

**Unit Descriptions:**

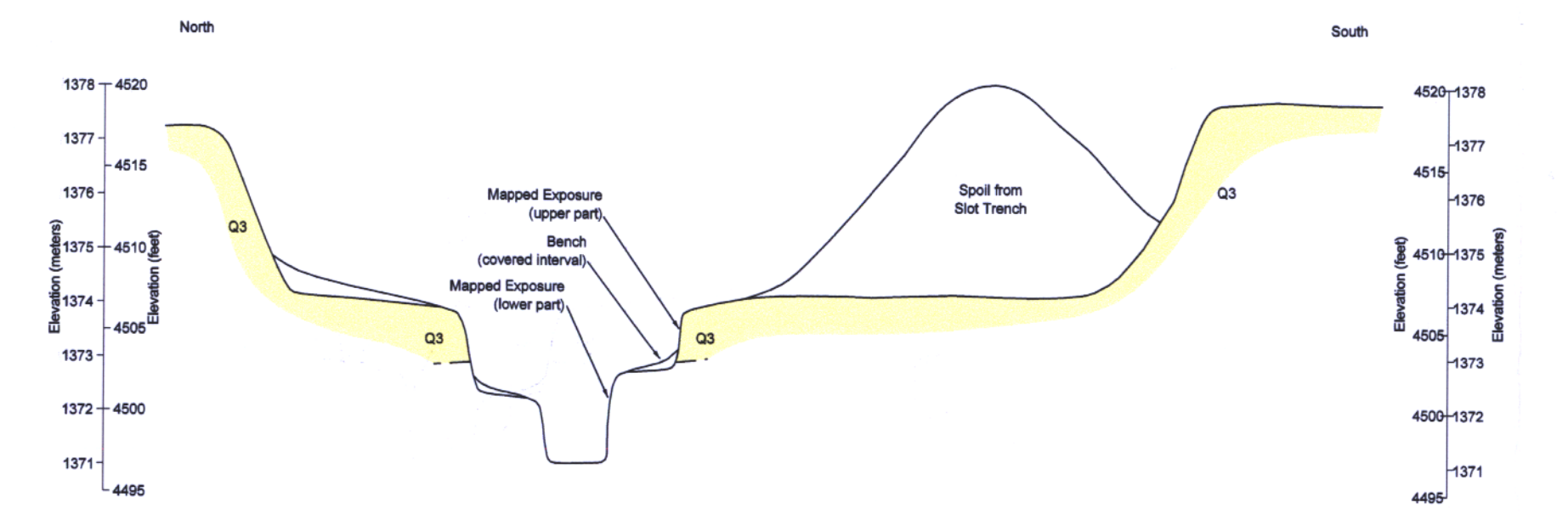
- Quaternary Deposits:**
- Q3** Post-Provo Sand Ramp  
Very pale brown (10YR 7/3,m) fine SAND; well sorted, isolated angular to subrounded clasts from coarse sand to 2 cm; includes SANDY GRAVEL lenses; mode grain size between 2 mm and 2 cm; basal cobble and boulder lag gravel, maximum clast size up to 30 cm
  - Q3a** Stansbury Shoreline Facies (Gravel bar?)  
SANDY GRAVEL; matrix-supported; rounded to subrounded pebbles and cobbles; mode 2 to 4 cm, maximum size 15 cm; loose; thin carbonate coatings on clast bottoms
  - Q2a** Post Little Valley-Pre Bonneville Sand Ramp  
Light yellowish brown (2.5YR 8/4,m) SANDY GRAVEL lenses and lag deposits; subangular to rounded pebble to cobble gravel clasts, maximum clast size 10 cm, mode grain size between 3 mm to 3 cm; Stage II+ carbonate soil development characterized by massive carbonates in matrix
  - Q2b** Post Little Valley-Pre Bonneville Sand Ramp  
White (10YR 8/1,m) in upper part and along fractures grading down to very pale brown (10YR 7/3, m) SILTY SAND; scattered subangular coarse sand to pebble-size clasts up to 2 cm, isolated subrounded to rounded clasts up to 5 cm; Stage II+ carbonate cementation in matrix
  - Q2c** Post Little Valley-Pre Bonneville Channel Deposit  
Very pale brown (10YR 7/3,m) SANDY GRAVEL; silty fine sand matrix; subangular to rounded pebble to boulder size clasts; maximum size 50 cm, mode <1 cm to 3 cm; poorly sorted; Stage II+ carbonate (1 to 2 mm thick rinds on clast bottoms, thin coatings on tops of clasts, few 1 to 2 % thin, discontinuous filaments in sandy matrix; rare 4 to 5 mm thick rinds may be on clasts reworked from older gravel deposits
  - Q1c** K Soil Horizon Formed on Pre-Little Valley Alluvium (Channel Deposit) White (10YR 8/1, m) in upper part, pinkish white (5YR 8/2, m) and light gray (5YR 7/2, m) in lower part. SANDY GRAVEL, subangular to subrounded pebble to boulder-size clasts, maximum diameter 30 cm, mode grain size 2 mm to 3 mm; Stage IV carbonate with well developed 0.5 to 1.0 cm thick platy structure throughout unit, well cemented matrix, hard
  - Q1b** Pre-Little Valley Alluvium/Colluvium  
Very pale brown (10YR 8/2, m) SILTY SAND; matrix supported, subangular to subrounded clasts in coarse sand and 5 mm fine sand and silt matrix
  - Q1a** Pre-Little Valley Alluvium (Channel Deposit)  
Light yellowish brown (10YR 8/4, m) SANDY GRAVEL; subangular to subrounded clasts, maximum size 70 cm in diameter; mode pebble to fine gravel; carbonate rinds on clasts range from 1 to 5 mm thick
- Quaternary? / Tertiary Deposit:**
- Q1** Landslide Debris?  
Light gray to very pale brown (10YR 7/2.5, d), GRAVELLY SANDY SILT, ~15 to 20% fine gravel (mode <2 cm), matrix-supported gravel clasts, subangular and subrounded locally-derived dolomite (from Hidden Knolls) and Tertiary siltstone and claystone; massive breaking into small subangular blocky structure, slightly stony, slightly plastic. The unit is the steeper parts of the trench is massive, hard, moderately thick clay films on pebble clasts. Where the unit is exposed near the Tertiary/Quaternary contact the unit has Stage II carbonate development (1 to 2 mm thick rinds on bottoms of clasts)

