

NERT Remedial Investigation Study Areas		1,700	Groundwater Elevation (feet above mean sea level)
	Downgradient Study Area	NA	Groundwater Elevation (feet above mean sea level) (M-121 - Potentiometric Surface in the Upper Muddy Creek Formation)
	Eastside Study Area	NA	Not Available during second quarter 2017 as part of the Groundwater Monitoring Program
	NERT Off-Site Study Area	DRY	Well Dry during second quarter 2017
	NERT Site		

Other Features	
	Site Features (Buildings and Tanks)
	Muddy Creek Topographic High/Unsaturated Alluvium
	Approximate Location of Paleochannel Centerline
	1700 Potentiometric Surface Contour (feet above mean sea level)

Shallow Monitoring Wells (Shown by owner; used in contouring)		Deep Monitoring Wells (Shown by owner; not used in contouring)	
	Owner Unknown		OSSM
	AMPAC/Endeavour		City of Henderson
	BRC		BRC
	Chimera Golf Club		AMPAC/Endeavour
	City of Henderson		NERT
	OSSM		Extraction Wells
	NERT		Shallow (pumping rate used in contouring)
	SNWA		Deep (not used in contouring)
	TIMET		

Notes:
 Results shown may have been rounded for clarity. Some wells in the area of the OSSM and TIMET well fields have been removed for clarity. See Table A-1 and A-4 for all results reported to full precision.

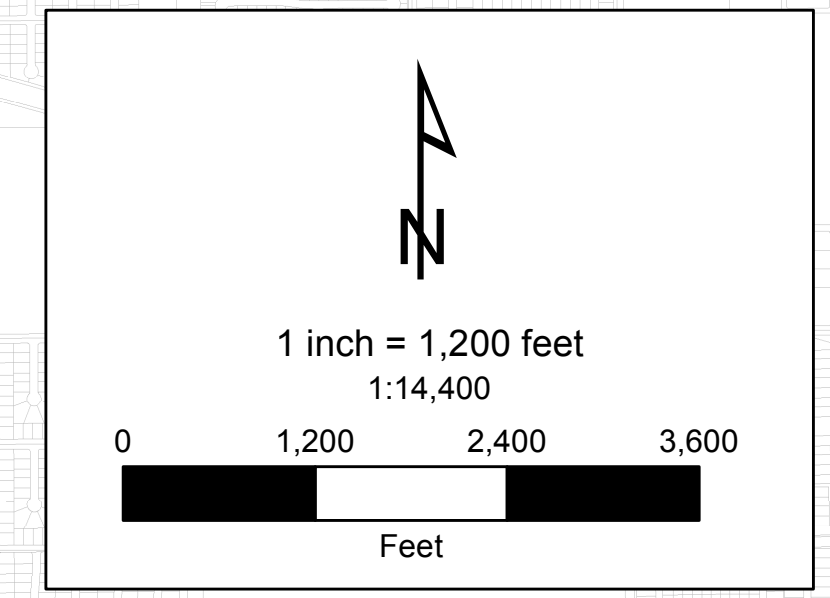
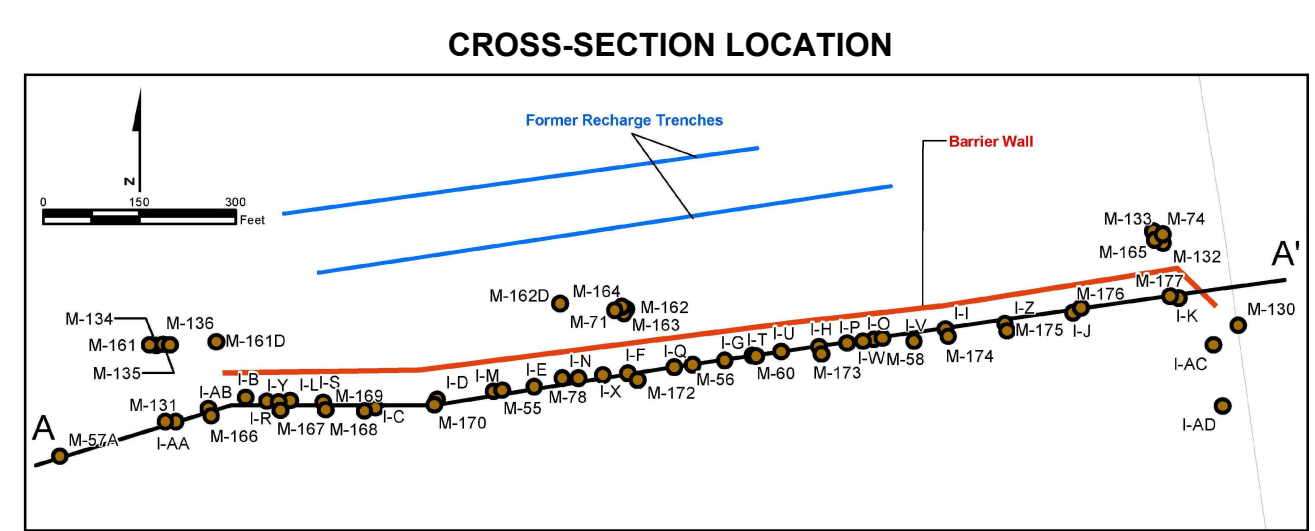
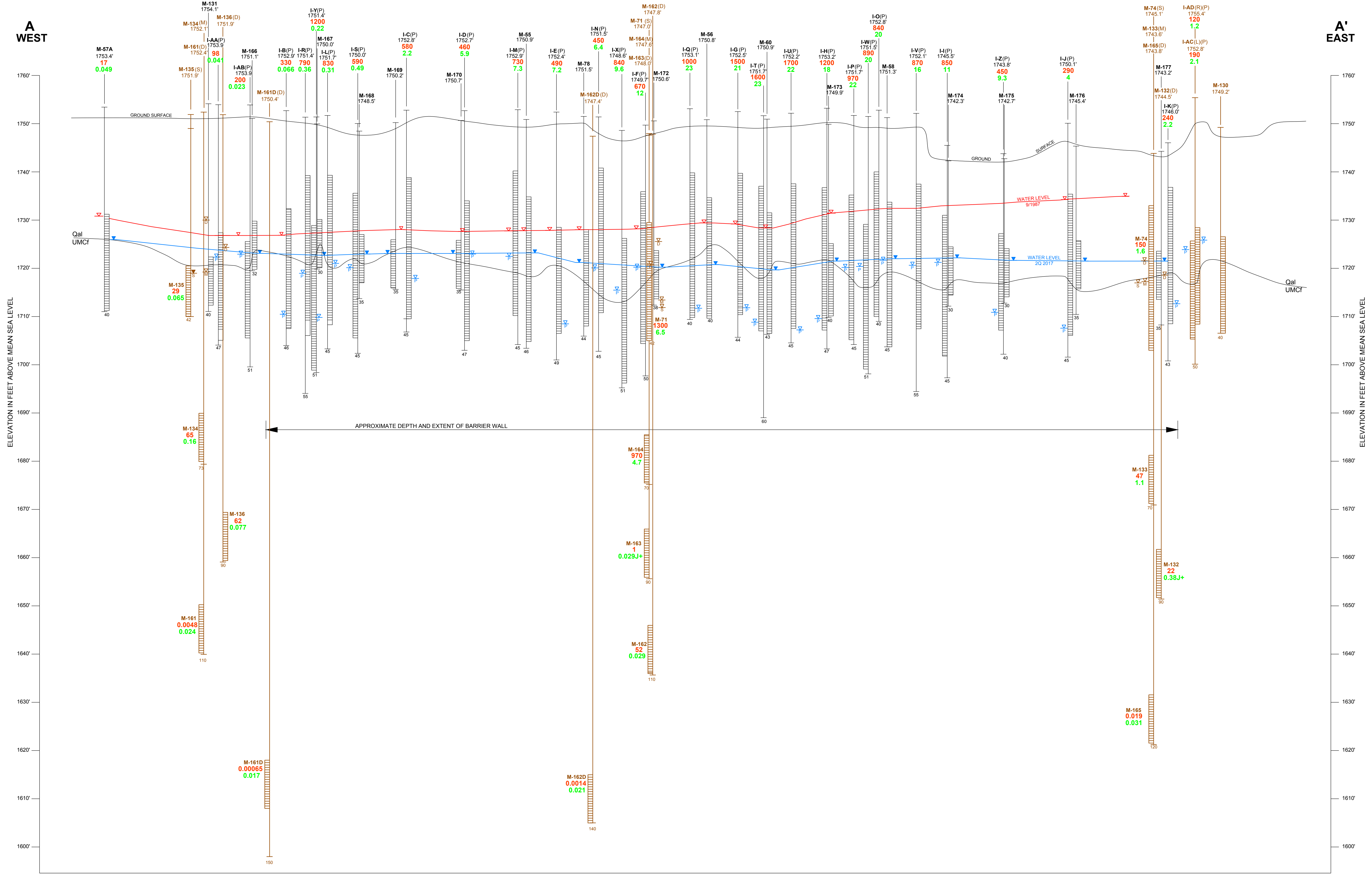


Plate 1	POTENTIOMETRIC SURFACE MAP SHALLOW WATER-BEARING ZONE SECOND QUARTER 2017 Annual Performance Report Nevada Environmental Response Trust (NERT) Henderson, Nevada	
	Coordinate System: NAD 1983 StatePlane Nevada East FIPS 2701 Feet Projection: Transverse Mercator Datum: North American 1983	

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DESIGNED BY:	NO.	0
DRAWN BY:	DATE:	10/09/17
CHECKED BY:	DESCRIPTION:	GENERATE APPROVED CROSS-SECTION
APPROVED BY:	BY:	DLB

WEST-EAST HYDROGEOLOGIC CROSS-SECTION A - A'
INTERCEPTOR WELL FIELD, SECOND QUARTER 2017
 Annual Performance Report
 Nevada Environmental Response Trust (NERT) Site
 Henderson, Nevada



- NOTES:**
- The shallow, middle, and deep screened interval designations are used to distinguish well screens in this cross section and do not refer to NDEP's definition of the water bearing zones (WBGZs).
 - Total depth labeled is rounded to the nearest foot.
 - Water levels from pumping wells, upgradient projected wells, and downgradient wells are not used for interpolating.

