

Digital Data Capture in Geological Field Work

A Joint Project of the BC Geological Survey and the University of Victoria

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Topics

- Materials
- Benefits of digital mapping
- The future



Traditional Mapping Materials

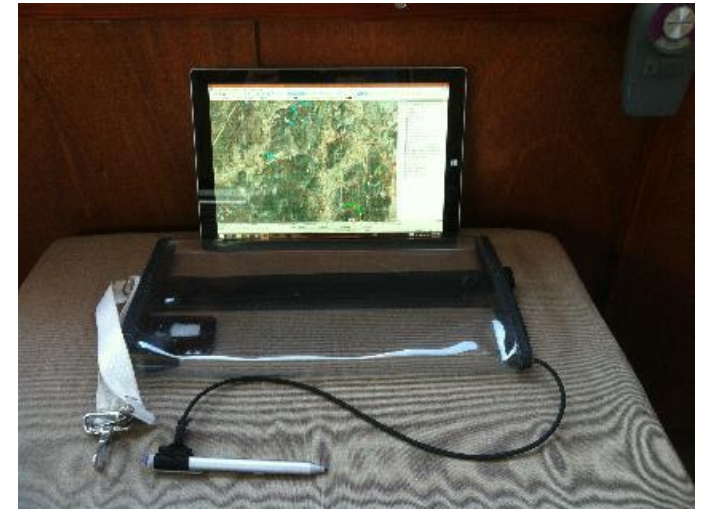


Digital Data Capture



Benefits of Digital Data Capture

- ✓ Easy to use
- ✓ Customizable for situation (ie planning traverses, data layers)
- ✓ Database integration
- ✓ Instant data mapping (structural symbols, rock unit coloration, contacts, labels)
- ✓ Easy data compilation
- ✓ Map creation...Done!



SNAP Field Notes

PREFIX

IRAV

STN

SUB

STATNUM

GMc14

2

1

0

GMc14-2-1

WEATHER

DATE

2014-06-28

AREA

EASTING

NORTHING

ELEVATION

GPS ±m

± 0

LocationID

9

Lithology

Sample

Structure

MagSus

Photo

ROCK NAME:

volcanic flow

ROCK UNIT

eJKcg

DESCRIPTION:

Low lying down dip section with rough surface weathering grey with pink feldspars visible in outcrop scale.
In parts glomeroporphyritic.
Clasts are largely of same composition but vary in grain size-some are largely aphanitic and some are strongly porphyritic. Some have abundant vesicles (up to 15%) filled partly with zeolite and qz and commonly rimmed by bright green mineral (seladinite?). A brown fine-grained vitreous mineral with somewhat rectangular outlines.

MINERALOGY/
ALTERATION:

10-20% conspicuous pinkish feldspars- rect to rounded. Rounded ones particularly appear to be composite with intergrowths of qz? No polysyn twinning.

STATNUM:

GMc14-2-1

LithologyID:

9

Record: 1 of 1

No Filter

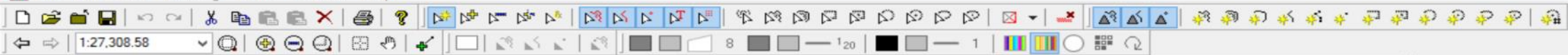
Search

Record: 1 of 354

No Filter

Search

Database Integration



Rock Unit Coloration

Format

Field: Unit

Method: Unique Values

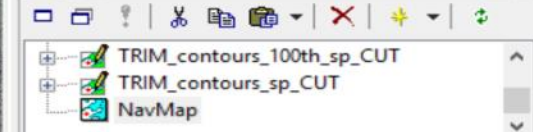
Palette: Altitude

Values:

ITrAd	11	
ITrAgd	28	
ITrNc	257	
ITrNd	5	
ITrNhp	43	
ITrNh	43	
ITrNI	46	
ITrNpx	296	
ITrNs	257	
ITrNt	21	
ITrNv	157	
ITrNvtf	53	
ITrTu	3	
mJOg	76	
mKSBkhp	9	
mKSgd	107	

☐ Preview

OK Cancel

Project

Map Local. 27 layers

GPS Console - [NavMap]

Drawing: OGPS TruckTracks

Refresh: 1 secs

Datum: World Geodetic 1984 (WGS84)

Altitude:

Bearing:

Mag bearing:

Mag variation:

Latitude:

Longitude:

Quality:

Speed:

Satellites:

Disconnected.

