

LOG OF BORING NO. B-01

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

GRAPHIC LOG	Boring Location: Pump Station Tanks	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
				NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
	Refusal at approximately 1 foot. Hole offset 3 feet west, refusal at similar depth encountered. Hole offset 15 feet east, refusal at similar depth encountered.									

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	NE	
WL		
WL		

Terracon

BORING STARTED		12-7-05	
BORING COMPLETED		12-7-05	
RIG	CME 750	FOREMAN	JRO
		JOB #	67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

BOREHOLE

LOG OF TEST PIT NO. B-01 (TP-01)

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Tanks

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

TESTS
UNCONFINED
STRENGTH, psf

2.2

5.75

11

POORLY GRADED SAND with SILT and GRAVEL Brown, moist, medium dense, with estimated 10-15% non-plastic fines, 70% coarse sand, and 10-15% sub-angular to sub-rounded coarse gravel and cobbles. Cobbles have a maximum particle size of 8" and is multilithic.

POORLY GRADED GRAVEL with SILTY Red-brown, moist, medium dense to dense with estimated 10% non-plastic fines, 40% medium to coarse sand, and 45-50% coarse gravel. Unit contains areas of moderate cementation, FeOx, highly weathered granite, and boulder and gravel percentage and size increase with depth.

POORLY GRADED GRAVEL with SAND Red-brown, moist, moderate density, with estimated 5% non-plastic fines, 35% coarse sand, and 60% coarse gravel. Unit contains cobbles and boulders to 2-3 feet in diameter.

1 GRAB

2 GRAB

3 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	NE	
WL		
WL		

Terracon

BORING STARTED 12-21-05

BORING COMPLETED 12-21-05

RIG CAT 330C L FOREMAN ZJB

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

BOREHOLE

LOG OF BORING NO. B-02

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Tanks

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

Refusal on boulder at approximately 2 feet.
Hole offset 3 feet east, refusal at 2-1/2 feet.
Hole offset 3 feet east, refusal at 2-1/2 feet.

2

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	NE	
WL		
WL		

Terracon

BORING STARTED		12-7-05	
BORING COMPLETED		12-7-05	
RIG	CME 750	FOREMAN	JRO
		JOB #	67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2008

BOREHOLE

LOG OF TEST PIT NO. B-02 (TP-02)

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Tanks

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1.5

POORLY GRADED SAND with SILT and GRAVEL Dark brown, moist, medium dense, with estimated 10% non-plastic to low-plasticity fines, 70% medium to coarse sand, and 20% coarse gravel. Unit contains large, subrounded boulders with some 4-5" cemented clasts.

SILTY SAND Light brown, moist, dense, with estimated 35% non-plastic fines, 60% medium to coarse sand, and trace sub-angular to sub-rounded coarse gravel. Unit is moderately cemented and contains 2-4 foot diameter multilithic boulders.

5.3

POORLY-GRADED GRAVEL with SAND Dark brown, dry, medium dense, with estimated 5% non-plastic fines, 40% coarse sand, and 55% coarse gravel. Unit contains large boulders, possibly weathered in place with soil infilled fractures.

5

10

14.5

GP 3 GRAB

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL	NE	
WL		
WL		

Terracon

BORING STARTED	12-21-05
BORING COMPLETED	12-21-05
RIG CAT 330C L	FOREMAN ZJB
JOB #	67055025

BOREHOLE 055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. B-02 (TP-02)

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

Dry Density at 4.0'=102.8 pcf. Wet Density
at 4.0'=108.7 pcf.

The stratification lines represent the approximate boundary lines
between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL

Terracon

BORING STARTED 12-21-05

BORING COMPLETED 12-21-05

RIG CAT 330C L FOREMAN ZJB

JOB # 67055025

BOREHOLE 055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF BORING NO. B-03

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Tanks

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

Refusal at approximately 1 foot. Hole
offset 3 feet north, refusal at 1 foot. Hole
offset 5 feet west, refusal at 2 feet.

2

The stratification lines represent the approximate boundary lines
between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ▽ NE ▽

WL ▽ ▽

WL

Terracon

BORING STARTED 12-7-05

BORING COMPLETED 12-7-05

RIG CME 750 FOREMAN JRO

JOB # 67055025

355025 GINT.GPJ TERRACON.GOT 8/7/2006

LOG OF TEST PIT NO. B-03 (TP-03)

Page 1 of 2

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Tanks

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1.5

2.5

8

15

POORLY GRADED SAND with SILT

Dark brown, damp to moist, medium dense, with estimated 5-10% non plastic fines, 80-85% fine to coarse sand, and 10% fine to coarse subrounded gravel. Organics in upper foot.

POORLY GRADED SAND with GRAVEL

Light brown, damp, dense, with estimated 5% non plastic fines, 70% fine to coarse sand, and 25% fine to coarse subrounded gravel.

SILTY SAND with GRAVEL Brown to grey, damp, very dense, with estimated 15% non plastic fines, 65% fine to coarse sand, and 20% coarse subangular to angular gravel. Unit contains approximately 80% cobbles and boulders to +3 feet in diameter. Volcanic and granitic material. Difficult excavation, soil classification represents excavated material.

POORLY-GRADED GRAVEL Light brown to grey, damp, very dense, with estimated 5% non plastic fines, 10% fine to coarse sand, and 85% coarse subangular to angular gravel. Unit contains approximately 35% cobbles with trace boulders to +1 foot. Presence of large boulders decreased from previous unit.

SP
SM

1 GRAB

5.2

93

SM

2 GRAB

3.6

GP

3 GRAB

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL	NE	
WL		
WL		

Terracon

BORING STARTED	12-20-05
BORING COMPLETED	12-20-05
RIG CAT 330C L	FOREMAN NDT
JOB #	67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2005

BOREHO

LOG OF TEST PIT NO. B-03 (TP-03)

Page 2 of 2

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

Dry Density at 3'=93.1 pcf. Wet Density at 3'=97.2 pcf.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

NL ▽ NE ▽

WL ▽ ▽

WL

Terracon

BORING STARTED 12-20-05

BORING COMPLETED 12-20-05

RIG CAT 330C L FOREMAN NDT

JOB # 67055025

BOREHOLE 355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF BORING NO. B-04

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Tanks

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

Refusal on cobble at approximately 2 feet.
Hole offset 5 feet west, refusal at 2-1/2
feet. Hole offset 6 feet west, refusal at 1
feet.

2

The stratification lines represent the approximate boundary lines
between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ▽ NE ▽

WL ▽ ▽

WL

Terracon

BORING STARTED 12-7-05

BORING COMPLETED 12-7-05

RIG CME 750 FOREMAN JRO

JOB # 67055025

355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. B-04 (TP-04)

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Tanks

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

2.7

POORLY GRADED SAND with SILT and GRAVEL Brown, moist, medium dense, with estimated 10-15% non-plastic fines, 70% medium to coarse sand, and 10-15% coarse gravel to 1" in diameter. Unit contains an estimated 30% angular to sub-angular boulders up to 3' in diameter.

4.5

POORLY GRADED SAND with GRAVEL Red-brown, moist, dense, with estimated 10% non-plastic fines, 65% coarse sand, and 20-25% coarse gravel. Unit is mostly decomposed granite, moderately cemented, highly weathered, FeOx stained, with 40% cobbles and boulders.

10.3

POORLY GRADED SAND with GRAVEL Light brown, damp, medium dense, with estimated 5% non-plastic fines, 55% coarse sand, and 40% coarse gravel. Unit is mostly decomposed granite and schist, contains an estimated 50% boulders up to 2' diameter. Refusal at 10.3' due to large boulder.

Dry density at 2.5'=102.7 pcf. Wet density at 2.5'=109.9 pcf.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 12-21-05

BORING COMPLETED 12-21-05

RIG CAT 330C L FOREMAN ZJB

JOB # 67055025

355025 GINT.GPJ TERRACON GDT 6/7/2006

LOG OF BORING NO. B-05

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Tanks

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Dark brown, moist, medium dense, with estimated 15% non-plastic fines, 80-85% fine to coarse sand, and trace fine to coarse angular to sub-angular gravel.

SM

1

SPT

14

15

4

SILTY SAND with GRAVEL(SM) Light brown, damp, medium dense, with estimated 15% non plastic fines, 65% fine to coarse sand, and 20% fine to coarse sub-angular gravel. Driller reports decomposed rock at 7-7.5' and refusal at 7.5'.

5

SM

2

SPT

14

28

7.5

SM

3

SPT

0

50

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 12-7-05

BORING COMPLETED 12-7-05

RIG CME 750 FOREMAN JRO

JOB # 67055025

955025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. B-05 (TP-05)

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Tanks

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1.5

3

8

15

5

10

15

POORLY GRADED SAND with SILT

Dark brown, moist, medium dense, with estimated 5-10% non plastic fines, 85-90% fine to coarse sand, and 5% fine to coarse subrounded gravel. Organics in upper 1 foot.

SILTY SAND Light brown, damp, medium dense to dense, with estimated 20% non plastic fines, 80% fine to coarse sand, and trace fine to coarse subrounded to subangular gravel.

POORLY GRADED SAND with SILT and GRAVEL Light brown, damp, dense to very dense, with estimated 10% non plastic fines, 60% fine to coarse sand, and 30% fine to coarse subrounded to angular gravel. Unit contains approximately 50% cobbles and boulders to +2 feet in diameter. Volcanic and decomposed granite boulders.

