

FIGURE 3-1  
URANIUM IN WESTERN AREA  
2014 DESIGN INVESTIGATION  
CIMARRON SITE, OKLAHOMA



**Legend**

- ★ Monitoring Well in Alluvium
- ★ Monitoring Well in Transition Zone
- ★ Monitoring Well in Sandstone A
- ★ Monitoring Well in Sandstone B
- ★ Monitoring Well in Sandstone C
- 2014 Geoprobe Location
- Topographic Contour and Elevation
- - - Western Area Uranium Plume Above the Maximum Contaminant Level (MCL) (30 micrograms per liter [ug/L])
- - - Western Area Uranium Plume Above the Activity Limit (180 picocuries per liter [pCi/L])
- Transition Zone Boundary
- Remediation Area

T-95 Well Location  
27 Uranium concentration data in ug/L

The highest value of the original sample and its duplicate from the 2014 Design Investigation is posted. Contaminant plumes were determined based on hydrogeology and historical data.

Note: Monitoring Wells 1323, 1328, and 1332 are screened in Sandstone C.  
BA = Burial Area  
J = Estimated Value  
UP = Uranium Pond

0 175 350 700 Feet

COORDINATES : (NAD 83) STATE PLANE OKLAHOMA NORTH FEET      DATE : AERIAL PHOTO - 2010 / MAP PRODUCED - APR 2015

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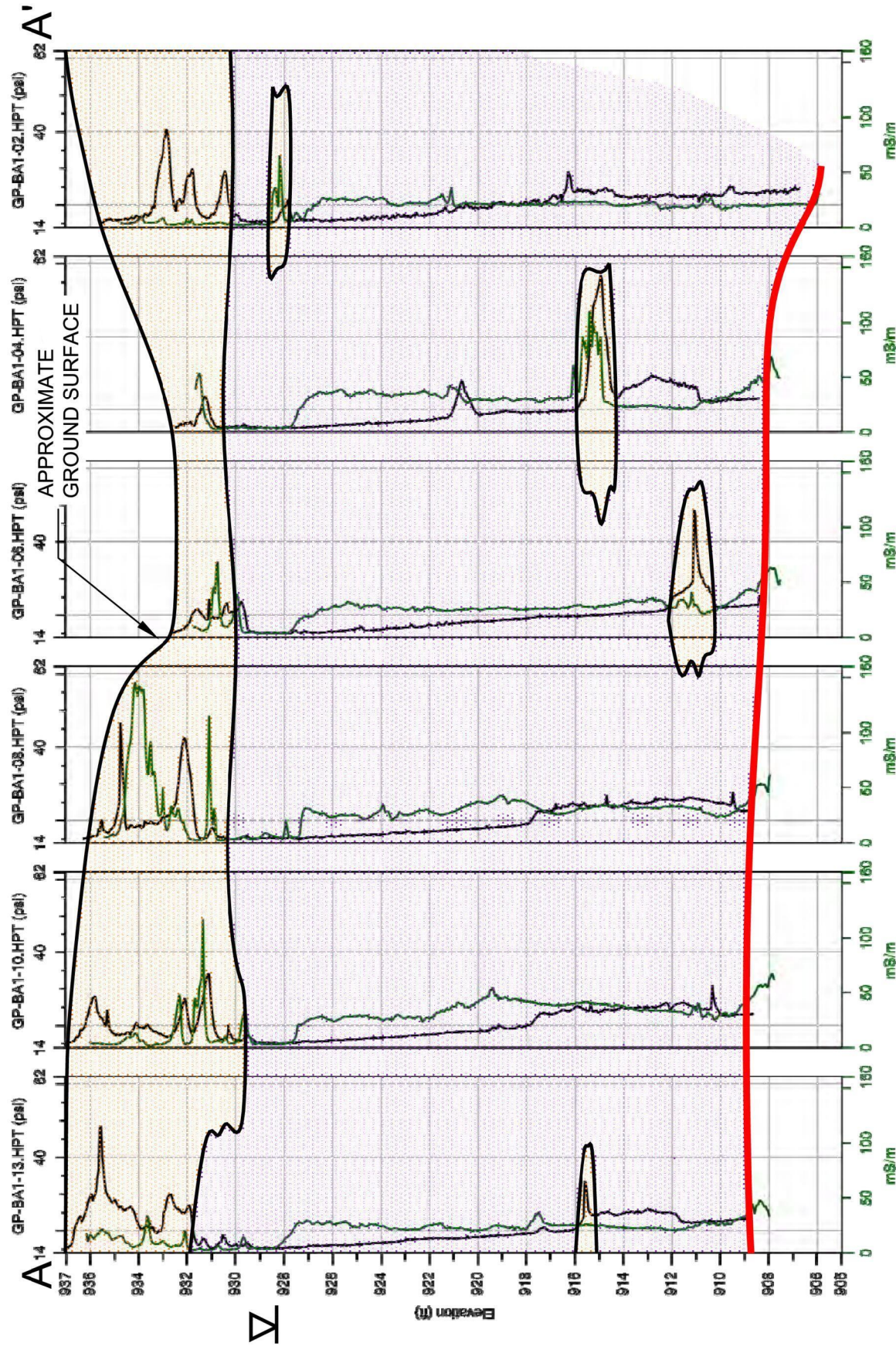
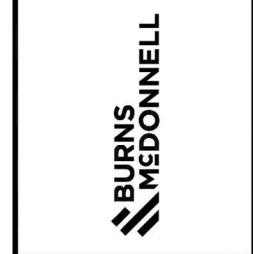