LEGEND

UMCI - UPPER MUDDY CREEK FORMATION
 Qal - ALLUVIUM
 (P) - PUMPING
 J+ - ESTIMATED CONCENTRATION, POTENTIAL POSITIVE BIAS
 52 - PERCHLORATE CONCENTRATION, MAY 2017 (mg/L)
 0.029 - TOTAL CHROMIUM CONCENTRATION, MAY 2017 (mg/L)

PROJECTED 1750.0'

1750.0' TOP OF CASING ELEVATION

SCREENED INTERVAL
 (S) SHALLOW
 (M) MIDDLE
 (D) DEEP
 (R) RIGHT
 (L) LEFT

BLANK CASING

QAL-UMCI CONTACT

BOREHOLE DEPTH (FT BGS)

WELLS UPGRADIENT OF BARRIER WALL:

- ▽ - STATIC WATER LEVEL PRIOR TO INITIAL PUMPING, SEPTEMBER 1987
- ▽ - GROUNDWATER LEVELS MEASURED, MAY 2017
- ▽ - WATER LEVEL FROM PUMPING WELL, MAY 2017

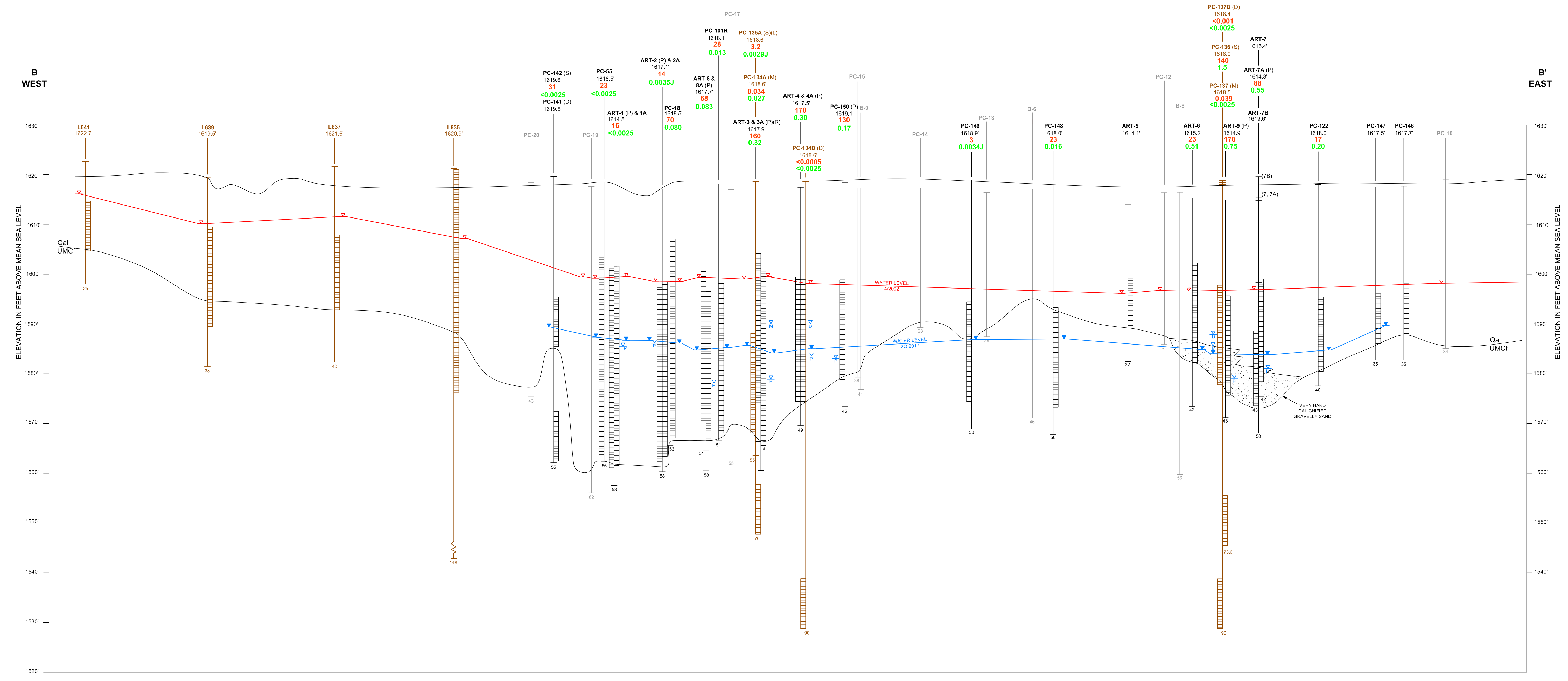
WELLS DOWNGRADIENT OF BARRIER WALL:

- ▽ - WATER LEVEL FROM DEEP WELL, MAY 2017
- ▽ - WATER LEVEL FROM MIDDLE WELL, MAY 2017
- ▽ - WATER LEVEL FROM SHALLOW WELL, MAY 2017

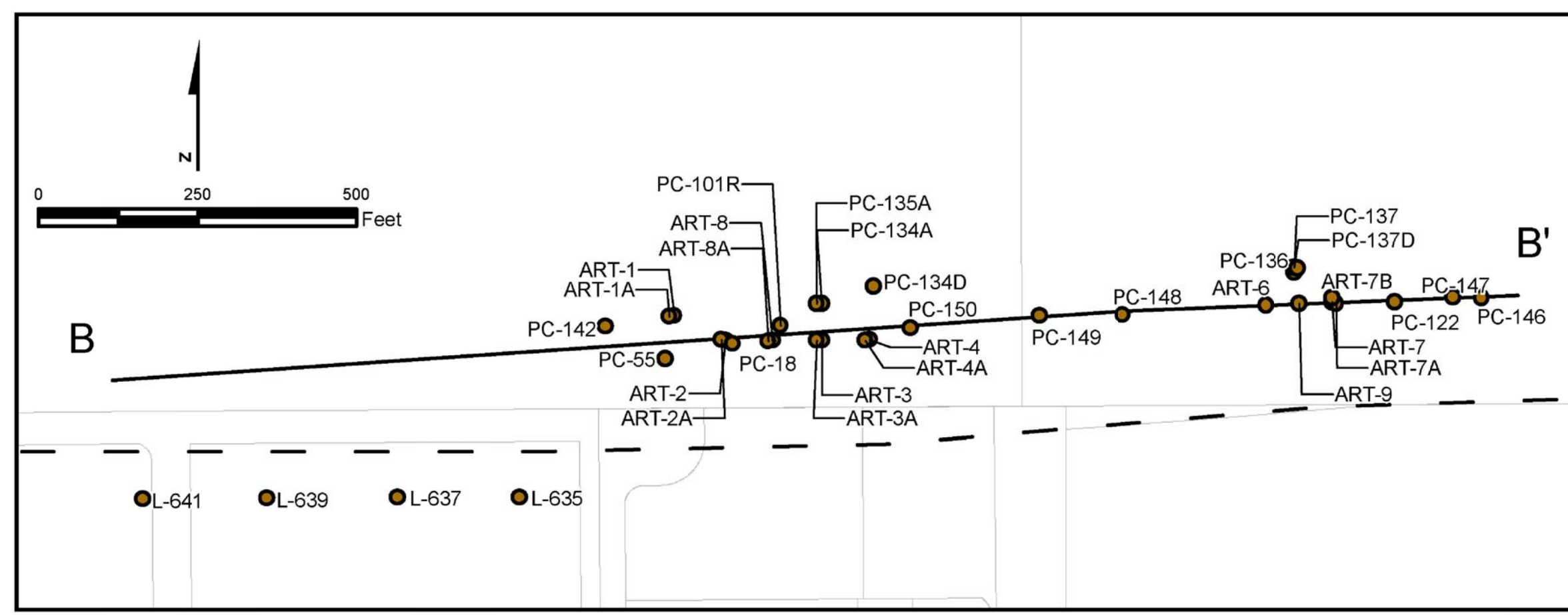
VERTICAL SCALE IN FEET
 0' 5' 10'
 HORIZONTAL SCALE IN FEET
 0' 40' 80'

DESIGNED BY:	EJK/HR
DRAWN BY:	RS/DLB
CHECKED BY:	APPROVED BY:
	CJR
NO.	0
REVISIONS:	
DESCRIPTION:	GENERATE APPROVED CROSS-SECTION
DATE:	10/09/17
BY:	DLB

WEST-EAST HYDROGEOLOGIC CROSS-SECTION B - B'
ATHENS ROAD WELL FIELD, SECOND QUARTER 2017
 Annual Performance Report
 Nevada Environmental Response Trust (NERT) Site
 Henderson, Nevada
 PROJECT: 1690004967



CROSS-SECTION LOCATION

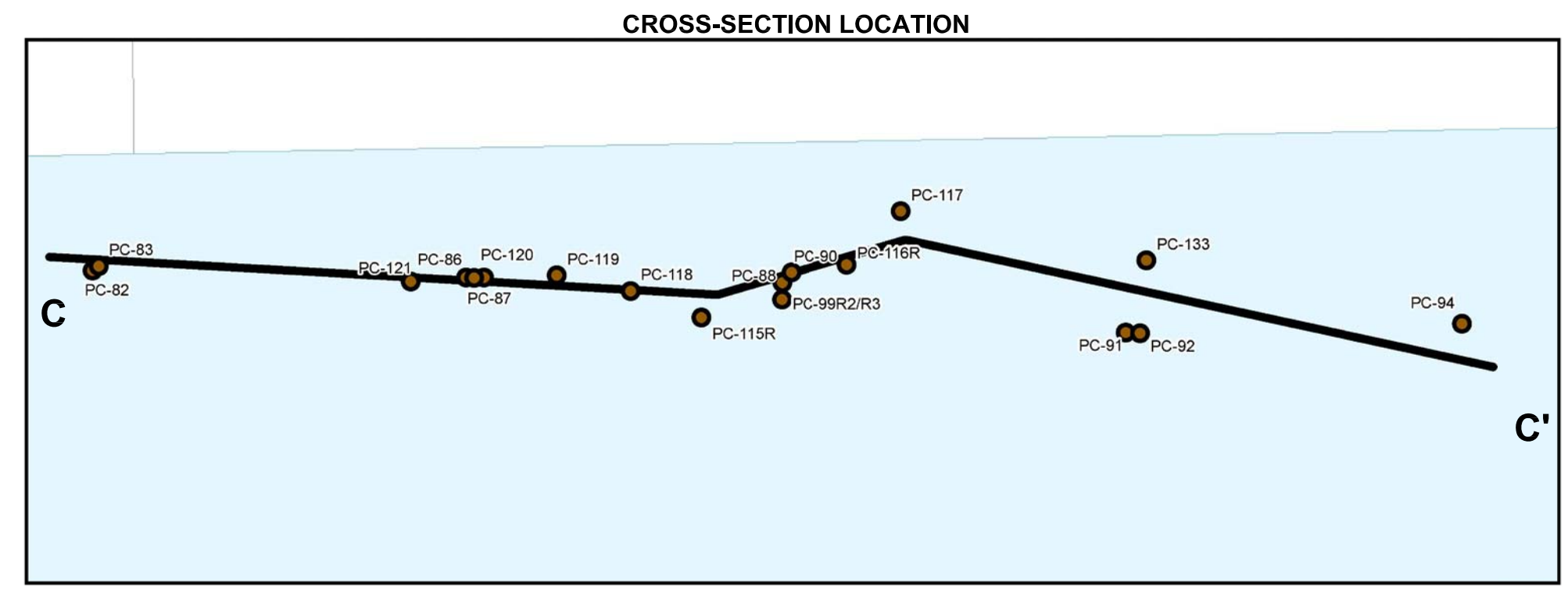
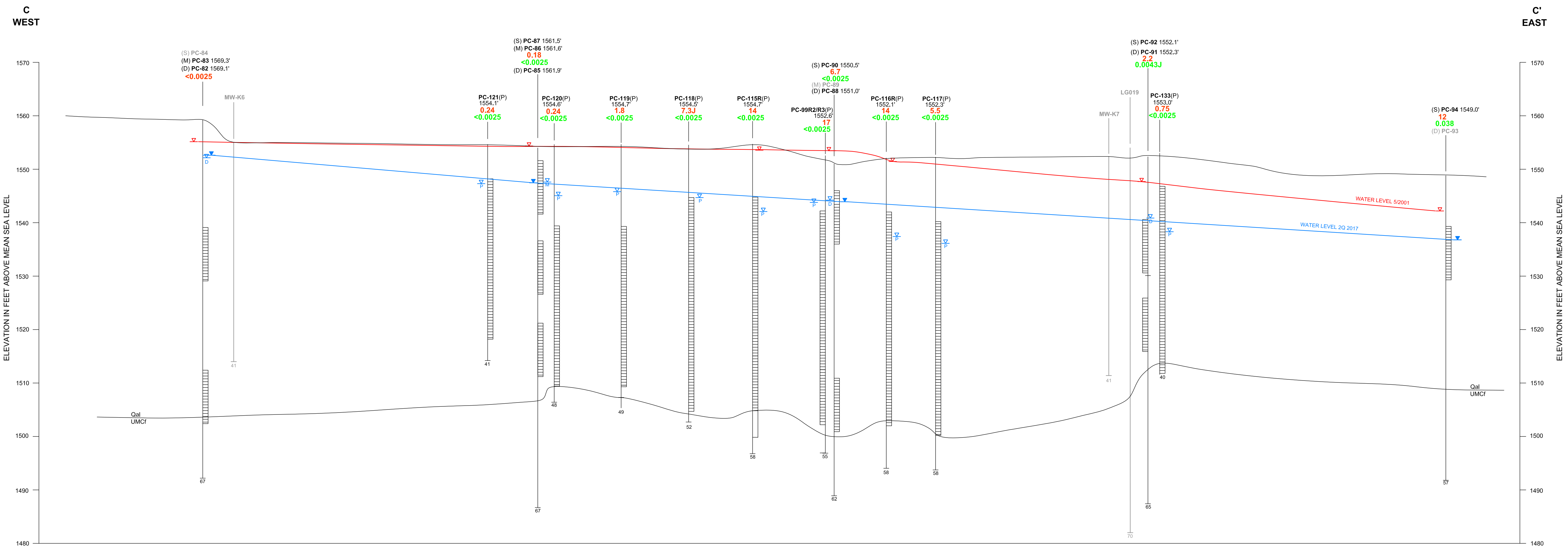