Info - [NavMap]

Column	Value
StatNum	MHE14-34-9
Subunit o...	
Unit	mJOg
Feature	
Azimuth	0
Diplunge	0
Reliability	0
Mag sus ...	
Photos	
HandSam...	
ThinSection	
Assay	
Officer	MHE14
ID	1128074
GPS Way...	
Geochron	
Isotooped	

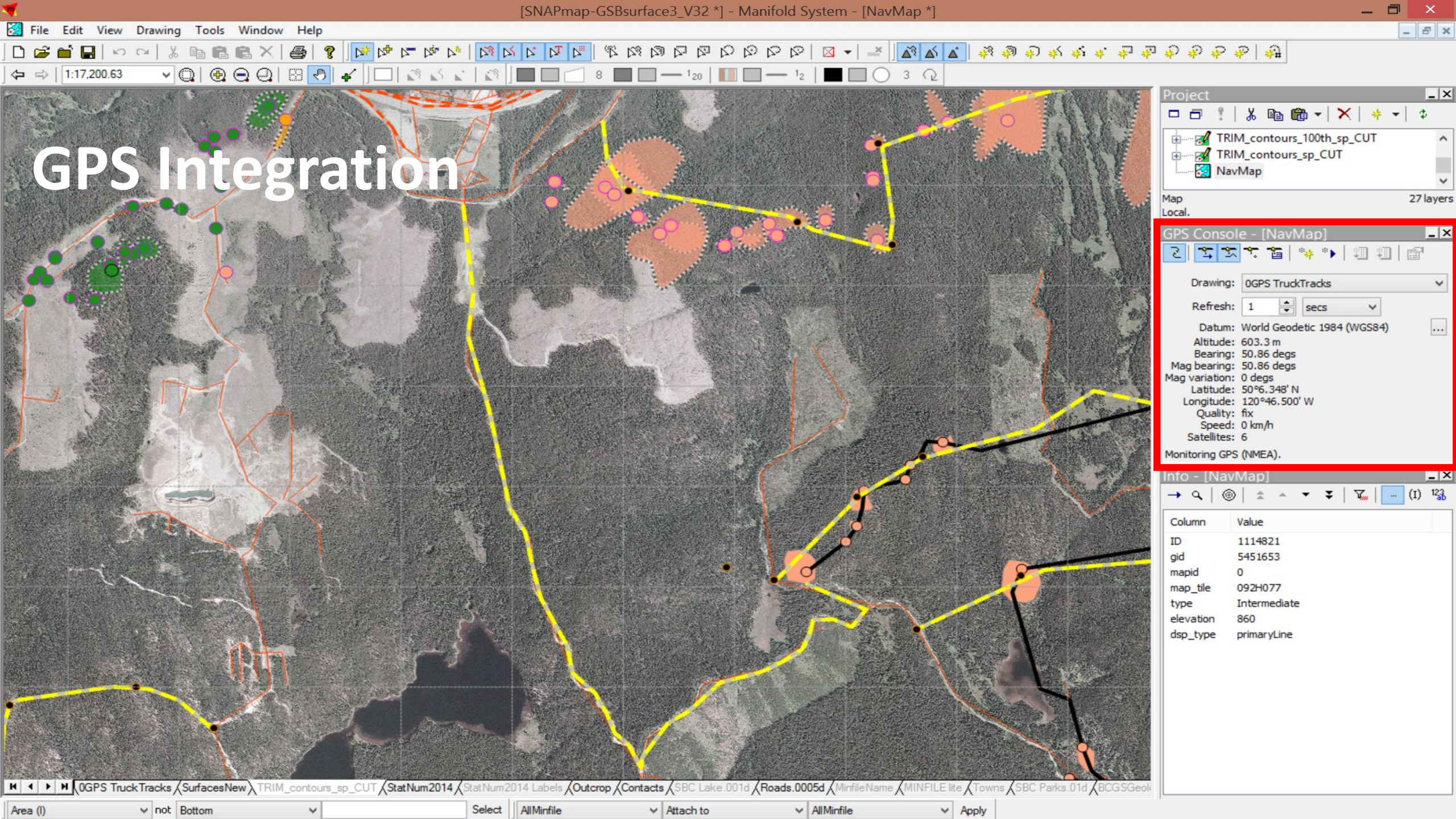
|< < > >| OGPS TruckTracks SurfacesNew TRIM_contours_sp_CUT StatNum2014 StatNum2014 Labels Outcrop Contacts SBC Lake.001d Roads.0005d MinfileName MINFILE lite Towns SBC Parks.01d BCGSGeol

