

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/30/14

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KU, M, ES</u>	GPS Waypoint: <u>SS-1</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N35° 59' 11.0"</u>	
	Longitude: <u>W 114° 58' 18.0"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00001	<u>Yes</u> <u>BC-ABS 00001</u>	<u>1</u>	<u>Hand</u>	<u>30</u>	<u>Old Alluvium (disturbed)</u>	<u>Sandy Loam</u>	<u><10% Creosote saltbrush</u>	<u><10% Good Desert Pavement</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/30/14	Soil/Bedrock Sample Number: BC-SS-00001	Grid/ID Number: .1	GPS Waypoint: SS - i
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

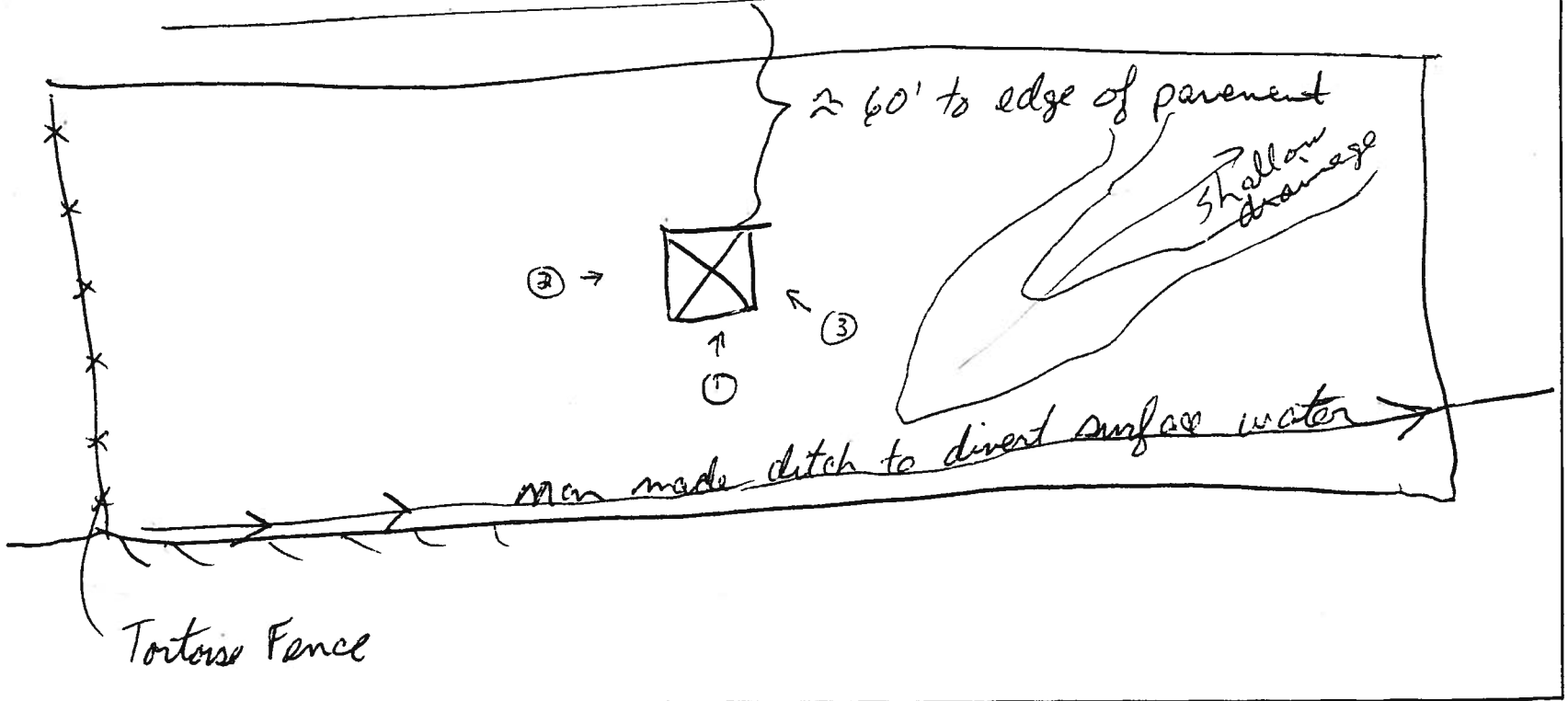
Slope \approx 2-5% to the North

No big erosion

Access Rd

South Bound

North Bound



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-30-14

Page 1/2

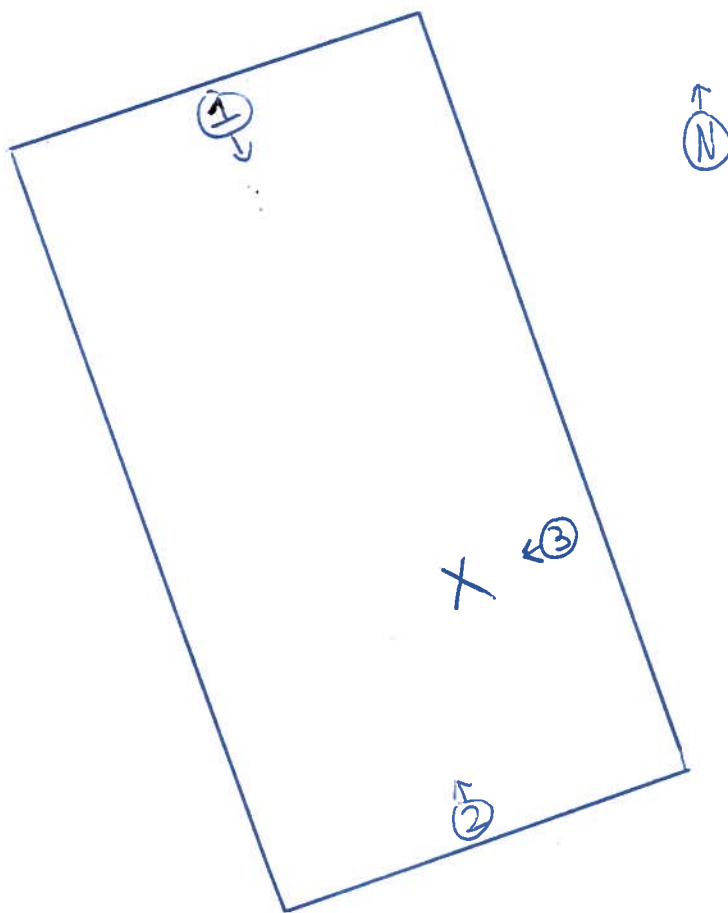
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS02</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 59' 07.6"</u>	
	Longitude: <u>W 114° 55' 18.9"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00002	N/A	02	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-30-14	Soil/Bedrock Sample Number: BS-SS-00002	Grid/ID Number: 02	GPS Waypoint: SS02
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-30-14

Page 1 / 2

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS03</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 59' 05.9"</u>	
	Longitude: <u>W 114° 55' 20.2"</u>	
GPS coordinates should be collected for the center of each sample.		

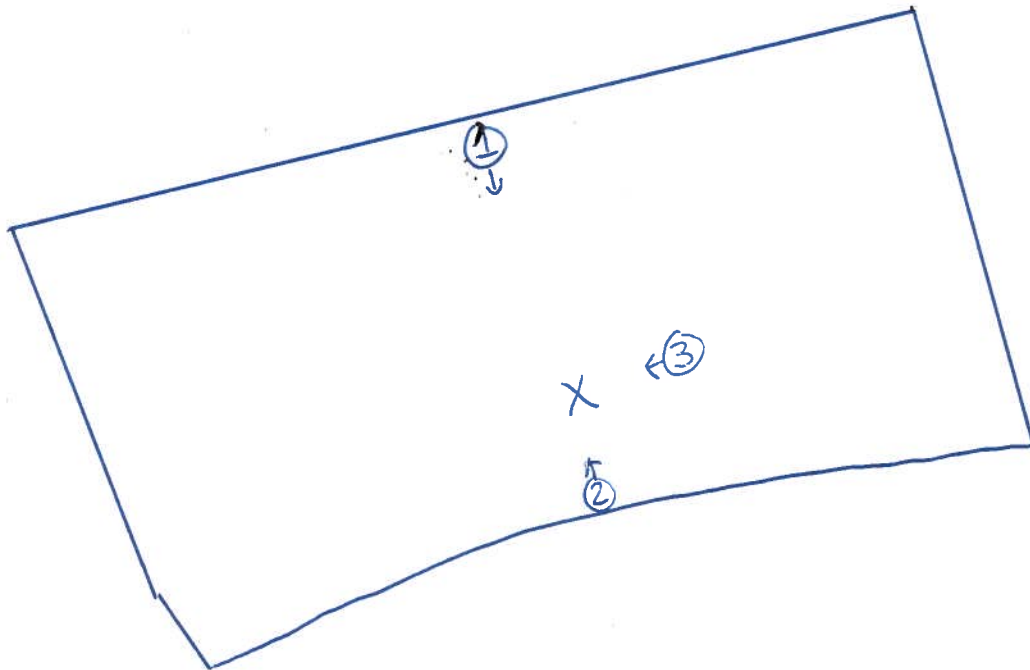
(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00003	N/A	03	Hand	30	old Alluvium	sandy loam	10-25%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Page 2/2

Date: 5-30-14	Soil/Bedrock Sample Number: BG-SS-00003	Grid/ID Number: 03	GPS Waypoint: SS03
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/30/14

Page 1/2

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KV, MS, ES</u>	GPS Waypoint: <u>SS-4</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N 35° 59' 05.4"</u>	
	Longitude: <u>W 114° 55' 11.8"</u>	
GPS coordinates should be collected for the center of each sample.		

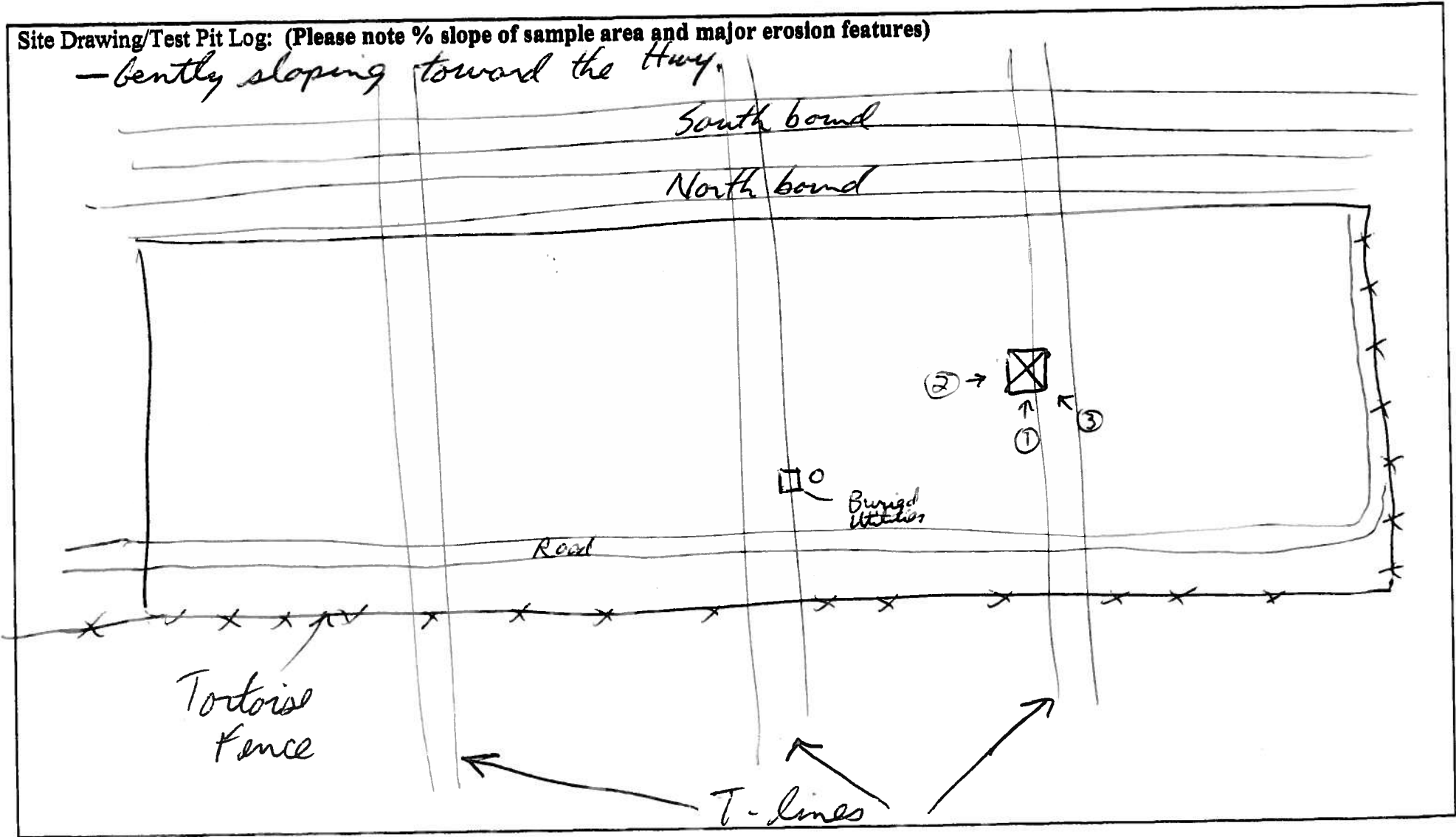
(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00004	<u>Yes</u> BC-ABS-00001	<u>4</u>	<u>Hand</u>	<u>30</u>	<u>Old Alluvium</u>	<u>Sandy Loam</u>	<u>10-35%</u> <u>Chertgrass</u> <u>creosote</u> <u>shrubs</u> <u>mesquite</u>	<u><10%</u> <u>desert pavement</u> <u>small gravels</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-48 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-####	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/30/14	Soil/Bedrock Sample Number: BC-SS-00004	Grid/ID Number: 4	GPS Waypoint: SS-4
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

- Gently sloping toward the Hwy.



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-30-14

Page 1/2

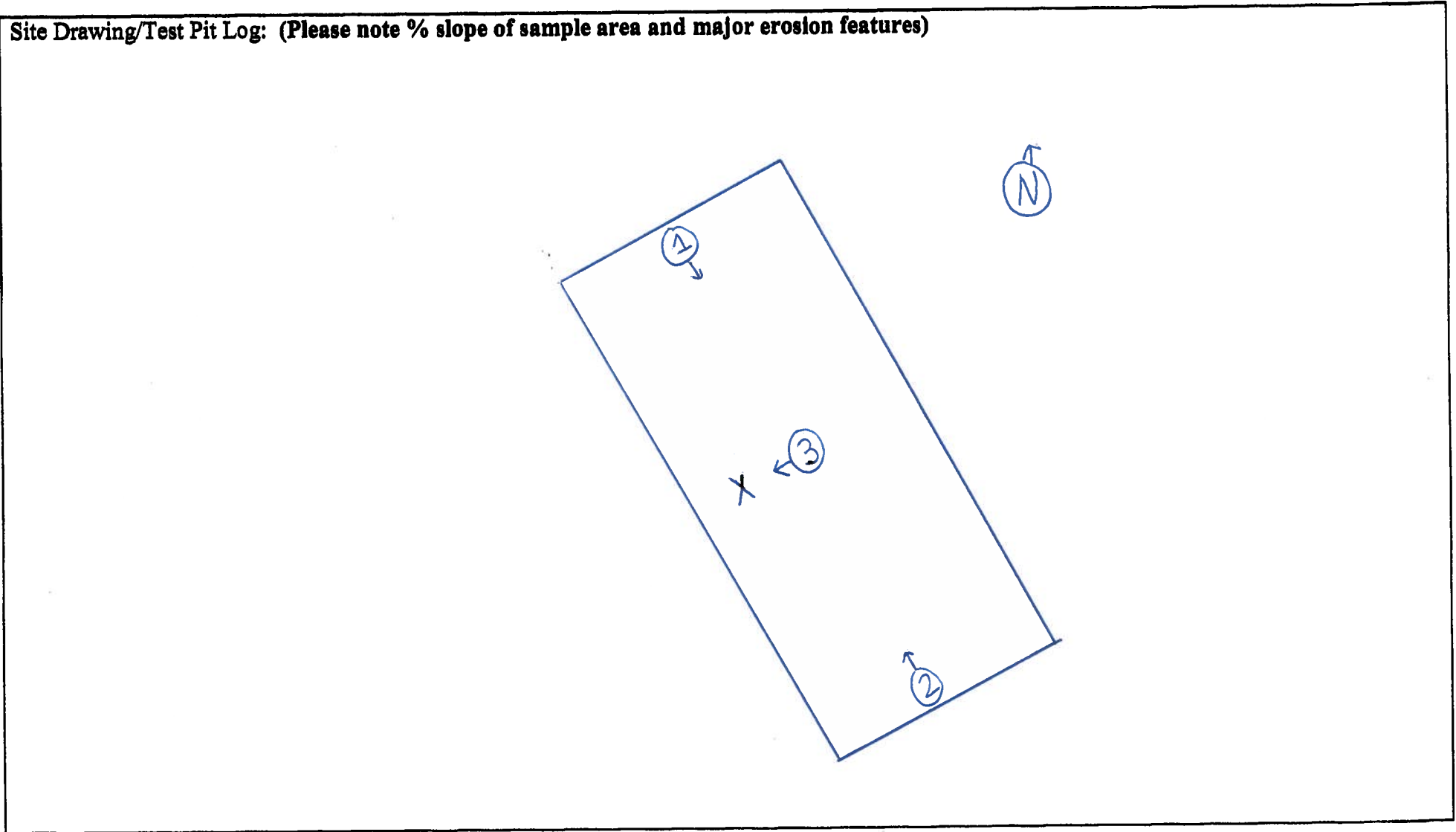
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS05</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 59' 03.0"</u>	
	Longitude: <u>W 114° 55' 14.0"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00005	N/A	05	Hand	30	Old Alluvium	sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-46 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-####	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-30-14	Soil/Bedrock Sample Number: BC-SS-00005	Grid/ID Number: 05	GPS Waypoint: SS05
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/30/14

Page 1/2

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes <u>SS-ABS</u>	<input type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KU, MS, ES</u>	GPS Waypoint: <u>SS-6</u>	
GPS System/Unit #: _____	Latitude: <u>N 35° 59' 03.0"</u>	
	Longitude: <u>W 114° 55' 17.7"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00006	<u>Yes</u> <u>BC-ABS 00001</u>	<u>6</u>	<u>Hand</u>	<u>30</u>	<u>Old Alluvium</u> <u>Good desert pavement</u>	<u>Fine Sandy Loam</u>	<u>< 10%</u> <u>creosote saltbrush</u>	<u>< 10%</u> <u>A few bigger > 6" rocks</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-48 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

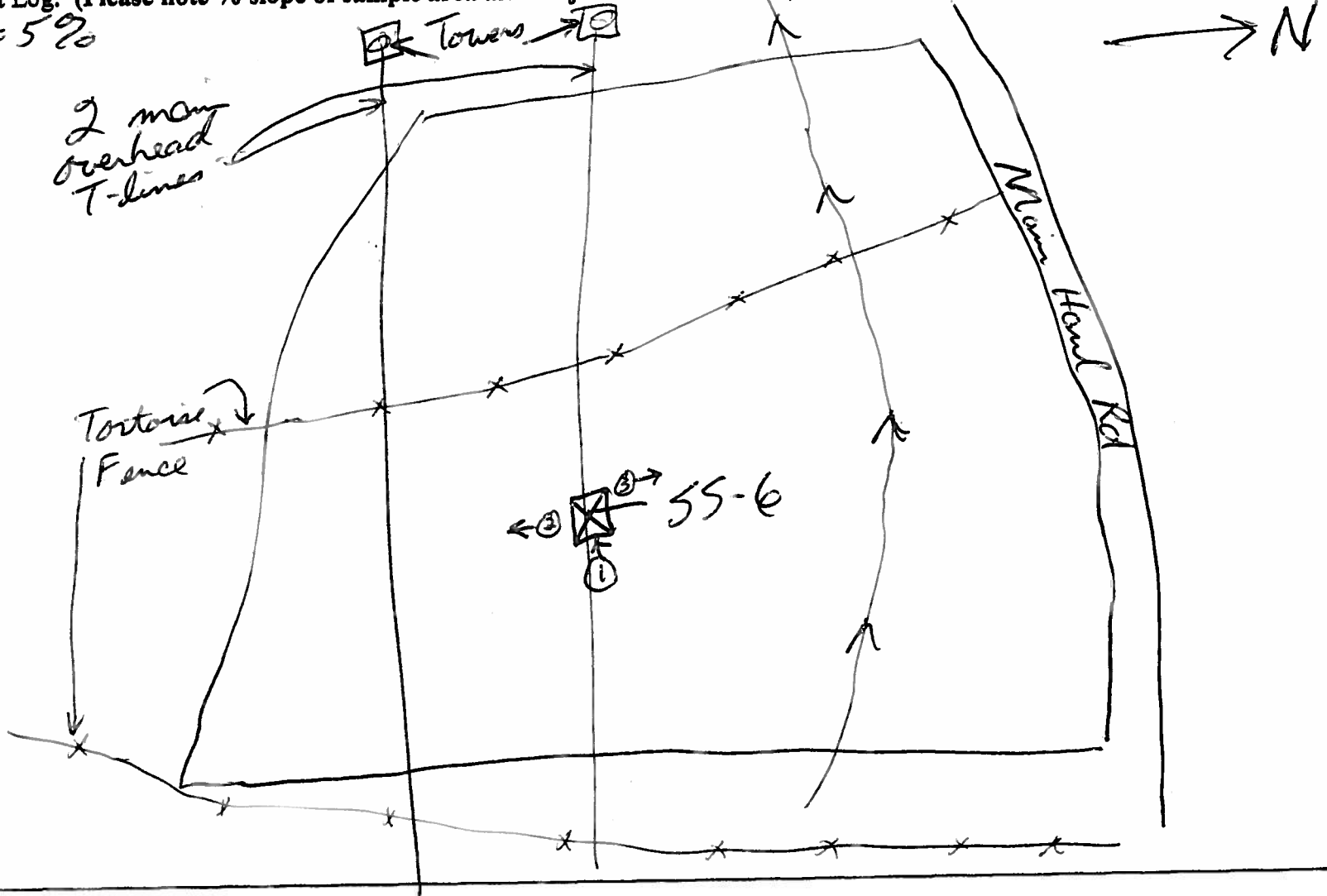
- convex slope ≈ 5% to the west sloping down to main wash