LEGEND

- UMCF - UPPER MUDDY CREEK FORMATION
- Alluvium
- PUMPING
- ESTIMATED CONCENTRATION
- 160 - PERCHLORATE CONCENTRATION, MAY 2017 (mg/L)
- 0.32 - TOTAL CHROMIUM CONCENTRATION, MAY 2017 (mg/L)
- PLUGGED AND ABANDONED
- PROJECTED
- TOP OF CASING ELEVATION
- SCREENED INTERVAL (S) SHALLOW, (M) MIDDLE, (D) DEEP, (R) RIGHT, (L) LEFT
- BLANK CASING
- QAL-UMCF CONTACT
- BOREHOLE DEPTH (FT BGS)
- ▽ - STATIC WATER LEVEL PRIOR TO INITIAL PUMPING, APRIL 2002
- ▽ - GROUNDWATER LEVELS MEASURED, MAY 2017
- ▽ - WATER LEVEL FROM PUMPING WELL, MAY 2017
- ▽ - WATER LEVEL FROM DEEP WELL, MAY 2017
- ▽ - WATER LEVEL FROM MIDDLE WELL, MAY 2017

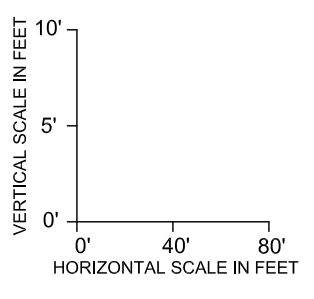
NOTES:

- The shallow, middle, and deep screened interval designations are used to distinguish well screens in this cross section and do not refer to NDEP's definition of the water bearing zones (WBZs).
- Total depth labeled is rounded to the nearest foot.
- Water levels from pumping, middle, and deep wells are not used for interpolating.
- Non-detect concentrations are labeled with "<*" and the sample quantitation limit value.



LEGEND

- UMCf - UPPER MUDDY CREEK FORMATION
- Qal - ALLUVIUM
- (P) - PUMPING
- J - ESTIMATED CONCENTRATION
- 14 - PERCHLORATE CONCENTRATION, MAY 2017 (mg/L)
- <0.0025 - TOTAL CHROMIUM CONCENTRATION, MAY 2017 (mg/L)
- PLUGGED AND ABANDONED 1750.0'
- 1750.0' TOP OF CASING ELEVATION
- SCREENED INTERVAL (S) SHALLOW (M) MIDDLE (D) DEEP
- BLANK CASING
- QAL-UMCF CONTACT
- BOREHOLE DEPTH (FT BGS)
- ▽ - STATIC WATER LEVEL PRIOR TO INITIAL PUMPING, MAY 2001
- ▽ - GROUNDWATER LEVELS MEASURED, MAY 2017
- ▽ - WATER LEVEL FROM PUMPING WELL, MAY 2017
- ▽ - WATER LEVEL FROM DEEP WELL, MAY 2017
- ▽ - WATER LEVEL FROM MIDDLE WELL, MAY 2017

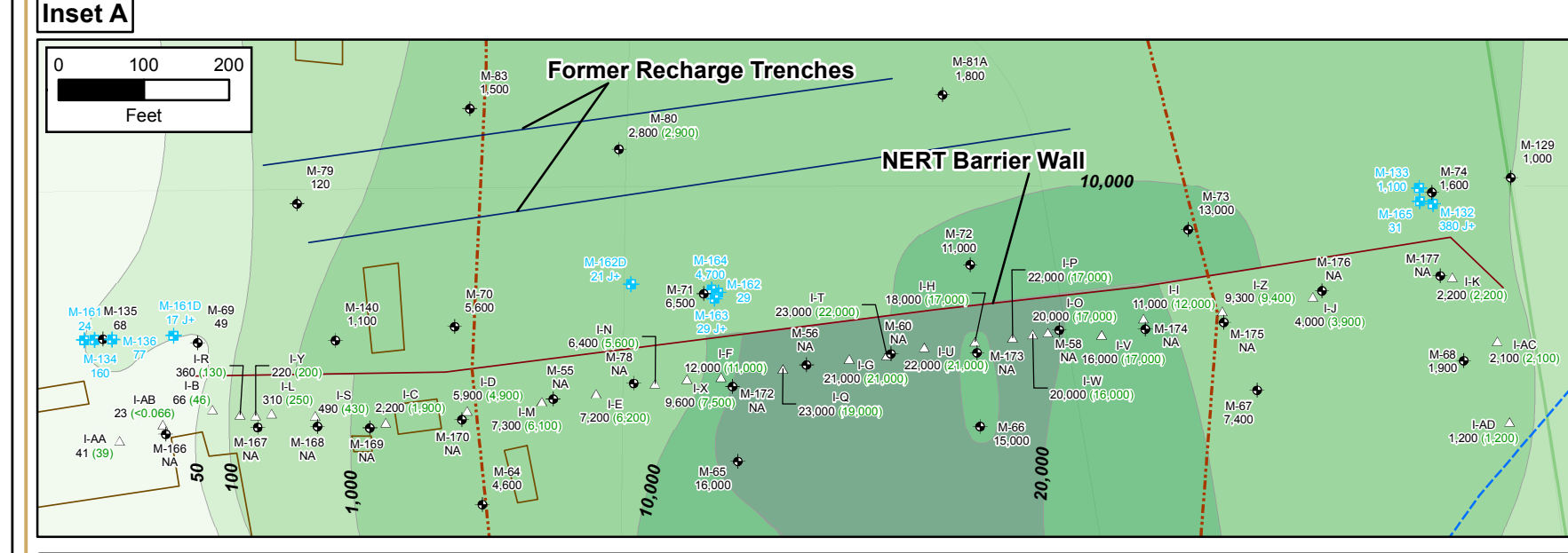
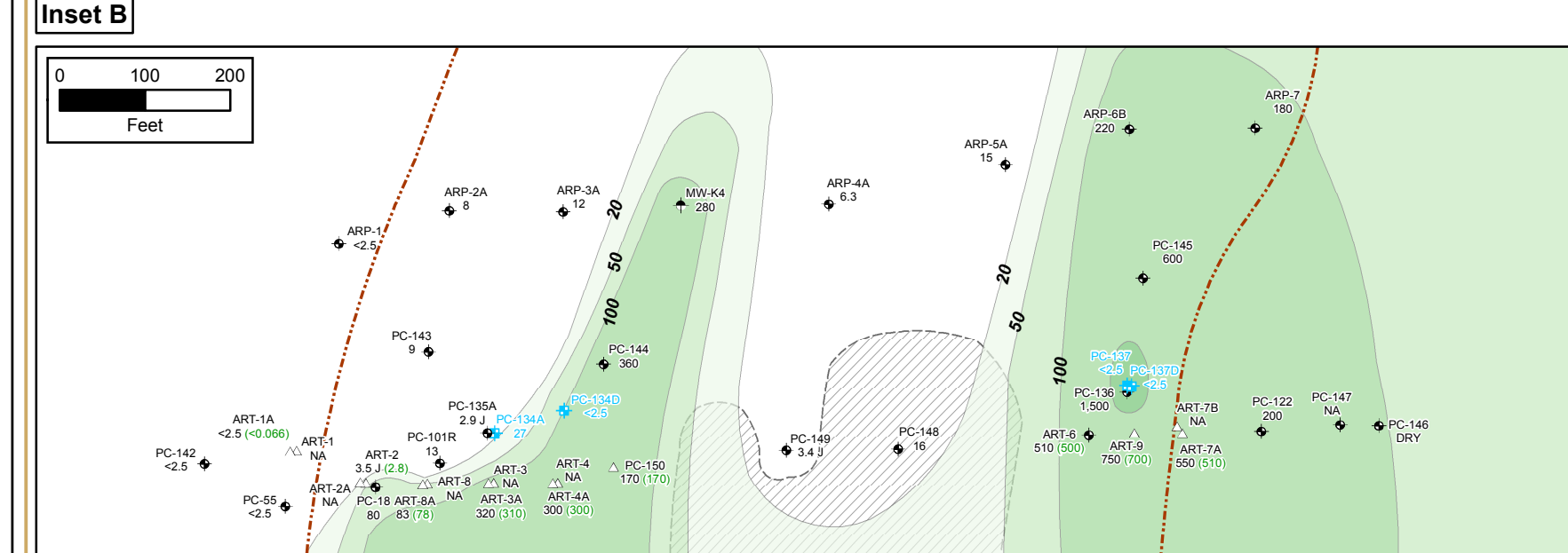
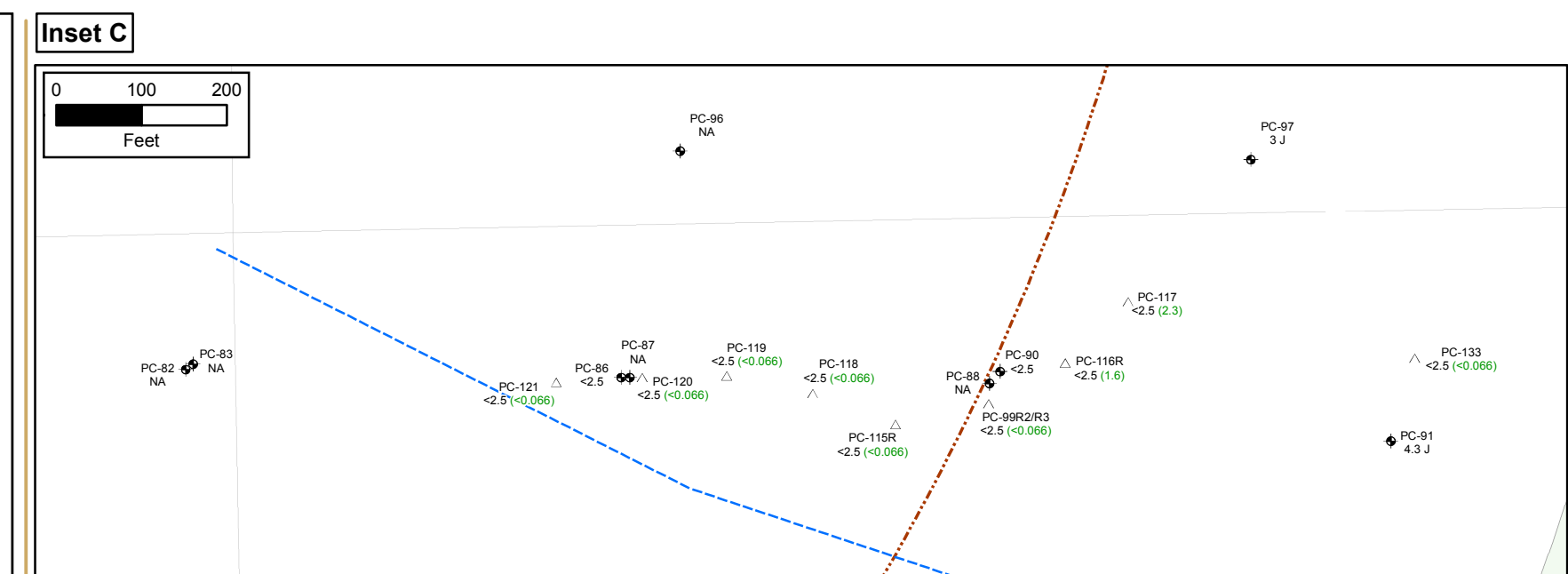
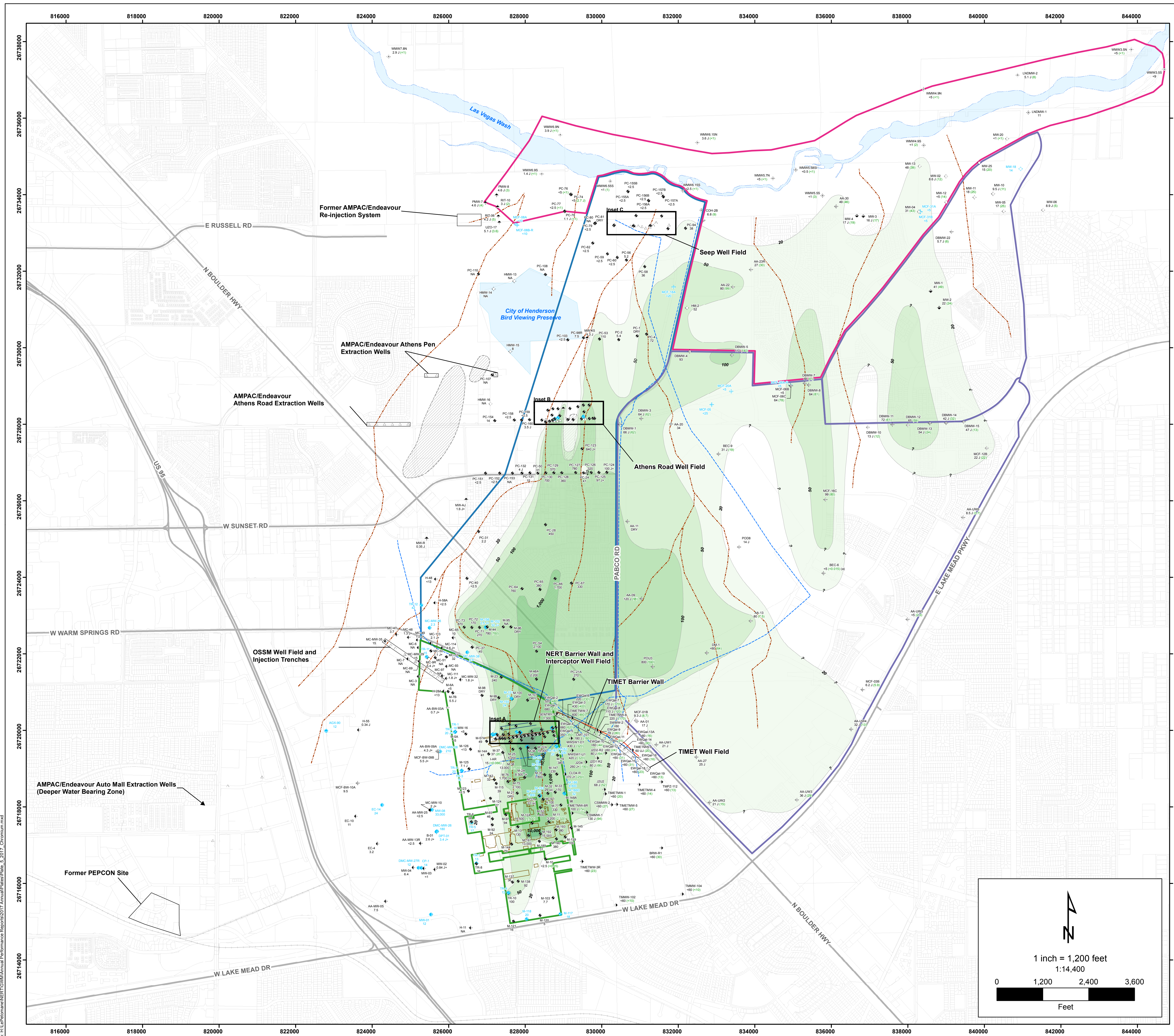