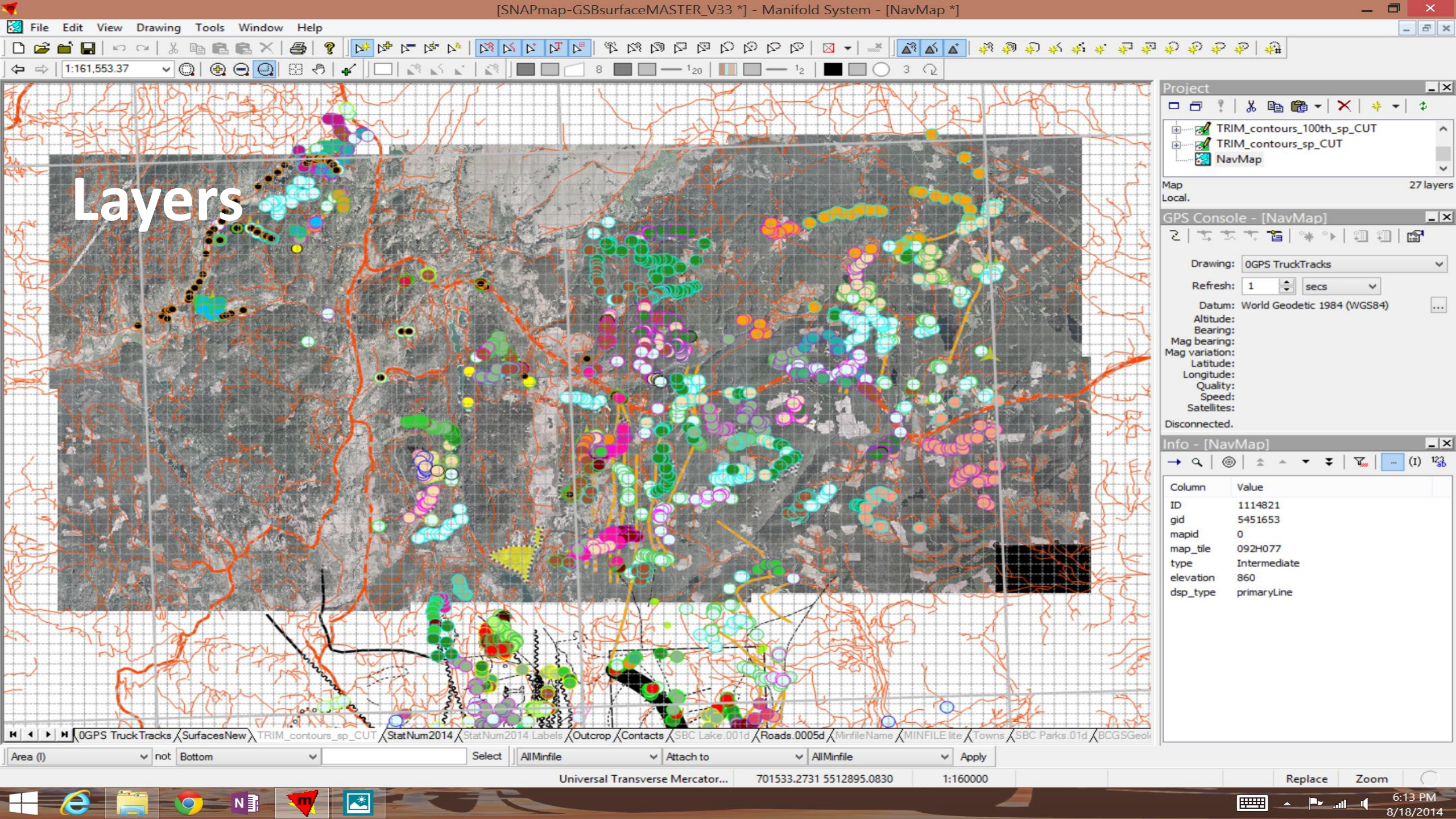
Area (I) not Bottom Select AllMinfile Attach to AllMinfile Apply

