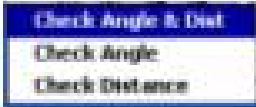


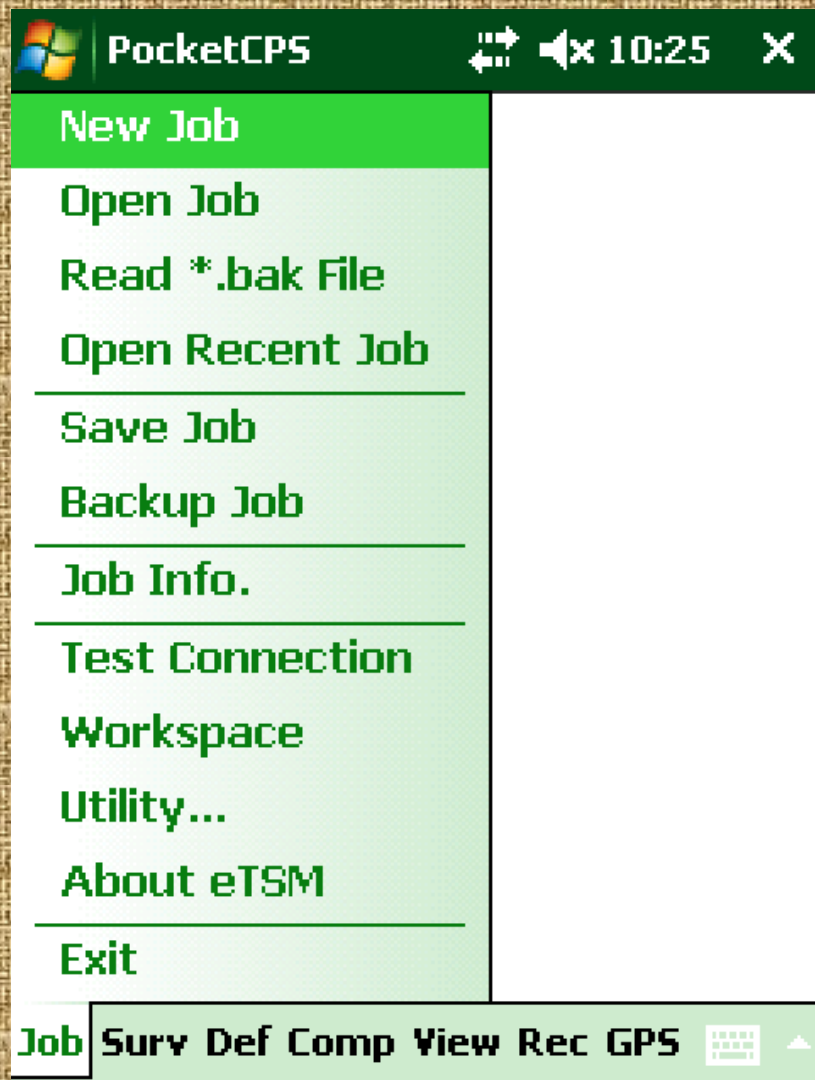
eTSM
Module
Field Capture
with
Total Station
-Overview-

eTSM Module Field Capture with Total Station

<u>Diff Field Test</u>	To perform Differential Field Test before starting job.	
<u>Senaman Harian</u>	To perform everyday Check Bearing and Distance before starting job.	
<u>Solar Obs.</u>	To perform SOLAR OBSERVATION measurement.	
<u>Datum</u>	To perform DATUM line measurement.	
<u>Traverse</u>	To perform normal TRAVERSE line measurement.	
<u>Online</u>	To perform ONLINE measurement.	
<u>Bearing Close</u>	To perform BEARING CLOSE measurement.	
<u>Close Statement</u>	To define CLOSE STATEMENT.	
<u>TT Mark</u>	To perform TT MARK measurement.	
<u>Patty Wall</u>	To perform Patty Wall measurement.	
Check... 	<u>Check Angle Dist</u>	To perform CHECK ANGLE & DISTANCE measurement together.
	<u>Check Angle</u>	To perform CHECK ANGLE measurement.
	<u>Check Distance</u>	To perform CHECK DISTANCE measurement.
<u>Offset (Details)</u>	To perform OFFSET measurement to pick up details.	
<u>Compile Line</u>	To key in Compile Line for Partly Survey and compile	
<u>Setting Out</u>	Perform SETTING OUT to track and plant new mark.	
Setting Out (Coord)	Perform SETTING OUT to track and plant new mark with Coordinate method.	

