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Date: JUN 0 1 2010
Refer To: EP2010-0230

James Bearzi, Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East, Building 1
Santa Fe, NM 87505-6303

Subject: Submittal of Baseline Geomorphic Conditions at Sediment Transport Mitigation Sites in the Los Alamos and Pueblo Canyon Watersheds

Dear Mr. Bearzi:

In accordance with the New Mexico Environment Department's Approval with Modifications Los Alamos and Pueblo Canyons Sediment Transport Monitoring Plan, dated January 11, 2010, Los Alamos National Laboratory has completed the initial report documenting baseline geomorphic conditions in Pueblo Canyon. This report summarizes the baseline geomorphic conditions present above and below recently constructed mitigation measures in Los Alamos and Pueblo Canyons using three methods: repeat cross-section surveys, channel thalweg surveys, and general area surveys. These methods will be conducted three times annually to document geomorphic changes that may occur after unique runoff events. A report documenting all future geomorphic changes in Los Alamos/Pueblo Canyons, including sediment accumulations behind the structures, will be submitted annually on May 30, 2010.

If you have any questions, please contact Steve Veenis at (505) 667-0013 (veenis@lanl.gov) or Nancy Werdel at (505) 665-3619 (nwerdel@doeal.gov).

Sincerely,

Michael J. Graham, Associate Director
Environmental Programs
Los Alamos National Laboratory

Sincerely,

David R. Gregory, Project Director
Environmental Operations
Los Alamos Site Office

33627

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MG/DG/DM/SV/SR:sm

Enclosures: Two hard copies with electronic files – Baseline Geomorphic Conditions at Sediment Transport Mitigation Sites in the Los Alamos and Pueblo Canyon Watersheds (LA-UR-10-2990)

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LA-UR-10-2990
May 2010
EP2010-0230

Baseline Geomorphic Conditions at Sediment Transport Mitigation Sites in the Los Alamos and Pueblo Canyon Watersheds

Los Alamos
NATIONAL LABORATORY
EST. 1943

Prepared by the Environmental Programs Directorate

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LA-UR-10-2990
EP2010-0230

Baseline Geomorphic Conditions at Sediment Transport Mitigation Sites in the Los Alamos and Pueblo Canyon Watersheds

May 2010

Responsible project manager:

Printed Name	Signature	Title	Organization	Date
Steve Veenis	Steve Veenis	Project Manager	Environmental Programs	5-28-10

Responsible LANS representative:

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Michael J. Graham	B. G. Schappell	Associate Director	Environmental Programs	5-28-10

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Printed Name	Signature	Title	Organization	Date
David R. Gregory	Cheryl J. Rodriguez for	Project Director	DOE-LASO	6/01/2010

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Attachment 1

Attachment 1 Survey Data (on CD included with this document)

1.0 INTRODUCTION

This report presents survey data obtained in 2009 and 2010 from both above and below sediment transport mitigation sites in the Los Alamos and Pueblo Canyon watersheds, within and near the Los Alamos National Laboratory (LANL or the Laboratory). The survey data document the baseline geomorphic conditions at these mitigation sites prior to the 2010 monsoon season, as specified in the Monitoring Plan for Los Alamos and Pueblo Canyons Sediment Transport Mitigation Project (LANL 2009, 107457). The New Mexico Environment Department (NMED) issued an Approval with Modifications for this plan (NMED 2010, 108444) and approved the submittal of a baseline geomorphic conditions report by May 30, 2010. This report satisfies that requirement. These surveys will be repeated after the 2010 monsoon season and the results presented in a report to NMED by May 30, 2011. That report will include estimates of net sediment deposition in each area since the previous surveys and will evaluate if any unintended geomorphic changes have occurred, such as net sediment erosion.

1.1 Surveys at Sediment Transport Mitigation Sites

Surveys were conducted at all sediment transport mitigation sites specified in LANL (2009, 107457) and at the LA-SMA-2 retention basins, as requested by NMED (2010, 108444). Surveys were conducted using a combination of a differentially corrected global-positioning system (GPS) and a total station tied to GPS control points, depending on tree cover. The general locations of all survey areas are shown in Figure 1, and these surveys are discussed below. Surveyed cross sections are shown in figures with a vertical exaggeration (VE) of 2.5 times, and channel thalweg profiles are shown with a VE of 5 times, 15 times, or 20 times. Raw survey data (*x* and I coordinates using the New Mexico State Plane coordinate system and elevations of all survey points) for all cross sections and thalweg profiles are included electronically as Attachment 1 (on CD).

Pueblo Canyon Cross-Vane Structures. Two cross sections were surveyed in the vicinity of each of the three Pueblo Canyon cross-vane structures (CVSs) in April and May 2010. One is 50 ft upcanyon, and one is 50 ft downcanyon of the apex rock of each structure. Channel thalweg profiles were also surveyed over these 100-ft distances. Cross-section and thalweg-profile locations are shown in Figure 2, and the cross sections and thalweg profiles for the upper, middle, and lower CVSs are shown in Figures 3, 4, and 5, respectively. Irregularities in the thalweg profiles partially reflect construction-related disturbance and are expected to be smoothed out after the first runoff events.

Upper Pueblo Canyon Willow-Planting Area. A total of 18 cross sections were surveyed in October 2009 in the area of Pueblo Canyon downstream from the new Los Alamos wastewater treatment plant (WWTP) outfall and upstream from the access road to the WWTP, where willows were planted in spring 2008 and spring 2009. These cross sections were divided into groups of six within the upper (UW), middle (MW), and lower (LW) thirds of the willow-planting area, and within each group, the cross sections were spaced at 100-ft intervals. Longitudinal channel thalweg profiles were also surveyed over 500-ft intervals through each of these three areas. Cross-section and thalweg-profile locations are shown in Figure 6. The cross sections in the UW, MW, and LW thirds of the willow-planting area are shown in Figures 7, 8, and 9, respectively, and the thalweg profiles are shown in Figure 10.

Pueblo Canyon Wing Ditch. Five cross sections were surveyed at 100-ft intervals downcanyon from the Pueblo Canyon wing ditch in November 2009. Longitudinal thalweg profiles of the active channel and an abandoned channel to the south, where the wing ditch will direct water, were also surveyed over this distance. Cross-section and thalweg-profile locations are shown in Figure 11. The cross sections are shown in Figure 12, and the thalweg profiles are shown in Figure 13.

Lower Pueblo Canyon Willow-Planting Area. A total of 23 cross sections were surveyed in September and October 2009 at 100-ft intervals within reaches P-3FE and P-4W in an area where willows were planted in spring 2009. The surveys extended for 1100 ft above and below a transition area separating a broad upcanyon wetland (P-3FE) from a narrower downcanyon wetland within incised geomorphic surfaces (P-4W). The cross sections are labeled with negative numbers above this transition area (e.g., PU-100 ft), and with positive numbers below this transition area (e.g., PU+100 ft). A longitudinal channel thalweg profile was also surveyed over this 2200-ft interval. Cross-section and thalweg-profile locations are shown in Figure 14, cross sections are shown in Figure 15, and the channel thalweg profile is shown in Figure 16.

Pueblo Canyon Grade-Control Structure. A total of 15 cross sections were surveyed in April 2010 at 100-ft intervals upstream of the Pueblo Canyon grade control structure (GCS), and 3 cross sections were surveyed at 100-ft intervals downstream from the GCS. A longitudinal channel thalweg profile was also surveyed over this 1800-ft interval, and was extended downstream past the new E060.1 gaging station. Cross-section and thalweg-profile locations are shown in Figure 17, cross sections are shown in Figure 18, and the channel thalweg profile is shown in Figure 19. The cross sections are labeled with negative numbers above the GCS and with positive numbers below the GCS. Some ground disturbance associated with site restoration has occurred downstream from the GCS after the surveys were completed, and another survey of the area of disturbance is planned before the 2010 monsoon season.

LA-SMA-2 Sediment Retention Basins. A general topographic survey was conducted that encompassed the area of the LA-SMA-2 sediment retention basins in March 2010. The topography of this area is presented in Figure 20. A general topographic survey will be repeated annually, documenting both the maximum thickness of accumulated sediment and total sediment volume deposited since the previous survey.

DP Canyon Grade-Control Structure. A total of 11 cross sections were surveyed in April and May 2010 at 100-ft intervals upstream of the DP Canyon GCS, and 3 cross sections were surveyed at 100-ft intervals downstream from the GCS and downstream from the new E039.1 gaging station. A longitudinal channel thalweg profile was also surveyed over this 1500-ft interval. Cross-section and thalweg-profile locations are shown in Figure 21, cross sections are shown in Figure 22, and the channel thalweg profile is shown in Figure 23. The cross sections are labeled with negative numbers above the GCS and with positive numbers below the GCS.

Los Alamos Canyon Low-Head Weir. A general topographic survey was conducted that encompassed the sediment retention basins above the Los Alamos Canyon low-head weir in July 2009. The topography of this area is presented in Figure 24. Because water had ponded in the basins prior to the survey, and has remained in the basins continuously since that time, it has not been possible to survey the deepest parts of the basins. The Laboratory plans to drain these basins after cessation of 2010 snowmelt runoff to allow surveying of the deepest parts of the basins. This survey will be presented in the May 30, 2011 report. A general topographic survey will be repeated annually, documenting both the maximum thickness of accumulated sediment and total sediment volume deposited since the previous survey.

2.0 REFERENCES

The following list includes all documents cited in this report. Parenthetical information following each reference provides the author(s), publication date, and ER ID. This information is also included in text citations. ER IDs are assigned by the Environmental Programs Directorate's Records Processing Facility (RPF) and are used to locate the document at the RPF and, where applicable, in the master reference set.

Copies of the master reference set are maintained at the NMED Hazardous Waste Bureau and the Directorate. The set was developed to ensure that the administrative authority has all material needed to review this document, and it is updated with every document submitted to the administrative authority. Documents previously submitted to the administrative authority are not included.

LANL (Los Alamos National Laboratory), October 2009. "Monitoring Plan for Los Alamos and Pueblo Canyons Sediment Transport Mitigation Project," Los Alamos National Laboratory document LA-UR-09-6563, Los Alamos, New Mexico. (LANL 2009, 107457)

NMED (New Mexico Environment Department), January 11, 2010. "Approval with Modifications, Los Alamos and Pueblo Canyons Sediment Transport Monitoring Plan," New Mexico Environment Department letter to G.J. Rael (DOE-LASO) and M. Graham (LANL) from J.P. Bearzi (NMED-HWB), Santa Fe, New Mexico. (NMED 2010, 108444)

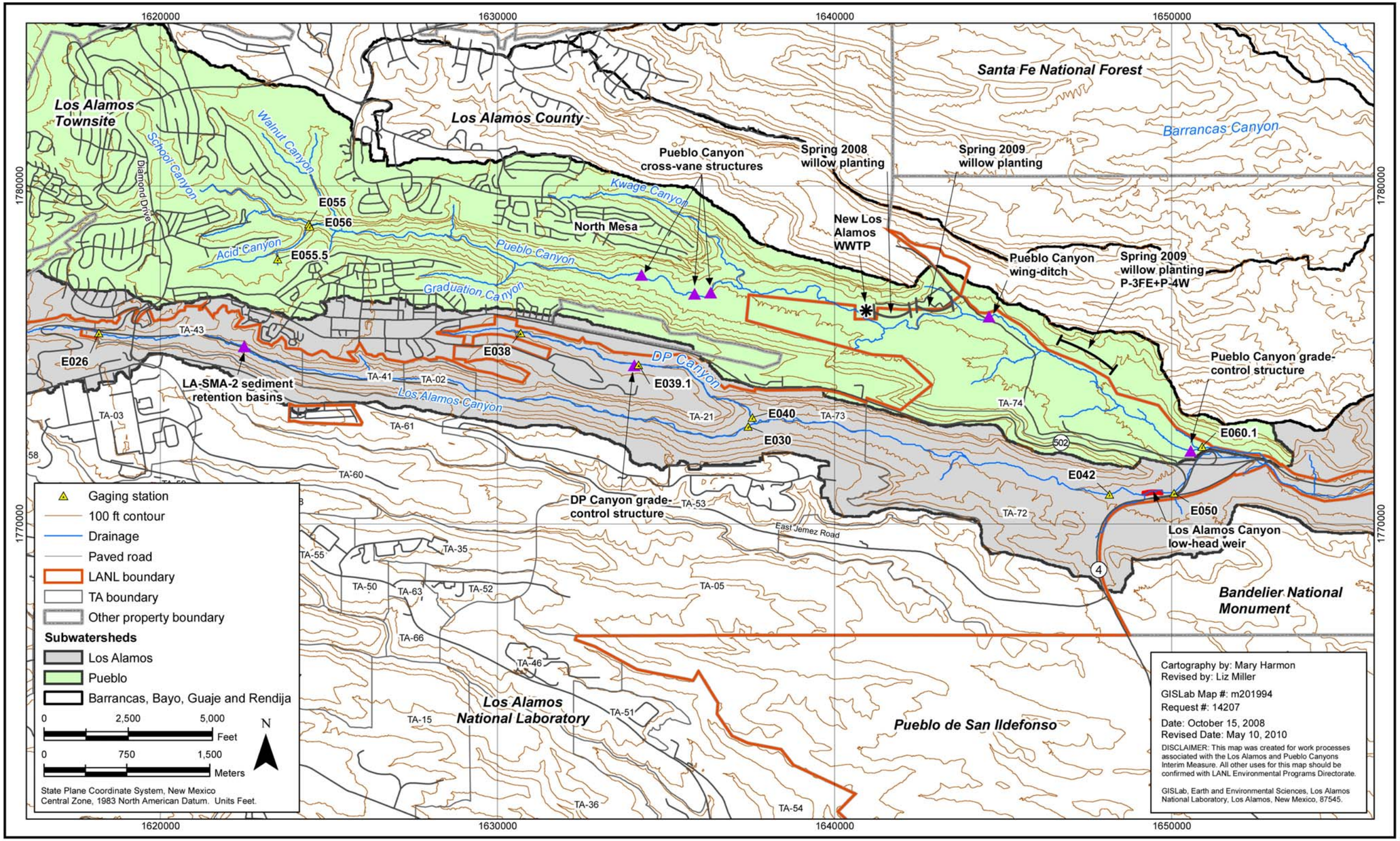


Figure 1 **Map of the Los Alamos and Pueblo Canyon watersheds showing sediment transport mitigation sites**

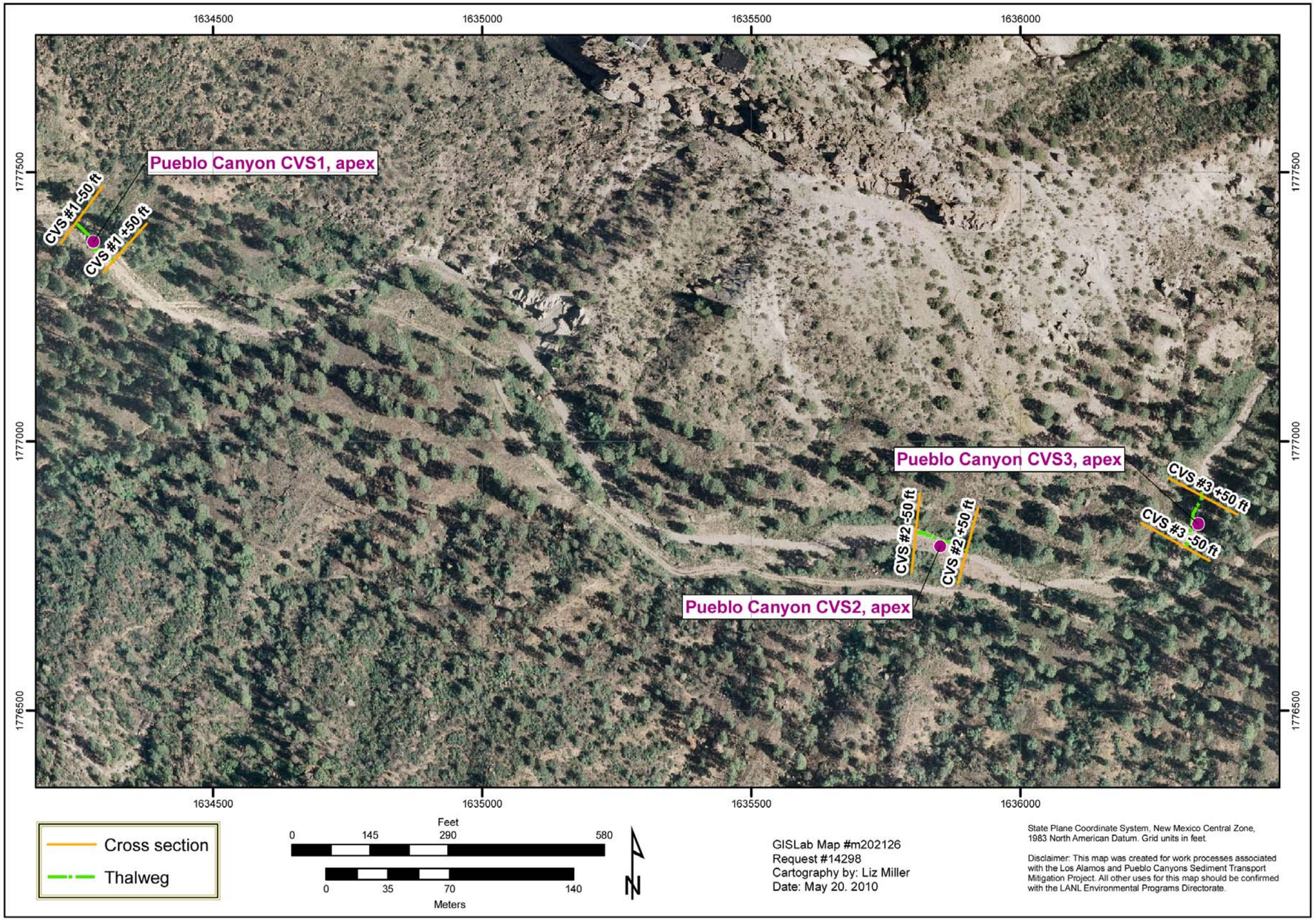


Figure 2 **Orthophoto showing the locations of surveyed cross sections and thalweg profiles at the Pueblo Canyon CVSs**