NOTES:

- 1) The shallow, middle, and deep screened interval designations are used to distinguish well screens in this cross section and do not refer to NDEP's definition of the water bearing zones (WBZs).
- 2) Total depth labeled is rounded to the nearest foot.
- 3) Water levels from pumping, middle, and deep wells are not used for interpolating groundwater level.
- 4) Non-detect concentrations are labelled with "<" and the sample quantitation limit value.

DESIGNED BY:	EJKHR
DRAWN BY:	RS/DLB
CHECKED BY:	CHE/CJR
APPROVED BY:	CJR
NO.	0
REVISIONS	
DESCRIPTION:	GENERATE APPROVED CROSS-SECTION
DATE:	10/09/17
BY:	DLB

WEST-EAST HYDROGEOLOGIC CROSS-SECTION C - C'
SEEP WELL FIELD, SECOND QUARTER 2017
 Annual Performance Report
 Nevada Environmental Response Trust (NERT) Site
 Henderson, Nevada



NERT Remedial Investigation Study Areas		Chromium Concentration (ug/L)	
	Downgradient Study Area	1,700	Chromium Concentration (ug/L)
	Eastside Study Area	(59)	Hexavalent Chromium Concentration (ug/L)
	NERT Off-Site Study Area	J	Estimated Concentration
	NERT Site	J+	Estimated Concentration, Potential Positive Bias
	Approximate Location of Paleochannel Centerline	UJ	Estimated Concentration, Below Laboratory Method Reporting Limit
	Former Ditches	NA	Not Analyzed during second quarter 2017 as part of the Groundwater Monitoring Program
	Muddy Creek Topographic High/Unsaturated Alluvium	DRY	Well dry during second quarter 2017
	Site Features (Buildings and Tanks)	(a)	Data point is anomalous and was not considered for contouring

Shallow Monitoring Wells (Shown by owner; used in contouring)		Extraction Wells		Chromium Isoconcentration	
	NERT		Shallow		<20 ug/L
	TIMET		Deep (not used in contouring)		20-50
	SNWA		Deep Monitoring Wells (Shown by owner; not used in contouring)		50-100
	City of Henderson		NERT		100-1,000
	Chimera Golf Club		AMPAC/Endeavour		1,000-10,000
	BRC		BRC		10,000-20,000
	AMPAC/Endeavour		City of Henderson		20,000-30,000 ug/L
	OSSM		OSSM		

Notes:
Results shown may have been rounded for clarity. See Table A-1 and A-4 for all results reported to full precision.