Figure 2-3  
 BA1 CROSS-SECTION (A-A')  
 2014 DESIGN INVESTIGATION  
 CIMARRON SITE, OKLAHOMA



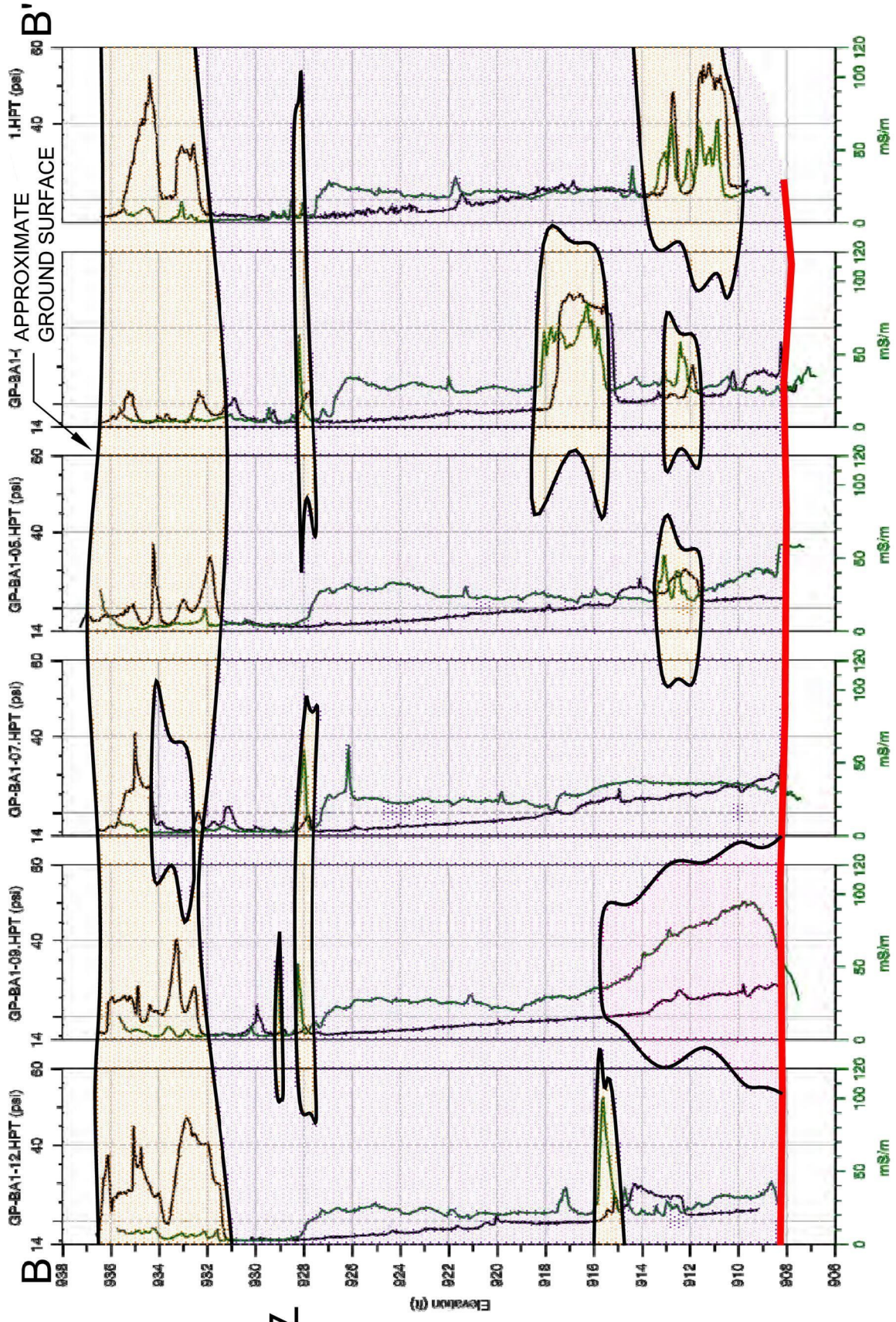
**NOTES**

- psi = Pounds per square inch
- mS/m = Millisiemens per meter
- Elevation = Feet above mean sea level

**LEGEND**

- Clay/Silt
- Sand (Fine to Coarse)
- Approx. Water Table
- Approx. Top of Rock





- LEGEND**
- Clay/Silt
  - Sand (Fine to Coarse)
  - Sand (Coarse)/Gravel
  - Approx. Water Table
  - Approx. Top of Rock

**NOTES**

psi = Pounds per square inch  
 mS/m = Millisiemens per meter  
 Elevation = Feet above mean sea level



