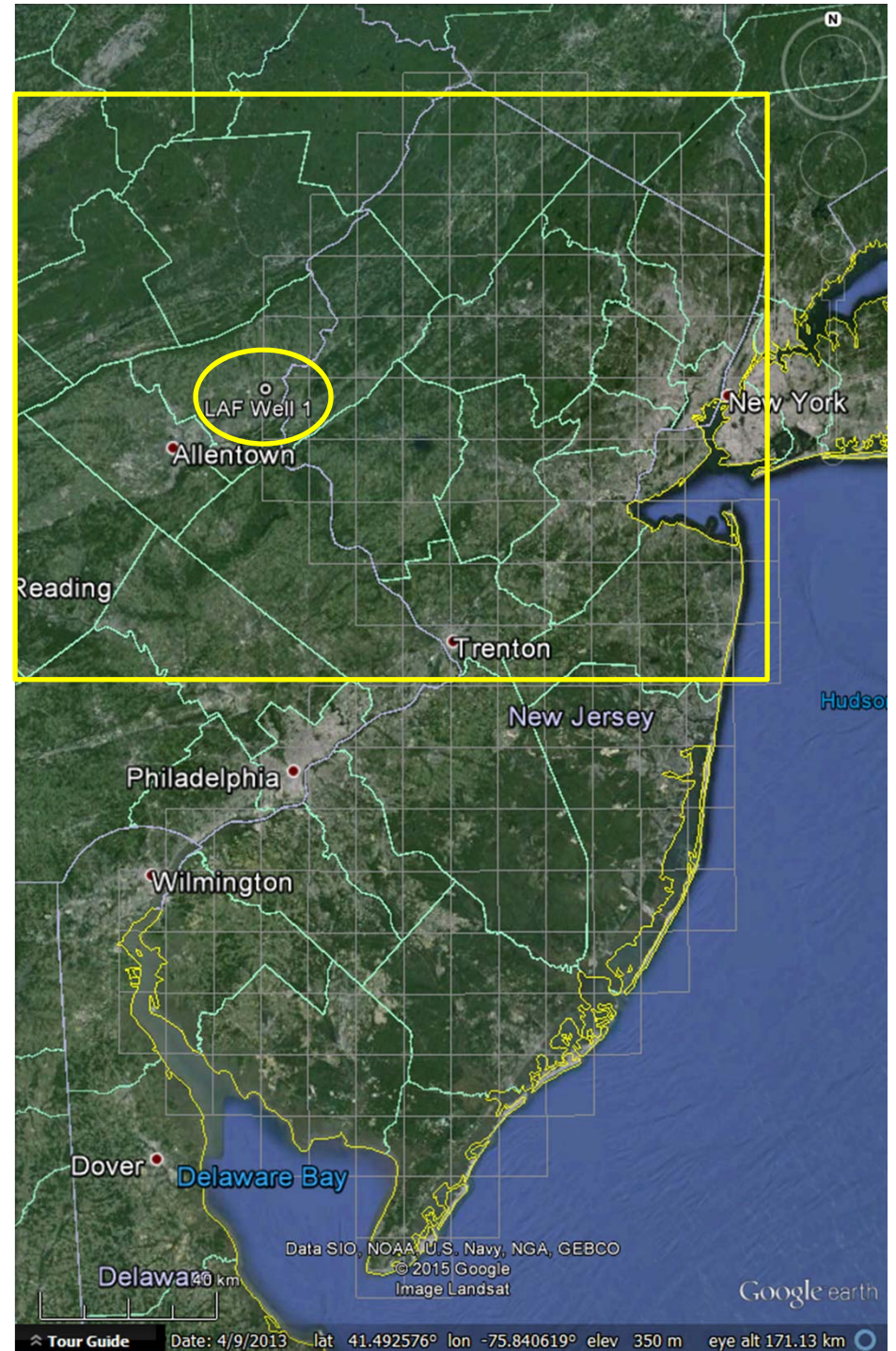
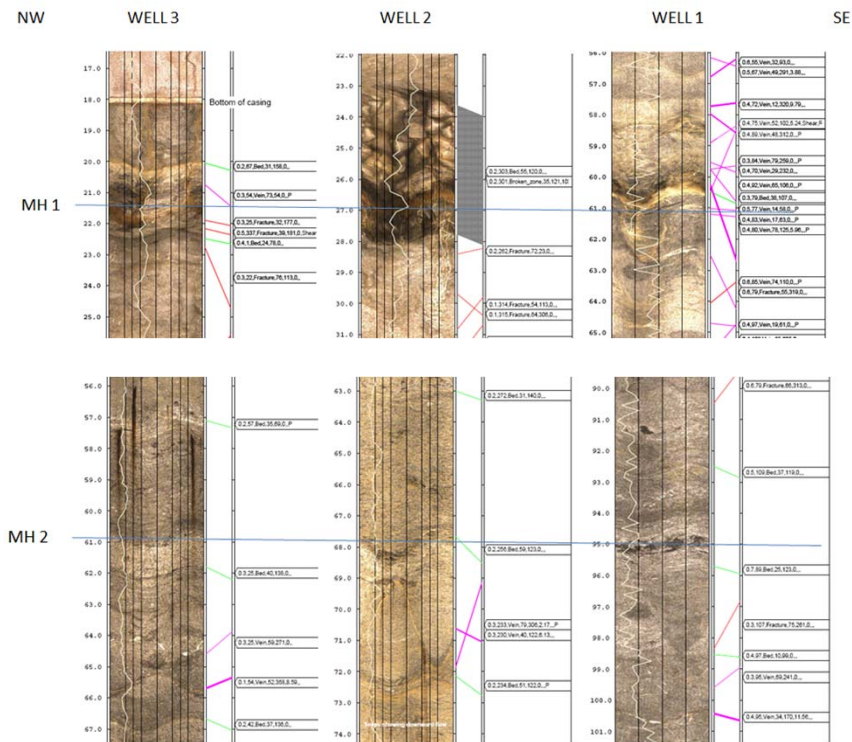


