R-234

T22S R1W 5116
Sec 20

Memorandum · UTAH DEPARTMENT OF TRANSPORTATION

DATE: January 30, 1981

TO : J. Q. Adair, Chief, Roadway Design Division

FROM : Edwin E. Lovelace, Engineer of Materials and Research

FOLDER DATA

SUBJECT: I-70-1(?5)48 - Sigurd to Salina
Subsoils Conditions at Sevier River Crossing, Station 2537+50 E.B.L.

SITE CONDITIONS

As requested, we have investigated the subsoils conditions at the Sevier River crossing site for the above project. Two different design concepts for the crossing are to be considered: (1) a 34 ft. by 10 ft. box culvert with earth embankments and (2) a bridge structure.

The crossing location is near the eastern edge of the Sevier River flood plain about three miles north of Sigurd. The ground slopes up very gently from the river in a westerly direction, but rises rather steeply to the east as the river skirts the low hills north of the Rocky Ford Dam.

The plans call for realignment of the river channel for a right angle crossing with the box culvert concept. Maximum embankment heights for the box culvert alternate are 38 to 40 feet.

SUBSOILS EXPLORATION

Four test holes were drilled at this site - one hole on each lane on both sides of the river. The correlation of subsoils between drill holes is fair to good. The generalized soil profile is as follows: from the ground surface to 6 feet - loose sandy silt with some clayey silt; from 6 feet to 20 feet - dense silty sand with gravel; from 20 feet to 29 feet - layers of silty fine sand and silty sand and gravel; from 29 feet to 34 feet - very stiff clayey silt with sand; from 34 feet to 37 feet - silty fine sand; from 37 feet to 39 feet - clayey silt and sandy silt; from 39 feet to the maximum depth of exploration - very dense sand and gravel with some silt. Ground water levels were observed at 3.8 to 5.6 feet below the ground surface. Refer to the attached geologist's Drilling Log for further details on the subsoils.

PRELIMINARY FOUNDATION ANALYSIS

The maximum expected foundation settlement for a 40 feet high embankment at this site is estimated to be 2.0 to 3.0 inches. Nearly all of this settlement should occur during embankment loading. This settlement estimate is based on the assumption that the upper 6 to 7 feet of material including the loose sandy silt and clayey silt near the surface would be excavated and removed for construction of the box culvert to the river flowline elevation.

Form R-353

Date Begun 1-14-81
Date Completed 1-14-81
Hole Diameter 3"

UTAH DEPARTMENT OF TRANSPORTATION
MATERIALS AND TESTS SECTION
DRILLING LOG

Hole No. 4
Sheet 1 of 3
Total Depth 60'

Project No. I-70-1(12)148
Project Name Sigurd to Salina — Sevier Co.
I-70 over Sevier River — Equation: Project Line Sta. / Other Line Sta.
Type of Structure Bridge
Sta. of Structure — Hole Sta. 2539+32 Rt. — Ft., Lt. 27 Ft., of ℄ WBL I-70
Collar Elevation 5174' Reference Plan & Profile Method Used Compass & Tape & Hand Level
Field Party Powell, Brown & Warwood Rig B-40 L

Ground Water Table

Depth in Ft.	5.6'				
Time	0830				
Date	1-16-81				

DESCRIPTION: Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths circulation lost, observed fluctuations in water level, notes on drilling ease, bits used, etc.

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph	Description
				0				Pushed casing to 5'
RB								
				1				Dk tan sandy silt to sandy silt with trace to some clay
				2–4				
	↓							Dk tan sand with some silt and a few thin lenses clayey silt.
Pen		9		5 (A)				3/6 6/6 18/6 30/6 — Loose to Dense — 1-14-81 / 1-15-81
"				(B) 6				Dk tan silty fine sand to fine sand with some silt
"				(C)				Dk tan sandy silt
"		48	4-7	(D)				
RB				7				Dk tan sand and gravel with some silt
				8–9				
	↓							Dk tan silty sand with trace fine gravel
				10				Drove casing to 10'
Pen								18/6 17/6 24/6 32/6 —Dense—
"		41		1		NR		No recovery
"								Dk tan silty sand with some fine gravel
"			NR	2				
RB								
				3				Lost circulation
								Dk tan silty sand and gravel
				4				Dk tan silty sand with some gravel
	↓							Drove casing to 15'
Pen				15				26/6 32/6 48/6 50/5 (Ref) — Very dense —
"		80		6				Dk tan silty sand and gravel to sand and gravel with some silt
"			4-17					
RB				7				High loss drilling water
				8				Mostly fine gravel
				9				
↓	↓			20				Drove casing to 20'