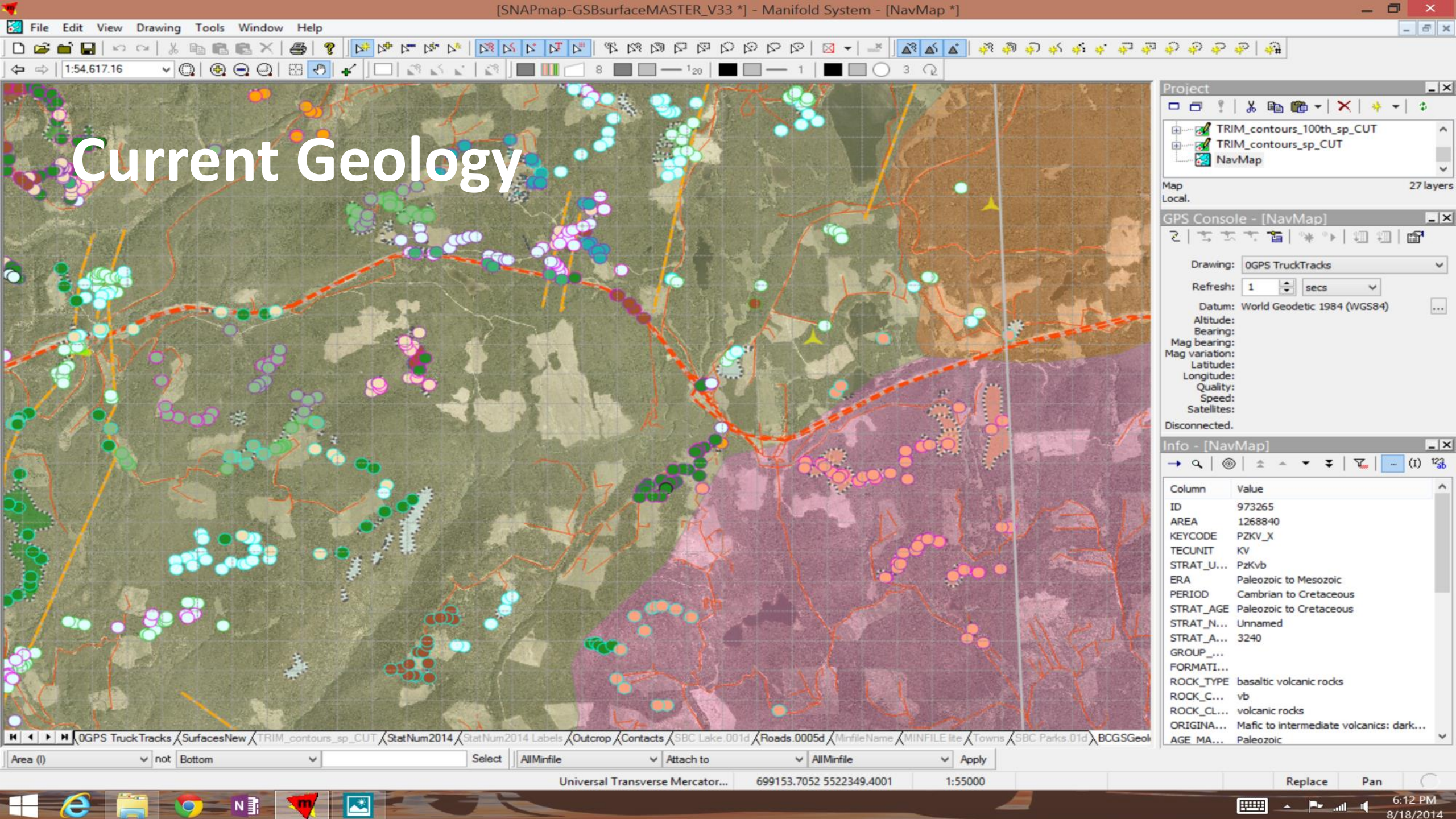
Universal Transverse Mercator... 697181.1721 5528718.5864 1:27000