Menu / Tools
in
eTSM
-Overview-

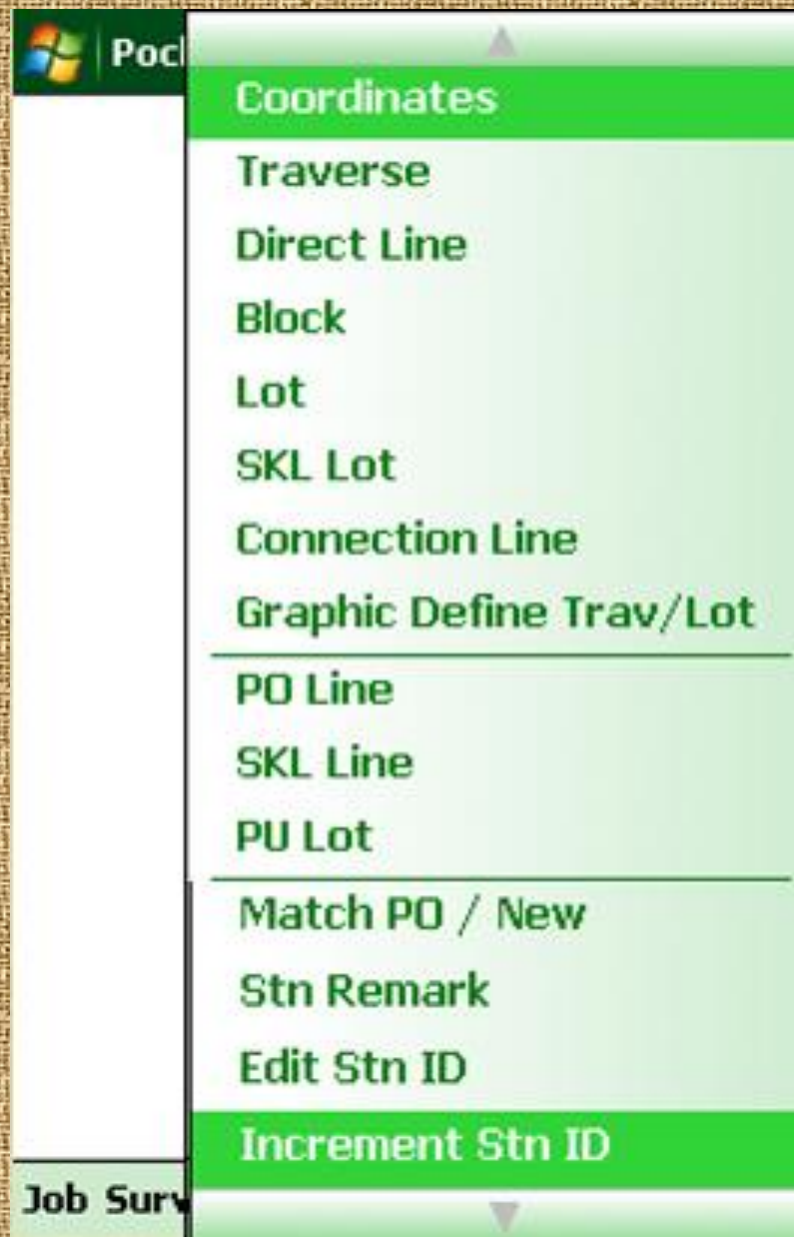
1. Job



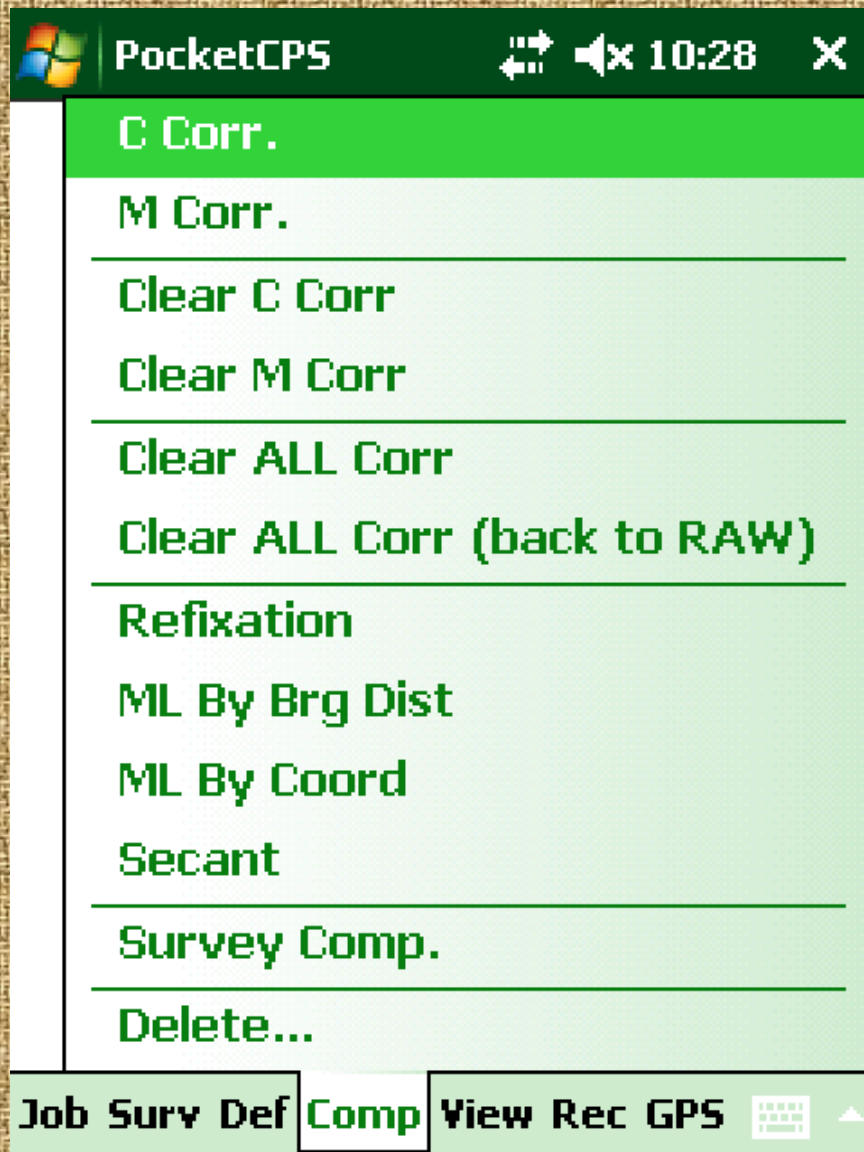
2. Sur



3. Def



4. Comp



PocketCPS 10:28

- C Corr.
- M Corr.

- Clear C Corr
- Clear M Corr

- Clear ALL Corr
- Clear ALL Corr (back to RAW)

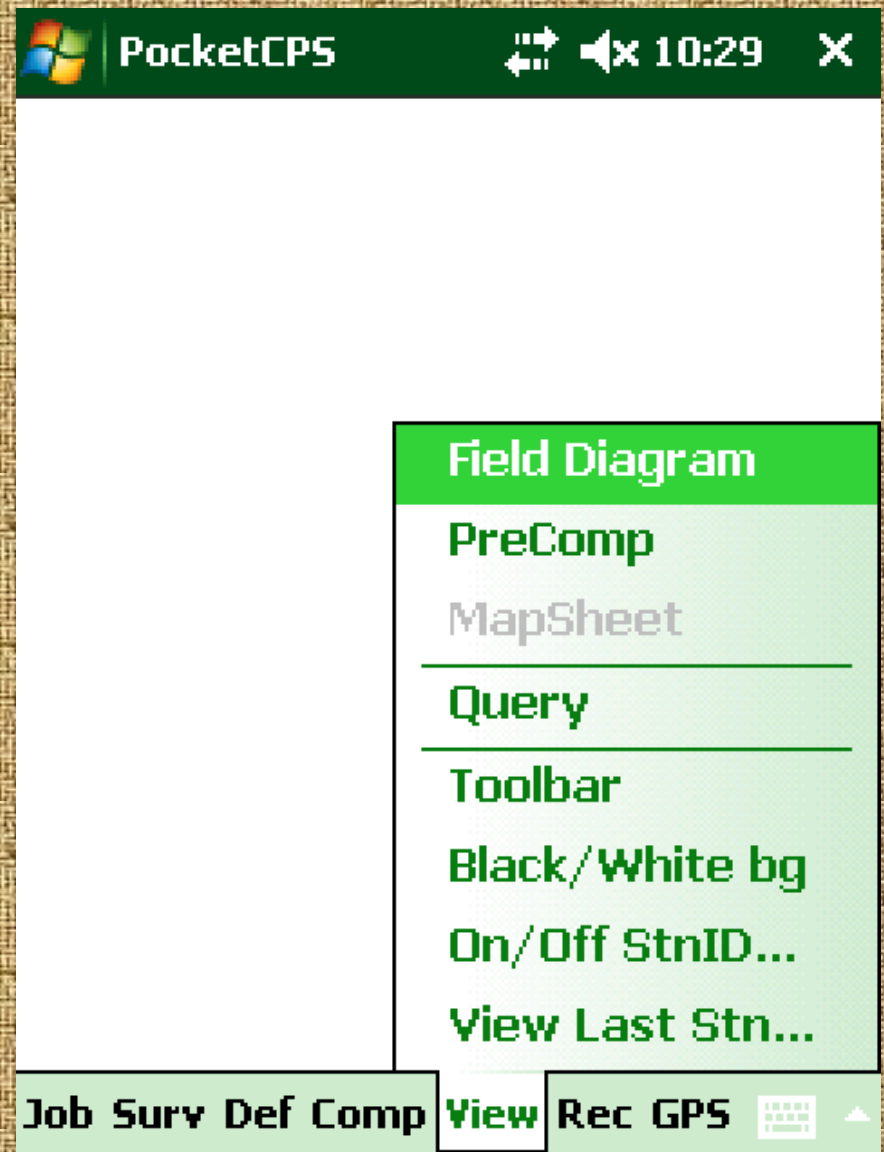
- Refixation
- ML By Brg Dist
- ML By Coord
- Secant

- Survey Comp.

- Delete...

Job Surv Def **Comp** View Rec GPS

5. View



PocketCPS 10:29

- Field Diagram
- PreComp
- MapSheet

- Query

- Toolbar
- Black/White bg
- On/Off StnID...
- View Last Stn...

Job Surv Def Comp **View** Rec GPS

6. Rec

The screenshot shows the 'Rec' menu in the PocketCPS application. The title bar reads 'PocketCPS' with a Windows logo on the left and signal strength, volume, and time (10:29) on the right. The menu items are: Differential Field Test (highlighted), Datum, Traverse, On Line, Bearing Close, Close Statement, Offset, TT Mark, Patty Wall, Check..., View All Record, and View Field Book. The bottom navigation bar includes 'Job Surv Def Comp View Rec GPS' with a keyboard icon and an upward arrow.

PocketCPS 10:29

- Differential Field Test
- Datum
- Traverse
- On Line
- Bearing Close
- Close Statement
- Offset
- TT Mark
- Patty Wall
- Check...
- View All Record
- View Field Book