Form R-353

Date Begun 1-14-81
Date Completed 1-14-81
Hole Diameter
Project No. I-70-1(25)41
Project Name Signed to Salina
I-70 over Sevier River
Type of Structure
Sta. of Structure
Collar Elevation
Field Party Powell, Brown & Worwood

UTAH DEPARTMENT OF TRANSPORTATION
MATERIALS AND TESTS SECTION
DRILLING LOG

Hole No. 4
Sheet 2 of 3
Total Depth 60'
Equation Project Line Sta. / Other Line Sta.
Hole Sta. 2539+32 Rt. — Ft., Lt. 22 Ft., of ℄ ERL I-70
Reference
Method Used
Rig B-40L

Ground Water Table

Depth in Ft.					
Time					
Date					

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph	DESCRIPTION
				20	A			Dk tan sand and gravel with some silt
Pen					B			22/6 15/6 16/6 20/6 —Dense—
"		31		1	C			Dk tan silty fine sand
"			4-22					
RB				2				
				3				Dk tan sand and gravel with some silt
				4				
								Drove casing to 25
Pen				25	A			28/6 32/6 34/6 37/6 —Very Dense—
"		66		6	B			
"			4-27		C			Dk tan silty fine sand with a few 1"-2" lenses of gravel
RB				7				
				8				
				9				
								Dk tan clayey silt with sand to some sand
								Drove casing to 30'
Pen				30	A			17/6 9/6 16/6 27/6
"		25			C			Dk tan clayey silt with sand and gravel
"				1	D			Dk tan silty clay
"			4-32					Dk tan clayey silt with sand to sandy silt with clay
RB				2				Dk tan silty sand and gravel
								Dk tan clayey silty with some sand
				3				Dk tan silty sand
								Dk tan clayey silt with some sand. A few lenses silty clay
				4				
								Dk tan silty sand
Pen				35	A			17/6 37/6 45/6 49/6 —Very Dense—
"		82		6	C			Dk tan silty fine sand
"			4-37		D			
RB				7				
								Dk tan sandy silt with trace to some clay. Some thin lenses silty sand
				8				Dk tan clayey silt with sand and some fine gravel
								Dk tan silty sand
				9				Dk tan clayey silt with some sand and fine gravel
								Dk tan silty sand with some fine gravel
				40				Drove casing to 40'

No. [illegible]

Project Name Cisuera to Salina

[illegible] 10 over Sevier River — Equation: Project Line Sta. / Other Line Sta.

Type of Structure

Sta of Structure — Hole Sta. 2528+32 — Rt. — Ft., Lt. 22 Ft., of ℄ WBL I-70

Collar Elevation — Reference — Method Used

Field Party Powell, Brown and Warner — Rig B-40L

Ground Water Table

Depth in Ft.					
Time					
Date					

DESCRIPTION: Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths circulation lost, observed fluctuations in water level, notes on drilling ease, bits used, etc.