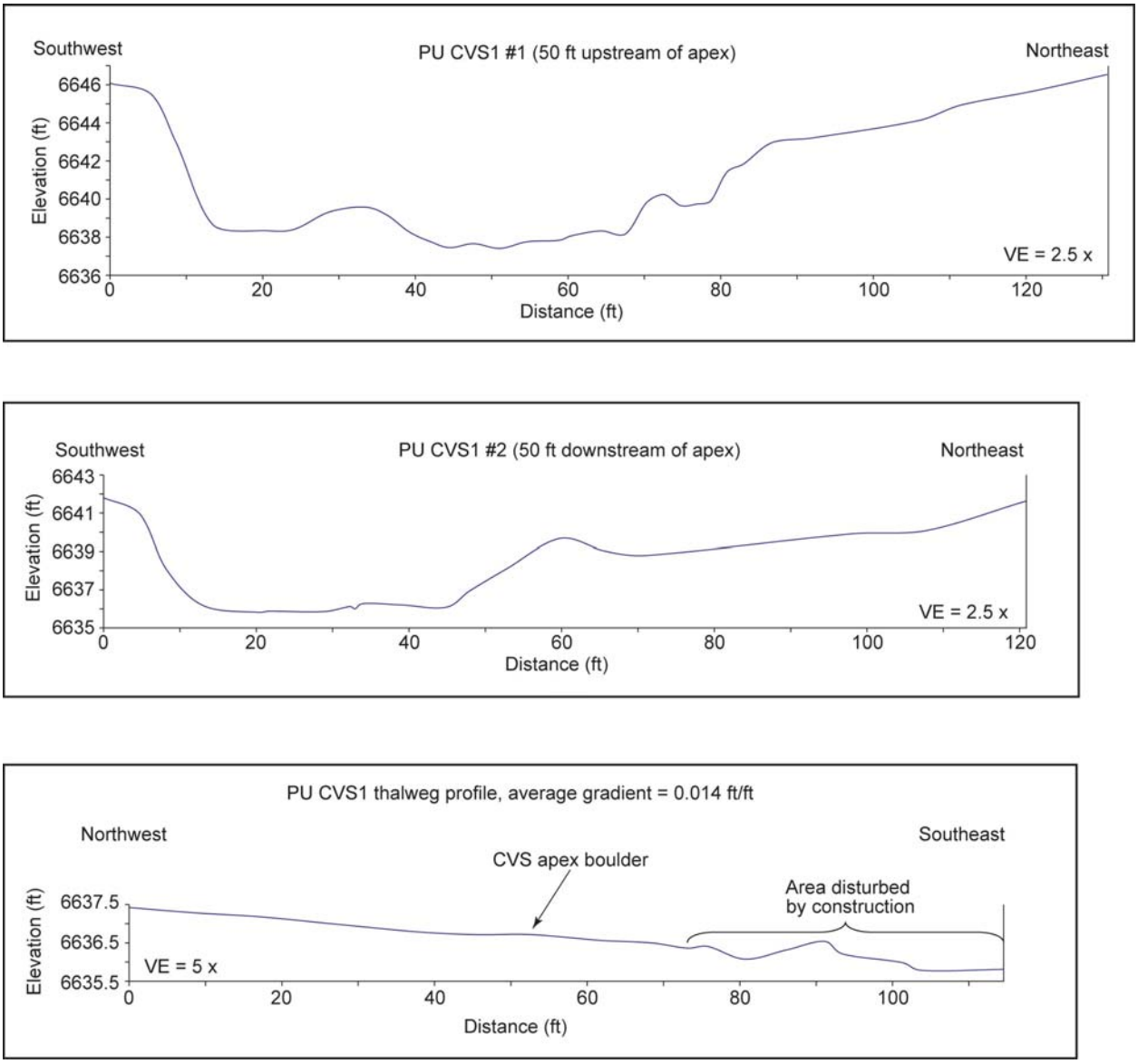


Figure 3 Cross sections and thalweg profile at upper CVS in Pueblo Canyon

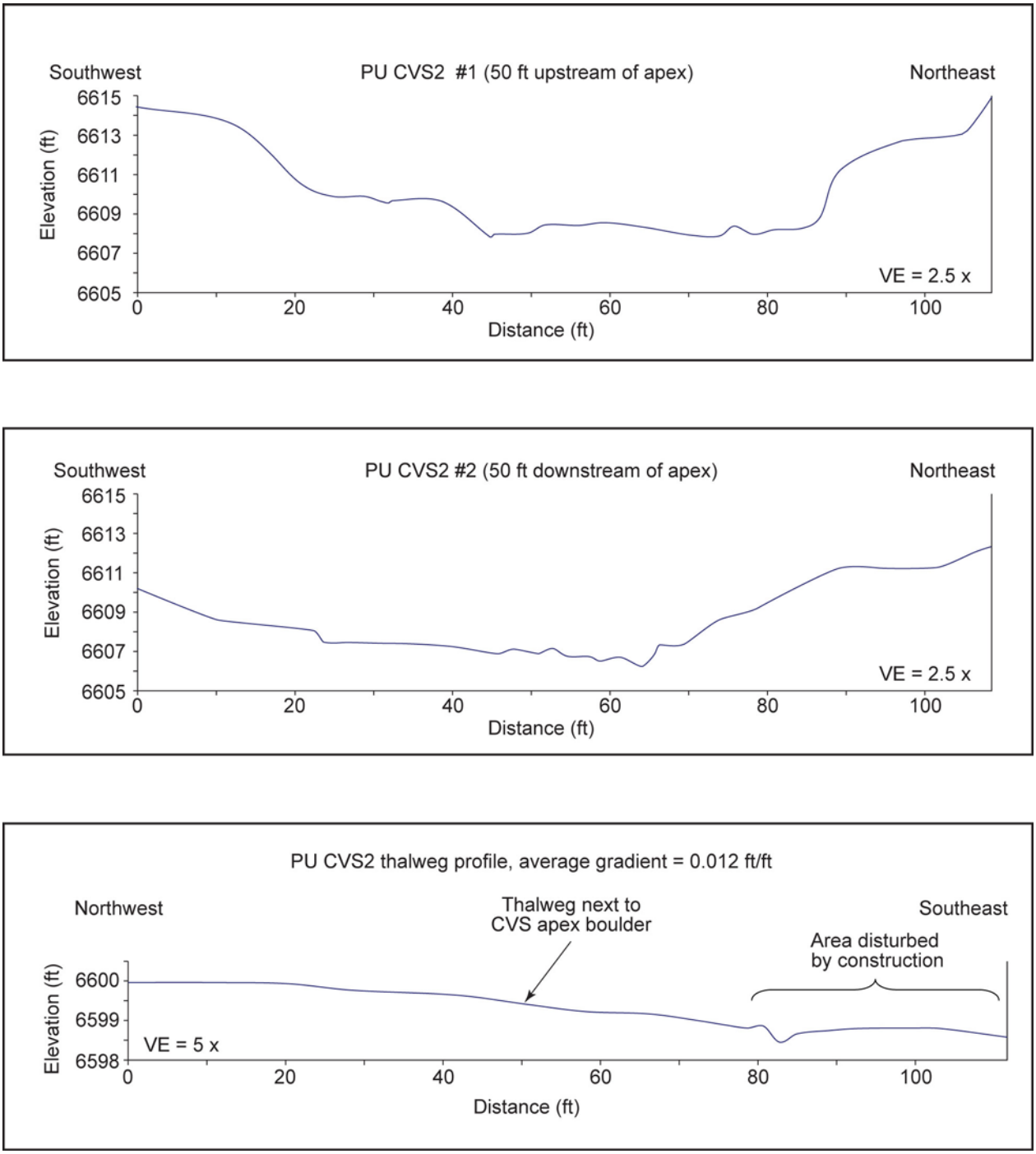


Figure 4 Cross sections and thalweg profile at middle CVS in Pueblo Canyon

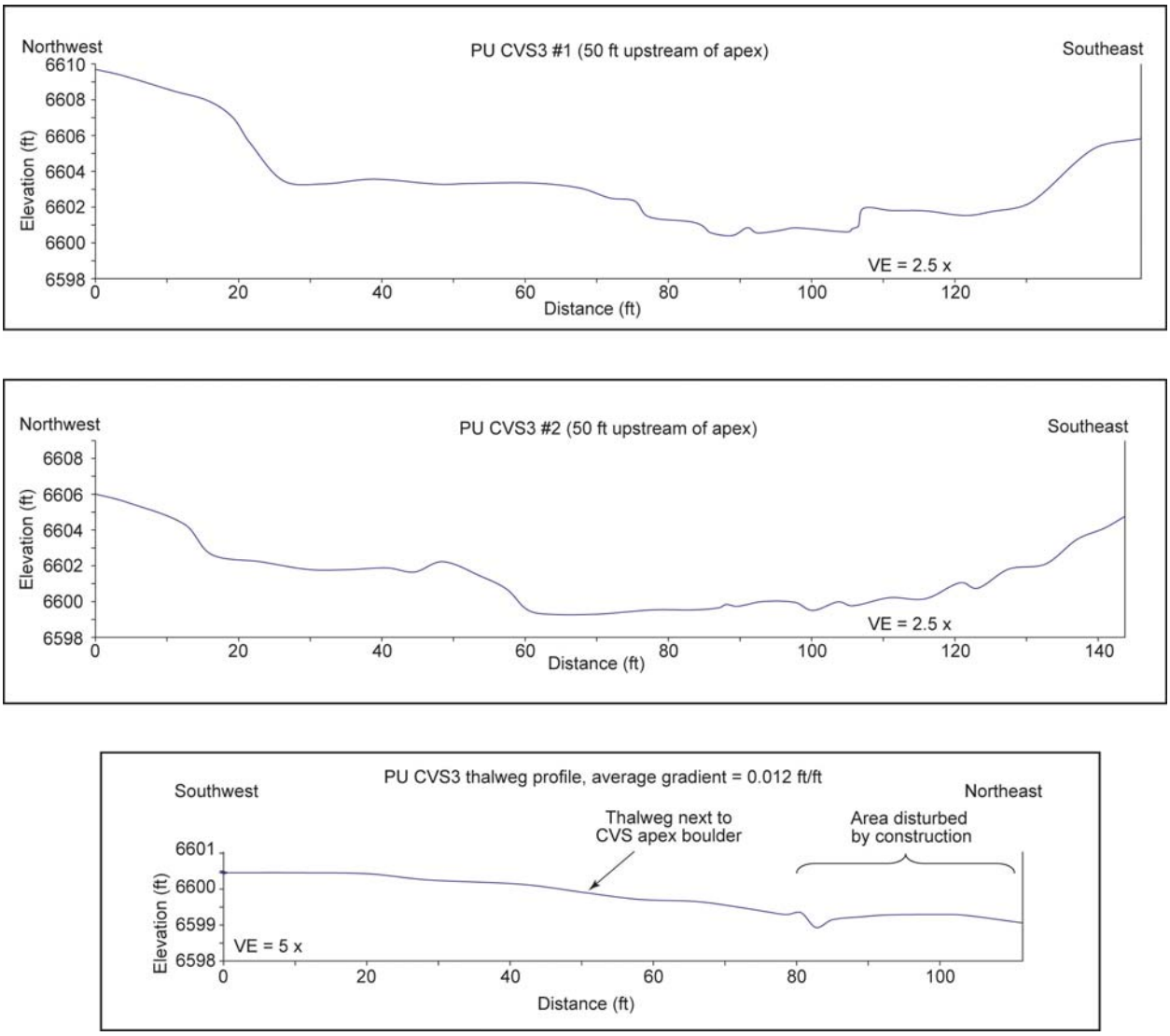


Figure 5 Cross sections and thalweg profile at lower CVS in Pueblo Canyon

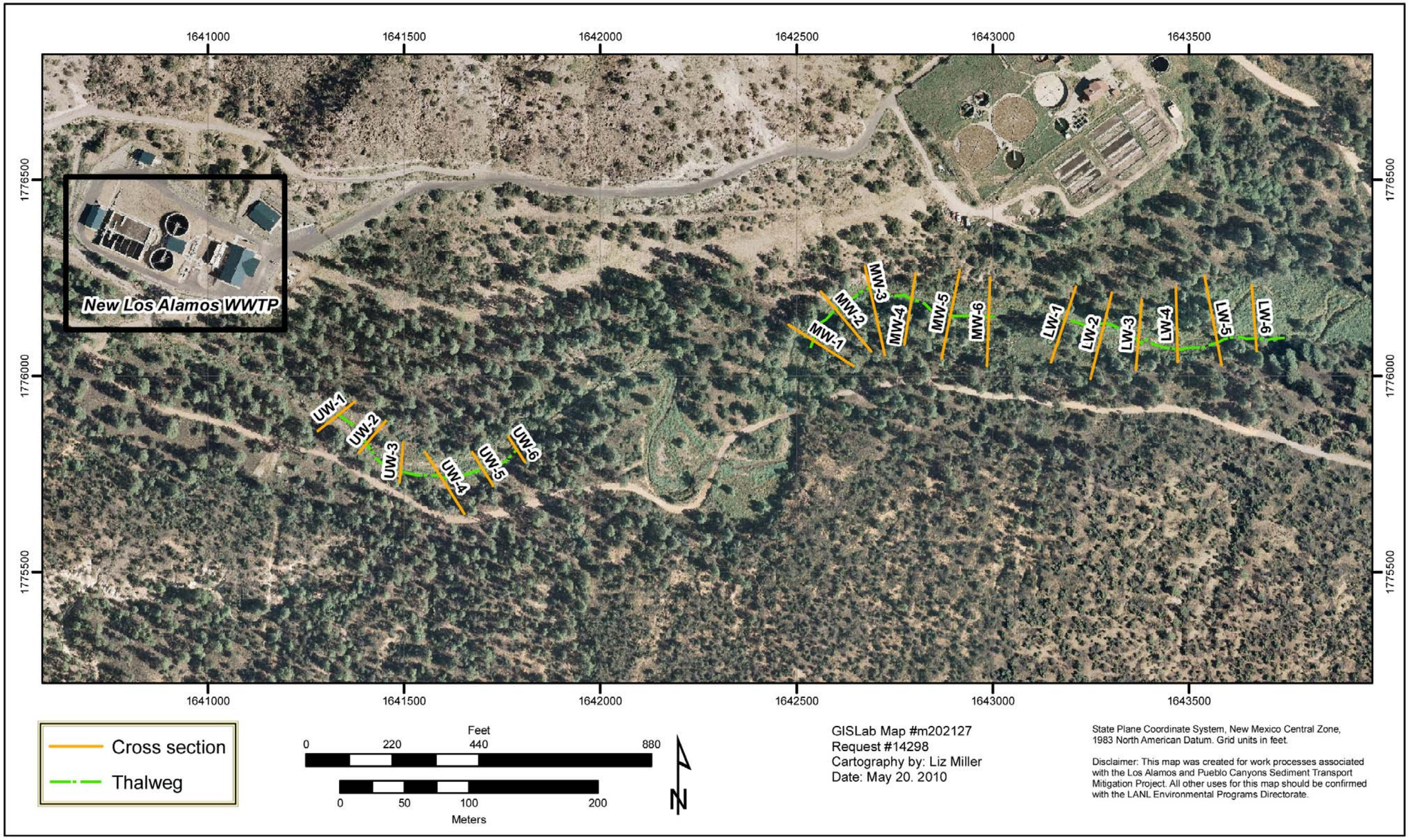


Figure 6 **Orthophoto showing the locations of surveyed cross sections and thalweg profiles in the upper Pueblo Canyon willow-planting area**

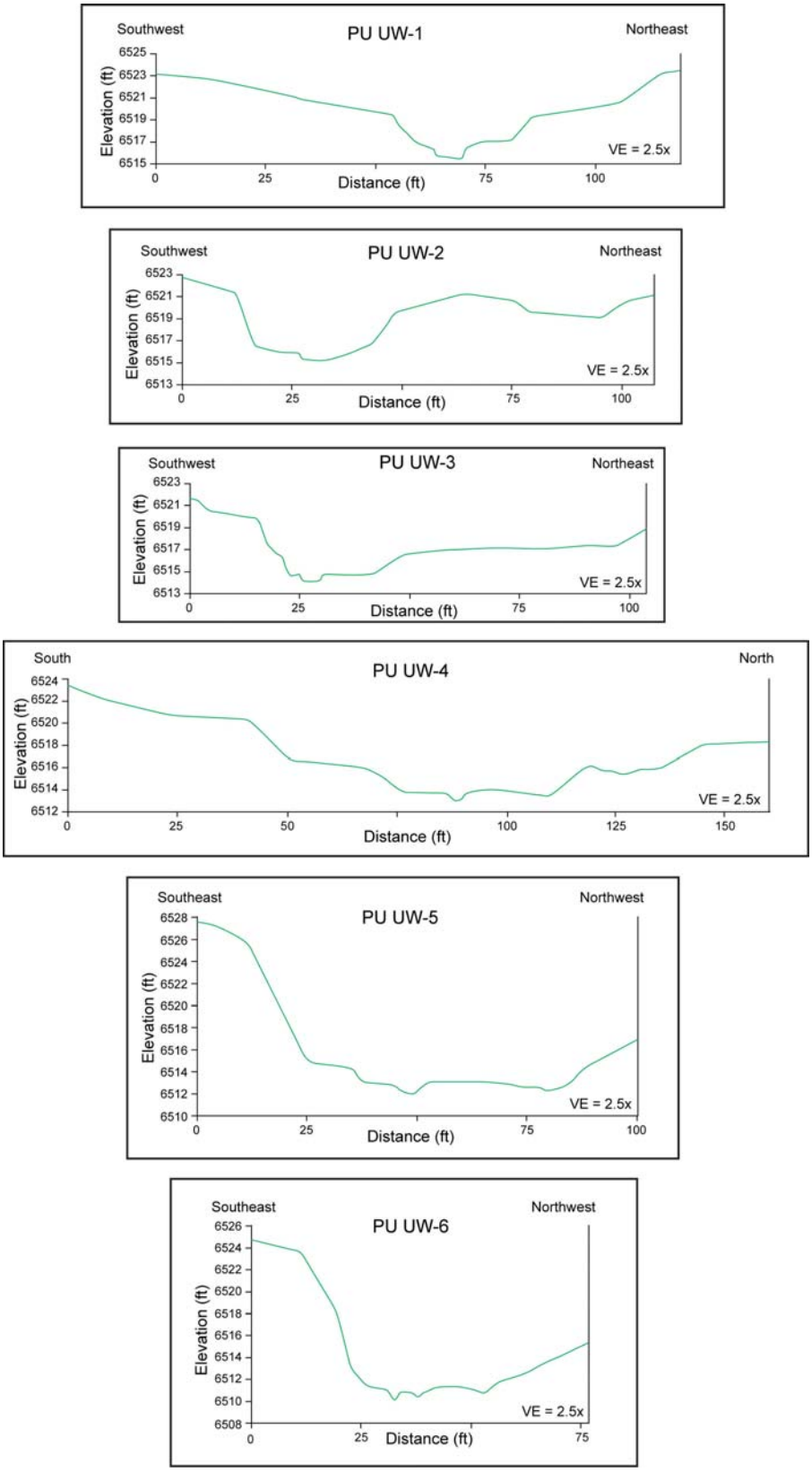


Figure 7 Cross sections in upper third of upper Pueblo Canyon willow-planting area

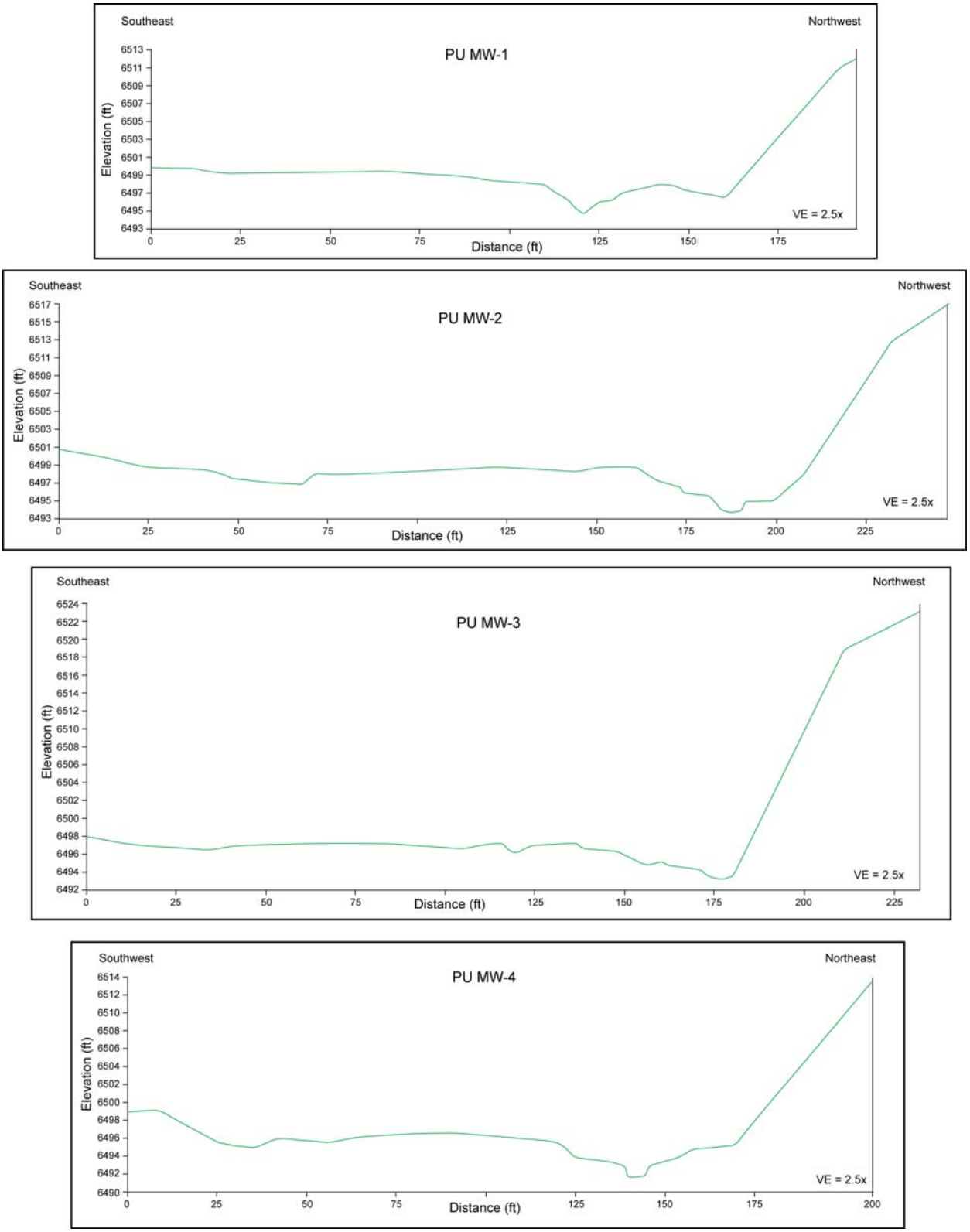
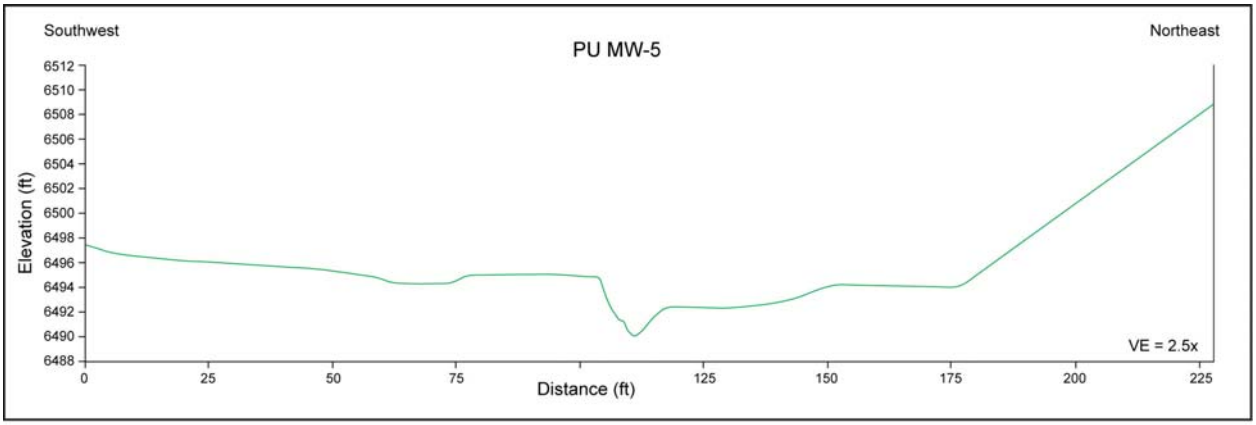


Figure 8 Cross sections in middle third of upper Pueblo Canyon willow-planting area



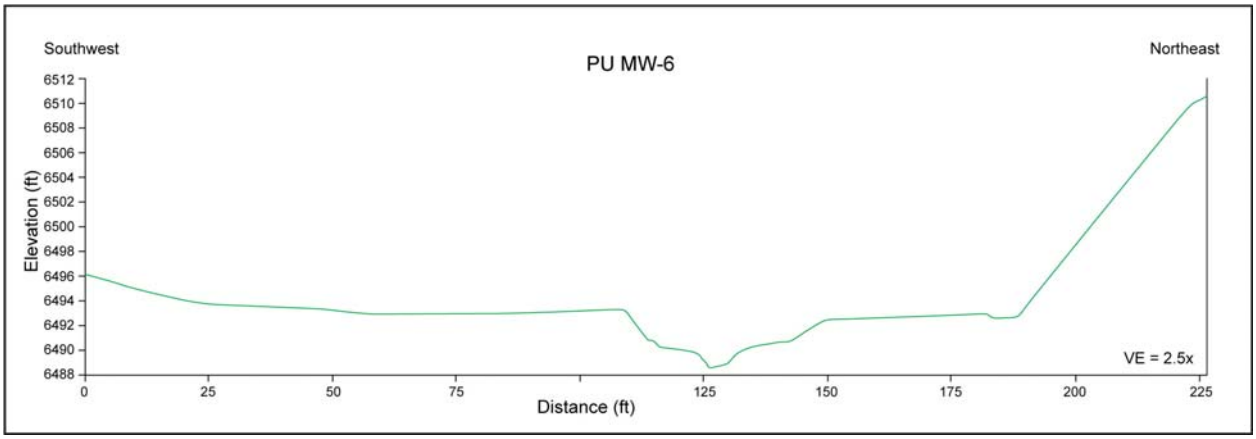


Figure 8 (continued)

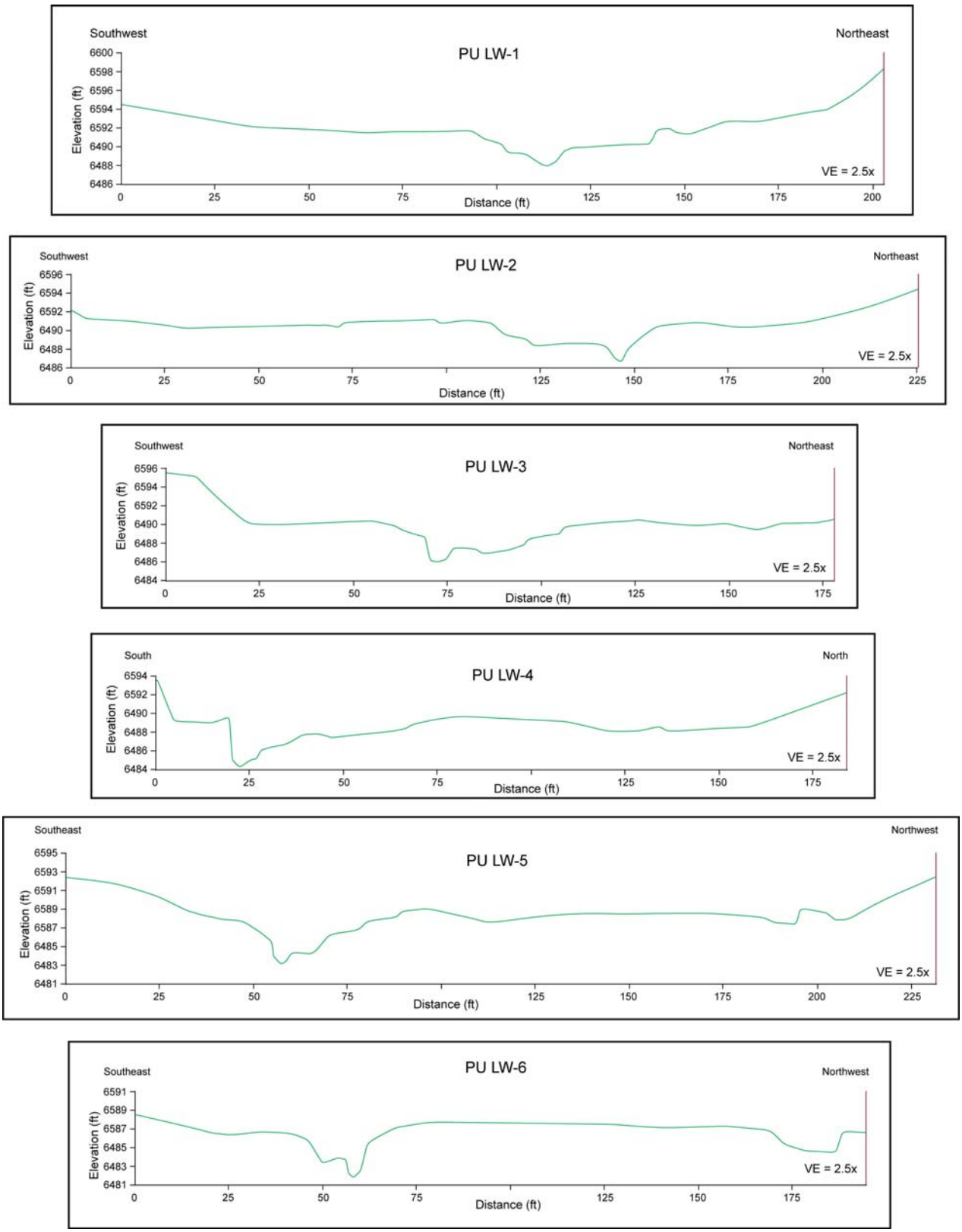


Figure 9 Cross sections in lower third of upper Pueblo Canyon willow-planting area

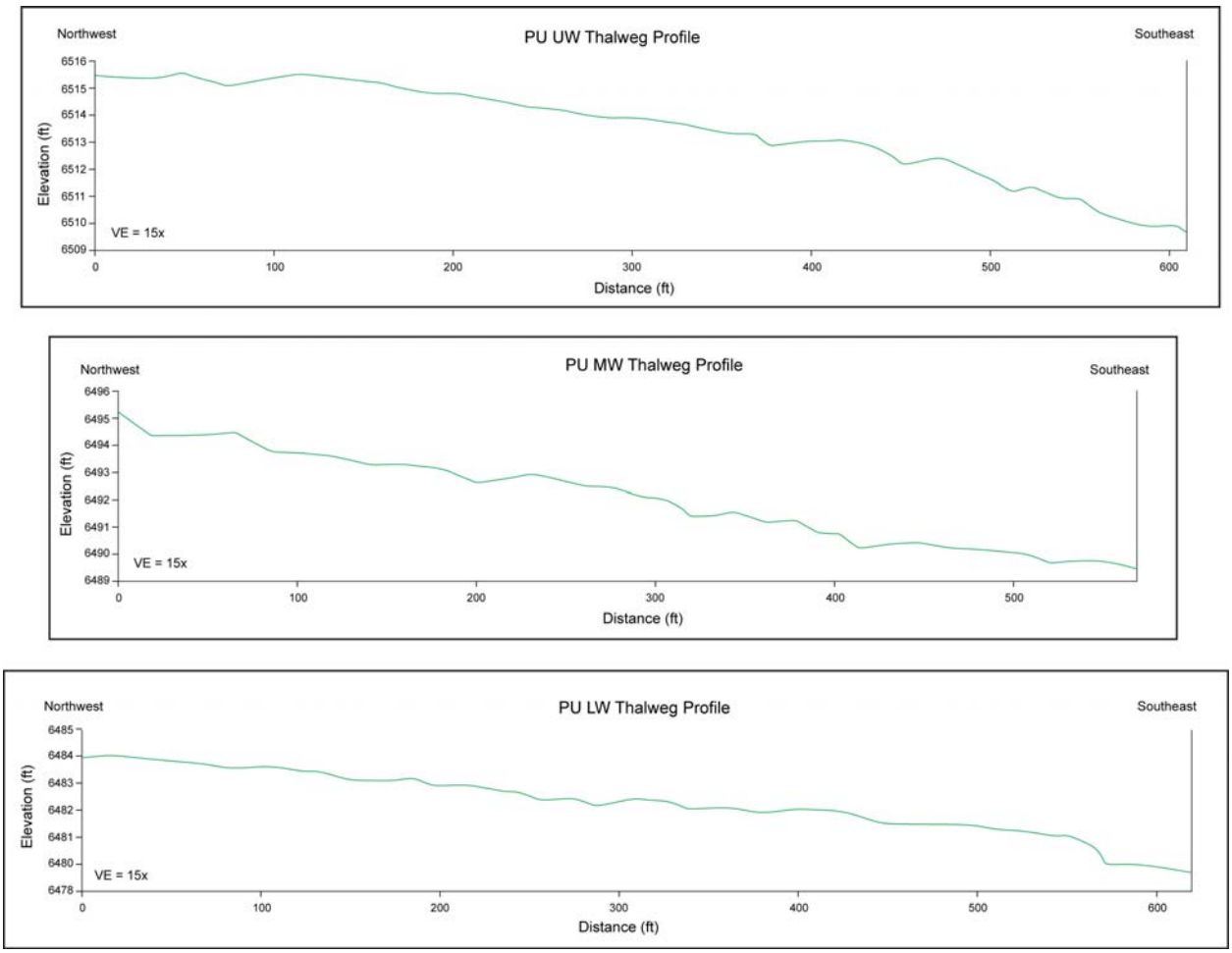


Figure 10 Thalweg profiles in the upper Pueblo Canyon willow-planting area

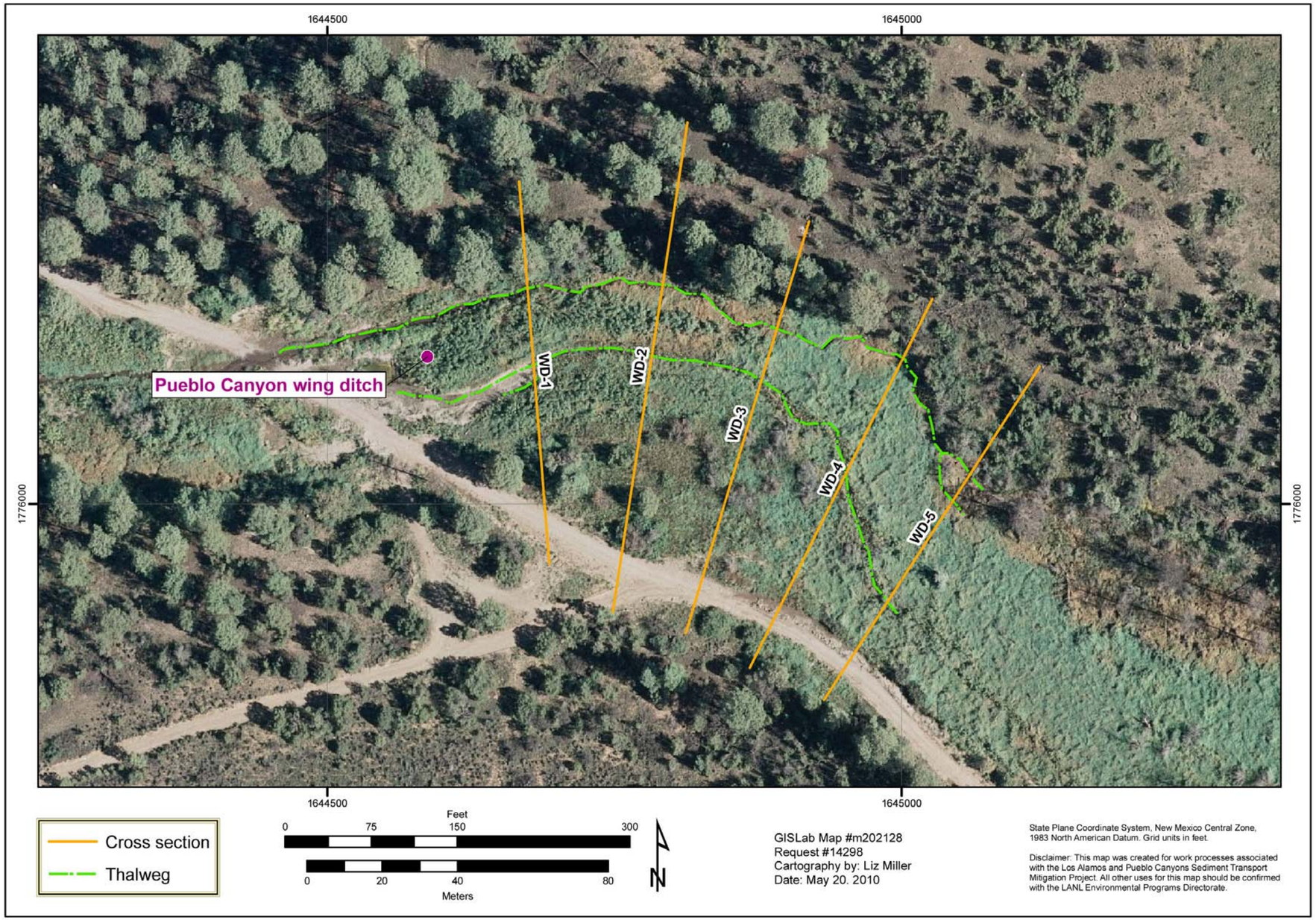


Figure 11 Orthophoto showing the locations of surveyed cross sections and thalweg profiles near the Pueblo Canyon wing ditch