Figure 2-4  
 BA1 CROSS-SECTION (B-B')  
 2014 DESIGN INVESTIGATION  
 CIMARRON SITE, OKLAHOMA



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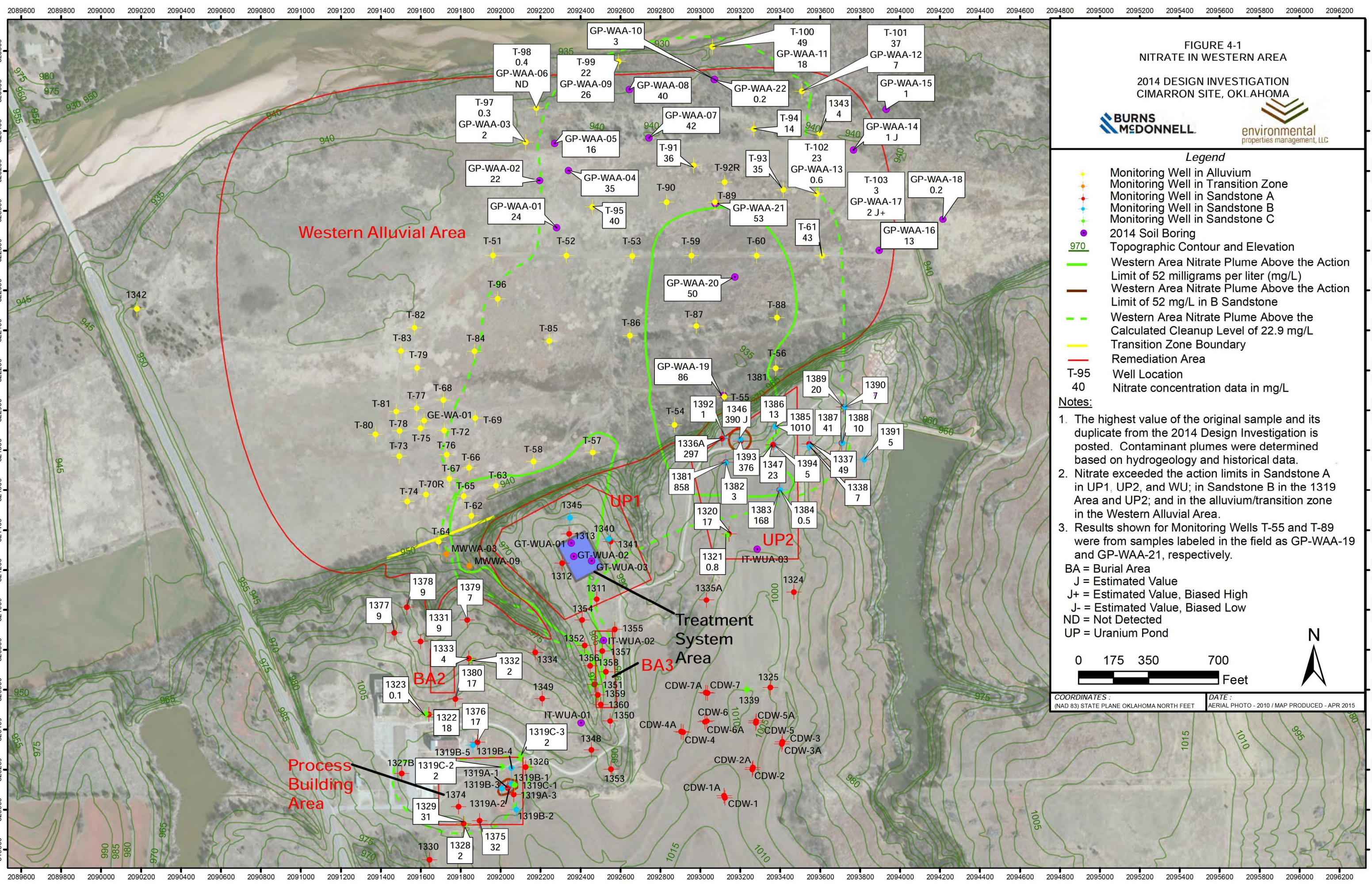


FIGURE 4-1  
NITRATE IN WESTERN AREA  
2014 DESIGN INVESTIGATION  
CIMARRON SITE, OKLAHOMA



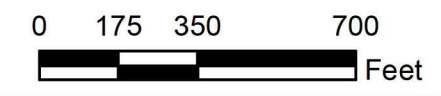
Legend

- ★ Monitoring Well in Alluvium
- ★ Monitoring Well in Transition Zone
- ★ Monitoring Well in Sandstone A
- ★ Monitoring Well in Sandstone B
- ★ Monitoring Well in Sandstone C
- 2014 Soil Boring
- 970 Topographic Contour and Elevation
- Western Area Nitrate Plume Above the Action Limit of 52 milligrams per liter (mg/L)
- Western Area Nitrate Plume Above the Action Limit of 52 mg/L in B Sandstone
- - - Western Area Nitrate Plume Above the Calculated Cleanup Level of 22.9 mg/L
- Transition Zone Boundary
- Remediation Area
- T-95 Well Location
- 40 Nitrate concentration data in mg/L

Notes:

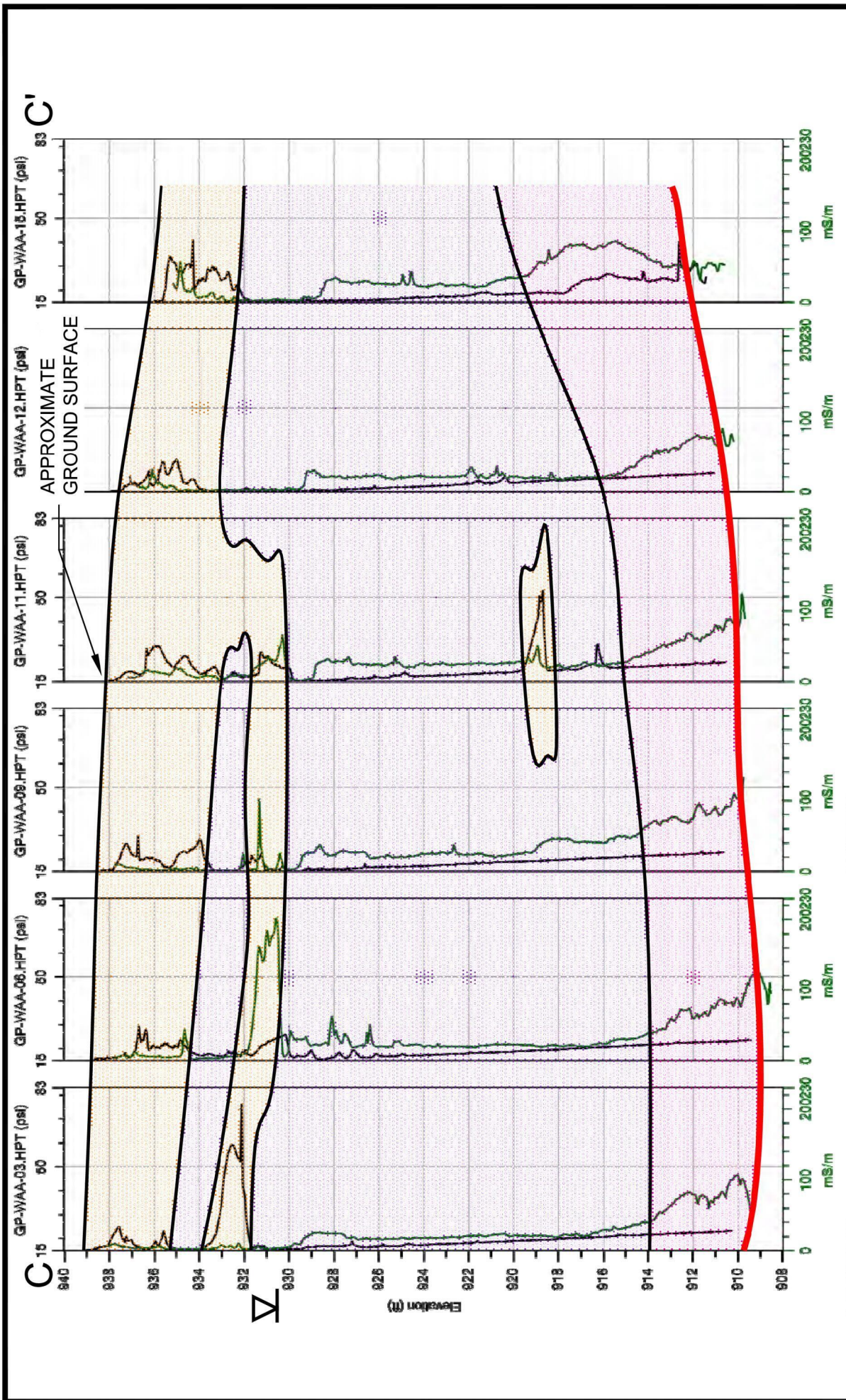
1. The highest value of the original sample and its duplicate from the 2014 Design Investigation is posted. Contaminant plumes were determined based on hydrogeology and historical data.
2. Nitrate exceeded the action limits in Sandstone A in UP1, UP2, and WU; in Sandstone B in the 1319 Area and UP2; and in the alluvium/transition zone in the Western Alluvial Area.
3. Results shown for Monitoring Wells T-55 and T-89 were from samples labeled in the field as GP-WAA-19 and GP-WAA-21, respectively.

BA = Burial Area  
 J = Estimated Value  
 J+ = Estimated Value, Biased High  
 J- = Estimated Value, Biased Low  
 ND = Not Detected  
 UP = Uranium Pond



COORDINATES : (NAD 83) STATE PLANE OKLAHOMA NORTH FEET  
 DATE : AERIAL PHOTO - 2010 / MAP PRODUCED - APR 2015





**LEGEND**

- Clay/Silt
- Sand (Fine to Coarse)
- Sand (Coarse)/Gravel
- Approx. Water Table
- Approx. Top of Rock