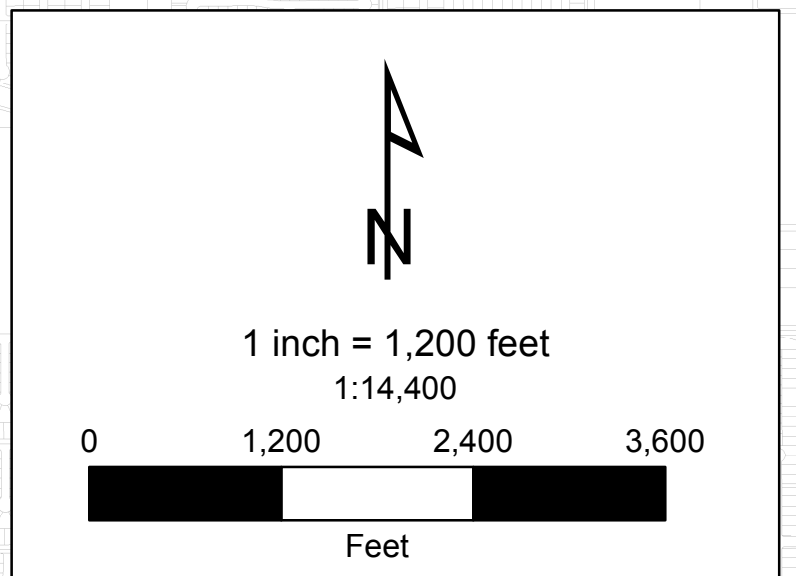
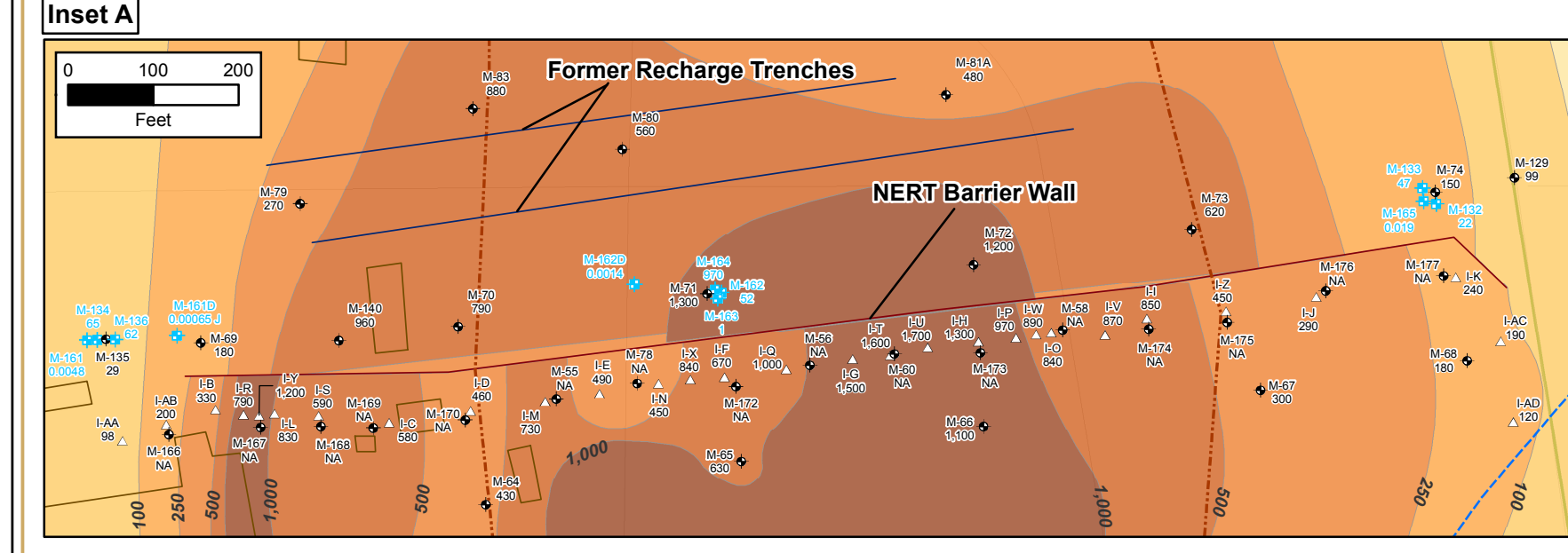
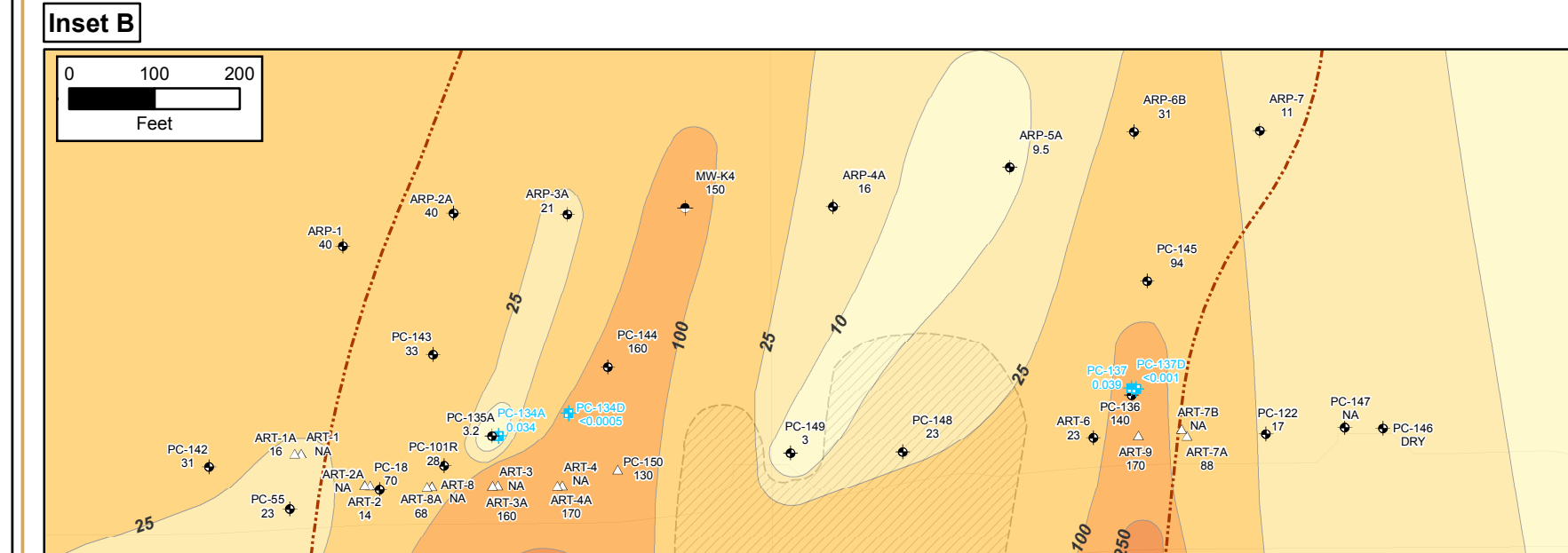
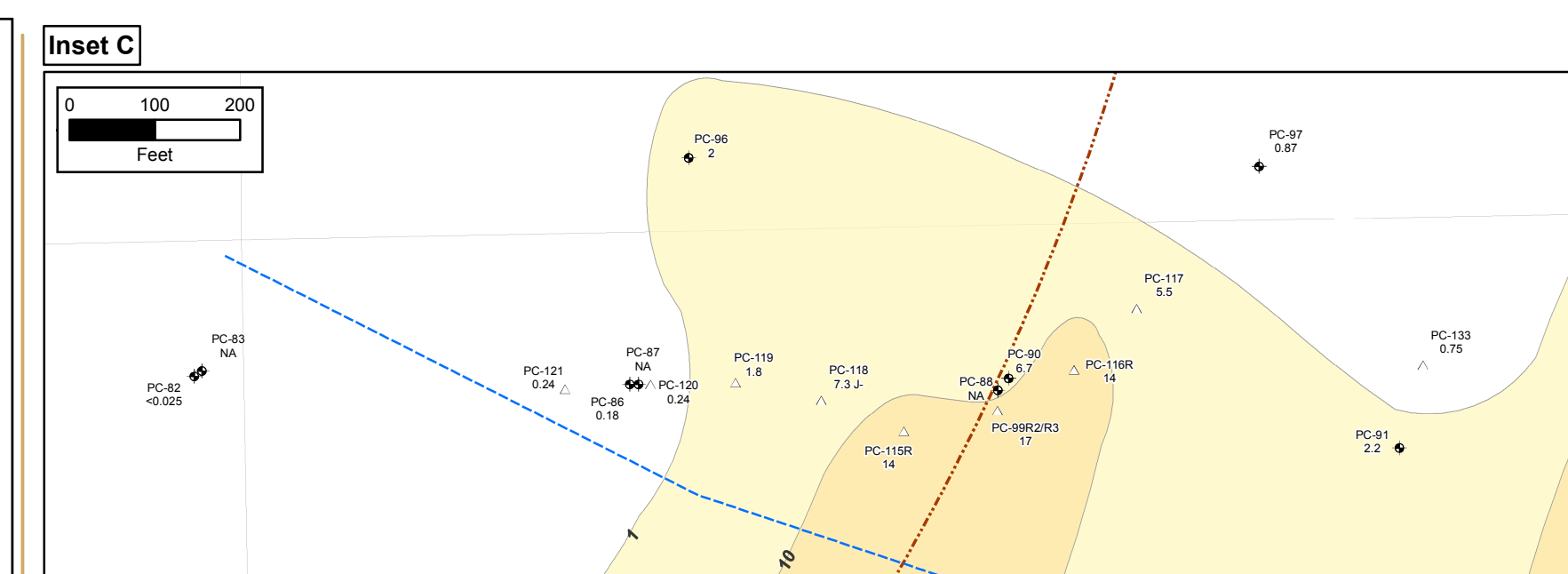
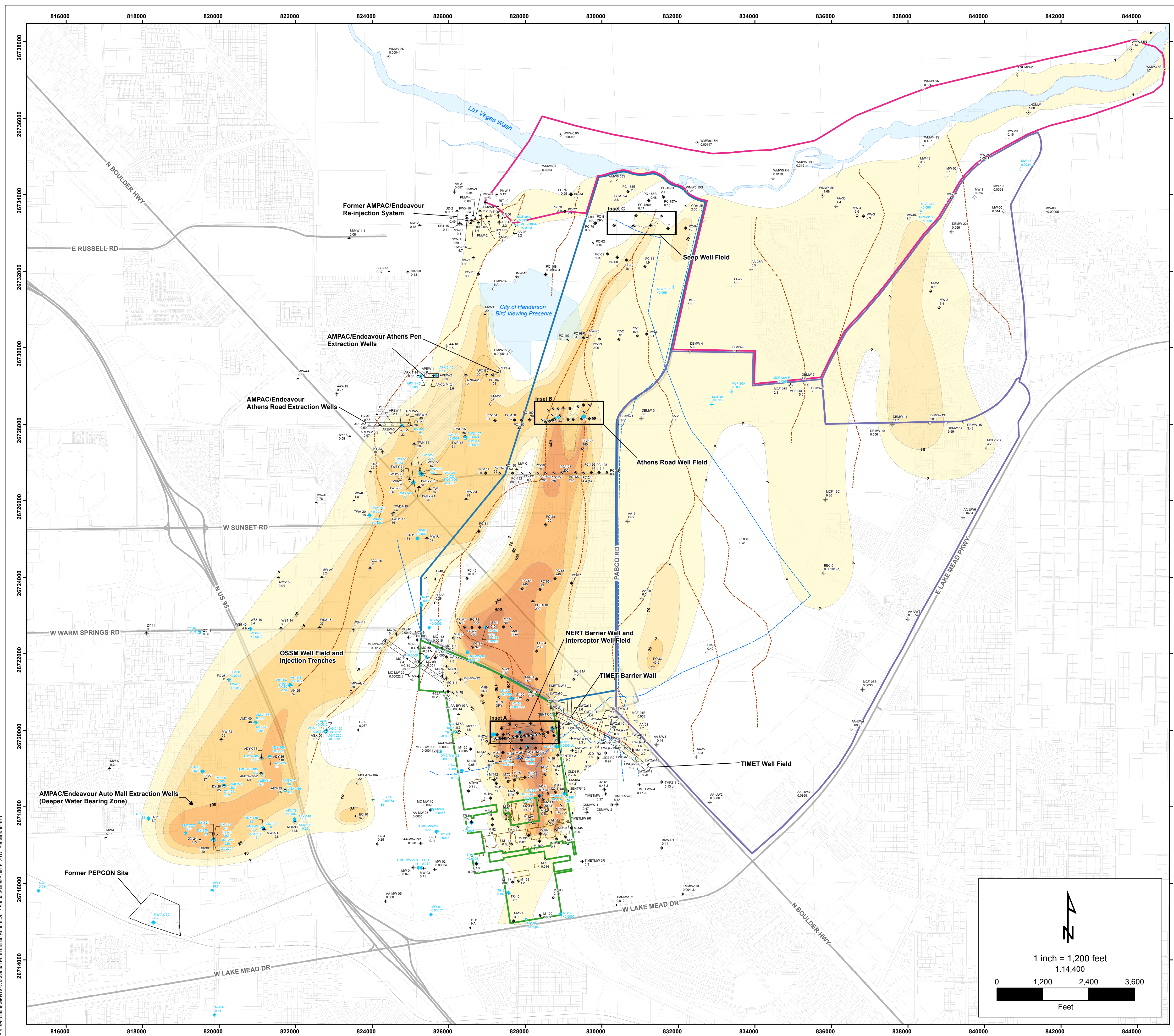


Plate 5	GROUNDWATER TOTAL CHROMIUM MAP SHALLOW WATER-BEARING ZONE SECOND QUARTER 2017		
	Annual Performance Report Nevada Environmental Response Trust (NERT) Henderson, Nevada		
Coordinate System: NAD 1983 StatePlane Nevada East FIPS 2701 Feet Projection: Transverse Mercator Datum: North American 1983	PROJECT: 21-41400A	BY: KL/MM/SAT	DATE: 12/8/2017

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NERT Remedial Investigation Study Areas		Perchlorate Concentration (mg/L)
 	Downgradient Study Area	1,700
 	Eastside Study Area	J
 	NERT Off-Site Study Area	J-
 	NERT Site	UU
	Approximate Location of Paleochannel Centerline	NA
	Former Ditches	DRY
 	Site Features (Buildings and Tanks)	(a)
 	Muddy Creek Topographic High/Unsaturated Alluvium	

Other Features	Shallow Monitoring Wells (Shown by owner; used in contouring)	Extraction Wells	Deep Monitoring Wells (Shown by owner; not used in contouring)	Perchlorate Isoconcentration
●	● NERT	△ Shallow (used in contouring)	△ Deep (not used in contouring)	 <math>< 1\text{ mg/L}</math>
●	● TIMET	△	△	 1-10
●	● SNWA	△	△	 10-25
●	● City of Henderson	△	△	 25-100
●	● Chimera Golf Club	△	△	 100-250
●	● BRC	△	△	 250-500
●	● AMPAC/Endeavour	△	△	 500-1,000
●	● OSSM	△	△	 >1,000 mg/L

Notes:
Results shown may have been rounded for clarity. See Table A-1 and A-4 for all results reported to full precision.