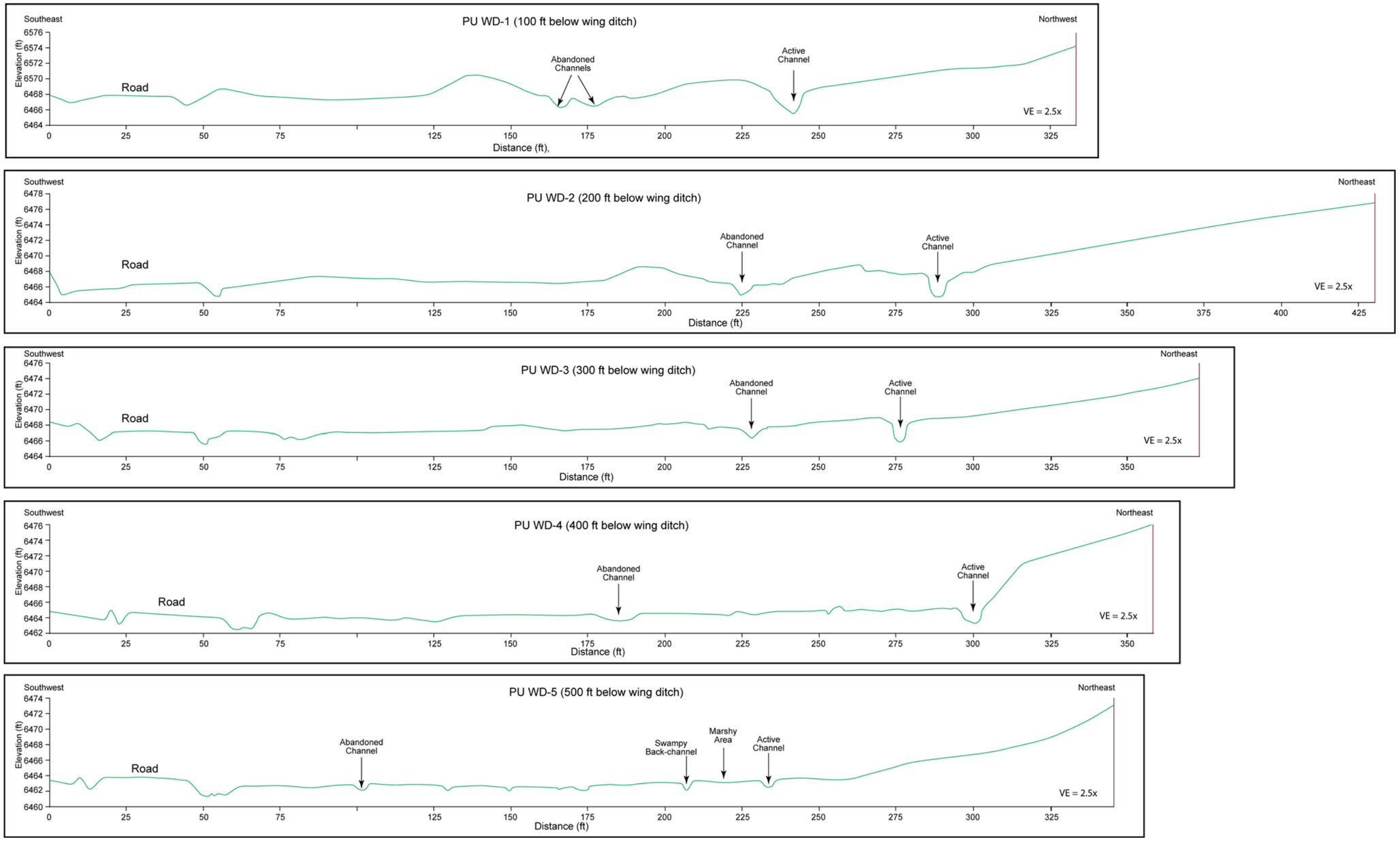
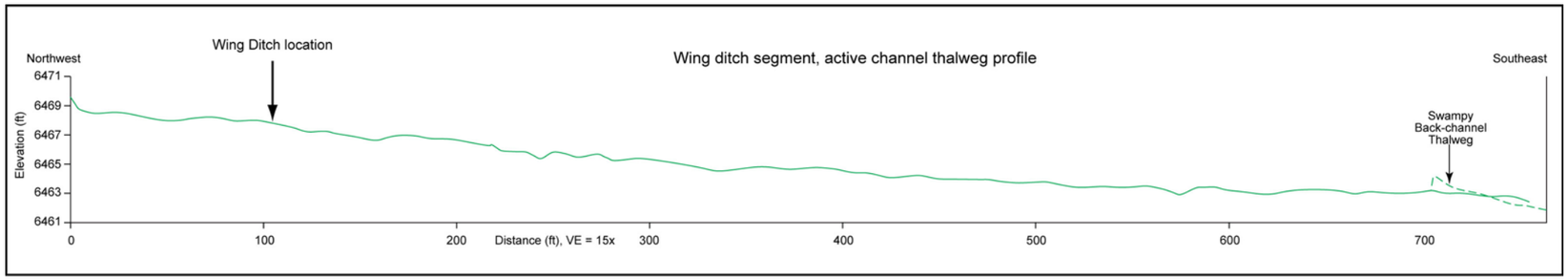


Figure 12 Cross sections below the Pueblo Canyon wing ditch



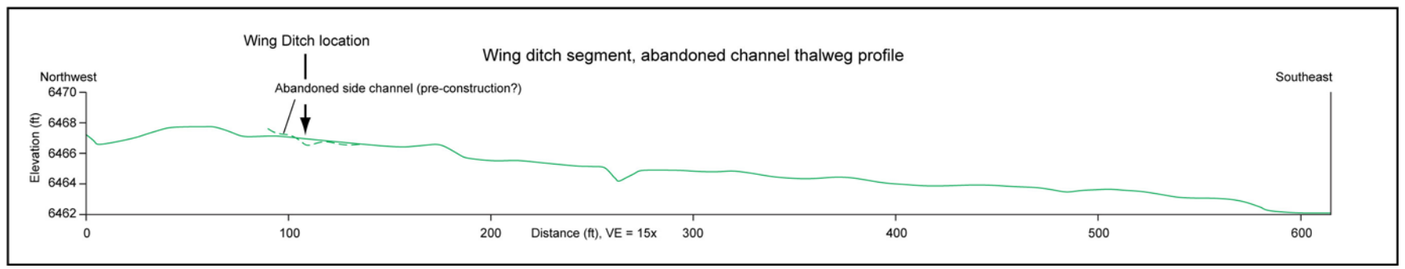


Figure 13 Thalweg profiles near the Pueblo Canyon wing ditch

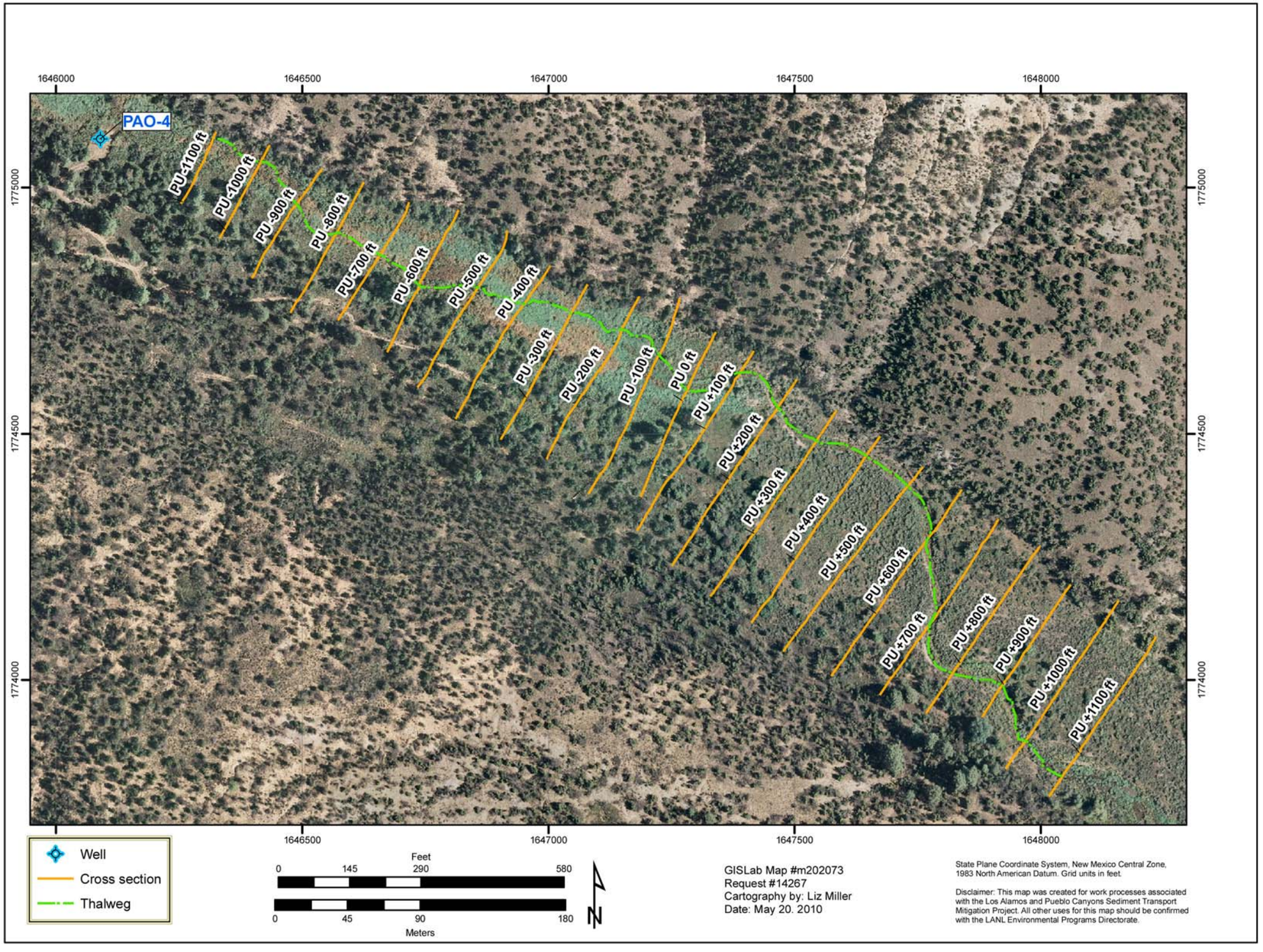
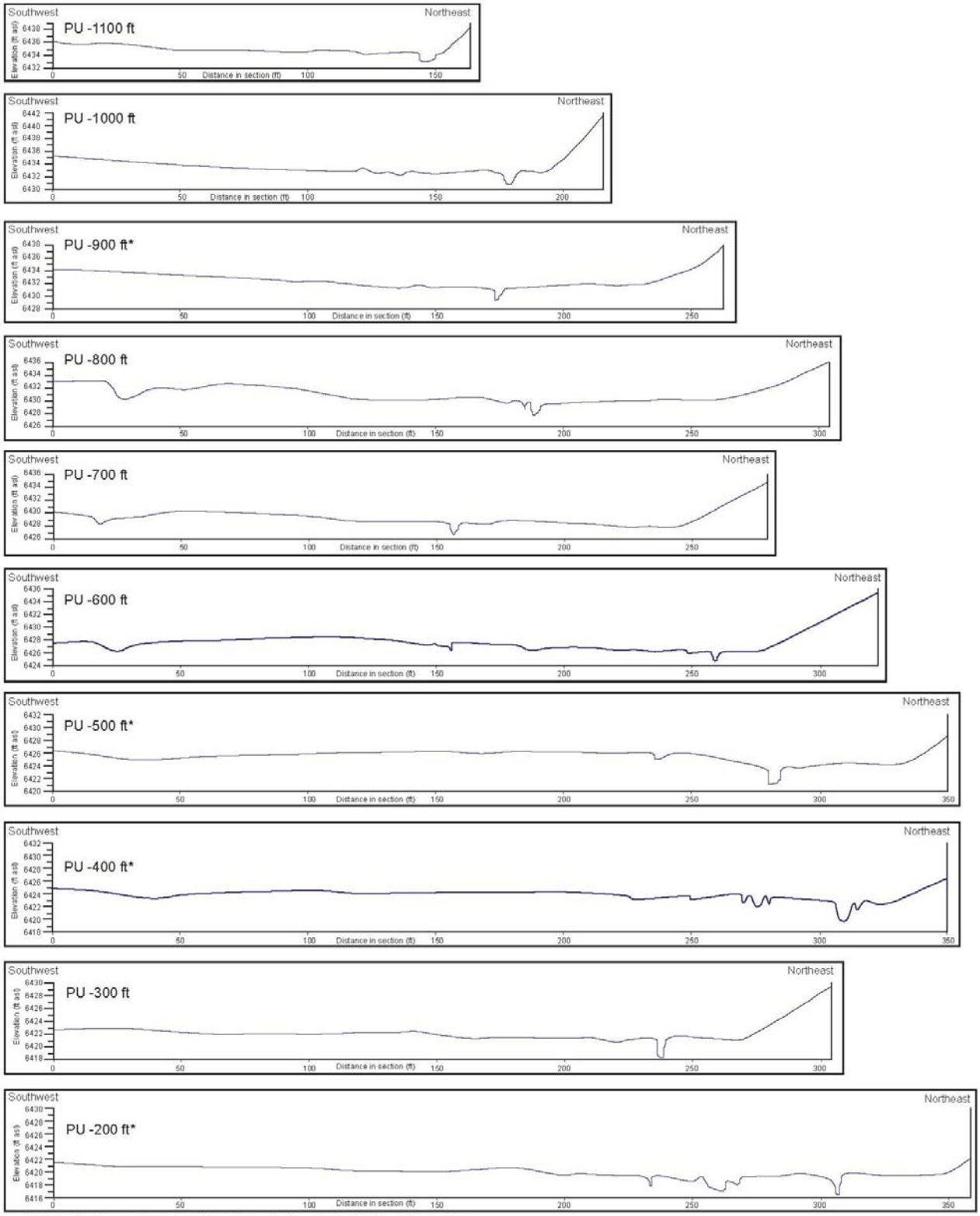
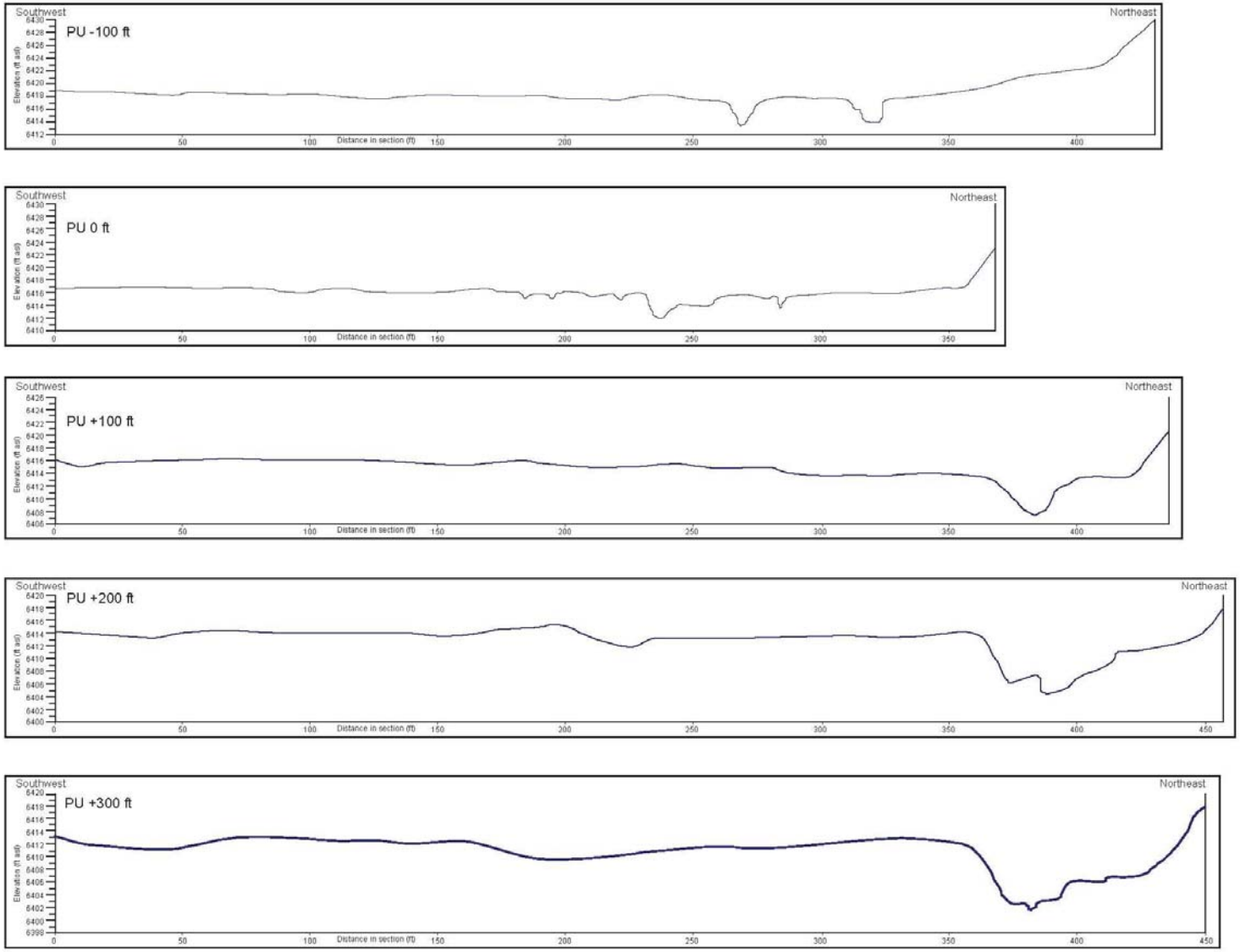


Figure 14 **Orthophoto showing the locations of surveyed cross sections and thalweg profiles in the lower Pueblo Canyon willow-planting area**



*Truncated on northeast end, northeast of contact with Puye Formation

Figure 15 Cross sections in the lower Pueblo Canyon willow-planting area



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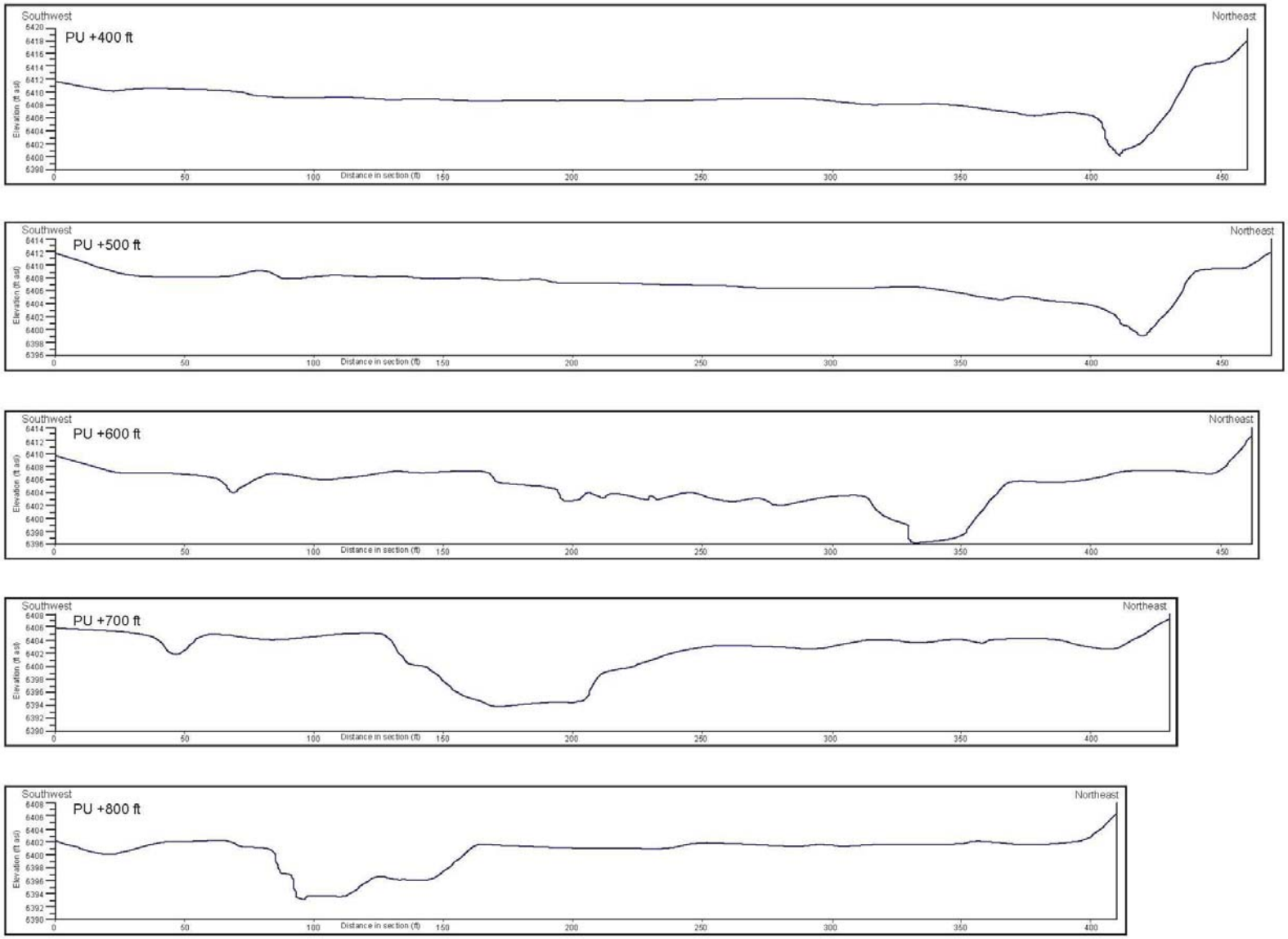