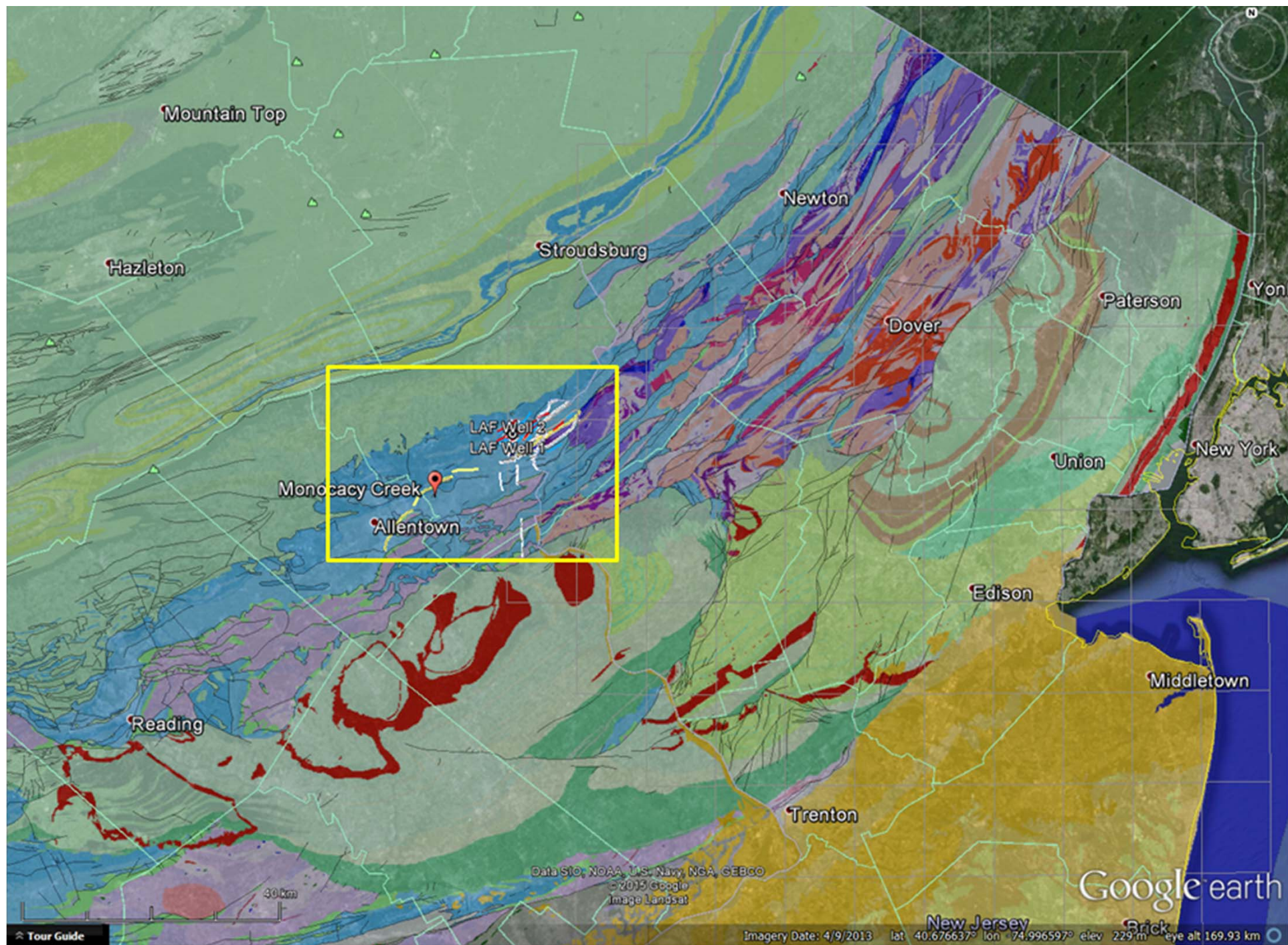
Lafayette College Well-field Analysis

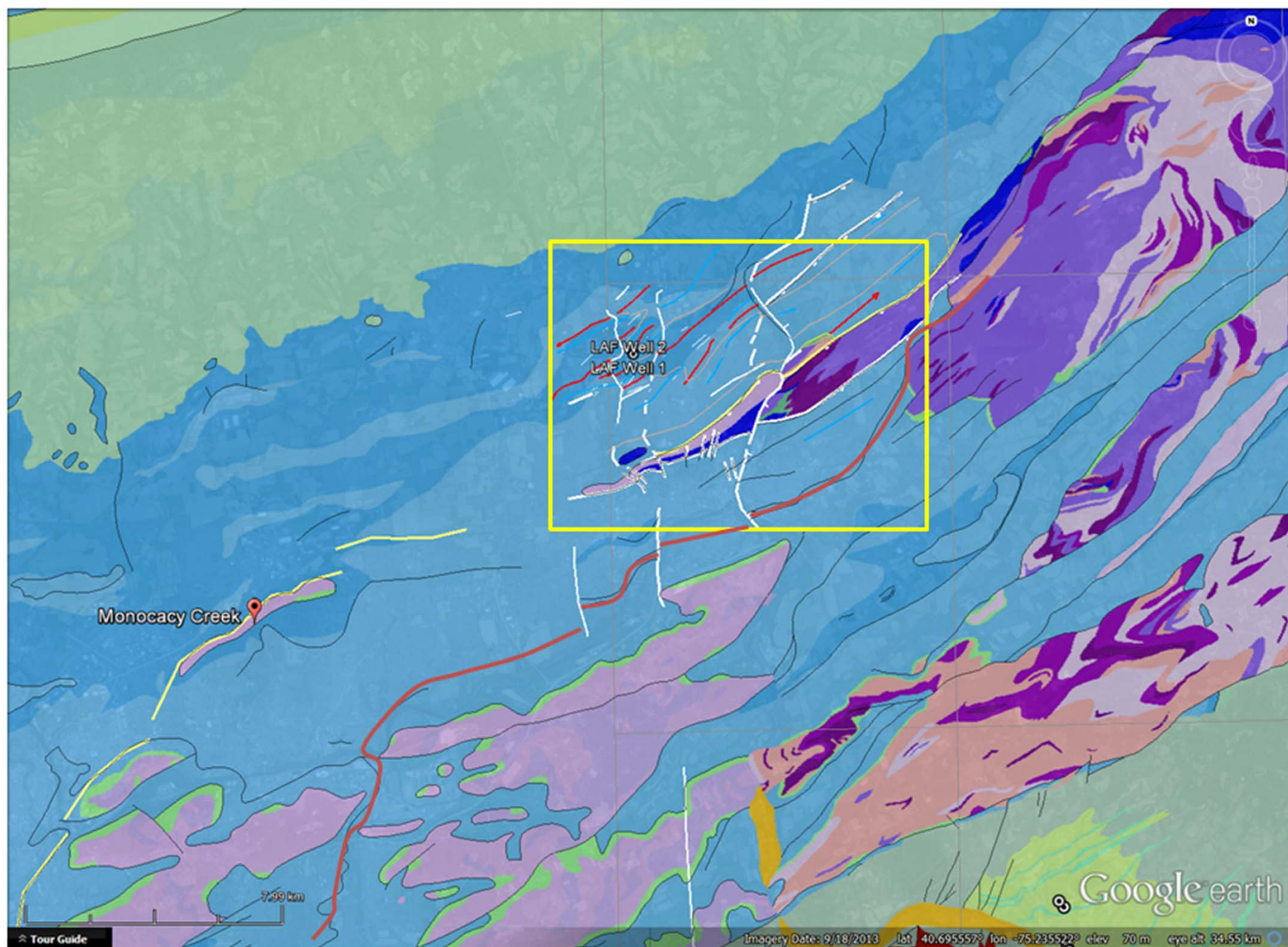
G.C. Herman

NJ Geological & Water Survey

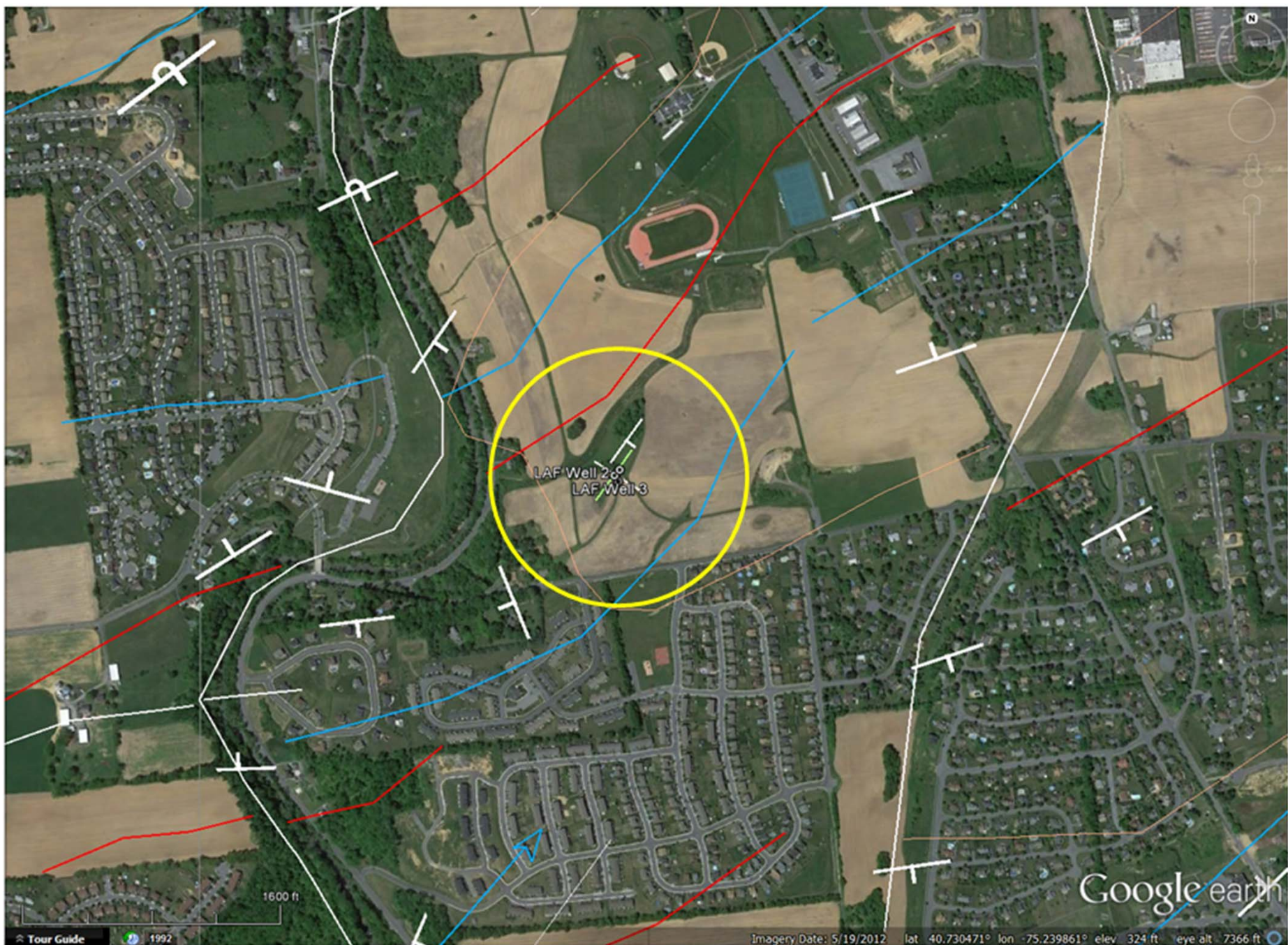
November, 2015



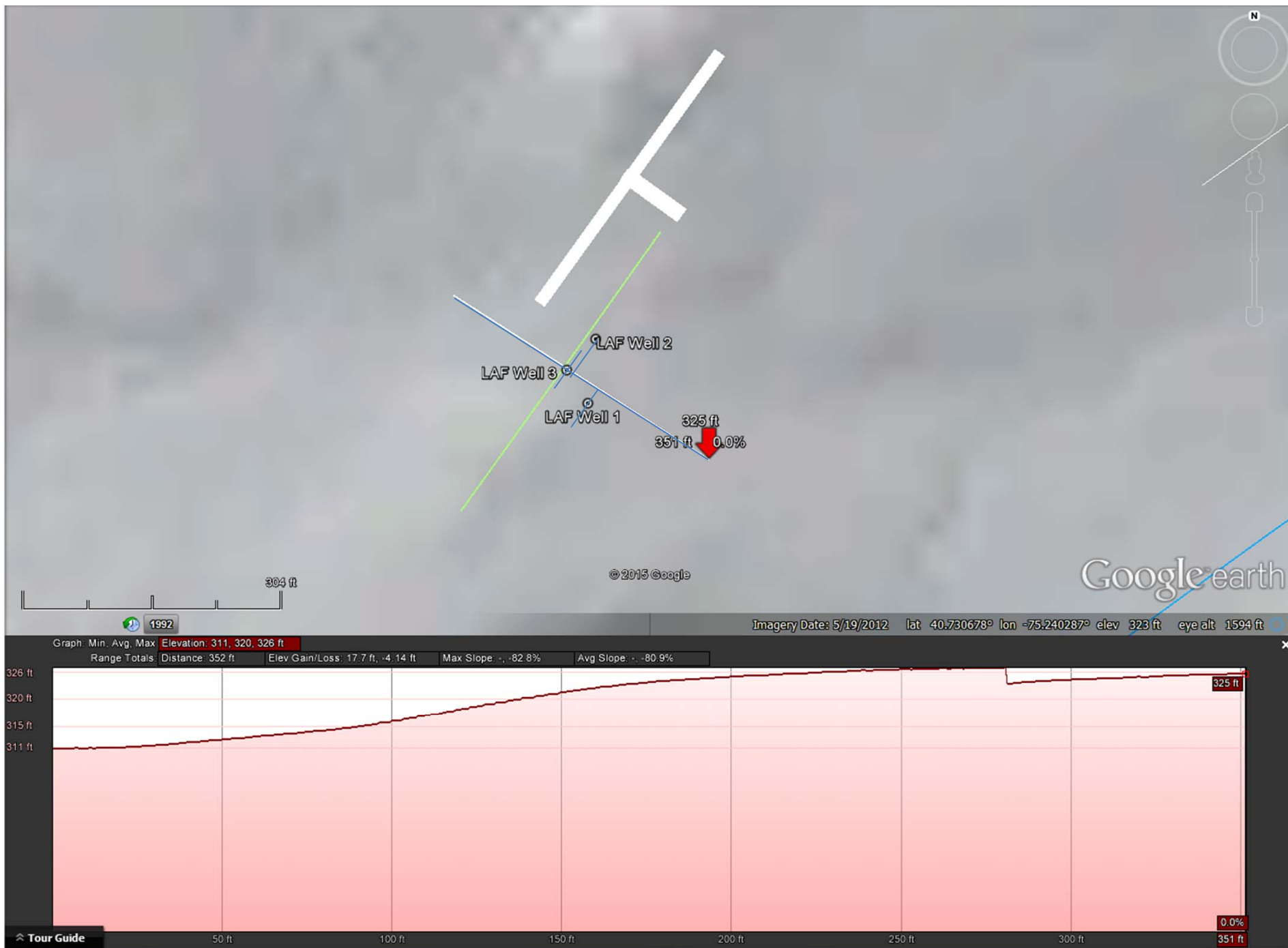