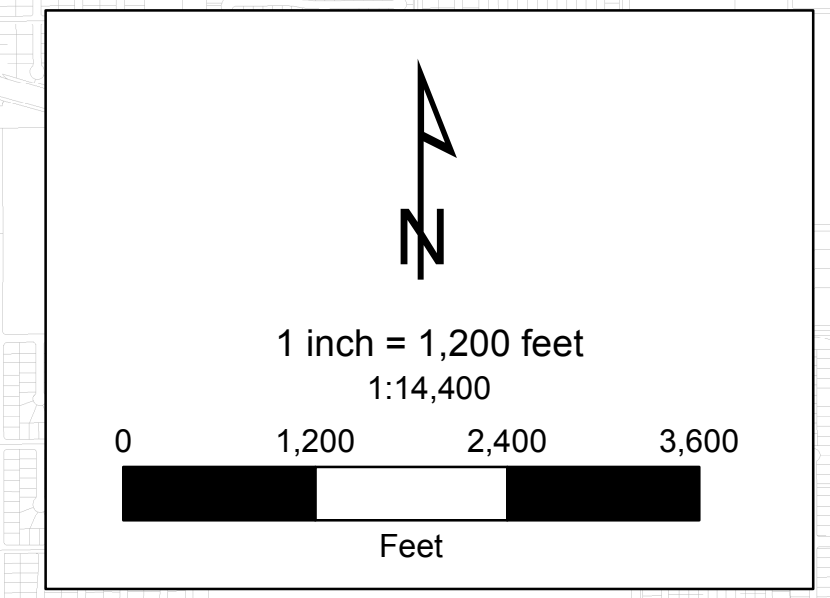
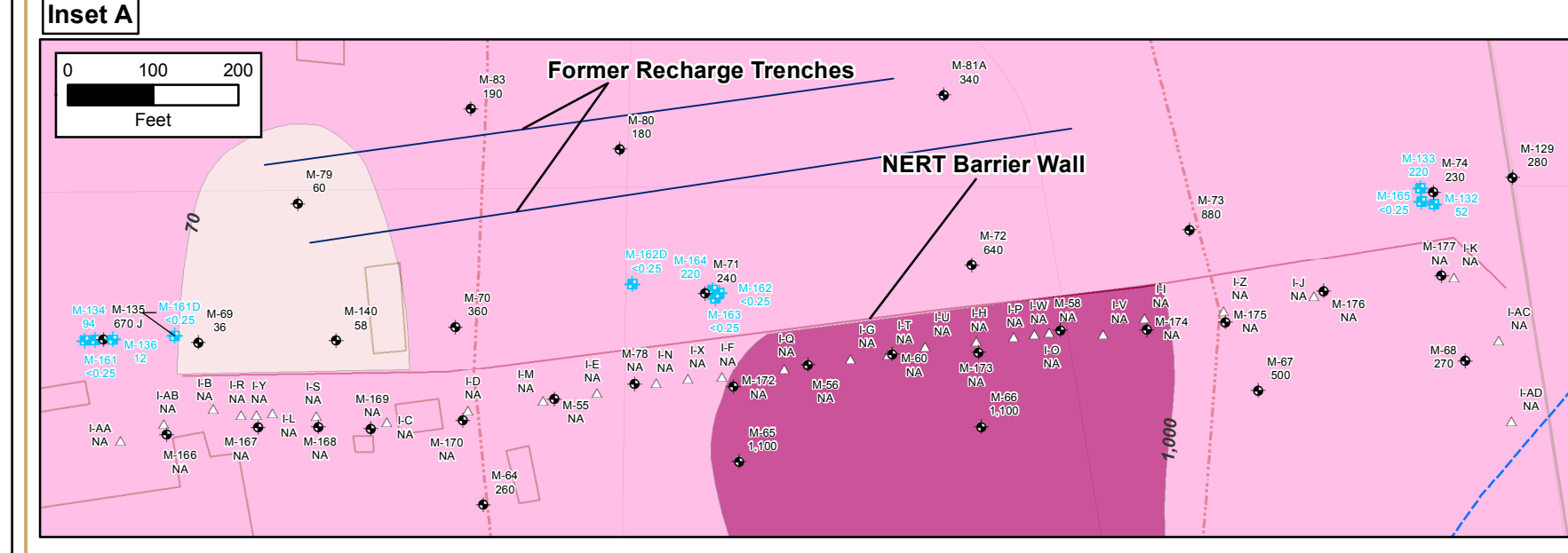
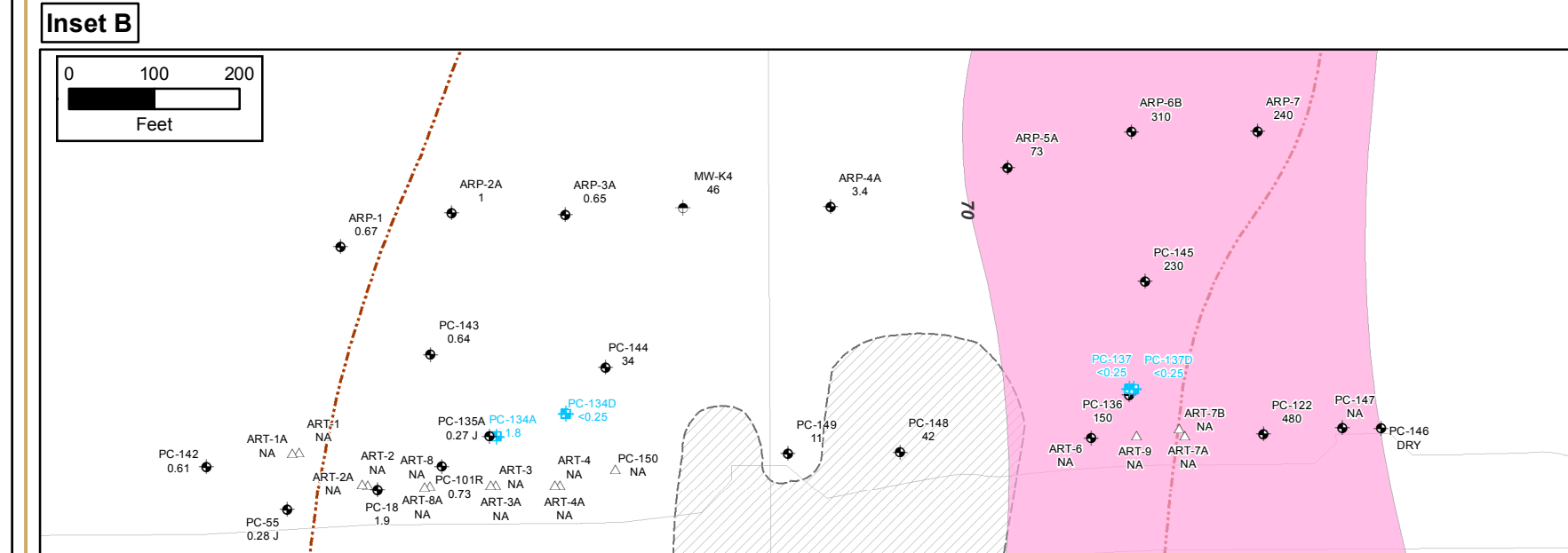
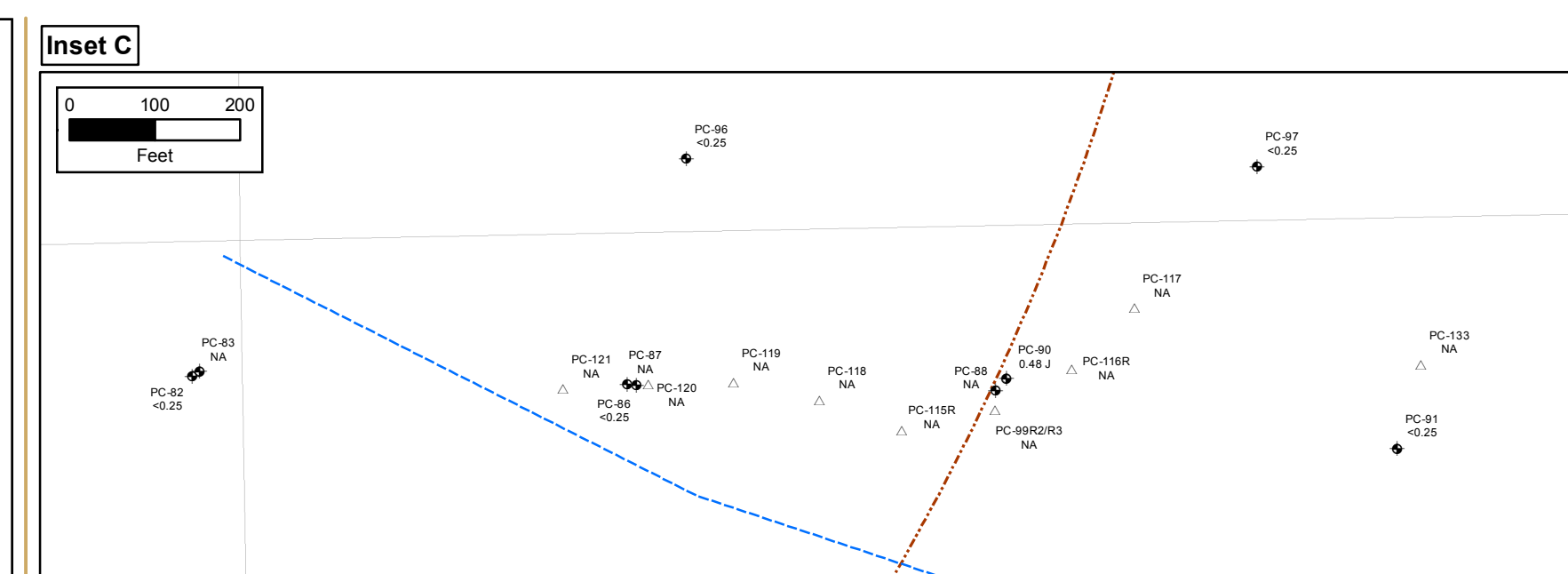
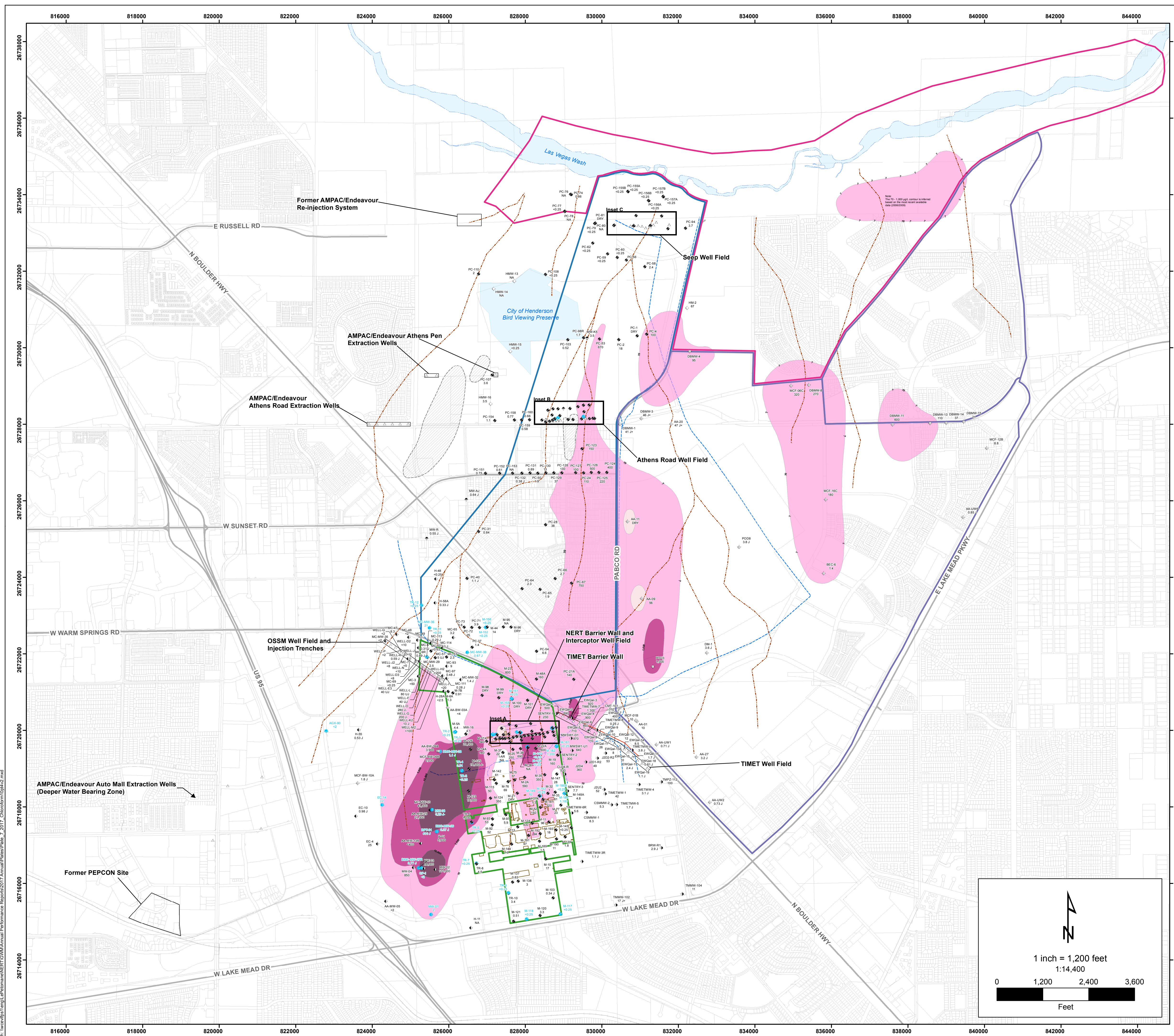