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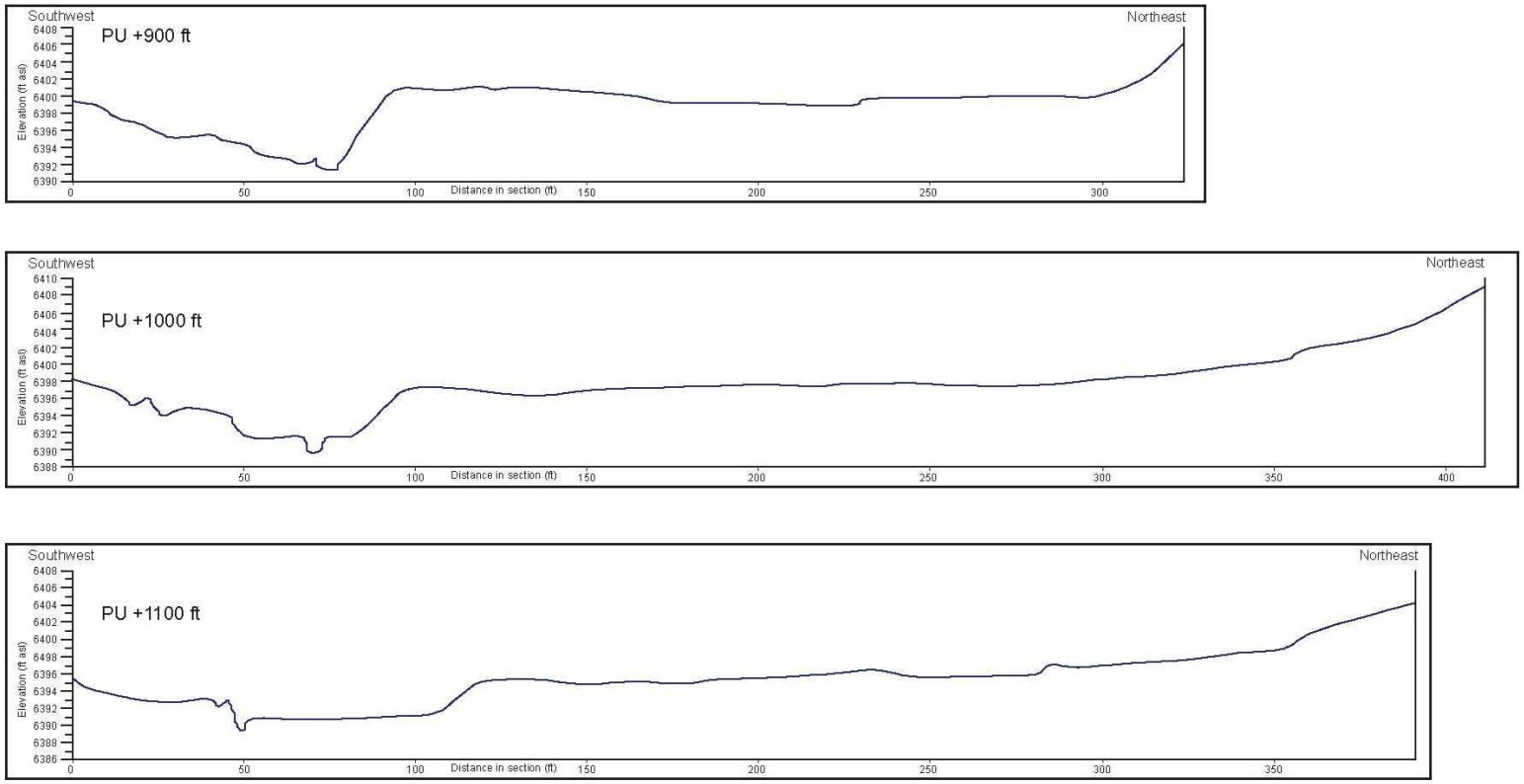

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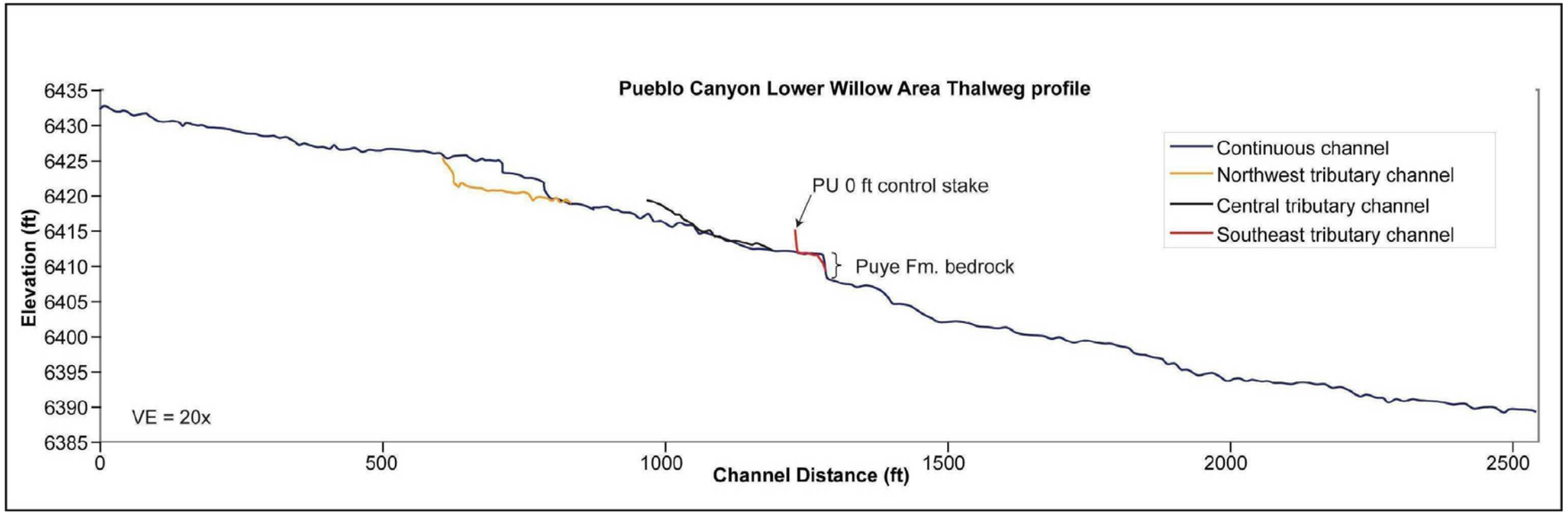


Figure 16 Thalweg profile in the lower Pueblo Canyon willow-planting area

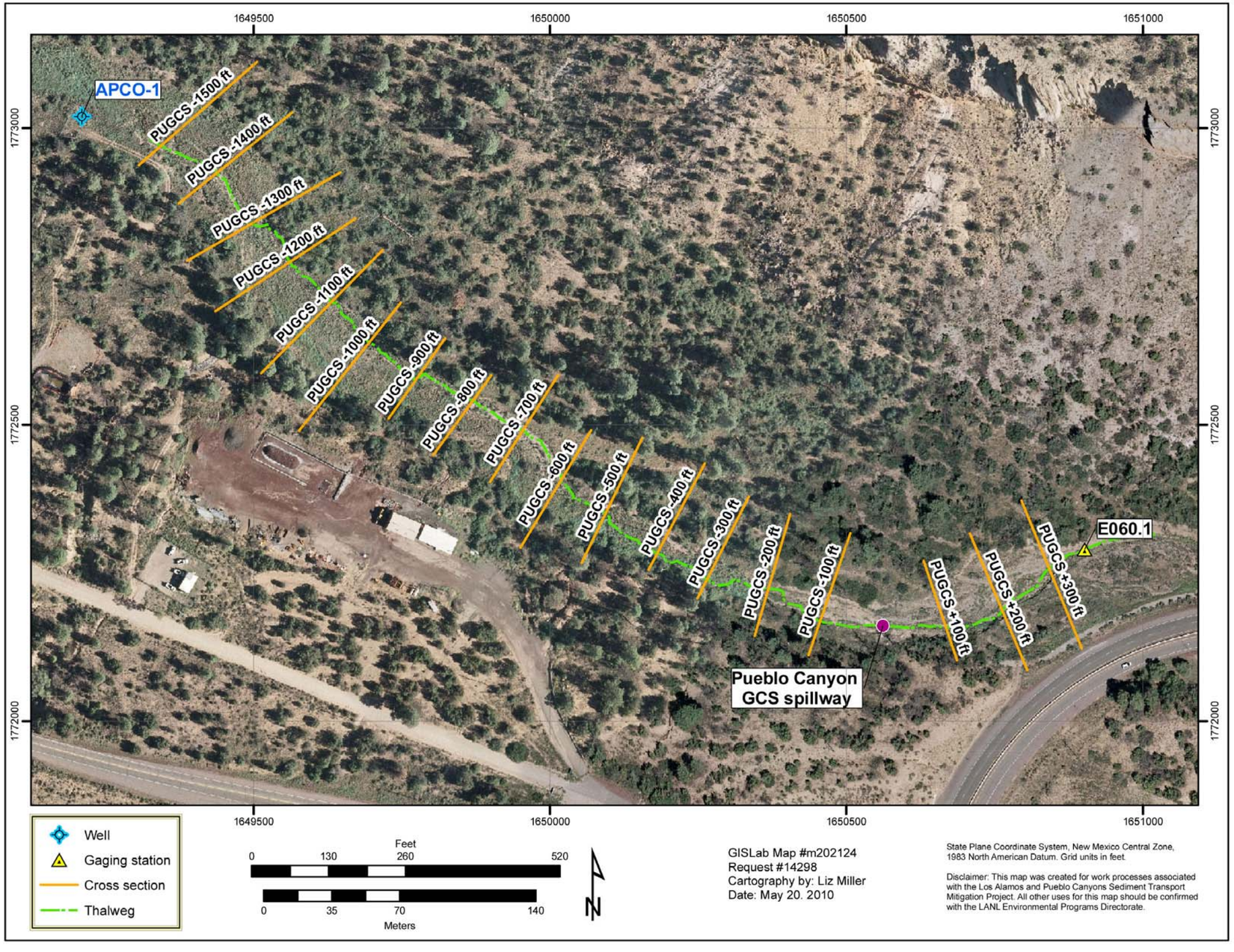


Figure 17 **Orthophoto showing the locations of surveyed cross sections and thalweg profiles near the Pueblo Canyon GCS**

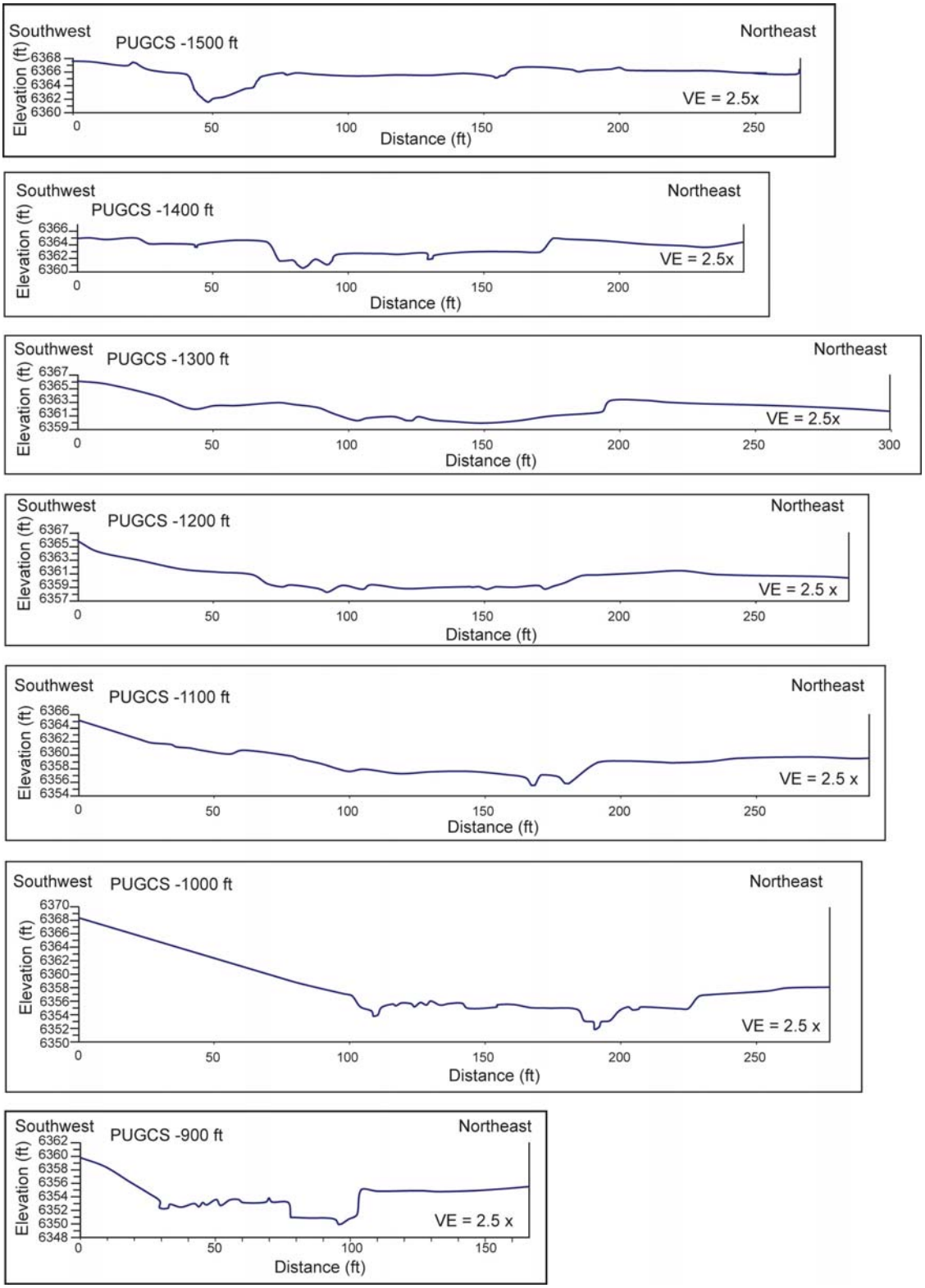
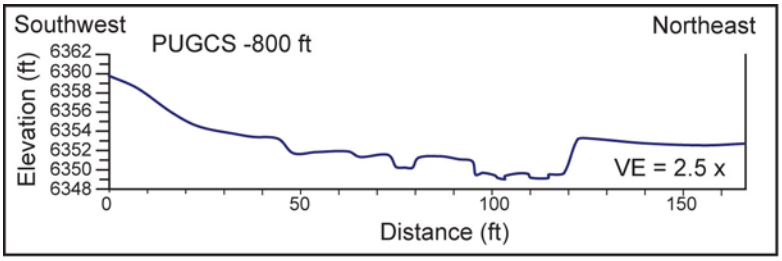
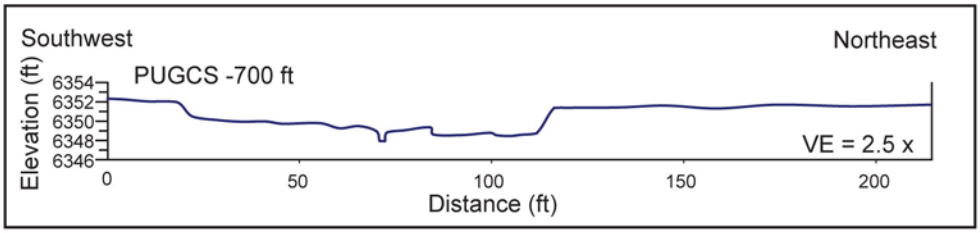
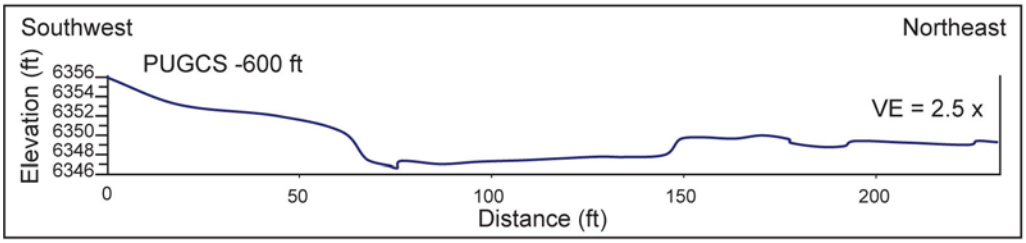
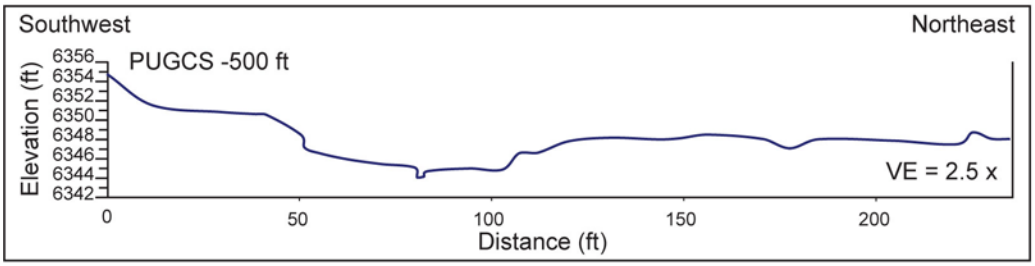


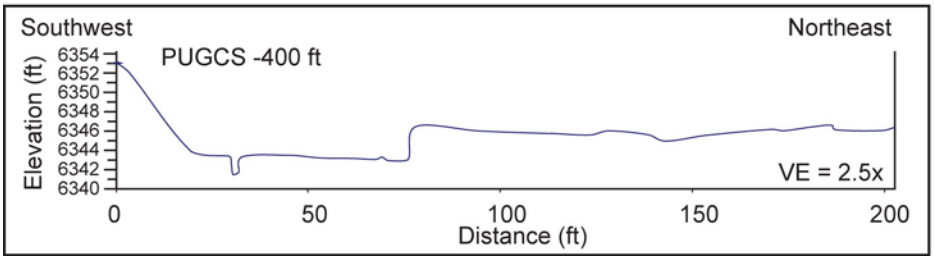
Figure 18 Cross sections near the Pueblo Canyon GCS











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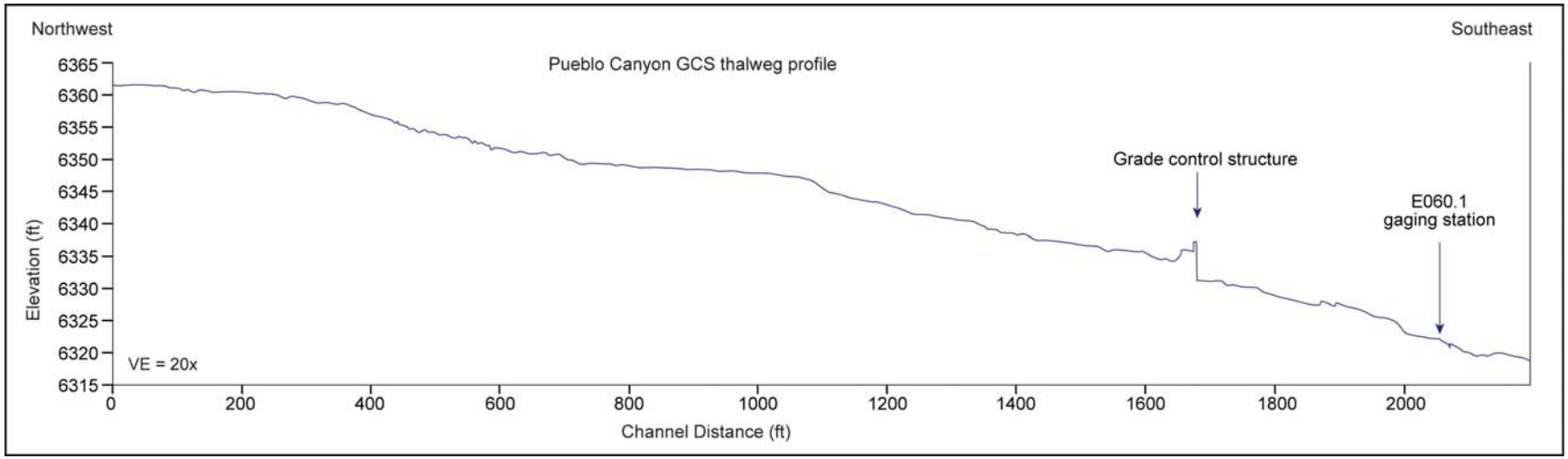

Figure 19 Thalweg profile at the Pueblo Canyon GCS

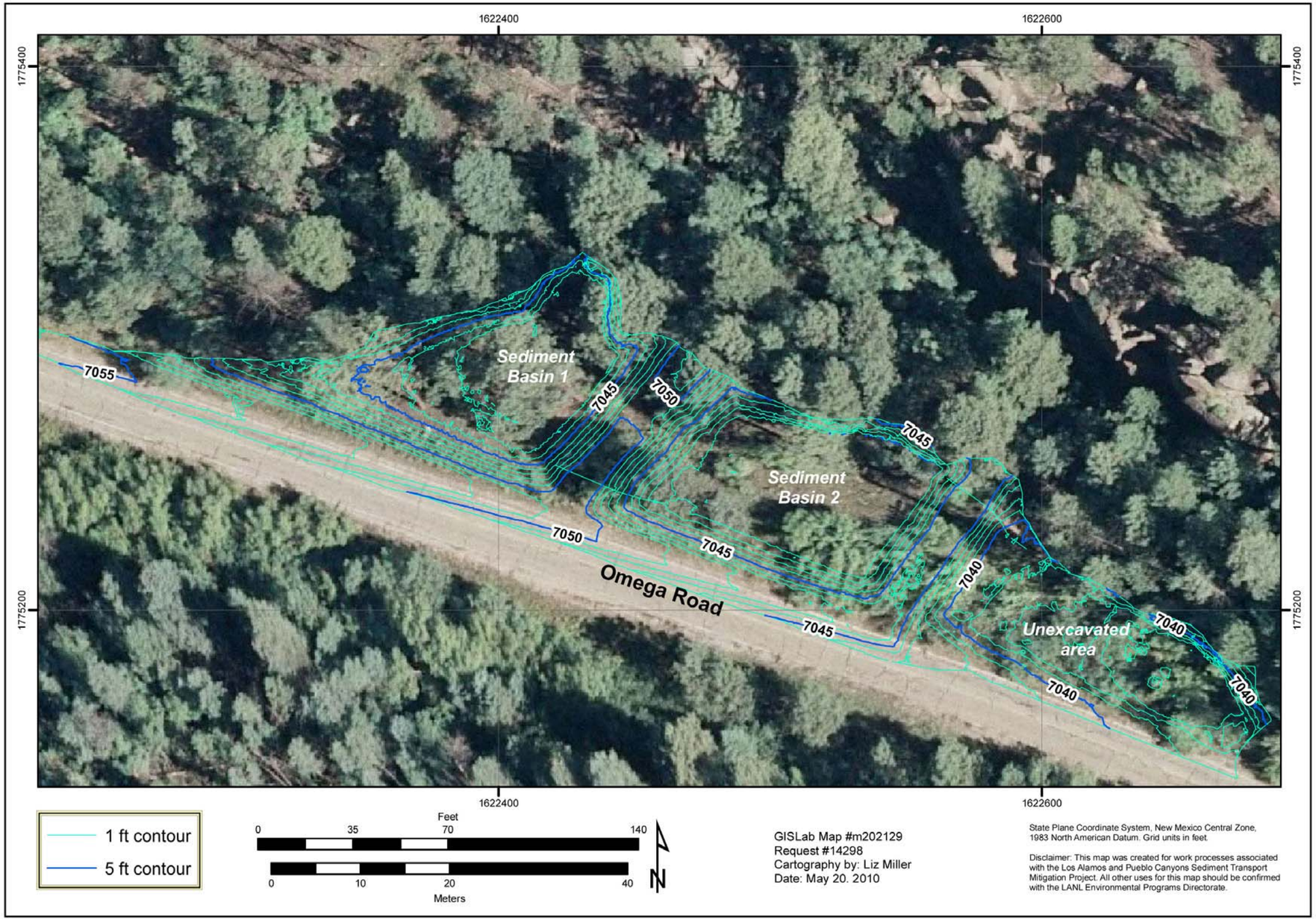

Figure 20 **Post-construction topography at the LA-SMA-2 sediment retention basins, overlain on a pre-construction orthophotograph**

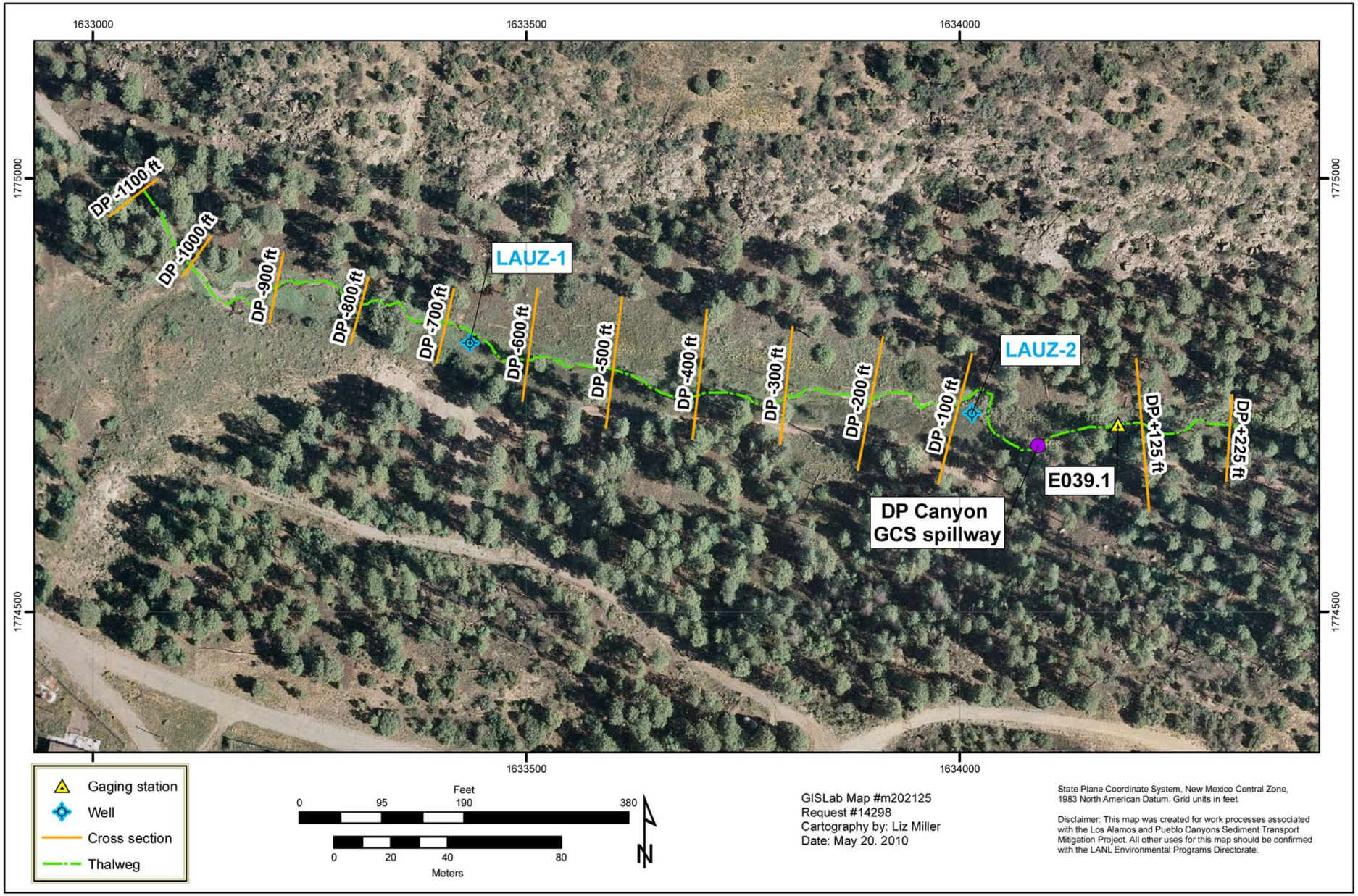

Figure 21 **Orthophoto showing the locations of surveyed cross sections and thalweg profiles near the DP Canyon GCS**