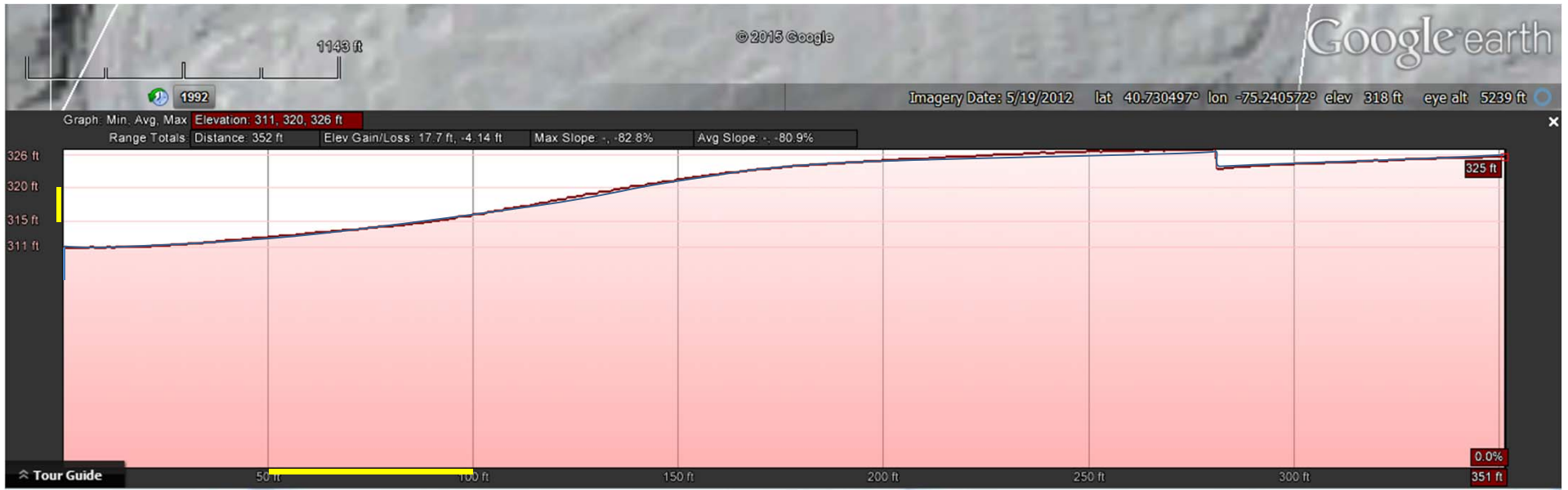






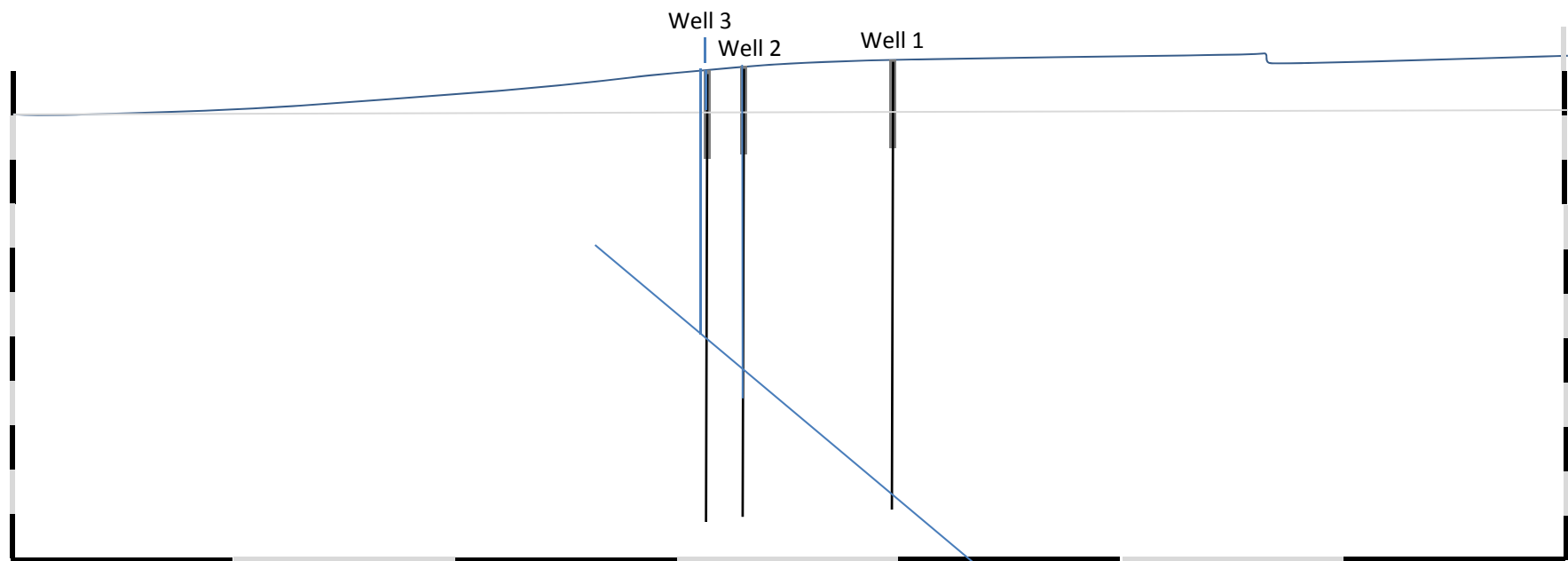
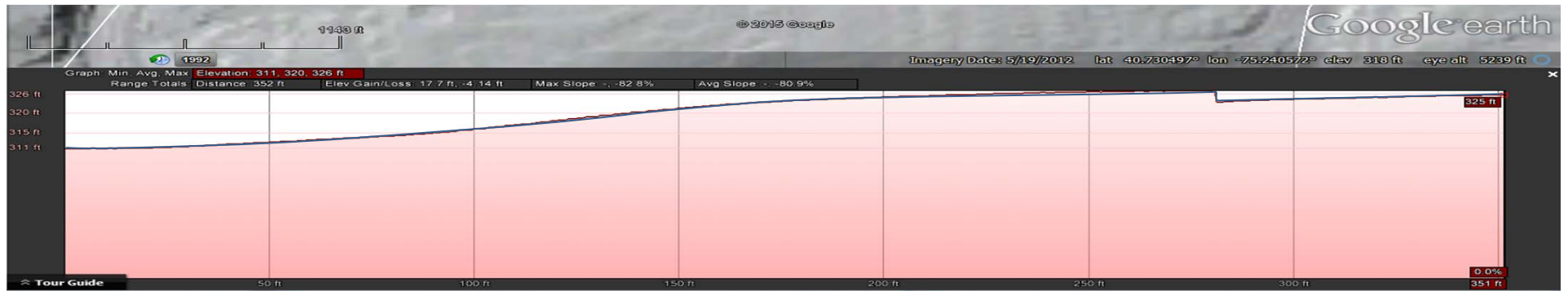
Identification	Geographic coordinates (WGS84 - decimal degrees)		Elevation NGVD88 – feet (meters)				
Name	Longitude	Latitude	Land surface	Stickup	Casing depth	Borehole depth	GE Model Altitude
LAF Well 1	-75.240540°	40.730417°	319 (97.3)	2.0 (0.60)	18.3 (5.6)	110.5 (33.7)	
LAF Well 2	-75.240508°	40. 730618°	317 (96.6)	2.0 (0.60)	19.2 (5.9)	104.0 (31.7)	
LAF Well 3	-75.240628°	40.730521°	316 (96.3)	2.0 (0.60)	18.2 (5.5)	117.0 (35.7)	