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/30/14	Soil/Bedrock Sample Number: BC-SS-00006	Grid/ID Number: 6	GPS Waypoint: 55-6
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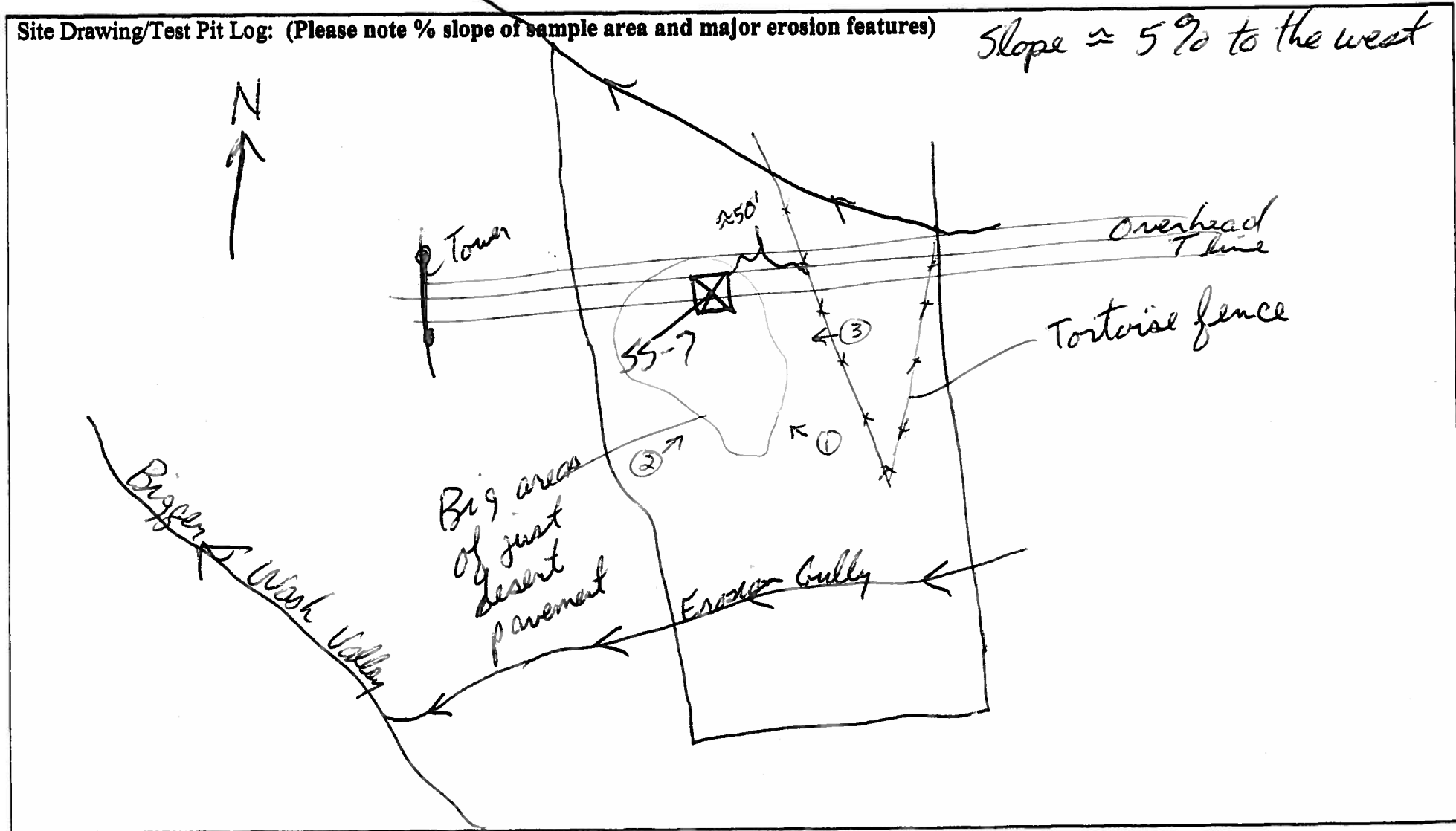
Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

Slope \approx 5%



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/30/14	Soil/Bedrock Sample Number: BC-55-φφφφ7	Grid/ID Number: 7	GPS Waypoint: 55-7
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BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/30/14

Page 1/2

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KU, MSE, ES</u>	GPS Waypoint: <u>55-8</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N 35° 58' 58.8"</u>	
	Longitude: <u>W 114° 55' 04.6"</u>	
GPS coordinates should be collected for the center of each sample.		

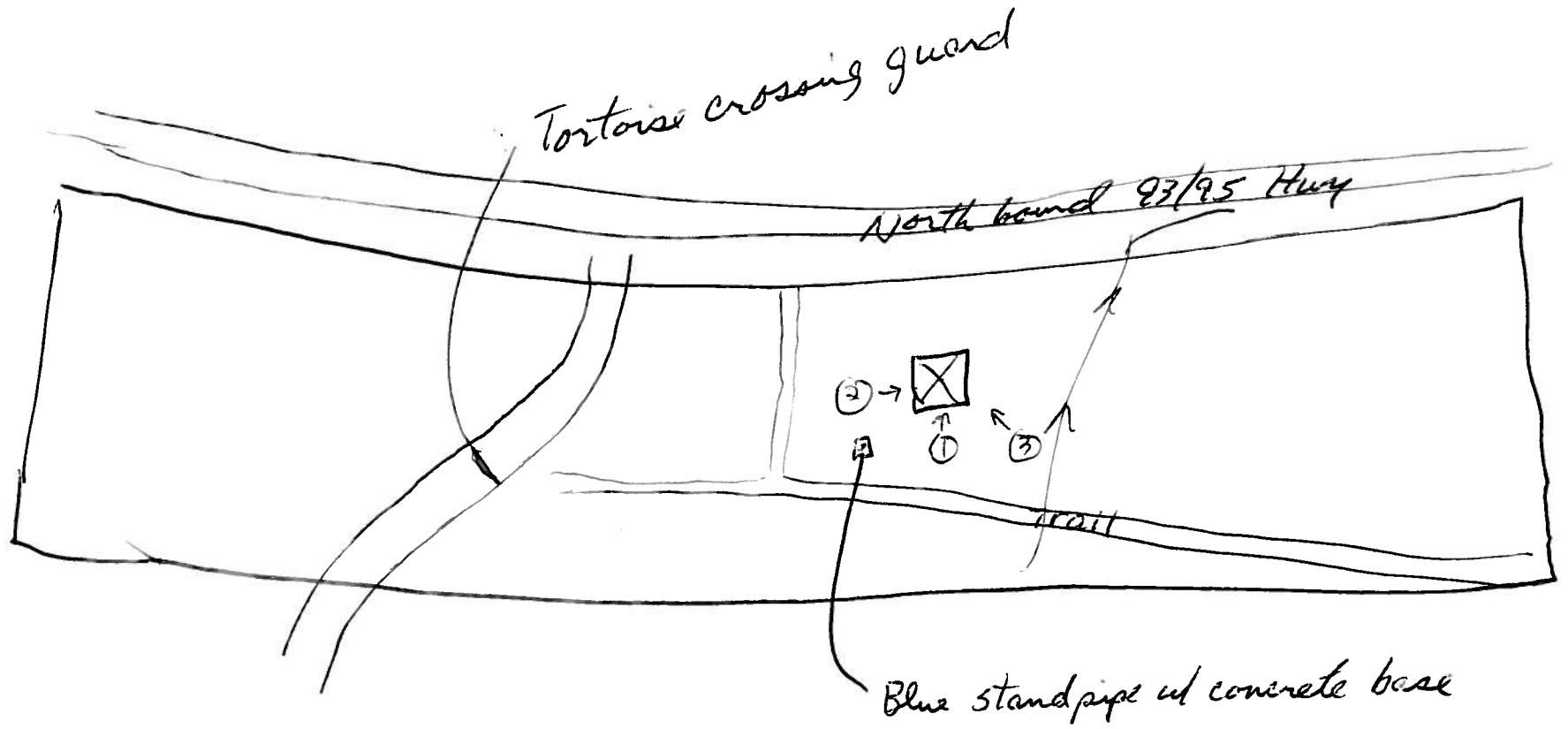
(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00008	<u>Yes</u> BC-ABS-00001	<u>8</u>	<u>Hand</u>	<u>30</u>	<u>Old Alluvium</u> <u>Fair desert pavement</u> <u>some disturbed</u>	<u>Sandy</u> <u>Loam</u>	<u><10%</u> <u>Saltbrush</u> <u>cheatgr.</u>	<u><10%</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pile (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/30/14	Soil/Bedrock Sample Number: 13C-55-00008	Grid/ID Number: 8	GPS Waypoint: 55-8
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

Area slopes to the west toward the road 93/95; small gullies cross the area toward road.



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/30/14

Page 1/2

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS09</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 56.8"</u>	
	Longitude: <u>W 114° 55' 08.7"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Allquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00009	N/A	09	Hand	30	Old Alluvium	Sandy	10-25%	< 10%

NOTES: To be used to complete details above.

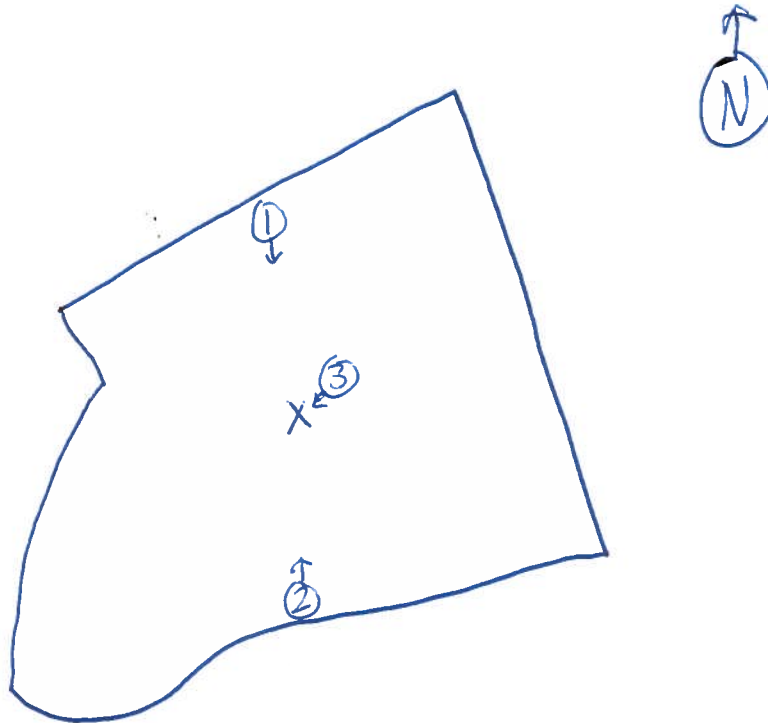
1) Surface Soil (0-6 inch)	2) Subsurface Test Pits (0-10 ft.)	3) Subsurface Auger Sample (0-45 ft.)	4) Outcrop Geologic Sample	5) Rock Core Drill Sample	6) Discrete "Target" Sample

BC-XX-###	Hand Backhoe HSA Core Drill Outcrop	New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation?	Proportion of stones greater than 6 inches?
				<10% 10-25% 25-50% >50%	<10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/30/14	Soil/Bedrock Sample Number: BC-SS-00012	Grid/ID Number: 12	GPS Waypoint: SS09
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-29-14

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS10</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 53.9"</u>	
	Longitude: <u>W 114° 55' 04.7"</u>	
GPS coordinates should be collected for the center of each sample.		

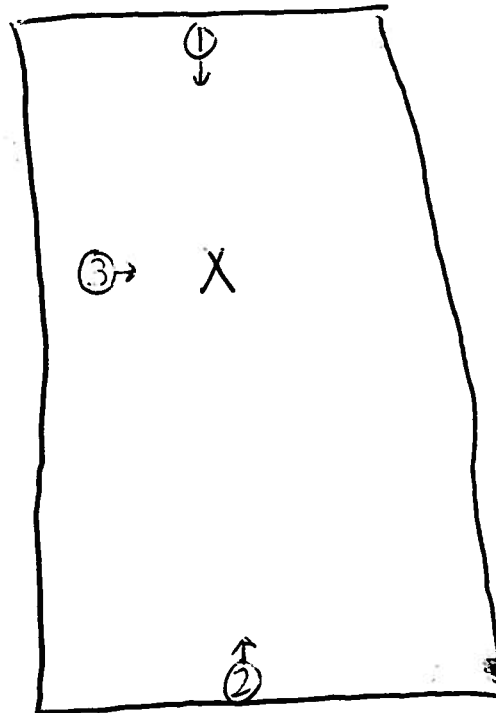
Page 1/2

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00010	N/A	10	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-29-14	Soil/Bedrock Sample Number: BC-SS-00010	Grid/ID Number: 10	GPS Waypoint: SS10
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/30/14

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes <u>SS-ABS</u>	<input type="checkbox"/> No
Collected By: <u>Ed Surbrugg</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KV, ES</u>	GPS Waypoint: <u>SS-11</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N 35.58.53.8</u>	
	Longitude: <u>W 114.55.08.6"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00011	Yes BC-SS-ABS0 BC-ABS-00001	11	Hand	30	Old Alluvium (disturbed above by road)	Sandy Loam	<10% creosote sagebrush	<10% 2 or 3 big rocks, ~1' diameter
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

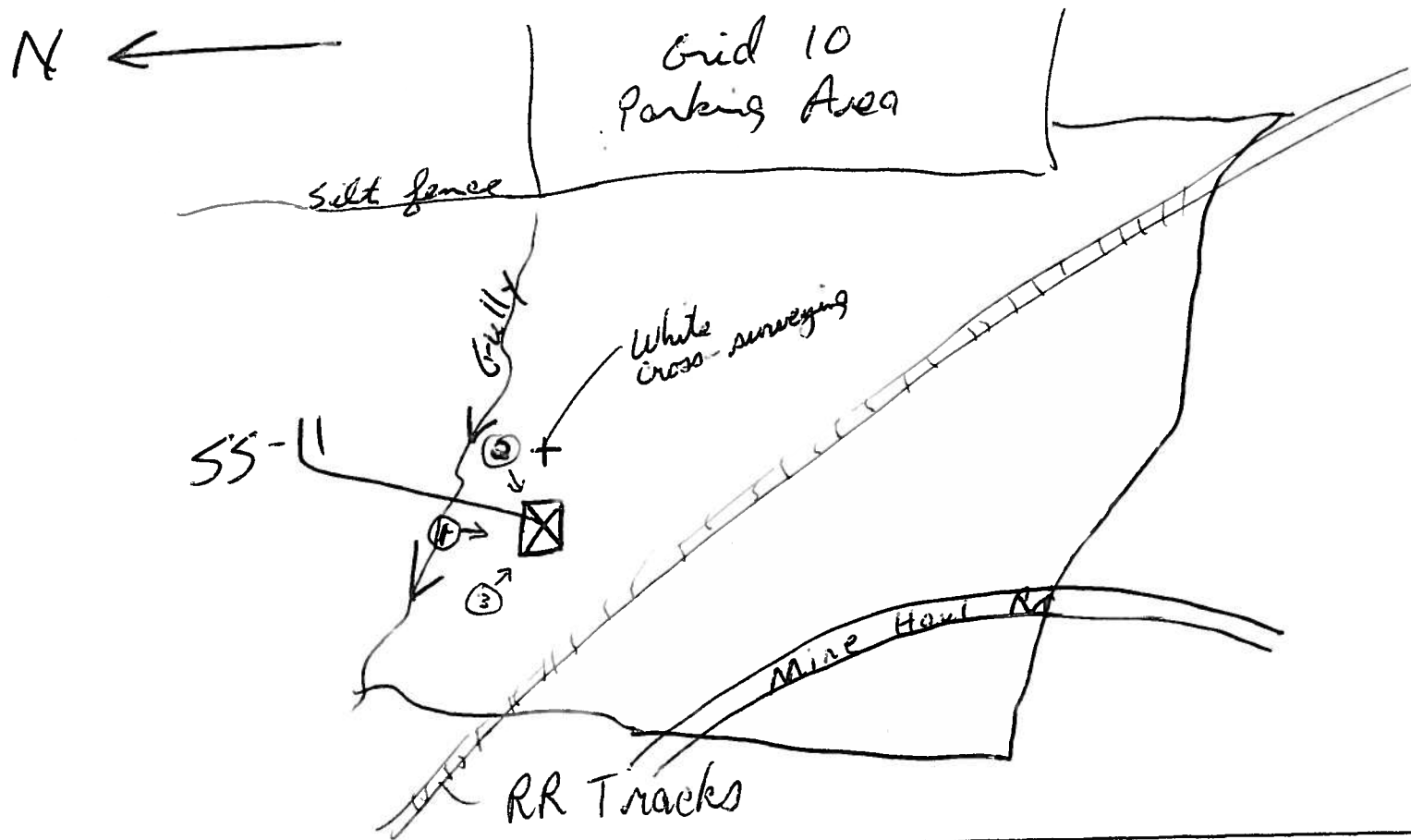
- Slope ≈ 5% gently sloping to the west
- Some garbage on surface, older cans, glass, etc
- Good desert pavement

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/30/14	Soil/Bedrock Sample Number: BC-SS-00011	Grid/ID Number: 11	GPS Waypoint: SS-11
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

Slope is 5% to the west. An erosion gully is on the north edge. A white cross used for surveying is 40' east of sample plot.



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Date: 5-29-14

Page 1/2

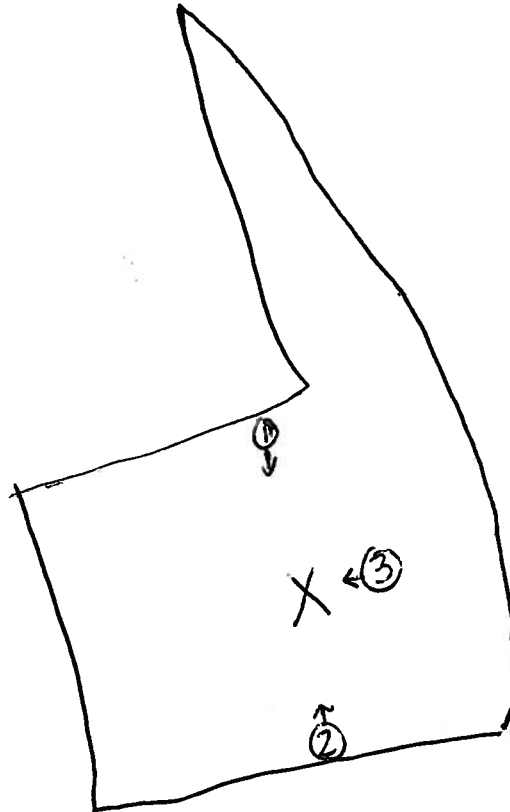
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS12</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 51.6"</u>	
	Longitude: <u>W 114° 55' 02.0"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Allquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00012	<u>N/A</u>	<u>12</u>	<u>Hand</u>	<u>30</u>	<u>Old Alluvium</u>	<u>sandy loam</u>	<u>10-15%</u>	<u>< 10%</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-29-14	Soil/Bedrock Sample Number: BC-SS-00012	Grid/ID Number: 12	GPS Waypoint: SS12
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/30/14

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KU, MS, ES</u>	GPS Waypoint: <u>55-13</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N 35° 58' 48.5"</u>	
	Longitude: <u>W 114° 54' 55.8"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00013	No	13	Hand	30	Old Alluvium	Sandy Loam	10-25% Creosote Cheatgrass Sagebrush	< 10% Good Desert Perennial
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

- On hill side steeply sloping toward fanly large drainage

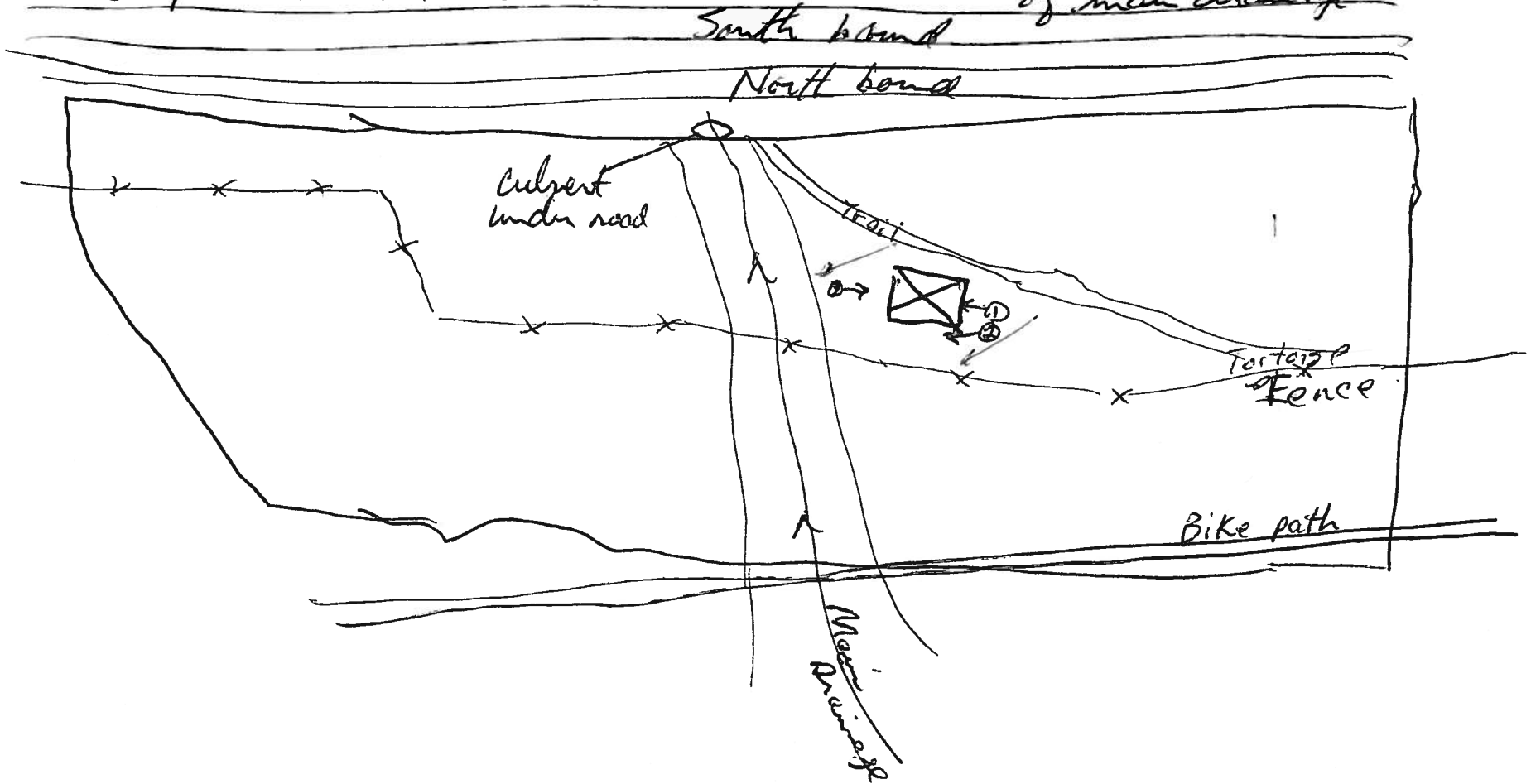
BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/30/14	Soil/Bedrock Sample Number: BC-55-00013	Grid/ID Number: 13	GPS Waypoint: 55-13
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