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph	Description
				40				← Dk tan silty sand
Pen		Ref	4-40.6		S			58/6 (Ref) — Very dense —
RB								Dk tan sand and gravel with some silt to silty sand and gravel. A few thin lenses clayey silt with sand
				2				Lost circulation
				3				(Mostly fine gravel)
				4				Drove casing to 45'
Pen				45				48/6 41/6 44/6 52/6 (Ref) — Very dense —
"		85		6				Dk tan silty sand and gravel
"			4-47	7				
RB				8				Dk tan sand and gravel with some silt. An occasional cobble
				9				Drove casing to 50'
Pen		Ref	NR	50	S			50/4 (Ref) — Very dense —
RB				1				No recovery
				2				Dk tan sand and gravel with silt to some silt. Some cobbles
				4				Drove casing to 55'
Pen		Ref	NR	55	S			50/3 (Ref) — Very dense —
RB				6				No recovery Dk tan sand and gravel with silt to some silt. An occasional cobble.
				7				
				8				
				9				
				60				

TD 60'
1-14-81

Form R-353

Date Begun 1-13-81
Date Completed 1-14-81
Hole Diameter 3"
Project No. I-70-1(25)48
Project Name Sigurd to Salina — Sevier Co.
I-70 over Sevier River
Type of Structure Bridge
Sta. of Structure — Hole Sta. 2538+46 — Rt. 20 Ft., Lt. — Ft., of ℄ EBL I-70
Collar Elevation 5173' — Reference Plan & Profile — Method Used Tape & Compass
Field Party Powell, Brown & Warnicord — Rig B-40L

UTAH DEPARTMENT OF TRANSPORTATION
MATERIALS AND TESTS SECTION
DRILLING LOG

Hole No. 2
Sheet 1 of 3
Total Depth 50'

Ground Water Table			
Depth in Ft.	5.4' WC	5.6' WC	5.6' WC
Time	0845	0830	0830
Date	1-14-81	1-15-81	1-16-81

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph	DESCRIPTION
								Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths circulation lost, observed fluctuations in water level, notes on drilling ease, bits used, etc.
RB				0				Pushed casing to 5'
				1				Dk tan sandy silt. Some grass roots
				2				A few 1/16"-1/8" thin lenses clayey silt
				3				
				4				
Pen				5	A			Dk tan sandy silt with trace clay
"		49						2/6 23/6 26/6 20/6 — Dense —
"				6	C			Dk tan fine sand with silt
"			3-7		D			Dk tan sand and gravel with some silt
RB				7	E			Tan silty sand to partially cemented silty sand
				8				Dk tan sand and gravel with some silt. A few cobbles
				9				
				10				Drove casing down to 10'
Pen					A			28/6 22/6 22/6 34/6 — Dense —
"		44		1	B			
"					C			Dk tan silty sand with some gravel
			3-12	2				
RB								Dk tan sand and gravel with some silt. A few cobbles
				3				High loss drilling water
				4				
				15				Drove casing down to 15'
Pen		Ref				NR		16/6 50/5" (Ref) — Very dense —
"			NR					No recovery
RB				6				
				7				Dk tan sand and gravel with some silt. An occasional cobble
				8				
				9				High loss drilling water
				20				Drove casing to 20'

Date Begun 1-13-81
Date Completed 1-14-81
Hole Diameter
Project No. I-70-1(25)48
Project Name Sigurd to Salina — Sevier Co
I-70 over Sevier River
Type of Structure
Equation Project Line Sta. / Other Line Sta.
Sta. of Structure — Hole Sta. 253E+46 — Rt. 20 Ft., Lt. — Ft., of ℄ EBL I-70
Collar Elevation — Reference — Method Used
Field Party Powell, Brown & Wordwood — Rig C-40C

UTAH DEPARTMENT OF TRANSPORTATION
MATERIALS AND TESTS SECTION
DRILLING LOG

Hole No.
Sheet 2 of 3
Total Depth 50'