**NOTES**

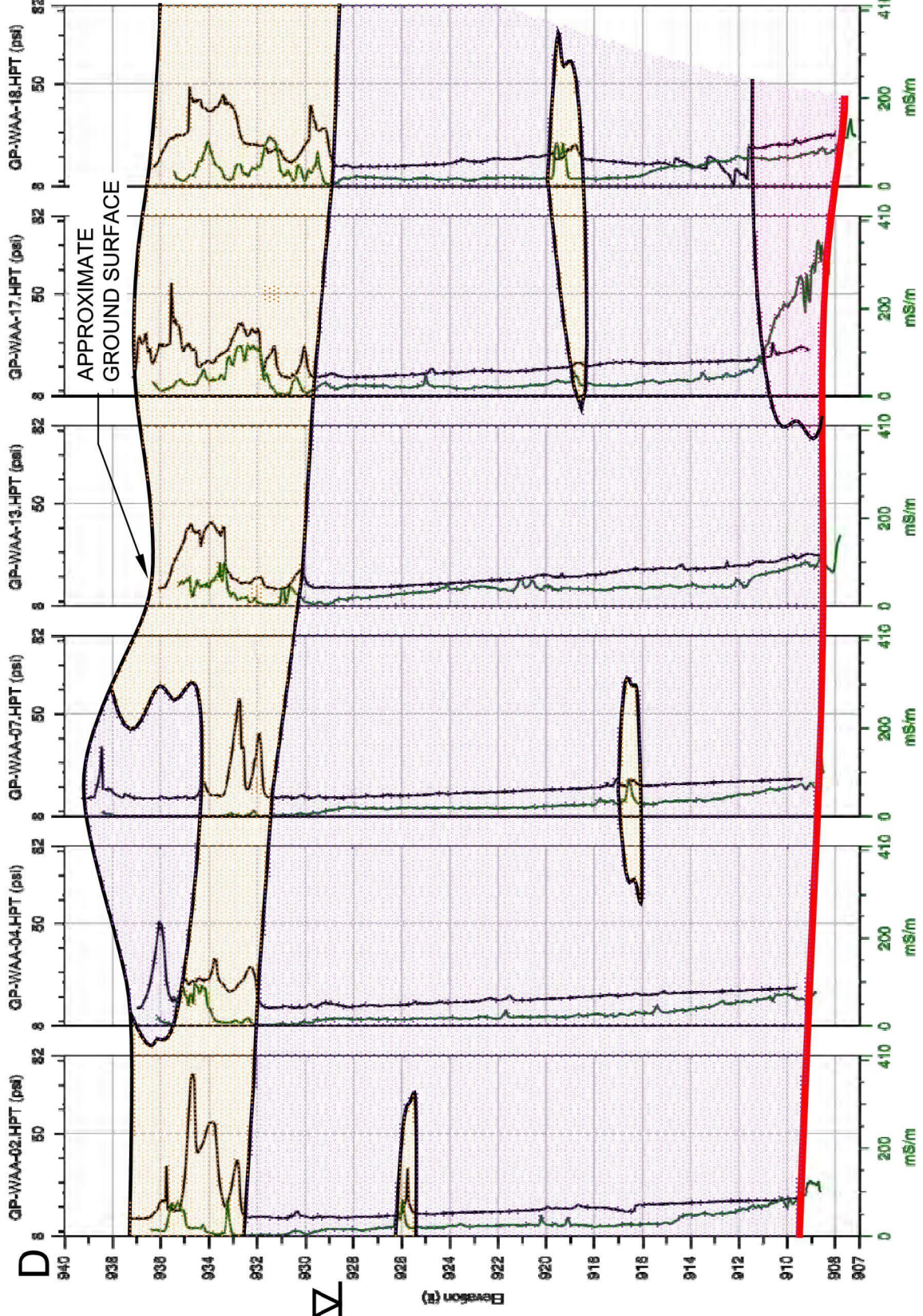
psi = Pounds per square inch  
mS/m = Millisiemens per meter  
Elevation = Feet above mean sea level

**BURNS MEDONNELL**

Figure 4-2  
WAA CROSS-SECTION (C-C')  
2014 DESIGN INVESTIGATION  
CIMARRON SITE, OKLAHOMA



D'



D



**NOTES**

psi = Pounds per square inch  
 mS/m = Millisiemens per meter  
 Elevation = Feet above mean sea level