Slope between 10-20%

More creosote along slopes of main drainage



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-29-14

Page 1/2

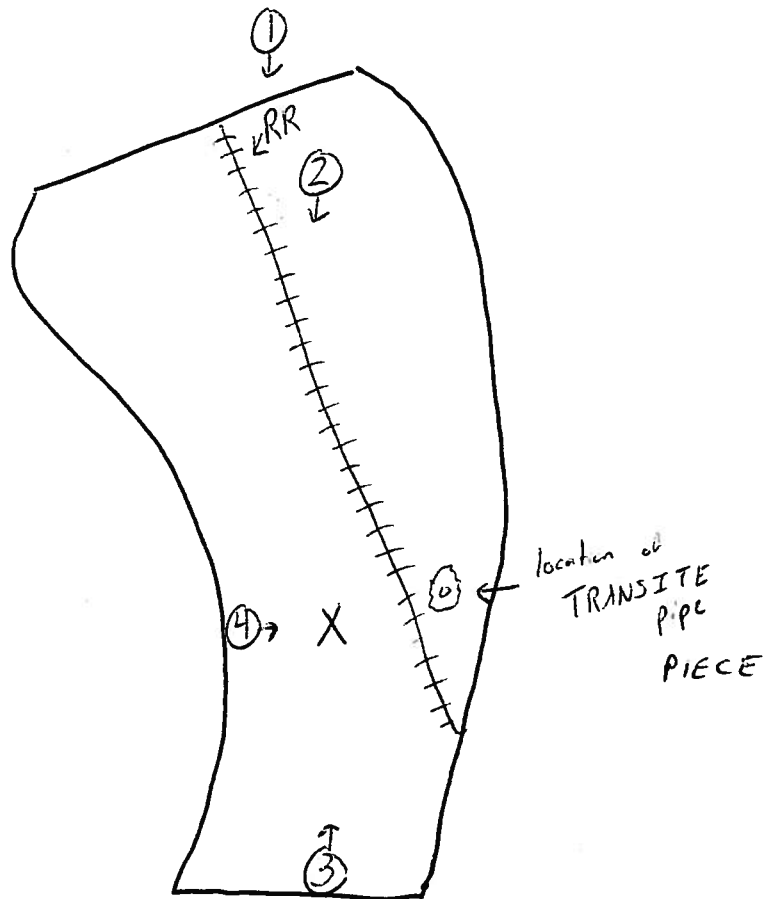
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS14</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 47.2"</u>	
	Longitude: <u>W 114° 54' 59.5"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Allquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00014	N/A	14	Hand	30	Old Alluvium	Sandy loam	10-25%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-29-14	Soil/Bedrock Sample Number: BC-SS-00014	Grid/ID Number: 14	GPS Waypoint: SS14
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/29/14

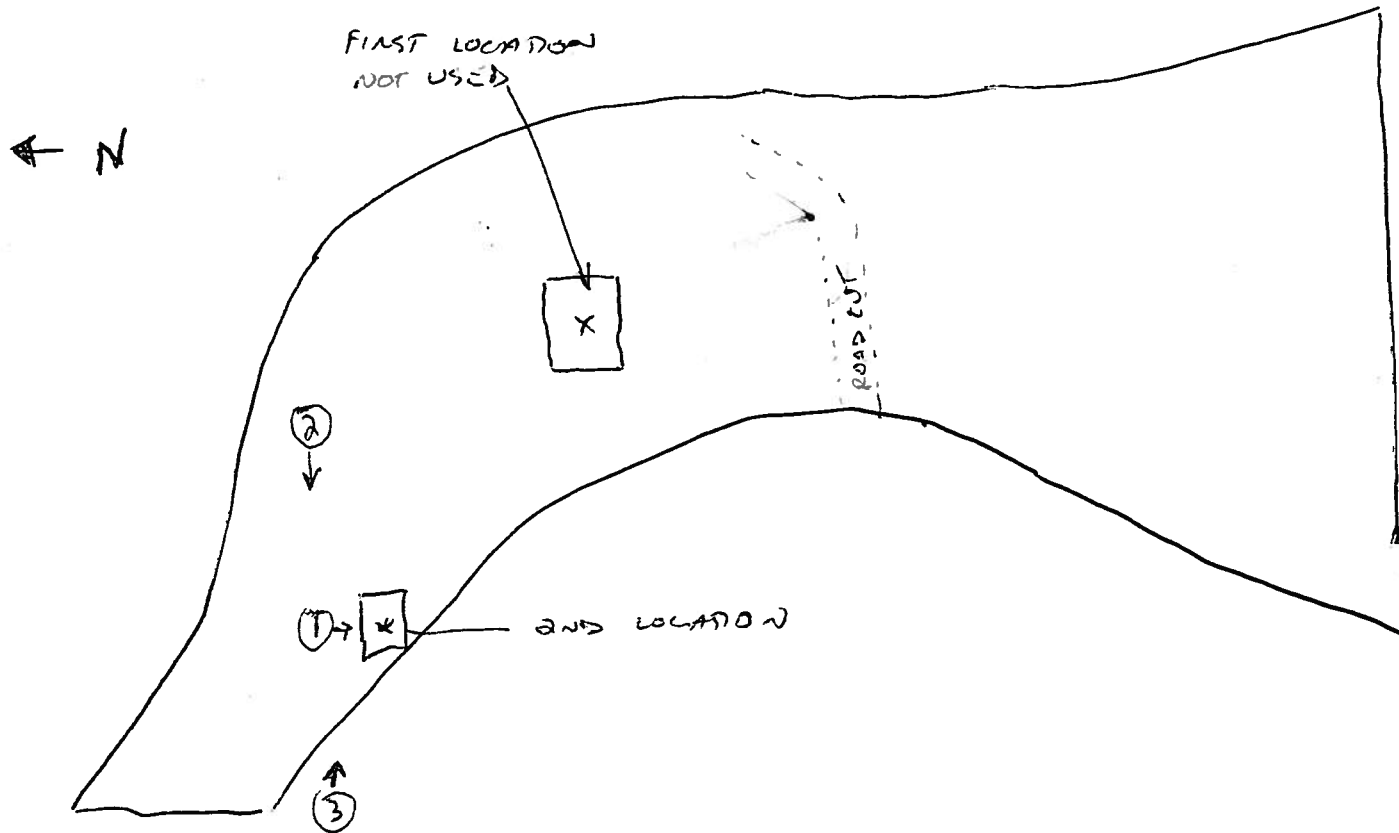
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>M. STOCKWELL</u>	Log Book No: <u>#1</u>	
Sample Team Initials: <u>ES, MS, RF, JW</u>	GPS Waypoint: <u>SS-15</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N35° 58' 48.4"</u>	
	Longitude: <u>W114° 55' 05.3"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
<u>BC-SS-00015</u>	<u>N/A</u>	<u>15</u>	<u>SURFACE SOIL BULK</u>	<u>30</u>	<u>OLD ALLUVIUM</u>	<u>SANDY LOAM</u>	<u><10%</u>	<u>10%</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 8 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/29/14	Soil/Bedrock Sample Number:	Grid/ID Number: BC-SS-15	GPS Waypoint:
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/29/14

Page 1/2

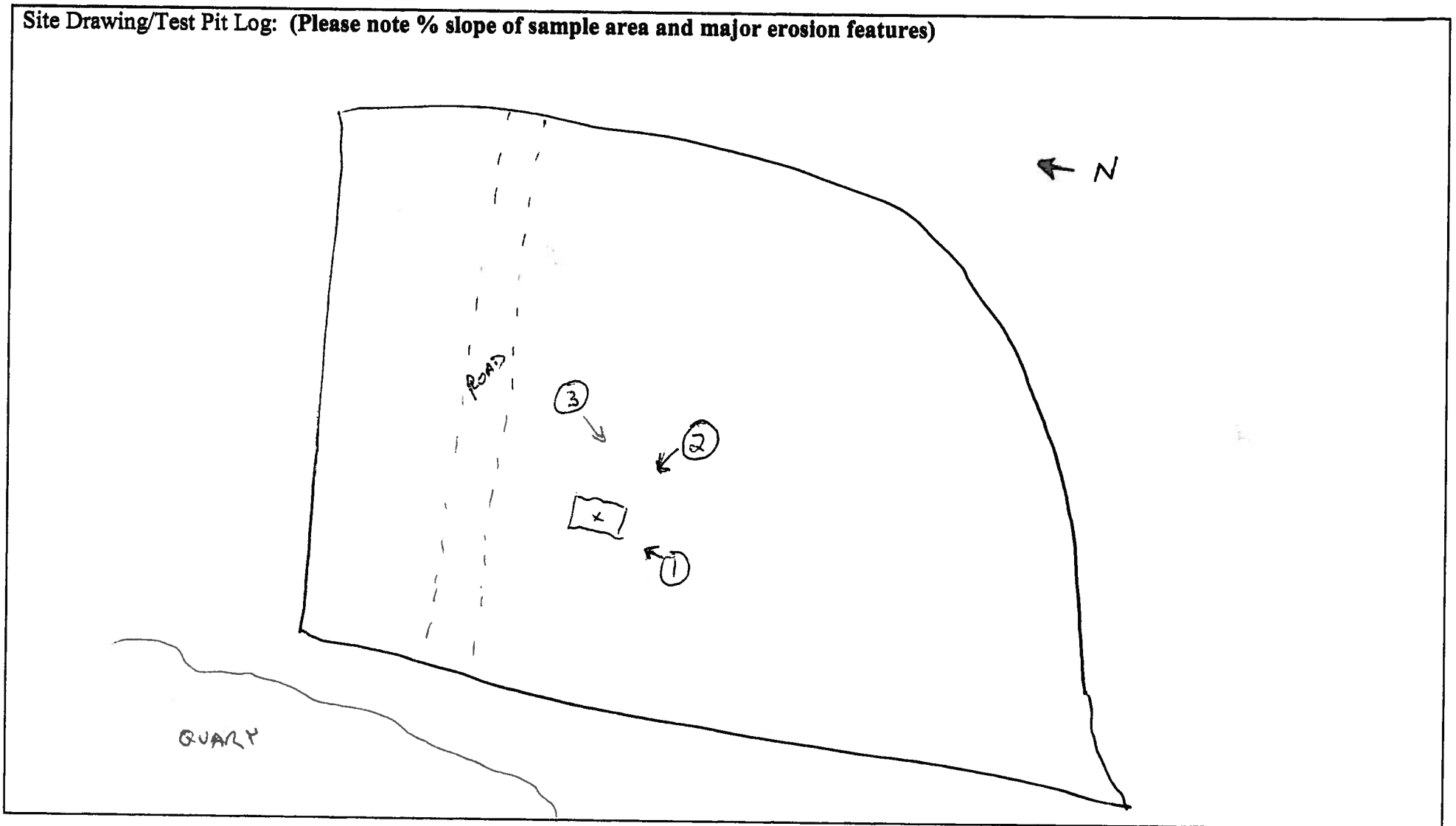
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>A. STOCKWELL</u>	Log Book No: <u>#1</u>	
Sample Team Initials: <u>ES, MS, RF, KV</u>	GPS Waypoint: <u>SS-16</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N35°58'45.9"</u>	
	Longitude: <u>W114°55'05.7"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
<u>BC-SS-00016</u> <u>SHALLOW TO BEDROCK</u>	<u>NA</u>	<u>16</u>	<u>SURFACE SOIL PULVER</u>	<u>30</u>	<u>VOLCANIC BRECCIA</u>	<u>SANDY LOAM</u>	<u><10%</u>	<u>10-25%</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/29/14	Soil/Bedrock Sample Number:	Grid/ID Number: BL-55-16	GPS Waypoint:
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/29/14

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No:	
Sample Team Initials: _____	GPS Waypoint: <u>SS-17</u>	
GPS System/Unit #: _____	Latitude: <u>N35 58' 42.2"</u>	
	Longitude: <u>W114° 54' 59.3"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00017		17	Hand	30	Old Alluvium (all disturbed)	Sandy Loam	<10%	<10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

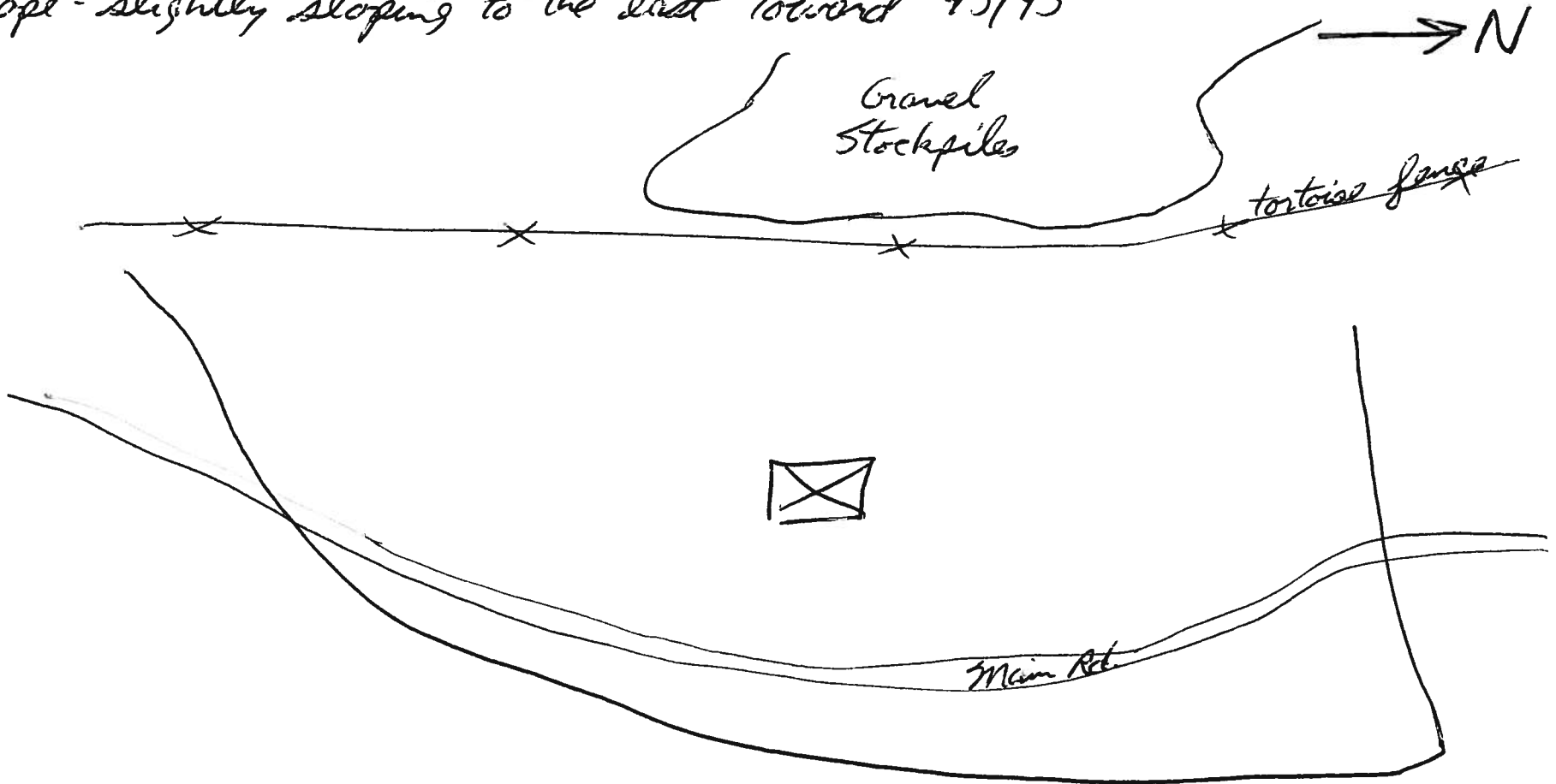
- Regraded surface - smooth, may be influenced by mining above
 - Surface covered w/ light tan small rocks

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/29/14	Soil/Bedrock Sample Number: BC-SS-00017	Grid/ID Number: 17	GPS Waypoint: SS-17
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

Slope - slightly sloping to the east toward 93/95



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-29-14

Page 1/2

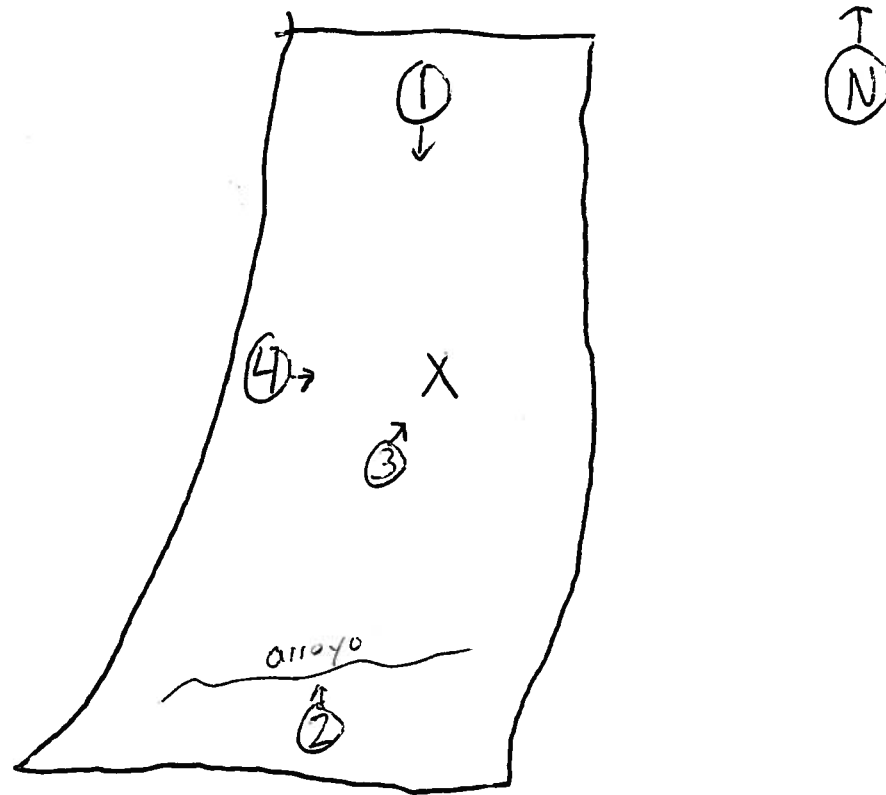
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS18</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 41.3"</u>	
	Longitude: <u>W 114° 57' 56.3"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00018	N/A	18	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-29-14	Soil/Bedrock Sample Number: BC-SS-00018	Grid/ID Number: 18	GPS Waypoint: SS18
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/30/14

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KV, ES</u>	GPS Waypoint: <u>55-19</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N 35° 58' 36.4"</u>	
	Longitude: <u>W 114° 54' 50.8"</u>	
GPS coordinates should be collected for the center of each sample.		

Page 1/2

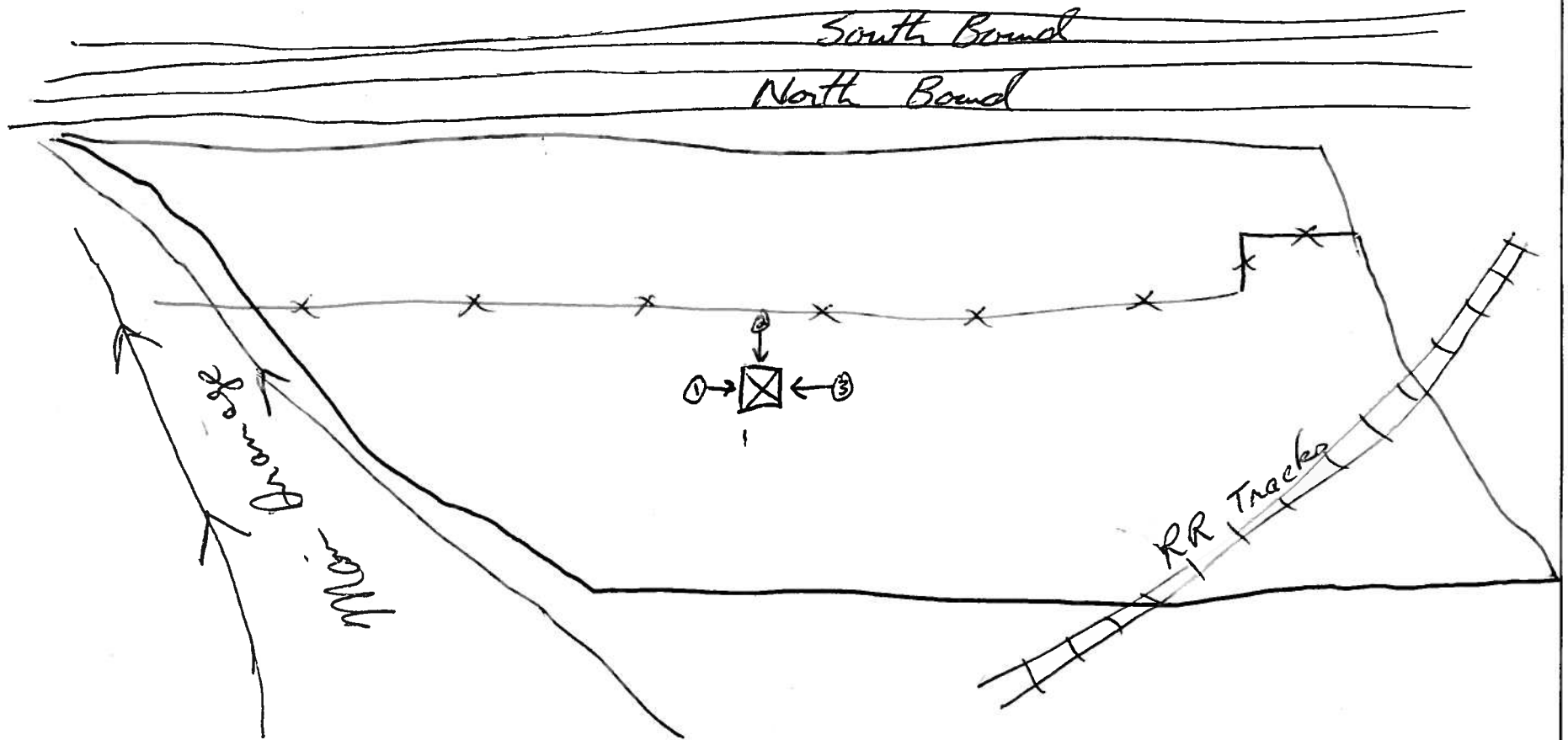
(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00019	No	19	Hand	30	Older Alluvium	Sandy loam	10-25% Chestgrass Creosote Tune grass	10-25% Large Red Qtz. Monzonite
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/30/14	Soil/Bedrock Sample Number: BC-55-00019	Grid/ID Number: 19	GPS Waypoint: 55-19
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

Slope gently to the SW at 2-5%. Main erosion ^{drainage} to the south



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/29/14

Associated ABS Testing?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KV, ES</u>	GPS Waypoint: <u>SS-20</u>	
GPS System/Unit #: <u>T+1</u>	Latitude: <u>N 35° 58' 36.4"</u>	
	Longitude: <u>W 114° 54' 54.4"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00020		20	Hand	30	Old Alluvium (stable surface)	Sandy loam	<10%	<10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

* Top surface of an erosional nose with good desert pavement of small dark-colored volcanic rocks
Veg = cheatgrass, creosote, saltbush
- ≈ 90% desert pavement