Job Surv Def Comp View Rec GPS

7. GPS

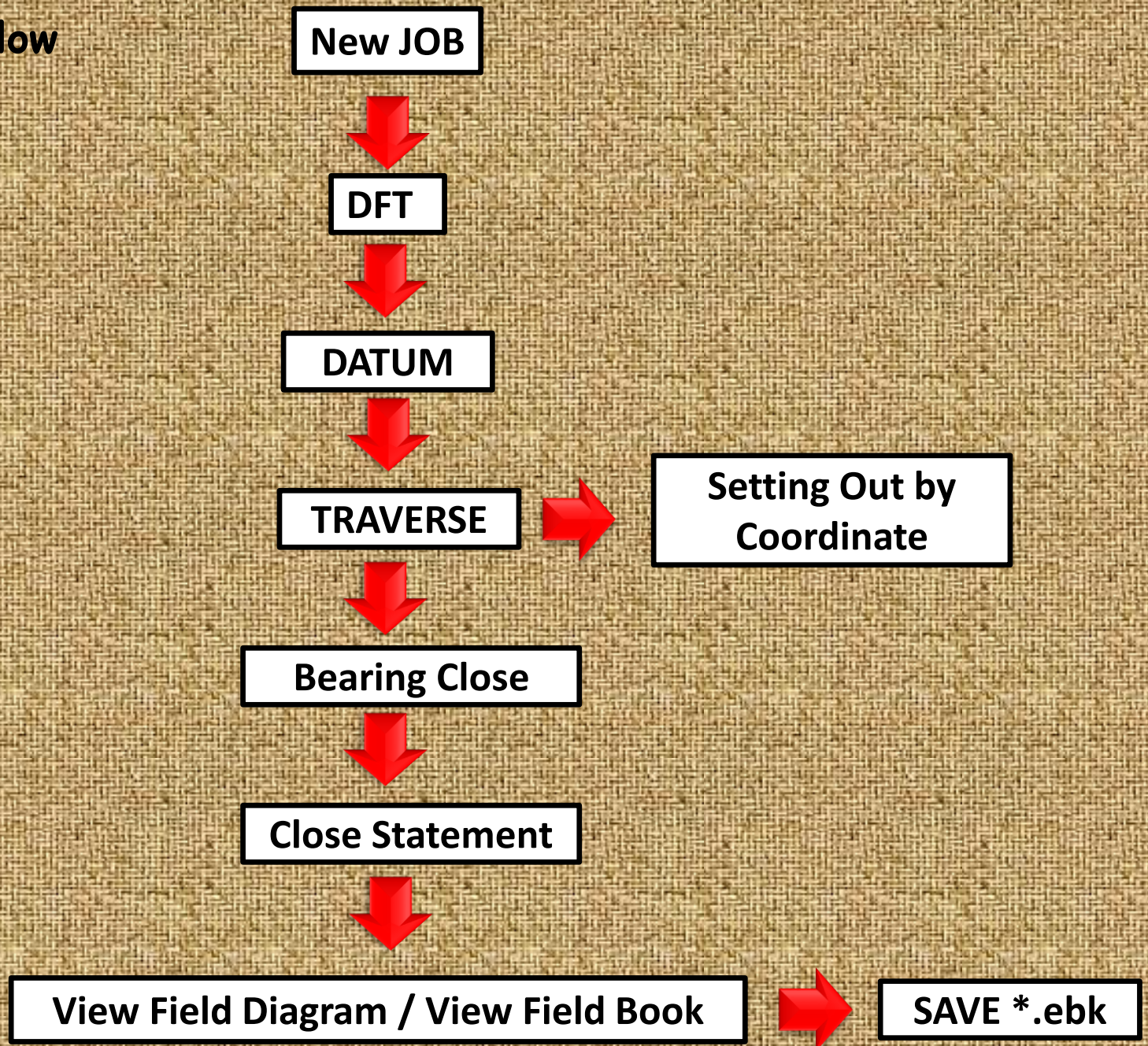
The screenshot shows the 'GPS' menu in the Start application. The title bar reads 'Start' with a Windows logo on the left and signal strength, volume, and time (11:50) on the right. The menu items are: GPS Start, GPS Point Entry, E650, GNSS Report (highlighted), GPS Record File, Open Basemap, and Pick Object Info. The bottom navigation bar includes 'Job Surv Def Comp View Rec GPS' with a keyboard icon and an upward arrow.

Start 11:50

- GPS Start
- GPS Point Entry
- E650
- GNSS Report
- GPS Record File
- Open Basemap
- Pick Object Info

Job Surv Def Comp View Rec GPS

eTSM Work Flow



1. eTSM > New Job > Create a new Job > Save

Start

- Today
- Office Mobile
- Calendar
- Contacts
- eTSM**
- Internet Explorer
- Messaging

Start

- New Job**
- Open Job
- Read *.bak File
- Open Recent Job
- Save Job
- Backup Job
- Job Info.
- Test Connection
- Workspace
- Utility...
- About eTSM
- Exit



Start 12:40

Save As

Name: PUBLSEL123

Folder: None

Type: JobFiles (*.ebk)

Location: SDMMC

Save Cancel

2. DFT (To Perform Differential Field Test before Starting job)

The screenshot displays a software interface for performing a Differential Field Test (DFT). On the left, a menu is visible with the following options: **Diff Field Test** (highlighted with a red box), Semakan Harian, Solar Obs., Datum, Traverse, On Line, Bearing Close, Close Statement, TT Mark, Patty Wall, Check..., Offset (Details), and Compile Line. At the bottom left of the menu, the text "Job **Surv**" is visible, with "Surv" circled in red.

A red arrow points from the "Diff Field Test" menu item to the main data entry screen on the right. This screen shows a diagram at the top with points A, C, and B connected by lines. Below the diagram, there are three rows of data entry for different calculations:

- A-B**: Input fields for A and B, a result field showing 137.471, and a **Measure** button (circled in red).
- C-A**: Input fields for C and A, a result field showing 64.453, and a **Measure** button.
- C-B**: Input fields for C and B, a result field showing 73.019, and a **Measure** button.

Below these rows, there are two summary rows:

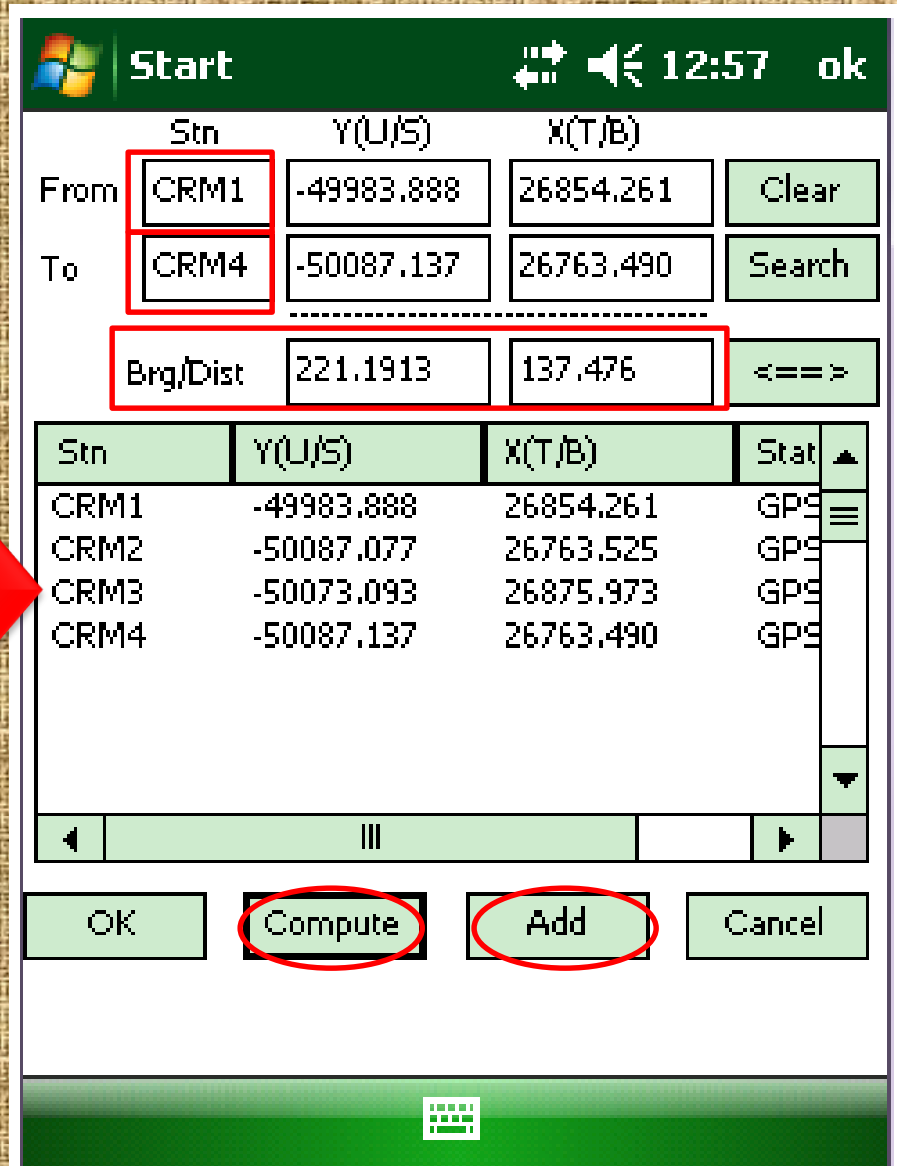
- CA+CB: result field showing 137.472, with a left arrow button (<<).
- (CA+CB) - AB: result field showing 0.001, with a right arrow button (>>).

At the bottom of the data entry screen, there are three buttons labeled **A+B**, **C+A**, and **C+B**, which are circled in red. Other icons at the bottom include a printer, a floppy disk, a red X, a DFT icon, a blue circle with a slash, and a keyboard icon.