POORLY GRADED SAND with SILT and GRAVEL Light brown, damp, dense to very dense, with estimated 10% non plastic fines, 60% fine to coarse sand, and 30% fine to coarse subrounded to angular gravel. Unit contains approximately 30% cobbles and boulders to 2 feet in diameter. Volcanic and decomposed granite boulders.

SM

1 GRAB

5.1

106

SP
SM

2 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 12-20-05

BORING COMPLETED 12-20-05

RIG CAT 330C L FOREMAN NDT

JOB # 67055025

355025 GINT GPJ TERRACON.GDT 9/7/2006

LOG OF BORING NO. B-06

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station (Old Location)

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND with GRAVEL Brown, damp, medium dense, with estimated 20% non-plastic fines, 60% fine to coarse sand, and 20% fine to coarse sub-angular gravel. Refusal at 4'. Moved 15' east, refusal at 3.5'.

SW 1 SPT 12 17

4

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL

Terracon

BORING STARTED 12-7-05

BORING COMPLETED 12-7-05

RIG CME 750 FOREMAN JRO

JOB # 67055025

BOREHOLE 355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. B-06 (TP-06)

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station (Old Location)

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1.5

SILTY SAND Dark brown, moist, loose to medium dense, with estimated 15% non plastic fines, 80% fine to coarse sand, and trace fine to coarse subrounded gravel. Organics in upper 1 foot.

POORLY GRADED SAND with SILT

Light brown, damp, medium dense, with estimated 10% non plastic fines, 80% fine to coarse sand, and 10% fine to coarse subrounded gravel.

4

SILTY SAND with GRAVEL Light brown, damp, dense to very dense, with estimated 15% non plastic fines, 50% fine to coarse sand, and 35% fine to coarse subrounded to subangular gravel. Unit contains approximately 25% cobbles and boulders to 2 feet in diameter.

5

10

15

SP
SM

1 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ∇ NE ∇

WL ∇ ∇

WL

Terracon

BORING STARTED 12-20-05

BORING COMPLETED 12-20-05

RIG CAT 330C L FOREMAN NDT

JOB # 67055025

355025 GINT.GPJ TERRACON.GDT 8/7/2006

LOG OF TEST PIT NO. PTP-01

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Septic (Old Location)

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SAMPLES

TESTS

1

POORLY GRADED SAND Dark brown, moist, loose to medium dense, with estimated 5% non plastic fines, 85% fine to coarse sand, and 10% fine to coarse subrounded gravel. Organics in upper 1 foot.

4

POORLY GRADED SAND with GRAVEL Medium brown, damp, medium dense, with estimated 5% non plastic fines, 80% fine to coarse sand, and 15% fine to coarse subrounded gravel.

Percolation test at approximately 3 feet:
Water drained in < 1 minute.

10

POORLY GRADED SAND with SILT and GRAVEL Medium brown, damp, dense, with estimated 10% non plastic fines, 50% fine to coarse sand, and 40% fine to coarse subrounded to subangular gravel. Unit contains approximately 45% cobbles to 1 foot in diameter. Decomposed granite boulders present.

13

POORLY GRADED SAND with SILT and GRAVEL Medium brown, dry to damp, dense, with estimated 10% non plastic fines, 50% fine to coarse sand, and 40% fine to coarse subrounded to subangular gravel. Unit contains approximately 45% cobbles to 1 foot in diameter. Size of cobbles/boulders increases with depth.

5

10

SP

1 GRAB

4.6

85

SP
SM

2 GRAB

5.9

100

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 12-20-05

BORING COMPLETED 12-20-05

RIG CAT 330C L FOREMAN NDT

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2005

LOG OF TEST PIT NO. PTP-02

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Septic Disposal Area

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1.5

POORLY GRADED SAND with SILT
Dark brown, moist, medium dense, with estimated 5-10% non plastic fines, 85-90% fine to coarse sand, and 5% fine to coarse subrounded gravel.

4.5

POORLY GRADED SAND with SILT and GRAVEL Light brown, damp, medium dense to dense, with estimated 10% non plastic fines, 75% fine to coarse sand, and 15% fine to coarse subrounded gravel.

5

SP
SM

2 GRAB

5.5

112

10

13

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ∇ NE ∇

WL ∇ ∇

WL

Terracon

BORING STARTED 12-20-05

BORING COMPLETED 12-20-05

RIG CAT 330C L FOREMAN NDT

JOB # 67055025

55025 GINT.GPJ TERRACON.GDT 6/7/2005

LOG OF TEST PIT NO. PTP-03

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Septic

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND with GRAVEL Brown, moist, dense, with estimated 25% non-plastic fines, 60% fine to coarse sand, and 15% fine to coarse gravel with a maximum grain size of >2 inches in diameter.

SM 1 GRAB

SILTY SAND with GRAVEL Brown, moist, dense, with estimated 25% low plasticity fines, 60% fine to coarse sand, and 15% fine to coarse gravel with a maximum grain size of >2 inches in diameter.

SM 2 GRAB

SILTY SAND with GRAVEL Brown, moist, dense, with estimated 20% non-plastic fines, 60% fine to coarse sand, and 20% fine to coarse gravel.

SM 3 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL NE

WL

WL

Terracon

BORING STARTED 4-13-06

BORING COMPLETED 4-13-06

RIG CAT 314C FOREMAN GCS

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. PTP-04

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station Septic

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

SAMPLES

TESTS

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND with GRAVEL Brown, moist, dense, with estimated 25% low plasticity fines, 60% fine to coarse sand, and 15% fine to coarse gravel.

SM 1 GRAB

SILTY SAND with GRAVEL Brown, moist, dense, with estimated 25% low plasticity fines, 60% fine to coarse sand, and 15% fine to coarse gravel. Unit contains trace boulders greater than 2 feet in diameter.

SM 2 GRAB

SILTY SAND with GRAVEL Brown, moist, dense, with estimated 25% low plasticity fines, 60% fine to coarse sand, and 15% fine to coarse gravel. Unit contains trace boulders greater than 2 feet in diameter.

SM 3 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ▽ NE ▽

WL ▽ ▽

WL ▽ ▽

Terracon

BORING STARTED 4-13-06

BORING COMPLETED 4-13-06

RIG CAT 314C FOREMAN GCS

JOB # 67055025

BOREHOLE 355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. PTP-07

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station

GRAPHIC LOG

DESCRIPTION

SAMPLES TESTS

DEPTH, ft. USCS SYMBOL NUMBER TYPE RECOVERY, in. SPT - N BLOWS / ft. WATER CONTENT, % DRY UNIT WT pcf UNCONFINED STRENGTH, psf

SILTY SAND with GRAVEL Brown, moist, dense to very dense, with estimated 35% non-plastic fines, 50% fine to coarse sand, 15% fine to coarse gravel. Fines toward bottom. Practical refusal on hardpan at 9 feet.

SM 1 GRAB

SM 2 GRAB

SM 3 GRAB

SM 4 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 4-12-06

BORING COMPLETED 4-12-06

RIG CAT 314C FOREMAN GCS

JOB # 67055025

355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. PTP-08

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, dense, with estimated 30% non-plastic fines, 60% fine to coarse sand, and 10% fine to coarse gravel. Boulders up to 2 feet in diameter below 5 feet.

SM 1 GRAB

SM 2 GRAB

SM 3 GRAB

11

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 4-11-06

BORING COMPLETED 4-11-06

RIG CAT 314C FOREMAN GCS

JOB # 67055025

355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. RTP-01

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station/Substation Access Road

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1

CLAYEY SAND Brown, moist, dense, with estimated 40% medium plasticity fines and 60% fine to coarse sand.

8

SILTY SAND Tan, moist, dense, with estimated 40% low plasticity fines, 60% fine to coarse sand, and trace gravel. Dry below 4.5 feet.

SC

1

GRAB

27.2

SM

2

GRAB

SM

3

GRAB

5

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 4-14-06

BORING COMPLETED 4-14-06

RIG CAT 314C FOREMAN GCS

JOB # 67055025

355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. RTP-02

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station/Substation Access Road

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, medium dense to dense, with estimated 30% low to non-plastic fines and 70% fine to coarse sand.

SM 1 GRAB

6.8

SM 2 GRAB

8

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ▽ NE ▼

WL ▽ ▼

WL

Terracon

BORING STARTED 4-13-06

BORING COMPLETED 4-13-06

RIG CAT 314C FOREMAN GCS

JOB # 67055025

BOREHOLE 355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. RTP-03

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Pump Station/Substation Access Road

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, medium dense to dense, with estimated 30% low to non-plastic fines and 70% fine to coarse sand. Some boulders greater than 1 foot in diameter below 5 feet.

SM 1 GRAB

SM 2 GRAB

8

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 4-13-06

BORING COMPLETED 4-13-06

RIG CAT 314C FOREMAN GCS

JOB # 67055025

BOREHOLE 355025 GINT.GPJ TERRACON.GOT 6/7/2006

LOG OF TEST PIT NO. STTP-01

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Surge Tank

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TOPSOIL

1

CLAYEY SAND with GRAVEL Brown, moist, dense, with estimated 15% low plasticity fines, 60% fine to coarse sand, and 23% fine to coarse gravel.

SC

1 GRAB

4

Practical refusal at 4 feet due to bedrock.

SC

2 GRAB

12.3

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 5-1-06

BORING COMPLETED 5-1-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. STTP-02

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Surge Tank

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TOPSOIL

POORLY GRADED SAND with SILT AND GRAVEL Brown, moist, very dense, with estimated 10% non-plastic fines, 60% fine to coarse sand, and 30% fine to coarse subangular gravel.

Practical refusal at 6 feet due to bedrock.