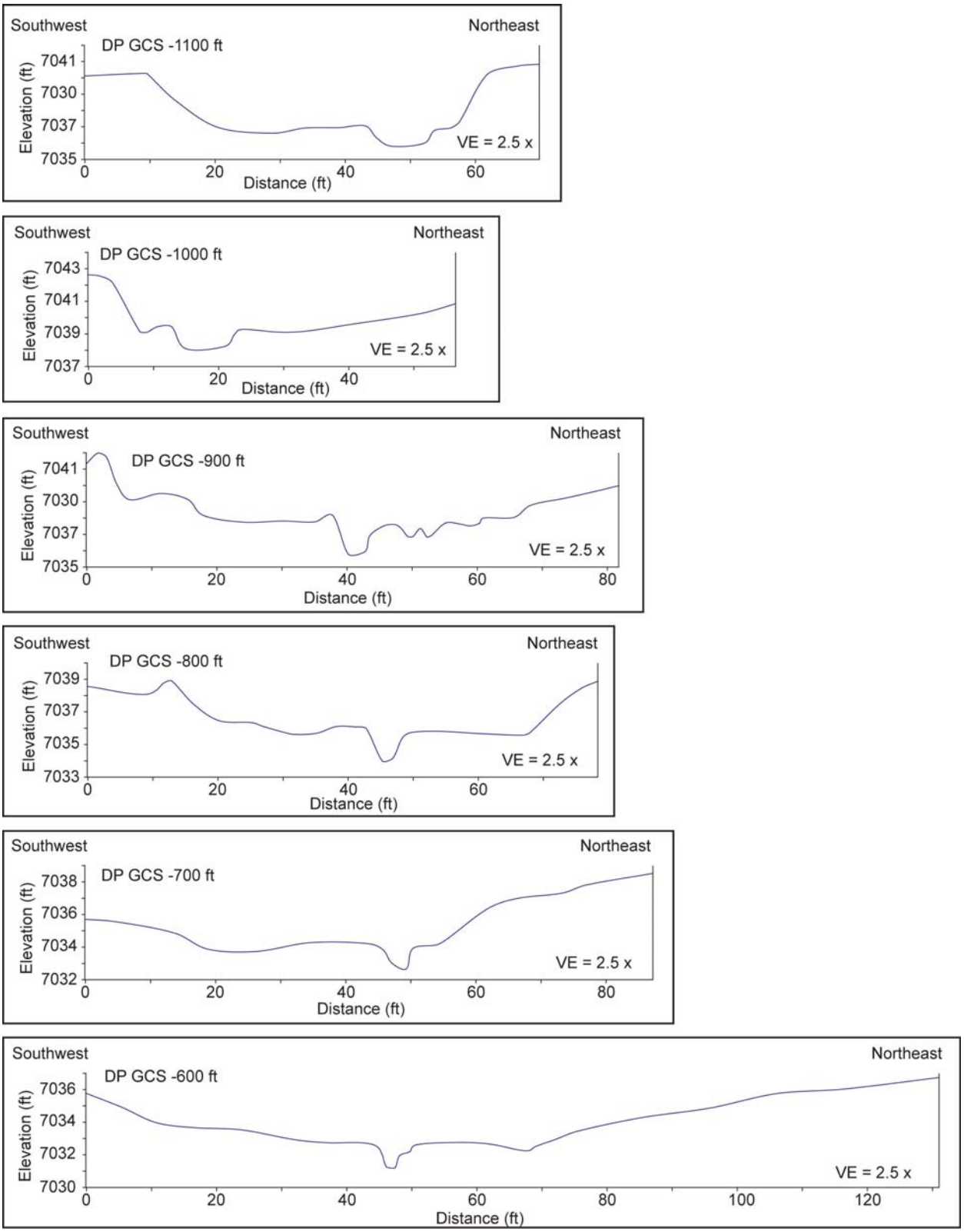

Figure 22 Cross sections near the DP Canyon GCS

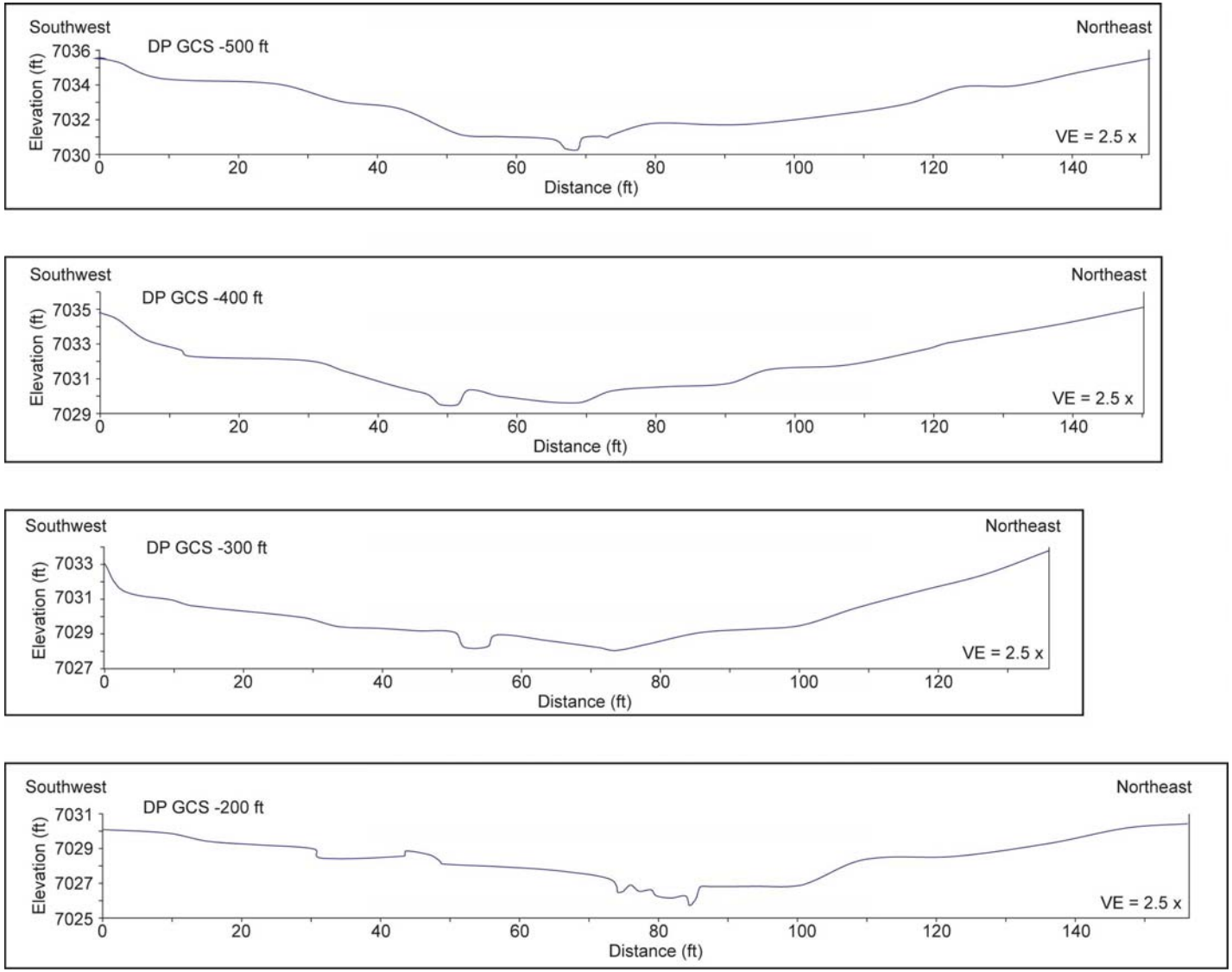

Figure 22 (continued)

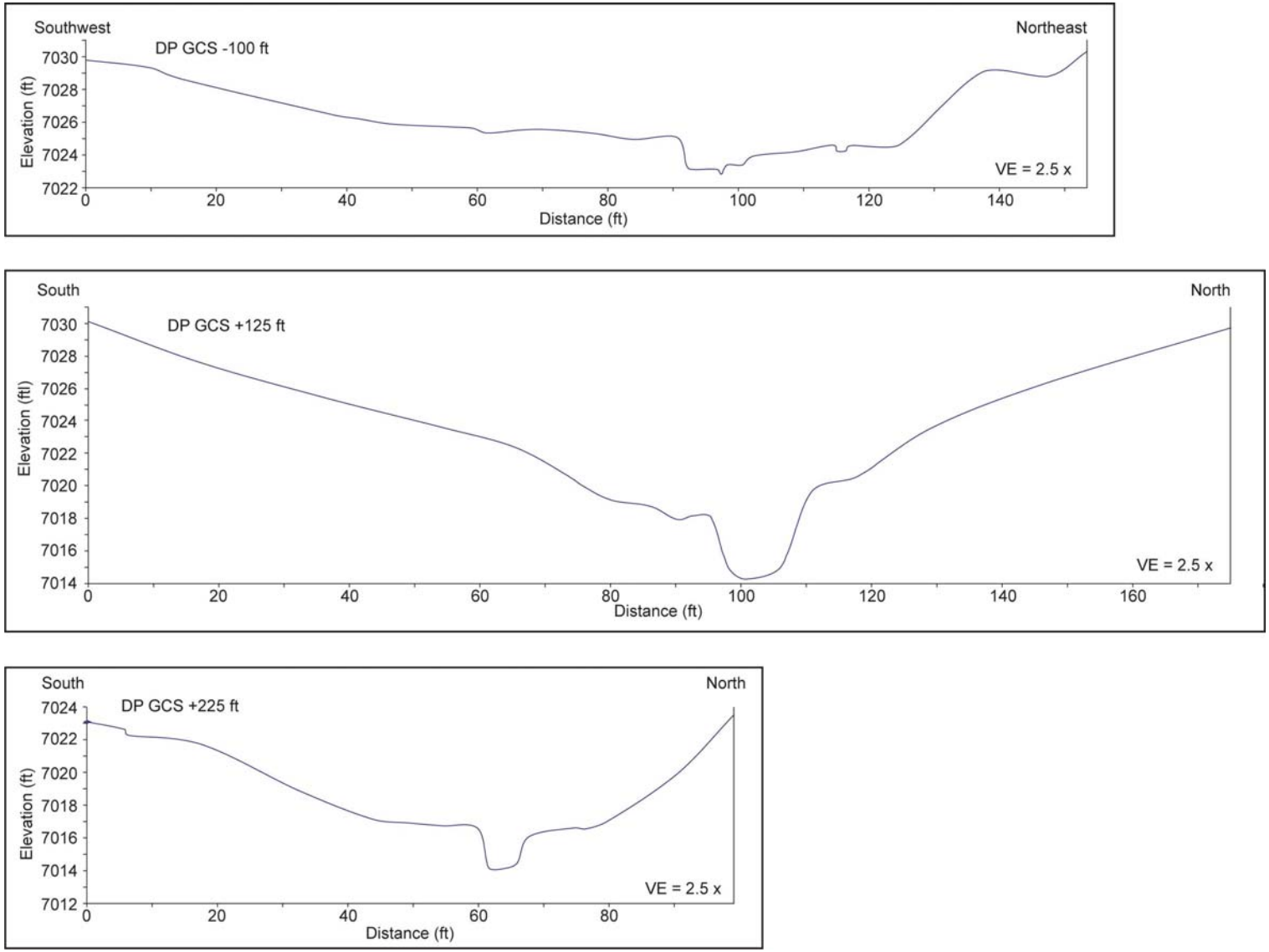

Figure 22 (continued)

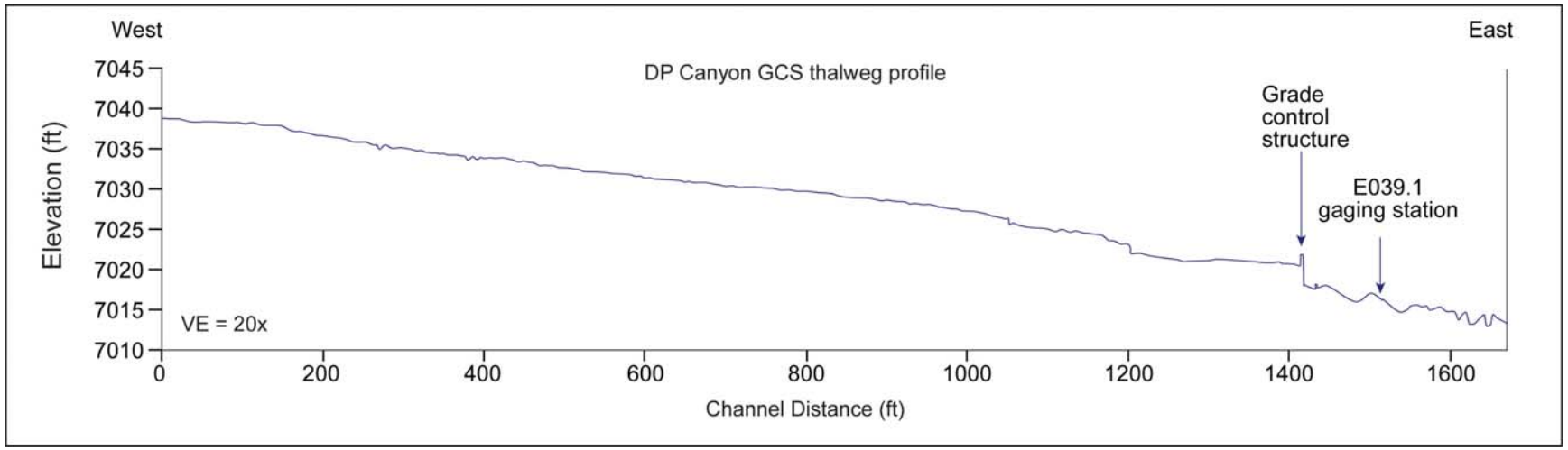

Figure 23 Thalweg profile at the DP Canyon GCS

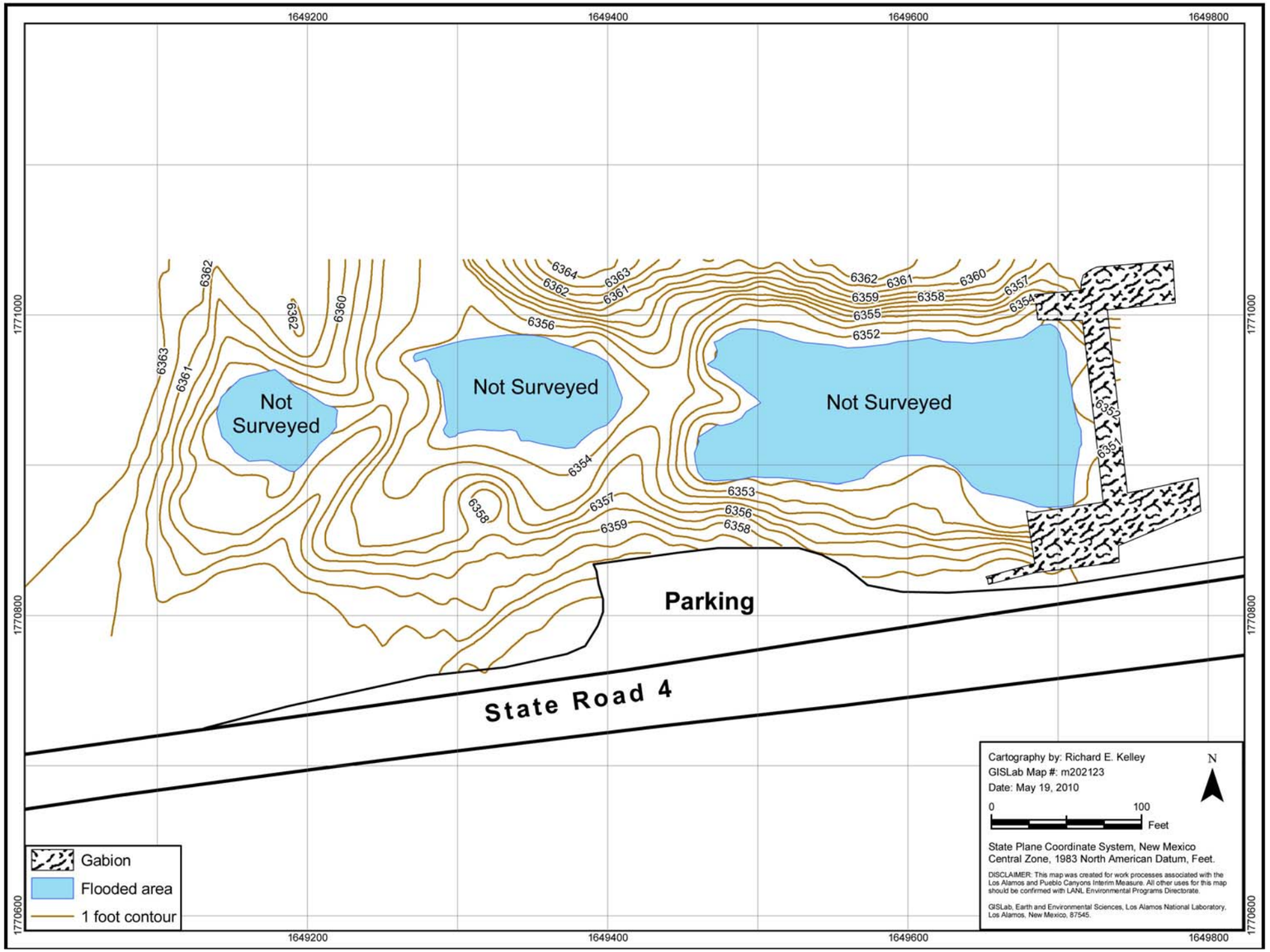

Figure 24 Post-construction topographic map of sediment retention basins above the Los Alamos Canyon low-head weir