Button to click measure

DFT (Using CRM point)

1. Highlight **From** CRM1 station, click **Add** button, then repeat for **To** CRM4
2. Then click **Compute** button. The system will calculate the Bearing & Distance.
3. Click **OK** button, the distance will be compared with the Total Station measured distance. The difference shall not more than 10mm.



The screenshot shows a software interface with a green header bar containing the Windows logo, the word "Start", and system icons for signal strength, volume, and time (12:57). Below the header is a form with the following fields:

Stn	Y(U/S)	X(T/B)	
From CRM1	-49983.888	26854.261	Clear
To CRM4	-50087.137	26763.490	Search

Brg/Dist	221.1913	137.476	<==>

Below the form is a table with the following data:

Stn	Y(U/S)	X(T/B)	Stat
CRM1	-49983.888	26854.261	GPS
CRM2	-50087.077	26763.525	GPS
CRM3	-50073.093	26875.973	GPS
CRM4	-50087.137	26763.490	GPS

At the bottom of the interface are four buttons: "OK", "Compute", "Add", and "Cancel". The "Compute" and "Add" buttons are circled in red. A red arrow points from the text instructions to the "Compute" button.

3. DATUM (for Starting traverse line)



A screenshot of a software application's menu. The menu items are: Diff Field Test, Semakan Harian, Solar Obs., Datum (highlighted with a red box), Traverse, On Line, Bearing Close, Close Statement, TT Mark, Patty Wall, Check..., Offset (Details), and Compile Line. At the bottom left, the text 'Job Surv' is visible, with 'Surv' circled in red.



A screenshot of a software form titled 'Datum'. The form has a header with 'Datum' and 'Purata'. Below the header, there is a dropdown menu for 'Datum Dari...' with a list of options: PA, PC, FB, Andaian Matahari, and RO. The 'Datum Dari...' dropdown is highlighted with a red box. Below the dropdown, there are several input fields and buttons. The buttons include '<<', '>>', and 'CalFR'. At the bottom, there is a 'Next Step' button and a status bar with the text 'Step : Enter Start Brg'. The status bar also contains icons for a hard drive, a folder, a sun, a compass, a folder, and a keyboard, with the compass icon circled in red.

DATUM (Using CRM Point)

Start 12:54 ok

Datum	Purata
Datum Dari... RO	
CRM	

Dari	Bg.Muktamat	Ke
1		2

PpBB	PpBB

S.Pugak	Jarak	J.Muktamat	CalFR

Search

PO

Navigate to **Surv > Datum**.
Select Datum type (**RO from CRM**)
Key in **At & To** station with Marker Type
Then click on RO button

Start 12:57 ok

Stn	Y(U/S)	X(T/B)	
From CRM1	-49983.888	26854.261	Clear
To CRM4	-50087.137	26763.490	Search

Brg/Dist 221.1913 137.476 <==>

Stn	Y(U/S)	X(T/B)	Stat
CRM1	-49983.888	26854.261	GPS
CRM2	-50087.077	26763.525	GPS
CRM3	-50073.093	26875.973	GPS
CRM4	-50087.137	26763.490	GPS

OK **Compute** Add Cancel

Select the **From** and **To** station to **Compute** the Bearing / Distance
Then click **OK** button

Start 12:54 ok

Datum		Purata
Datum Dari...	RO	221.1913
CRM		
		221.1913

Dari	Bg.Muktamat	Ke
1	221.1910	2

PpBB		PpBB

S.Pugak	Jarak	J.Muktamat	<<
			>>
			CalFR

Search

Taskbar: PO, Sun, R/O, etc.



Start 12:54 ok

Datum		Purata
Datum Dari...	RO	221.1913
CRM		
		221.1913

Dari	Bg.Muktamat	Ke
1	221.1910	2

PpBB		PpBB

S.Pugak	Jarak	J.Muktamat	<<
89.4111	137.474	137.472	>>
270.1848	137.474		CalFR

Search

Taskbar: Measure button circled in red, PO, Sun, R/O, etc.



Calculate Bearing will be shown. Use it as **Datum**



Click **Measure** button to observe the Face Left and Face Right. Get the result and **Save** it.

4. Traverse

start 6:02 ok

Trav Stn	P. Kiri	P.Kanan	Purata
2.Back stn ▼	4.P.Kiri	6.P.Kanan	8.Means Bearing
1.Sit stn ▼			
3.To stn	5.P.Kiri	7.P.Kanan	
	Refix		
Dari	Bg.Muktamat	Ke	<input type="checkbox"/> Refer To
Sit stn	Final Bearing	To stn	<input type="checkbox"/> Dont Set BckBrg
Marker Types ▼		Marker Types ▼	<input type="checkbox"/> Trav. Produce
	Stone Number		
S.Pugak	Jarak	J.Muktamat	<<
Vertical Distance	Slope Distance	Final Distance	>>
			CalFR
Step : Select your At Stn			Next Step

FL FR [Disk Icon] last stn Dist adi. [Sight Icon] HT [Screen Icon] [Arrow Icon] [Keypad Icon] [Up Arrow Icon]

Traverse Observation



1. Navigate to **Surv > Traverse**.
2. Select the [**1.Sit stn**], [**2.Back stn**] and [**3.To stn**] Then select marker type.
3. Sight to the [**Back station**] and **tab at the [P.kiri button]** to set the back bearing for your [**4.P.Kiri**].
4. Then sight to the [**forward station**] and tab the **measure button [FL]** for the [**5.P.kiri**]
5. Then sight to the [**Back station**] and tab the [**P. kanan button**] to set the back bearing for your [**6.P.Kanan**].
6. Then sight to the [**forward station**] and tab the **measure button [FR]** for the [**7. P.Kanan**].
7. Get the result and Save

5. Bearing Close

The screenshot shows a software interface for a bearing close observation. At the top, there is a green header bar with a Windows logo, the word 'Start', and system icons for network, volume, and time (6:11). Below the header, the main interface is divided into several sections:

- Top Row:** Buttons for 'Brq Close', 'P. Kiri', 'P.Kanan', and 'Purata'.
- Second Row:** A dropdown menu showing '2.Back stn', and input fields for '4.P.Kiri', '6.P.Kanan', and '8.Means Bearing'.
- Third Row:** A dropdown menu showing '1.Sit stn', and several greyed-out input fields.
- Fourth Row:** A dropdown menu showing '3.To stn', and input fields for '5.P.Kiri' and '7.P.Kanan'.
- Bottom Section:** A grid of buttons including 'Dari', 'Bg.Muktamat', 'Ke', 'Sit stn', 'Final Bearing', 'To stn', and 'Brg. Terikat'.
- Navigation Buttons:** 'Del', '<<', '>>', 'CalFR', and 'Next Step'.
- Task Instruction:** A red-bordered box contains the text 'Step : Select your At Stn'.
- Taskbar:** At the bottom, there is a taskbar with icons for 'HbrG', a folder, a floppy disk, 'Edit Stn', a red 'X', a printer, 'last stn', a folder, a monitor, and a keyboard.

Bearing Close Observation

1. Navigate to Surv > Brg Close.
2. Select the [1.Sit stn], [2.Back stn] and [3.To stn]
3. Sight to the [Back station] and tab at the [P.kiri button] to set the back bearing for your 'face left'.
4. Then sight to the [forward station] and tab the measure button 
5. Then sight to the [Back station] and tab the [P. kanan button] to set the back bearing for your 'face right'.
6. Then sight to the forward station and tab the measure button. 
7. Get the result and Save

6. Close Statement

Start 6:12 ok

Close Statement Purata

Garisan ▾ - ▾ dibaca

Sepatut dibaca

Tikaian ialah dlm stn iaitu

Pembetulan ialah satu stn.

| | Close To Sun Reduced <<

Save >>


Del

Step: Enter Close At Stn Next Step

PO info

Bearing Close Statement

1. Navigate to **Surv > Close Statement.**

2. i.e ; Close to Sun 

Select the Garisan **2 to 1**
Di baca [**Purata**] **320.4200**
Sepatutnya di baca 320.4500

3. So Tikaian **0.0300** dlm **6 stn iaitu**

2,3,4,5,6 and 1

Pembetulan ialah 0.0050" per satu Stn

5. Get the result and Save

7. Setting Out

Setting Out Search More Logging

At 4 To 1008 Search

4, 5, 1008

Use Adjusted PO Recompute

Back Stn 3 Find Bck Bg

Back Brg 260.4823 Set Brg


	Bearing	Distance
Computed	192.2300	28.447
Reading	192.2300	28.449
Difference	00.0000	-0.002