- Tertiary Units:**
- T1a** White claystone
  - T1B** Pale brown siltstone with light brown claystone interbeds
  - T2** Brown claystone
  - T3** Pale brown sandy siltstone
  - T4** Light brown silty claystone
  - T5a** White volcanic ash
  - T5b** White to light gray reworked ash; cross bedding and graded bedding
  - T5c** Dirty reworked ash, well bedded
  - T6** Reddish brown interbedded claystone and siltstone
  - T7** Brown claystone; weathered to pink, green and light brown
  - T8** Medium brown claystone
  - T9** Interbedded pale brown siltstone and brown claystone; siltstone beds range in thickness from 3 to 7 cm
  - T10** Medium brown claystone; weathered to olive gray in upper 30 cm; small subangular blocky structure
  - T10a** Pale brown siltstone
  - T11** Interbedded thin to medium thick light gray siltstone and thin greenish gray and red claystone
- Paleozoic**
- P1** Dolomite?; weathered, sheared, and broken; includes dark gray blocks adjacent to pale greenish yellow more broken bedrock.
- Map Symbols**
- Lithologic contact: dashed where less distinct or gradational
  - Faults and Shears
  - Shear fabric
  - Krotovina (filled animal burrow)
  - Volcanic ash (vitrific tuff sample)

- T12** Overturned sequence of interbedded pale brown claystone, silty claystone, and clayey siltstone, and greenish brown claystone; selected contacts shown on log (probably correlative in part with Units T6 and T7)
- T13** Pale brown tuffaceous siltstone
- T14** Pale brown tuffaceous siltstone; hard, blocky
- T15** Grayish green claystone
- T16** Green weathered silty claystone; sheared
- T17** Pale brown tuffaceous siltstone
- T18** Medium brown (green in upper weathered zone) claystone
- T19** Interbedded claystone (similar to T18) and pale brown siltstone
- T20** Pebbly sand; fining upward to coarse sand
- T21** Pale brown siltstone
- T22** Pale brown interbedded siltstone and claystone; siltstone beds range in thickness from 6 to 15 cm
- T23** Brown claystone; massive; upper 15 cm is pink to green and brown
- T24** Light grayish brown and white claystone
- T25** Light brown siltstone; blocky structure
- T26** Pale greenish gray to white siltstone

**Notes**

- n1 Mullion plunge 30°SE
- n2 Red clay seam
- n3 Intensely sheared T2
- n4 Conjugate shear N45E; T6NW
- n5 T6; disrupted in fault zone
- n6 T5c and T6 disrupted in fault zone
- n7 Due to benching of the trench exposures it is difficult to trace individual faults into lower panel. The lower contact of Q2a in the lower part of the trench is displaced, but due to the loose nature of the pea gravel and the lack of a vertical wall in the upper part of the lower panel, amounts of displacement were difficult to measure
- n8 Unit is displaced by numerous small (<5 cm vertical displacement) faults not shown on trench log
- n9 Pea green secondary crystalline mineralization
- n10 Primarily siltstone
- n11 Boudin of white claystone
- n12 Massive light gray ash
- n13 Reworked pale olive ash
- n14 Zone of sheared grayish brown claystone and boudins of light gray claystone
- n15 Subrounded block of carbonate cemented gravel (Q/T)
- n16 Gravel clasts along sheared contact
- n17 Sharp, subvertical contact; possible fault contact
- n18 Silty sand (reworked ash); hard
- n19 Pebbly silty sand; includes large 15 cm long, subrounded boulder clast.
- n20 Gravel clasts (Q/T) in green claystone; sheared along fault
- n21 Pale brown tuffaceous siltstone and grayish brown claystone; deformed and faulted; contorted bedding; lenses of Q/T gravel along clayey shear zones
- n22 Tuff (?) in sandy gravel



Trench T-1, view looking east

**MAP OF SOUTH WALL TRENCH T-1**  
Private Fuel Storage Facility  
Skull Valley, Utah

	Project No. 4790	Plate 2
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