Pueblo Canyon Cross-Vane Structures Survey

Site	Type of Survey	Purpose	Date Surveyed	X	Y	Z
Pueblo CVS #1 -50ft[a]	TS[b]	BM[c]	4/19/2010	1777368.14	1634216.59	6646.68
	TS	XS[d]	4/19/2010	1777368.02	1634216.58	6646.08
	TS	XS	4/19/2010	1777371.95	1634220.08	6645.53
	TS	XS	4/19/2010	1777374.63	1634222.06	6642.97
	TS	XS	4/19/2010	1777378.58	1634224.85	6638.64
	TS	XS	4/19/2010	1777384.22	1634228.73	6638.34
	TS	XS	4/19/2010	1777387.43	1634230.78	6638.42
	TS	XS	4/19/2010	1777391.04	1634233.59	6639.32
	TS	XS	4/19/2010	1777394.71	1634236.36	6639.58
	TS	XS	4/19/2010	1777396.90	1634238.29	6639.17
	TS	XS	5/5/2010	1777399.65	1634239.67	6638.26
	TS	XS	5/5/2010	1777401.88	1634241.25	6637.76
	TS	XS	5/5/2010	1777403.91	1634242.75	6637.45
	TS	XS	5/5/2010	1777406.31	1634244.80	6637.66
	TS	XS	5/5/2010	1777409.13	1634246.78	6637.41
	TS	XS	5/5/2010	1777411.95	1634248.92	6637.76
	TS	XS	5/5/2010	1777415.16	1634251.44	6637.83
	TS	XS	4/19/2010	1777416.90	1634252.23	6638.08
	TS	XS	4/19/2010	1777420.11	1634254.24	6638.33
	TS	XS	4/19/2010	1777422.52	1634256.28	6638.16
	TS	XS	4/19/2010	1777424.77	1634257.91	6639.81
	TS	XS	4/19/2010	1777426.59	1634259.25	6640.24
	TS	XS	4/19/2010	1777428.57	1634260.29	6639.66
	TS	XS	4/19/2010	1777430.28	1634261.49	6639.74
	TS	XS	4/19/2010	1777431.77	1634262.57	6639.88
	TS	XS	4/19/2010	1777433.56	1634263.76	6641.43
	TS	XS	4/19/2010	1777435.35	1634265.08	6641.86
	TS	XS	4/19/2010	1777438.47	1634267.20	6642.98
	TS	XS	4/19/2010	1777442.90	1634270.37	6643.23
	TS	XS	4/19/2010	1777453.34	1634278.56	6644.10
	TS	XS	4/19/2010	1777458.00	1634282.39	6644.95
	TS	XS	4/19/2010	1777465.68	1634287.80	6645.68
	TS	XS	4/19/2010	1777473.14	1634294.01	6646.55
	TS	BM	4/19/2010	1777473.04	1634294.13	6646.99
Pueblo CVS #1 +50ft	TS	BM	4/19/2010	1777314.14	1634296.24	6642.51
	TS	XS	4/19/2010	1777314.25	1634296.30	6641.81
	TS	XS	4/19/2010	1777317.78	1634299.47	6640.97
	TS	XS	4/19/2010	1777320.37	1634301.87	6638.07
	TS	XS	5/5/2010	1777324.14	1634304.90	6636.18
	TS	XS	5/5/2010	1777329.44	1634309.60	6635.83
	TS	XS	5/5/2010	1777330.83	1634310.55	6635.89
	TS	XS	5/5/2010	1777336.02	1634315.16	6635.87
	TS	XS	5/5/2010	1777338.54	1634317.39	6636.13
	TS	XS	5/5/2010	1777339.08	1634318.00	6636.02
	TS	XS	5/5/2010	1777340.03	1634318.84	6636.29
	TS	XS	5/5/2010	1777343.66	1634321.99	6636.22
	TS	XS	5/5/2010	1777348.14	1634325.75	6636.09
	TS	XS	5/5/2010	1777350.51	1634327.83	6636.96
	TS	XS	4/19/2010	1777353.98	1634331.14	6638.11
	TS	XS	4/19/2010	1777358.70	1634336.30	6639.68
	TS	XS	4/19/2010	1777363.23	1634340.10	6639.04
	TS	XS	4/19/2010	1777367.74	1634343.71	6638.81
	TS	XS	4/19/2010	1777386.65	1634361.31	6639.89
	TS	XS	4/19/2010	1777394.44	1634368.34	6640.08
	TS	XS	4/19/2010	1777404.66	1634376.50	6641.63
	TS	BM	4/19/2010	1777404.52	1634376.55	6642.32
Pueblo CVS #1 Thalweg Profile	TS	TP[e]	4/19/2010	1777405.75	1634244.17	6637.42
	TS	TP	4/19/2010	1777399.98	1634250.35	6637.28
	TS	TP	4/19/2010	1777393.99	1634257.12	6637.17
	TS	TP	4/19/2010	1777386.52	1634263.97	6636.98
	TS	TP	4/19/2010	1777380.76	1634272.76	6636.78
	TS	TP	4/19/2010	1777373.51	1634272.03	6636.72
	TS	TP	4/19/2010	1777367.16	1634274.28	6636.72
	TS	TP	4/19/2010	1777362.39	1634277.78	6636.63
	TS	TP	4/19/2010	1777358.60	1634276.59	6636.56
	TS	TP	4/19/2010	1777355.31	1634282.03	6636.50
	TS	TP	4/19/2010	1777356.97	1634286.36	6636.37
	TS	TP	4/19/2010	1777354.62	1634284.78	6636.41
	TS	TP	4/19/2010	1777356.65	1634289.11	6636.08
	TS	TP	4/19/2010	1777353.65	1634293.60	6636.32
	TS	TP	4/19/2010	1777349.42	1634296.23	6636.54
	TS	TP	4/19/2010	1777347.87	1634298.32	6636.21
	TS	TP	4/19/2010	1777343.19	1634304.07	6636.00
	TS	TP	4/19/2010	1777341.87	1634306.96	6635.79
	TS	TP	4/19/2010	1777336.19	1634315.44	6635.82
Pueblo CVS #2 -50ft	TS	BM	4/20/2010	1776670.74	1635967.86	6610.68
	TS	XS	4/20/2010	1776755.70	1635796.92	6615.40
	TS	XS	4/20/2010	1776755.74	1635796.69	6614.48
	TS	XS	4/20/2010	1776767.98	1635797.94	6613.58
	TS	XS	4/20/2010	1776776.37	1635799.11	6610.58
	TS	XS	4/20/2010	1776780.39	1635799.59	6609.92
	TS	XS	4/20/2010	1776784.26	1635800.41	6609.92
	TS	XS	4/20/2010	1776786.33	1635800.69	6609.67
	TS	XS	4/20/2010	1776787.46	1635800.69	6609.57
	TS	XS	4/20/2010	1776787.98	1635800.81	6609.69
	TS	XS	4/20/2010	1776794.29	1635801.10	6609.65
	TS	XS	4/20/2010	1776800.22	1635801.92	6607.85
	GPS[f]	XS	5/5/2010	1776800.82	1635801.76	6607.99
	GPS	XS	5/5/2010	1776804.91	1635802.20	6608.03
	GPS	XS	5/5/2010	1776807.33	1635802.32	6608.47
	GPS	XS	5/5/2010	1776811.39	1635803.08	6608.43
	GPS	XS	5/5/2010	1776814.79	1635803.72	6608.58
	GPS	XS	5/5/2010	1776820.09	1635804.39	6608.31
	GPS	XS	5/5/2010	1776825.25	1635805.01	6607.95
	GPS	XS	5/5/2010	1776829.00	1635805.41	6607.89
	GPS	XS	5/5/2010	1776830.94	1635805.63	6608.40
	GPS	XS	5/5/2010	1776833.39	1635805.76	6607.98
	GPS	XS	5/5/2010	1776836.09	1635806.16	6608.22
	GPS	XS	5/5/2010	1776839.51	1635806.54	6608.29
	TS	XS	4/20/2010	1776841.98	1635805.67	6608.90
	TS	XS	4/20/2010	1776844.41	1635806.40	6611.27
	TS	XS	4/20/2010	1776852.21	1635806.80	6612.74
	TS	XS	4/20/2010	1776860.43	1635807.85	6613.26
	TS	XS	4/20/2010	1776875.33	1635809.58	6623.17
	TS	XS	4/20/2010	1776887.89	1635811.26	6631.85
	TS	XS	4/20/2010	1776892.83	1635811.87	6634.38
	TS	XS	4/20/2010	1776902.46	1635812.97	6636.64
	TS	BM	4/20/2010	1776902.47	1635812.81	6637.38
Pueblo CVS #2 +50ft	TS	BM	4/20/2010	1776736.50	1635883.49	6611.17
	TS	XS	4/20/2010	1776736.50	1635883.62	6610.18
	TS	XS	4/20/2010	1776746.63	1635885.75	6608.62
	TS	XS	4/20/2010	1776758.45	1635888.64	6608.05
	GPS	XS	5/5/2010	1776759.43	1635888.75	6607.49
	GPS	XS	5/5/2010	1776761.10	1635889.38	6607.46
	GPS	XS	5/5/2010	1776766.26	1635890.74	6607.46
	GPS	XS	5/5/2010	1776775.18	1635892.84	6607.28
	GPS	XS	5/5/2010	1776780.83	1635894.26	6607.00
	GPS	XS	5/5/2010	1776782.95	1635894.77	6607.18
	GPS	XS	5/5/2010	1776785.90	1635895.64	6606.97
	GPS	XS	5/5/2010	1776787.54	1635896.09	6607.14
	GPS	XS	5/5/2010	1776789.65	1635896.49	6606.78
	GPS	XS	5/5/2010	1776792.09	1635896.93	6606.77
	GPS	XS	5/5/2010	1776793.71	1635897.48	6606.61
	GPS	XS	5/5/2010	1776795.93	1635898.08	6606.79
	GPS	XS	5/5/2010	1776798.81	1635898.55	6606.33
	GPS	XS	5/5/2010	1776800.42	1635899.18	6607.00
	TS	XS	4/20/2010	1776800.57	1635899.08	6607.38
	TS	XS	4/20/2010	1776804.04	1635899.96	6607.45
	TS	XS	4/20/2010	1776808.22	1635900.37	6608.61
	TS	XS	4/20/2010	1776812.72	1635902.32	6609.25
	TS	XS	4/20/2010	1776822.91	1635905.00	6611.28
	TS	XS	4/20/2010	1776827.69	1635906.22	6611.28
	TS	XS	4/20/2010	1776834.66	1635908.24	6611.28
	TS	XS	4/20/2010	1776838.32	1635909.46	6611.84
	TS	XS	4/20/2010	1776842.19	1635910.48	6612.56
	TS	XS	4/20/2010	1776845.54	1635911.45	6614.27
	TS	XS	4/20/2010	1776849.60	1635912.54	6616.89
	TS	XS	4/20/2010	1776852.29	1635913.40	6619.06
	TS	XS	4/20/2010	1776854.64	1635914.15	6621.05
	TS	XS	4/20/2010	1776858.13	1635915.19	6624.05
	TS	XS	4/20/2010	1776861.34	1635916.23	6625.75
	TS	XS	4/20/2010	1776864.66	1635917.44	6627.16
	TS	XS	4/20/2010	1776868.53	1635918.71	6628.36
	TS	XS	4/20/2010	1776872.23	1635919.89	6629.62
	TS	XS	4/20/2010	1776876.69	1635921.33	6630.76
	TS	BM	4/20/2010	1776876.66	1635921.21	6631.66
Pueblo CVS #2 Thalweg Profile	TS	TP	4/20/2010	1776831.26	1635805.64	6607.93
	TS	TP	4/20/2010	1776830.04	1635814.01	6607.89
	TS	TP	4/20/2010	1776828.40	1635821.22	6607.90
	TS	TP	4/20/2010	1776825.46	1635829.04	6607.78
	TS	TP	4/20/2010	1776822.99	1635836.74	6607.70
	TS	TP	4/20/2010	1776819.92	1635844.07	6607.51
	TS	TP	4/20/2010	1776817.13	1635853.95	6607.32
	TS	TP	4/20/2010	1776813.90	1635862.47	6607.35
	TS	TP	4/20/2010	1776812.26	1635871.89	6607.10
	TS	TP	4/20/2010	1776809.21	1635879.88	6607.00
	TS	TP	4/20/2010	1776806.87	1635881.09	6607.05
	TS	TP	4/20/2010	1776807.51	1635884.18	6607.25
	TS	TP	4/20/2010	1776807.65	1635887.87	6607.08
	TS	TP	4/20/2010	1776804.99	1635890.75	6606.81
	TS	TP	4/20/2010	1776802.27	1635894.33	6606.68
	TS	TP	4/20/2010	1776799.63	1635895.93	6606.60
	TS	TP	4/20/2010	1776798.25	1635897.10	6606.69
	TS	TP	4/20/2010	1776796.80	1635898.74	6606.66
	TS	TP	4/20/2010	1776794.47	1635902.66	6606.57
Pueblo CVS #3 -50ft	TS	BM	4/20/2010	1776848.96	1636223.10	6610.28
	TS	XS	4/20/2010	1776849.05	1636223.15	6609.76
	TS	XS	4/20/2010	1776847.23	1636226.67	6609.39
	TS	XS	4/20/2010	1776843.78	1636232.65	6608.55
	TS	XS	4/20/2010	1776841.37	1636236.87	6608.00
	TS	XS	4/20/2010	1776839.77	1636239.93	6607.07
	TS	XS	4/20/2010	1776838.48	1636242.01	6605.62
	TS	XS	4/20/2010	1776836.11	1636245.98	6603.51
	TS	XS	4/20/2010	1776833.41	1636250.79	6603.32
	TS	XS	4/20/2010	1776829.78	1636257.02	6603.59
	TS	XS	4/20/2010	1776825.24	1636264.50	6603.31
	TS	XS	4/20/2010	1776823.10	1636268.61	6603.35
	TS	XS	4/20/2010	1776818.92	1636276.06	6603.38
	TS	XS	4/20/2010	1776815.76	1636282.05	6603.10
	TS	XS	4/20/2010	1776813.58	1636285.66	6602.54
	TS	XS	4/20/2010	1776811.96	1636288.78	6602.37
	TS	XS	4/20/2010	1776810.91	1636290.49	6601.47
	TS	XS	4/20/2010	1776808.10	1636295.37	6601.21
	GPS	XS	5/5/2010	1776807.75	1636297.26	6600.98
	GPS	XS	5/5/2010	1776807.19	1636298.41	6600.57
	GPS	XS	5/5/2010	1776805.49	1636300.83	6600.43
	GPS	XS	5/5/2010	1776804.47	1636302.64	6600.87
	GPS	XS	5/5/2010	1776803.92	1636303.96	6600.57
	GPS	XS	5/5/2010	1776802.10	1636306.85	6600.73
	GPS	XS	5/5/2010	1776801.24	1636308.75	6600.86
	GPS	XS	5/5/2010	1776798.19	1636314.98	6600.63
	GPS	XS	5/5/2010	1776797.91	1636315.75	6600.81
	TS	XS	4/20/2010	1776797.02	1636316.26	6600.96
	TS	XS	4/20/2010	1776796.77	1636316.96	6601.96
	TS	XS	4/20/2010	1776794.85	1636320.40	6601.83
	TS	XS	4/20/2010	1776792.79	1636324.56	6601.81
	TS	XS	4/20/2010	1776790.28	1636329.47	6601.55
	TS	XS	4/20/2010	1776788.35	1636332.77	6601.78
	TS	XS	4/20/2010	1776785.96	1636337.70	6602.29
	TS	XS	4/20/2010	1776781.69	1636345.18	6605.27
	TS	XS	4/20/2010	1776778.32	1636350.94	6605.86
	TS	BM	4/20/2010	1776778.33	1636350.68	6606.99
Pueblo CVS #3 +50ft	TS	BM	4/20/2010	1776931.41	1636275.65	6606.50
	TS	XS	4/20/2010	1776931.55	1636275.66	6606.02
	TS	XS	4/20/2010	1776929.39	1636279.63	6605.54
	TS	XS	4/20/2010	1776925.39	1636286.30	6604.36
	TS	XS	4/20/2010	1776923.62	1636289.80	6602.63
	TS	XS	4/20/2010	1776920.57	1636295.98	6602.23
	TS	XS	4/20/2010	1776917.47	1636301.67	6601.81
	TS	XS	4/20/2010	1776914.72	1636306.42	6601.79
	TS	XS	4/20/2010	1776912.12	1636311.34	6601.89
	TS	XS	4/20/2010	1776910.21	1636314.74	6601.66
	TS	XS	4/20/2010	1776908.52	1636318.40	6602.24
	TS	XS	4/20/2010	1776906.34	1636323.14	6601.43
	TS	XS	4/20/2010	1776904.71	1636326.44	6600.69
	GPS	XS	5/5/2010	1776903.46	1636328.75	6599.61
	GPS	XS	5/5/2010	1776902.22	1636330.92	6599.31
	GPS	XS	5/5/2010	1776899.06	1636337.36	6599.29
	GPS	XS	5/5/2010	1776895.03	1636344.12	6599.54
	GPS	XS	5/5/2010	1776892.08	1636349.21	6599.54
	GPS	XS	5/5/2010	1776890.40	1636352.19	6599.65
	GPS	XS	5/5/2010	1776890.01	1636353.30	6599.85
	GPS	XS	5/5/2010	1776889.21	1636354.78	6599.75
	GPS	XS	5/5/2010	1776887.58	1636357.81	6600.01
	GPS	XS	5/5/2010	1776885.63	1636361.69	6599.97
	GPS	XS	5/5/2010	1776884.12	1636363.84	6599.51
	GPS	XS	5/5/2010	1776882.67	1636367.02	6599.99
	GPS	XS	5/5/2010	1776881.70	1636369.03	6599.78
	GPS	XS	5/5/2010	1776879.58	1636373.55	6600.22
	GPS	XS	5/5/2010	1776876.95	1636377.80	6600.16
	GPS	XS	5/5/2010	1776874.75	1636382.07	6601.05
	GPS	XS	5/5/2010	1776873.52	1636384.38	6600.76
	TS	XS	4/20/2010	1776871.54	1636388.15	6601.83
	TS	XS	4/20/2010	1776869.29	1636392.72	6602.10
	TS	XS	4/20/2010	1776867.18	1636396.56	6603.47
	TS	XS	4/20/2010	1776865.60	1636400.09	6604.11
	TS	XS	4/20/2010	1776863.87	1636402.38	6604.76
	TS	BM	4/20/2010	1776863.94	1636402.43	6605.42
Pueblo CVS #3 Thalweg Profile	TS	TP	4/20/2010	1776801.89	1636306.84	6600.63
	TS	TP	4/20/2010	1776811.80	1636310.09	6600.46
	TS	TP	4/20/2010	1776820.91	1636313.38	6600.43
	TS	TP	4/20/2010	1776829.34	1636313.92	6600.26
	TS	TP	4/20/2010	1776841.95	1636316.58	6600.14
	TS	TP	4/20/2010	1776850.68	1636318.24	6599.91
	TS	TP	4/20/2010	1776858.28	1636319.42	6599.72
	TS	TP	4/20/2010	1776866.27	1636320.52	6599.66
	TS	TP	4/20/2010	1776872.31	1636323.10	6599.48
	TS	TP	4/20/2010	1776874.48	1636325.28	6599.38
	TS	TP	4/20/2010	1776876.13	1636327.56	6599.30
	TS	TP	4/20/2010	1776878.20	1636327.83	6599.35
	TS	TP	4/20/2010	1776880.28	1636327.94	6598.94
	TS	TP	4/20/2010	1776881.96	1636329.60	6599.16
	TS	TP	4/20/2010	1776885.08	1636332.28	6599.24
	TS	TP	4/20/2010	1776888.40	1636333.82	6599.29
	TS	TP	4/20/2010	1776895.04	1636336.05	6599.30
	TS	TP	4/20/2010	1776898.69	1636336.44	6599.28
	TS	TP	4/20/2010	1776906.71	1636336.68	6599.07

[a] CVS = cross-vane structure. #1 = western; #2 = central, #3 = eastern.
Positive numbers (e.g., +50ft) indicate cross-sections downstream of CVS; distance below apex rock.
Negative numbers (e.g., -50ft) indicate cross-sections upstream of CVS; distance above apex rock.
[b] TS = Geodimeter 620 total station survey method.
[c] BM = benchmark
[d] XS = cross-section point
[e] TP = thalweg point.
[f] GPS = Trimble 5700 GPS survey method.

Upper Pueblo County Wildfire Arson Surveys

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Year	ZIP	Gender	Age	Ethnicity	Race	Q1	Q2	Q3
2008-07	79_	Male	20-29	Hispanic/Latino	White	0.0	0.0	0.0

	Fe	55	55.934937	0.116420	100.000000	55.934937
	Fe	56	56.935394	91.754204	91.754204	51.303143
	Fe	57	57.933276	2.119660	2.119660	1.228164
	Fe	58	58.933895	0.282413	0.282413	0.166504
	Fe	59	59.934077	0.000000	0.000000	0.000000
	Fe	60	60.936749	0.000000	0.000000	0.000000
	Fe	61	61.936767	0.000000	0.000000	0.000000
	Fe	62	62.940370	0.000000	0.000000	0.000000
	Fe	63	63.941201	0.000000	0.000000	0.000000
	Fe	64	64.945016	0.000000	0.000000	0.000000
	Fe	65	65.946781	0.000000	0.000000	0.000000
	Fe	66	66.950947	0.000000	0.000000	0.000000
	Fe	67	67.952753	0.000000	0.000000	0.000000
	Fe	68	68.957799	0.000000	0.000000	0.000000
	Fe	69	69.960674	0.000000	0.000000	0.000000
	Fe	70	70.965151	0.000000	0.000000	0.000000
	Fe	71	71.968509	0.000000	0.000000	0.000000
	Fe	72	72.972400	0.000000	0.000000	0.000000
	Fe	73	73.975460	0.000000	0.000000	0.000000
	Fe	74	74.979590	0.000000	0.000000	0.000000
	Fe	75	75.982594	0.000000	0.000000	0.000000
	Fe	76	76.986542	0.000000	0.000000	0.000000
	Fe	77	77.989140	0.000000	0.000000	0.000000
	Fe	78	78.993000	0.000000	0.000000	0.000000
	Fe	79	79.995300	0.000000	0.000000	0.000000
	Fe	80	80.999700	0.000000	0.000000	0.000000
	Fe	81	81.999700	0.000000	0.000000	0.000000
	Fe	82	82.999700	0.000000	0.000000	0.000000
	Fe	83	83.999700	0.000000	0.000000	0.000000
	Fe	84	84.999700	0.000000	0.000000	0.000000
	Fe	85	85.999700	0.000000	0.000000	0.000000
	Fe	86	86.999700	0.000000	0.000000	0.000000
	Fe	87	87.999700	0.000000	0.000000	0.000000
	Fe	88	88.999700	0.000000	0.000000	0.000000
	Fe	89	89.999700	0.000000	0.000000	0.000000
	Fe	90	90.999700	0.000000	0.000000	0.000000
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	Fe	92	92.999700	0.000000	0.000000	0.000000
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	Fe	299	299.999700	0.000000	0.000000	0.000000
	Fe	300	300.999700	0.000000	0.000000	0.000000

* Mass = Isotopic mass (amu), C = Isotopic % (percent)
* Fe = Iron(element symbol), Fe(Iron) (element name)
* Mass = Isotopic mass
* Mass = Isotopic mass (amu)
* Mass = Mass (amu)
* C = Isotopic % (percent), C = Isotopic % (percent)
* Fe = Iron(element symbol), Fe = Isotopic % (percent)