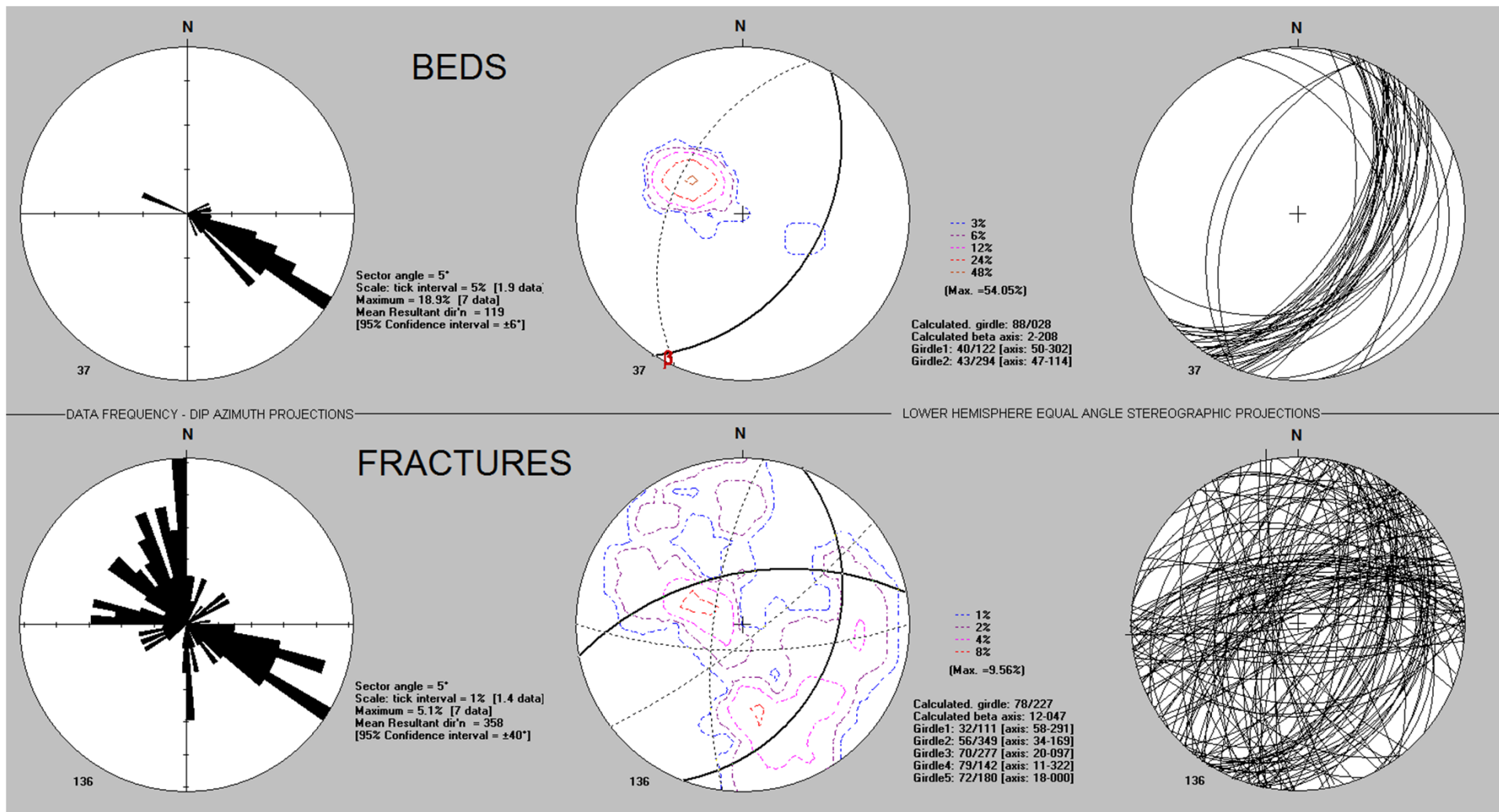




Horizontal = 50 ft = 1.3 in. and Vertical 5 ft = 0.22 in. or 50 ft 2.2 in., therefore $1.3/2.2 = 0.59$