LOG

Status:

Trav match last ON LINE

Setting Out Observation

1. Select the **At stn > To stn** Search button.
2. Tab **Yes** for the Warning dialog to using PO stn.
3. Back Stn and Back Brg will show automatically.
4. Tab Measure button. 
5. This will measure the [**bearing and distance.**]
6. The **difference** between **computed** and **measured** line will shown

8. Setting Out (Coordinate)

Start 11:33 ok

Setting Out **Logging**

	Station	Northing	Easting
AT	<input type="text"/>	<input type="text"/>	<input type="text"/>
TO	<input type="text"/>	<input type="text"/>	<input type="text"/>

Search **Compute** **LOG**

Back Stn **Find Bck Bg**

Back Brg **Set Brg**

	Bearing	Distance
Computed	0.0000	0.000
Reading	<input type="text"/>	<input type="text"/>
Difference	<input type="text"/>	<input type="text"/>

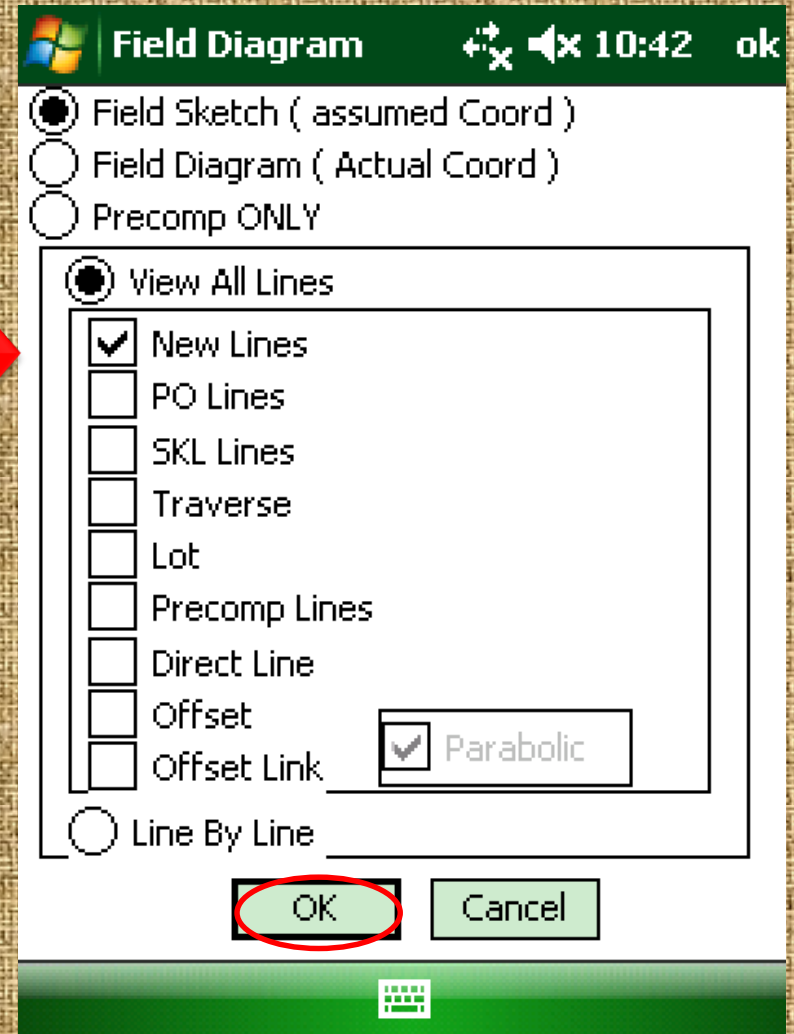
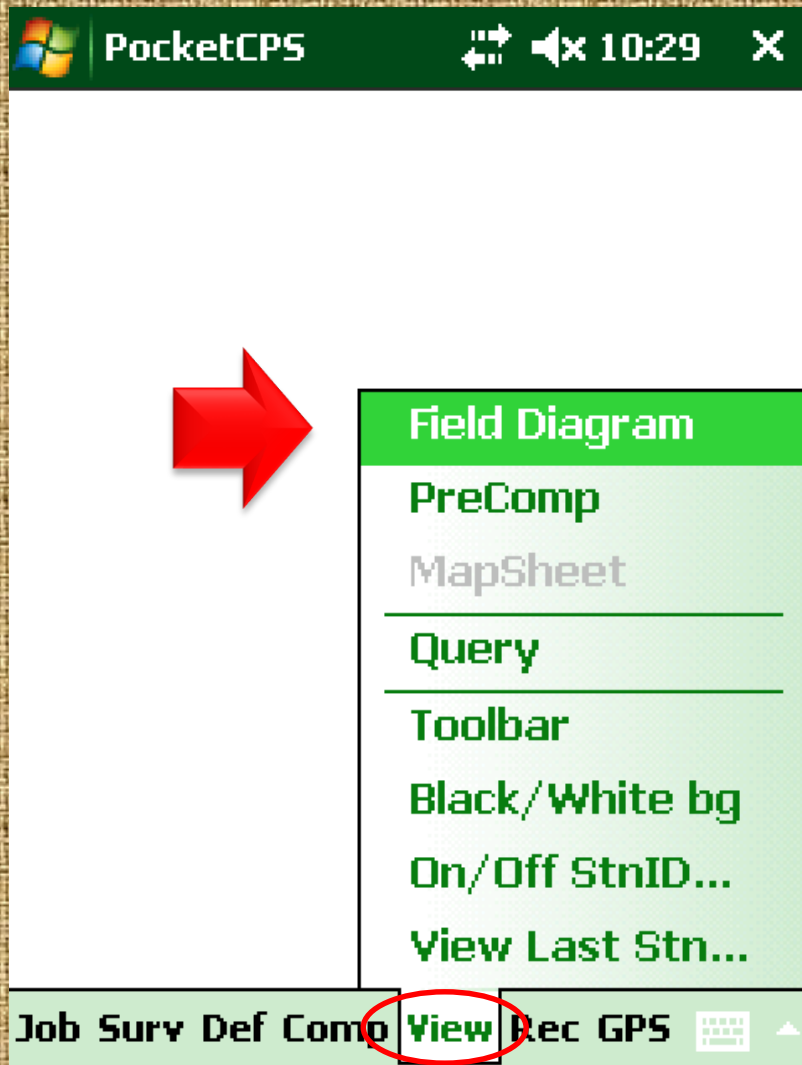
Status:

Trav match last ON PO stn LINE

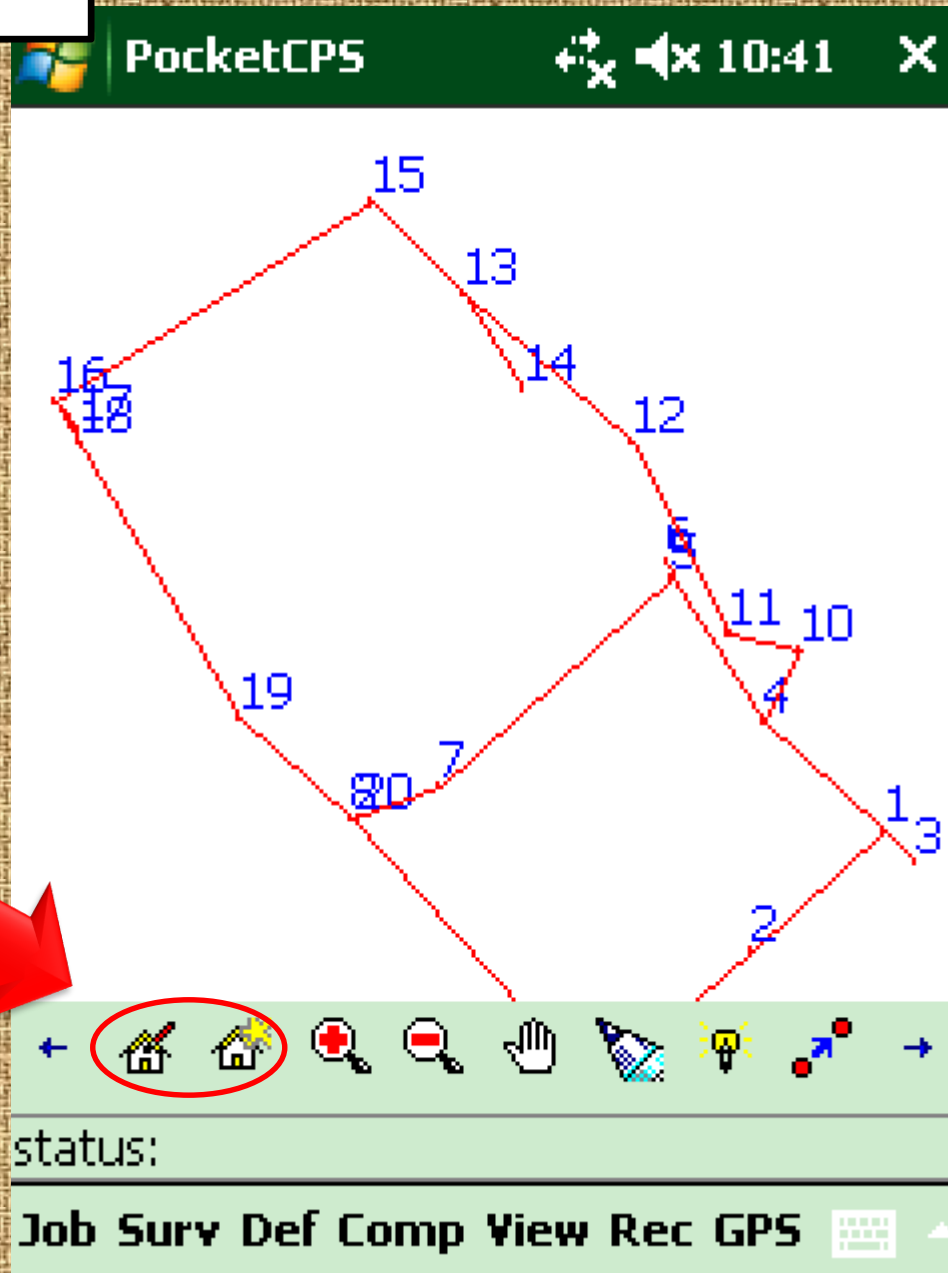
Setting Out by Coordinate Observation

1. Enter AT Stn, TO Stn & Coordinate.
2. Then Tab Compute button.
2. The difference between computed and measured line will shown

View Field Diagram



ie : Field Diagram



Replot & Refresh

View Field Book

PocketCPS 10:43

- Differential Field Test
- Datum
- Traverse
- On Line
- Bearing Close
- Close Statement
- Offset
- TT Mark
- Patty Wall
- Check...
- View All Record
- View Field Book**

Job Surv Def Comp View Rec GPS

PocketCPS 10:45 ok

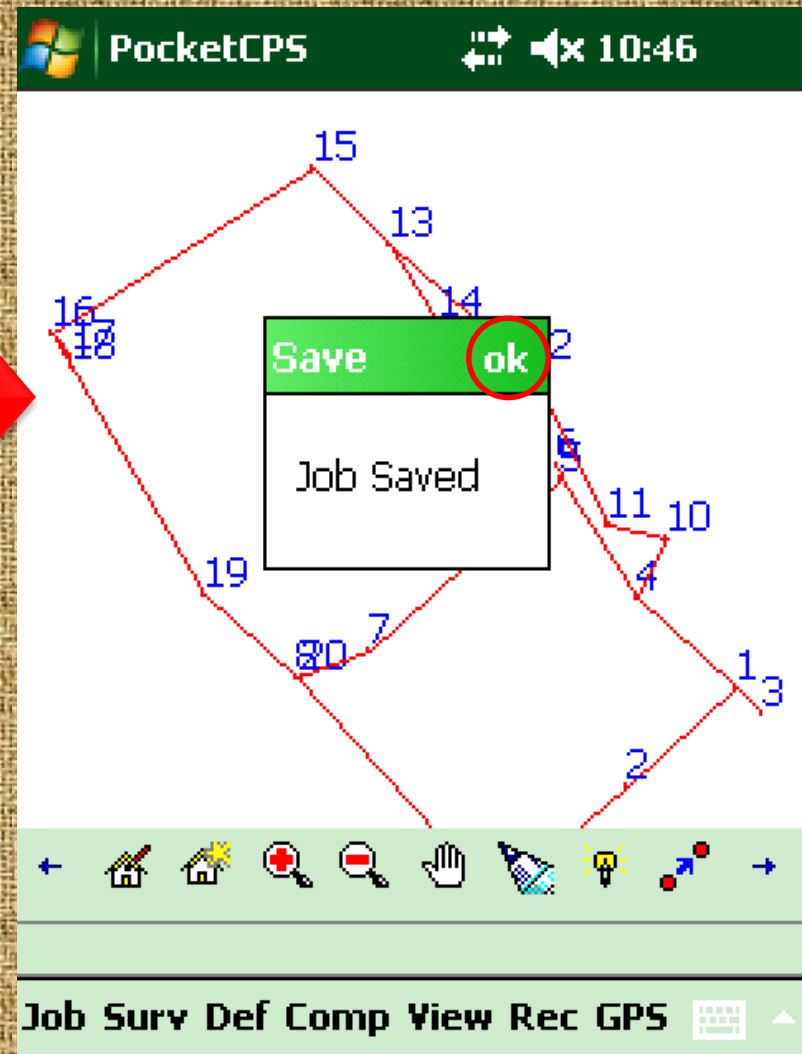
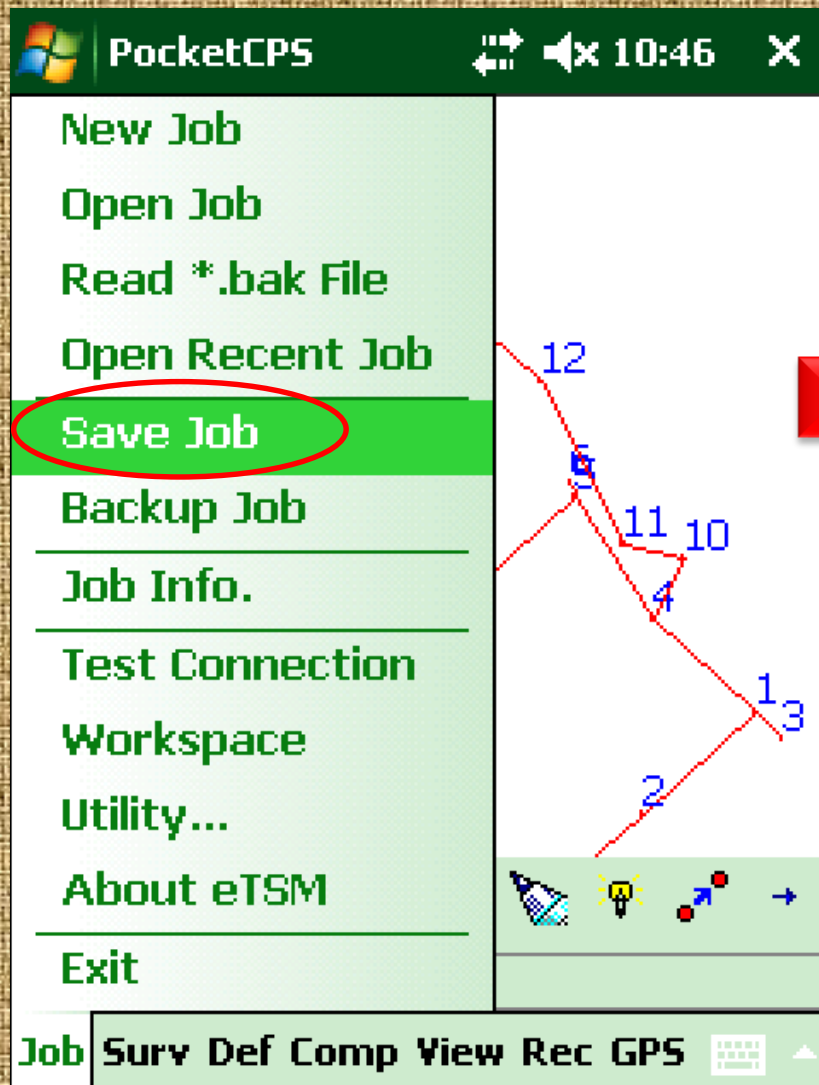
Show Deleted Lines