5

SP
SM

2 GRAB

16.7

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 5-1-06

BORING COMPLETED 5-1-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

BOREHOLE 355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-01

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

0.4

TOPSOIL Light brown, dry, medium dense, with estimated 10% non plastic fines, 70% fine to coarse sand, and 20% fine to coarse subangular gravel.

SILTY SAND Dark brown, damp, loose to medium dense, with estimated 15% non plastic fines, 85% fine to coarse sand, and trace fine subangular gravel. Grades to a lighter brown color with depth.

SM

1 GRAB

5

6

POORLY GRADED SAND with SILT

Light brown, damp, loose to medium dense, with estimated 10% non plastic fines, 90% fine to coarse sand (mostly fine to medium), and trace fine subangular gravel.

SP
SM

2 GRAB

10

SP
SM

3 GRAB

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL

Terracon

BORING STARTED 12-12-05

BORING COMPLETED 12-12-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

BOREHOLE 355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-02

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TESTS

POORLY GRADED SAND with SILT

Brown, damp, loose to medium dense, with estimated 10% non plastic fines, 90% fine to coarse sand, and trace fine to coarse subangular gravel.

5

SP
SM

1 GRAB

8

POORLY GRADED SAND with SILT

Brown, damp, loose to medium dense, with estimated 10% non plastic fines and 90% fine to coarse sand.

10

SP
SM

2 GRAB

10.5

Test pit abandoned at approximately 10-1/2 feet due to loose trench walls caving.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL

Terracon

BORING STARTED 12-12-05

BORING COMPLETED 12-12-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

BOREHOLE 355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-03

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

0.5

POORLY GRADED GRAVEL with SAND

Black-gray, dry, medium dense, with estimated 5% non plastic fines, 35% fine to coarse sand, and 60% fine to coarse subangular gravel.

SILTY SAND Medium brown, damp, loose to medium dense, with estimated 15% non plastic fines, 85% fine to coarse sand, and trace fine to coarse subangular gravel. Trace cobbles to 1 foot diameter present.

5

SM

1 GRAB

9.5

Test pit abandoned at approximately 9-1/2 feet due to loose trench walls caving.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL

Terracon

BORING STARTED 12-12-05

BORING COMPLETED 12-12-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

67055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-03B

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Substation

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

POORLY GRADED SAND with GRAVEL
Brown, moist, dense, with estimated 5% non-plastic fines, 80% fine to coarse sand, and 15% fine to coarse subrounded gravel. Common boulders to 2 feet in diameter.

5

SILTY SAND Light brown, moist, dense, with estimated 15% non-plastic fines, 80% fine to coarse sand, and 5% fine to coarse subrounded gravel up to 6 inches in diameter.

5

SP 1 GRAB

SM 2 GRAB

SM 3 GRAB

10

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL

Terracon

BORING STARTED 5-1-06

BORING COMPLETED 5-1-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

BOREHOLE 55025 GINT GPJ TERRACON GOT 6/7/2006

LOG OF TEST PIT NO. TP-04

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Medium brown, damp to moist, loose to medium dense, with estimated 15% non plastic fines, 85% fine to coarse sand, and trace fine to coarse subangular gravel. Thin coarse sand and fine gravel lens present at approximately 1 foot.

SM 1 GRAB

SILTY SAND Medium brown, damp to moist, loose to medium dense, with estimated 20% non plastic fines and 80% fine to medium sand.

SM 2 GRAB

Test pit abandoned at approximately 10 feet due to loose soil in trench walls caving.

The stratification lines represent the approximate boundary lines between soil and rock types: In-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 12-12-05

BORING COMPLETED 12-12-05

Base 580 Backhoe FOREMAN NDT

JOB # 67055025

BOREHOLE 67055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-04B

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

GRAPHIC LOG

Boring Location: Substation

DESCRIPTION

SILTY SAND with GRAVEL Brown, moist, dense, with estimated 5% non-plastic fines, 80% fine to coarse sand, and 15% fine to coarse, subround to round gravel. Boulders common up to 3 feet in diameter. Pit collapsed at 4 feet and 7.5 feet.

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

5

SM 1 GRAB

SM 2 GRAB

8.5

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL

Terracon

BORING STARTED 5-1-06

BORING COMPLETED 5-1-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

BOREHOLE 055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-05

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

POORLY GRADED SAND with SILT FILL

Light brown, damp, loose to medium dense, with estimated 10% non plastic fines and 90% fine to coarse sand. Thin layer of coarse gravel on surface.

SILTY SAND Dark brown, damp to moist, loose, with estimated 15% non plastic fines, 85% fine to coarse sand (mostly fine to medium), and trace fine subangular gravel.

1

5

SM 1 GRAB

9

POORLY GRADED SAND with SILT

Dark brown, moist, loose to medium dense, with estimated 10% non plastic fines, 90% fine to coarse sand, and trace fine to coarse subangular gravel. Weakly cemented/more consolidated with depth (at approximately 10.0 feet). Trace cobbles to +8 inches present at depth.

10

SP
SM 2 GRAB

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 12-12-05

BORING COMPLETED 12-12-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

BOREHOLE 155074 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-05B

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

GRAPHIC LOG

Boring Location: Substation

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

0.5

TOPSOIL

POORLY GRADED SAND WITH SILT

Brown, moist, dense, with estimated 10% non-plastic fines, 80% fine to coarse sand, and 10% fine to coarse sub-rounded to rounded clasts. Boulders up to 2 feet in diameter.

5

1 GRAB

2 GRAB

8

Trench repeatedly collapsed at 8 feet. Could not excavate further.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 5-1-06

BORING COMPLETED 5-1-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

55025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-06

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

POORLY GRADED SAND with SILT

Light brown, damp, medium dense, with estimated 10% non plastic fines, 80% fine to coarse sand, and 10% fine to coarse subangular gravel. Thin layer of coarse gravel on surface.

SILTY SAND Dark brown, moist, medium dense, with estimated 40% non plastic to low plasticity fines and 60% fine to medium sand.

SILTY SAND Light brown, damp to moist, loose to medium dense, with estimated 15% non plastic fines and 85% fine to coarse sand.

POORLY GRADED SAND with SILT

Light brown, moist, loose to medium dense, with estimated 10% non plastic fines and 90% fine to medium sand. Minor lumps of more cohesive material (SC?) present at depth.

SM 1 GRAB

SM 2 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE
WL
WL

Terracon

BORING STARTED 12-12-05

BORING COMPLETED 12-12-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-07

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Dark brown, moist, dense to very dense, with estimated 45% low plasticity fines and 55% fine sand.

3.5

POORLY-GRADED SAND Light brown, dry to damp, loose, with estimated 5% non plastic fines and 95% fine to medium sand. Minor moderately cemented layers.

5

SP

2 GRAB

10

SP

3 GRAB

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ∇ NE ∇

WL ∇ ∇

WL

Terracon

BORING STARTED 12-12-05

BORING COMPLETED 12-12-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

BOREHOLE 365025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-08

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Grey-brown, moist, medium dense to dense, with estimated 15-20% non plastic fines, 75% fine to coarse sand, and 5-10% fine gravel. Loose to approximately 1-1/2 feet. Very well cemented layers below approximately 1-1/2 feet.

5

SM 1 GRAB

10

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▼

WL ▽ ▼

WL

Terracon

BORING STARTED 12-13-05

BORING COMPLETED 12-13-05

RIG Case 580 FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-09

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, medium dense to dense, with 30% non plastic fines and 70% fine to coarse sand. Moderately to very well cemented. Clayey Sand (SC) layer approximately 2 inches thick at approximately 5 feet. Sparse Clayey Sand (SC) interbedding <1" thick between 8-10 feet.

5

SM

1 GRAB

10.5

SM

2 GRAB

45.0

72

10

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL NE

WL

WL

Terracon

BORING STARTED 12-13-05

BORING COMPLETED 12-13-05

RIG Case 580 FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF BORING NO. TP-10 (B-10)

Page 1 of 4

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
		NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
4	SP SM	1	SPT	18	27			
5	SP	2	SPT	18	48			
6.5	SP SM	3	SPT	16	51	9.8	114	
9.5	SP	4	SPT	17	55			
12	SP	5	SPT	18	47			
14.5								
15								

POORLY-GRADED SAND with SILT
Brown, damp to moist, medium dense, with 10% non plastic fines and 90% fine to medium sand.

POORLY-GRADED SAND Light brown, damp, dense, with estimated 5% non plastic fines and 95% fine to coarse sand.

POORLY-GRADED SAND with SILT
Medium brown, damp, very dense, with estimated 10% non plastic fines and 90% fine to coarse sand.

POORLY-GRADED SAND Light brown, damp to moist, very dense, with estimated 5% non plastic fines and 95% fine to coarse sand.

POORLY-GRADED SAND Medium brown, damp, dense, with estimated 5% non plastic fines and 95% fine to coarse sand.

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	20.0	
WL		
WL		

Terracon

BORING STARTED	12-9-05
BORING COMPLETED	12-9-05
RIG	CME 750
FOREMAN	NDT
JOB #	67055025

055025 GINT.GPJ TERRACON.GDT 8/7/2005

LOG OF BORING NO. TP-10 (B-10)

Page 2 of 4

CLIENT








ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

GRAPHIC LOG	DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS	
			NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf
	16.5	SP SM	6	SPT	16	36		
								
		SP SM	7	SPT	15	32	26.4	
	20	SM	8	SPT	13	30		
	21.5							
		SC	9	SPT	12	11		
	24.5							
		SM	10	SPT	15	14	29.8	
	26.5							
		SC	11	SPT	12	18		
	29.5							

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	20.0	▼
WL		▼
WL		

Terracon

BORING STARTED	12-9-05
BORING COMPLETED	12-9-05
RIG	CME 750
FOREMAN	NDT
JOB #	67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF BORING NO. TP-10 (B-10)

Page 3 of 4

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Light to medium brown, damp, very dense, with 16% non plastic fines and 84% fine to medium sand. Reddish-brown staining.