Ground Water Table

Depth in Ft.					
Time					
Date					

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph	DESCRIPTION
Pen		Ref	NR	2 0	S	W/S		50/3 (Ref) — Very dense —
RB				1				Sampler probably on large gravel or cobble.
								No recovery
				2				Dk tan sand and gravel with some silt and cobbles
								Dk tan silty sand with some gravel.
				3				
				4				Dk tan sand and gravel with some silt. An occasional cobble
				25				Drove casing to 25'
Pen								26/6 40/6 50/3.5 (Ref) — Very dense —
"		Ref	3-26-3	6				Dk tan sand with silt and gravel
"								1-13-81 / 1-14-81
RB				7				Dk tan sand with some silt and gravel. A few thin lenses dk tan clayey silt
				8				
				9				
				30				Drove casing to 30'
Pen					A			20/6 13/6 14/6 17/6 — Very stiff —
"		27		1	B			Dk tan clayey silt with sand and some fine to med. gravel
"					C			
"			3-32	2				Dk tan clayey silt with trace fine sand
RB				3				
				4				Dk tan sand and gravel with some silt and cobbles.
								Dk tan silty sand with trace to some fine to med gravel
				35				Drove casing to 35'
Pen					A			13/6 36/6 50/5 (Ref) — Very dense —
"		Ref		6	B			Dk tan sandy silt to fine sand and silt
"			3-36-4					Dk tan sand and gravel with silt to some silt
RB				7				
				8				Dk tan sand and gravel with some silt. A few thin lenses dk tan clayey silt
				40				Drove casing to 40'

UTAH DEPARTMENT OF TRANSPORTATION
MATERIALS AND TESTS SECTION
DRILLING LOG

Hole No. 2
Sheet 3 of 3
Total Depth 50'

Date Completed 1-14-81
Hole Diameter
Project No. I-70-1(25)48
Project Name Sigurd to Salina
I-70 over Sevier River
Equation Project Line Sta. / Other Line Sta.
Type of Structure
Sta. of Structure Hole Sta. 2538+46 Rt. 20 Ft., Lt. — Ft., of ℄ ERL I-70
Collar Elevation Reference Method Used
Field Party Powell, Brown & Wormwood Rig B-40L

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph	DESCRIPTION
								Ground Water Table: Depth in Ft. / Time / Date
								Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths circulation lost, observed fluctuations in water level, notes on drilling ease, bits used, etc.
Pen RB		Ref	NR	40	SS	NR		50/4 (Ref) — Very dense — No recovery
				41				Dk tan sand and gravel with silt to some silt
				42				
				43				
				44				Dk tan sandy silt with trace clay
				45				Drove casing to 45'
Pen					CBA			2/6 30/6 34/6 50/5 (Ref) — Very dense —
"		64		46				Dk tan clayey silt with some sand and trace fine gravel
"								Dk tan sand and gravel with silt and some clay
"			3-469	47				Dk tan fine sand with some silt
RB				48				
				49				Dk tan sand and gravel with silt to some silt
				50				TD-50 1-14-81
				51				
				52				
				53				
				54				
				55				
				56				
				57				
				58				
				59				
				60				

Form R-35

Date Begun 1-6-81
Date Completed 1-7-81
Hole Diameter 3"
Project No. I-70-1(25)48

UTAH DEPARTMENT OF TRANSPORTATION
MATERIALS AND TESTS SECTION
DRILLING LOG

Hole No. 1
Sheet 1 of 3
Total Depth 60'

Project Name Sigurd to Salina — Sevier Co
I 70 over Sevier River or Box Alternate
Equation Project Line Sta. / Other Line Sta.
Type of Structure Bridge or Box
Sta. of Structure Approx 35' Fill — Hole Sta. 2537+00 — Rt. — Ft., Lt. — Ft., of ℄ EAL I-70
Collar Elevation 5172 — Reference Plan & Profile — Method Used Tape
Field Party Powell, Brown & Norwood — Rig B-40L

Ground Water Table					
Depth in Ft.	2.4' WC	2.8' *			
Time	0830	0830			
Date	1-7-81	1-8-81			