Replace



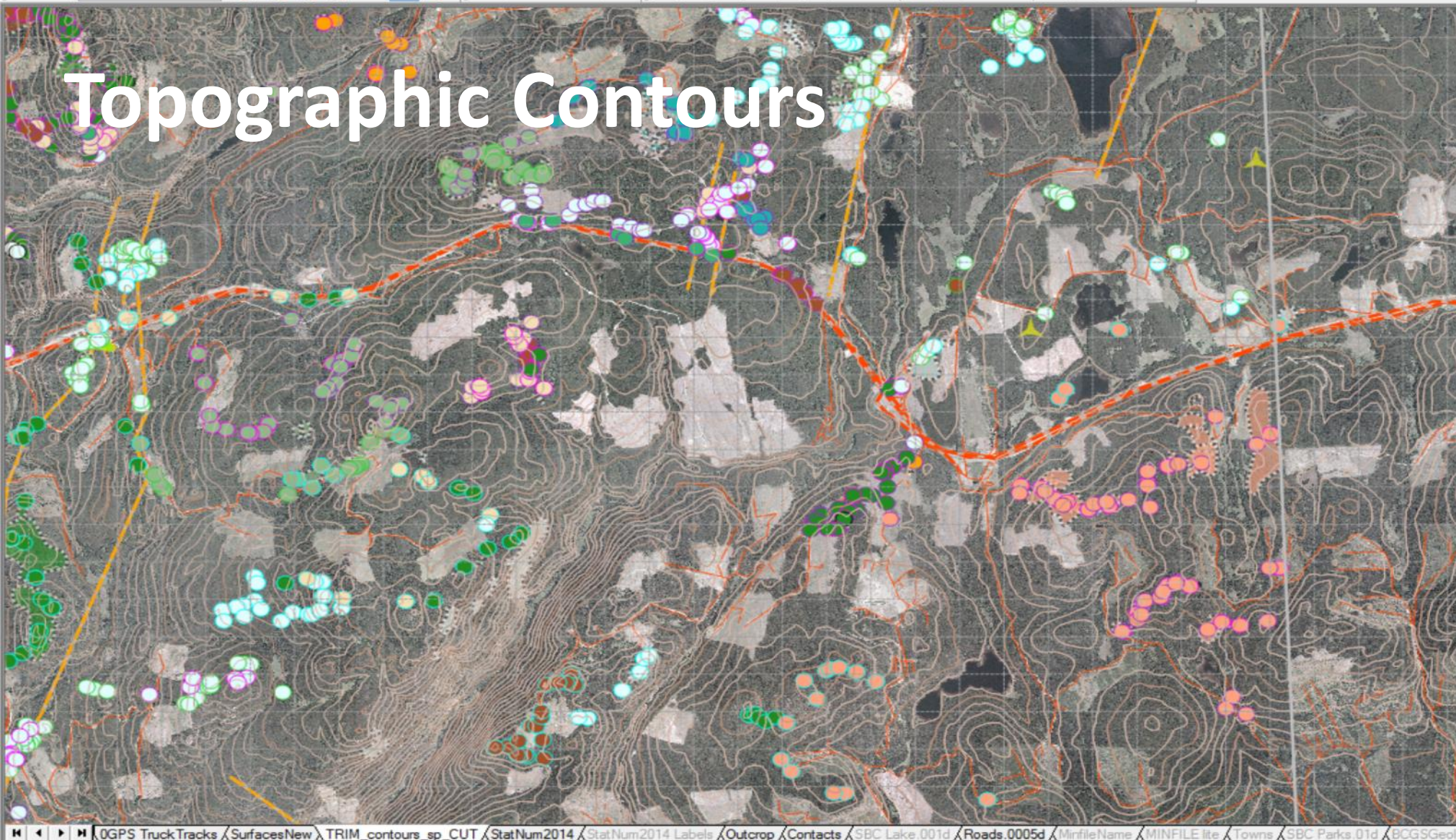




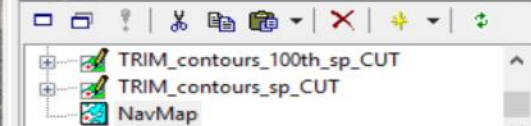




Topographic Contours

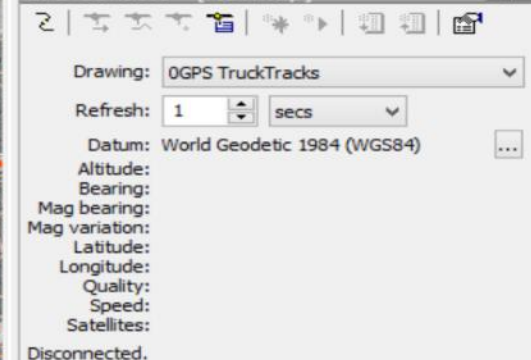


Project



Map
Local. 27 layers