34.5

SILTY SAND Medium brown, damp, medium dense, with estimated 40% non plastic to low plasticity fines and 60% fine to medium sand.

35

SM

13

SPT

14

25

39

SILTY SAND Light brown, moist, very dense, with estimated 20% non plastic fines and 80% fine to medium sand. Weakly cemented.

40

SM

14

SPT

15

70

43.5

SILTY, CLAYEY SAND Medium brown, damp to moist, very dense, with estimated 25% non plastic to low plasticity fines and 75% fine to medium sand.

45

Continued Next Page

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL 20.0

WL

WL

Terracon

BORING STARTED 12-9-05

BORING COMPLETED 12-9-05

RIG CME 750 FOREMAN NDT

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF BORING NO. TP-10 (B-10)

Page 4 of 4

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY, CLAYEY SAND Medium brown, damp to moist, very dense, with estimated 25% non plastic to low plasticity fines and 75% fine to medium sand.

50

SILTY SAND Light to medium brown, damp to moist, very dense, with estimated 20% non plastic fines and 80% fine to coarse sand.

51.5

50

SC
SM

15

SPT

13

52

SM

16

SPT

14

79

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL 20.0

WL

WL

Terracon

BORING STARTED 12-9-05

BORING COMPLETED 12-9-05

RIG CME 750 FOREMAN NDT

JOB # 67055025

055025 GINT.GPJ TERRACON.GOT 6/7/2006

LOG OF TEST PIT NO. TP-11

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SAMPLES

TESTS

TOPSOIL

1.5

SILTY SAND with GRAVEL Brown, moist, medium dense, with estimated 20% non plastic fines, 65% fine to coarse sand, and 15% fine to coarse subangular to subrounded gravel. Weakly cemented.

5

6

SILTY SAND WITH GRAVEL Brown, moist, medium dense, with estimated 15% non plastic fines, 70% fine to coarse sand, and 15% fine gravel. Weakly cemented.

SM

1 GRAB

SM

2 GRAB

9

POORLY-GRADED SAND with SILT and GRAVEL Brown, moist, medium dense, with estimated 10% non plastic fines, 60% fine to coarse sand, and 30% fine to coarse subangular to angular gravel.

10

SP
SM

3 GRAB

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL ▽

Terracon

BORING STARTED 12-13-05

BORING COMPLETED 12-13-05

RIG Case 580 FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON GDT 6/7/2006

LOG OF TEST PIT NO. TP-12

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TOPSOIL

1

SILTY SAND with GRAVEL Brown, moist, medium dense, with estimated 20% low plasticity fines, 60% fine to coarse sand, and 20% subrounded to subangular gravel. Weakly cemented.

3.5

SILTY SAND Brown, moist, medium dense to dense, with estimated 30% low plasticity fines, 60% fine to coarse sand, and 10% fine gravel. Well to very well cemented.

5.5

SILTY SAND Brown, moist, medium dense to dense, with estimated 30% low plasticity fines, 60% fine to coarse sand, and 10% fine gravel. Well to very well cemented.

8

POORLY-GRADED SAND with SILT and GRAVEL Brown to grey, moist, very dense, with estimated 10% non plastic fines, 70% fine to coarse sand, and 20% fine subangular gravel. Very well cemented.

9.5

SM

1

GRAB

SM

2

GRAB

SM

3

GRAB

SP
SM

4

GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ∇ NE ∇

WL ∇ ∇

WL

Terracon

BORING STARTED 12-13-05

BORING COMPLETED 12-13-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-13

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

2.5

SILTY SAND Dark brown, damp to moist, dense, with estimated 15% non plastic fines and 85% fine to medium sand.

SM 1 GRAB

7

POORLY GRADED SAND with SILT Light brown, damp to moist, loose to medium dense, with estimated 10% non-plastic fines, 90% fine to coarse sand, and trace fine subangular gravel.

SP
SM 2 GRAB

11

POORLY-GRADED SAND Light brown, damp to moist, loose, with estimated trace non plastic fines and 95%+ fine to coarse sand.

SP 3 GRAB

Trench repeatedly collapsed at 10' - could not excavate further.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

/L	NE	▼
WL	▼	▼
WL		

Terracon

BORING STARTED 12-13-05

BORING COMPLETED 12-13-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

BOREHOLE 055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-14

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

SAMPLES TESTS

DEPTH, ft. USCS SYMBOL NUMBER TYPE RECOVERY, in. SPT - N BLOWS / ft. WATER CONTENT, % DRY UNIT WT pcf UNCONFINED STRENGTH, psf

1

SILTY SAND Dark brown, damp to moist, medium dense, with estimated 25% non plastic fines and 75% fine to medium sand.
SILTY SAND Light brown, damp, dense to very dense, with estimated 40% non plastic fines and 60% fine to medium sand. Minor moderately cemented sections present.

SM 1 GRAB

5.5

POORLY-GRADED SAND Light brown, damp to moist, loose to medium dense, with estimated 5% non plastic fines, 90% fine to coarse sand, and trace fine subangular gravel. Minor decomposed granite present.

SP 2 GRAB

8.5

POORLY-GRADED SAND with SILT Light brown, damp to moist, dense to very dense, with estimated 10% non-plastic fines, 80% fine to coarse sand, and 10% fine to coarse subangular to angular gravel. Increasing decomposed granite and fine gravel present with depth.

SP SM 3 GRAB

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ∇ NE ∇
WL ∇ ∇
WL

Terracon

BORING STARTED 12-13-05

BORING COMPLETED 12-13-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-15

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

WEATHERED BEDROCK Grey, white, orange, and brown, damp to moist, dense to very dense, excavates out as a Poorly-Graded Gravel with Sand, with estimated 5% non plastic fines, 30% fine to coarse sand, and 65% fine to coarse angular gravel. In situ material mainly weathered bedrock.

WEATHERED BEDROCK Black, moist, very dense. Material excavates out as a Poorly-Graded Gravel with Silt and Sand (GP-GM) with 10% low plasticity fines, 20% fine to coarse sand, and 70% fine to coarse gravel.

Practical Refusal

GP
GM 1 GRAB

GP
GM 2 GRAB

9.6

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ∇ NE ∇
WL ∇ ∇
WL

Terracon

BORING STARTED 12-13-05

BORING COMPLETED 12-13-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

255025 GINT.GPJ TERRACON.GDT 8/7/2008

LOG OF TEST PIT NO. TP-16

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

POORLY GRADED SAND with GRAVEL

Dark brown, moist, dense, with estimated 5% non plastic fines, 80-85% fine to coarse sand, and 10-15% fine to coarse gravel.

2.5

WEATHERED BEDROCK Decomposed granite, very dense. Practical refusal.

3

SP 1 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 12-13-05

BORING COMPLETED 12-13-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

BOREHOLE 055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-17

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Dark brown, moist, dense, with estimated 15% non to low plasticity fines and 85% fine to medium sand.

1.5

SILTY SAND Light brown, damp, dense to very dense, with estimated 15% non plastic fines and 85% fine to medium sand.

2.5

SILTY SAND Dark brown, damp to moist, very dense, with estimated 15% non plastic fines and 85% fine to coarse sand.

3.5

WEATHERED BEDROCK Decomposed granite
Practical refusal

4

SM 1 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL ▽

Terracon

BORING STARTED 12-14-05

BORING COMPLETED 12-14-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

255025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-18

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SAMPLES

TESTS

POORLY GRADED SAND with SILT

Dark brown, moist, medium dense, with estimated 10% non-plastic fines, 85% fine to coarse sand, and 5% fine to coarse subangular gravel.

POORLY GRADED SAND with SILT

Light brown, moist, dense to very dense, with estimated 10% non plastic fines and 90% fine to coarse sand (mostly medium to coarse). Decomposed granite appearance (coarse sand). Moderately cemented.

SILTY, CLAYEY SAND Medium brown, moist, dense, with estimated 40% non to low plasticity fines and 60% fine to medium sand.

SILTY SAND Light brown, moist, dense, with estimated 25% non to low plasticity fines, 75% fine to coarse sand, and trace fine to coarse subangular gravel.

SM 1 GRAB

SM 2 GRAB

SM 3 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ∇ NE ∇

WL ∇ ∇

WL ∇ ∇

Terracon

BORING STARTED 12-14-05

BORING COMPLETED 12-14-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 8/7/2006

LOG OF TEST PIT NO. TP-19

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1.5

SILTY SAND Dark brown, moist, medium dense, with estimated 15% non plastic fines and 85% fine to coarse sand.

6

SILTY, CLAYEY SAND Light brown, damp, dense to very dense, with estimated 40% non to low plasticity fines and 60% fine to medium sand.

8

SILTY SAND Light brown, damp, medium dense, with estimated 20% non plastic fines and 80% fine to coarse sand.

9

SILTY, CLAYEY SAND Light brown, dry to damp, dense to very dense, with estimated 40% non to low plasticity fines and 60% fine to medium sand.

12

SILTY SAND Dark brown, damp, medium dense, with estimated 20% non plastic fines, 80% fine to coarse sand, and trace fine subangular gravel.