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph	DESCRIPTION
								Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths circulation lost, observed fluctuations in water level, notes on drilling ease, bits used, etc.
				0				Pushed casing to 2.5'
RB				1				Light brown sandy silt grading to sandy silt with tra. clay
				2				Drove casing to 5'
				3				Dk tan silty sand with some gravel
				4				Dk tan silty sand with gravel
Pen				5				8/6 14/6 31/6 34/6 — Dense —
"		45		6				
"			1-7					Dk tan sand and gravel with silt to some silt
RB				7				Drove casing to 10'
				8				
				9				
Pen				10				38/6 39/6 30/6 27/6 — Very dense —
"		69		1				
"			1-12					Dk tan sand and gravel with some silt
RB				2				
				3				
				4				
				5				Drove casing to 15'
Pen								18/6 14/6 22/6 30/6 — Dense —
"		36		6				
"			1-17					Dk tan silty sand
RB				7				Dk tan sand and gravel with some silt
				8				
				9				A few thin lenses gray clayey silt with sand and dk tan silty cla
								Lost circulation
				20				Drove casing to 20'

* 8' of casing left in drill hole

Form R-35

Date Begun 1-6-81
Date Completed 1-7-81
Hole Diameter
Project No. I-70-1(25) 48
Project Name Sigurd to Salina
I-70 over Sevier River
Type of Structure
Sta. of Structure
Collar Elevation
Field Party Powell, Brown & Norwood

UTAH DEPARTMENT OF TRANSPORTATION
MATERIALS AND TESTS SECTION
DRILLING LOG

Hole No. 1
Sheet 2 of 3
Total Depth 60'

Equation Project Line Sta. / Other Line Sta.
Hole Sta. 3537+00 Rt. — Ft., Lt. — Ft., of ℄ EBL I-70
Reference
Method Used
Rig B-40A

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph	DESCRIPTION
Pen				20				11/6 11/6 10/6 15/6 — Medium —
"				A				Dk tan sand (mostly fine) with some silt
"		21		B 1				
"			1-22					
RB				2				Dk tan sandy silt with trace clay
								Dk tan silty sand
				3				
								Dk tan sand and gravel with some silt.
				4				
								Drove casing to 25'
Pen				25				21/6 44/6 35/6 44/6 — Very dense —
"								
"		79		6				Dk tan sand and gravel with some silt
"			1-27					
RB				7				
				8				
				9				
								Drove casing to 30'
Pen				30				28/6 28/6 35/6 32/6 — Very dense —
"								
"		63		1				Dk tan sand and gravel with silt to some silt
"			1-32					
RB				2				
				3				Dk tan sand, gravel and silt. Mostly fine gravel
								Trace clay
				4				
								1-6-81
								Drove casing to 35' 1-7-81
Pen				35				34/6 36/2 33/6 42/6 — Very dense —
"				A				Dk tan sand and gravel with silt to some silt
"		64		B 6				
"			1-37					
RB				7				
				8				
				9				An occasional thin lense gray clayey silt with some sand
				40				Drove casing to 40'

Ground Water Table

Depth in Ft.					
Time					
Date					

DESCRIPTION

Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths circulation lost, observed fluctuations in water level, notes on drilling ease, bits used, etc.

Form R-353

UTAH DEPARTMENT OF TRANSPORTATION
MATERIALS AND TESTS SECTION
DRILLING LOG

Hole No. 1
Sheet 3 of 3
Total Depth 60'

Date Started 1-6-81
Date Completed 1-7-81
Hole Diameter
Project No. I-70-1(25) 48
Project Name Sigurd to Salina
I 70 over Sevier River
Equation Project Line Sta. / Other Line Sta.
Type of Structure
Sta. of Structure
Hole Sta. 2537+00 Rt. — Ft., Lt. — Ft., of ℄ EBL I-70
Collar Elevation Reference Method Used
Field Party Powell, Brown and Norwood Rig B-40L