GPS Console - [NavMap]



Info - [NavMap]

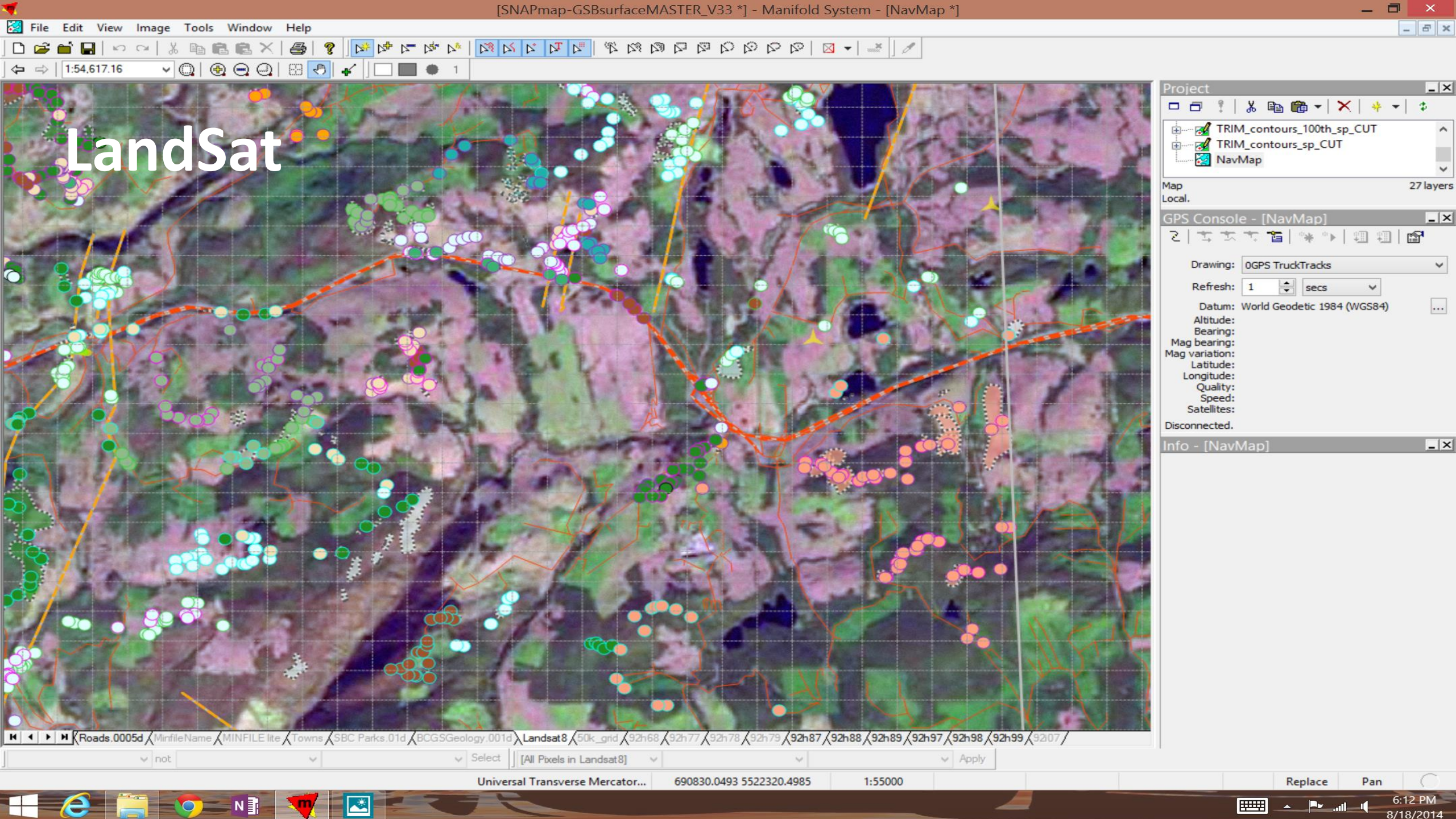
Column	Value
ID	1114821
gid	5451653
mapid	0
map_tile	092H077
type	Intermediate
elevation	860
dsp_type	primaryLine