SM

1 GRAB

5

SM

2 GRAB

10

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ∇ NE ∇

WL ∇ ∇

WL

Terracon

BORING STARTED 12-14-05

BORING COMPLETED 12-14-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

BOREHOLE 255025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-20

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1

POORLY GRADED SAND with SILT

Dark brown, moist, medium dense to dense, with estimated 10% non plastic fines, 90% fine to coarse sand, and trace fine subangular gravel.

POORLY GRADED SAND with SILT

Light brown, damp to moist, medium dense to dense, with estimated 10% non plastic fines and 90% fine to coarse sand.

SP
SM

1 GRAB

6

POORLY GRADED SAND with SILT

Light brown, moist, medium dense, with estimated 10% non plastic fines, 90% fine to coarse sand, and trace fine subangular gravel.

SP
SM

2 GRAB

10

SP
SM

3 GRAB

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ∇ NE ∇

WL ∇ ∇

WL ∇

Terracon

BORING STARTED 12-14-05

BORING COMPLETED 12-14-05

RIG Case 580 FOREMAN NDT

JOB # 67055025

355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-21

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, dense, with estimated 20%-30% non-plastic fines and 70%-80% fine to coarse sand.

SM 1 GRAB

4.5

SILTY SAND with GRAVEL Grey-brown, damp, dense, with estimated 20% non-plastic fines, 50% fine to coarse sand, 30% fine to coarse gravel. Oxide stains and trace cobbles present.

SM 3 GRAB

9.5

SILTY SAND Red-brown, moist, cemented, dense to very dense, with estimated 25% non-plastic fines and 75% fine to coarse sand.

SM 4 GRAB

13.5

SM 5 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ∇ NE ∇

WL ∇ ∇

WL

Terracon

BORING STARTED 3-24-06

BORING COMPLETED 3-24-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

BOREHOLE 255025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-22

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

SAMPLES

TESTS

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, medium dense to dense, with estimated 20%-35% non-plastic fines and 65%-80% fine to coarse sand. Fines toward top.

SM 1 GRAB

SM 2 GRAB

SM 3 GRAB

SM 4 GRAB

10

SILTY SAND Red-brown, moist, dense, with estimated 30% non-plastic fines, 65% fine to coarse sand, and 5% fine to coarse gravel. Cobbles up to 6 inches in diameter.

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 3-24-06

BORING COMPLETED 3-24-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

55025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-23

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

3.5

SILTY SAND Brown, moist, dense, with estimated 30% non-plastic fines and 70% fine to coarse sand. Appears to be decomposed granite at bottom of unit.

SM 1 GRAB

5.5

SILTY SAND with GRAVEL White-grey, dry, very dense, with estimated 25% non-plastic fines, 60% fine to coarse sand, and 15% fine to coarse gravel. Cobbles up to 6 inches in diameter. Refusal on bedrock at 5.5 feet.

5

SM 2-3 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 3-24-06

BORING COMPLETED 3-24-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

BOREHOLE 155025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-24

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown to red-brown, moist, dense, with estimated 10%-20% non-plastic fines and 80%-90% fine to coarse sand.

SM 1 GRAB

SM 2 GRAB

SM 3 GRAB

6.5

SILTY SAND with GRAVEL Grey, moist, dense, with estimated 15% non-plastic fines, 80% fine to coarse and 5% fine to coarse gravel. Cobbles to 4 inches in diameter. Decomposed granite.

SM 4 GRAB

SM 5 GRAB

10

10

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 3-24-06

BORING COMPLETED 3-24-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

BOREHOLE

LOG OF TEST PIT NO. TP-25

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown to red-brown, moist, dense, with estimated 25% non-plastic fines and 75% fine to coarse sand.

SM 1 GRAB

3

SILTY SAND with GRAVEL Red-brown, moist, dense, with estimated 20% non-plastic fines, 80% fine to coarse sand, and trace gravel. Unit contains cobbles to 4 inches in diameter. Decomposed granite.

SM 2 GRAB

SM 3 GRAB

9.1

5

SM 4 GRAB

10

SILTY SAND with GRAVEL Red-brown, moist, very dense, with estimated 20% non-plastic fines, 65% fine to coarse sand, and 15% fine to coarse gravel. Unit contains cobbles up to 6 inches in diameter. Decomposed granite.

10

SM 5 GRAB

11.5

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

Terracon

BORING STARTED 3-24-06

BORING COMPLETED 3-24-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-26

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown to red-brown, moist, dense, with estimated 20%-30% non-plastic fines and 70%-80% fine to coarse sand.

SM 1 GRAB

5.5

SILTY SAND Red-brown, moist, dense, with estimated 20% non-plastic fines and 80% fine to coarse sand. Decomposed granite.

SM 3 GRAB

8

SILTY SAND with GRAVEL Red-brown to grey, dry, dense to very dense, with estimated 15% non-plastic fines, 70% fine to coarse sand, and 15% fine to coarse gravel. Decomposed granite. Refusal on bedrock at 11.5 feet.

SM 4 GRAB

10

SM 5 GRAB

11.5

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ∇ NE ∇

WL ∇ ∇

WL

Terracon

BORING STARTED 3-24-06

BORING COMPLETED 3-24-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

BOREHOLE 755025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-27

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

2.5

SILTY SAND Brown, moist, dense, with estimated 20% non-plastic fines and 80% fine to coarse sand.

SM 1 GRAB

4.5

SILTY SAND Red-brown, moist, dense, with estimated 25% low to non-plastic fines and 75% fine to coarse sand.

SM 2 GRAB

5

SILTY SAND with GRAVEL Red-brown, moist, dense, with estimated 20% non-plastic fines, 80% fine to coarse sand and trace gravel to 3 inches in diameter. Decomposed granite.

SM 3 GRAB

10

SM 4 GRAB

12

The stratification lines represent the approximate boundary lines between soil and rock types: In-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

BORING STARTED 3-24-06

BORING COMPLETED 3-24-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

Terracon

BOREHOLE 055025 GINT GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-28

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, dense, with estimated 20% non-plastic fines and 80% fine to coarse sand.

SM 1 GRAB

CLAYEY SAND Red-brown, moist, dense, with estimated 25% low to medium plasticity fines and 75% fine to coarse gravel.

SC 2 GRAB

SILTY SAND with GRAVEL Red-brown, moist, weakly cemented, dense, with estimated 20% non-plastic fines, 70% fine to coarse sand and 10% fine to coarse gravel. Decomposed granite. Refusal on bedrock at 10 feet.

SM 3 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL NE

WL

WL

Terracon

BORING STARTED 3-24-06

BORING COMPLETED 3-24-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-29

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, dense, with estimated 20% non-plastic fines and 80% fine to coarse sand. Decomposed granite.

2

POORLY-GRADED SAND with SILT Grey, moist, dense, with estimated 10% non-plastic fines and 90% fine to coarse sand. Decomposed granite. Refusal on bedrock at 7 feet.

7

SM

1 GRAB

SP

SM

2 GRAB

8.1

5

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ∇ NE ∇

WL ∇ ∇

WL

Terracon

BORING STARTED 3-24-06

BORING COMPLETED 3-24-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

67055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-30

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, dense with estimated 20% non-plastic fines and 80% fine to coarse sand.

SM 1 GRAB

3.5

SILTY SAND Brown to red-brown, moist, weakly cemented, dense with estimated 40% non-plastic fines, 60% fine to coarse sand, and trace gravel.

SM 2 GRAB

5

SM 3 GRAB

8

SILTY SAND with GRAVEL Grey, moist, very dense with estimated 20% non-plastic fines, 65% fine to coarse sand, and 15 % fine to coarse gravel. Decomposed granite. Refusal on bedrock at 9 feet.

SM 4 GRAB

9

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

WL

WL

BORING STARTED 3-27-06

BORING COMPLETED 3-27-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

Terracon

055025 GINT.GPJ TERRACON.GDT 6/7/2006

BOREHOLE

LOG OF TEST PIT NO. TP-31

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

SAMPLES

TESTS

NUMBER
TYPE
RECOVERY, in.
SPT - N
BLOWS / ft.
WATER
CONTENT, %
DRY UNIT WT
pcf
UNCONFINED
STRENGTH, psf

CLAYEY SAND Red-brown, dry, dense with estimated 40% medium plasticity fines and 60% fine to coarse sand.

2.5

CLAYEY SAND with GRAVEL Red-brown, dry, dense with estimated 25% low to medium plasticity fines, 60% fine to coarse sand, and 15% fine to coarse gravel. Cobbles up to 4 inches in diameter. Refusal on bedrock at 3.5 feet.

3.5

SC 1 GRAB

SC 2 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ∇ NE ∇
WL ∇ ∇
WL

Terracon

BORING STARTED 3-27-06

BORING COMPLETED 3-27-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

BOREHOLE 055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-32

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

SAMPLES TESTS

DEPTH, ft. USCS SYMBOL NUMBER TYPE RECOVERY, in. SPT - N BLOWS / ft. WATER CONTENT, % DRY UNIT WT pcf UNCONFINED STRENGTH, psf

SILTY SAND Brown to dark brown, moist, dense with estimated 30%-40% non-plastic fines and 60%-70% fine to coarse sand.

SM 1 GRAB

SM 2 GRAB

2.5

SILTY SAND with GRAVEL Red-brown, dry, weakly cemented, dense with estimated 35%-40% non-plastic fines, 45%-50% fine to coarse sand, and 15% fine to coarse gravel. Cobbles up to 6 inches in diameter.