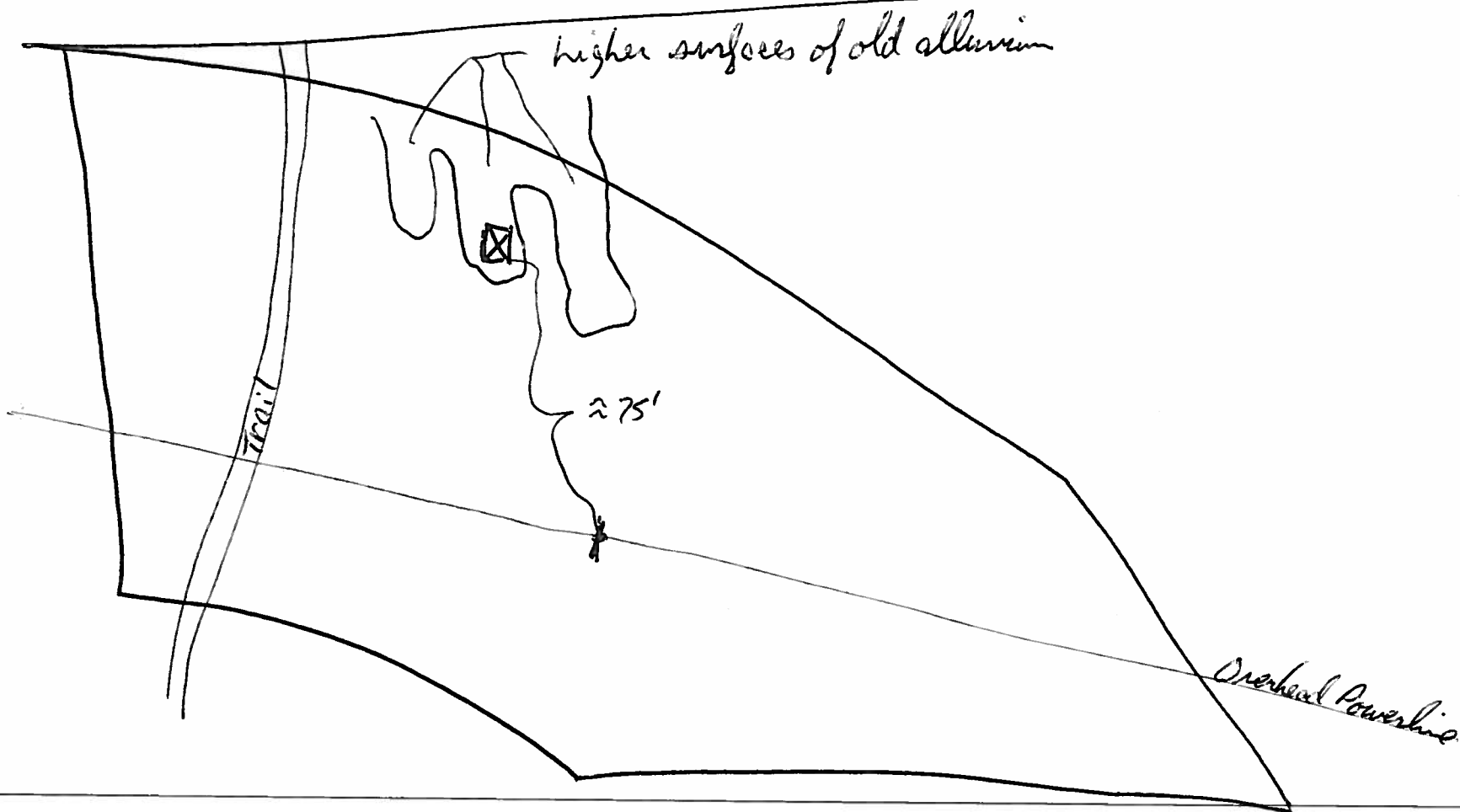
BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/29/14	Soil/Bedrock Sample Number: BC-55- 000 20	Grid/ID Number: 20	GPS Waypoint: 55-20
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

Slope = gently sloping to the SW

N ←



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/29/14

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>RF, KV, Ed Surbrugg</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KV, ES</u>	GPS Waypoint: <u>SS-21</u>	
GPS System/Unit #: <u>T+1</u>	Latitude: <u>N 35° 58' 32.5"</u>	
	Longitude: <u>W 114° 54' 53.1"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00021		21	Hand	30	<i>Disturbed Old Alluvium Surface - road Qty monzonite some volcanic</i>	<i>Sandy Loam</i>	10-25%	10-25%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

** Road grader strips*

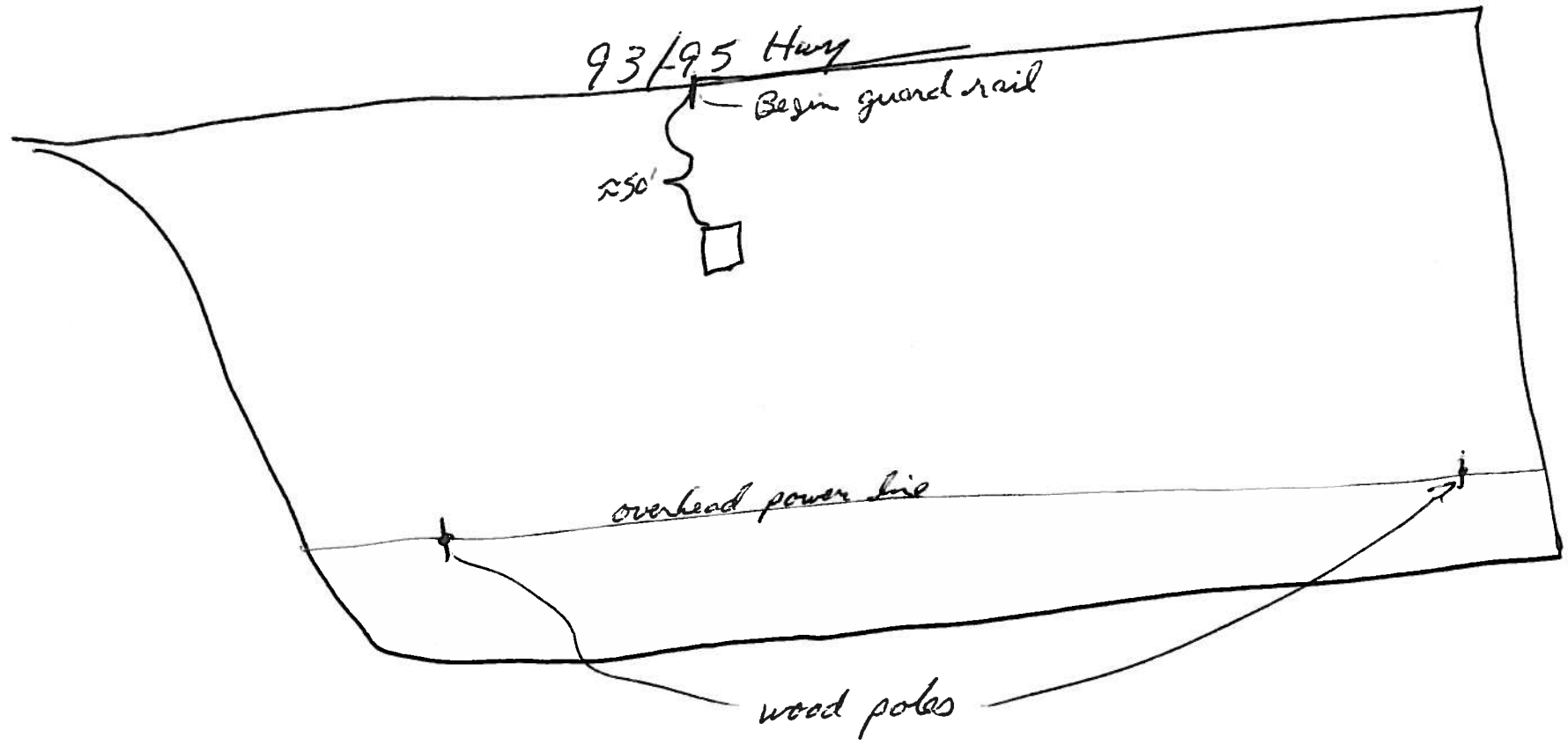
BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/29/14	Soil/Bedrock Sample Number: BC-55-00021	Grid/ID Number: 21	GPS Waypoint: 55-21
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

Slope - nearly flat

N ←



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-29-14

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS22</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 33.4"</u>	
	Longitude: <u>W 114° 54' 56.7"</u>	
GPS coordinates should be collected for the center of each sample.		

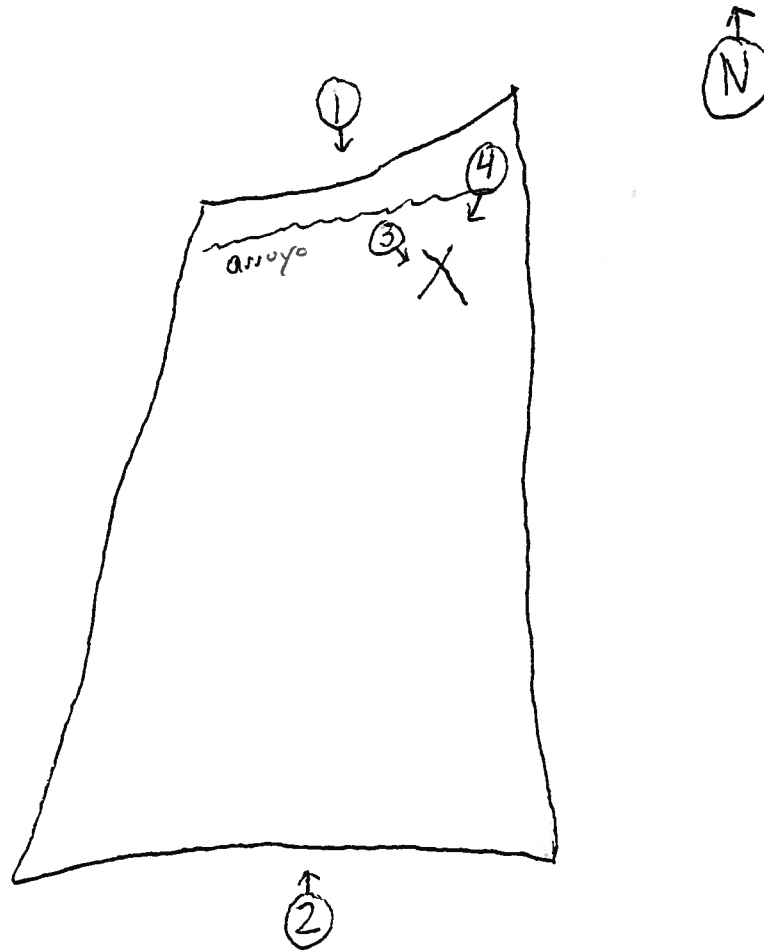
Page 1/2

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00022	N/A	BC-SS 22	Hand	30	Old Alluvium	Sandy Loam	10-25%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-29-14	Soil/Bedrock Sample Number: BC-SS-00022	Grid/ID Number: 22	GPS Waypoint: SS22
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/30/14

Page 1/2

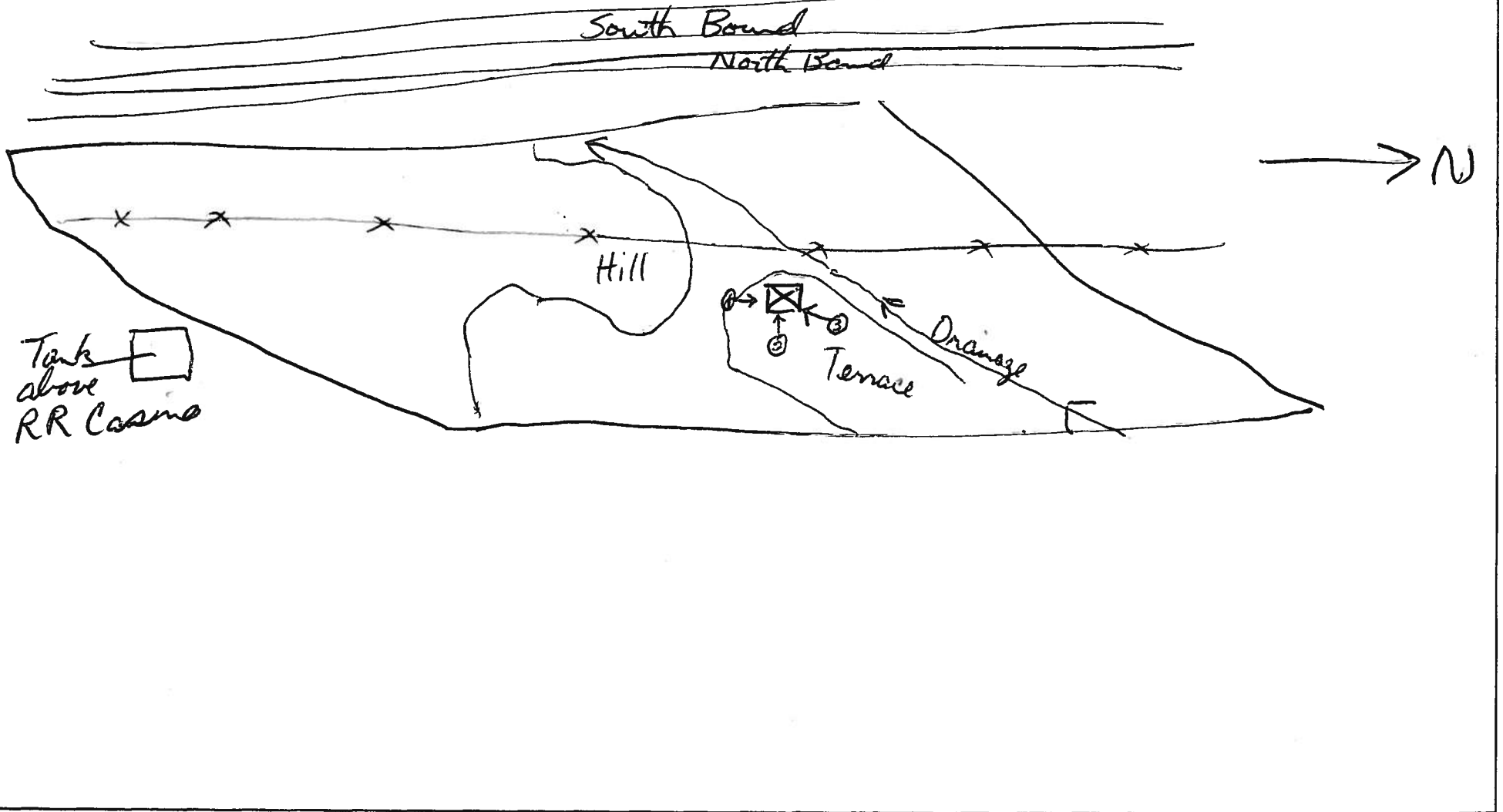
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KV, ES</u>	GPS Waypoint: <u>SS-23</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N 35° 58' 31.4"</u>	
	Longitude: <u>W 114° 54' 48.0"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Allquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00023	No	23	Hand	30	Old Alluvium	Sandy Loam (Just Loam)	<10%	<10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-46 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/30/14	Soil/Bedrock Sample Number: BC-55- 000 23	Grid/ID Number: 23	GPS Waypoint: 55-23
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/29/14

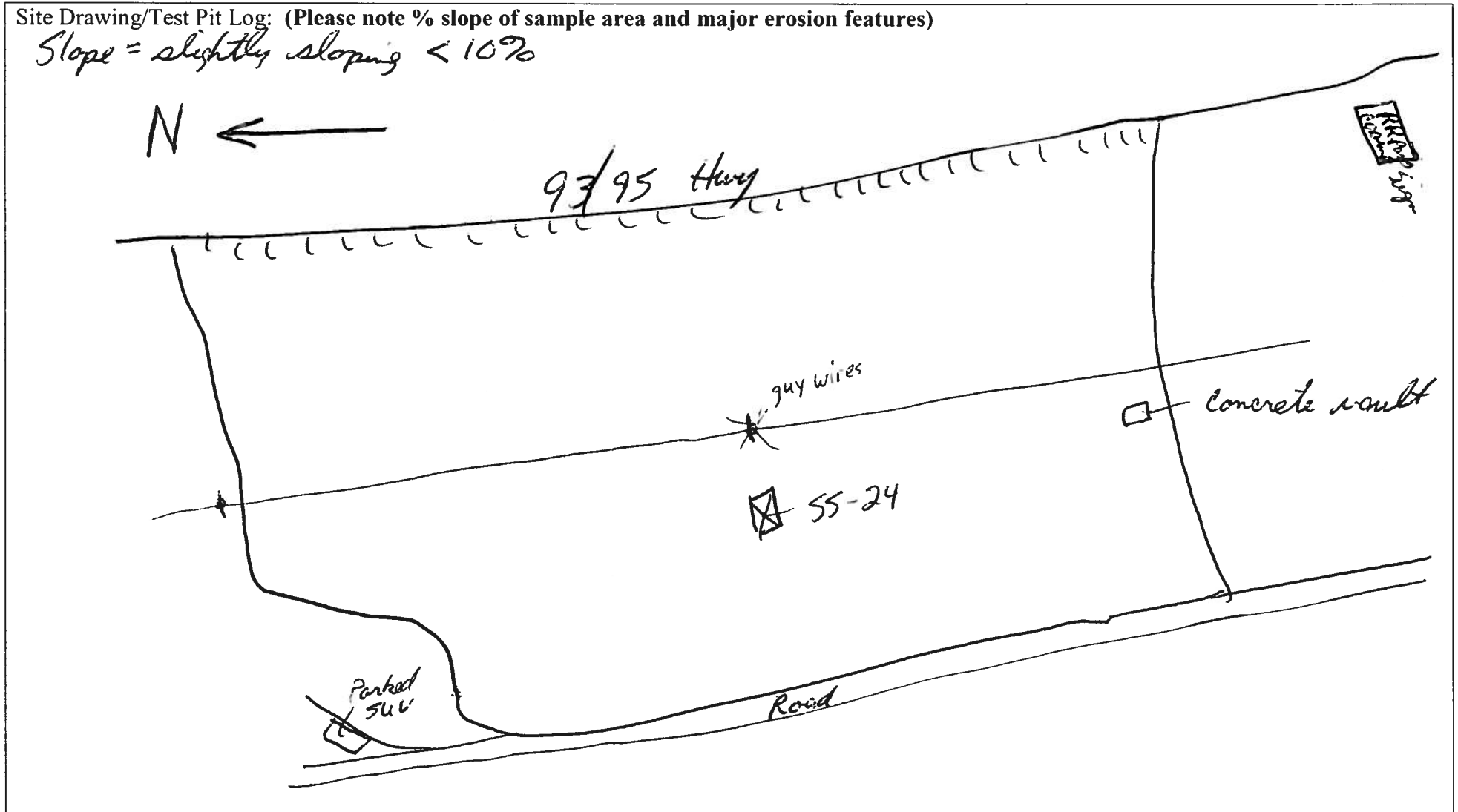
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KV, ES, MS</u>	GPS	
GPS System/Unit #: <u>T+1</u>	Waypoint: <u>SS-24</u>	
	Latitude: <u>N 35° 58' 25.2"</u>	
	Longitude: <u>W 114° 54' 52.4"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00024		24	Hand	30	Old Alluvium (disturbed)	Sandy Loam	<10%	<10% see note below
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

- Area is a small bench
- Surface rock = tan ^{dried} volcanics, lots of small cobbles & gravels

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/29/14	Soil/Bedrock Sample Number: BC-55-00024	Grid/ID Number: 24	GPS Waypoint: 55-24
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BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-29-14

Page 1 / 2

Associated ABS Testing?		<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By:	<u>Team 2</u>	Log Book No:	<u>2</u>
Sample Team Initials:	<u>SH</u>	GPS Waypoint:	<u>SS-25</u>
GPS System/Unit #:	<u>TT-2</u>	Latitude:	<u>N 35° 58' 25.2"</u>
		Longitude:	<u>W 114° 54' 55.8"</u>
GPS coordinates should be collected for the center of each sample.			

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00025	<u>N/A</u>	<u>25</u>	<u>Hand</u>	<u>30</u>	<u>Old Alluvium</u>	<u>Sandy loam</u>	<u>< 10%</u>	<u>< 10%</u>

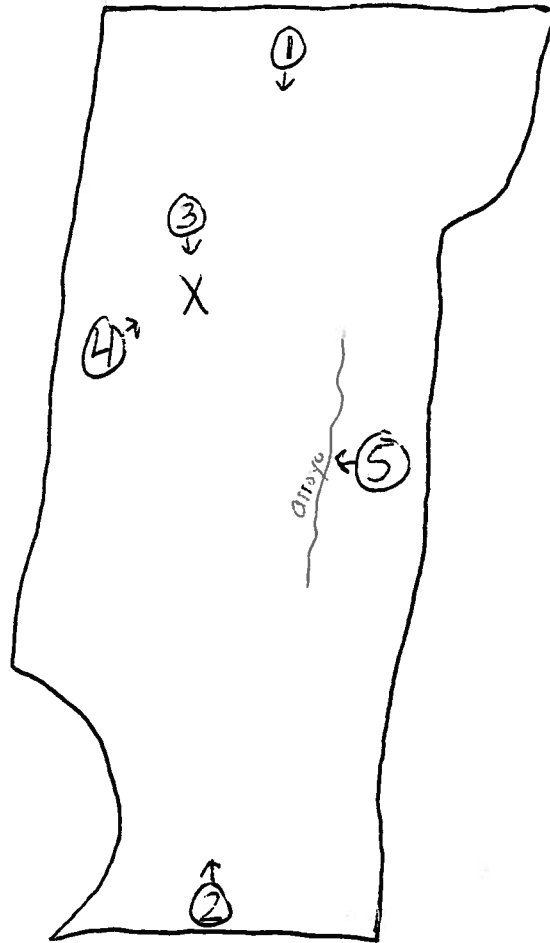
NOTES: To be used to complete details above.

1) Surface Soil (0-6 inch)		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation?	Proportion of stones greater than 6 inches?
2) Subsurface Test Pits (0-10 ft.)							<10%	<10%
3) Subsurface Auger Sample (0-45 ft.)							10-25%	10-25%
4) Outcrop Geologic Sample							25-50%	25-50%
5) Rock Core Drill Sample							>50%	>50%
6) Discrete "Target" Sample								

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-29-14	Soil/Bedrock Sample Number: BC-SS-00025	Grid/ID Number: 25	GPS Waypoint: SS 25
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-30-14

Page 1/2

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS 26</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 23.6"</u>	
	Longitude: <u>W 114° 54' 49.6"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00026	N/A	26	Hand	30	Old Alluvium	sandy loam	< 10%	< 10%

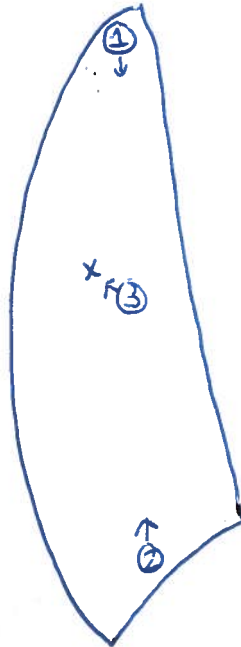
NOTES: To be used to complete details above.

