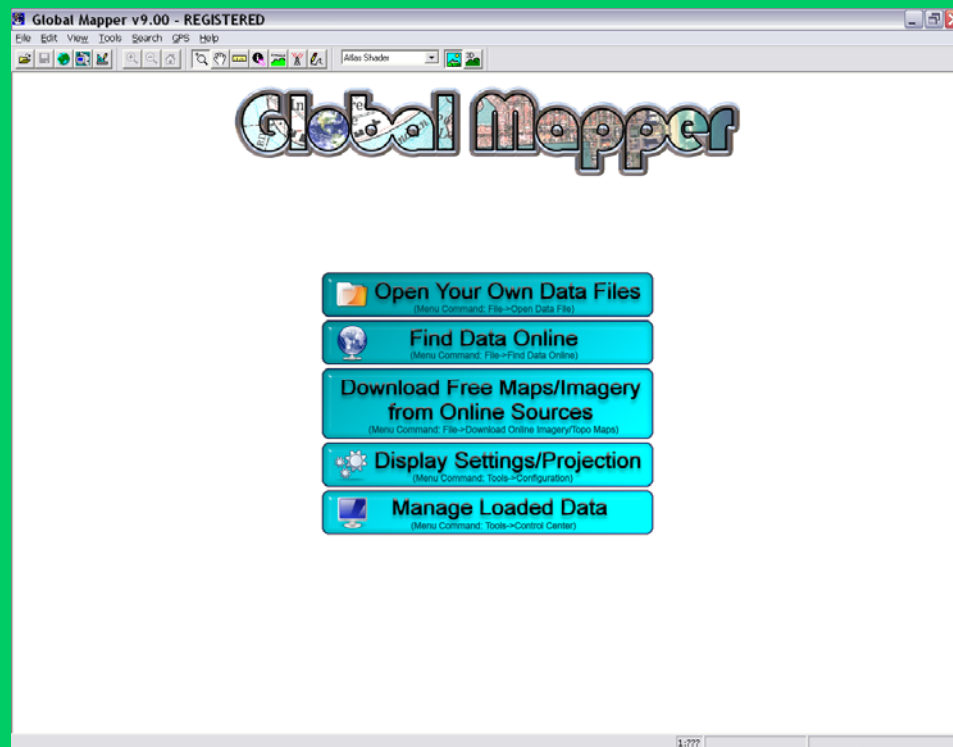


Global Mapper Overview



Bridge Planning Practitioners Workshop
April 2012

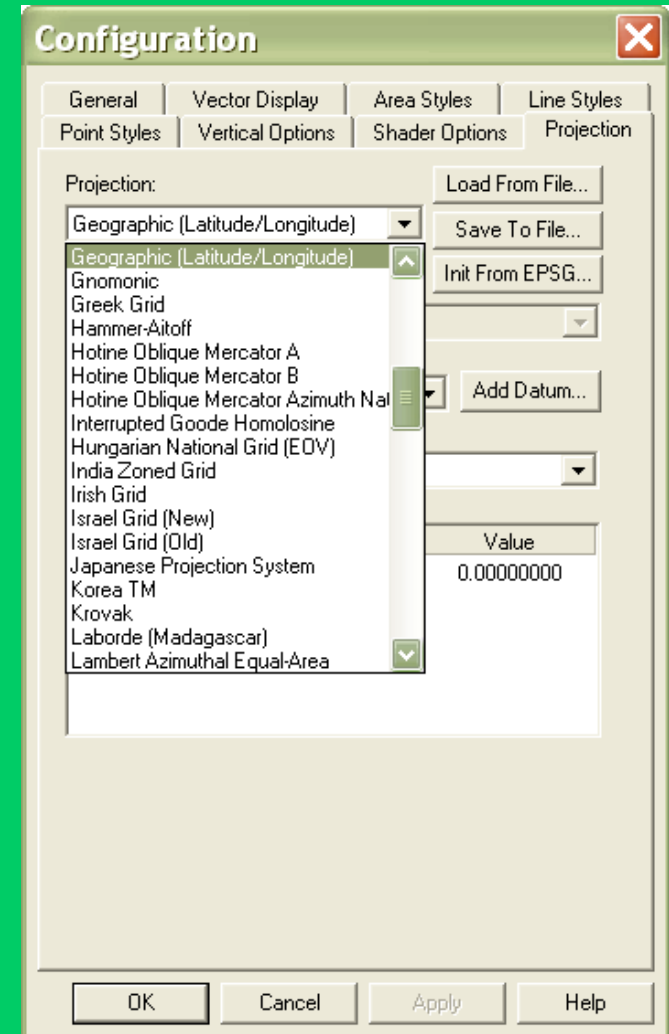
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Overview

- Drainage Area
- Stream Profile
- Channel XS Parameters
- Banktracking
- BPG Tool

Projection

- GIS data files may store data in different projection systems
- GM will convert and display in the selected projection.
- Tools: Configuration, “Projection Tab”, pick from list, or “Load From File” (PRJ file).
- UTM 11/12, 3TM, 10TM, geographic



Drainage Area (DA) - Overview

1. Locate Map Sheet for Site (HIS)
2. Open Global Mapper and set projection to TM
3. Load GIS Data - DEM, Streams, Bridges, others
4. Zoom to extents of DA
5. Generate Contours
6. Draw DA boundary
7. Modify DA, if necessary
8. Large DA – Use Multiple Polygons

Locate Map Sheet Number

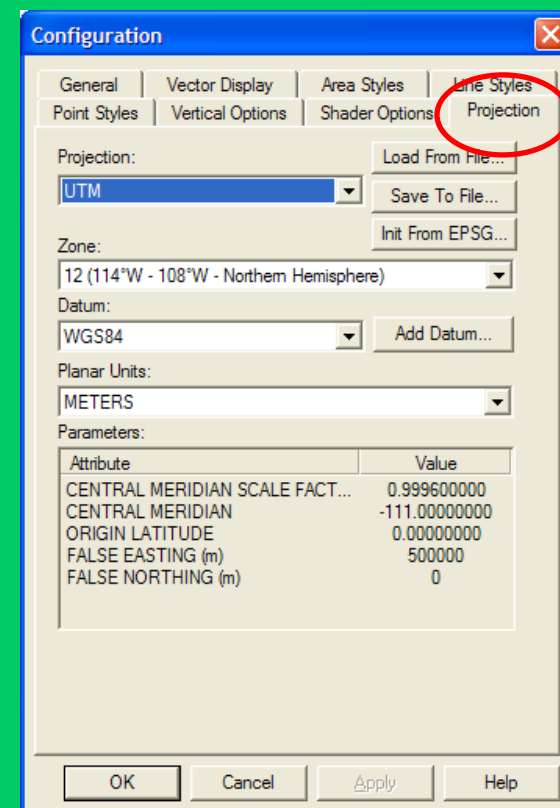
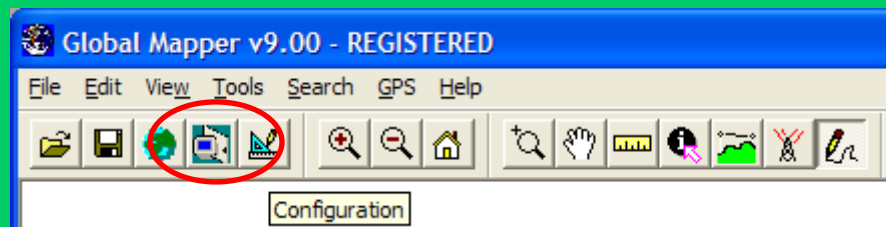
- Use HIS
- 48 Map Sheets in Alberta