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph	DESCRIPTION
								Ground Water Table: Depth in Ft. / Time / Date
								Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths circulation lost, observed fluctuations in water level, notes on drilling ease, bits used, etc.
Pen		Ref	1-40-9	40				49/6 50/4 (Ref) — Very dense —
"				1				
RB								Dk tan sand and gravel with silt to some silt
				2				
				3				
				4				Dk tan partially cemented sandy silt
								Drove casing to 45'
Pen				45				30/6 14/6 7/6 19/6 — Dense to stiff —
"		34		A				Dk tan sand and gravel with silt
"				B 6				Dk tan clayey silt with sand and trace fine gravel
"		26	1-47	C				
RB				7				Dk tan silty sand with trace fine gravel
				8				Dk tan partially cemented sandy silt
				9				Dk tan sand and gravel with some silt
								Drove casing to 50'
Pen		Ref	NR	50	SR	NR		50/2 (Ref) — Very dense —
RB				1				No recovery. Sampler on cobble
				2				Dk tan sand and gravel with some silt. Some cobbles from 50'-51'
				3				Dk tan silty sand with trace fine gravel
				4				Dk tan sand and gravel with some silt. An occasional cobble
Pen		Ref	NR	55	SR	NR		50/2 (Ref) — Very dense —
RB				6				No Recovery
				7				Dk tan sand and gravel with silt to some silt. An occasional cobble
				8				
				9				
				60				

TD-60
1-7-80

Form R-35

Date Begun 1-3-81
Date Completed 1-9-81
Hole Diameter 3"
Project No. I-70-1(25)48

UTAH DEPARTMENT OF TRANSPORTATION
MATERIALS AND TESTS SECTION
DRILLING LOG

Hole No. 2
Sheet 1 of 3
Total Depth 45'

Project Name Sigurd to Salina — Sevier Co
I 70 over Sevier River or Box Alternate
Equation Project Line Sta. / Other Line Sta.
Type of Structure Bridge or Box
Sta. of Structure Approx 35' Fill — Hole Sta. 2537+62 — Rt. — Ft., Lt. — Ft., of ℄ WBL I-70
Collar Elevation 5173' — Reference Plan & Profile — Method Used Tape & Compass
Field Party Powell, Brown & Warwood — Rig B-40L

Ground Water Table

Depth in Ft.	2.8' WC*	3.8 WC	3.8 WOC	OH caved in	at that dep
Time	1100	0900	1500		
Date	1-8-81	1-13-81	1-14-81		

DESCRIPTION

Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths circulation lost, observed fluctuations in water level, notes on drilling ease, bits used, etc.

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph	
				0				Pushed casing to 2'
RB				1				Dk tan sandy silt to sandy silt with trace to some clay
				2				Dk tan clayey silt with some sand
				3				Dk tan silty sand with gravel. Some cobbles at 1.8'-2.5
				4				Dk tan silty sand with trace fine gravel
				5				Drove casing to 5'
Pen								21/6 22/6 20/6 21/6 —Dense—
"		42		6				Dk tan sand and gravel with some silt
"			2-7	7				
RB				8				Lost circulation...Coming up around casing
				9				Drove casing to 10'
Pen				10				14/6 18/6 18/6 20/6 —Dense—
"		36		1				Dk tan sand and gravel with some silt
"			2-12	2				
RB				3				
				4				
				15				Drove casing to 15'
Pen								14/6 10/6 22/6 32/6 —Dense—
"		32		6				Dk tan silty sand
"			2-17	7				Dk tan sand and gravel with silt to some silt
RB				8				
				9				An occasional thin lense of dk tan clayey silt
				20				Drove casing to 20'

* 5' of casing in drill hole which had been drilled down to a depth of 9'

Form R-3

Date Begun 1-8-81
Date Completed 1-9-81
Hole Diameter 3"
Project No. I-70-1(25)48
Project Name Sigurd to Salina
I-70 over Sevier River
Type of Structure
Sta. of Structure
Collar Elevation
Field Party Powell, Braun & Workman

UTAH DEPARTMENT OF TRANSPORTATION
MATERIALS AND TESTS SECTION
DRILLING LOG

Hole No. 2
Sheet 2 of 3
Total Depth 45'
Equation Project Line Sta. / Other Line Sta.
Hole Sta. 2537+62 Rt. — Ft., Lt. — Ft., of ℄ I-70 WBL
Reference
Method Used
Rig B-40L