1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-####	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%
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BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-30-14	Soil/Bedrock Sample Number: BC-SS-00026	Grid/ID Number: 26	GPS Waypoint: SS26
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-31-14

Page 1/2

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Teun 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS27</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 16.0"</u>	
	Longitude: <u>W 114° 54' 43.6"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00027	BC-ABS-00005	27	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%

NOTES: To be used to complete details above.

1) Surface Soil (0-6 inch)	BC-XX-###	Hand	New Alluvium	Sand	Proportion of grid covered w/ vegetation?	Proportion of stones greater than 6 inches?
2) Subsurface Test Pits (0-10 ft.)		Backhoe	Old Alluvium	Loamy Sand	<10%	<10%
3) Subsurface Auger Sample (0-45 ft.)		HSA	Qtz Monzonite	Sandy Loam	10-25%	10-25%
4) Outcrop Geologic Sample		Core Drill	Volcanic Breccia	Loam	25-50%	25-50%
5) Rock Core Drill Sample		Outcrop	Other (describe)	Other (describe)	>50%	>50%
6) Discrete "Target" Sample						

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-31-14	Soil/Bedrock Sample Number: BC-SS-00027	Grid/ID Number: 27	GPS Waypoint: SSZ7
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-30-14

Page 1/2

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Teen 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS28</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 17.0"</u>	
	Longitude: <u>W 114° 54' 45.6"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00028	N/A	28	Hand	30	Old Alluvium	sandy loam	< 10%	< 10%

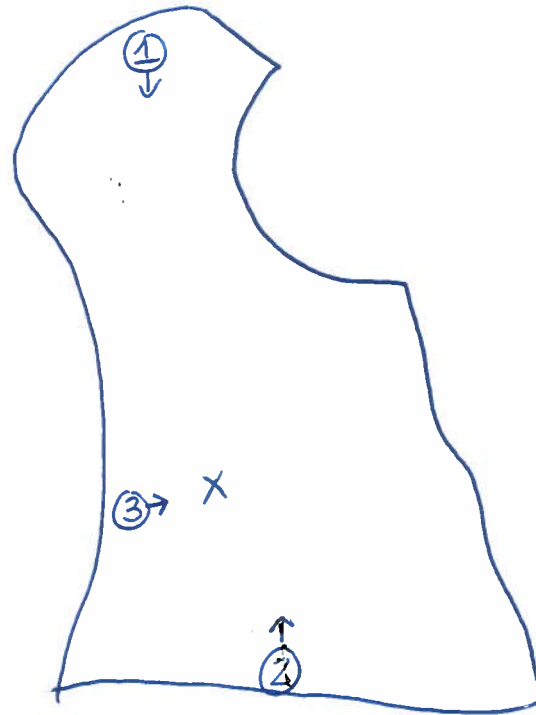
NOTES: To be used to complete details above.

1) Surface Soil (0-6 inch)	BC-XX-###	Hand	New Alluvium	Sand	Proportion of grid covered w/ vegetation?	Proportion of stones greater than 6 inches?
2) Subsurface Test Pits (0-10 ft.)		Backhoe	Old Alluvium	Loamy Sand	10-25%	<10%
3) Subsurface Auger Sample (0-46 ft.)		HSA	Qtz Monzonite	Sandy Loam	25-50%	10-25%
4) Outcrop Geologic Sample		Core Drill	Volcanic Breccia	Loam	>50%	25-50%
5) Rock Core Drill Sample		Outcrop	Other (describe)	Other (describe)		>50%
6) Discrete "Target" Sample						

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-30-14	Soil/Bedrock Sample Number: BC-SS-00028	Grid/ID Number: 28	GPS Waypoint: SS 28
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-30-14

Page 1/2

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS29</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 18.3"</u>	
	Longitude: <u>W 114° 54' 50.0"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Allquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00029	N/A	29	Hand	30	Old Alluvium	sandy ^{SH} loamy sand	10-25%	< 10%

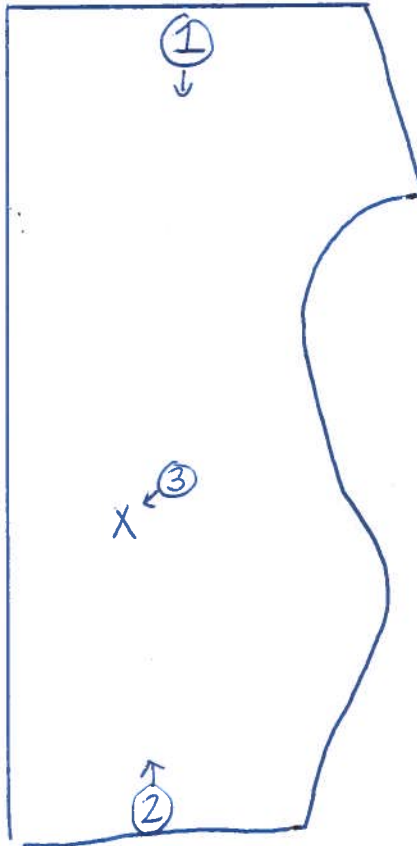
NOTES: To be used to complete details above.

1) Surface Soil (0-6 inch)	2) Subsurface Test Pits (0-10 ft.)	3) Subsurface Auger Sample (0-48 ft.)	4) Outcrop Geologic Sample	5) Rock Core Drill Sample	6) Discrete "Target" Sample	BC-XX-###	Hand Backhoe HSA Core Drill Outcrop	New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation?	Proportion of stones greater than 8 inches?
										<10% 10-25% 25-50% >50%	<10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-30-14	Soil/Bedrock Sample Number: BC-SS-00029	Grid/ID Number: 29	GPS Waypoint: SS29
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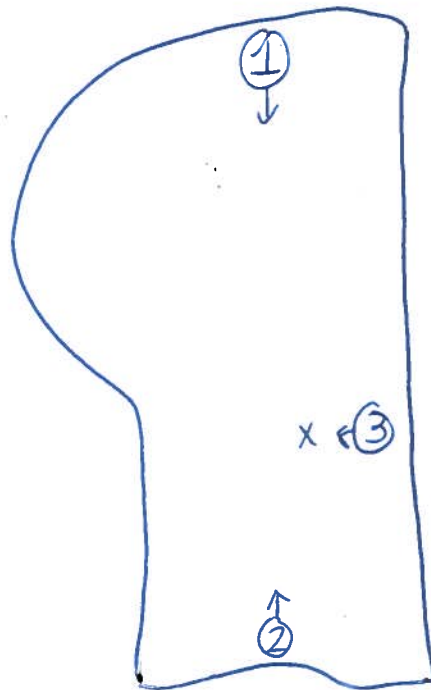
Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-30-14	Soil/Bedrock Sample Number: BC-SS-00030	Grid/ID Number: 30	GPS Waypoint: SS30
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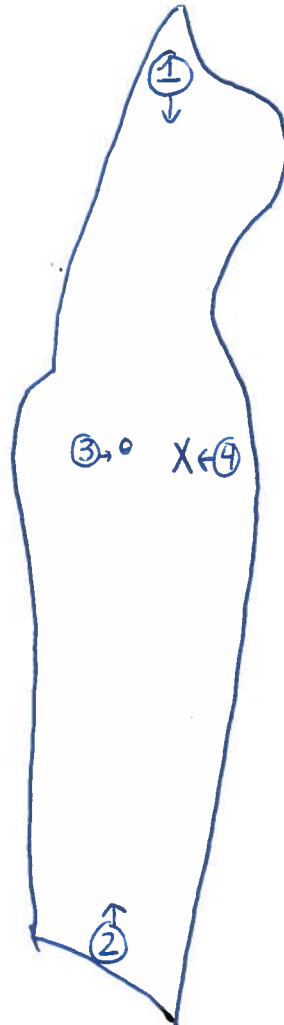
Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-30-14	Soil/Bedrock Sample Number: BC-SS-00031	Grid/ID Number: 31	GPS Waypoint: SS31
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



○ mine adit location

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-31-14

Page 1 / 2

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS32</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 14.1"</u>	
	Longitude: <u>W 114° 54' 54.4"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00032	BC-ABS-00005	32	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%

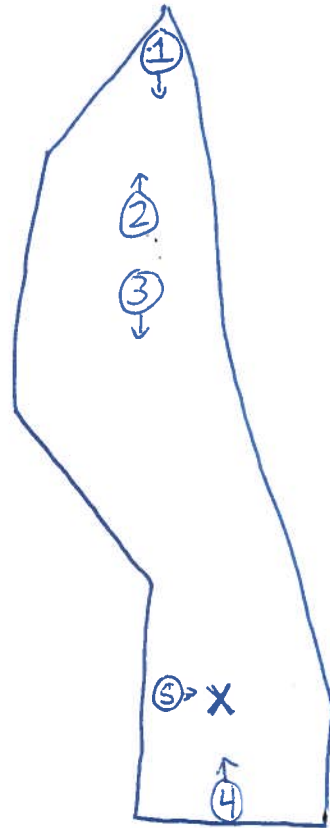
NOTES: To be used to complete details above.

1) Surface Soil (0-6 inch)	2) Subsurface Test Pits (0-10 ft.)	3) Subsurface Auger Sample (0-46 ft.)	4) Outcrop Geologic Sample	5) Rock Core Drill Sample	6) Discrete "Target" Sample			
		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-31-14	Soil/Bedrock Sample Number: BC-SS-00032	Grid/ID Number: 32	GPS Waypoint: SS32
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-31-14

Page 1/2

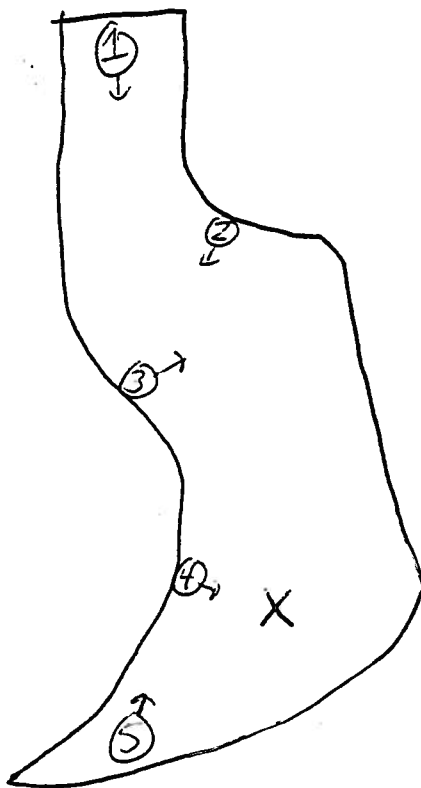
Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS33</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 10.4"</u>	
	Longitude: <u>W 114° 54' 36.8"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00033	BC-ABS-00005	33	Hand	30	Old Alluvium	sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-31-14	Soil/Bedrock Sample Number: BC-SS-00033	Grid/ID Number: 33	GPS Waypoint: SS33
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-2-14

Page 1/2

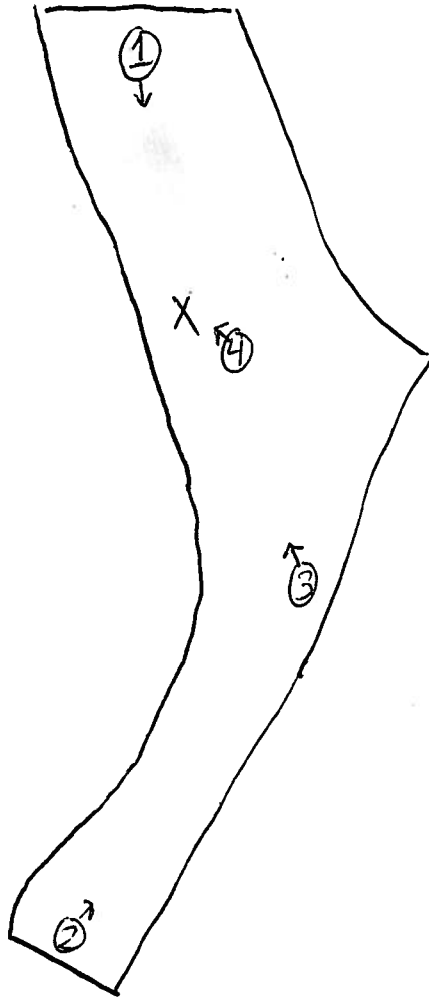
Associated ABS Testing? <input checked="" type="checkbox"/> ^{SH} Yes <input checked="" type="checkbox"/> No	
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS34</u>
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 11.0"</u>
	Longitude: <u>W 114° 54' 40.9"</u>
GPS coordinates should be collected for the center of each sample.	

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00034	BC-ABS-00007 ^{SH}	34	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 8 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-2-14	Soil/Bedrock Sample Number: BC-SS-00034	Grid/ID Number: 34	GPS Waypoint: SS34
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-2-14

Page 1 / 2

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes ^{SH} <input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS35</u>
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 59' 10.0"</u>
	Longitude: <u>W 114° 54' 42.7"</u>
GPS coordinates should be collected for the center of each sample.	

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00035		35	Hand	30	New Alluvium	sandy loam	< 10%	< 10%

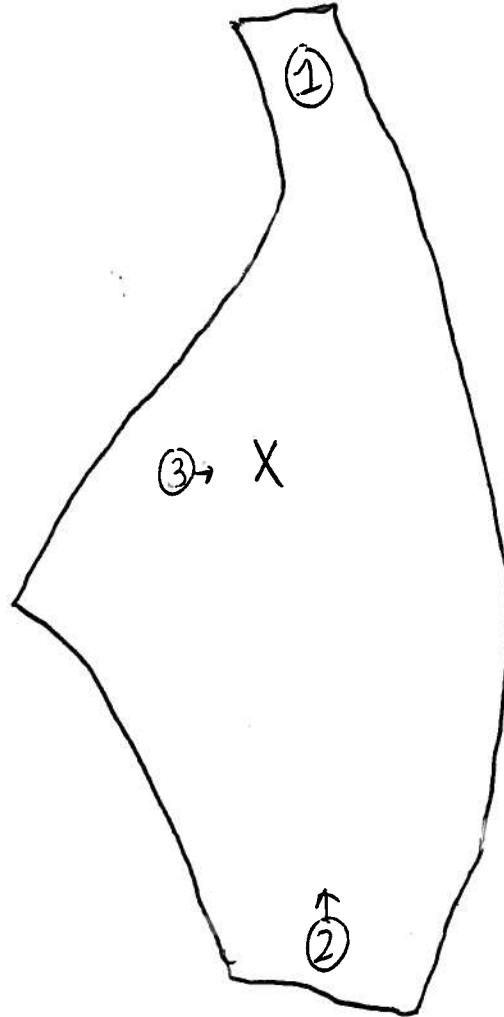
NOTES: To be used to complete details above.

1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample	BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%
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BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-2-14	Soil/Bedrock Sample Number: BC-SS-00035	Grid/ID Number: 35	GPS Waypoint: SS35
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-2-14

Page 1/2

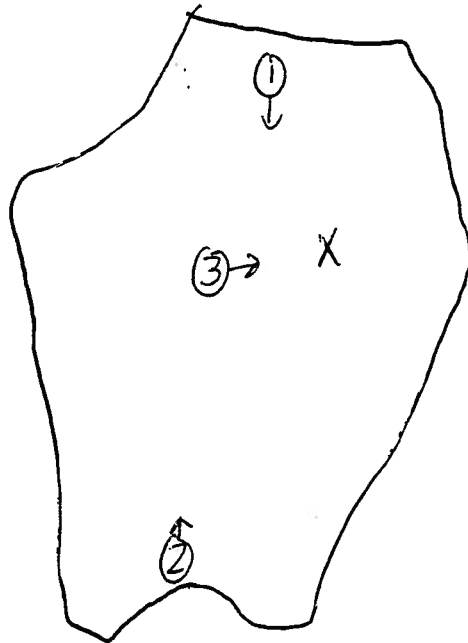
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS36</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 12.4"</u>	
	Longitude: <u>W 114° 54' 46.0"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00036		36	Hand	30	New Alluvium	Sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-2-14	Soil/Bedrock Sample Number: BC-SS-00036	Grid/ID Number: 36	GPS Waypoint: SS36
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/31/14

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KU, ES</u>	GPS Waypoint: <u>55-37</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N 35° 58' 11.4"</u>	
	Longitude: <u>W 114° 54' 49.4"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Allquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00037	<u>Yes</u> <u>BC-ABS-00004</u>	<u>37</u>	<u>Hand</u>	<u>30</u>	<u>Young New Alluvium</u>	<u>Loamy Sand</u>	<u>10-25%</u> <u>Cresote Saltbush</u>	<u><10%</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch)		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

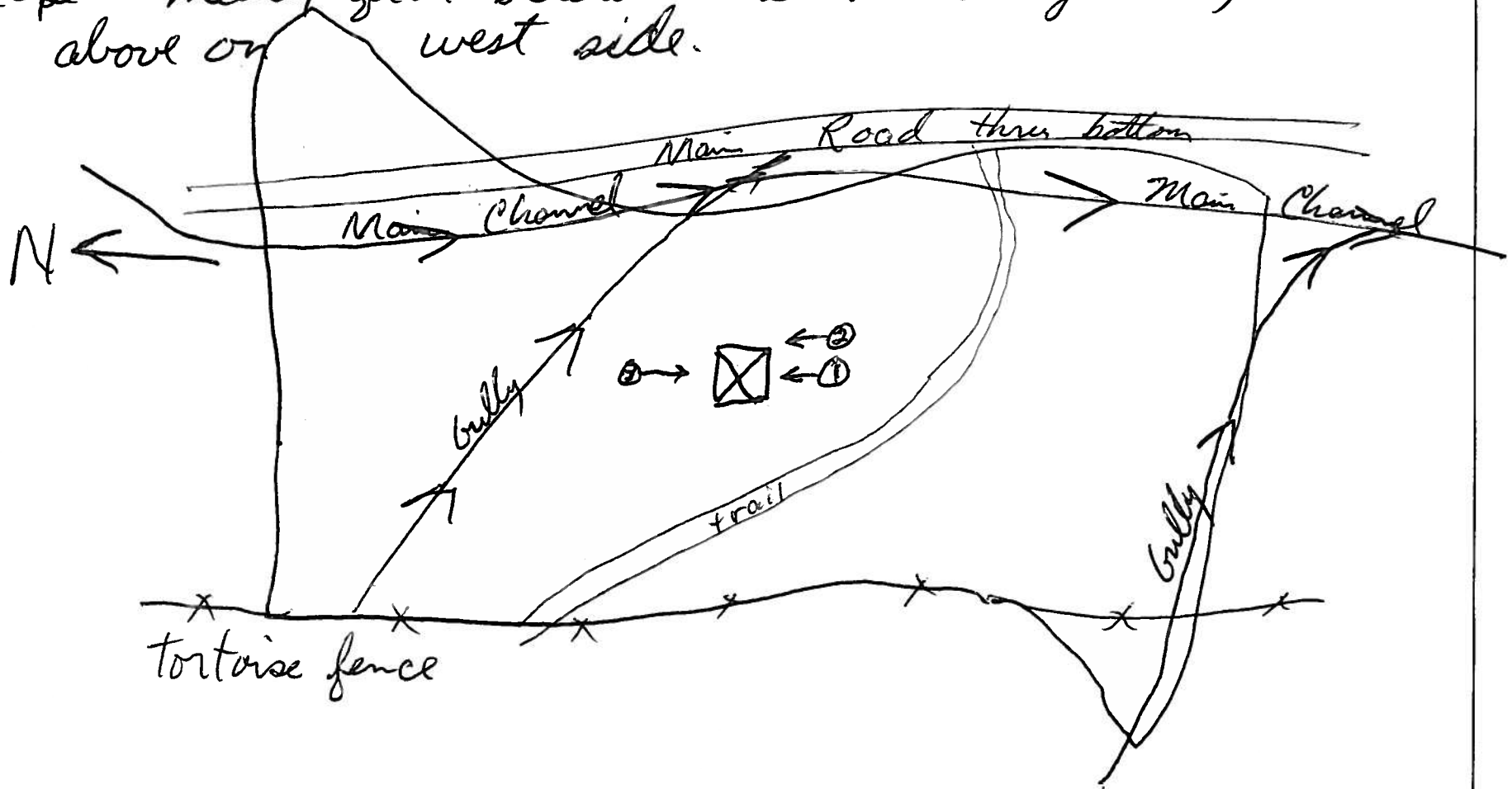
Veg - Site must of had several cactus salvaged from plot and several old/dead cactus remain.

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/31/14	Soil/Bedrock Sample Number: BC-55-00037	Grid/ID Number: 37	GPS Waypoint: 55-37
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

Slope - nearly flat below on east side grading to $\approx 15\%$ above on west side.



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/31/14

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KV, ES</u>	GPS Waypoint: <u>55-38</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N 35° 58' 10.7"</u>	
	Longitude: <u>W 114° 54' 53.0"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00038	<u>Yes</u> <u>BC-ABS-00004</u>	<u>38</u>	<u>Hand</u>	<u>30</u>	<u>Qtz Morn,</u> <u>Volcanic</u>	<u>Loamy</u> <u>Sand</u>	<u><10%</u>	<u><10%</u> <u>but ≈</u> <u>100%</u> <u>pavement</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

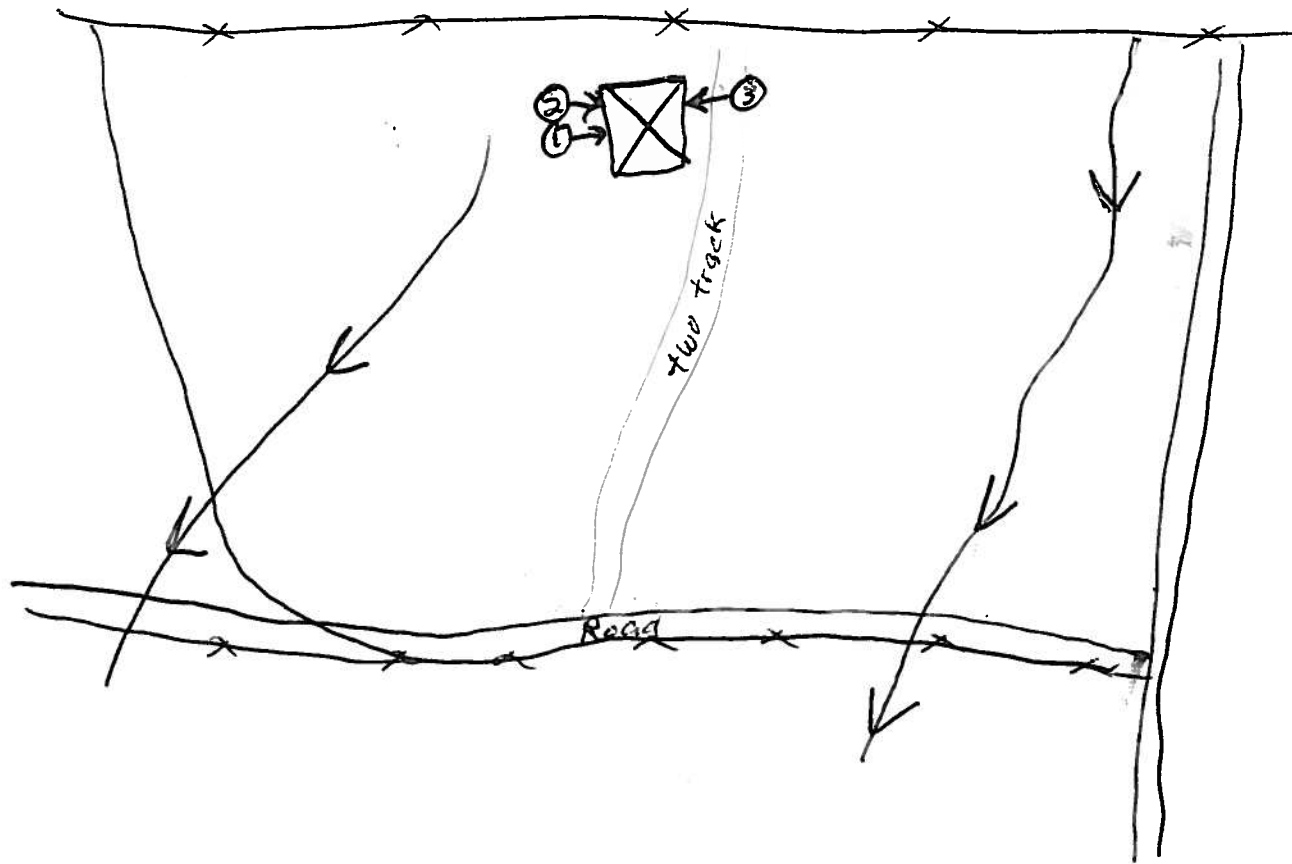
Slope ≈ 20%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/31/14	Soil/Bedrock Sample Number: BC-55- 00004 ⁵⁵ 00038	Grid/ID Number: 55-38	GPS Waypoint: 55-38
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

Slope $\approx 20\%$, 2 main gullies across area. Near the top of the small ridge.