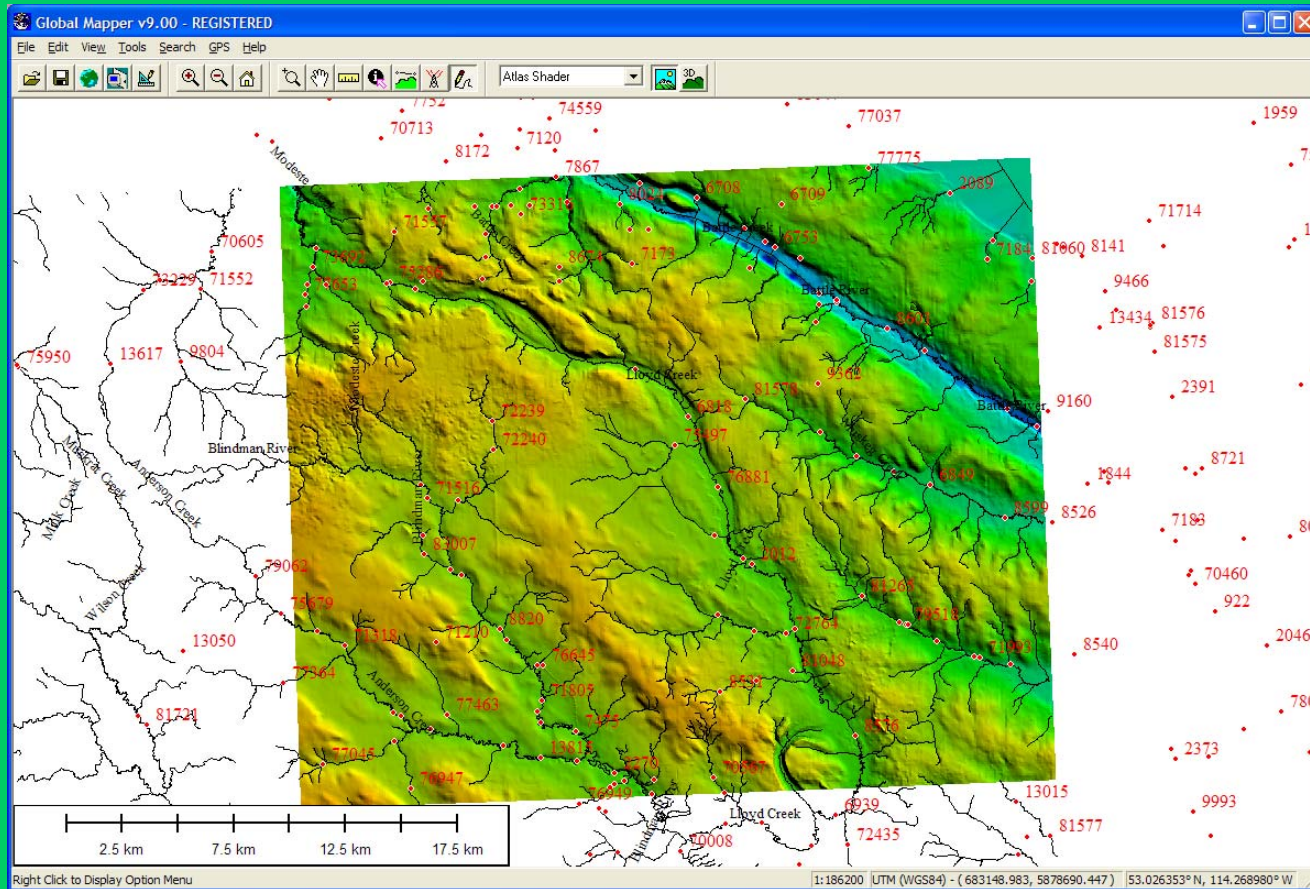
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Flood		All Flood	Bridge	History	Profile	Summary	Visual	Inspection								
2	Stream :		ANDERSON CREEK														
3								#		Spn /					Gross		
4	File	Reg	Hwy	LLL	Location	Map	Years	Cat	Type	Spn	Len	DIA	Wid	Ht	DA	S	B
5	79062	3	L	SW4-45-4-5	HOADLEY	83B15	1980	C	MP	1	29.0	2000.0	8.0	3.6	14	0.0055	
6	75679	3	L	NW27-44-4-5	HOADLEY	83B15	1964	C	SP	1	39.0	2134.0	7.3	4.3	29	0.005	
7	72780	3	L	SW26-44-4-5		83B16	UNKNCN								35	0.004	
8	71318	3	L	SE26-44-4-5		83B16	UNKNCN				0.0				37	0.004	
9	08821	3	L	SW18-44-3-5	BLUFFTON	83B16	1960	S	PG	3	20.7	6.1	6.4	3.7	74	0.001	6
10	07255	3	L	SW18-44-3-5	BLUFFTON	83B16	1967	S	HC	3	20.7	6.1	8.2	4.3	74	0.001	6
11	07476	3	L	NW8-44-3-5	BLUFFTON	83B16	1968	S	HC	3	18.3	6.1	7.3	4.3	130	0.001	7
12	08822	3	L	SW10-44-3-5	BLUFFTON	83B16	1986	S	SM	3	26.0	8.0	8.8	5.4	153	0.001	8
13	15815	3	L	NW2-44-3-5		83B16	UNKNCN								158	0.001	
14	07229	3	20:06:12.492	NW1-44-3-5	BLUFFTON	83B16	1984	C	SP	2	55.5	3700.0	11.0		161	0.001	8
15																	
16																	
17																	
18																	

About / Instructions / Select Stream / Bridge List /
 Draw / AutoShapes / Ready

Open Global Mapper

- Open Global Mapper and Set Projection to TM type

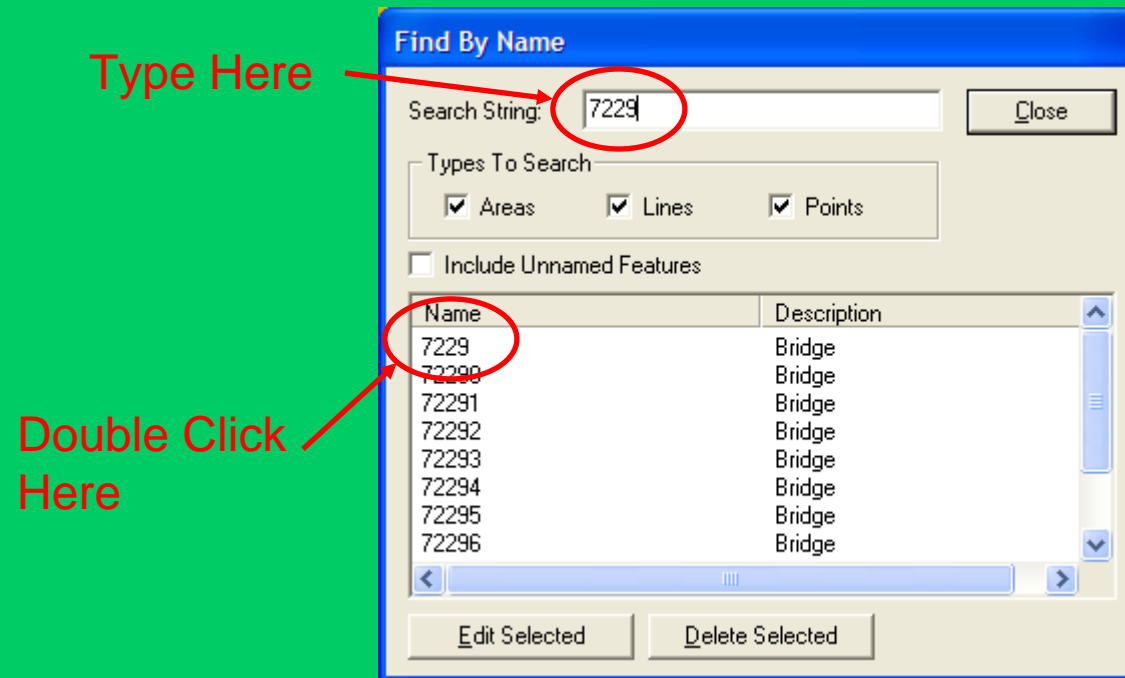




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Find Bridge Site

- Search : “Search By Name”



Generate Contours

- File : Generate Contours

Contour Generation Options

Contour Options | Simplification | Gridding | Contour Bounds

Description: GENERATED CONTOURS

Contour Interval: 5 METERS

☐ Only Generate Contour Lines at Specified Height

Resolution

The resolution affects fidelity with which contours are generated. Larger numbers result in less detailed contour lines that take up less space. Typically you'll just want to accept the defaults.