SM 3 GRAB

6.5

5

SM 4 GRAB

10

SM 5 GRAB

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE
WL
WL

Terracon

BORING STARTED 3-27-06

BORING COMPLETED 3-27-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

BOREHOLE

LOG OF TEST PIT NO. TP-33

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
		NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
	SM	1	GRAB					
	SM	2	GRAB					
	SM	3	GRAB					

SILTY SAND Brown, dry, medium dense with estimated 25% non-plastic fines and 75% fine to coarse sand. Problems with hole collapsing.

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	NE	
WL		
WL		

Terracon

BORING STARTED	3-27-06
BORING COMPLETED	3-27-06
RIG Cat 314C	FOREMAN GCS
JOB #	67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-34

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1.5

CLAYEY SAND Brown, dry, dense with estimated 30% low to medium plasticity fines and 70% fine to coarse sand.

SC 1 GRAB

6.5

SILTY SAND Brown, dry, dense with estimated 25% non-plastic fines and 75% fine to coarse sand.

SM 2 GRAB

SM 3 GRAB

5

SILTY SAND with GRAVEL Red-brown, dry, dense with estimated 20% non-plastic fines, 65% fine to coarse sand, and 15% fine to coarse gravel. Cobbles up to 6 inches in diameter.

SM 4 GRAB

10

SM 5 GRAB

13

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL

BORING STARTED 3-27-06

BORING COMPLETED 3-27-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

Terracon

055025 GINT GPJ TERRACON.GDT 6/7/2005

LOG OF TEST PIT NO. TP-38

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, dense with estimated 20% non-plastic fines and 80% fine to coarse sand. Pit collapses at 10 feet.

SM 1 GRAB

SM 2 GRAB

SM 3 GRAB

4.5

10

10

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL NE

WL

WL

BORING STARTED 3-27-06

BORING COMPLETED 3-27-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

Terracon

055025 GINT.GPJ TERRACON.GDT 6/7/2006

BOREHOLE

LOG OF TEST PIT NO. TP-42

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

SAMPLES TESTS

DEPTH, ft. USCS SYMBOL NUMBER TYPE RECOVERY, in. SPT - N BLOWS / ft. WATER CONTENT, % DRY UNIT WT pcf UNCONFINED STRENGTH, psf

SILTY SAND Red-brown, moist, dense with estimated 30% low to medium plasticity fines and 70% fine to coarse sand.

SM 1 GRAB

SM 2 GRAB

SILTY SAND with GRAVEL Red-brown, moist, weakly cemented, dense with estimated 20% non-plastic fines, 55%-65% fine to coarse sand, and 15%-25% fine to coarse gravel.

SM 3 GRAB

SM 4 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE
WL
WL

BORING STARTED 3-27-06

BORING COMPLETED 3-27-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

Terracon

055025 GINT.GPJ TERRACON.GDT 6/7/2006

BOREHOLE

LOG OF TEST PIT NO. TP-46

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

SAMPLES

TESTS

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1.5

CLAYEY SAND Brown, moist, medium dense with estimated 35% medium plasticity fines, 65% fine to coarse sand, and trace gravel to 2 inches in diameter.

3.5

SILTY SAND with GRAVEL Red-brown, moist, dense with estimated 30% low plasticity fines, 55% fine to coarse sand, and 15% fine to coarse gravel.

7.5

SILTY SAND with GRAVEL Red-brown, moist, cemented, very dense with estimated 20%-30% low plasticity fines, 50% fine to coarse sand, and 20%-30% fine to coarse gravel. Refusal on hardpan and boulders.

SC

1

GRAB

SM

3

GRAB

SM

3

GRAB

SM

4

GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL

BORING STARTED 3-28-06

BORING COMPLETED 3-28-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

Terracon

055025 GINT GPJ TERRACON.GDT 6/7/2006

BOREHOLE

LOG OF TEST PIT NO. TP-48

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, medium dense with estimated 35%-40% low plasticity fines, 25%-35% fine to coarse sand, and 10% fine gravel.

SILTY SAND with GRAVEL Red-brown, moist, dense with estimated 25%-35% non-plastic fines, 55%-60% fine to coarse sand, and 15% fine gravel.

SILTY SAND with GRAVEL Red-brown, moist, cemented, very dense with estimated 15%-20% non-plastic fines, 55% fine to coarse sand, and 25% fine to coarse gravel.

POORLY GRADED GRAVEL with SAND and SILT Red-brown, dry, cemented, very dense with estimated 15% non-plastic fines, 25% fine to coarse sand, and 60% fine to coarse gravel.

SM 1 GRAB

SM 2 GRAB

SM 3 GRAB

GP 4 GRAB

GM

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL NE

WL

WL

BORING STARTED 3-28-06

BORING COMPLETED 3-28-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

Terracon

055025 GINT GPJ TERRACON.GOT 6/7/2006

Page 1 of 1

ECO:LOGIC Engineering

Washoe County, Nevada

Fish Springs Water Supply Project

DESCRIPTION

SILTY SAND with GRAVEL Brown, dry, cemented, very dense with estimated 20% non-plastic fines, 65% fine to coarse sand, and 15% fine to coarse gravel.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N

BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT

100

STRENGTH, psf

SM

3

GRA

10-

SM

5

GRA

WATER LEVEL OBSERVATIONS, ft

✓L	NE
----	----

WL	
----	--

WL

BORING STARTED 3-28-06

BORING COMPLETED 3-28-06

RIG	Cat 314C	FOREMAN	GCS
-----	----------	---------	-----

JOB # 67055025

Terracon

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-52

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
		NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
1	SM	1	GRAB					
	SM	2	GRAB					
5								
6	SM	3	GRAB					
	SM	4	GRAB					
10								
	SM	5	GRAB					
12								

CLAYEY SAND Brown, wet, medium dense with estimated 40% medium plasticity fines and 60% fine to coarse sand.

SILTY SAND with GRAVEL Red-brown, moist, dense with estimated 25% non-plastic fines, 45% fine to coarse sand, and 20% fine to coarse gravel. Cobbles and boulders up to 15 inches in diameter start at 3.5' to bottom of pit.

SILTY SAND with GRAVEL Red-brown, moist, very dense with estimated 25% low to medium plasticity fines, 55% fine to coarse sand, and 20% fine to coarse gravel. Gravel fraction increases with depth.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL	NE	
WL		
WL		

Terracon

BORING STARTED 3-28-06

BORING COMPLETED 3-28-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-55

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

FAT CLAY Red-brown, wet, stiff with estimated 60% high plasticity fines and 40% fine to coarse sand.

SILTY SAND with GRAVEL Red-brown, moist to dry, very dense with estimated 20% non-plastic fines, 50% fine to coarse sand, and 30% fine to coarse gravel. Gravel fraction increases with depth. Refusal on bedrock at 7 feet.

CH 1 GRAB

SM 2 GRAB

SM 3 GRAB

10.4

5

7

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL NE

WL

WL

BORING STARTED 3-28-06

BORING COMPLETED 3-28-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

Terracon

955025 GINT.GPJ TERRACON.GOT 6/7/2006

BOREHOLE

LOG OF TEST PIT NO. TP-65

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Line

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND with GRAVEL Reddish brown, moist, very dense, with estimated 15% non-plastic fines, 50% fine to coarse sand, and 35% fine to coarse subangular gravel. Trace cobbles up to 1 foot in diameter.

2

Practical refusal at 2 feet due to bedrock.

SM 1 GRAB

SM 2 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL NE

WL

WL

Terracon

BORING STARTED 5-3-06

BORING COMPLETED 5-3-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-66

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Line

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
		NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf

SILTY SAND with GRAVEL Reddish brown, moist, very dense, with estimated 15% low plasticity fines, 50% fine to coarse sand, and 35% fine to coarse subangular gravel. Trace boulders up to 1.5 feet in diameter.

SM 1 GRAB

SM 2 GRAB

Practical refusal at 5 feet due to bedrock.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	NE	▼
WL	▼	▼
WL		

Terracon

BORING STARTED		5-3-06	
BORING COMPLETED		5-3-06	
RIG	Cat 314C	FOREMAN	SAN
		JOB #	67055025

355025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-67

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Line

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND Brown, moist, medium dense, with estimated 45% non-plastic fines, 50% fine to coarse sand, and 5% fine to coarse, subrounded gravel up to 3 inches in diameter. Unit is well cemented.

SM

1 GRAB

15.4

5

SM

2 GRAB

6.5

Practical refusal at 6.5 feet due to bedrock.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽

WL ▽ ▽

WL

Terracon

BORING STARTED 5-3-06

BORING COMPLETED 5-3-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

BOREHOLE

LOG OF TEST PIT NO. TP-68

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Line

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

POORLY GRADED SAND with SILT and GRAVEL Brown, moist, very dense, with estimated 10% low plasticity fines, 50% fine to coarse sand, and 40% fine to coarse gravel. Many boulders up to 2 feet in diameter.

4

Practical refusal at 4 feet due to boulders and bedrock.

SP
SM
SP
SM

1 GRAB
2 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽
WL ▽ ▽
WL

Terracon

BORING STARTED 5-3-06

BORING COMPLETED 5-3-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

55025 GINT GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-69

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Line

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

0.5

TOPSOIL

SILTY SAND with GRAVEL Brown, moist, dense, with estimated 15% low plasticity fines, 60% fine to coarse sand, and 25% fine to coarse subangular gravel.

4

Practical refusal at 4 feet due to bedrock.