Figure 4-3  
 WAA CROSS-SECTION (D-D')  
 2014 DESIGN INVESTIGATION  
 CIMARRON SITE, OKLAHOMA



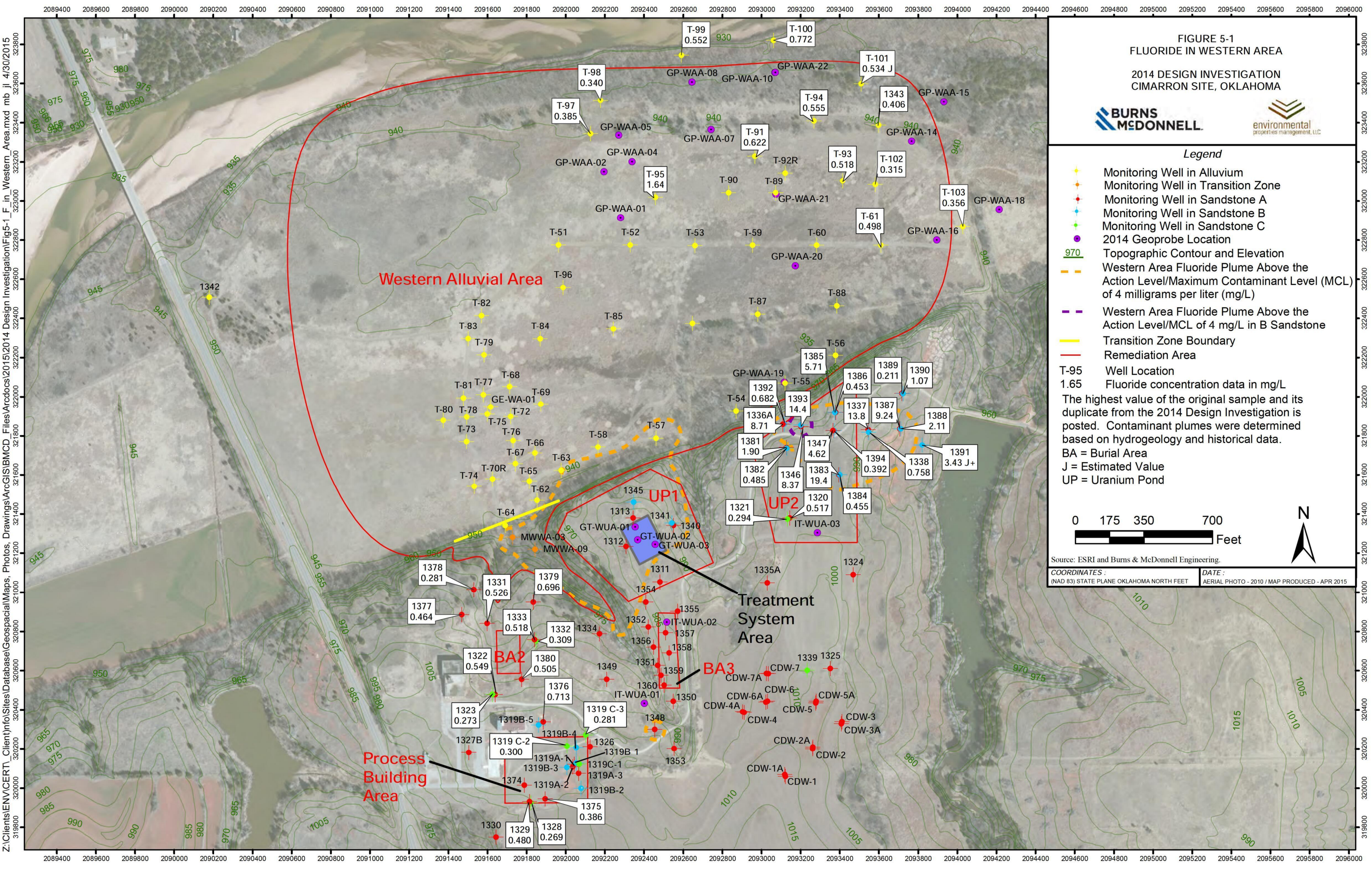


FIGURE 5-1  
 FLUORIDE IN WESTERN AREA  
 2014 DESIGN INVESTIGATION  
 CIMARRON SITE, OKLAHOMA



Legend

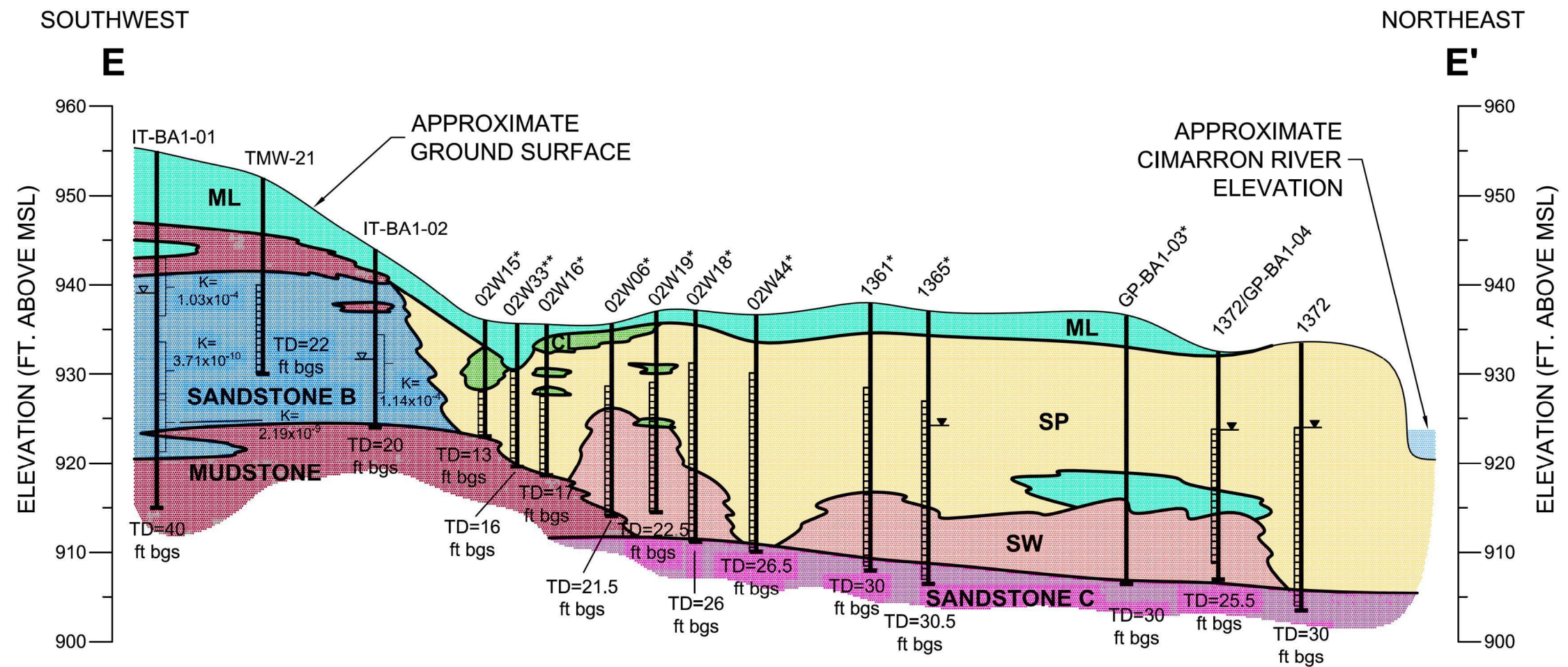
- ★ Monitoring Well in Alluvium
  - ★ Monitoring Well in Transition Zone
  - ★ Monitoring Well in Sandstone A
  - ★ Monitoring Well in Sandstone B
  - ★ Monitoring Well in Sandstone C
  - 2014 Geoprobe Location
  - Topographic Contour and Elevation
  - - - Western Area Fluoride Plume Above the Action Level/Maximum Contaminant Level (MCL) of 4 milligrams per liter (mg/L)
  - - - Western Area Fluoride Plume Above the Action Level/MCL of 4 mg/L in B Sandstone
  - Transition Zone Boundary
  - Remediation Area
  - T-95 Well Location
  - 1.65 Fluoride concentration data in mg/L
- The highest value of the original sample and its duplicate from the 2014 Design Investigation is posted. Contaminant plumes were determined based on hydrogeology and historical data.  
 BA = Burial Area  
 J = Estimated Value  
 UP = Uranium Pond