Datum Dari PC

2	228°13'20	48°13'20
1	pkB	
3	135°29'00	315°29'00

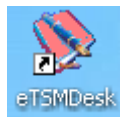
Search Exit

Save Job

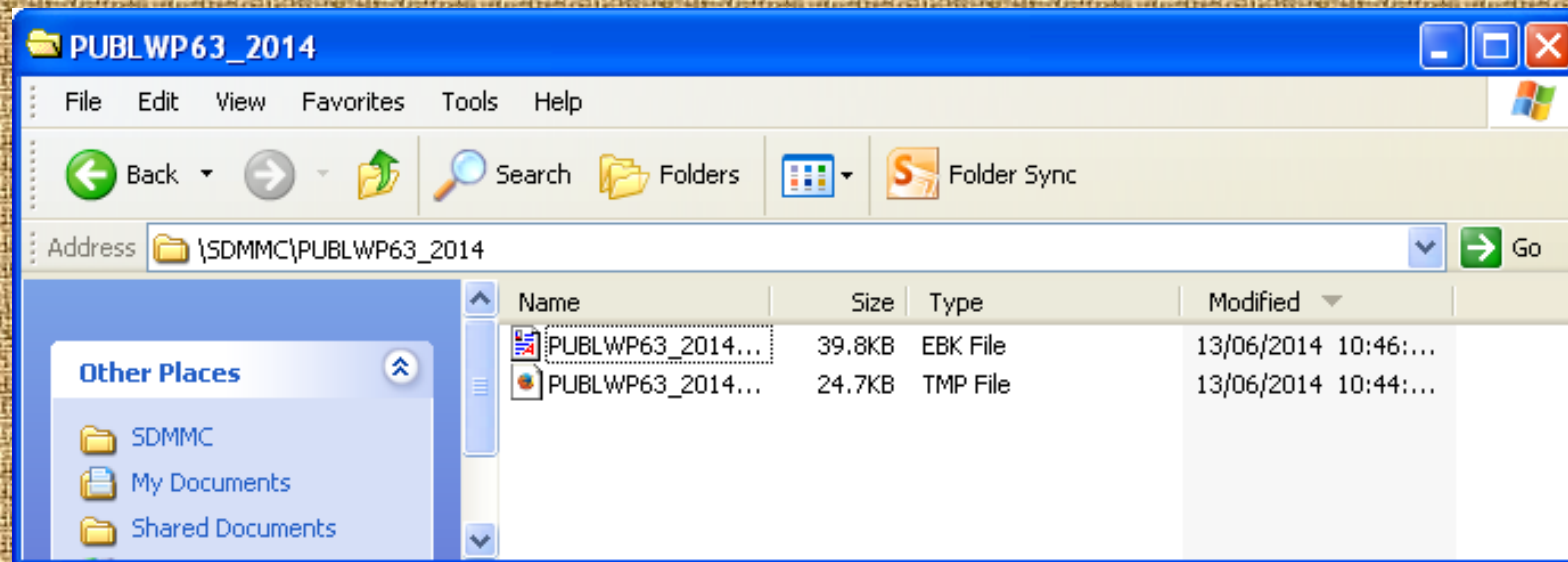
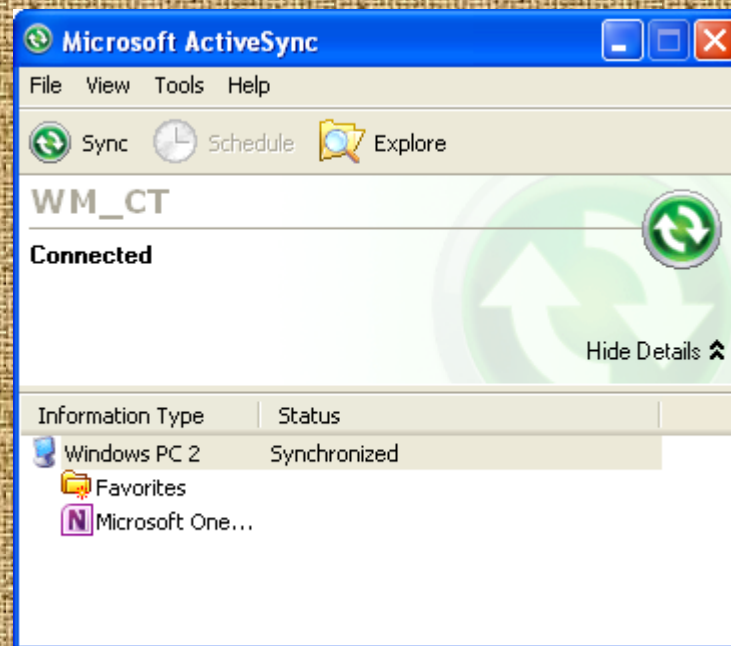