X-axis: 15.921625275701 meters

Y-axis: 16.371125348539 meters

If you wish to change the ground units that the resolution is specified in, you need to change the current projection by going to Config->Projection.

☐ Generate Area Features Colored Based on the Current Elevation Shader in Addition to Contours

☐ Generate Spot Elevations at Min/Max Elevations

☒ Interpolate to Fill Small Gaps in Data

☒ Append Unit Labels (m' or ft') to Elevation Labels

☒ Smooth Contour Lines/Areas to Improve Appearance

Export Contours Directly to Package Files Rather Than Displaying in the Main Map View. Use with Gridding Option to Allow Contouring of Very Large Areas

☐ Displaying in the Main Map View. Use with Gridding Option to Allow Contouring of Very Large Areas

OK Cancel Apply Help

Enter Contour Interval e.g. 10m for steep areas, 2m for flat areas

Contour Generation Options

Contour Options | Simplification | Gridding | Contour Bounds

☐ All Loaded Data

☒ All Data Visible On Screen

Draw a Box...

☐ Lat/Long (Degrees)

North: 53 -115 West

South: 52.5 -113.9375 East

☐ Global Projection (UTM - meters)

North: 5876481.268497 634213.2519212 West

South: 5818544.232700 703627.3878913 East

☐ Corner w/ Size - Global Projection (UTM - meters)

North: 5876481.268497 634213.2519212 West

Width: 69414.13597007 Height: 57937.03579650

☐ MGRS (Military Grid Reference System) Bounds

Top Left: 11 U PU 32622 76437

Bottom Right: 12 U TD 98623 18451

☐ Crop to Selected Area Feature(s)

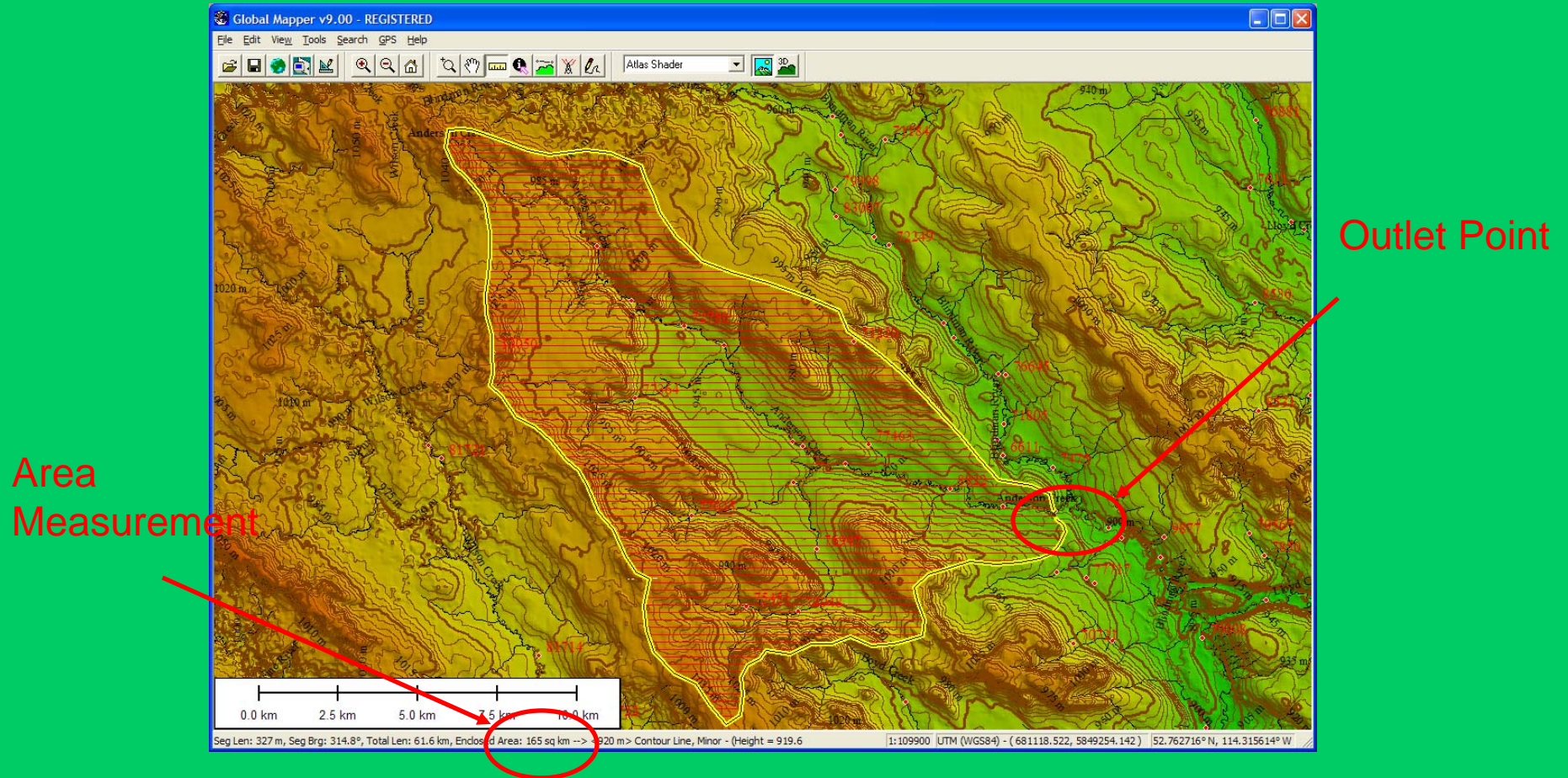
Reset to Last Exported Bounds

OK Cancel Apply Help

Select this to limit contouring to screen area, much faster than "all loaded data"

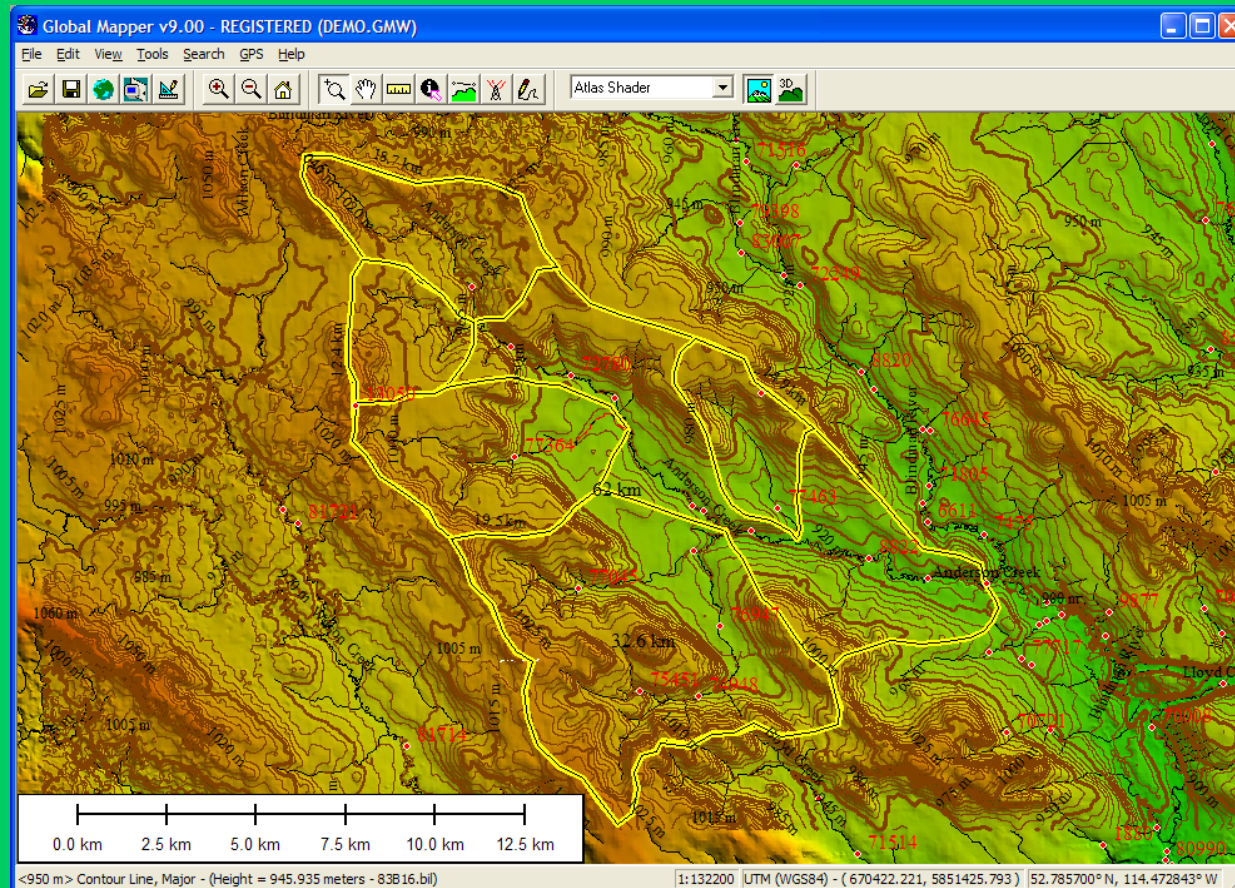
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Draw DA Boundary