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/31/14

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KV, ES</u>	GPS Waypoint: <u>55-39</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N35°58'07.3"</u>	
	Longitude: <u>W114°54'49.3"</u>	
GPS coordinates should be collected for the center of each sample.		

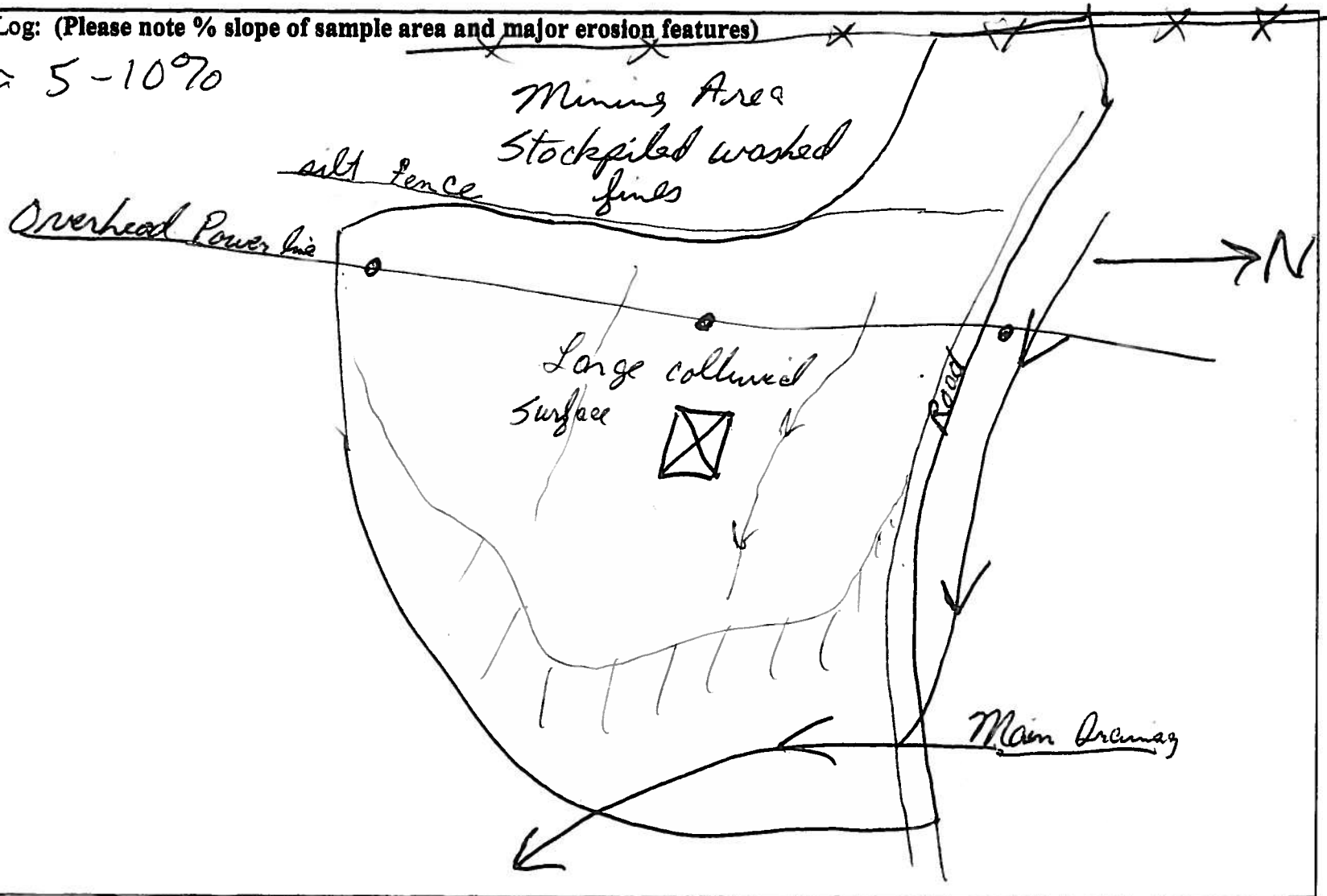
(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00039	<u>Yes</u> BC-ABS-00004	<u>39</u>	<u>Hand</u>	<u>40</u>	<u>Other - Colluvial Many large rocks Volcanic in origin</u>	<u>Sandy Loam</u>	<u>10-25% cactus creosote sagebrush annuals</u>	<u>10-25%</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/31/14	Soil/Bedrock Sample Number: BC-55-00039	Grid/ID Number: 39	GPS Waypoint: 55-39
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

Slope \approx 5-10%



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/31/14

Page 1/2

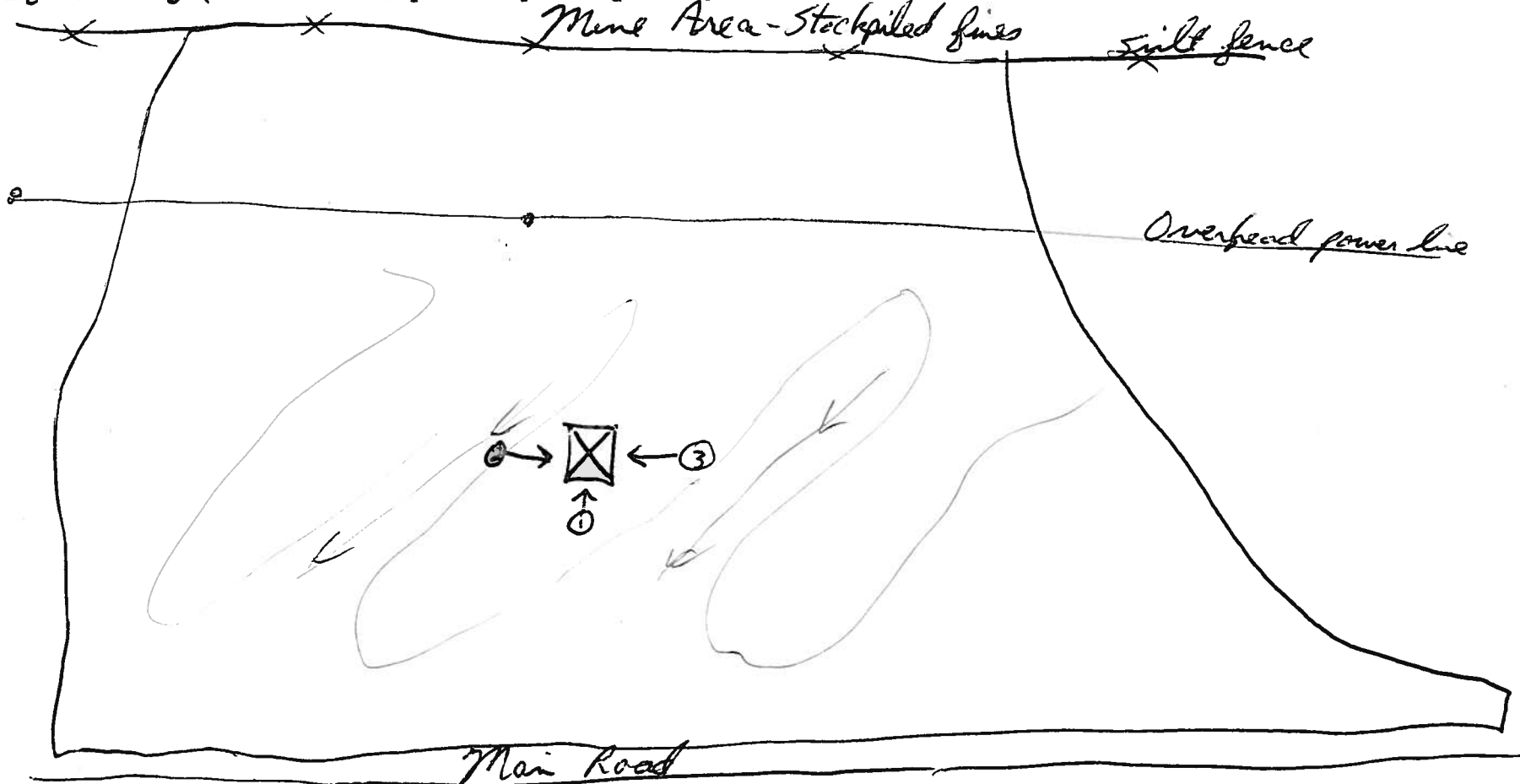
Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KV, ES</u>	GPS Waypoint: <u>SS-40</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N35°58'03.9"</u>	
	Longitude: <u>W114°54'48.2"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Allquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00040	<u>Yes</u> BC-ABS-00004	<u>40</u>	<u>Hand</u>	<u>40</u>	<u>Colluvial Material mixed</u>	<u>Sandy loam</u>	<u>10-25% Sediment creosote cactus.</u>	<u>10-25%</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/31/14	Soil/Bedrock Sample Number: BC-55- 000 40	Grid/ID Number: 40	GPS Waypoint: 55-40
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



Slope \approx 5-10% to the east. Fairly noticeable colluvial surfaces.

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/31/14

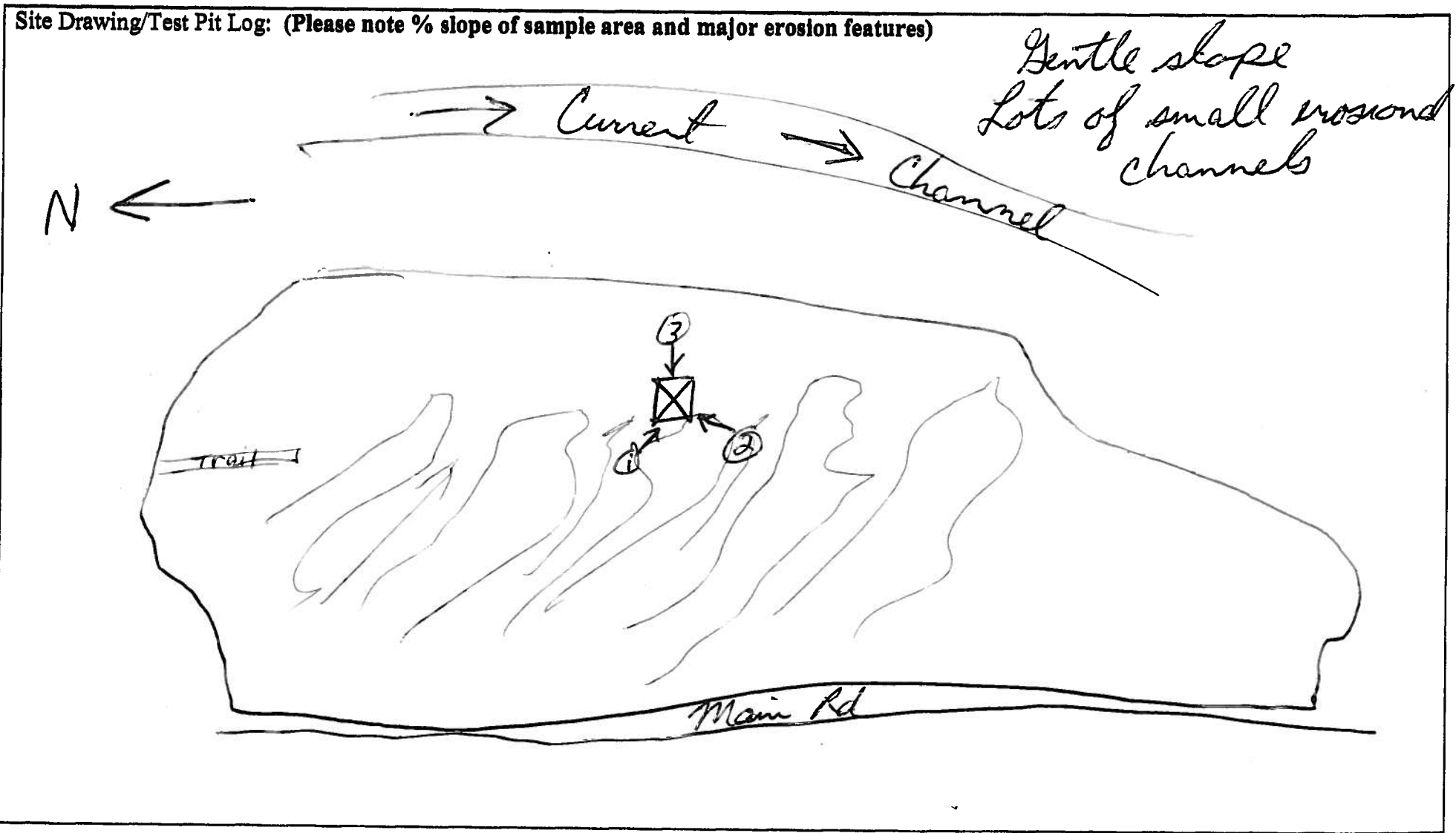
Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, KV, ES</u>	GPS Waypoint: <u>SS-41</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: <u>N 35° 58' 03.4"</u>	
	Longitude: <u>W 114° 54' 44.8"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00041	<u>Yes</u> BC-ABS-00004	<u>41</u>	<u>Hand</u>	<u>30</u>	<u>Young Alluvium Rounded & Rocky</u>	<u>Loamy Sand</u>	<u>10-25% creosote saltbrush cactus small forbs</u>	<u>10-25%</u>
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-46 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 8 inches? <10% 10-25% 25-50% >50%

Slope - nearly flat w/ small slope < 2% to the south, southeast. Site just west of main drainage, current channel

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/31/14	Soil/Bedrock Sample Number: BC-SS- 000 41	Grid/ID Number: 41	GPS Waypoint: 55-41
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BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-2-14

Page 1/2

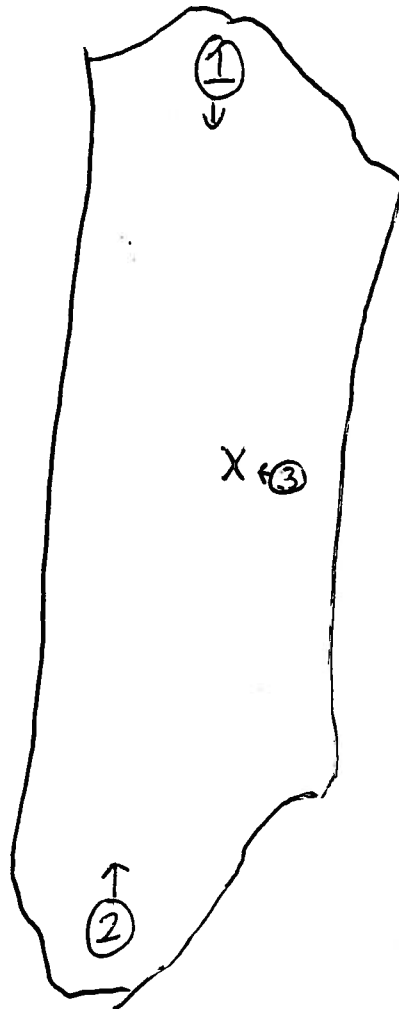
Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS41</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 05.7"</u>	
	Longitude: <u>W 114° 54' 45.7"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00041B	BC-ABS-00007	41	Hand	30	New Alluvium	gravelly sand	10-25%	<10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-48 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 8 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-2-14	Soil/Bedrock Sample Number: BC-SS-00041B	Grid/ID Number: 41	GPS Waypoint: SS41
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-2-14

Page 1/2

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS42</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 03.1"</u>	
	Longitude: <u>W 114° 54' 42.6"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00042	BC-ABS-00007	42	Hand	30	Old Alluvium	gravelly sand	< 10%	< 10%

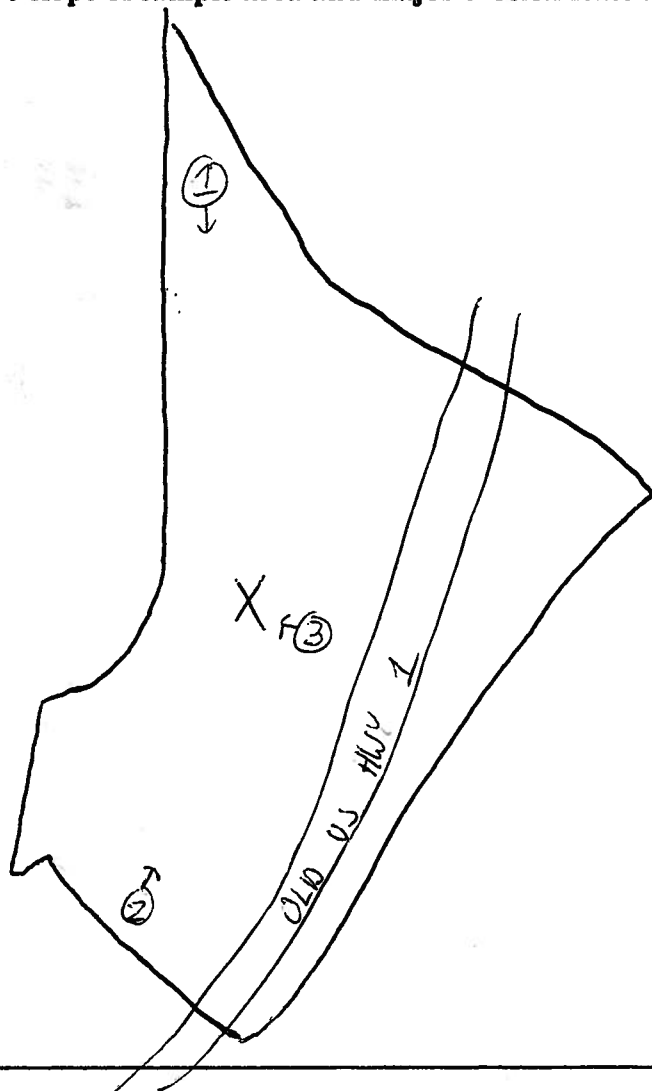
NOTES: To be used to complete details above.

1) Surface Soil (0-6 inch)		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 8 inches? <10% 10-25% 25-50% >50%
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BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-2-14	Soil/Bedrock Sample Number: BC-SS-00042	Grid/ID Number: 42	GPS Waypoint: SS42
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-2-14

Page 1/2

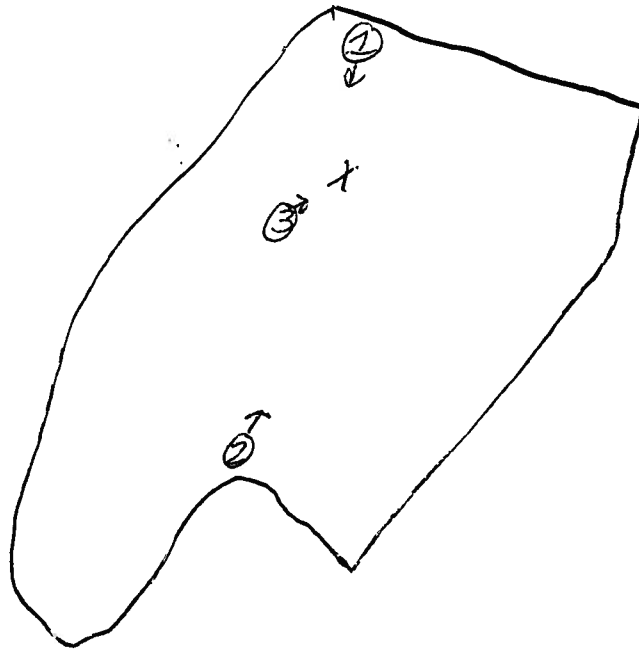
Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>5543</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 03.1"</u>	
	Longitude: <u>W 114° 54' 37.7"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00043	BC-ABS-00067	43	Hand	30	Old Alluvium	Silty Sand loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 8 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-2-14	Soil/Bedrock Sample Number: BC-SS-00043	Grid/ID Number: 43	GPS Waypoint: SS43
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-2-14

Page 1/2

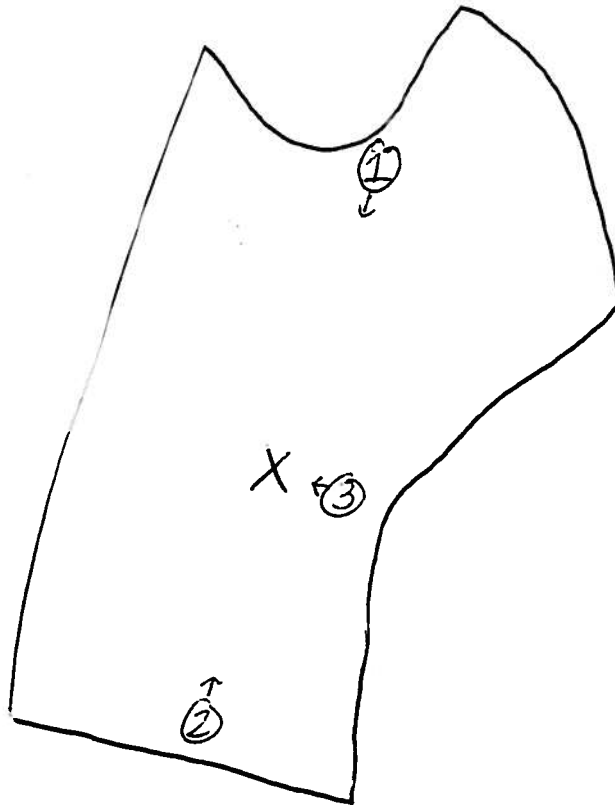
Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS44</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 57' 56.4"</u>	
	Longitude: <u>W 114° 54' 39.4"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00044	BC-ABS-00007	44	Hand	30	Old Alluvium	Sandy/Gravelly loam	10-25%	<10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-2-14	Soil/Bedrock Sample Number: BC-SS-00044	Grid/ID Number: 44	GPS Waypoint: SS44
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-2-14

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS45</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 57' 59.4"</u>	
	Longitude: <u>W 114° 54' 44.2"</u>	
GPS coordinates should be collected for the center of each sample.		