Pueblo Canyon Wing Ditch Survey

Site	Type of Survey	Purpose	Date Surveyed	X	Y	Z
Pueblo WD-1[a]	GPS[b]	BM[c]	11/10/2009	1775948.13	1644693.20	6467.99
	GPS	XS[d]	11/10/2009	1775955.47	1644693.50	6466.86
	GPS	XS	11/10/2009	1775966.28	1644693.36	6467.93
	GPS	XS	11/10/2009	1775988.36	1644692.66	6467.71
	GPS	XS	11/10/2009	1775992.96	1644693.13	6466.48
	GPS	XS	11/10/2009	1776003.80	1644693.14	6468.81
	GPS	XS	11/10/2009	1776016.80	1644692.98	6467.72
	GPS	XS	11/10/2009	1776041.11	1644692.25	6467.26
	GPS	XS	11/10/2009	1776056.83	1644697.05	6467.47
	GPS	XS	11/10/2009	1776064.66	1644695.79	6467.67
	GPS	XS	11/10/2009	1776071.39	1644694.70	6467.99
	GPS	XS	11/10/2009	1776077.32	1644693.86	6469.13
	GPS	XS	11/10/2009	1776083.50	1644693.78	6470.45
	GPS	XS	11/10/2009	1776088.06	1644693.23	6470.51
	GPS	XS	11/10/2009	1776093.29	1644692.87	6470.09
	GPS	XS	11/10/2009	1776097.75	1644692.54	6469.50
	GPS	XS	11/10/2009	1776102.42	1644692.11	6468.59
	GPS	XS	11/10/2009	1776107.20	1644691.35	6467.89
	GPS	XS	11/10/2009	1776110.78	1644691.01	6467.78
	GPS	XS	11/10/2009	1776112.52	1644690.76	6466.78
	GPS	XS	11/10/2009	1776114.00	1644690.55	6466.26
	GPS	XS	11/10/2009	1776115.92	1644690.06	6466.52
	GPS	XS	11/10/2009	1776117.95	1644689.31	6467.62
	GPS	XS	11/10/2009	1776119.49	1644689.00	6467.29
	GPS	XS	11/10/2009	1776121.56	1644689.30	6466.81
	GPS	XS	11/10/2009	1776124.24	1644689.11	6466.52
	GPS	XS	11/10/2009	1776126.37	1644689.06	6466.59
	GPS	XS	11/10/2009	1776128.84	1644689.13	6467.15
	GPS	XS	11/10/2009	1776131.61	1644689.47	6467.66
	GPS	XS	11/10/2009	1776134.58	1644688.74	6467.76
	GPS	XS	11/10/2009	1776137.20	1644688.28	6467.49
	GPS	XS	11/10/2009	1776142.41	1644687.26	6467.72
	GPS	XS	11/10/2009	1776146.32	1644686.41	6468.14
	GPS	XS	11/10/2009	1776153.11	1644685.79	6469.18
	GPS	XS	11/10/2009	1776158.36	1644684.96	6469.59
	GPS	XS	11/10/2009	1776168.58	1644684.31	6469.96
	GPS	XS	11/10/2009	1776174.06	1644684.05	6469.90
	GPS	XS	11/10/2009	1776181.96	1644684.44	6468.56
	GPS	XS	11/10/2009	1776183.66	1644683.86	6467.25
	GPS	XS	11/10/2009	1776187.66	1644682.55	6465.97
	GPS	XS	11/10/2009	1776190.04	1644682.35	6465.45
	GPS	XS	11/10/2009	1776191.63	1644682.20	6466.19
	GPS	XS	11/10/2009	1776193.26	1644681.69	6468.20
	GPS	XS	11/10/2009	1776197.15	1644681.69	6468.82
	GPS	XS	11/10/2009	1776238.84	1644676.58	6471.24
	GPS	XS	11/10/2009	1776250.02	1644674.44	6471.38
	GPS	XS	11/10/2009	1776264.60	1644671.34	6471.98
	GPS	BM	11/10/2009	1776280.88	1644666.82	6474.33
Pueblo WD-2	GPS	BM	11/10/2009	1775906.08	1644748.46	6467.96
	GPS	XS	11/10/2009	1775907.27	1644748.56	6467.11
	GPS	XS	11/10/2009	1775910.01	1644748.94	6464.96
	GPS	XS	11/10/2009	1775914.61	1644749.85	6465.47
	GPS	XS	11/10/2009	1775928.33	1644751.79	6465.80
	GPS	XS	11/10/2009	1775932.78	1644752.00	6466.28
	GPS	XS	11/10/2009	1775954.57	1644754.30	6466.57
	GPS	XS	11/10/2009	1775959.36	1644755.59	6464.85
	GPS	XS	11/10/2009	1775961.00	1644755.96	6464.79
	GPS	XS	11/10/2009	1775961.80	1644756.01	6465.81
	GPS	XS	11/10/2009	1775990.32	1644762.88	6467.41
	GPS	XS	11/10/2009	1776004.01	1644764.31	6467.14
	GPS	XS	11/10/2009	1776015.08	1644766.39	6467.09
	GPS	XS	11/10/2009	1776025.54	1644768.34	6466.67
	GPS	XS	11/10/2009	1776038.12	1644770.63	6466.73
	GPS	XS	11/10/2009	1776049.72	1644772.68	6466.61
	GPS	XS	11/10/2009	1776060.20	1644774.70	6466.56
	GPS	XS	11/10/2009	1776068.19	1644776.29	6466.44
	GPS	XS	11/10/2009	1776084.10	1644778.83	6466.82
	GPS	XS	11/10/2009	1776093.92	1644780.93	6468.61
	GPS	XS	11/10/2009	1776102.17	1644782.29	6468.43
	GPS	XS	11/10/2009	1776107.19	1644783.22	6467.73
	GPS	XS	11/10/2009	1776114.88	1644784.45	6467.09
	GPS	XS	11/10/2009	1776117.25	1644785.16	6466.67
	GPS	XS	11/10/2009	1776124.25	1644786.41	6466.40
	GPS	XS	11/10/2009	1776125.68	1644786.74	6465.78
	GPS	XS	11/10/2009	1776127.27	1644786.94	6464.95
	GPS	XS	11/10/2009	1776129.93	1644787.29	6465.58
	GPS	XS	11/10/2009	1776131.47	1644787.96	6466.25
	GPS	XS	11/10/2009	1776135.19	1644788.41	6466.30
	GPS	XS	11/10/2009	1776137.72	1644788.74	6466.41
	GPS	XS	11/10/2009	1776140.51	1644789.21	6466.33
	GPS	XS	11/10/2009	1776143.89	1644789.36	6467.13
	GPS	XS	11/10/2009	1776149.03	1644790.76	6467.66
	GPS	XS	11/10/2009	1776156.58	1644792.43	6468.32
	GPS	XS	11/10/2009	1776165.19	1644793.99	6468.90
	GPS	XS	11/10/2009	1776167.49	1644793.53	6468.06
	GPS	XS	11/10/2009	1776172.55	1644794.27	6468.13
	GPS	XS	11/10/2009	1776178.39	1644796.26	6467.59
	GPS	XS	11/10/2009	1776185.24	1644797.72	6467.76
	GPS	XS	11/10/2009	1776187.03	1644797.49	6467.35
	GPS	XS	11/10/2009	1776187.94	1644797.93	6465.31
	GPS	XS	11/10/2009	1776189.19	1644798.21	6464.73
	GPS	XS	11/10/2009	1776190.42	1644798.60	6464.74
	GPS	XS	11/10/2009	1776191.93	1644799.08	6464.98
	GPS	XS	11/10/2009	1776192.96	1644799.06	6466.72
	GPS	XS	11/10/2009	1776198.22	1644800.20	6467.85
	GPS	XS	11/10/2009	1776201.86	1644801.16	6467.95
	GPS	XS	11/10/2009	1776206.56	1644802.47	6468.85
	GPS	XS	11/10/2009	1776288.06	1644809.49	6474.43
	GPS	BM	11/10/2009	1776331.94	1644813.64	6476.87
Pueblo WD-3	GPS	BM	11/18/2009	1775888.01	1644812.14	6465.76
	GPS	XS	11/18/2009	1775888.02	1644812.29	6466.39
	GPS	XS	11/18/2009	1775893.28	1644813.72	6465.77
	GPS	XS	11/18/2009	1775896.98	1644815.07	6466.23
	GPS	XS	11/18/2009	1775903.26	1644817.30	6463.96
	GPS	XS	11/18/2009	1775907.83	1644818.80	6465.11
	GPS	XS	11/18/2009	1775919.65	1644822.93	6465.19
	GPS	XS	11/18/2009	1775932.20	1644827.54	6465.00
	GPS	XS	11/18/2009	1775934.54	1644828.20	6463.73
	GPS	XS	11/18/2009	1775935.91	1644828.65	6463.43
	GPS	XS	11/18/2009	1775937.08	1644829.01	6464.23
	GPS	XS	11/18/2009	1775940.11	1644829.90	6464.59
	GPS	XS	11/18/2009	1775942.02	1644830.94	6465.21
	GPS	XS	11/18/2009	1775951.08	1644833.81	6465.13
	GPS	XS	11/18/2009	1775957.58	1644836.05	6464.87
	GPS	XS	11/18/2009	1775959.96	1644836.99	6464.16
	GPS	XS	11/18/2009	1775961.41	1644837.11	6464.49
	GPS	XS	11/18/2009	1775965.77	1644838.39	6464.11
	GPS	XS	11/18/2009	1775970.50	1644840.14	6464.77
	GPS	XS	11/18/2009	1775975.42	1644841.74	6465.08
	GPS	XS	11/18/2009	1775982.27	1644843.97	6464.97
	GPS	XS	11/18/2009	1775987.47	1644845.91	6464.95
	GPS	XS	11/18/2009	1775994.12	1644847.97	6465.00
	GPS	XS	11/18/2009	1776017.52	1644856.27	6465.24
	GPS	XS	11/18/2009	1776021.62	1644857.06	6465.39
	GPS	XS	11/18/2009	1776024.28	1644858.25	6465.85
	GPS	XS	11/18/2009	1776026.94	1644858.96	6465.82
	GPS	XS	11/18/2009	1776034.08	1644862.00	6465.94
	GPS	XS	11/18/2009	1776040.52	1644863.49	6465.64
	GPS	XS	11/18/2009	1776045.81	1644865.22	6465.20
	GPS	XS	11/18/2009	1776049.88	1644865.98	6465.38
	GPS	XS	11/18/2009	1776063.35	1644870.11	6465.47
	GPS	XS	11/18/2009	1776067.90	1644871.55	6465.72
	GPS	XS	11/18/2009	1776072.04	1644872.88	6465.87
	GPS	XS	11/18/2009	1776075.73	1644873.86	6466.16
	GPS	XS	11/18/2009	1776078.42	1644874.88	6466.10
	GPS	XS	11/18/2009	1776084.25	1644876.98	6466.32
	GPS	XS	11/18/2009	1776089.93	1644878.74	6466.05
	GPS	XS	11/18/2009	1776091.39	1644879.25	6465.46
	GPS	XS	11/18/2009	1776094.56	1644880.27	6465.73
	GPS	XS	11/18/2009	1776100.89	1644882.14	6465.58
	GPS	XS	11/18/2009	1776104.51	1644883.38	6464.36
	GPS	XS	11/18/2009	1776107.56	1644884.50	6465.43
	GPS	XS	11/18/2009	1776109.56	1644884.85	6465.55
	GPS	XS	11/18/2009	1776109.56	1644885.02	6465.73
	GPS	XS	11/18/2009	1776113.13	1644886.13	6465.80
	GPS	XS	11/18/2009	1776118.86	1644887.39	6465.96
	GPS	XS	11/18/2009	1776124.63	1644888.88	6466.37
	GPS	XS	11/18/2009	1776130.03	1644890.27	6466.51
	GPS	XS	11/18/2009	1776135.79	1644891.36	6466.58
	GPS	XS	11/18/2009	1776140.27	1644892.36	6466.84
	GPS	XS	11/18/2009	1776144.86	1644893.39	6467.03
	GPS	XS	11/18/2009	1776148.85	1644894.50	6466.11
	GPS	XS	11/18/2009	1776149.53	1644894.50	6464.43
	GPS	XS	11/18/2009	1776150.90	1644894.80	6463.88
	GPS	XS	11/18/2009	1776152.72	1644895.46	6464.05
	GPS	XS	11/18/2009	1776154.13	1644895.83	6466.18
	GPS	XS	11/18/2009	1776159.79	1644897.20	6466.81
	GPS	XS	11/18/2009	1776165.58	1644898.74	6466.85
	GPS	XS	11/18/2009	1776173.79	1644900.75	6467.07
	GPS	XS	11/18/2009	1776217.66	1644911.78	6469.64
	GPS	XS	11/18/2009	1776227.44	1644914.30	6470.45
	GPS	XS	11/18/2009	1776236.42	1644916.20	6471.05
	GPS	BM	11/18/2009	1776246.21	1644919.13	6472.07
Pueblo WD-4	GPS	BM	11/18/2009	1775857.36	1644867.56	6464.30
	GPS	XS	11/18/2009	1775857.40	1644867.50	6464.77
	GPS	XS	11/18/2009	1775873.29	1644876.20	6463.65
	GPS	XS	11/18/2009	1775874.98	1644876.82	6465.14
	GPS	XS	11/18/2009	1775877.62	1644878.04	6463.05
	GPS	XS	11/18/2009	1775880.26	1644879.59	6464.66
	GPS	XS	11/18/2009	1775892.98	1644885.91	6464.32
	GPS	XS	11/18/2009	1775907.34	1644893.37	6463.94
	GPS	XS	11/18/2009	1775909.80	1644894.71	6462.56
	GPS	XS	11/18/2009	1775912.66	1644896.21	6462.37
	GPS	XS	11/18/2009	1775913.05	1644896.22	6462.66
	GPS	XS	11/18/2009	1775916.19	1644897.51	6462.51
	GPS	XS	11/18/2009	1775918.40	1644898.98	6464.30
	GPS	XS	11/18/2009	1775920.86	1644899.99	6464.62
	GPS	XS	11/18/2009	1775926.39	1644903.11	6463.76
	GPS	XS	11/18/2009	1775932.75	1644906.50	6463.87
	GPS	XS	11/18/2009	1775937.18	1644908.87	6463.99
	GPS	XS	11/18/2009	1775941.72	1644911.24	6463.90
	GPS	XS	11/18/2009	1775946.81	1644913.64	6464.02
	GPS	XS	11/18/2009	1775951.59	1644916.15	6463.90
	GPS	XS	11/18/2009	1775956.25	1644918.49	6463.61
	GPS	XS	11/18/2009	1775959.05	1644919.97	6463.77
	GPS	XS	11/18/2009	1775960.19	1644920.59	6464.02
	GPS	XS	11/18/2009	1775963.85	1644922.45	6463.73
	GPS	XS	11/18/2009	1775969.30	1644924.71	6463.43
	GPS	XS	11/18/2009	1775972.99	1644926.67	6463.94
	GPS	XS	11/18/2009	1775976.87	1644928.82	6464.23
	GPS	XS	11/18/2009	1775982.99	1644932.02	6464.27
	GPS	XS	11/18/2009	1775988.46	1644935.21	6464.30
	GPS	XS	11/18/2009	1775994.09	1644937.77	6464.34
	GPS	XS	11/18/2009	1776000.35	1644941.18	6464.22
	GPS	XS	11/18/2009	1776007.03	1644944.43	6464.22
	GPS	XS	11/18/2009	1776014.11	1644948.00	6464.48
	GPS	XS	11/18/2009	1776018.75	1644950.07	6463.69
	GPS	XS	11/18/2009	1776021.61	1644951.85	6463.58
	GPS	XS	11/18/2009	1776025.02	1644953.68	6463.69
	GPS	XS	11/18/2009	1776027.80	1644955.23	6464.49
	GPS	XS	11/18/2009	1776033.59	1644958.15	6464.59
	GPS	XS	11/18/2009	1776039.82	1644961.21	6464.47
	GPS	XS	11/18/2009	1776044.93	1644963.39	6464.43
	GPS	XS	11/18/2009	1776050.29	1644966.08	6464.38
	GPS	XS	11/18/2009	1776053.46	1644967.65	6464.34
	GPS	XS	11/18/2009	1776053.83	1644967.41	6464.27
	GPS	XS	11/18/2009	1776056.99	1644968.93	6464.76
	GPS	XS	11/18/2009	1776061.61	1644971.09	6464.31
	GPS	XS	11/18/2009	1776066.95	1644973.53	6464.71
	GPS	XS	11/18/2009	1776073.43	1644976.84	6464.80
	GPS	XS	11/18/2009	1776080.25	1644979.76	6464.87
	GPS	XS	11/18/2009	1776082.42	1644980.75	6464.92
	GPS	XS	11/18/2009	1776083.56	1644981.24	6464.34
	GPS	XS	11/18/2009	1776084.79	1644982.23	6465.22
	GPS	XS	11/18/2009	1776086.27	1644983.14	6465.53
	GPS	XS	11/18/2009	1776088.51	1644983.66	6464.72
	GPS	XS	11/18/2009	1776092.82	1644985.44	6465.05
	GPS	XS	11/18/2009	1776099.57	1644988.68	6464.75
	GPS	XS	11/18/2009	1776101.46	1644989.75	6464.94
	GPS	XS	11/18/2009	1776104.13	1644990.65	6465.12
	GPS	XS	11/18/2009	1776107.31	1644992.98	6464.81
	GPS	XS	11/18/2009	1776114.11	1644995.76	6465.12
	GPS	XS	11/18/2009	1776117.75	1644997.54	6465.20
	GPS	XS	11/18/2009	1776119.15	1644998.37	6465.02
	GPS	XS	11/18/2009	1776120.39	1644999.05	6465.33
	GPS	XS	11/18/2009	1776122.41	1645000.04	6464.59
	GPS	XS	11/18/2009	1776122.74	1645000.52	6463.70
	GPS	XS	11/18/2009	1776125.79	1645002.53	6463.24
	GPS	XS	11/18/2009	1776128.19	1645002.63	6463.65
	GPS	XS	11/18/2009	1776128.60	1645002.75	6465.05
	GPS	XS	11/18/2009	1776133.66	1645005.01	6467.42
	GPS	XS	11/18/2009	1776161.97	1645018.59	6473.86
	GPS	XS	11/18/2009	1776169.64	1645021.92	6474.66
	GPS	BM	11/18/2009	1776178.63	1645026.64	6476.05
Pueblo WD-5	GPS	BM	11/18/2009	1775829.80	1644932.14	6462.98
	GPS	XS	11/18/2009	1775829.88	1644932.07	6463.38
	GPS	XS	11/18/2009	1775836.08	1644936.12	6462.83
	GPS	XS	11/18/2009	1775838.29	1644937.32	6463.89
	GPS	XS	11/18/2009	1775841.04	1644939.49	6462.01
	GPS	XS	11/18/2009	1775844.51	1644941.54	6463.71
	GPS	XS	11/18/2009	1775855.20	1644948.13	6463.88
	GPS	XS	11/18/2009	1775867.98	1644956.59	6463.42
	GPS	XS	11/18/2009	1775871.24	1644958.69	6461.57
	GPS	XS	11/18/2009	1775873.31	1644960.01	6461.26
	GPS	XS	11/18/2009	1775874.17	1644960.58	6461.75
	GPS	XS	11/18/2009	1775874.74	1644960.94	6461.45
	GPS	XS	11/18/2009	1775876.06	1644961.84	6461.73
	GPS	XS	11/18/2009	1775878.00	1644963.23	6461.47
	GPS	XS	11/18/2009	1775882.23	1644965.86	6462.71
	GPS	XS	11/18/2009	1775887.31	1644969.14	6462.66
	GPS	XS	11/18/2009	1775894.06	1644973.05	6462.72
	GPS	XS	11/18/2009	1775901.50	1644977.84	6462.43
	GPS	XS	11/18/2009	1775908.36	1644982.73	6462.82
	GPS	XS	11/18/2009	1775913.06	1644984.90	6462.88
	GPS	XS	11/18/2009	1775914.36	1644985.99	6462.33
	GPS	XS	11/18/2009	1775915.67	1644986.91	6462.10
	GPS	XS	11/18/2009	1775917.08	1644987.26	6462.44
	GPS	XS	11/18/2009	1775917.67	1644987.83	6463.01
	GPS	XS	11/18/2009	1775918.76	1644988.98	6462.89
	GPS	XS	11/18/2009	1775925.07	1644992.84	6462.81
	GPS	XS	11/18/2009	1775930.72	1644996.45	6462.90
	GPS	XS	11/18/2009	1775936.99	1645000.73	6462.72
	GPS	XS	11/18/2009	1775938.72	1645001.82	6462.01
	GPS	XS	11/18/2009	1775939.96	1645002.72	6462.54
	GPS	XS	11/18/2009	1775943.48	1645004.91	6462.62
	GPS	XS	11/18/2009	1775949.40	1645008.88	6462.65
	GPS	XS	11/18/2009	1775954.54	1645012.12	6462.42
	GPS	XS	11/18/2009	1775956.21	1645012.56	6461.97
	GPS	XS	11/18/2009	1775956.64	1645012.81	6462.49
	GPS	XS	11/18/2009	1775962.53	1645016.63	6462.58
	GPS	XS	11/18/2009	1775968.78	1645021.27	6462.46
	GPS	XS	11/18/2009	1775968.90	1645020.85	6462.25
	GPS	XS	11/18/2009	1775972.95	1645023.68	6462.65
	GPS	XS	11/18/2009	1775974.00	1645024.36	6462.34
	GPS	XS	11/18/2009	1775974.96	1645025.42	6462.09
	GPS	XS	11/18/2009	1775977.04	1645026.69	6462.16
	GPS	XS	11/18/2009	1775977.64	1645027.11	6462.67
	GPS	XS	11/18/2009	1775982.52	1645029.95	6462.84
	GPS	XS	11/18/2009	1775987.70	1645033.65	6462.79
	GPS	XS	11/18/2009	1775993.49	1645037.12	6463.13
	GPS	XS	11/18/2009	1775998.09	1645039.85	6463.14
	GPS	XS	11/18/2009	1776002.66	1645043.06	6462.98
	GPS	XS	11/18/2009	1776003.67	1645043.41	6462.22
	GPS	XS	11/18/2009	1776004.12	1645044.27	6462.15
	GPS	XS	11/18/2009	1776005.93	1645045.08	6463.34
	GPS	XS	11/18/2009	1776009.28	1645047.08	6463.23
	GPS	XS	11/18/2009	1776013.21	1645049.95	6463.12
	GPS	XS	11/18/2009	1776016.79	1645052.20	6463.16
	GPS	XS	11/18/2009	1776020.61	1645054.66	6463.36
	GPS	XS	11/18/2009	1776024.12	1645057.23	6463.43
	GPS	XS	11/18/2009	1776024.69	1645057.65	6462.90
	GPS	XS	11/18/2009	1776025.56	1645058.31	6462.53
	GPS	XS	11/18/2009	1776027.03	1645059.07	6462.62
	GPS	XS	11/18/2009	1776028.27	1645059.84	6463.54
	GPS	XS	11/18/2009	1776033.99	1645063.72	6463.80
	GPS	XS	11/18/2009	1776040.46	1645067.60	6463.63
	GPS	XS	11/18/2009	1776048.13	1645072.26	6463.44
	GPS	XS	11/18/2009	1776065.52	1645085.40	6465.90
	GPS	XS	11/18/2009	1776076.87	1645091.69	6466.44
	GPS	XS	11/18/2009	1776087.98	1645098.69	6467.14
	GPS	XS	11/18/2009	1776103.01	1645109.12	6468.96
	GPS	XS	11/18/2009	1776111.97	1645114.85	6470.88
	GPS	BM	11/18/2009	1776119.68	1645120.15	6473.05
Pueblo WD Thalweg Profile	GPS	TP[e]	11/18/2009	1776097.40	1644559.28	6467.23
	GPS	TP	11/18/2009	1776097.11	1644565.65	6466.57
	GPS	TP	11/18/2009	1776094.68	1644573.22	6466.75
	GPS	TP	11/18/2009	1776093.84	1644582.75	6467.04
	GPS	TP	11/18/2009	1776093.43	1644591.44	6467.39
	GPS	TP	11/18/2009	1776091.09	1644599.94	6467.73
	GPS	TP	11/18/2009	1776087.43	1644607.06	6467.75
	GPS	TP	11/18/2009	1776093.43	1644618.36	6467.81
	GPS	TP	11/18/2009	1776098.19	1644633.48	6467.11
	GPS	TP	11/18/2009	1776107.38	1644648.92	6467.16
	GPS	TP	11/18/2009	1776115.22	1644665.79	6466.86
	GPS	TP	11/18/2009	1776121.17	1644680.34	6466.68
	GPS	TP	11/18/2009	1776126.96	1644692.76	6466.50
	GPS	TP	11/18/2009	1776132.68	1644705.11	6466.42
	GPS	TP	11/18/2009	1776134.85	1644721.04	6466.64
	GPS	TP	11/18/2009	1776135.21	1644734.99	6465.68
	GPS	TP	11/18/2009	1776135.96	1644747.44	6465.50
	GPS	TP	11/18/2009	1776133.76	1644762.89	6465.54
	GPS	TP	11/18/2009	1776127.72	1644788.20	6465.17
	GPS	TP	11/18/2009	1776125.26	1644802.04	6465.10
	GPS	TP	11/18/2009	1776125.21	1644809.20	6464.14
	GPS	TP	11/18/2009	1776124.87	1644820.52	6464.92
	GPS	TP	11/18/2009	1776122.07	1644835.26	6464.89
	GPS	TP	11/18/2009	1776118.89	1644850.44	6464.79
	GPS	TP	11/18/2009	1776114.56	1644865.68	6464.83
	GPS	TP	11/18/2009	1776104.47	1644882.99	6464.45
	GPS	TP	11/18/2009	1776095.87	1644895.48	6464.31
	GPS	TP	11/18/2009	1776084.57	1644899.73	6464.44
	GPS	TP	11/18/2009	1776074.23	1644905.36	6464.42
	GPS	TP	11/18/2009	1776069.99	1644916.58	6464.10
	GPS	TP	11/18/2009	1776070.09	1644937.31	6463.87
	GPS	TP	11/18/2009	1776051.13	1644943.52	6463.87
	GPS	TP	11/18/2009	1776063.14	1644944.58	6463.94
	GPS	TP	11/18/2009	1776037.44	1644948.85	6463.75
	GPS	TP	11/18/2009	1776024.14	1644951.83	6463.45
	GPS	TP	11/18/2009	1776005.57	1644953.52	6463.65
	GPS	TP	11/18/2009	1775992.42	1644958.41	6463.56
	GPS	TP	11/18/2009	1775980.61	1644962.22	6463.31
	GPS	TP	11/18/2009	1775967.69	1644966.09	6463.05
	GPS	TP	11/18/2009	1775958.68	1644971.33	6463.03
	GPS	TP	11/18/2009	1775946.44	1644973.15	6462.99
	GPS	TP	11/18/2009	1775935.77	1644974.53	6462.66
	GPS	TP	11/18/2009	1775929.07	1644976.44	6462.24
	GPS	TP	11/18/2009	1775919.60	1644984.57	6462.07
	GPS	TP	11/18/2009	1775912.55	1644989.23	6462.05
	GPS	TP	11/18/2009	1775904.81	1644996.29	6462.05
	GPS	TP	11/18/2009	1776042.81	1645033.77	6463.69
	GPS	TP	11/18/2009	1776042.30	1645033.58	6464.17
	GPS	TP	11/18/2009	1776033.09	1645032.83	6463.40
	GPS	TP	11/18/2009	1776021.14	1645033.47	6463.03
	GPS	TP	11/18/2009	1776013.29	1645034.96	6462.77
	GPS	TP	11/18/2009	1776004.00	1645042.90	6462.22
	GPS	TP	11/18/2009	1775998.17	1645048.63	6462.08
	GPS	TP	11/18/2009	1775990.45	1645053.67	6461.85
	TS[f]	TP	11/19/2009	1776131.36	1644458.05	6469.57
	TS	TP	11/19/2009	1776134.27	1644460.86	6468.73
	TS	TP	11/19/2009	1776136.41	1644468.54	6468.43
	TS	TP	11/19/2009	1776136.68	1644480.66	6468.54
	TS	TP	11/19/2009	1776138.53	1644492.26	6468.22
	TS	TP	11/19/2009	1776139.76	1644502.66	6467.97
	TS	TP	11/19/2009	1776143.07	1644511.28	6467.94
	TS	TP	11/19/2009	1776146.53	1644519.52	6468.16
	TS	TP	11/19/2009	1776148.24	1644530.40	6468.22
	TS	TP	11/19/2009	1776150.75	1644540.65	6467.89
	TS	TP	11/19/2009	1776151.89	1644550.93	6468.02
	TS	TP	11/19/2009	1776152.92	1644561.03	6467.71
	TS	TP	11/19/2009	1776156.17	1644567.06	6467.56
	TS	TP	11/19/2009	1776160.48	1644574.74	6467.17
	TS	TP	11/19/2009	1776162.49	1644583.72	6467.22
	TS	TP	11/19/2009	1776162.57	1644590.21	6467.01
	TS	TP	11/19/2009	1776166.05	1644599.33	6466.83
	TS	TP	11/19/2009	1776171.37	1644608.39	6466.59
	TS	TP	11/19/2009	1776173.90	1644616.36	6466.91
	TS	TP	11/19/2009	1776174.38	1644626.91	6466.93
	TS	TP	11/19/2009	1776178.10	1644635.24	6466.67
	TS	TP	11/19/2009	1776180.57	1644644.40	6466.67
	TS	TP	11/19/2009	1776181.23	1644653.75	6466.54
	GPS	TP	11/18/2009	1776181.82	1644658.53	6466.44
	GPS	TP	11/18/2009	1776184.66	1644665.77	6466.23
	GPS	TP	11/18/2009	1776184.63	1644665.82	6466.33
	GPS	TP	11/18/2009	1776187.21	1644670.78	6465.87
	GPS	TP	11/18/2009	1776189.85	1644683.75	6465.81
	GPS	TP	11/18/2009	1776190.37	1644690.42	6465.32
	GPS	TP	11/18/2009	1776188.70	1644696.87	6465.84
	GPS	TP	11/18/2009	1776185.71	1644710.66	6465.44
	GPS	TP	11/18/2009	1776183.91	1644719.87	6465.68
	GPS	TP	11/18/2009	1776189.20	1644725.04	6465.22
	GPS	TP	11/18/2009	1776190.06	1644732.50	6465.25
	GPS	TP	11/18/2009	1776192.06	1644740.11	6465.38
	GPS	TP	11/18/2009	1776197.66	1644754.67	6465.04
	GPS	TP	11/18/2009	1776192.33	1644762.64	6464.85
	GPS	TP	11/18/2009	1776193.18	1644776.31	6464.49
	GPS	TP	11/18/2009	1776191.33	1644786.69	6464.63
	GPS	TP	11/18/2009	1776190.16	1644799.30	6464.81
	GPS	TP	11/18/2009	1776183.39	1644811.75	6464.60
	GPS	TP	11/18/2009	1776182.46	1644826.68	6464.77
	GPS	TP	11/18/2009	1776176.75	1644833.88	6464.63
	GPS	TP	11/18/2009	1776170.23	1644838.63	6464.39
	GPS	TP	11/18/2009	1776165.88	1644844.65	6464.36
	GPS	TP	11/18/2009	1776157.61	1644854.14	6464.03
	GPS	TP	11/18/2009	1776154.90	1644868.40	6464.21
	GPS	TP	11/18/2009	1776158.19	1644877.63	6463.96
	GPS	TP	11/18/2009	1776152.87	1644890.13	6463.90
	GPS	TP	11/18/2009	1776148.27	1644902.21	6463.92
	GPS	TP	11/18/2009	1776147.42	1644908.31	6463.77
	GPS	TP	11/18/2009	1776142.38	1644916.32	6463.69
	GPS	TP	11/18/2009	1776136.12	1644930.37	6463.71
	GPS	TP	11/18/2009	1776146.84	1644941.35	6463.36
	GPS	TP	11/18/2009	1776144.03	1644952.47	6463.42
	GPS	TP	11/18/2009	1776145.84	1644964.39	6463.34
	GPS	TP	11/18/2009	1776145.86	1644964.39	6463.34
	GPS	TP	11/18/2009	1776135.85	1644970.30	6463.48
	GPS	TP	11/18/2009	1776134.12	1644977.79	6463.27
	GPS	TP	11/18/2009	1776130.92	1644987.85	6462.85
	GPS	TP	11/18/2009	1776130.25	1644995.87	6463.35
	GPS	TP	11/18/2009	1776125.56	1645002.96	6463.40
	GPS	TP	11/18/2009	1776119.14	1645004.94	6463.15
	GPS	TP	11/18/2009	1776097.98	1645009.53	6462.86
	GPS	TP	11/18/2009	1776109.89	1645012.99	6463.22
	GPS	TP	11/18/2009	1776087.49	1645015.32	6463.21
	GPS	TP	11/18/2009	1776082.10	1645022.89	6462.95
	GPS	TP	11/18/2009	1776074.21	1645024.76	6463.07
	GPS	TP	11/18/2009	1776065.11	1645026.95	6462.95
	GPS	TP	11/18/2009	1776052.45	1645028.66	6462.95
	GPS	TP	11/18/2009	1776044.24	1645035.07	6463.19
	GPS	TP	11/18/2009	1776044.02	1645041.48	6462.96
	GPS	TP	11/18/2009	1776039.15	1645050.25	6462.96
	GPS	TP	11/18/2009	1776027.66	1645058.49	6462.71
	GPS	TP	11/18/2009	1776019.50	1645063.84	6462.80
	GPS	TP	11/18/2009	1776012.43	1645070.65	6462.40
	TS	TP	11/19/2009	1776124.65	1644695.42	6466.53
	TS	TP	11/19/2009	1776118.72	1644694.36	6466.63
	TS	TP	11/19/2009	1776112.34	1644687.62	6466.55
	TS	TP	11/19/2009	1776106.33	1644678.73	6466.82
	TS	TP	11/19/2009	1776101.77	1644671.91	6466.52
	TS	TP	11/19/2009	1776099.14	1644664.93	6467.19
	TS	TP	11/19/2009	1776096.39	1644657.83	6467.31
	TS	TP	11/19/2009	1776095.28	1644652.06	6467.63

[a] WD = wing ditch. 1 = westernmost cross-section; 6 = easternmost cross-section.
[b] GPS = Trimble 5700 GPS survey method.
[c] BM = benchmark
[d] XS = cross-section point
[e] TP = thalweg point
[f] TS = Geodimeter 620 Total Station survey method.