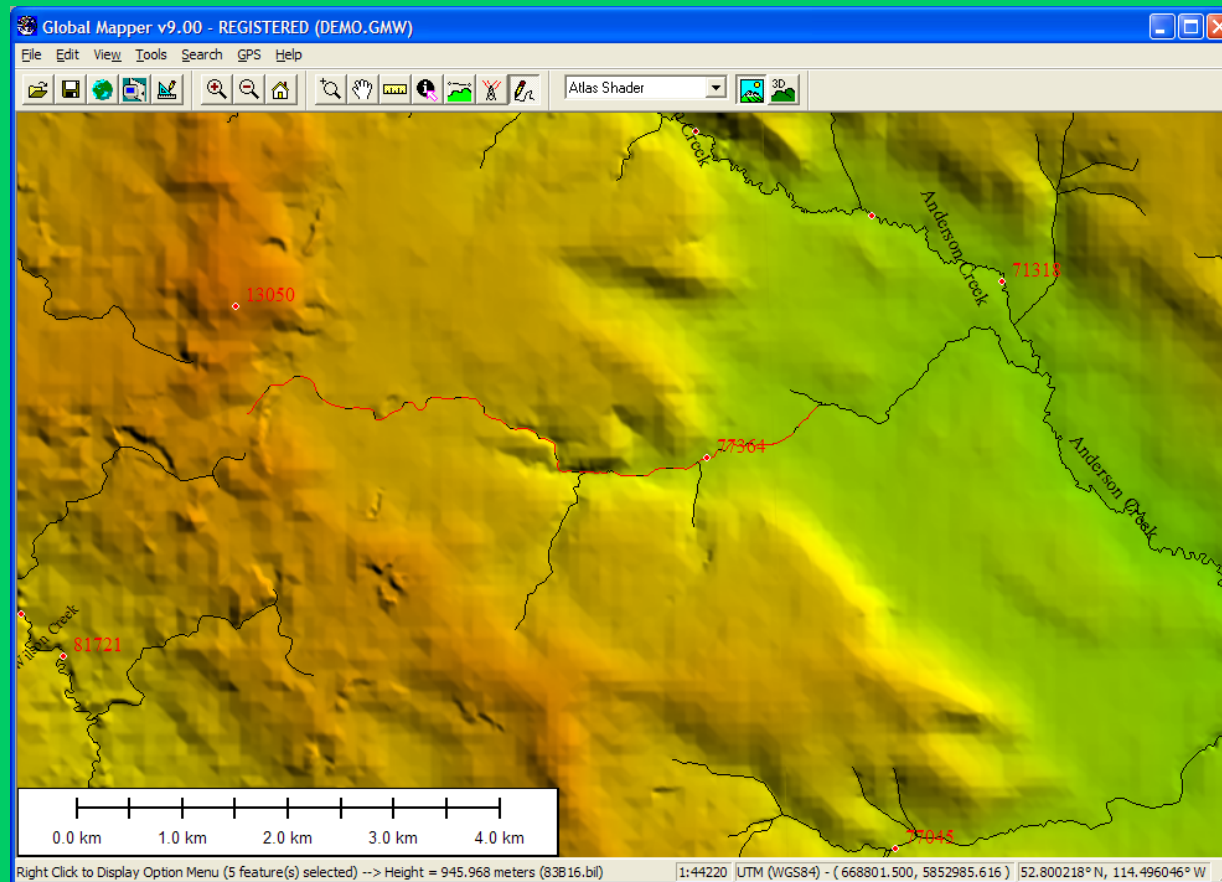
Multiple Polygons

- Can move/edit points/lines/areas



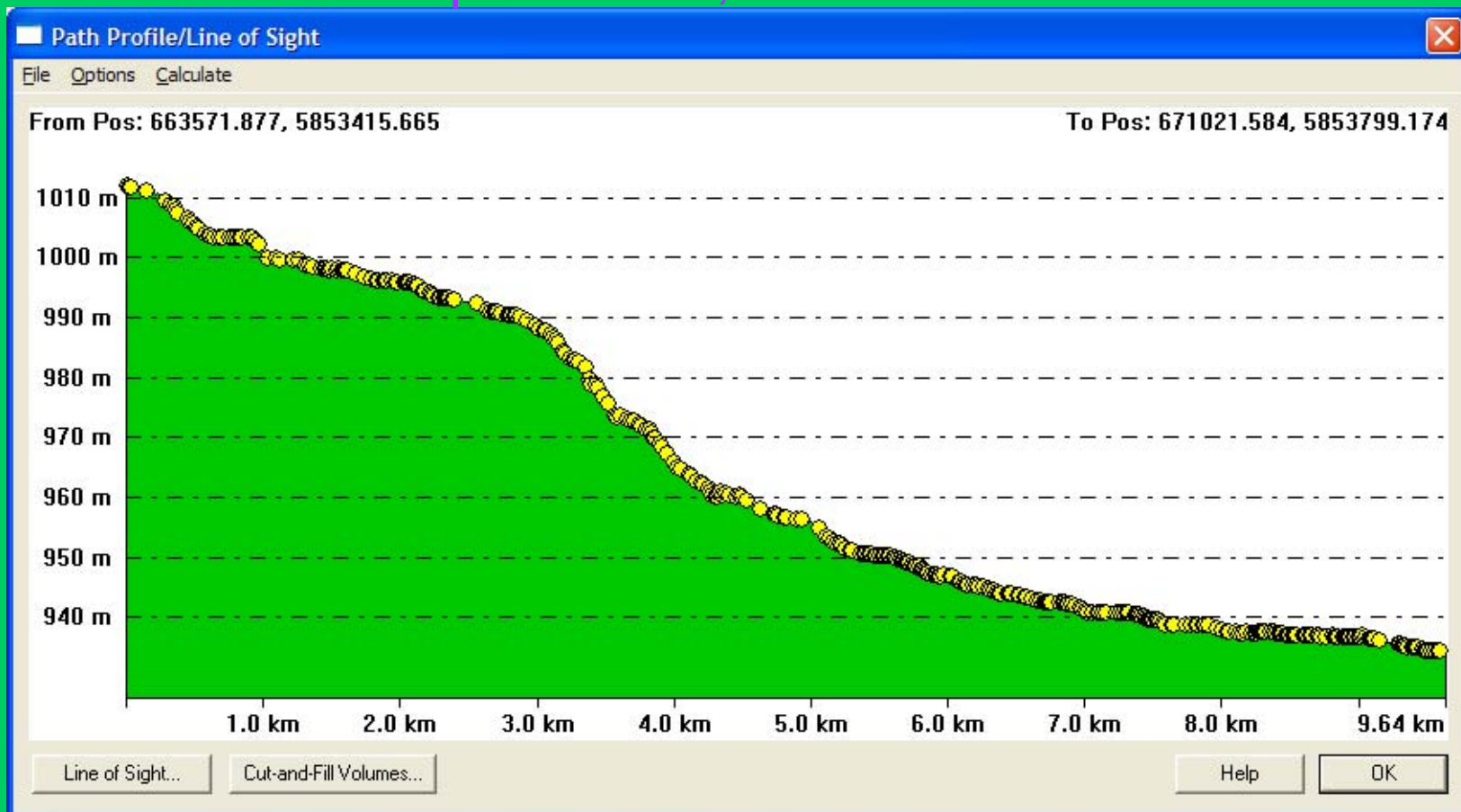
Stream Profile

- Can combine line segments



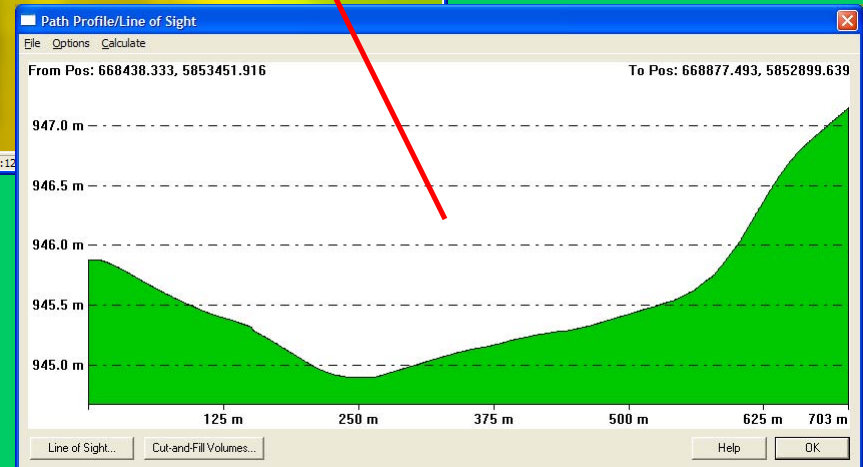
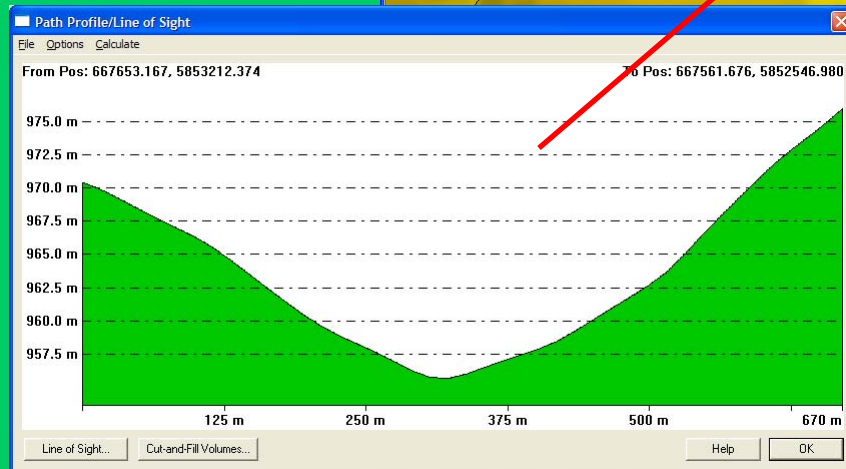
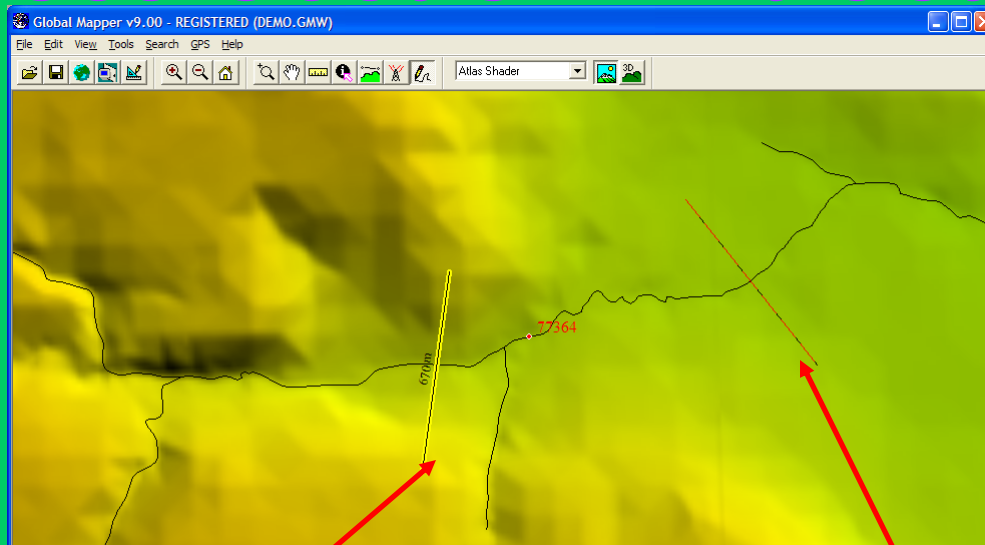
Generate Profile from DEM