***.ebk File**

**Copy /Paste to computer
to do next processing in
eTSMDesk**



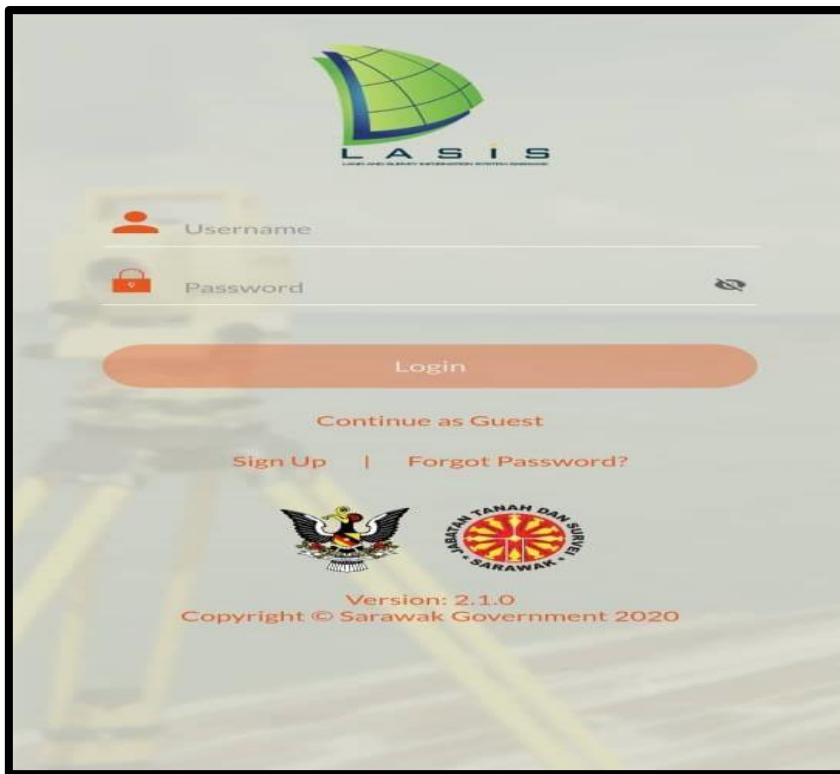
To generate 16 ascii file



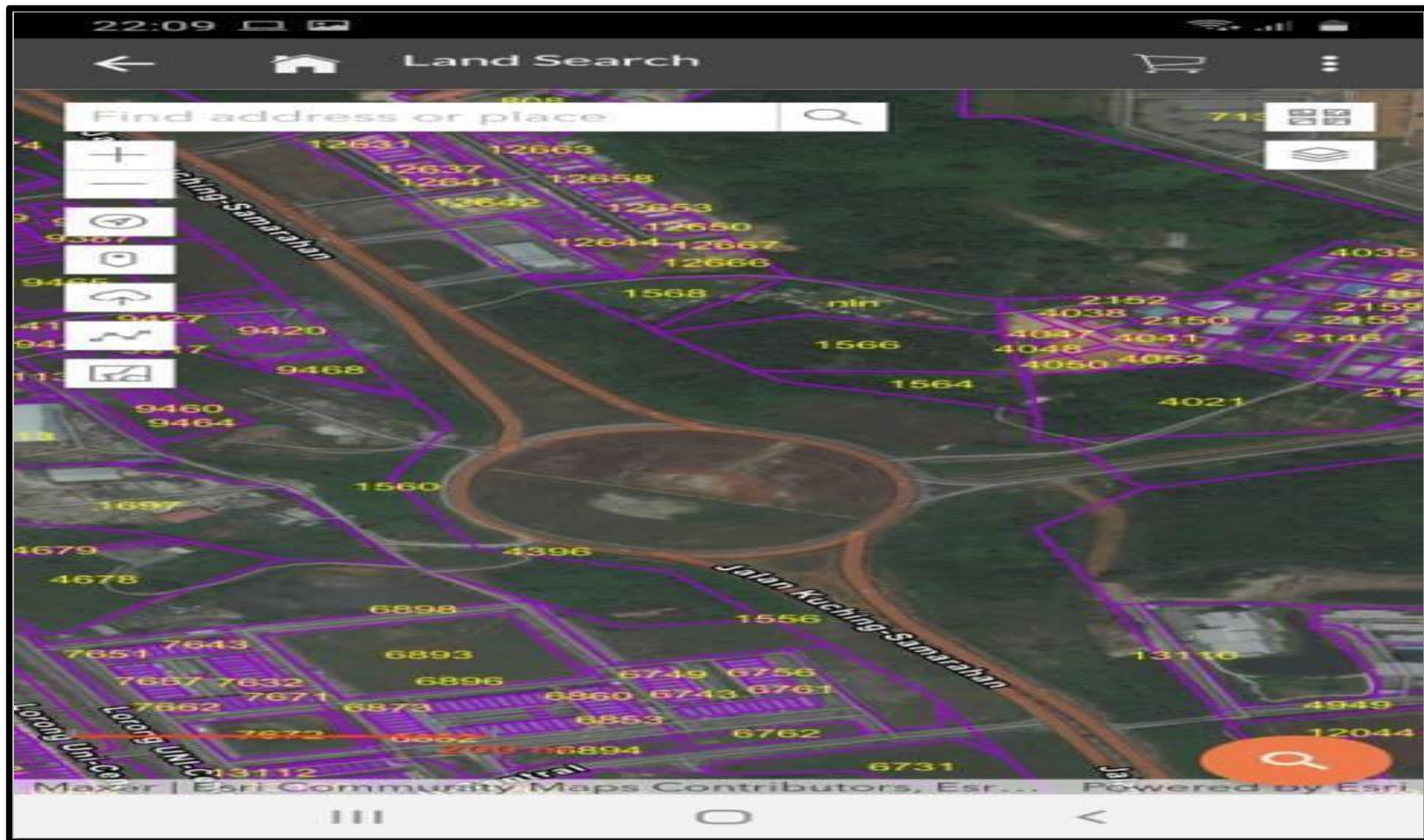
Sarawak

Sarawak

Aplikasi mobile LASIS yang dibangunkan oleh Jabatan Tanah dan Survei Sarawak. *Mobile LASIS* adalah aplikasi telefon pintar yang dapat memaparkan lot-lot kadastral di Sarawak dan nombor lot-lot kadastral .

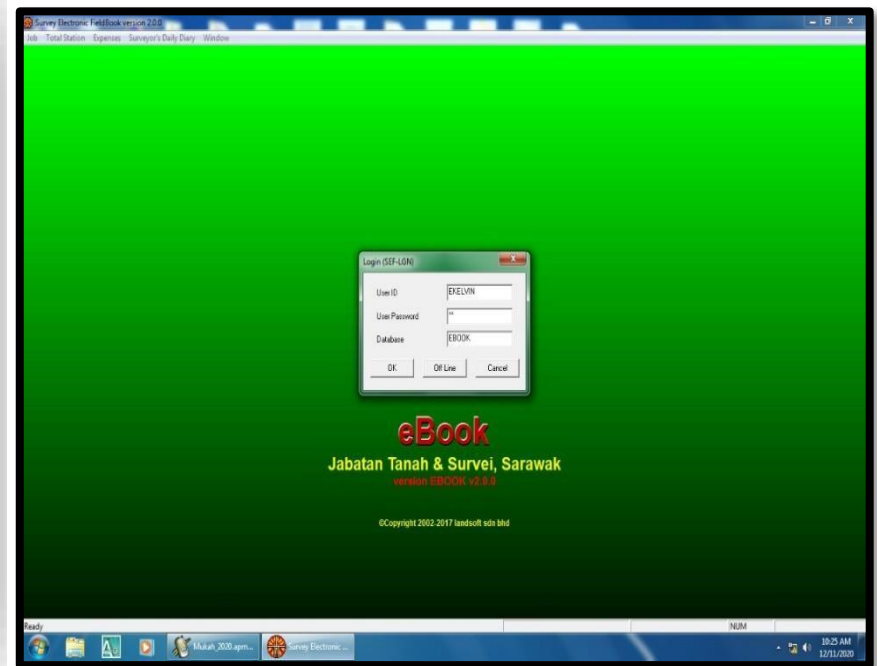


Sarawak



Sarawak

Perisian *e-Book* telah dibangunkan oleh Jabatan Tanah dan Survei Sarawak bagi mengautomasikan pengukuran di dalam sektor kerajaan dan menjadi pelengkap kepada Sistem eLASIS.



Sarawak

CDS merupakan perisian yang digunakan untuk kerja-kerja pemprosesan data ukur bagi tujuan penghasilan pelan. Ianya merupakan pakej yang berkeupayaan untuk melaksanakan analisis bagi kerja-kerja kejuruteraan.

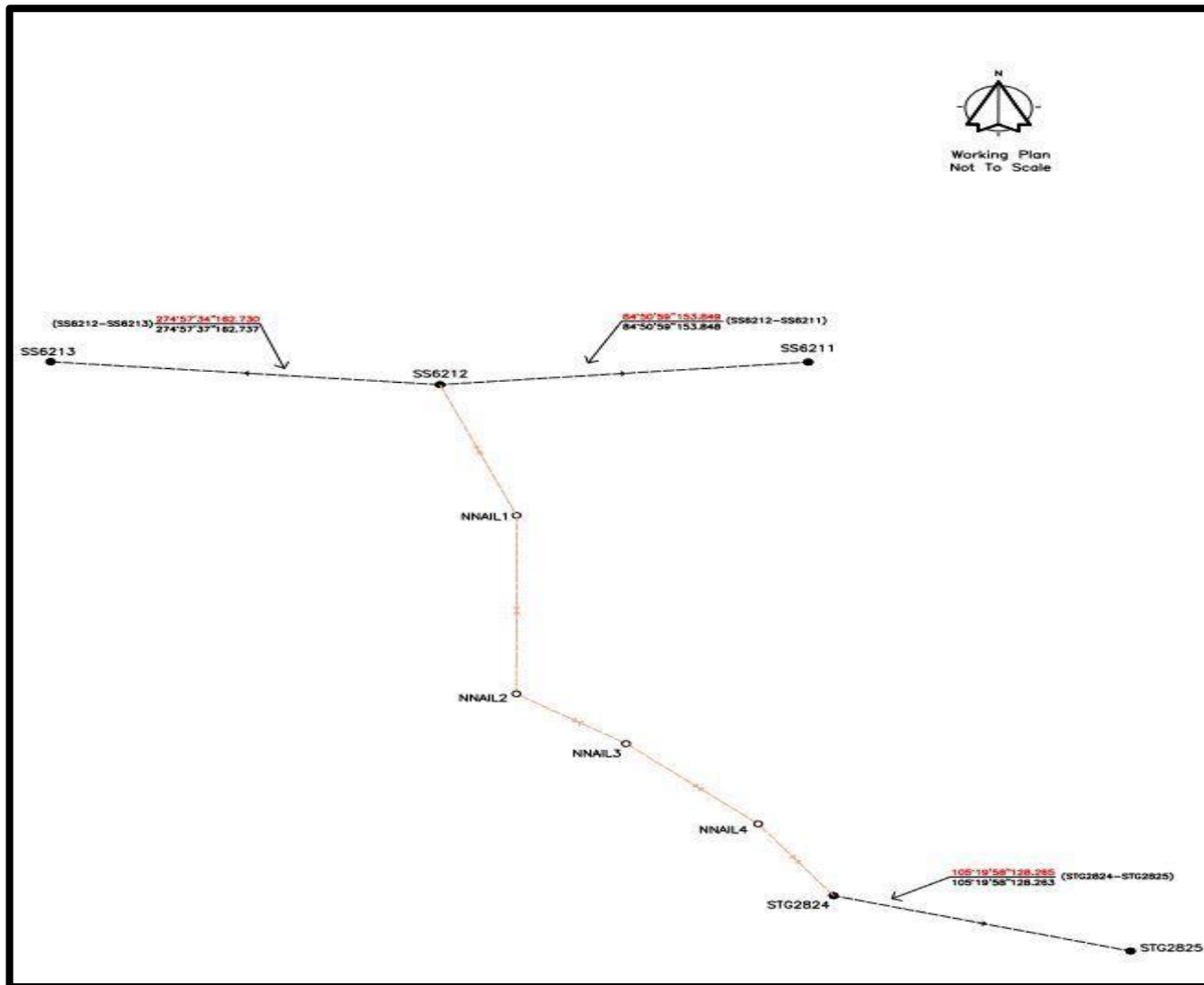


CDS2 release 11th March 2010

2.3.0.1

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Sarawak





Question

AV

Answer

ST