Section azimuth: 122

Fractures: 32/111 8% 70/277 4% 79/142 2%
56/349 8% 72/180 2%

Beds: primary 40/122 and rarely 43/294

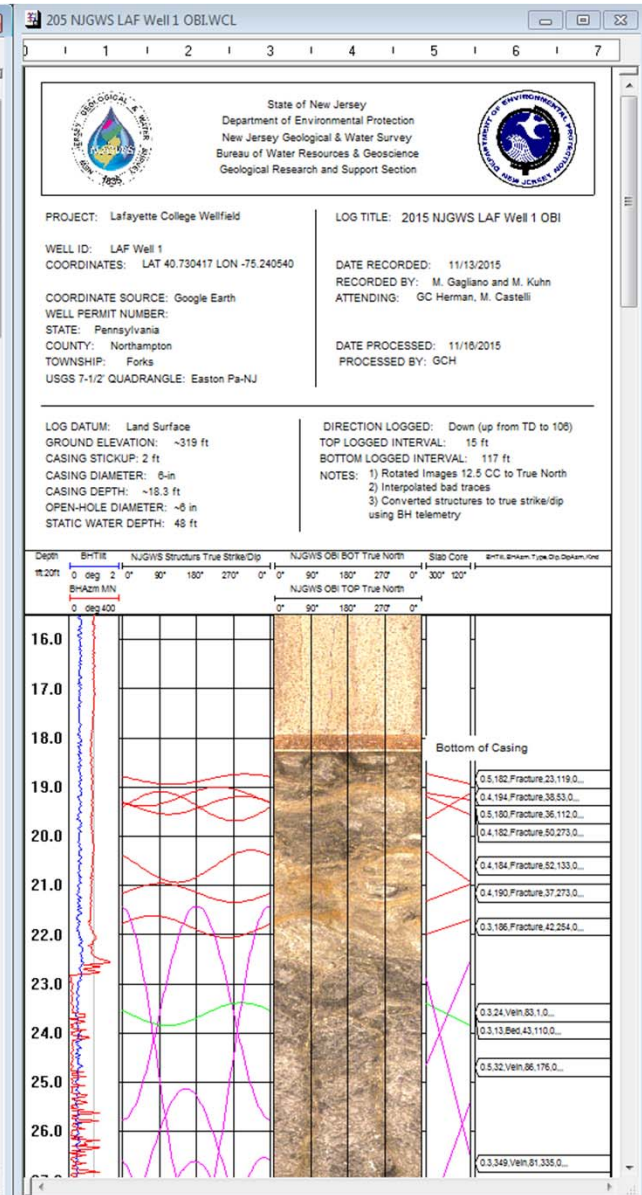
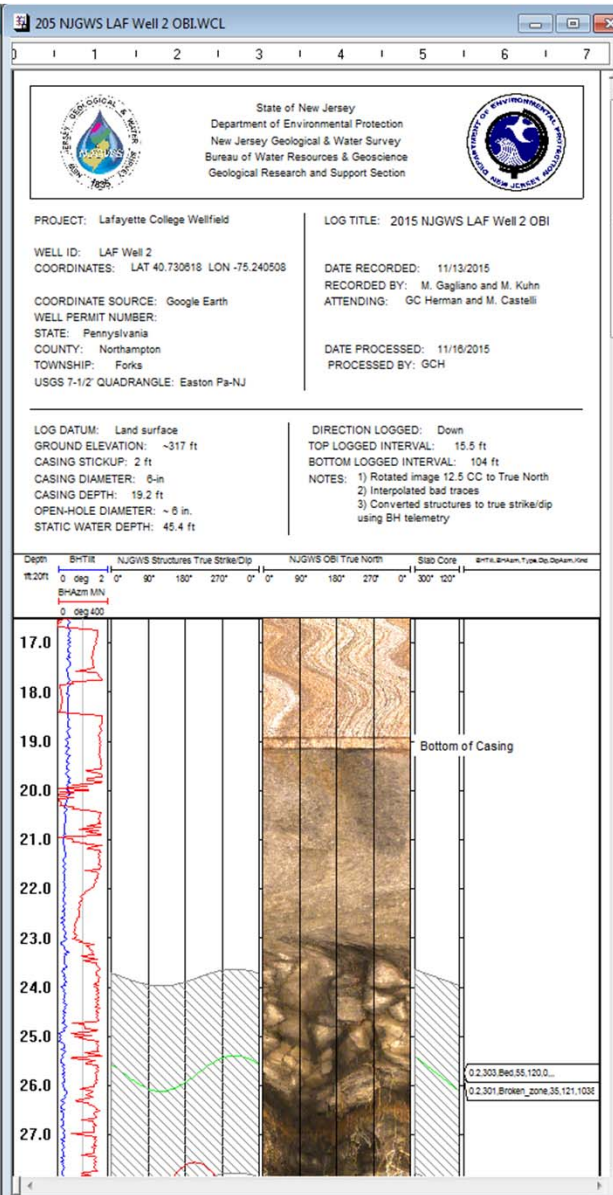
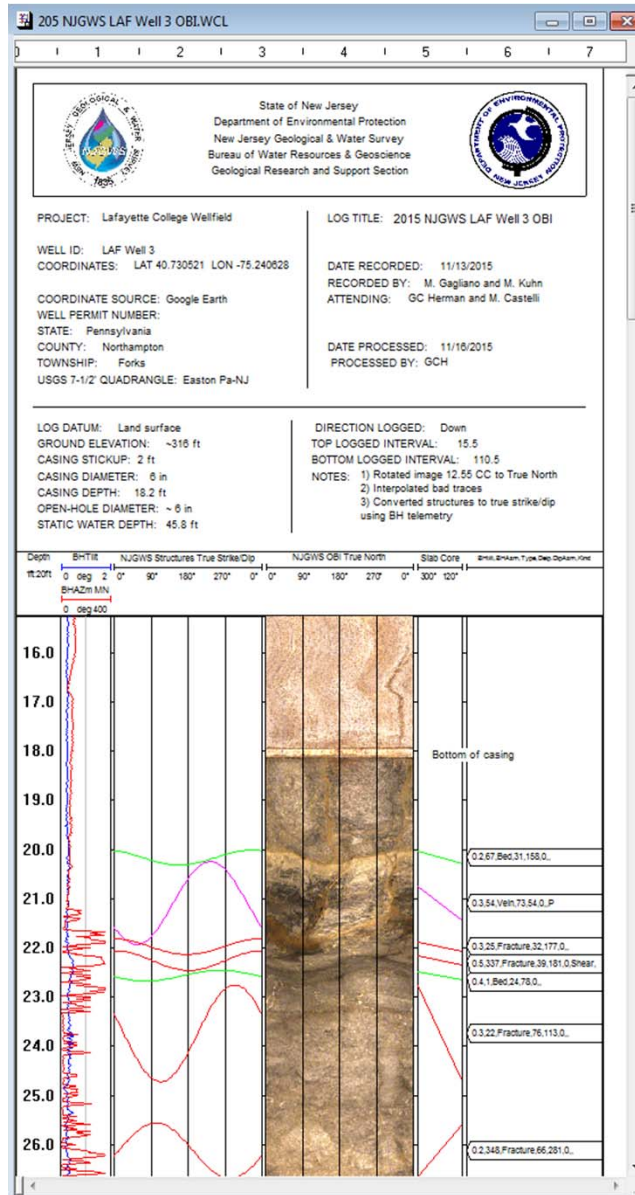
NW