- Source of slopes in H/S; can extract to Excel

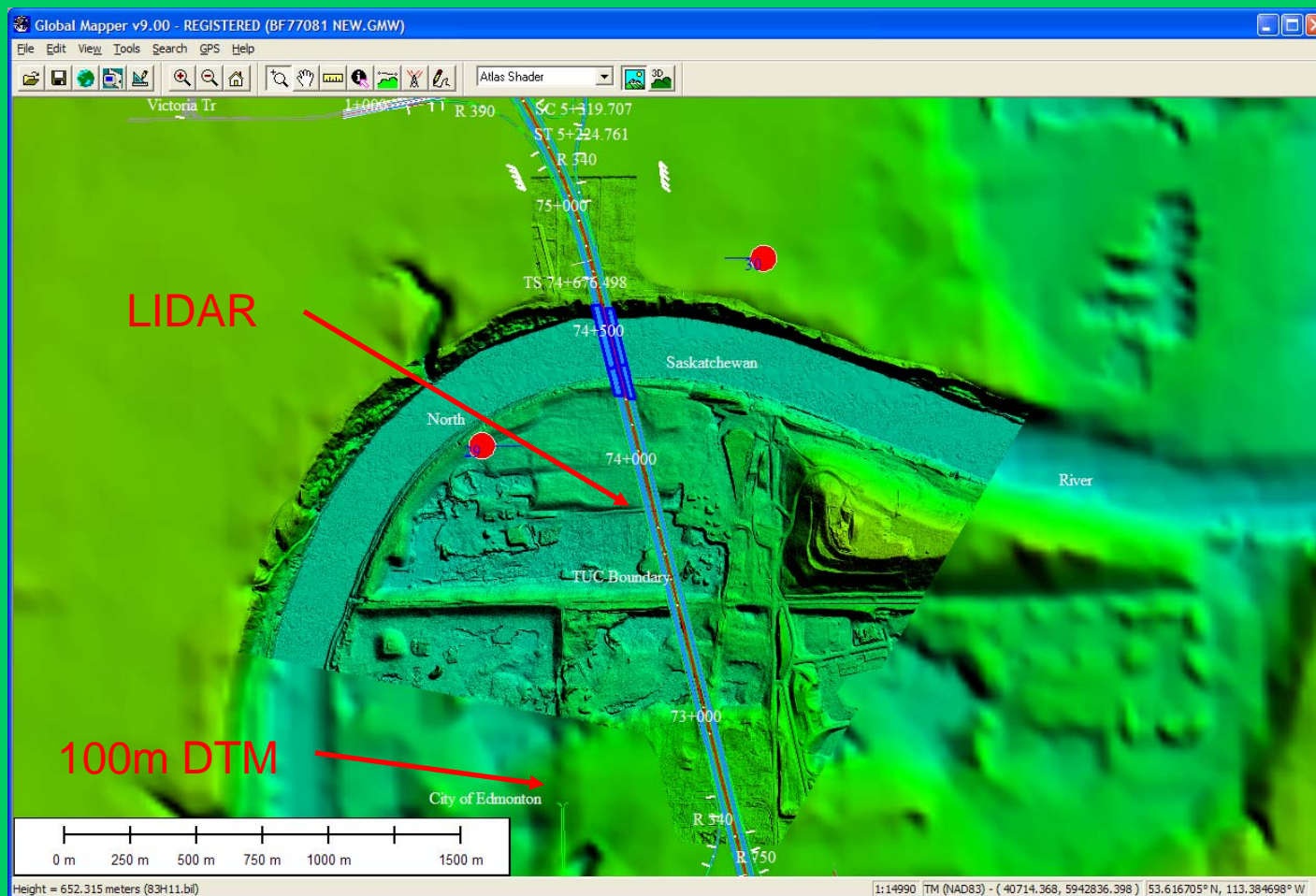


Cross Section Extraction

- B, h, T

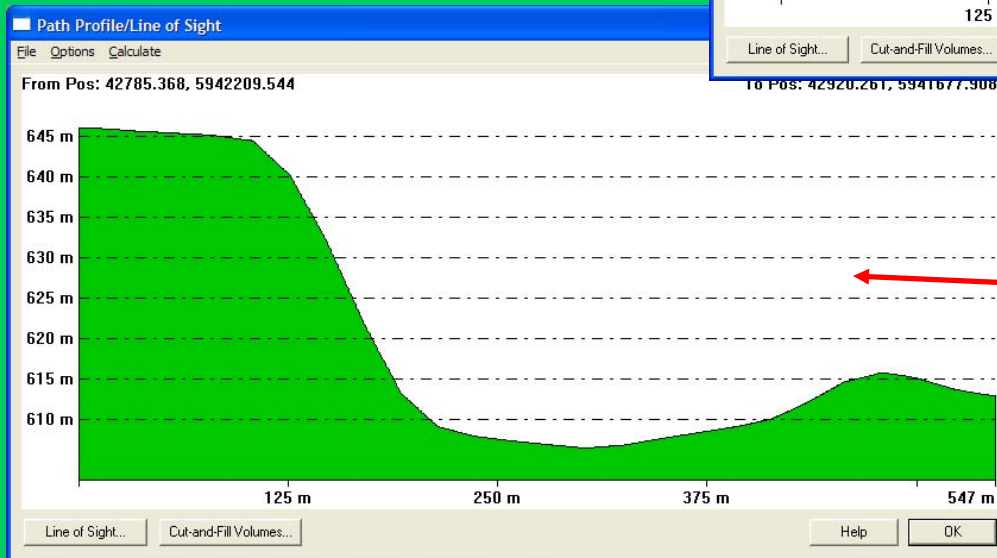
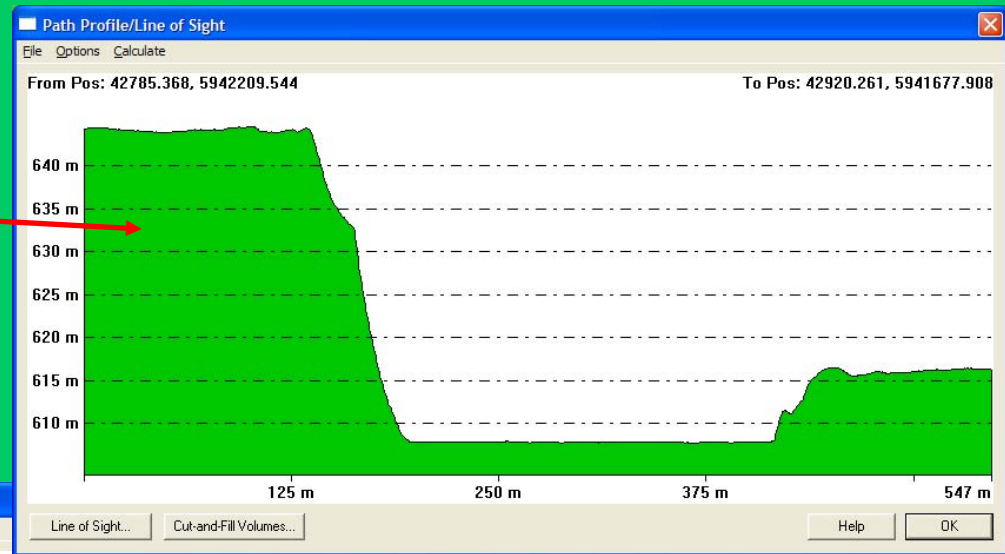