Area (l) not Bottom Select AllMinfile Attach to AllMinfile Apply

Universal Transverse Mercator... 687636.4244 5522363.8509 1:55000

Replace Pan



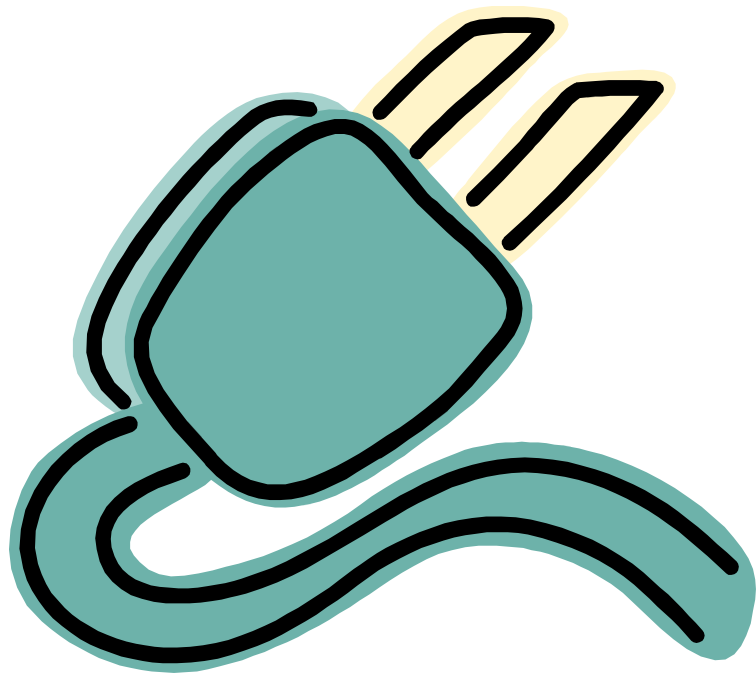


Why Digital Data Capture?

- ✓ Data at your fingertips
- ✓ Multiple drawings for traverse planning, roads, topographic overlays etc...
- ✓ Modifications can be made easily in the field
- ✓ Database for easy note taking and GIS integration
- ✓ Syncing of data from mapping crews
- ✓ Less time spent transferring data to build a map and data table
- ✓ Instantaneous map creation: Saving you TIME, ENERGY, and \$\$\$



Obstacles



The Future

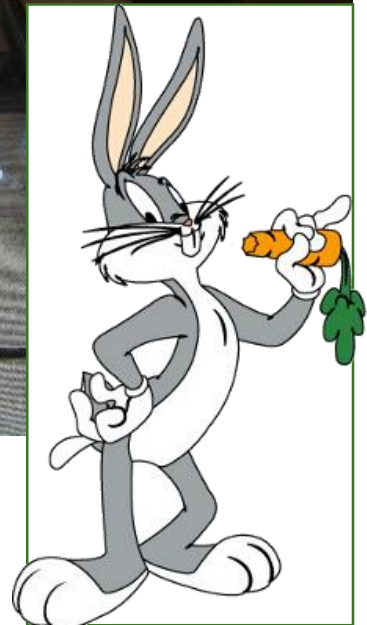
- Real-time data sharing and map generation
 - Data backups
 - Safety!

Out with the old...



http://looneytunesshow.wikia.com/wiki/Yosemite_Sam

In with the new...



http://en.wikipedia.org/wiki/Bugs_Bunny