WELL 3

WELL 2

WELL 1

SE



NW

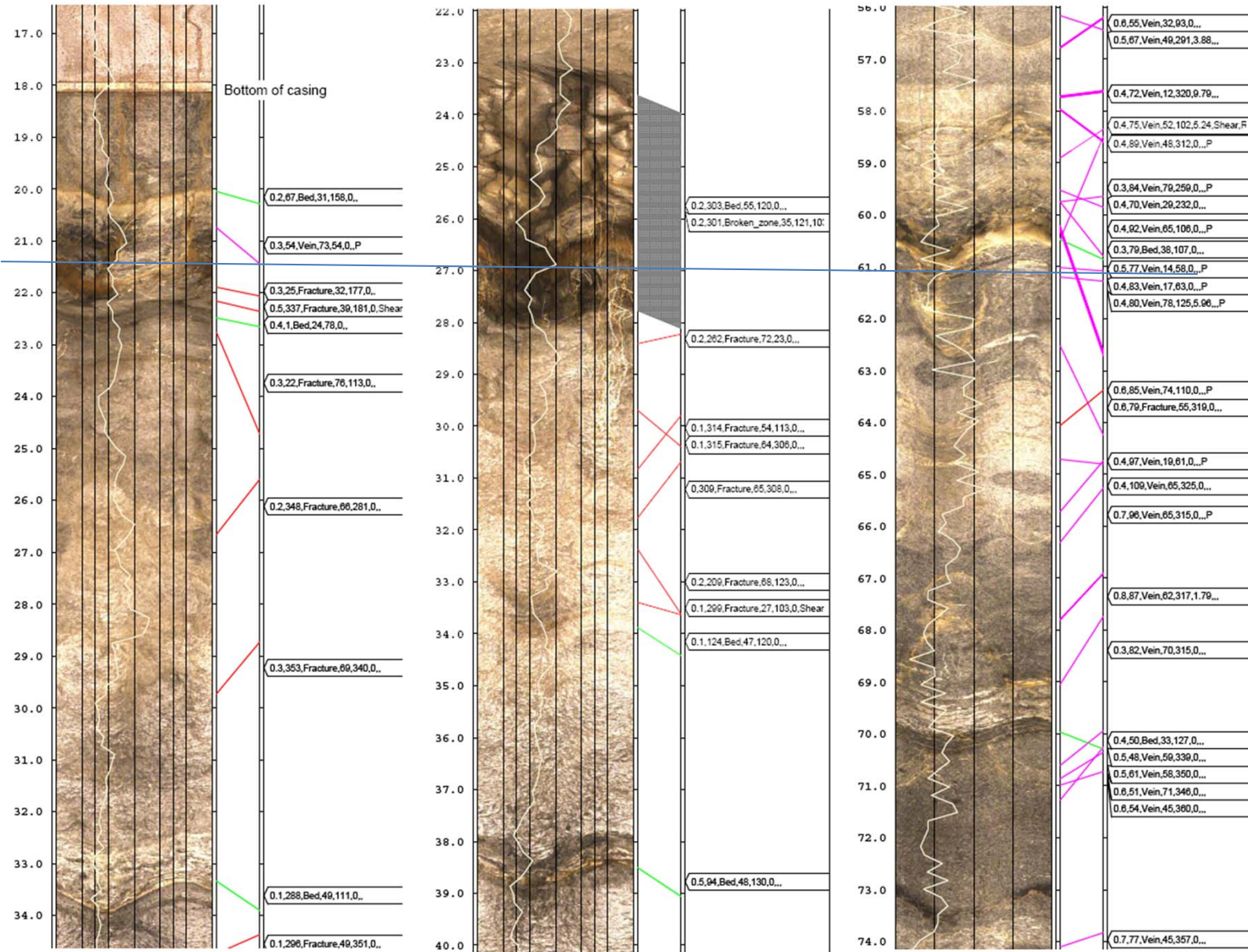
WELL 3

WELL 2

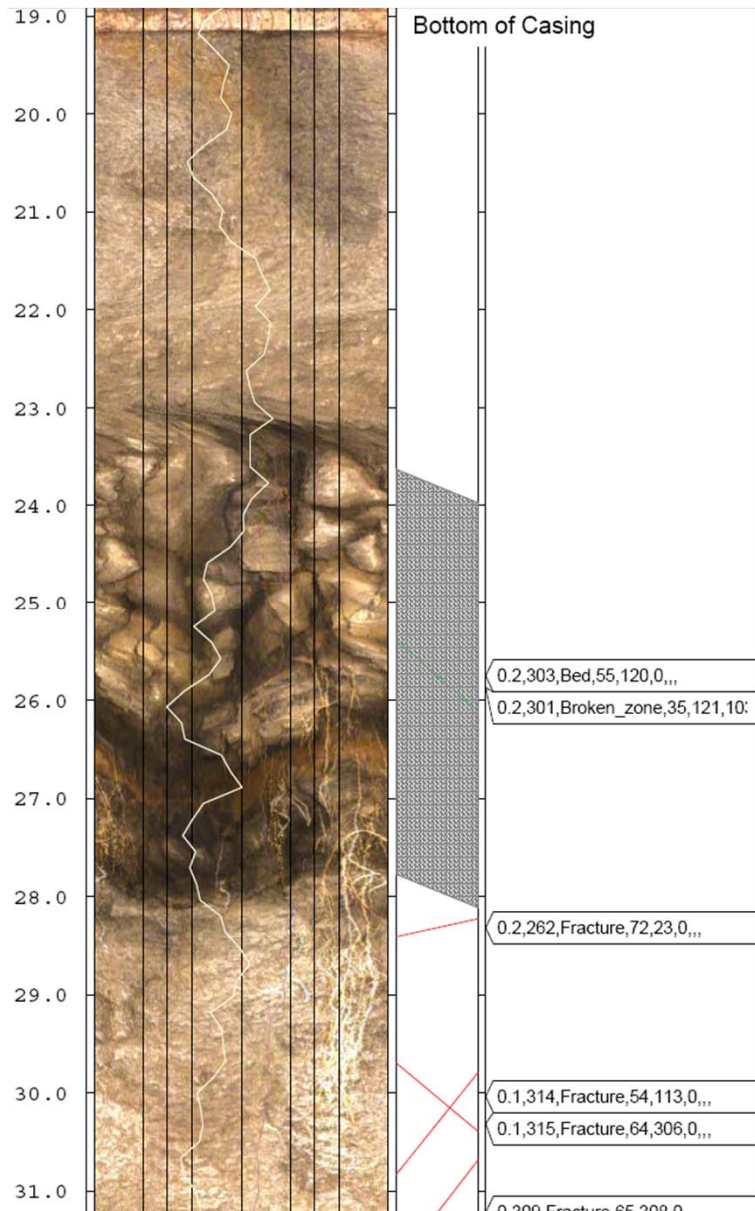
WELL 1

SE

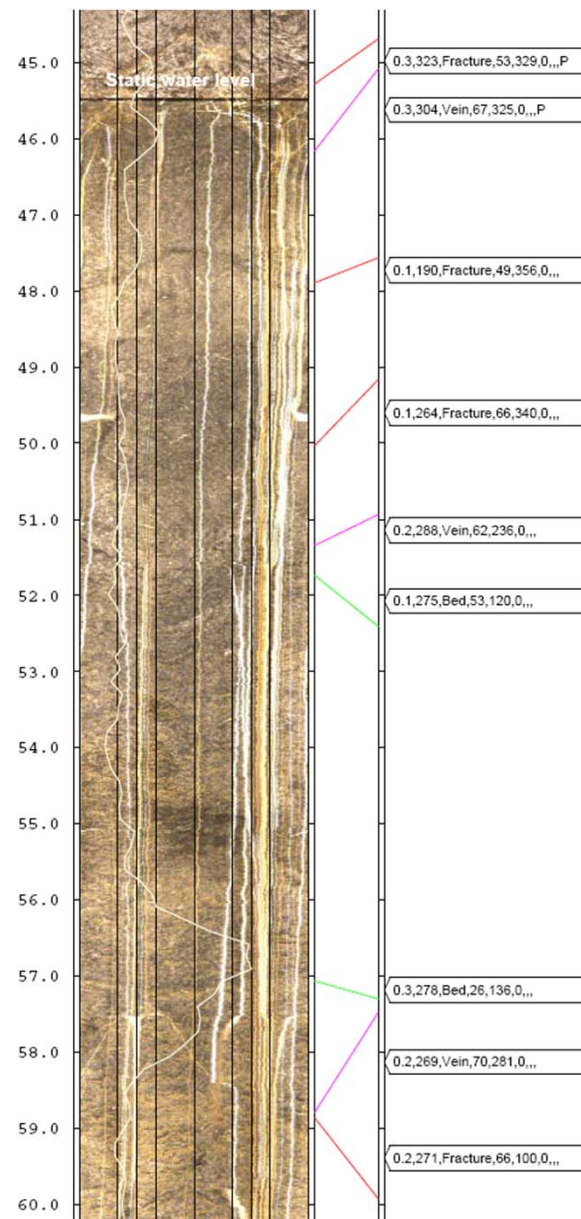
MH 1



WELL 2 Karst zone with plant roots



WELL 2 Mineralized flow streaks



NW

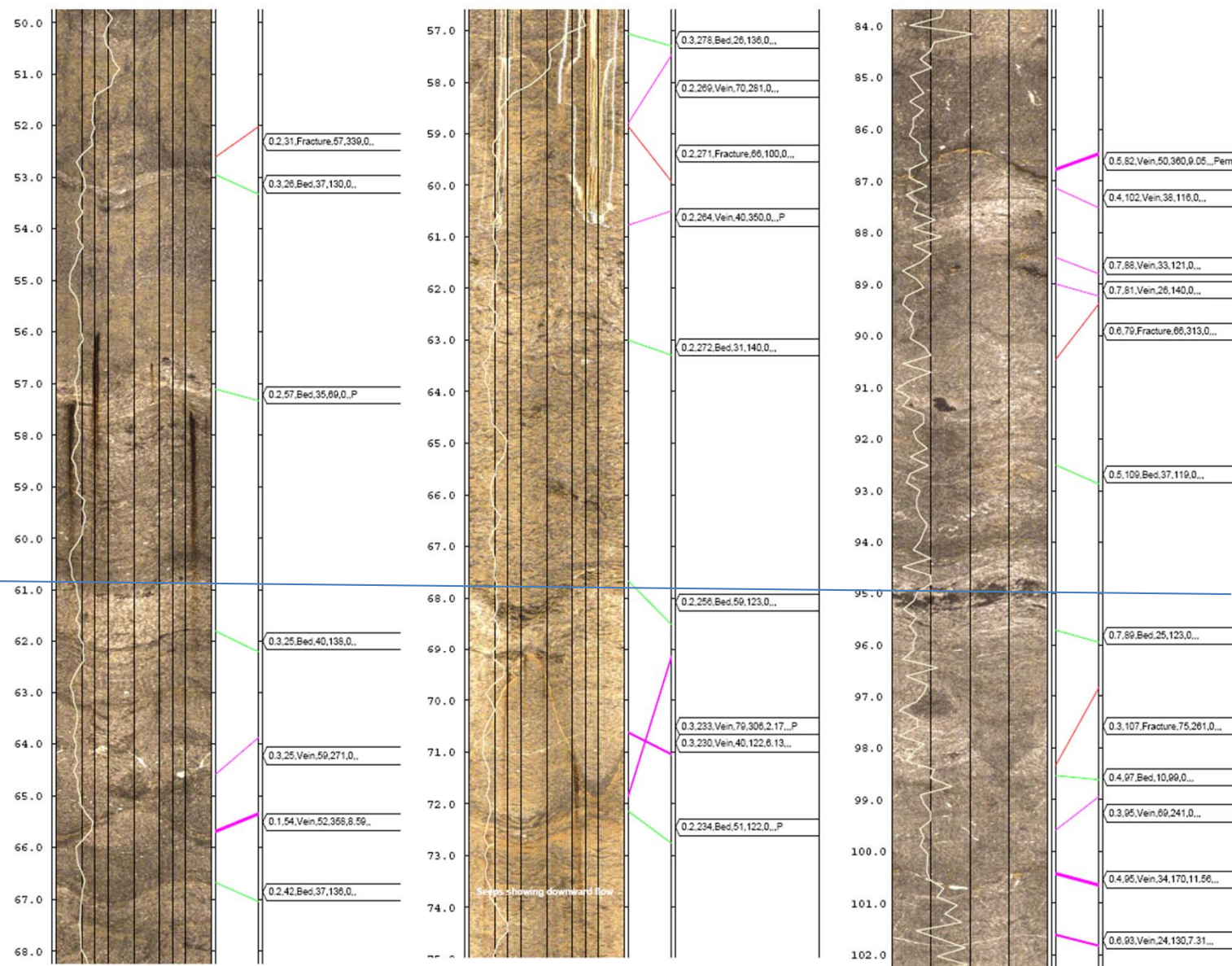
WELL 3

WELL 2

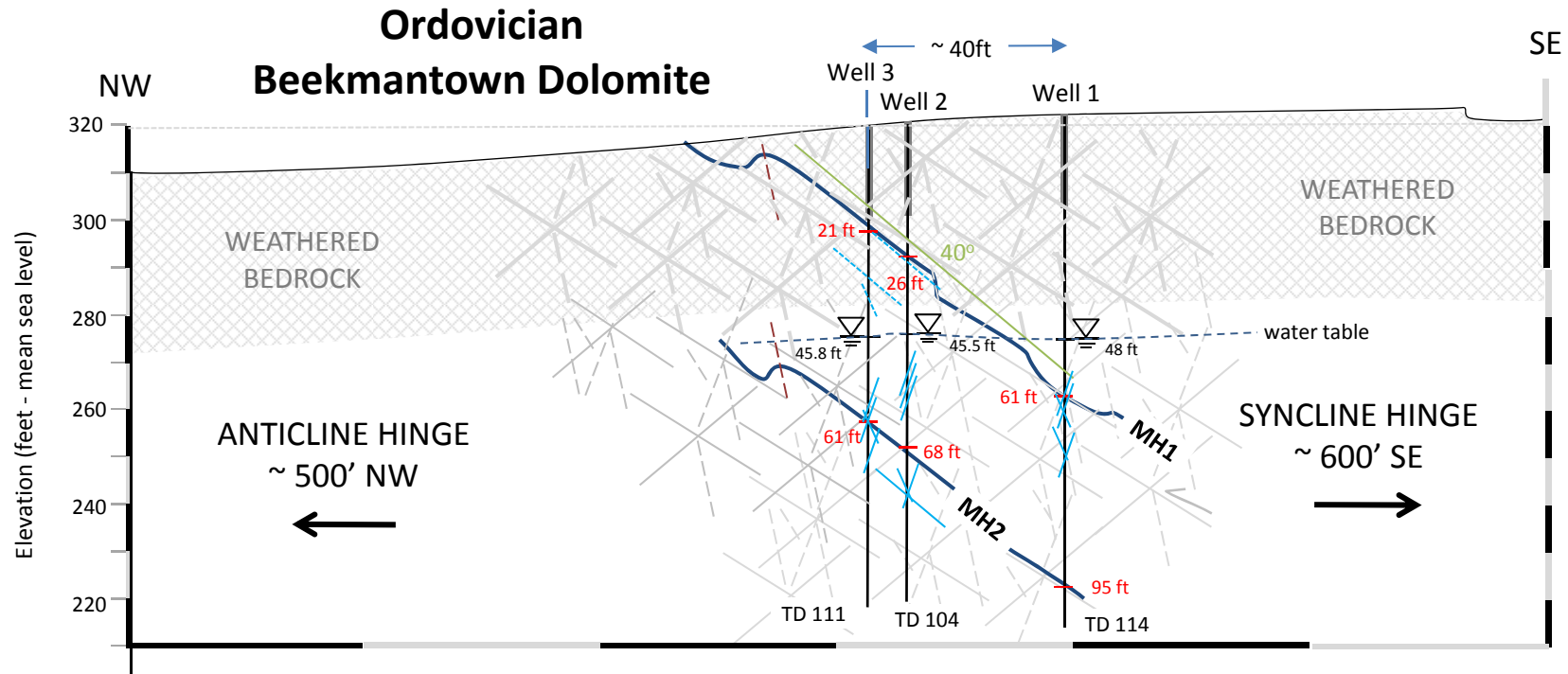
WELL 1

SE

MH 2



HYDROGEOLOGICAL PROFILE BASED ON OBI IMAGERY LAFAYETTE COLLEGE WELLFIELD, EASTON, PENNSYLVANIA



Cross-section azimuth = 123-303°