Cross Section Extraction



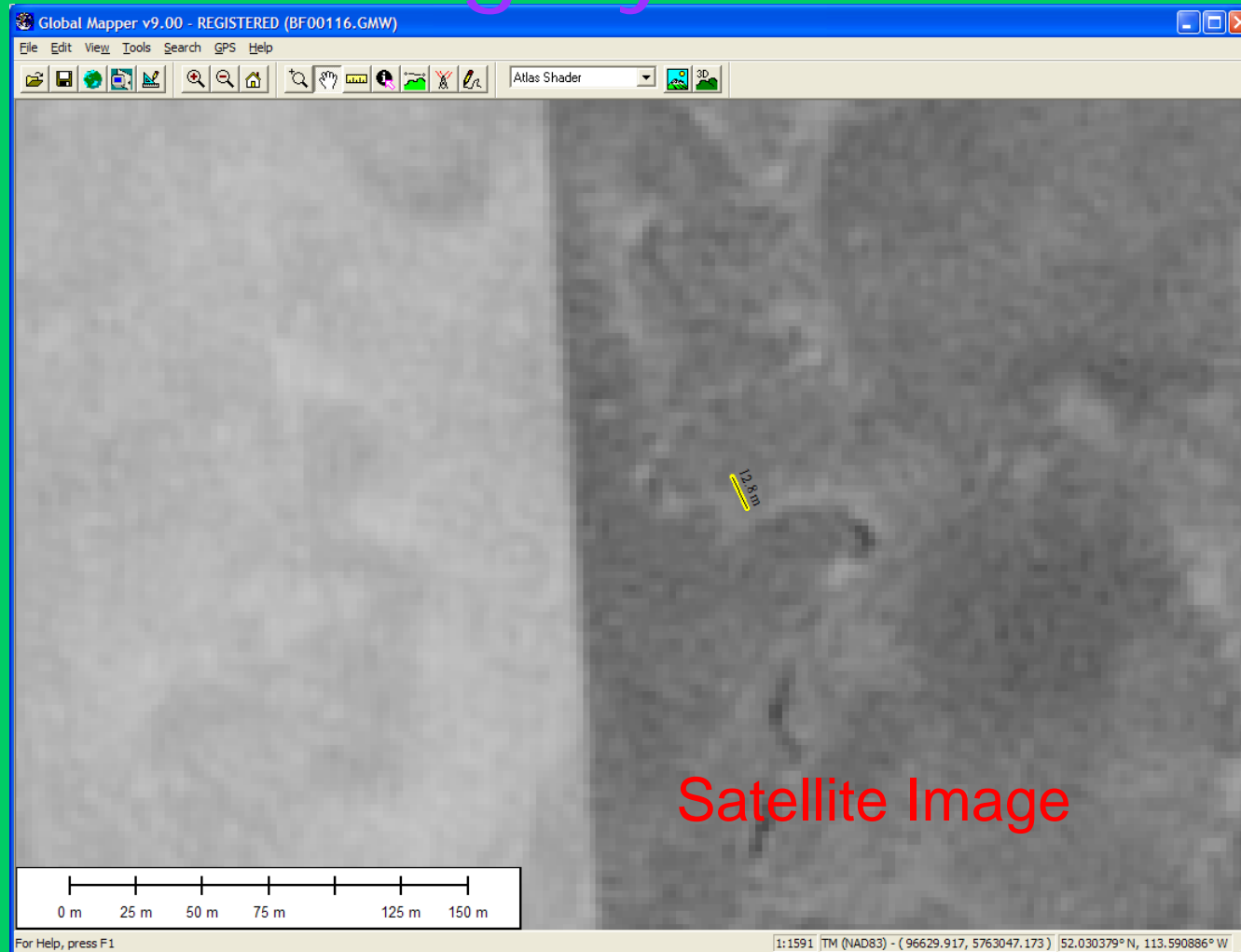
DTM – XS Extraction

LIDAR



100m DTM

Satellite Imagery Measurement



Satellite Image

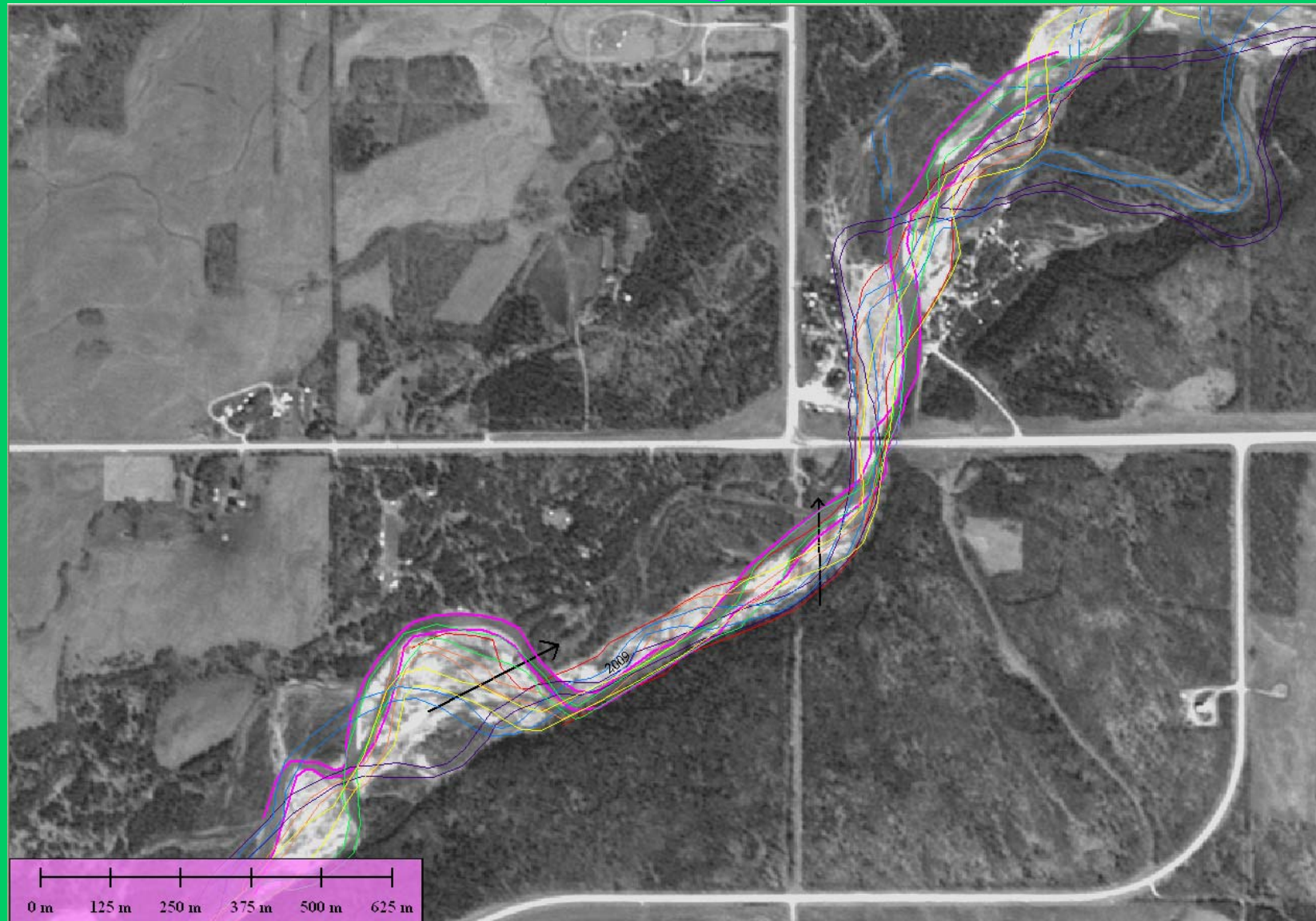