Ground Water Table

Depth in Ft.					
Time					
Date					

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph	DESCRIPTION
Pen				20				13/6 17/6 19/6 19/6 — Dense —
"				1				Dk tan sand and gravel with some silt
"		36						
"			2-22					Dk tan silty sand
RB				2				
				3				Dk tan sand and gravel with some silt
								Lost circulation
				4				
								Dk tan silty sand with a few thin lenses of gravel
				25				Drove casing to 25'
Pen								22/6 17/6 19/6 18/6 — Dense —
"				6				
"		36						Dk tan sand and gravel with some silt
"			2-27	7				
RB								
				8				Lost circulation
				9				An occasional cobble
				30				Drove casing to 30'
Pen								41/6 50/4.5 (12ef) — Very dense —
"		Ref	2-30.9	1				
RR								Dk tan sand and gravel with some silt. An occasional cobble
				2				
				3				Dk tan sand, gravel (mostly fine) and silt with some clay
				4				
				35				Drove casing to 35' 1-8-81
Pen								49/6 35/6 39/6 39/6 1-9-81
"		74		6				
"								Dk tan sand and gravel with some silt to silty sand with gravel
"			2-37	7				
RB								
								Dk tan sand, gravel and silt
				9				
								Dk tan sand and gravel with some silt to silty s... and gravel
				40				Drove casing to 40'

Form R-

Begun 1-8-81
Date Completed 1-9-81
Hole Diameter
Project No. I-70-1(25)48
Project Name Sigurd to Salina
I-70 over Sevier River
Type of Structure
Sta. of Structure
Collar Elevation
Field Party Powell, Brown & Werwood

UTAH DEPARTMENT OF TRANSPORTATION
MATERIALS AND TESTS SECTION
DRILLING LOG

Hole No. 2
Sheet 3 of 3
Total Depth 45'

Equation Project Line Sta. / Other Line Sta.
Hole Sta. 2537+62 Rt. — Ft., Lt. — Ft., of ℄ WBL I-70
Reference
Method Used
Rig B-40L

Drilling Method	Casing Depth	Blows per Foot	Sample Number	Depth in Feet	Sampling	Sample Recovery	Soil Graph
Pen				0			
"		59		1			
"			2-42	2			
RB				3			
				4			
				5			

Ground Water Table

Depth in Ft.					
Time					
Date					

DESCRIPTION

Soil type, color, texture, consistency, sampler driving notes, blows per foot on casing, depths circulation lost, observed fluctuations in water level, notes on drilling ease, bits used, etc.

3016 3316 2416 4016 — Very dense —
Dk tan sand and gravel with silt to some silt

Dk tan sand and gravel with a trace to some silt

TD 45
1-9-81

UTAH STATE DEPARTMENT OF TRANSPORTATION

MATERIALS AND RESEARCH

Summary of Test Data

Project Number I-70-1(25)48
Project Name Sigurd to Salina

Sheet 1 Of 1
Structure I-70 over Sevier

Boring No.	Depth	Grading Analysis Percent				Group Classification	Atterberg Limits		Water Cont. ω %	Wet Unit Weight γ P.C.F.	Dry Unit Weight γ_s P.C.F.	Specific Gravity Gs	Permeability k 10^{-4} cm/sec.		Unconfined Strength q_u T.S.F.	Shear Strength				Type Of Test
																Total Stress		Effective Stress		
		Gravel	Coarse Sand	Fine Sand	Silt and Clay		Liquid Limit L.L.	Plastic Index P.I.					Hor.	Vert.		ø°	C T.S.F.	ø'°	C' T.S.F.	
1	22	23	8	60	9	A-3(0)	NA	NP	20.0											
2	12	52	17	17	14	A-1-b	NA	NP	13.3											
2	17	60	13	13	14	A-1-a	NA	NP	10.2											
3	32	26	5	5	64	A-4(6)	29	3	29.2											
4	7	16	1	48	35	A-2-4	NA	NP	23.6											
4	22	22	55	13	10	A-1-G	NA	NP	20.5											

Triaxial Shear Test - Consolidate DIR Direct Shear Test UU - Unconsolidated, Undrained