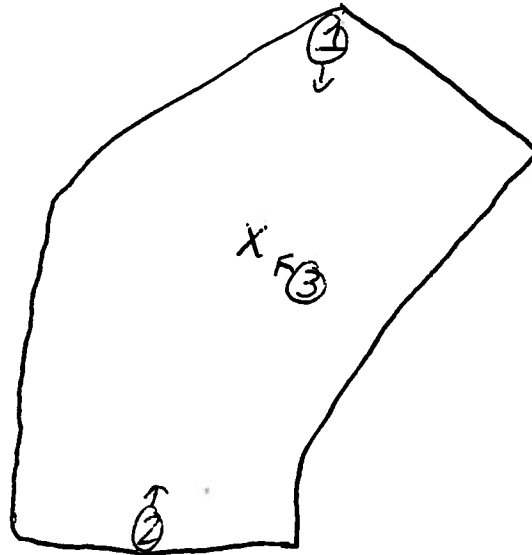
Page 1 / 2

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00045	BC-ABS-00007	45	Hard	30	New Alluvium	gravely sand	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample	BC-XX-###	Hand Backhoe HSA Core Drill Outcrop	New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 8 inches? <10% 10-25% 25-50% >50%		

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-2-14	Soil/Bedrock Sample Number: BC-SS-00045	Grid/ID Number: 45	GPS Waypoint: SS45
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5/31/14

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By:	<u>Team 1</u>	Log Book No: <u>1</u>
Sample Team Initials:	<u>RF, KU, ES</u>	GPS Waypoint: <u>SS-46</u>
GPS System/Unit #:	<u>TT-1</u>	Latitude: <u>N35°57'57.9"</u>
		Longitude: <u>W114°54'47.6"</u>
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00046	<u>Yes</u> BC-ABS-00004	<u>46</u>	<u>Hand</u>	<u>30</u>	<u>Old Alluvium</u>	<u>Sandy Loam</u>	<u>< 10%</u> 10-25% <u>saltbush creosote</u>	<u>< 10%</u>

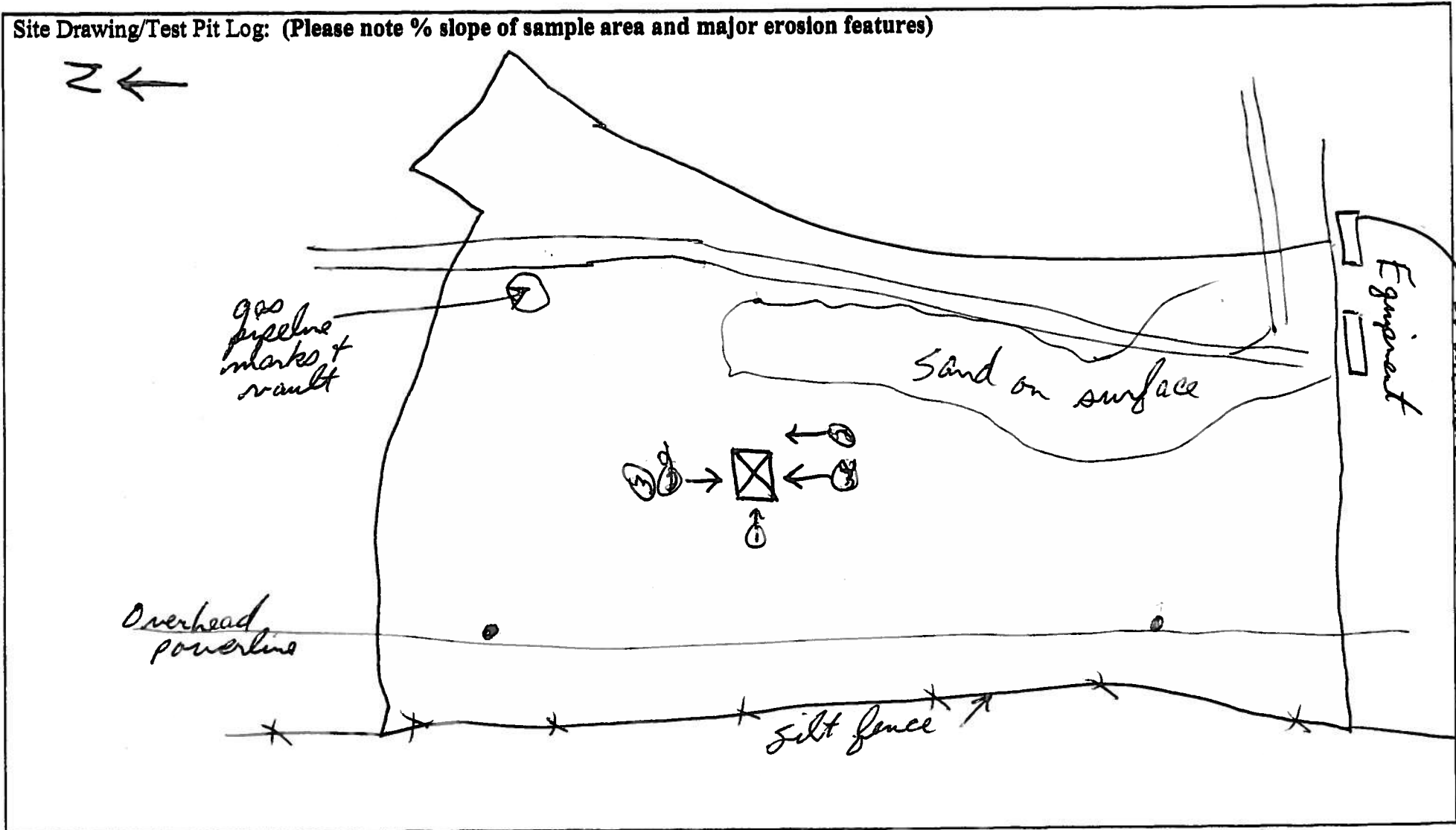
NOTES: To be used to complete details above.

1) Surface Soil (0-6 inch)	2) Subsurface Test Pits (0-10 ft.)	3) Subsurface Auger Sample (0-45 ft.)	4) Outcrop Geologic Sample	5) Rock Core Drill Sample	6) Discrete "Target" Sample	BC-XX-###	Hand Backhoe HSA Core Drill Outcrop	New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation?	Proportion of stones greater than 6 inches?
										<10% 10-25% 25-50% >50%	<10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5/31/14	Soil/Bedrock Sample Number: BC-55-00046	Grid/ID Number: 46	GPS Waypoint: 55-46
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-2-14

Page 1/2

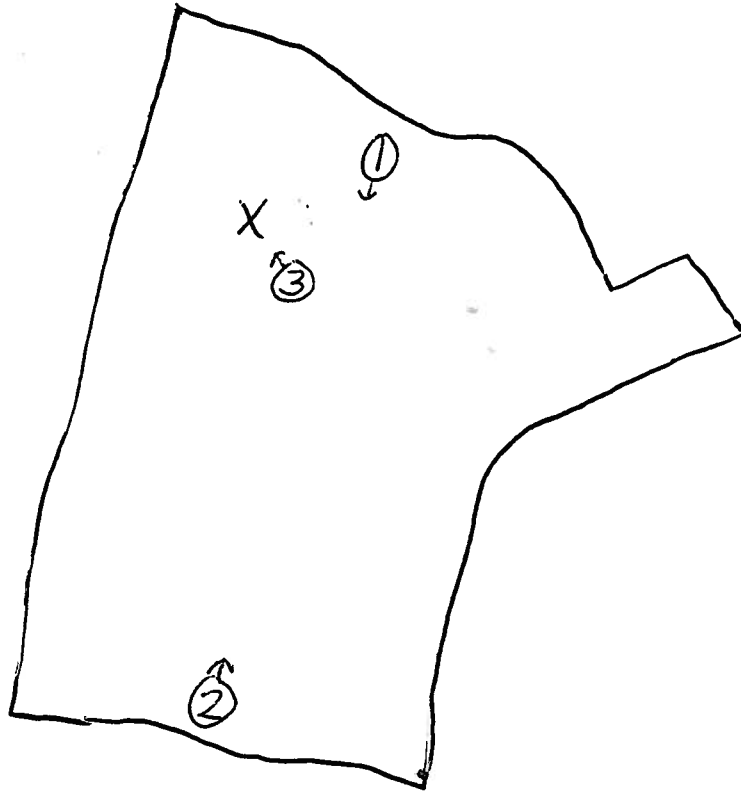
Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS46</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 00.5"</u>	
	Longitude: <u>W 114° 54' 49.0"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00046B	BC-ABS-00007	46	Hand	30	Old Alluvium	sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6/2/14	Soil/Bedrock Sample Number: BC-SS-00046B	Grid/ID Number: 46	GPS Waypoint: SS46
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-3-14

Page 1/2

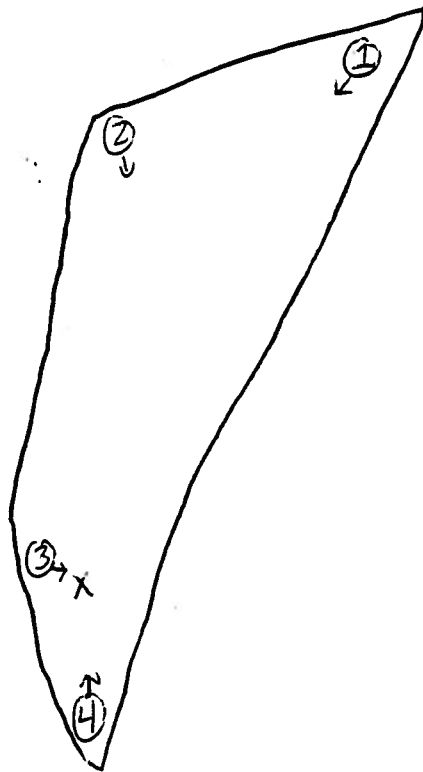
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By:	<u>Team 2</u>	Log Book No: <u>2</u>
Sample Team Initials:	<u>SH</u>	GPS Waypoint: <u>SS47</u>
GPS System/Unit #:	<u>TT-2</u>	Latitude: <u>N 35° 57' 51.2"</u>
		Longitude: <u>W 114° 54' 38.7"</u>
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00047	N/A	47	Hand	30	Old Alluvium	sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 8 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-3-14	Soil/Bedrock Sample Number: BC-SS-00047	Grid/ID Number: 47	GPS Waypoint: SS47
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-4-14

Page 1 / 2

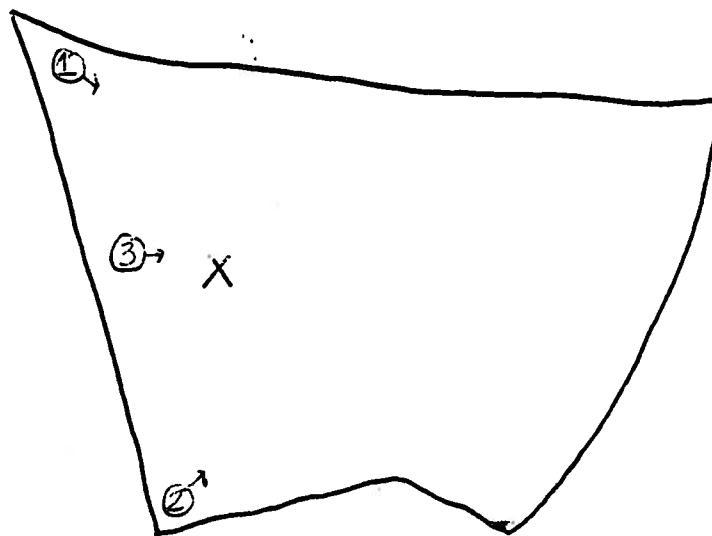
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Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS48</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 57' 51.4"</u>	
	Longitude: <u>W 114° 54' 42.4"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Allquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00048	BC-ABS-00012	48	Hand	30	Old Alluvium	sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-48 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-####	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-4-14	Soil/Bedrock Sample Number: BC-SS-00048	Grid/ID Number: 48	GPS Waypoint: SS48
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-4-14

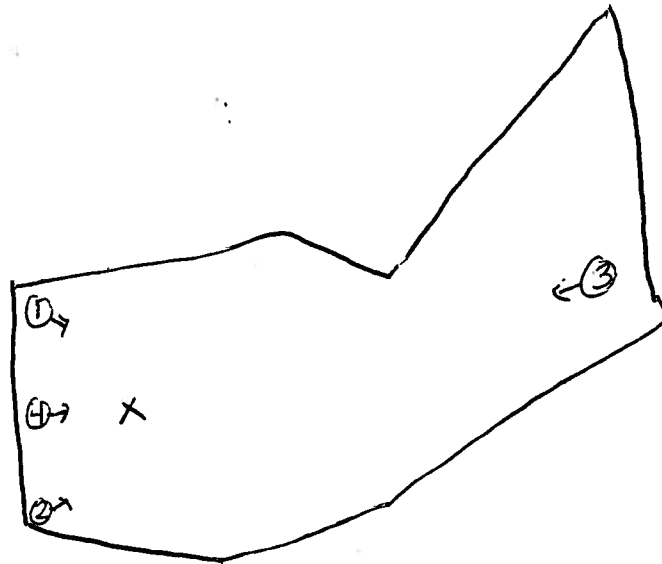
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Collected By:	<u>Team 2</u>	Log Book No: <u>2</u>
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS49</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 57' 48.2"</u>	
	Longitude: <u>W 114° 54' 41.8"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00049	BC-ABS - 00012	49	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 Inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-4-14	Soil/Bedrock Sample Number: BC-SS-00049	Grid/ID Number: 49	GPS Waypoint: SS49
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-4-14

Page 1/2

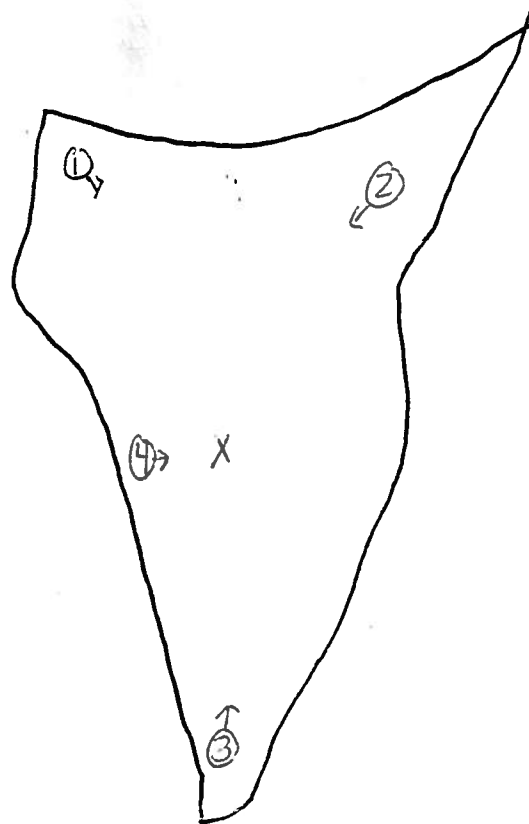
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Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS 50</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 57' 45.5"</u>	
	Longitude: <u>W 114° 54' 40.2"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00050	BC-ABS 00 12	50	Hand	30	old Alluvium	sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 8 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-4-14	Soil/Bedrock Sample Number: BC-SS-00050	Grid/ID Number: 50	GPS Waypoint: SS50
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-4-14

Page 1/2

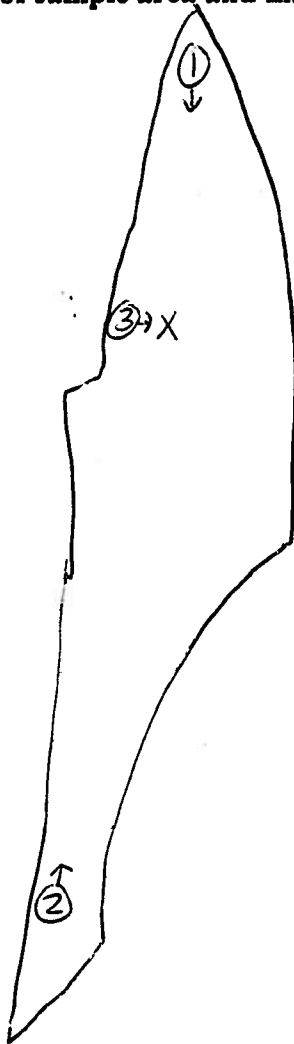
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Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS 51</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 57' 43.3"</u>	
	Longitude: <u>W 114° 54' 38.6"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00051	BC-ABS-0012	51	Hand	30	Old Alluvium	Sandy loam	<10%	<10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-48 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-4-14	Soil/Bedrock Sample Number: BC-SS-00051	Grid/ID Number: 51	GPS Waypoint: SS51
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-4-14

Page 1/2

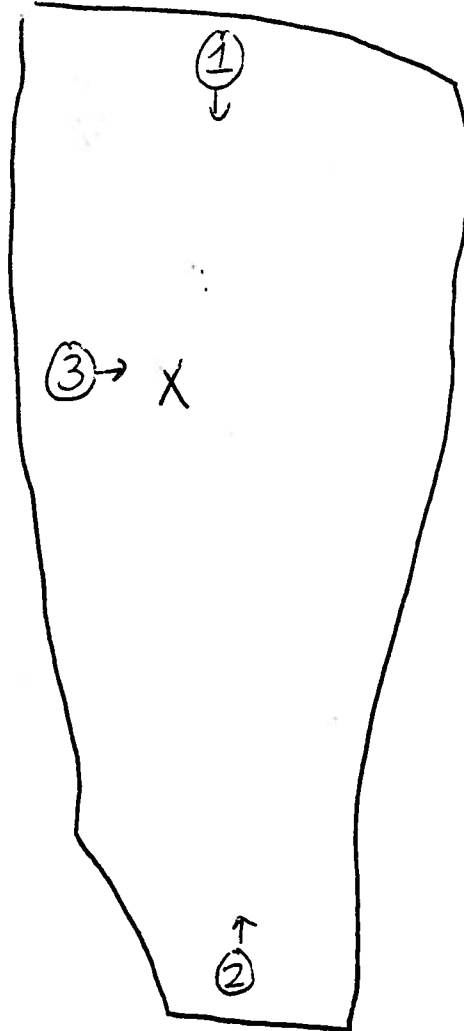
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Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS52</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 57' 38.2"</u>	
	Longitude: <u>W 114° 54' 41.1"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00052	BC ABS 00012	52	Hand	30	New Alluvium	sandy loam	10-25%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-48 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-4-14	Soil/Bedrock Sample Number: BC-SS-00052	Grid/ID Number: 52	GPS Waypoint: SS52
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-4-14

Page 1 / 2

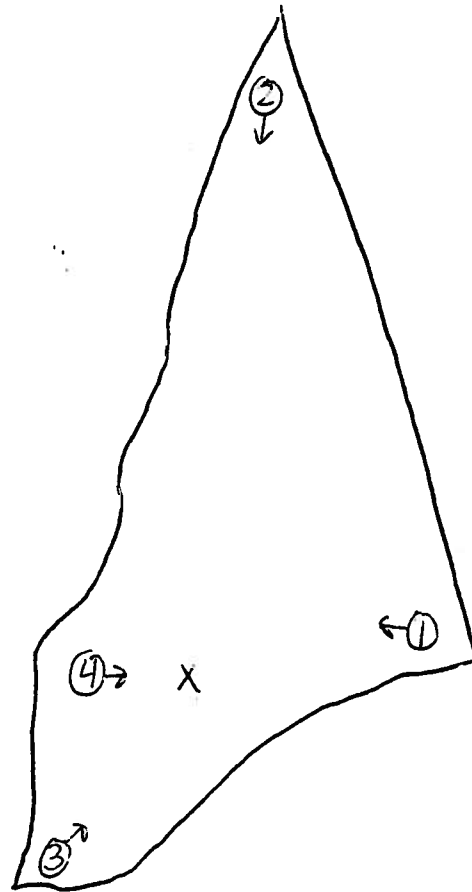
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Sample Team Initials: <u>BH</u>	GPS Waypoint: <u>SS 53</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 57' 35.2"</u>	
	Longitude: <u>W 114° 54' 35.8"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00053	BC-ABS-00012	53	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-4-14	Soil/Bedrock Sample Number: BC-SS-00053	Grid/ID Number: 53	GPS Waypoint: SS53
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-4-14

Page 1/2

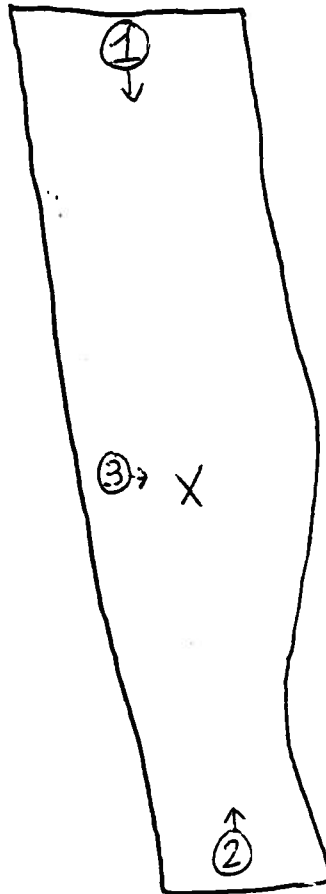
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Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS54</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 57' 31.0"</u>	
	Longitude: <u>W 114° 54' 37.8"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00054	N/A	54	Hand	30	New Alluvium	sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-4-14	Soil/Bedrock Sample Number: BC-SS-00054	Grid/ID Number: 54	GPS Waypoint: SS54
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-4-14

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS55</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 57' 31.1"</u>	
	Longitude: <u>W 114° 54' 32.6"</u>	
GPS coordinates should be collected for the center of each sample.		