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Airphoto Imagery Measurement

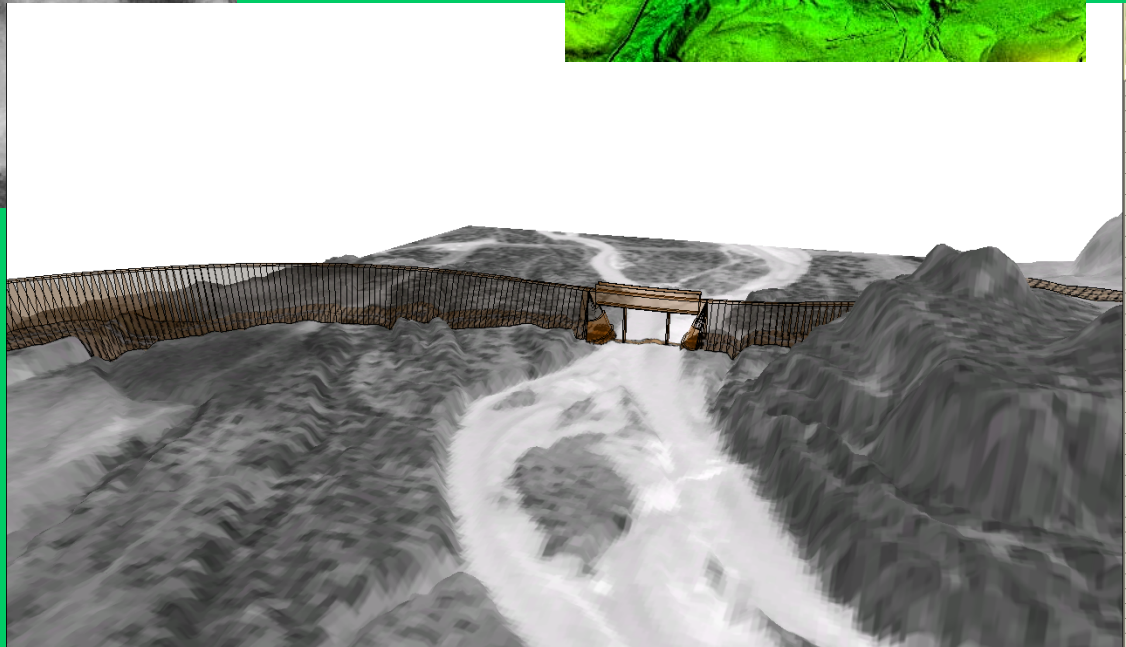
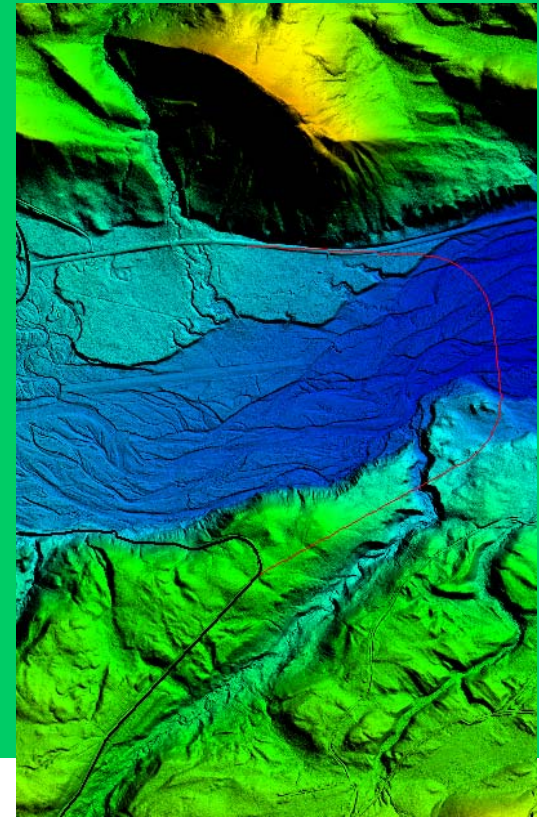
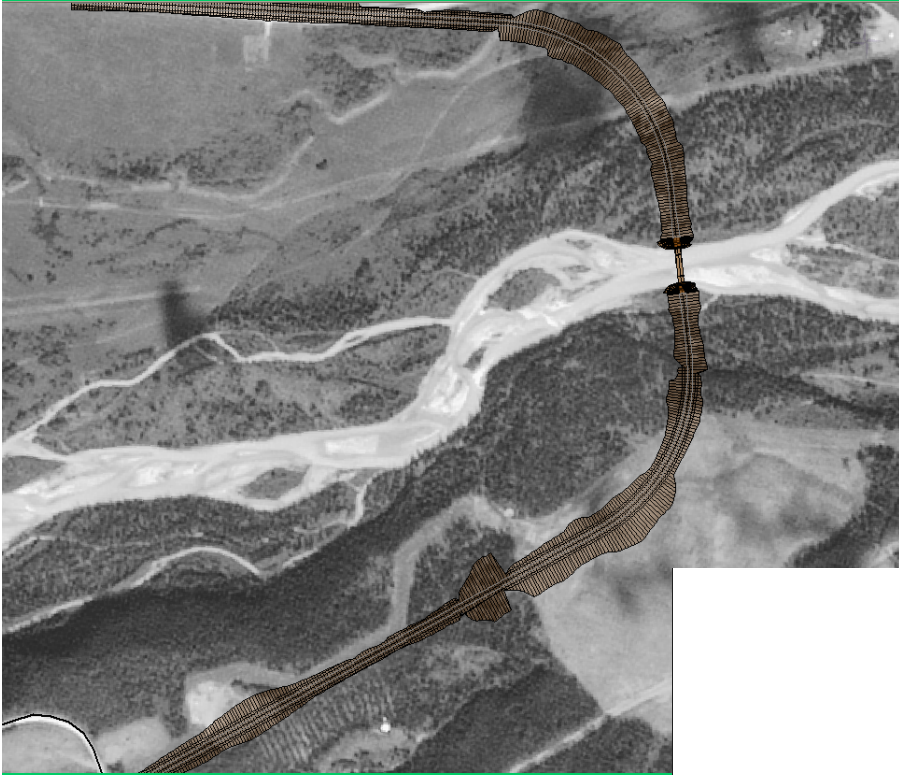