Plate 6	GROUNDWATER PERCHLORATE MAP SHALLOW WATER-BEARING ZONE SECOND QUARTER 2017 Annual Performance Report Nevada Environmental Response Trust (NERT) Henderson, Nevada	
	Coordinate System: NAD 1983 StatePlane Nevada East FIPS 2701 Feet Projection: Transverse Mercator Datum: North American 1983	

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NERT Remedial Investigation Study Areas		1,700	Chloroform Concentration (ug/L)
	Downgradient Study Area	J	Estimated Concentration
	Eastside Study Area	J-	Estimated Concentration, Potential Negative Bias
	NERT Off-Site Study Area	J+	Estimated Concentration, Potential Positive Bias
	NERT Site	UJ	Estimated Concentration, Below Laboratory Method Reporting Limit
		NA	Not Analyzed during second quarter 2017 as part of the Groundwater Monitoring Program
		DRY	Well dry during second quarter 2017

Other Features		
	Former Ditches	
	Approximate Location of Paleochannel Centerline	
	Muddy Creek Topographic High/Unsaturated Alluvium	
	Site Features (Buildings and Tanks)	

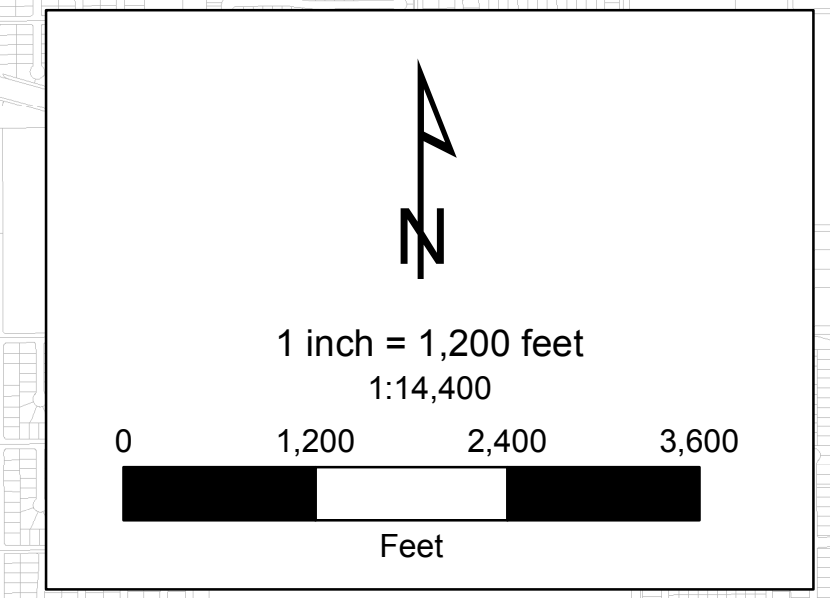
Shallow Monitoring Wells (shown by well owner; used in contouring)		Extraction Wells	
	BRC		Shallow (used in contouring)
	Chimera Golf Club		Deep (not used in contouring)
	City of Henderson		NERT
	OSSM		AMPAC/Endeavour
	NERT		BRC
	SNWA		City of Henderson
	TIMET		OSSM
	AMPAC/Endeavour		