Source: ESRI and Burns & McDonnell Engineering.  
 COORDINATES : (NAD 83) STATE PLANE OKLAHOMA NORTH FEET      DATE : AERIAL PHOTO - 2010 / MAP PRODUCED - APR 2015

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**LEGEND**

- ▽ WATER LEVEL MEASURED IN OPEN BOREHOLE 11/2014
- ▼ ALLUVIUM WATER LEVEL MEASURED 12/2014
- ⌋ PACKER TEST INTERVAL
- ▬ WELL SCREEN
- K HYDRAULIC CONDUCTIVITY (cm/sec)
- CL CLAY
- ML SILT
- SP POORLY GRADED SAND
- SW WELL GRADED SAND
- \* WELL PROJECTED ONTO PROFILE
- TD TOTAL DEPTH
- ft bgs FEET BELOW GROUND SURFACE
- cm/sec CENTIMETERS PER SECOND
- MSL MEAN SEA LEVEL

**NOTES**

1. HORIZONTAL SCALE AND SURFACE TOPOGRAPHY ARE APPROXIMATE
2. CORRELATION OF GEOLOGICAL UNITS IS AN INTERPRETATION

**HORIZONTAL SCALE**



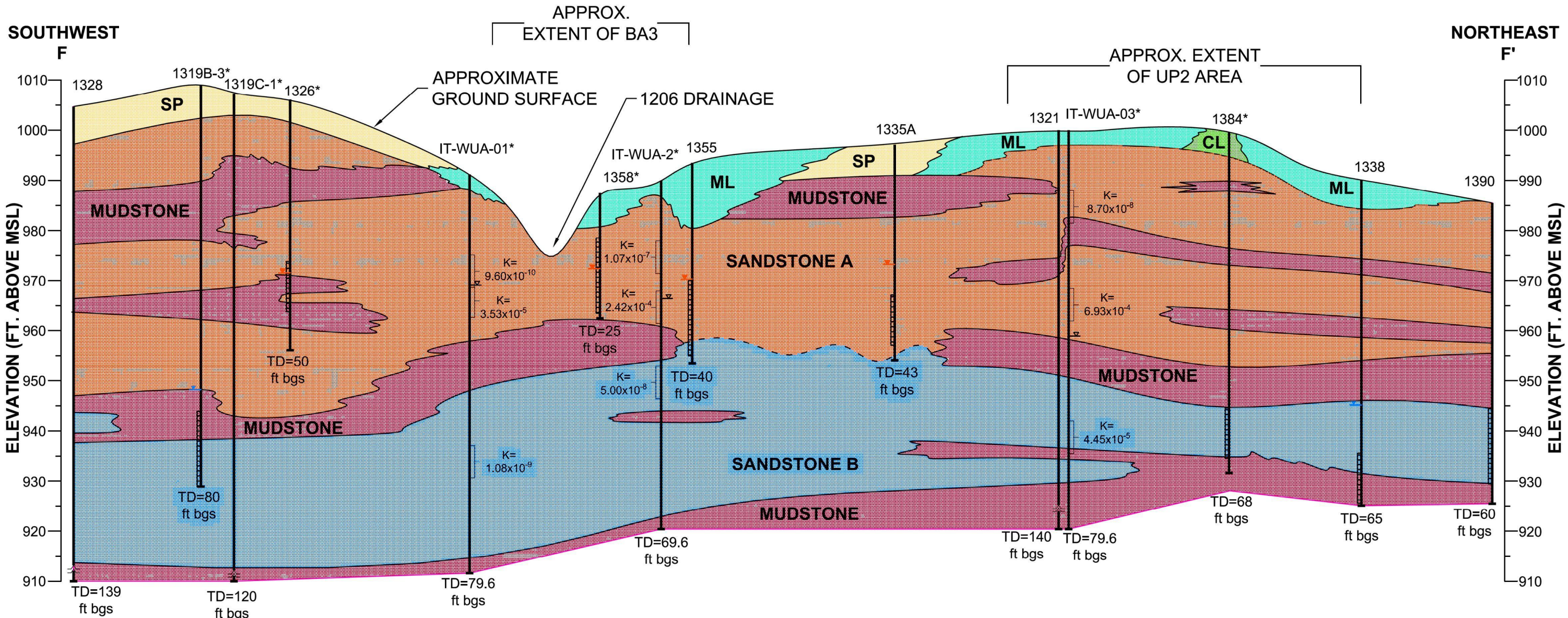
**VERTICAL SCALE**



**BURNS & MCDONNELL**

**Figure 10-1  
BA1 CROSS-SECTION (E-E')  
2014 DESIGN INVESTIGATION  
CIMARRON SITE, OKLAHOMA**





**LEGEND**

- WATER LEVEL MEASURED IN OPEN BOREHOLE 11/2014
- SANDSTONE A WATER LEVEL MEASURED 11/15/2013
- SANDSTONE B WATER LEVEL MEASURED 11/15/2013
- PACKER TEST INTERVAL
- WELL SCREEN
- K** HYDRAULIC CONDUCTIVITY IN CENTIMETERS PER SECOND (cm/sec)
- CL** CLAY
- ML** SILT
- \*** BEND IN PROFILE
- TD** TOTAL DEPTH
- ft bgs** FEET BELOW GROUND SURFACE
- MSL** MEAN SEA LEVEL