SM

1 GRAB

SM

2 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ∇ NE ∇

WL ∇ ∇

WL

BORING STARTED 5-3-06

BORING COMPLETED 5-3-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

Terracon

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-70

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Line

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

0.5

TOPSOIL

CLAYEY SAND with GRAVEL Brown, moist, medium dense, with estimated 45% non-plastic fines, 50% fine to coarse sand, and 5% fine gravel. Unit is well cemented.

SC

1 GRAB

20.3

5

SC

2 GRAB

6.5

POORLY GRADED SAND with SILT and GRAVEL Brown, moist, very dense, with estimated 10% low plasticity fines, 60% fine to coarse sand, and 20% fine to coarse subrounded gravel.

10

SP
SM

3 GRAB

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ∇ NE ∇

WL ∇ ∇

WL

BORING STARTED 5-3-06

BORING COMPLETED 5-3-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

Terracon

BOREHOLE 055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-71

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TOPSOIL

1

POORLY GRADED SAND with SILT and GRAVEL Light brown, moist, very dense, with estimated 10% non-plastic fines, 50% fine to coarse sand, and 40% fine to coarse gravel. Unit contains trace boulders up to 2.5 feet in diameter.

3.5

Practical refusal at 3.5 feet due to bedrock.

SP
SM

1 GRAB

SP
SM

2 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ∇ NE ∇

WL ∇ ∇

WL

Terracon

BORING STARTED 5-2-06

BORING COMPLETED 5-2-06

RIG CAT 314C FOREMAN SAN

JOB # 67055025

BOREHOLE 355025 GINT.GPJ TERRACON.GDT 8/7/2006

LOG OF TEST PIT NO. TP-72

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
		NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf

TOPSOIL

CLAYEY SAND with GRAVEL Reddish brown, moist, dense to very dense, with estimated 20% medium plasticity fines, 60% fine to coarse sand, and 20% fine to coarse gravel up to 3 inches in diameter. Gravel increases with depth.

SC 1 GRAB

SC 2 GRAB

Practical refusal at 6 feet due to bedrock.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	NE	
WL		
WL		

Terracon

BORING STARTED 5-2-06

BORING COMPLETED 5-2-06

RIG CAT 314C FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-73

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

SAMPLES TESTS

DEPTH, ft. USCS SYMBOL NUMBER TYPE RECOVERY, in. SPT - N BLOWS / ft. WATER CONTENT, % DRY UNIT WT pcf UNCONFINED STRENGTH, psf

TOPSOIL

FAT CLAY Grey, moist, stiff, with estimated 60% medium to high plasticity fines, 30% fine to coarse sand, and 10% fine gravel.

POORLY-GRADED SAND with GRAVEL Grey, moist, very dense, with estimated 10% low plasticity fines, 60% fine to coarse sand, and 30% fine to coarse sub-angular gravel. Weathered bedrock.

SP 1 GRAB
SM

SP 2 GRAB
SM

8.5

Practical refusal on bedrock at 8.5 feet

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ∇ NE ∇

WL ∇ ∇

WL

Terracon

BORING STARTED 5-2-06

BORING COMPLETED 5-2-06

RIG CAT 314C FOREMAN SAN

JOB # 67055025

BOREHOLE 155025 GINT.GPJ TERRACON.GDT 5/7/2006

LOG OF TEST PIT NO. TP-74

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CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TOPSOIL

1.5

SILTY SAND with GRAVEL Brown, moist, very dense, very well cemented, with estimated 20% low plasticity fines, 65% fine to coarse sand, and 15% fine gravel.

3

Practical refusal on very well cemented soil.

SM 1 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL	NE	
WL		
WL		

Terracon

BORING STARTED 5-2-06

BORING COMPLETED 5-2-06

RIG CAT 314C FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-75

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TOPSOIL

SILTY SAND with GRAVEL Brown, moist, dense, with estimated 15% non-plastic fines, 50% fine to coarse sand, and 35% fine to coarse subangular gravel. Unit contains boulders up to 1.5 feet in diameter.

POORLY GRADED SAND with SILT and GRAVEL Brown, moist, very dense, with estimated 10% non-plastic fines, 65% fine to coarse sand, and 25% fine to coarse subangular gravel. Unit contains cobbles up to 1 foot in diameter.

Practical refusal at 6 feet due to bedrock.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	NE	▼
WL	▼	▼
WL		

Terracon

BORING STARTED 5-2-06

BORING COMPLETED 5-2-06

RIG CAT 314C FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON.GOT 8/7/2006

LOG OF TEST PIT NO. TP-76

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1.5

TOPSOIL Dark brown, moist, medium dense, with estimated 15% low plasticity fines, 80% fine to coarse sand, and 5% fine gravel.

SILTY SAND Brown, moist, medium dense to very dense, with estimated 20% non-plastic to low plasticity fines, 70% fine to coarse sand, and 10% fine to coarse gravel. Unit contains cobbles up to 6 inches in diameter.

5

7

Practical refusal at 7 feet due to bedrock.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL ∇ NE ∇
WL ∇ ∇
WL

Terracon

BORING STARTED 5-2-06

BORING COMPLETED 5-2-06

RIG CAT 314C FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-77

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
		NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf
	SM	1	GRAB					
5	SC	2	GRAB			20.1		
	SC	3	GRAB					
10	SC	4	GRAB					

SILTY SAND Dark brown, moist, medium dense, with estimated 25% low plasticity fines, 70% fine to coarse sand, and 5% fine gravel.

3

CLAYEY SAND Brown, moist, medium dense, with estimated 40% medium plasticity fines, 55% fine to coarse sand, and 10% fine gravel. Fines decrease with depth.

5

8.5

CLAYEY SAND with GRAVEL Brown, moist, medium dense, with estimated 15% medium plasticity fines, 60% fine to coarse sand, and 25% fine subangular gravel. Unit contains cobbles up to 6 inches in diameter. Fines decrease with depth.

10

11

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL	NE	
WL		
WL		

Terracon

BORING STARTED	5-2-06
BORING COMPLETED	5-2-06
RIG CAT 314C	FOREMAN SAN
JOB #	67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

DESCRIPTION

SAMPLES

TESTS

GRAPHIC LOG

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.WATER
CONTENT,

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, p

TOPSOIL

CLAYEY SAND with GRAVEL Brown, moist, medium dense, with estimated 40% high plasticity fines, 35% fine to coarse sand, and 25% fine to coarse subangular gravel. Boulders up to 2 feet in diameter.

SILTY SAND with GRAVEL Brown, damp, very dense, with estimated 40% high plasticity fines, 40% fine to coarse sand, and 20% fine to coarse subangular gravel. Boulders up to 2 feet in diameter.

Practical refusal at 5.5 feet due to boulders.

SC

1 GRAB

33.2

SM

2 GRAB

SM

3 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	<input checked="" type="checkbox"/>	NE	<input checked="" type="checkbox"/>
----	-------------------------------------	----	-------------------------------------

WL	▽	▽
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W/I		
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BORING STARTED 5-2-06

BORING COMPLETED 5-2-06

RIG	CAT 314C	FOREMAN	SAN
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JOB # 67055025

Terracon

7055025 GINT.GPJ TERRACON.GOT 6/7/2006

LOG OF TEST PIT NO. TP-80

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

CLAYEY SAND with GRAVEL

Reddish-brown, moist, dense, with 35% medium to high plasticity fines, 50% fine to coarse sand, and 15% fine to coarse gravel.

SILTY SAND

Reddish-brown, dry, very dense, with estimated 15% non-plastic fines, 60% fine to coarse sand, and 25% fine to coarse gravel.

Practical refusal at 5.5 feet due to boulders.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	NE	
WL		
WL		

Terracon

BORING STARTED	4-13-06
BORING COMPLETED	4-13-06
RIG Cat 314C	FOREMAN GCS
JOB #	67055025

BOREHOLE 7055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TP-81

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Water Transmission Main

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

SAMPLES

TESTS

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY SAND with GRAVEL Brown, moist, medium dense, with estimated 15% non-plastic to low plasticity fines, 60% fine to coarse sand, and 25% fine to coarse gravel. Unit contains cobbles to 8 inches in diameter.

SILTY, CLAYEY SAND Reddish-brown, moist, dense, with estimated 22% medium plasticity fines, 66% fine to coarse sand, and 13% fine to coarse gravel. Unit contains cobbles to 6 inches in diameter.

SILTY SAND with GRAVEL

Reddish-brown, moist, very dense, with estimated 25% non-plastic fines, 60% fine to coarse sand, 15% fine to coarse gravel. Unit contains trace boulders greater than 2 feet in diameter.

SILTY SAND with GRAVEL Reddish brown, moist, very dense with estimated 15% non-plastic fines, 55% fine to coarse sand, and 30% fine to coarse gravel.

BOREHOLE 7055025 GINT.GPJ TERRACON.GDT 6/7/2006

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	NE	
WL		
WL		

Terracon

BORING STARTED 4-13-06

BORING COMPLETED 4-13-06

RIG Cat 314C FOREMAN GCS

JOB # 67055025

LOG OF TEST PIT NO. TTTP-01

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Terminal Tank

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TOPSOIL

1

WELL GRADED SAND with SILT Brown, moist, medium dense, with estimated 10% low plasticity fines, 85% fine to coarse sand, and 5% fine gravel.

SM 1 GRAB

5

SW
SM 2 GRAB

6.3

8

SILTY SAND Brown, damp, very dense, with estimated 15% low plasticity fines, 80% fine to coarse sand, and 5% fine gravel. Unit is very well cemented and is decomposed granite. Practical Refusal at 9 feet on cemented soils.