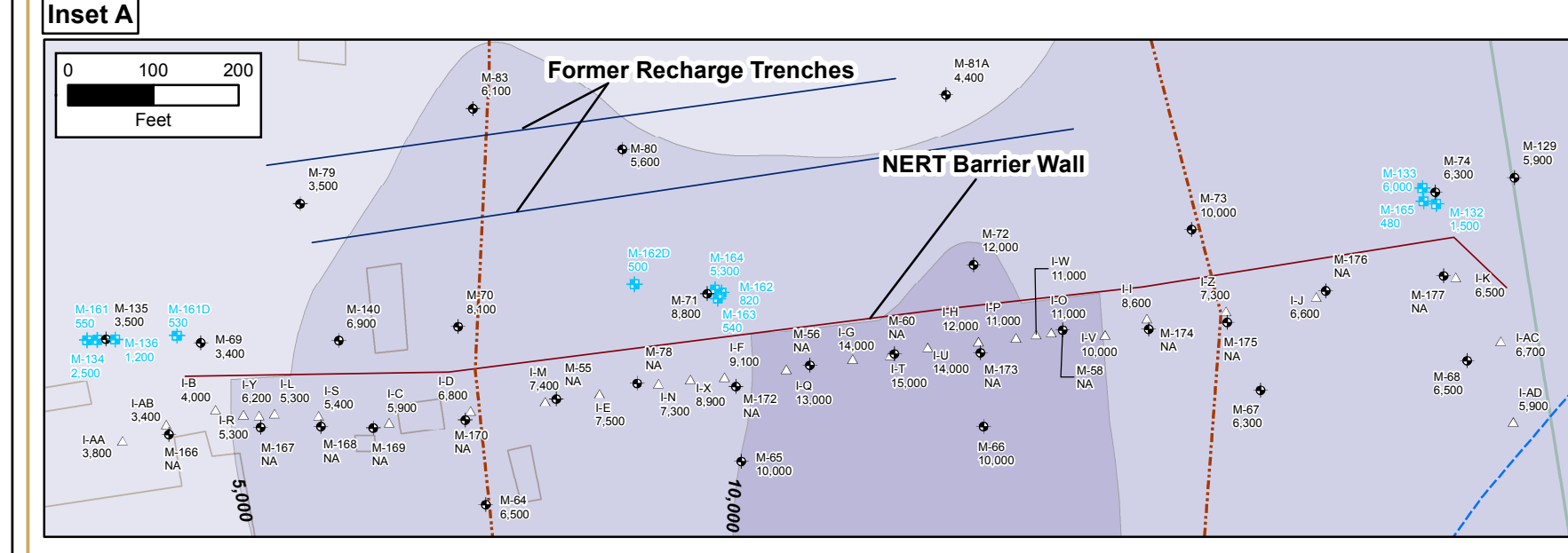
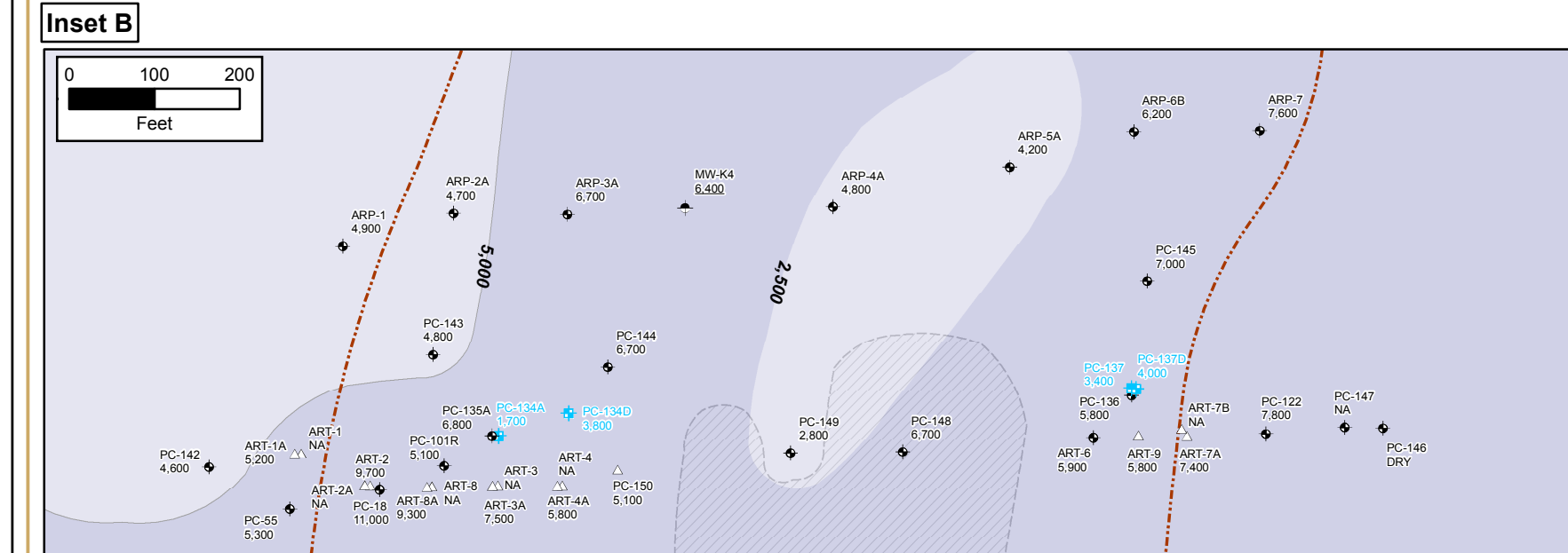
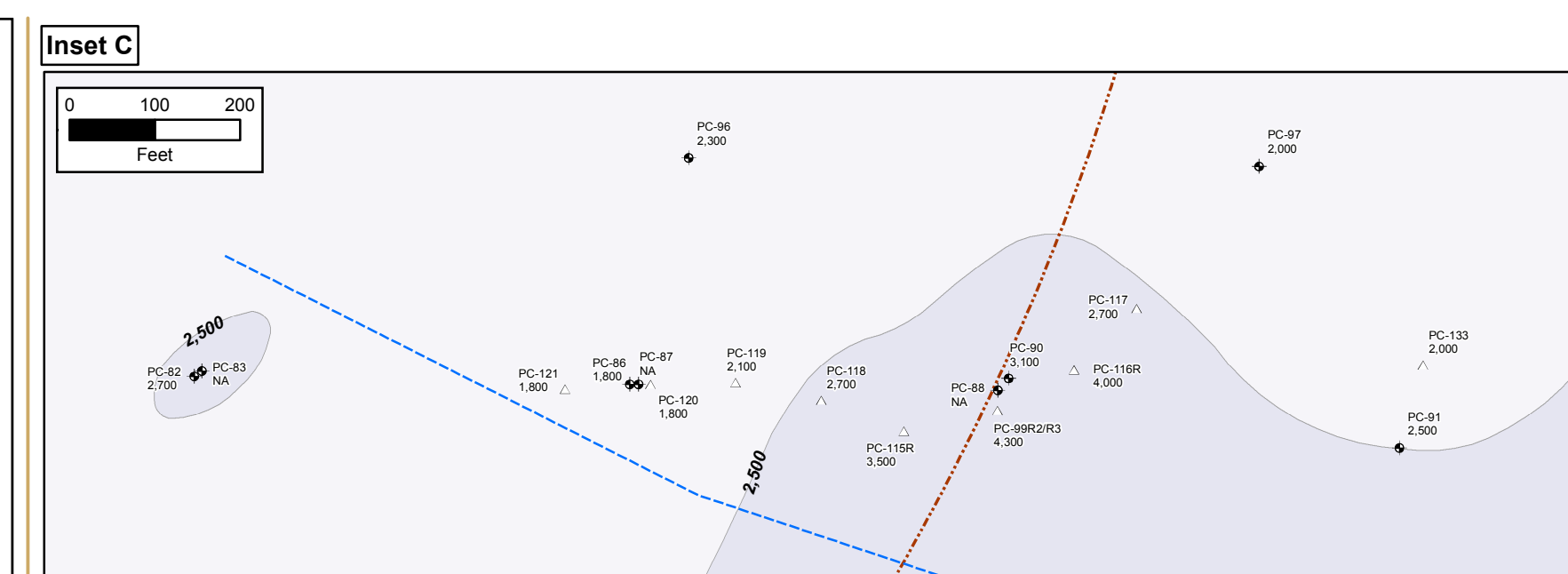
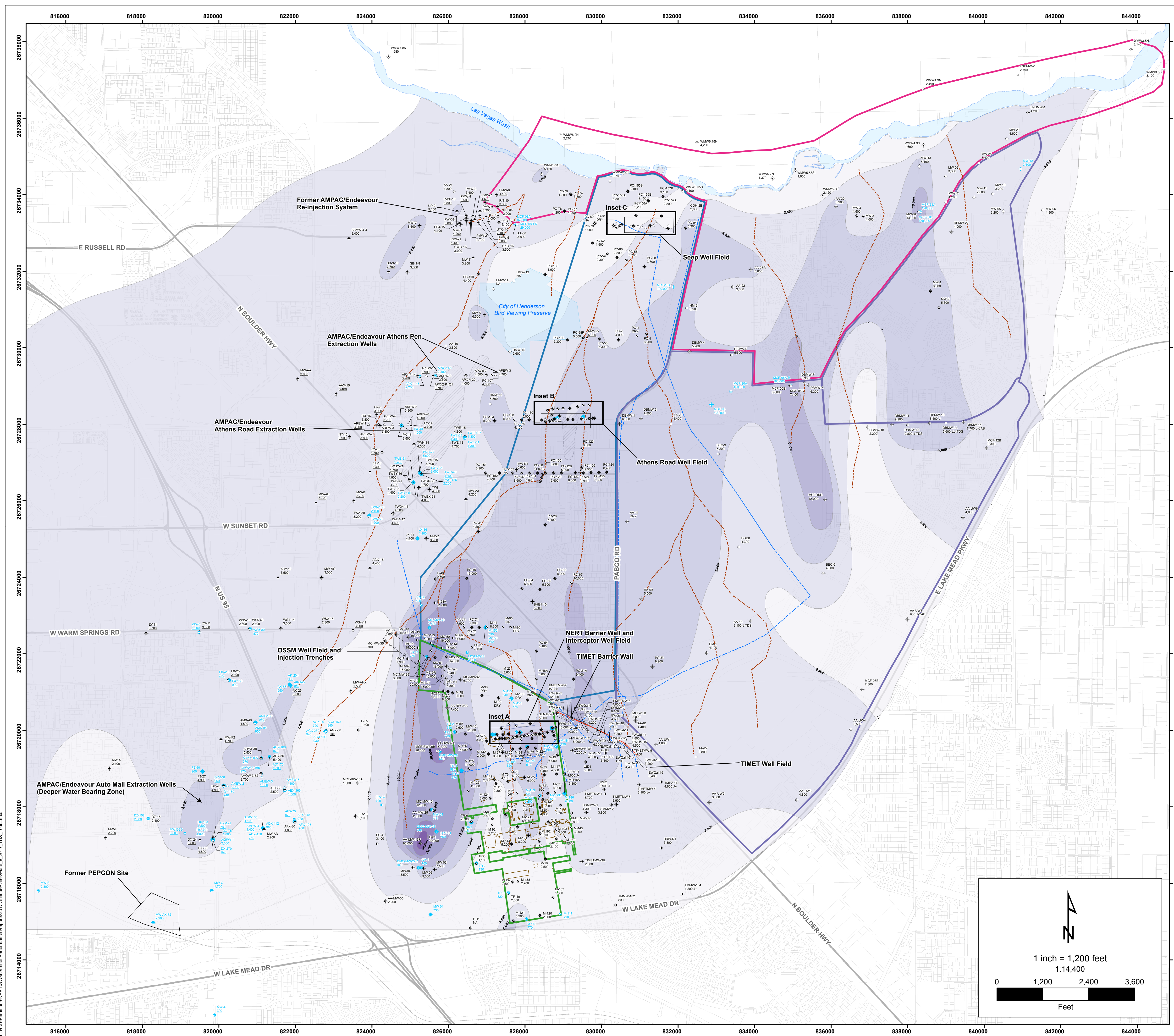
Chloroform Isoconcentration

	< 70 ug/L
	70 - 1,000
	1,000 - 10,000
	> 10,000 ug/L

Results shown may have been rounded for clarity. See Table A-1 and A-4 for all results reported to full precision.

Additional groundwater data collected during 2008/2009 within the Eastside Study Area has been included in the plume interpretation, but is not presented on this map.





NERT Remedial Investigation Study Areas		TDS Concentration (mg/L)	
 	Downgradient Study Area	1,700	Calculated TDS Concentration (mg/L) from AMPAC
 	Eastside Study Area	J	Estimated Concentration
 	NERT Off-Site Study Area	J-	Estimated Concentration, Potential Negative Bias
 	NERT Site	J+	Estimated Concentration, Potential Positive Bias
 	Former Ditches	J-TDS	Estimated Concentration, TDS Balance Unacceptable
 	Approximate Location of Paleochannel Centerline	J-CAB	Estimated Concentration, Cation-Anion Balance Unacceptable
 	Site Features (Buildings and Tanks)	NA	Not Analyzed during second quarter 2017 as part of the Groundwater Monitoring Program
 	Muddy Creek Topographic High/Unsaturated Alluvium	DRY	Well Dry during second quarter 2017

Shallow Monitoring Wells (Shown by well owner; used in contouring)		Extraction Wells		TDS Isoconcentration	
+	AMPAC/Endeavour	△	Shallow (used in contouring)		<2,500 mg/L
+	BRC	△	Deep (not used in contouring)		2,500 - 5,000
+	Chimera Golf Club	+	Deep Monitoring Wells (Shown by well owner; not used in contouring)		5,000 - 10,000
+	City of Henderson	+	City of Henderson		10,000 - 15,000
+	OSSM	+	OSSM		15,000 - 20,000
+	NERT	+	BRC		20,000 - 50,000
+	SNWA	+	AMPAC/Endeavour		>50,000 mg/L
+	TIMET	+	NERT		

Notes:
Results shown may have been rounded for clarity. See Table A-1 and A-4 for all results reported to full precision.

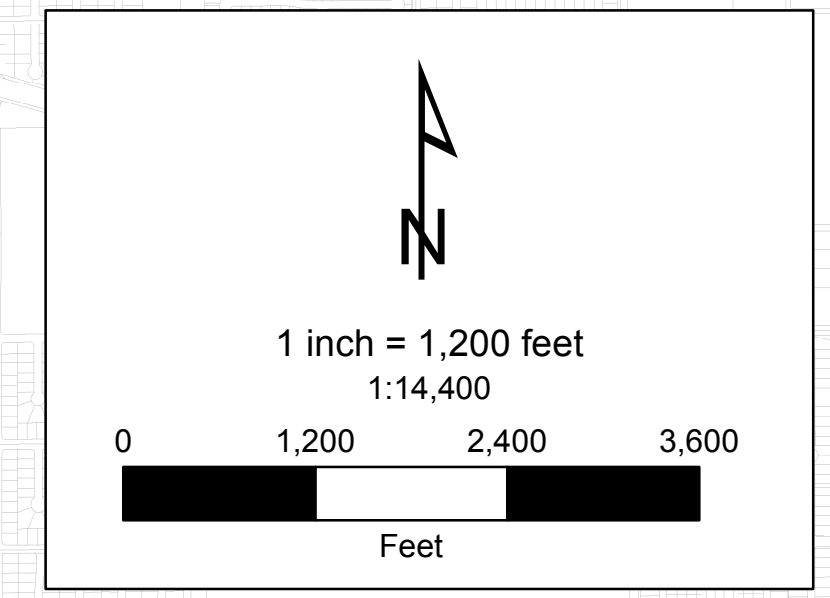


Plate 8	GROUNDWATER SHALLOW DISSOLVED SOLIDS MAP SHALLOW WATER-BEARING ZONE SECOND QUARTER 2017 Annual Performance Report Nevada Environmental Response Trust (NERT) Henderson, Nevada	
Coordinate System: NAD 1983 StatePlane Nevada East FIPS 2701 Feet Projection: Transverse Mercator Datum: North American 1983		PROJECT: 21-41400A BY: KL/MMV/ST DATE: 12/8/2017