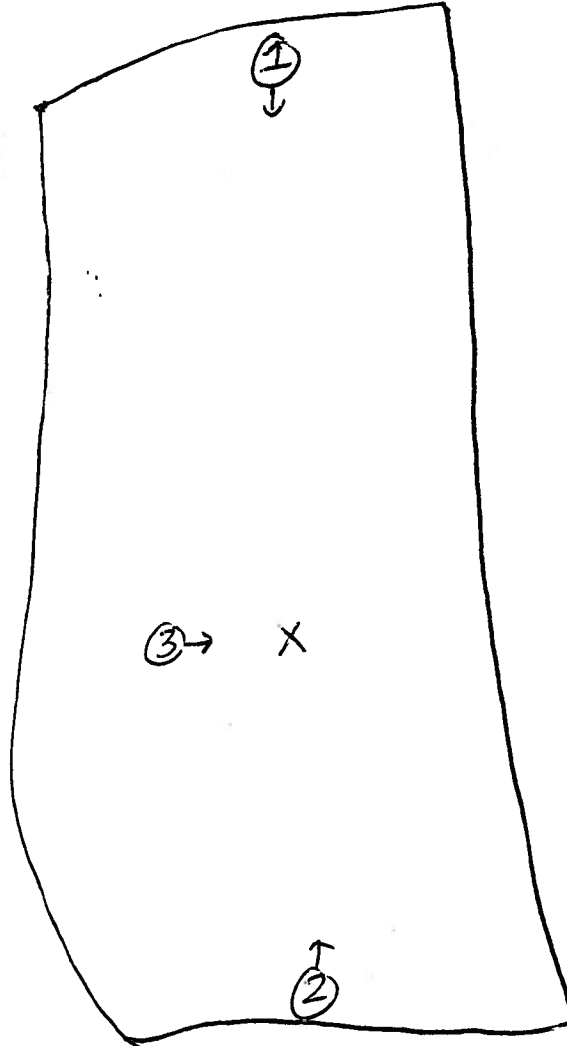
Page 1 / 2

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Allquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00055	N/A	55	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-4-14	Soil/Bedrock Sample Number: BC-SS-00055	Grid/ID Number: 55	GPS Waypoint: SS55
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-31-14

Page 1/2

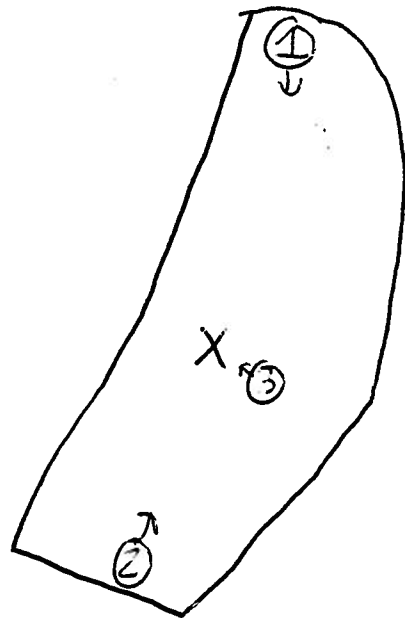
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Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS56</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 06.9"</u>	
	Longitude: <u>W 114° 54' 38.5"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00056	BC-ABS-00005	56	Hand	30	New Alluvium + wash material	sandy loam	10-25%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-31-14	Soil/Bedrock Sample Number: BC-SS-00056	Grid/ID Number: 56	GPS Waypoint: SS56
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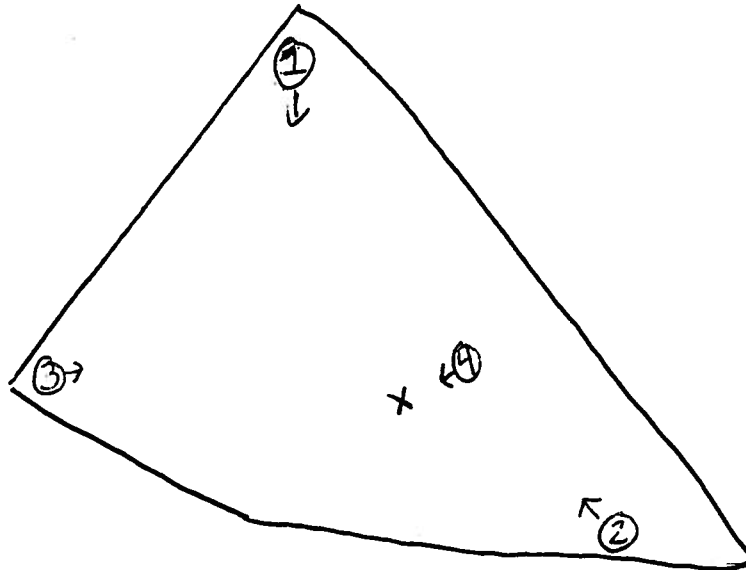
Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-31-14	Soil/Bedrock Sample Number: BC-SS-00057	Grid/ID Number: 57	GPS Waypoint: SS 57
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 5-31-14

Page 1/2

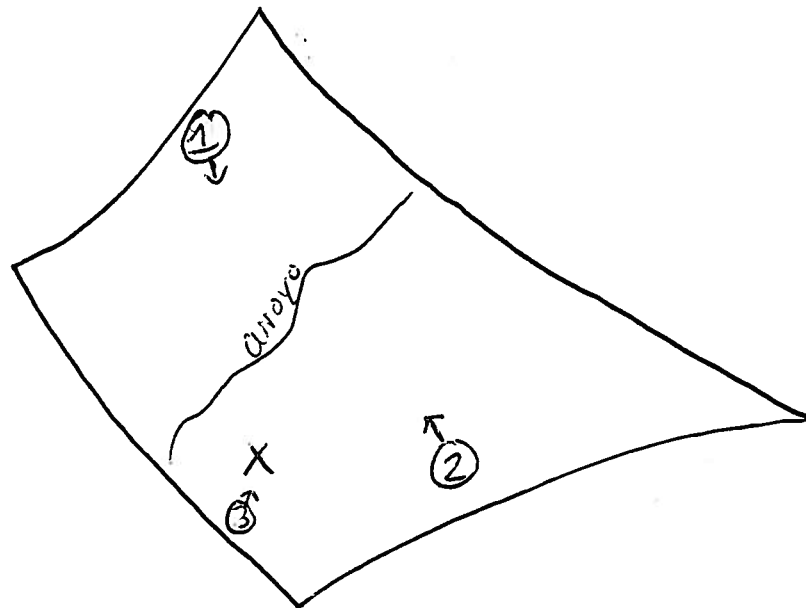
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Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS58</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 06.7"</u>	
	Longitude: <u>W 114° 54' 33.7"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00058	BC ABS-00055	58	Hand	30	Old Alluvium	sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 5-31-14	Soil/Bedrock Sample Number: BC-SS-00058	Grid/ID Number: 58	GPS Waypoint: 5558
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6 3 14

Page 1/2

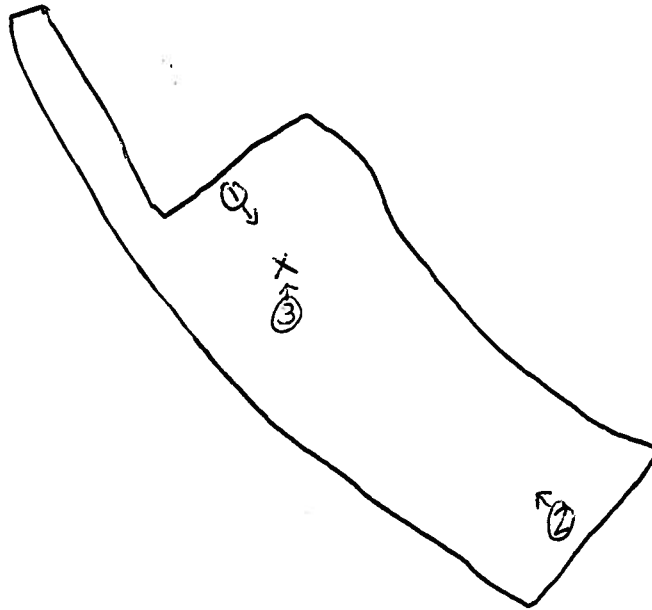
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Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS59</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 12.4"</u>	
	Longitude: <u>W 114° 54' 34.3</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00059	N/A	59	Hand	30	Old Alluvium	sandy loam	<10%	<10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-3-14	Soil/Bedrock Sample Number: BC-SS-00059	Grid/ID Number: S9	GPS Waypoint: SS59
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-3-14

Page 1/2

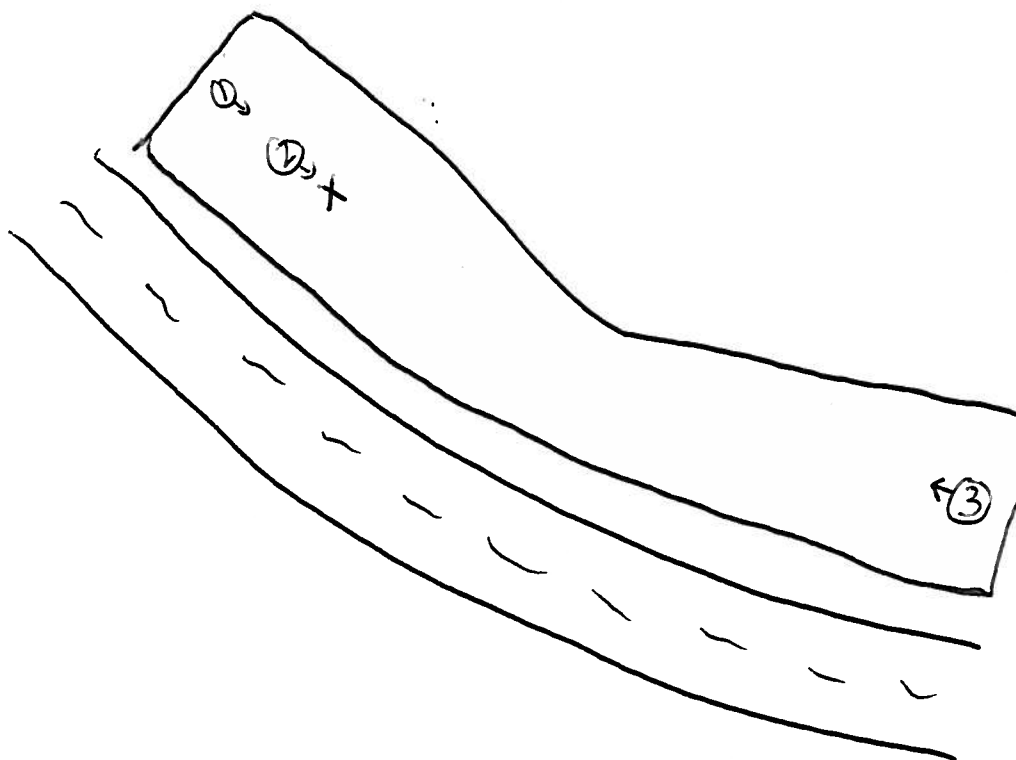
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Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>5560</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 09.8"</u>	
	Longitude: <u>W 114° 54' 29.5"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00060	N/A	60	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-3-14	Soil/Bedrock Sample Number: BC-SS 00060	Grid/ID Number: 60	GPS Waypoint: SS60
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-3-14

Page 1/2

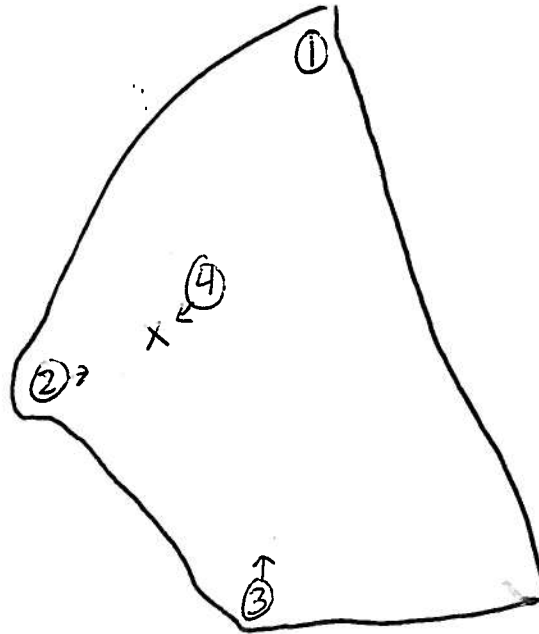
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Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS61</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 05.6"</u>	
	Longitude: <u>W 114° 54' 31.4"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00061	N / A	61	Hand	30	Old Alluvium	sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-3-14	Soil/Bedrock Sample Number: BC-SS-00061	Grid/ID Number: 61	GPS Waypoint: SS61
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-3-14

Page 1/2

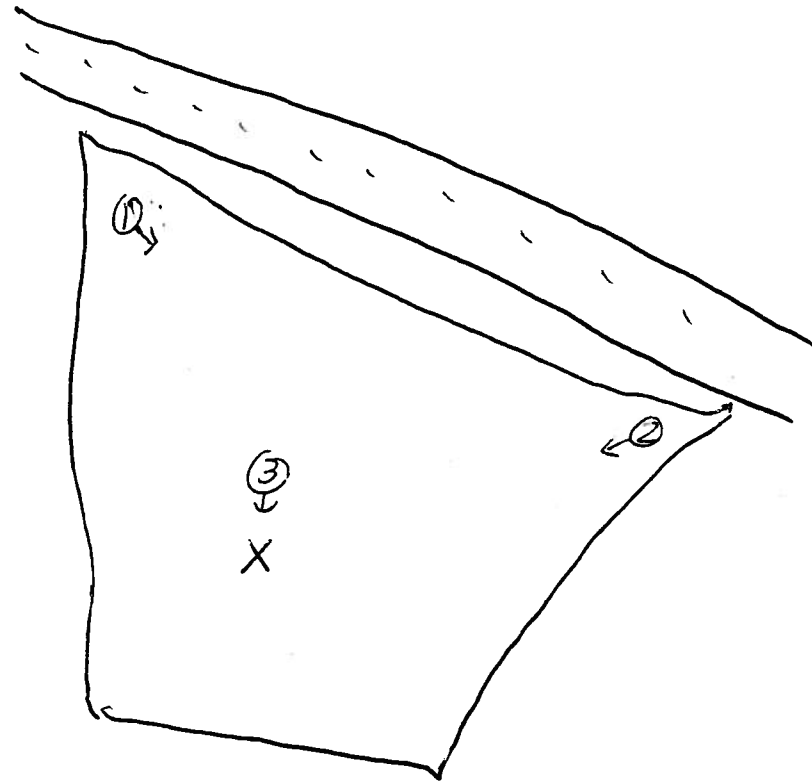
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS 62</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 05.8"</u>	
	Longitude: <u>W 114° 54' 28.1"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #s	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00062	N/A	62	Hand	30	Old Alluvium	sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-3-14	Soil/Bedrock Sample Number: BC-SS-00062	Grid/ID Number: 62	GPS Waypoint: SS62
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6 3 14

Page 1/2

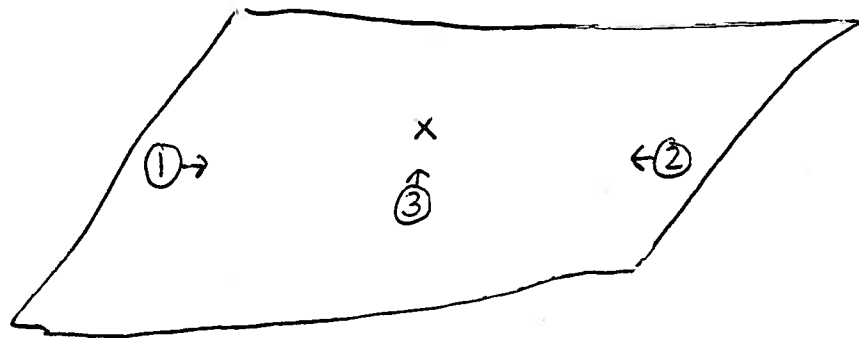
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS63</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 04.9"</u>	
	Longitude: <u>W 114° 54' 21.2"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00063	N/A	63	Hand	30	Old Alluvium	sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-48 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-3-14	Soil/Bedrock Sample Number: BC-SS-00063	Grid/ID Number: 63	GPS Waypoint: SS63
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6-3-14

Page 1/2

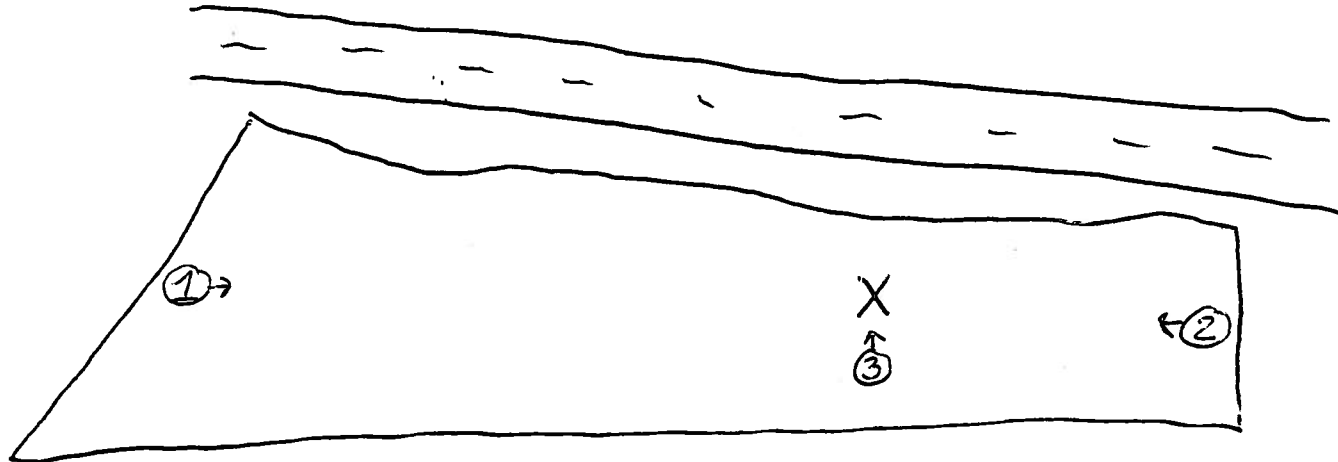
Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS64</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 03.1"</u>	
	Longitude: <u>W 114° 54' 15.0"</u>	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Allquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00064	N/A	64	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-####	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6-3-14	Soil/Bedrock Sample Number: BC-SS-00064	Grid/ID Number: 64	GPS Waypoint: SS64
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: ~~6-4-14~~^{SH} 6-3-14

Page 1/2

Associated ABS Testing?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Collected By: <u>Team 2</u>	Log Book No: <u>2</u>	
Sample Team Initials: <u>SH</u>	GPS Waypoint: <u>SS65</u>	
GPS System/Unit #: <u>TT-2</u>	Latitude: <u>N 35° 58' 06.8"</u>	
	Longitude: <u>W 114° 54' 17.6"</u>	
GPS coordinates should be collected for the center of each sample.		

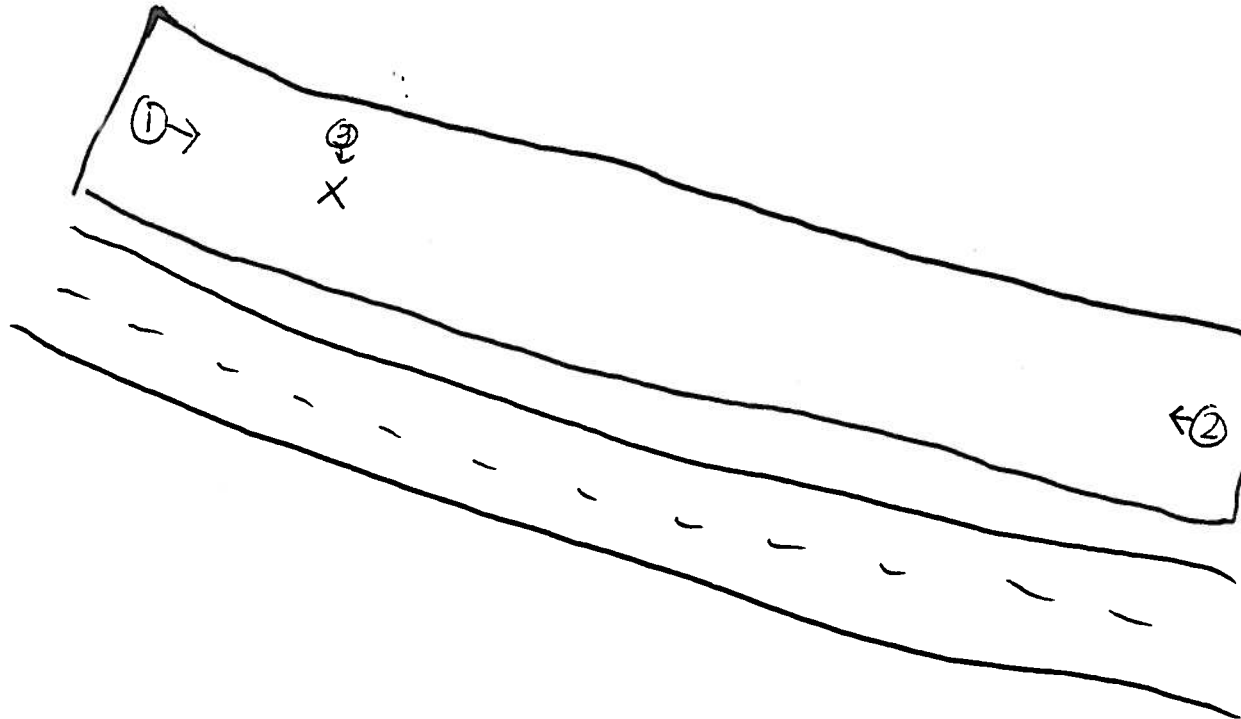
(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-SS-00065	N /A	65	Hand	30	Old Alluvium	Sandy loam	< 10%	< 10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-6 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-45 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 6 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Page 2/2

Date: 6-4-14 ^{SH} 6-3-14	Soil/Bedrock Sample Number: BC-SS-00065	Grid/ID Number: 65	GPS Waypoint: SS65
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)



BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Tetra Tech, Inc.
Soil/Bedrock Sampling and ABS

Date: 6/3/14

Page 1/2

Associated ABS Testing?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collected By: <u>Team 1</u>	Log Book No: <u>1</u>	
Sample Team Initials: <u>RF, DB, ES</u>	GPS Waypoint: <u>55-66</u>	
GPS System/Unit #: <u>TT-1</u>	Latitude: _____	
	Longitude: _____	
GPS coordinates should be collected for the center of each sample.		

(1) Soil/Bedrock Sample #	Associated ABS Air Sample #	Grid ID/ Number	Sample Method	Number of Aliquots	(2) Parent Material	(3) Soil Texture	(4) Vegetation Cover	(4) Stoniness
BC-55-00066	Yes BC-ABS-00066 BC-ABS-00009 BC-ABS-00010	New grid 66 West of 39 & 40	Hand	30	Wash	silt & clay	<10%	<10%
NOTES: To be used to complete details above.								
1) Surface Soil (0-8 inch) 2) Subsurface Test Pits (0-10 ft.) 3) Subsurface Auger Sample (0-48 ft.) 4) Outcrop Geologic Sample 5) Rock Core Drill Sample 6) Discrete "Target" Sample		BC-XX-###	Hand Backhoe HSA Core Drill Outcrop		New Alluvium Old Alluvium Qtz Monzonite Volcanic Breccia Other (describe)	Sand Loamy Sand Sandy Loam Loam Other (describe)	Proportion of grid covered w/ vegetation? <10% 10-25% 25-50% >50%	Proportion of stones greater than 8 inches? <10% 10-25% 25-50% >50%

BOULDER CITY BYPASS SOIL/BEDROCK FIELD SAMPLE DATA SHEET

Date: 6/3/14	Soil/Bedrock Sample Number: BC-55-00066	Grid/ID Number: 66 (Above 39+40)	GPS Waypoint: 55-66
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Site Drawing/Test Pit Log: (Please note % slope of sample area and major erosion features)

