil perhitungan dapat dicetak dengan klik tombol "Cetak/Print".





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	Kedalaman pondasi (br)         Lebar / sisi pondasi         :         0.32 (m)           Lebar / Sisi Pondasi         Daya Dukung (qa)         :         20.71834029351259616 (literational state)	kg/cm2) Vednesday
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 Langkah untuk mengisi data SPT sama seperti mengisi data CPT. Data yang perlu diisi meliputi N1, N2, N3, N<sub>spt</sub>. Setelah selesai mengisi data lengkap kemudian mulai menganalisis dengan klik "ANALISA".

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<b>@</b>		) 💿		

9. Pilih bentuk dimensi yang diinginkan, kemudian mengisi data pada kolom "Kedalaman pondasi" untuk kedalaman pondasi yang diinginkan, kolom "Lebar/sisi pondasi", kolom



"*Safety Factor*", data muka air tanah pada kolom "M.A.T.". Setelah lengkap mengisi data, kemudian klik "Analisa" untuk mengetahui hasilnya, klik "Tampilkan grafik" untuk melihat grafik dan gambar pondasi tiang. Hasil perhitungan dapat dicetak dengan klik tombol "Cetak/Print". Untuk perhitungan kelompok tiang, klik tombol "Kelompok Tiang".



10.Pada Perhitungan Kelompok Tiang mengisi data pada kolom "Beban terfaktor/beban di titik pondasi (P)", klik tombol "Jumlah Tiang (n)", mengisi data "Jarak antar tiang (s)", klik pilihan "Jumlah tiang pancang". Setelah selesai mengisi data dengan lengkap, klik tombol "Analisa". Setelah keluar hasilnya, hasil perhitungan kelompok tiang dapat dicetak dengan klik tombol "Cetak/Print".









# LAMPIRAN 5



## Flowchart Aplikasi Pondasi Tiang Pancang