APPARENT DIP (AD) = $\text{COT} ((\text{TAN (DIP)} * \text{COS (a)})$
where a = acute deviation between the
cross-section azimuth and a structure's
dip azimuth

NOTES:

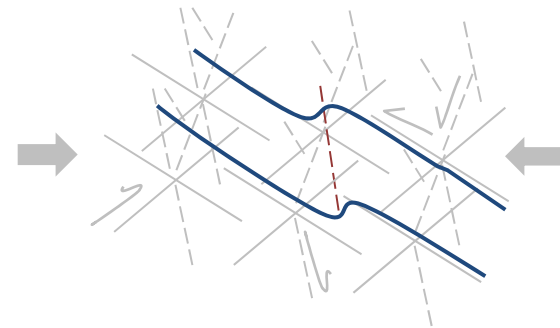
G.C. Herman, NJ Geological & Water Survey
November, 19, 2015

FEATURE	APPARENT DIP	DIP/DIP AZIMUTH
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Bedding	40	40/122
	43	43/294

Fractures	31	32/111 (8%)
	40	56/349 (8%)
	68	70/277 (4%)
	78	79/142 (2%)
	58	72/180 (2%)

BED & FRACTURE GEOMETRY



Lafayette College Well-field Analysis

Holding place for 3D
well-field GE Model