**NOTES**

1. HORIZONTAL SCALE AND SURFACE TOPOGRAPHY ARE APPROXIMATE
2. CORRELATION OF GEOLOGICAL UNITS IS AN INTERPRETATION
3. BA3 = Burial Area #3
4. UP2 = Uranium Pond #2

**HORIZONTAL SCALE**

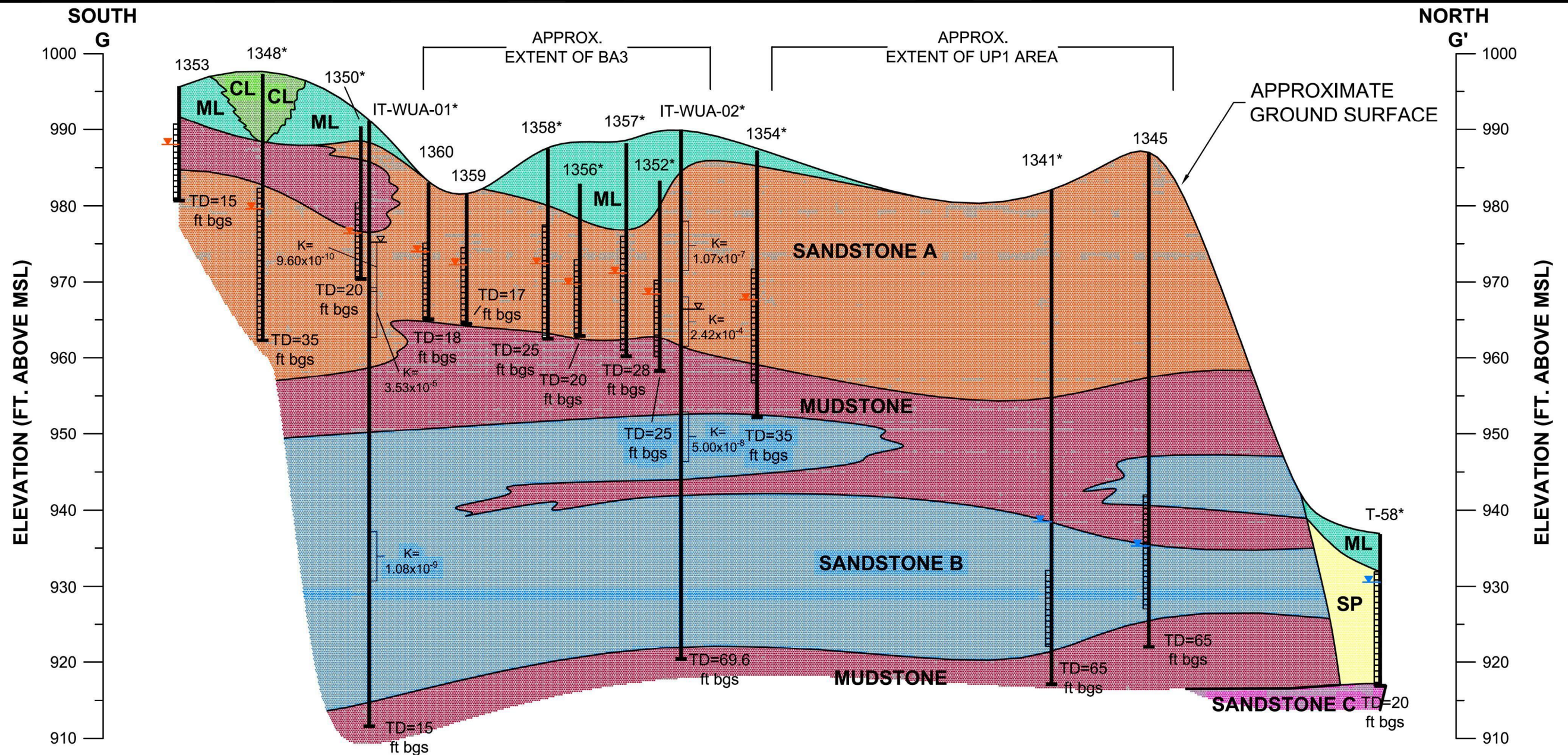


**VERTICAL SCALE**



**Figure 10-2**  
**WUA CROSS-SECTION (F-F')**  
**2014 DESIGN INVESTIGATION**  
**CIMARRON SITE, OKLAHOMA**





**LEGEND**

- WATER LEVEL MEASURED IN OPEN BOREHOLE 11/2014
- SANDSTONE A WATER LEVEL MEASURED 11/15/2013
- SANDSTONE B & ALLUVIUM WATER LEVEL MEASURED 11/15/2013
- PACKER TEST INTERVAL
- WELL SCREEN
- K** HYDRAULIC CONDUCTIVITY (cm/sec)
- CL** CLAY
- ML** SILT
- \*** BEND IN PROFILE
- TD** TOTAL DEPTH
- ft bgs** FEET BELOW GROUND SURFACE
- MSL** MEAN SEA LEVEL
- cm/sec** CENTIMETERS PER SECOND

**NOTES**

1. HORIZONTAL SCALE AND SURFACE TOPOGRAPHY ARE APPROXIMATE
2. CORRELATION OF GEOLOGICAL UNITS IS AN INTERPRETATION
3. BA3 = BURIAL AREA #3
4. UP1 = URANIUM POND #1

**HORIZONTAL SCALE**



**VERTICAL SCALE**



**Figure 10-3**  
**BA#3 CROSS-SECTION (G-G')**  
**2014 DESIGN INVESTIGATION**  
**CIMARRON SITE, OKLAHOMA**