Lower Franklin Gorge (Willow Grove Springs)

Name	Type of Observation	Observation Value	Value Qualifier	X	Y	Z
Franklin Lower (Willow) - 2009	WL	0.07		2.5172E+6	1.7175E+7	5.6E+0

Lower Foothills Surgical Wellness Series Nursing

Date	Type of Class	Program	Video Recording	X	Y	Z
	NAPS	NA	NA/SMS	1777800.00	1627000.00	1630.00

Lower Pueblo Canyon Willow Area Surveys

Site	Type of Survey	Purpose	Date Surveyed	X	Y	Z
	GPS	XS	9/22/2009	1774186.93	1647938.41	6401.33
	GPS	XS	9/22/2009	1774197.31	1647945.70	6401.59
	GPS	XS	9/22/2009	1774209.33	1647954.32	6401.56
	GPS	XS	9/22/2009	1774222.84	1647963.40	6401.71
	GPS	XS	9/22/2009	1774227.60	1647966.58	6402.08
	GPS	XS	9/22/2009	1774242.62	1647977.20	6401.50
	GPS	XS	9/22/2009	1774252.10	1647983.56	6401.71
	GPS	XS	9/22/2009	1774262.18	1647991.58	6402.38
	GPS	BM	9/22/2009	1774271.04	1647997.68	6406.27
Pueblo Lower Willows +900 ft	GPS	BM	9/22/2009	1773925.08	1647880.42	6399.48
	GPS	XS	9/22/2009	1773927.96	1647882.02	6399.25
	GPS	XS	9/22/2009	1773931.47	1647884.01	6398.96
	GPS	XS	9/22/2009	1773935.34	1647887.04	6397.65
	GPS	XS	9/22/2009	1773938.33	1647889.14	6397.18
	GPS	XS	9/22/2009	1773942.42	1647891.62	6396.72
	GPS	XS	9/22/2009	1773949.21	1647896.00	6395.28
	GPS	XS	9/22/2009	1773958.51	1647901.39	6395.58
	GPS	XS	9/22/2009	1773962.01	1647903.21	6394.95
	GPS	XS	9/22/2009	1773967.85	1647906.76	6394.50
	GPS	XS	9/22/2009	1773971.13	1647909.00	6393.33
	GPS	XS	9/22/2009	1773978.85	1647913.86	6392.71
	GPS	XS	9/22/2009	1773980.58	1647915.14	6392.28
	GPS	XS	9/22/2009	1773983.28	1647918.72	6392.42
	GPS	XS	9/22/2009	1773984.57	1647918.98	6392.87
	GPS	XS	9/22/2009	1773985.50	1647919.54	6391.81
	GPS	XS	9/22/2009	1773989.97	1647922.34	6391.54
	GPS	XS	9/22/2009	1773990.71	1647923.21	6392.49
	GPS	XS	9/22/2009	1774003.01	1647931.88	6400.76
	GPS	XS	9/22/2009	1774014.93	1647939.99	6400.75
	GPS	XS	9/22/2009	1774023.40	1647946.44	6401.20
	GPS	XS	9/22/2009	1774026.95	1647949.04	6400.84
	GPS	XS	9/22/2009	1774033.02	1647953.45	6401.10
	GPS	XS	9/22/2009	1774054.59	1647965.17	6400.40
	GPS	XS	9/22/2009	1774062.57	1647972.65	6399.97
	GPS	XS	9/22/2009	1774066.87	1647975.39	6399.45
	GPS	XS	9/22/2009	1774072.35	1647979.35	6399.24
	GPS	XS	9/22/2009	1774088.69	1647989.40	6399.24
	GPS	XS	9/22/2009	1774101.76	1647998.59	6399.04
	GPS	XS	9/22/2009	1774114.74	1648006.83	6399.07
	GPS	XS	9/22/2009	1774118.78	1648009.40	6399.75
	GPS	XS	9/22/2009	1774137.63	1648021.80	6399.82
	GPS	XS	9/22/2009	1774148.81	1648029.22	6400.04
	GPS	XS	9/22/2009	1774163.80	1648039.41	6400.06
	GPS	XS	9/22/2009	1774174.21	1648046.41	6400.17
	GPS	XS	9/22/2009	1774186.22	1648055.07	6402.61
	GPS	BM	9/22/2009	1774193.69	1648060.65	6406.11
Pueblo Lower Willows +1000 ft	GPS	BM	9/22/2009	1773819.49	1647928.79	6398.26
	GPS	XS	9/22/2009	1773829.62	1647935.07	6396.84
	GPS	XS	9/22/2009	1773834.01	1647937.94	6395.18
	GPS	XS	9/22/2009	1773838.11	1647940.57	6395.98
	GPS	XS	9/22/2009	1773841.64	1647942.87	6393.98
	GPS	XS	9/22/2009	1773847.51	1647947.08	6394.95
	GPS	XS	9/22/2009	1773856.64	1647953.80	6394.11
	GPS	XS	9/22/2009	1773859.66	1647956.05	6392.28
	GPS	XS	9/22/2009	1773863.31	1647959.34	6391.37
	GPS	XS	9/22/2009	1773874.15	1647966.81	6391.50
	GPS	XS	9/22/2009	1773875.68	1647968.29	6389.85
	GPS	XS	9/22/2009	1773876.71	1647969.26	6389.62
	GPS	XS	9/22/2009	1773878.64	1647970.60	6390.15
	GPS	XS	9/22/2009	1773879.63	1647971.63	6391.36
	GPS	XS	9/22/2009	1773881.59	1647972.96	6391.51
	GPS	XS	9/22/2009	1773886.22	1647975.87	6391.61
	GPS	XS	9/22/2009	1773891.46	1647980.06	6393.94
	GPS	XS	9/22/2009	1773899.07	1647984.84	6396.98
	GPS	XS	9/22/2009	1773910.94	1647992.32	6397.12
	GPS	XS	9/22/2009	1773922.92	1648000.25	6396.55
	GPS	XS	9/22/2009	1773932.69	1648006.66	6396.39
	GPS	XS	9/22/2009	1773944.46	1648014.40	6396.97
	GPS	XS	9/22/2009	1773961.34	1648025.57	6397.21
	GPS	XS	9/22/2009	1773978.16	1648036.70	6397.55
	GPS	XS	9/22/2009	1773984.66	1648040.92	6397.62
	GPS	XS	9/22/2009	1773999.15	1648049.69	6397.40
	GPS	XS	9/22/2009	1774005.59	1648053.89	6397.66
	GPS	XS	9/22/2009	1774016.20	1648060.35	6397.67
	GPS	XS	9/22/2009	1774022.04	1648064.25	6397.75
	GPS	XS	9/22/2009	1774031.66	1648070.50	6397.51
	GPS	XS	9/22/2009	1774041.76	1648077.87	6397.39
	GPS	XS	9/22/2009	1774052.07	1648084.77	6397.56
	GPS	XS	9/22/2009	1774060.28	1648090.99	6397.76
	GPS	XS	9/22/2009	1774073.12	1648099.22	6398.43
	GPS	XS	9/22/2009	1774082.83	1648105.66	6398.70
	GPS	XS	9/22/2009	1774097.83	1648116.24	6399.67
	GPS	XS	9/22/2009	1774112.48	1648125.64	6400.40
	GPS	XS	9/22/2009	1774119.07	1648130.00	6401.87
	GPS	XS	9/22/2009	1774133.94	1648139.77	6403.09
	GPS	XS	9/22/2009	1774146.92	1648148.54	6405.37
	GPS	BM	9/22/2009	1774161.55	1648157.87	6408.90
Pueblo Lower Willows +1100 ft	GPS	BM	9/22/2009	1773763.54	1648015.65	6395.32
	GPS	XS	9/22/2009	1773765.76	1648017.64	6394.45
	GPS	XS	9/22/2009	1773771.59	1648021.76	6393.66
	GPS	XS	9/22/2009	1773776.51	1648025.05	6393.12
	GPS	XS	9/22/2009	1773786.66	1648031.75	6392.65
	GPS	XS	9/22/2009	1773795.85	1648038.00	6393.04
	GPS	XS	9/22/2009	1773798.22	1648039.66	6392.13
	GPS	XS	9/22/2009	1773800.70	1648041.19	6392.77
	GPS	XS	9/22/2009	1773802.83	1648042.49	6389.86
	GPS	XS	9/22/2009	1773803.69	1648042.94	6389.38
	GPS	XS	9/22/2009	1773804.99	1648043.86	6389.52
	GPS	XS	9/22/2009	1773806.83	1648045.06	6390.72
	GPS	XS	9/22/2009	1773819.67	1648053.72	6390.63
	GPS	XS	9/22/2009	1773829.51	1648060.67	6390.75
	GPS	XS	9/22/2009	1773840.51	1648068.09	6391.00
	GPS	XS	9/22/2009	1773850.68	1648074.61	6391.42
	GPS	XS	9/22/2009	1773856.36	1648078.25	6393.30
	GPS	XS	9/22/2009	1773862.53	1648082.13	6395.06
	GPS	XS	9/22/2009	1773874.46	1648091.04	6395.34
	GPS	XS	9/22/2009	1773887.76	1648099.33	6394.74
	GPS	XS	9/22/2009	1773898.99	1648106.65	6395.06
	GPS	XS	9/22/2009	1773911.54	1648114.94	6394.85
	GPS	XS	9/22/2009	1773919.68	1648120.40	6395.32
	GPS	XS	9/22/2009	1773929.95	1648127.74	6395.50
	GPS	XS	9/22/2009	1773944.94	1648138.05	6395.92
	GPS	XS	9/22/2009	1773956.62	1648146.06	6396.45
	GPS	XS	9/22/2009	1773966.18	1648153.12	6395.60
	GPS	XS	9/22/2009	1773976.75	1648160.44	6395.64
	GPS	XS	9/22/2009	1773986.07	1648167.16	6395.75
	GPS	XS	9/22/2009	1773995.56	1648174.00	6395.86
	GPS	XS	9/22/2009	1773999.20	1648176.87	6397.04
	GPS	XS	9/22/2009	1774005.82	1648181.21	6396.70
	GPS	XS	9/22/2009	1774017.56	1648189.40	6397.15
	GPS	XS	9/22/2009	1774030.39	1648197.99	6397.49
	GPS	XS	9/22/2009	1774043.84	1648207.34	6398.43
	GPS	XS	9/22/2009	1774054.84	1648215.73	6398.92
	GPS	XS	9/22/2009	1774064.68	1648218.36	6401.00
	GPS	BM	9/22/2009	1774088.79	1648223.80	6404.18
Pueblo Lower Willows Thalweg Profile	GPS	TP[e]	9/28/2009	1775098.08	1646327.82	6432.42
	GPS	TP	9/28/2009	1775097.53	1646335.38	6432.78
	GPS	TP	9/28/2009	1775090.73	1646350.79	6432.07
	GPS	TP	9/28/2009	1775085.21	1646359.05	6431.98
	GPS	TP	9/28/2009	1775083.20	1646364.68	6432.13
	GPS	TP	9/28/2009	1775076.27	1646364.83	6431.95
	GPS	TP	9/28/2009	1775068.52	1646372.05	6431.47
	GPS	TP	9/28/2009	1775062.39	1646380.59	6431.60
	GPS	TP	9/28/2009	1775057.50	1646392.07	6431.73
	GPS	TP	9/28/2009	1775054.70	1646397.76	6431.34
	GPS	TP	9/28/2009	1775052.94	1646414.77	6430.62
	GPS	TP	9/28/2009	1775050.72	1646428.70	6430.58
	GPS	TP	9/28/2009	1775044.70	1646435.26	6430.69
	GPS	TP	9/28/2009	1775036.83	1646444.69	6430.46
	GPS	TP	9/28/2009	1775031.69	1646448.09	6429.96
	GPS	TP	9/28/2009	1775025.84	1646450.31	6430.38
	GPS	TP	9/28/2009	1775015.35	1646452.09	6430.16
	GPS	TP	9/28/2009	1775007.22	1646458.32	6430.01
	GPS	TP	9/28/2009	1775000.97	1646463.09	6430.04
	GPS	TP	9/28/2009	1774993.92	1646468.16	6429.76
	GPS	TP	9/28/2009	1774986.90	1646476.31	6429.70
	GPS	TP	9/28/2009	1774975.35	1646479.07	6429.64
	GPS	TP	9/28/2009	1774965.56	1646487.19	6429.51
	GPS	TP	9/28/2009	1774955.48	1646496.03	6429.26
	GPS	TP	9/28/2009	1774947.29	1646499.44	6429.13
	GPS	TP	9/28/2009	1774937.33	1646504.10	6428.90
	GPS	TP	9/28/2009	1774929.11	1646507.99	6428.85
	GPS	TP	9/28/2009	1774921.28	1646511.45	6428.82
	GPS	TP	9/28/2009	1774913.49	1646518.71	6428.55
	GPS	TP	9/28/2009	1774907.71	1646526.93	6428.50
	GPS	TP	9/28/2009	1774907.84	1646537.37	6428.56
	GPS	TP	9/28/2009	1774905.45	1646548.10	6428.29
	GPS	TP	9/28/2009	1774903.73	1646557.92	6428.39
	GPS	TP	9/28/2009	1774905.78	1646565.51	6428.13
	GPS	TP	9/28/2009	1774908.49	1646573.34	6427.75
	GPS	TP	9/28/2009	1774905.75	1646581.08	6427.24
	GPS	TP	9/28/2009	1774900.57	1646588.63	6427.44
	GPS	TP	9/28/2009	1774897.72	1646597.53	6427.21
	GPS	TP	9/28/2009	1774890.04	1646608.72	6426.94
	GPS	TP	9/28/2009	1774884.09	1646616.66	6426.96
	GPS	TP	9/28/2009	1774879.14	1646627.28	6426.73
	GPS	TP	9/28/2009	1774876.66	1646635.28	6427.19
	GPS	TP	9/28/2009	1774872.89	1646644.13	6426.61
	GPS	TP	9/28/2009	1774864.25	1646654.87	6426.63
	GPS	TP	9/28/2009	1774858.46	1646667.45	6426.82
	GPS	TP	9/28/2009	1774850.22	1646676.62	6426.27
	GPS	TP	9/28/2009	1774844.24	1646687.12	6426.57
	GPS	TP	9/28/2009	1774839.50	1646697.15	6426.46
	GPS	TP	9/28/2009	1774836.10	1646706.77	6426.46
	GPS	TP	9/28/2009	1774826.08	1646711.85	6426.68
	GPS	TP	9/28/2009	1774816.16	1646723.70	6426.64
	GPS	TP	9/28/2009	1774796.70	1646754.39	6426.37
	GPS	TP	9/28/2009	1774798.12	1646766.46	6426.40
	GPS	TP	9/28/2009	1774795.78	1646781.98	6426.07
	GPS	TP	9/28/2009	1774796.84	1646795.19	6426.07
	GPS	TP	9/28/2009	1774800.56	1646805.96	6425.38
	GPS	TP	9/28/2009	1774801.10	1646816.56	6425.65
	GPS	TP	9/28/2009	1774799.72	1646826.74	6425.75
	GPS	TP	9/28/2009	1774806.21	1646837.79	6425.79
	GPS	TP	9/28/2009	1774805.25	1646843.49	6425.49
	GPS	TP	9/28/2009	1774797.98	1646853.11	6425.01
	GPS	TP	9/28/2009	1774795.22	1646863.06	6425.31
	GPS	TP	9/28/2009	1774793.82	1646868.66	6425.12
	GPS	TP	9/28/2009	1774786.24	1646871.74	6425.12
	GPS	TP	9/28/2009	1774786.31	1646871.74	6425.12
	GPS	TP	9/28/2009	1774780.84	1646881.04	6425.03
	GPS	TP	9/28/2009	1774778.37	1646885.79	6425.09
	GPS	TP	9/28/2009	1774783.17	1646890.13	6424.61
	GPS	TP	9/28/2009	1774784.12	1646890.77	6423.39
	GPS	TP	9/28/2009	1774778.72	1646899.28	6423.28
	GPS	TP	9/28/2009	1774777.93	1646908.96	6423.18
	GPS	TP	9/28/2009	1774773.84	1646919.61	6422.93
	GPS	TP	9/28/2009	1774770.41	1646926.55	6422.62
	GPS	TP	9/28/2009	1774766.00	1646937.01	6422.59
	GPS	TP	9/28/2009	1774763.30	1646946.74	6422.40
	GPS	TP	9/28/2009	1774763.62	1646958.39	6421.89
	GPS	TP	9/28/2009	1774763.68	1646960.17	6420.90
	GPS	TP	9/28/2009	1774770.94	1646968.87	6419.63
	GPS	TP	9/28/2009	1774768.00	1646977.46	6419.69
	GPS	TP	9/28/2009	1774767.34	1646995.46	6419.06
	GPS	TP	9/28/2009	1774767.39	1647002.97	6418.88
	GPS	TP	9/28/2009	1774760.15	1647012.31	6418.86
	GPS	TP	9/28/2009	1774756.63	1647024.38	6418.65
	GPS	TP	9/28/2009	1774750.44	1647038.79	6418.12
	GPS	TP	9/28/2009	1774750.47	1647038.76	6418.34
	GPS	TP	9/28/2009	1774744.84	1647048.28	6418.36
	GPS	TP	9/28/2009	1774745.75	1647060.95	6418.45
	GPS	TP	9/28/2009	1774740.56	1647070.08	6418.05
	GPS	TP	9/28/2009	1774740.33	1647079.98	6418.01
	GPS	TP	9/28/2009	1774735.61	1647086.32	6417.72
	GPS	TP	9/28/2009	1774729.48	1647096.21	6417.64
	GPS	TP	9/28/2009	1774725.87	1647105.54	6417.40
	GPS	TP	9/28/2009	1774717.33	1647110.06	6416.86
	GPS	TP	9/28/2009	1774706.89	1647119.40	6417.46
	GPS	TP	9/28/2009	1774708.88	1647128.77	6416.43
	GPS	TP	9/28/2009	1774712.79	1647141.19	6416.47
	GPS	TP	9/28/2009	1774711.18	1647149.04	6416.09
	GPS	TP	9/28/2009	1774708.31	1647160.61	6415.62
	GPS	TP	9/28/2009	1774698.99	1647168.98	6416.19
	GPS	TP	9/28/2009	1774698.23	1647180.94	6415.86
	GPS	TP	9/28/2009	1774698.77	1647193.23	6415.78
	GPS	TP	9/28/2009	1774695.17	1647203.47	6414.68
	GPS	TP	9/28/2009	1774689.51	1647210.30	6414.85
	GPS	TP	9/28/2009	1774676.18	1647212.71	6414.50
	GPS	TP	9/28/2009	1774664.48	1647221.95	6414.14
	GPS	TP	9/28/2009	1774654.87	1647227.76	6413.88
	GPS	TP	9/28/2009	1774638.49	1647246.24	6413.04
	GPS	TP	9/28/2009	1774621.51	1647255.43	6412.49
	GPS	TP	9/28/2009	1774612.44	1647264.92	6412.49
	GPS	TP	9/28/2009	1774597.22	1647271.19	6412.37
	GPS	TP	9/28/2009	1774587.58	1647281.95	6412.18
	GPS	TP	9/28/2009	1774585.59	1647296.79	6412.20
	GPS	TP	9/28/2009	1774586.76	1647311.83	6412.12
	GPS	TP	9/28/2009	1774588.72	1647329.62	6411.79
	GPS	TP	9/28/2009	1774595.84	1647336.16	6411.86
	GPS	TP	9/28/2009	1774604.86	1647342.46	6411.81
	GPS	TP	9/28/2009	1774616.09	1647350.45	6411.62
	GPS	TP	9/28/2009	1774618.28	1647357.70	6408.42
	GPS	TP	9/28/2009	1774619.67	1647372.33	6407.93
	GPS	TP	9/28/2009	1774623.71	1647384.52	6407.55
	GPS	TP	9/28/2009	1774624.81	1647399.11	6407.40
	GPS	TP	9/28/2009	1774624.75	1647410.40	6407.05
	GPS	TP	9/28/2009	1774619.43	1647427.56	6407.28
	GPS	TP	9/28/2009	1774602.65	1647443.51	6406.64
	GPS	TP	9/28/2009	1774589.51	1647449.67	6405.49
	GPS	TP	9/28/2009	1774583.65	1647452.80	6404.72
	GPS	TP	9/28/2009	1774568.31	1647454.78	6404.65
	GPS	TP	9/28/2009	1774554.16	1647465.16	6404.33
	GPS	TP	9/28/2009	1774537.51	1647480.59	6403.19
	GPS	TP	9/28/2009	1774522.47	1647484.06	6402.58
	GPS	TP	9/28/2009	1774513.79	1647495.31	6402.09
	GPS	TP	9/28/2009	1774495.96	1647518.73	6402.21
	GPS	TP	9/28/2009	1774490.13	1647537.20	6401.94
	GPS	TP	9/28/2009	1774479.88	1647552.41	6401.47
	GPS	TP	9/28/2009	1774480.66	1647567.86	6401.38
	GPS	TP	9/28/2009	1774480.10	1647586.61	6401.20
	GPS	TP	9/28/2009	1774479.12	1647602.17	6401.31
	GPS	TP	9/28/2009	1774470.77	1647615.12	6400.68
	GPS	TP	9/28/2009	1774465.67	1647626.05	6400.38
	GPS	TP	9/28/2009	1774459.74	1647638.84	6400.26
	GPS	TP	9/28/2009	1774451.08	1647649.17	6400.21
	GPS	TP	9/28/2009	1774444.91	1647658.88	6400.11
	GPS	TP	9/28/2009	1774438.94	1647670.92	6399.75
	GPS	TP	9/28/2009	1774429.61	1647681.15	6399.95
	GPS	TP	9/28/2009	1774422.90	1647693.42	6399.44
	GPS	TP	9/28/2009	1774416.86	1647704.24	6399.19
	GPS	TP	9/28/2009	1774404.41	1647718.20	6399.48
	GPS	TP	9/28/2009	1774392.41	1647730.54	6399.25
	GPS	TP	9/28/2009	1774381.38	1647740.93	6399.04
	GPS	TP	9/28/2009	1774373.21	1647752.58	6399.01
	GPS	TP	9/28/2009	1774359.99	1647761.43	6398.65
	GPS	TP	9/28/2009	1774346.35	1647766.98	6398.39
	GPS	TP	9/28/2009	1774337.41	1647770.51	6397.74
	GPS	TP	9/28/2009	1774326.58	1647773.83	6397.49
	GPS	TP	9/28/2009	1774317.66	1647776.52	6397.43
	GPS	TP	9/28/2009	1774306.11	1647777.24	6397.12
	GPS	TP	9/28/2009	1774289.18	1647772.13	6396.88
	GPS	TP	9/28/2009	1774282.61	1647766.52	6396.16
	GPS	TP	9/28/2009	1774268.54	1647767.17	6396.17
	GPS	TP	9/28/2009	1774258.01	1647769.47	6395.36
	GPS	TP	9/28/2009	1774247.76	1647774.74	6395.31
	GPS	TP	9/28/2009	1774229.77	1647774.57	6394.57
	GPS	TP	9/28/2009	1774217.01	1647775.96	6394.74
	GPS	TP	9/28/2009	1774204.24	1647780.79	6394.85
	GPS	TP	9/28/2009	1774192.47	1647782.21	6394.43
	GPS	TP	9/28/2009	1774179.04	1647783.93	6393.75
	GPS	TP	9/28/2009	1774166.24	1647783.57	6394.07
	GPS	TP	9/28/2009	1774156.02	1647786.88	6394.10
	GPS	TP	9/28/2009	1774146.28	1647789.65	6393.72
	GPS	TP	9/28/2009	1774135.95	1647785.64	6393.92
	GPS	TP	9/28/2009	1774120.91	1647778.19	6393.66
	GPS	TP	9/28/2009	1774112.08	1647773.32	6393.71
	GPS	TP	9/28/2009	1774099.32	1647773.09	6393.44
	GPS	TP	9/28/2009	1774087.86	1647772.36	6393.44
	GPS	TP	9/28/2009	1774070.20	1647771.41	6393.26
	GPS	TP	9/28/2009	1774056.76	1647772.50	6393.51
	GPS	TP	9/28/2009	1774046.46	1647779.16	6393.52
	GPS	TP	9/28/2009	1774029.58	1647786.55	6393.23
	GPS	TP	9/28/2009	1774021.06	1647799.41	6393.26
	GPS	TP	9/28/2009	1774017.69	1647812.01	6392.76
	GPS	TP	9/28/2009	1774010.93	1647826.63	6392.85
	GPS	TP	9/28/2009	1774007.68	1647841.23	6392.34
	GPS	TP	9/28/2009	1774004.69	1647859.06	6391.58
	GPS	TP	9/28/2009	1774001.33	1647870.83	6391.80
	GPS	TP	9/28/2009	1774000.78	1647888.77	6391.37
	GPS	TP	9/28/2009	1773999.82	1647900.08	6391.31
	GPS	TP	9/28/2009	1773994.22	1647906.87	6390.68
	GPS	TP	9/28/2009	1773988.68	1647919.80	6391.16
	GPS	TP	9/28/2009	1773976.95	1647927.12	6390.88
	GPS	TP	9/28/2009	1773962.57	1647932.01	6391.17
	GPS	TP	9/28/2009	1773957.32	1647942.10	6391.02
	GPS	TP	9/28/2009	1773941.33	1647943.11	6390.92
	GPS	TP	9/28/2009	1773926.16	1647948.61	6390.84
	GPS	TP	9/28/2009	1773904.85	1647947.62	6390.48
	GPS	TP	9/28/2009	1773898.23	1647952.77	6390.36
	GPS	TP	9/28/2009	1773879.47	1647954.59	6390.49
	GPS	TP	9/28/2009	1773876.25	1647970.34	6389.79
	GPS	TP	9/28/2009	1773861.58	1647983.62	6390.01
	GPS	TP	9/28/2009	1773847.07	1647993.35	6389.95
	GPS	TP	9/28/2009	1773836.04	1648004.76	6389.26
	GPS	TP	9/28/2009	1773825.95	1648002.76	6389.71
	GPS	TP	9/28/2009	1773815.63	1648019.64	6389.68
	GPS	TP	9/28/2009	1773806.42	1648034.82	6389.59
	GPS	TP	9/28/2009	1773804.59	1648043.11	6389.40

[a] Positive numbers (e.g., +100ft) indicate cross-sections downstream of zero line (headcut).
Negative numbers (e.g., -800ft) indicate cross-sections upstream of zero line (headcut).

[b] GPS = Trimble 5700 GPS survey method.

[c] BM = benchmark.

[d] XS = cross-section point.

[e] TP = thalweg point.

Pandas Dataset: Double Standard Deviation Surveys

Title	Type of Survey	Accepted	Date Submitted	x	y	z
Pandas-dev-ctb_v0.0	TS	SD*	2/21/2014	1777538.28	3400386.28	3400386
	TS	SD

Flexible Compact Durable Standard Mirrorless Rangefinder

Title	Type of Service	Date Available	Date Expiration	x	y	z
	Fly	3M	1/20/2004	1/17/2006	3/28/78	3/8/18

Pacific Canyon Grade Second Mitigation Survey

Site	Type of Survey	Date (mm/dd/yyyy)	Date Surveyed	X	Y	Z
	Ps	50	2/28/2010	1777588.49	3243577.37	500.04

BP Canyon Grande Central Structure Surveys

Site	Type of Survey	Date				
BP-CG-01-0001						
	TG	GP	5/28/2010	27.73800 N	90.64000 W	7000.0
	TG	GP	5/28/2010	27.73800 N	90.64000 W	7000.0
	TG	SN

IMF Kenyan Double Exercise Structural Surveys

Obs	Type of Survey	Year	Country	Q	Y	Z	Z-Y
	DATA	1	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	10	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	11	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	12	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	13	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	14	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	15	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	16	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	17	5/28/2011	177.0000	32.0000000	78	1.9531-2
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	DATA	19	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	20	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	21	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	22	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	23	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	24	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	25	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	26	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	27	5/28/2011	177.0000	32.0000000	78	1.9531-2
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	DATA	29	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	30	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	31	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	32	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	33	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	34	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	35	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	36	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	37	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	38	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	39	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	40	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	41	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	42	5/28/2011	177.0000	32.0000000	78	1.9531-2
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	DATA	49	5/28/2011	177.0000	32.0000000	78	1.9531-2
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	DATA	51	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	52	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	53	5/28/2011	177.0000	32.0000000	78	1.9531-2
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	DATA	55	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	56	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	57	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	58	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	59	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	60	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	61	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	62	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	63	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	64	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	65	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	66	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	67	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	68	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	69	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	70	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	71	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	72	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	73	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	74	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	75	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	76	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	77	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	78	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	79	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	80	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	81	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	82	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	83	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	84	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	85	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	86	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	87	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	88	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	89	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	90	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	91	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	92	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	93	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	94	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	95	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	96	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	97	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	98	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	99	5/28/2011	177.0000	32.0000000	78	1.9531-2
	DATA	100	5/28/2011	177.0000	32.0000000	78	1.9531-2

* Obs = quarter-country observation. Country is numbered 1 to 5. 1=Mexico 2=Brazil 3=Kenya 4=Ghana 5=South Africa. Kenyan surveyed in Q1, 1997. Ghanian and South African surveyed in Q3 1997. Mexican survey 1995.
* Y = Capacitation 1997 PPP dollars, survey-verified
* Z = Capacitation
* Z-Y = Gap
* Z-Y-1 = Gap one period lagged
* Z-Y-2 = Gap two periods lagged, or 2 years ago, using a method
* DY = Growth gap