SM 3 GRAB

9

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL	NE	▼
WL	▼	▼
WL		

Terracon

BORING STARTED	5-1-06
BORING COMPLETED	5-1-06
RIG Cat 314C	FOREMAN SAN
JOB #	67055025

BOREHOLE 055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TTTP-02

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Terminal Tank

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TESTS

TOPSOIL

1.5

WELL-GRADED SAND with SILT and GRAVEL Light brown, moist, very dense, with estimated 5% non-plastic fines, 60% fine to coarse sand, and 35% fine to coarse gravel. Unit contains cobbles to 6 inches in diameter. Unit is composed mainly of decomposed granite.

4

SW
SM

1 GRAB

5.2

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ▽ NE ▽
WL ▽ ▽
WL

Terracon

BORING STARTED 5-1-06

BORING COMPLETED 5-1-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

LOG OF TEST PIT NO. TTTP-03

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Terminal Tank

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TOPSOIL

1.5

POORLY GRADED GRAVEL with SAND

Brown, moist, very dense, with estimated trace non-plastic fines, 45% fine to coarse sand, and 55% fine to coarse gravel.

3

Practical Refusal at 3 feet on bedrock

GP 1 GRAB

GP 2 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL	NE	▼
WL	▼	▼
WL		

Terracon

BORING STARTED	5-1-06
BORING COMPLETED	5-1-06
RIG Cat 314C	FOREMAN SAN
JOB #	67055025

BOREHOLE 7055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TTTP-04

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Terminal Tank

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TOPSOIL

1.5

POORLY GRADED GRAVEL with SAND
Brown, moist, very dense, with estimated
5% non-plastic fines, 45% fine to coarse
sand, and 50% fine to coarse gravel.

3.5

Practical Refusal on Bedrock at 3.5 feet.

SP 1 GRAB

SP 2 GRAB

The stratification lines represent the approximate boundary lines
between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	NE	▼
WL	▼	▼
WL		

Terracon

BORING STARTED 5-1-06

BORING COMPLETED 5-1-06

RIG Cat 314C FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. TTTP-05

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Terminal Tank

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

TESTS

SILTY SAND Dark brown, moist, medium dense, with estimated 20% low plasticity fines, 70% fine to coarse sand, and 10% fine gravel.

WELL GRADED SAND with SILT and GRAVEL Light brown, moist, very dense, with estimated 10% non-plastic fines, 70% fine to coarse sand, and 20% fine to coarse gravel and cobbles up to 6 inches in diameter.

POORLY GRADED SAND with GRAVEL Light brown, moist, very dense, with estimated 5% non-plastic fines, 60% fine to coarse sand, and 35% fine to coarse gravel and cobbles up to 12 inches in diameter.

SW
SM

1 GRAB

6.6

SP

2 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL ∇ NE ∇
WL ∇ ∇
WL

Terracon

BORING STARTED 5-1-06
BORING COMPLETED 5-1-06
RIG Cat 314C FOREMAN SAN
JOB # 67055025

LOG OF TEST PIT NO. WTP-01

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Well Field Collection System/Well House

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
		NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf

1.5

SILTY SAND Dark brown, damp, medium dense, with estimated 35% low plasticity fines, 60% fine to coarse sand, and 5% fine to coarse gravel. Some roots and organics present.

SILTY SAND Light brown, damp, medium dense, weakly cemented, with estimated 40% non plastic fines, 60% fine to coarse sand, and trace fine to coarse subrounded gravel.

SM 1 GRAB

SM 2 GRAB

11.7

5

SM 3 GRAB

10

POORLY GRADED SAND with SILT and GRAVEL Light grey, damp, medium dense to dense, with estimated 10% low plasticity fines, 65% fine to coarse sand, and 25% fine to coarse sub-rounded to rounded gravel.

10

SP
SM 4 GRAB

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

/L	NE	
WL		
WL		

Terracon

BORING STARTED 12-7-05

BORING COMPLETED 12-7-05

RIG CAT 314C FOREMAN SAN

JOB # 67055025

BOREHOLE 055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. WTP-02

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Well Field Collection System/Wellhouse

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

SAMPLES

TESTS

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

1.5

SILTY SAND Brown, damp, medium dense, well cemented, with estimated 20% low plasticity fines, 70% fine to coarse sand, and 10% fine gravel.

SM 1 GRAB

6

SILTY SAND Light brown, dry, medium dense, with estimated 20% low plasticity fines, 70% fine to coarse sand, and 10% fine gravel. Gypsum layer 2" thick at 3'.

SM 2 GRAB

10

POORLY-GRADED SAND with SILT Light brown, dry, dense, with estimated 10% non plastic fines, 90% fine to coarse sand, and trace fine gravel.

SP
SM 3 GRAB

6.3

11

SANDY LEAN CLAY with GRAVEL Dark brown, moist, medium stiff, with estimated 55% medium plasticity fines, 30% fine to coarse sand and 15% fine to coarse well rounded gravel.

SP
SM 4 GRAB

12

SILTY SAND Light brown, dry, very well cemented, with estimated 15% low plasticity fines, 80% fine to medium sand, and 5% fine gravel.

CL 5 GRAB

SM 6 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL	NE	
WL		
WL		

Terracon

BORING STARTED 12-7-05

BORING COMPLETED 12-7-05

RIG Cat 314C FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 8/7/2005

LOG OF TEST PIT NO. WTP-03

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Well Field Collection System/Well House

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.	USCS SYMBOL	SAMPLES				TESTS		
		NUMBER	TYPE	RECOVERY, in.	SPT - N BLOWS / ft.	WATER CONTENT, %	DRY UNIT WT pcf	UNCONFINED STRENGTH, psf

SILTY SAND Brown, damp, medium dense, with estimated 35% non plastic fines, 6% fine to coarse sand, and 5% fine to coarse gravel.

SM 1 GRAB

7.9

5

SM 2 GRAB

8

SILTY SAND Dark brown, damp, medium dense, with estimated 45% low plasticity fines, 50% fine to coarse sand, and 5% fine to coarse gravel.

SM 3 GRAB

10

11

SILTY SAND with GRAVEL Dark brown, moist, dense, with estimated 15% low plasticity fines, 50% fine to coarse sand, and 35% fine to coarse rounded to sub-rounded gravel. Cobbles up to 5". Moderate difficulty in excavation.

SM 4 GRAB

12

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

VL	NE	▼
WL	▼	▼
WL		

Terracon

BORING STARTED	12-7-05
BORING COMPLETED	12-7-05
RIG CAT 314C	FOREMAN SAN
JOB # 67055025	

BOREHOLE 055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. WTP-04

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Well Field Collection System

GRAPHIC LOG

DESCRIPTION

SAMPLES TESTS

DEPTH, ft. USCS SYMBOL NUMBER TYPE RECOVERY, in. SPT - N BLOWS / ft. WATER CONTENT, % DRY UNIT WT pcf UNCONFINED STRENGTH, psf

SILTY SAND Brown, dry, loose, with estimated 30% low plasticity fines, 60% fine to coarse sand, and 10% fine to coarse sub-rounded to rounded gravel.

SM 1 GRAB

SILTY SAND with GRAVEL Brown, dry, dense, with 15% low plasticity fines, 50% fine to coarse sand, and 35% fine to coarse sub-rounded to rounded gravel up to 3.5".

SM 2 GRAB

SM 3 GRAB

SILTY SAND Brown, dry, loose, with estimated 35% low plasticity fines, 55% fine to coarse sand, and 10% fine to coarse sub rounded to rounded gravel to 1.5".

SM 4 GRAB

SILTY SAND Brown, dry, dense, well cemented, with estimated 40% low plasticity fines, 50% fine to coarse sand, and 10% fine gravel.

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

/L NE
WL
WL

Terracon

BORING STARTED 12-7-05

BORING COMPLETED 12-7-05

RIG CAT 314C FOREMAN SAN

JOB # 67055025

055025 GINT.GPJ TERRACON.GDT 6/7/2006

LOG OF TEST PIT NO. WTP-05

Page 1 of 1

CLIENT

ECO:LOGIC Engineering

SITE

Washoe County, Nevada

PROJECT

Fish Springs Water Supply Project

Boring Location: Well Field Collection System/Well House

GRAPHIC LOG

DESCRIPTION

DEPTH, ft.

USCS SYMBOL

NUMBER

TYPE

RECOVERY, in.

SPT - N
BLOWS / ft.

WATER
CONTENT, %

DRY UNIT WT
pcf

UNCONFINED
STRENGTH, psf

SILTY GRAVEL with SAND Grey, moist, dense, with estimated 25% non plastic fines, 35% fine to coarse sand, and 45% fine to coarse subrounded to rounded gravel.

3.5

SILTY SAND Light grey, dry, loose, with estimated 35% non plastic fines, 60% fine to coarse sand, and 5% fine gravel. Thin 1" well cemented layers.

8

SILTY SAND Brown, damp, medium dense, with estimated 40% low plasticity fines, 50% fine to coarse sand, and 10% fine to coarse gravel.

12

GM 1 GRAB

SM 2 GRAB

9.1

SM 3 GRAB

The stratification lines represent the approximate boundary lines between soil and rock types: in-situ, the transition may be gradual.

WATER LEVEL OBSERVATIONS, ft

WL NE

▼

WL

▼

WL

Terracon

BORING STARTED 12-7-05

BORING COMPLETED 12-7-05

RIG CAT 314C FOREMAN SAN

JOB # 67055025

BOREHOLE 055025 GINT.GPJ TERRACON.GDT 6/7/2006