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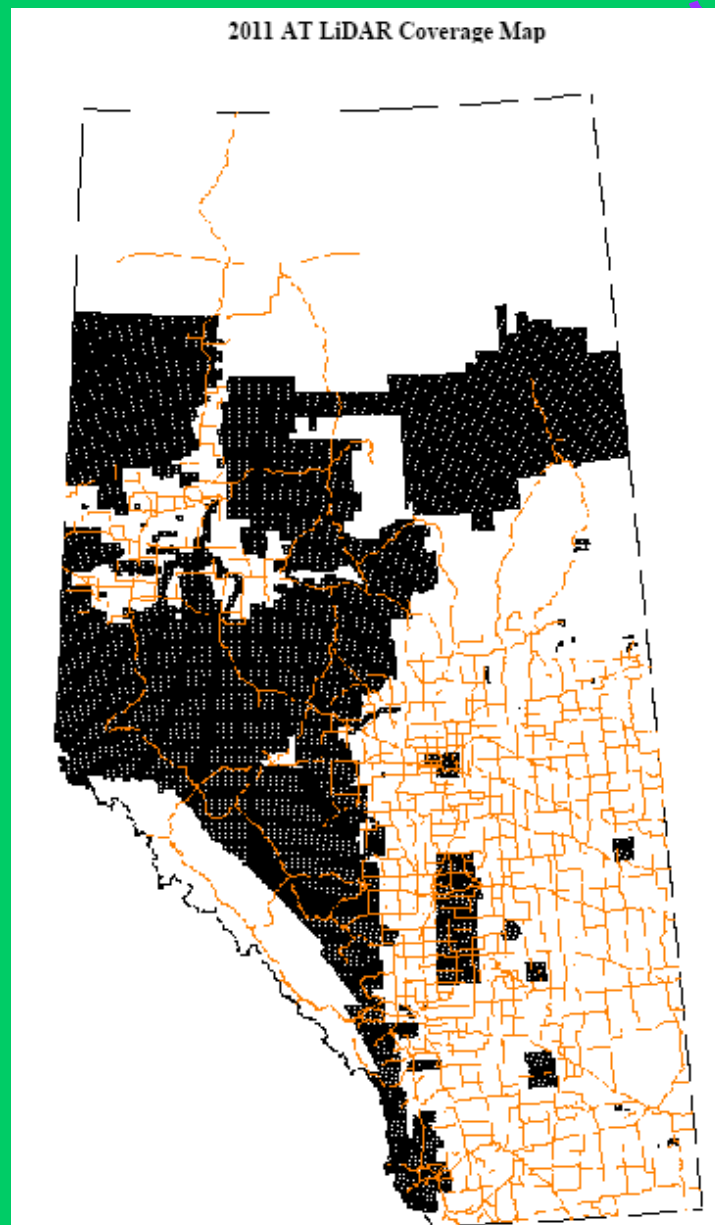
Banktracking (BIM 2)



BPG Tool



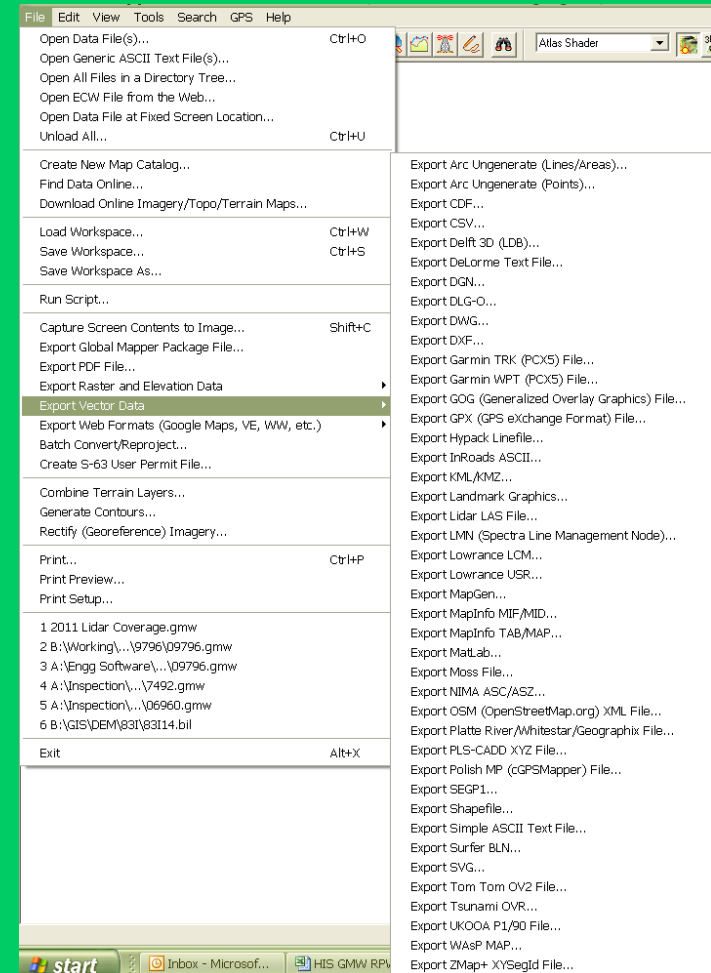
LiDAR Coverage



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Other Layers

- Maps (1:50000, 1:250000)
- NWPA
- WSC Gauges
- Storms
- TWP Grids
- RoWs
- Provincial Highways
- Local Roads
- Alberta/Edmonton Boundary
- River Basins
- Import/Export to Excel/DGN/DWG/Google Earth



QUESTIONS?