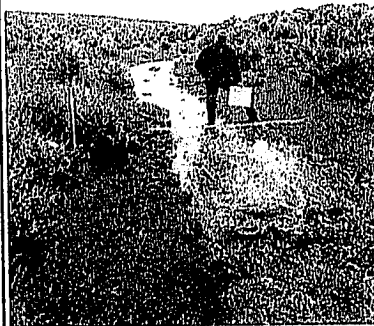


Kobeh Valley Surface Water Resource

Field ID	KI034	
GMI ID		
Other Names or ID's, specify type		
Dead Horse Creek		
Location		
UTM m N	UTM m E	Datum
4407866	542725	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/18/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.		



Description	Channel is gravel, cobbles and sand bed. Moss and grass on channel sides. ACW is approximately 5.5 feet. Elev 6900'. Dead Horse Creek measured above confluence w/ Little Cottonwood Canyon.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		KI0034			
Date	May 18, 2011	Time	14:00		
Parameters					
Water Quality					Air Temp
T degrees F	56	K		pH	
				Air Temp degrees F	38

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 2.24 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	3.3	0.25	0.00	0.00	0.00	0.00			
	3.8	0.40	0.10	0.10	0.04	0.00			
	4.1	0.30	0.27	0.92	0.08	0.07			
	4.4	0.30	0.22	1.71	0.07	0.11			
	4.7	0.30	0.22	3.24	0.07	0.21		Total W	3.70
	5.0	0.30	0.40	3.14	0.12	0.38		Total A	1.00
	5.3	0.30	0.45	4.19	0.14	0.57		Total Q	2.24
	5.6	0.30	0.50	3.22	0.15	0.48			
	5.9	0.30	0.43	2.15	0.13	0.28			
	6.2	0.30	0.36	0.85	0.11	0.09			
	6.5	0.40	0.25	0.44	0.10	0.04			
	7.0	0.25	0.00	0.00	0.00	0.00			
	3.7	3.70			1.00	2.24			

Notes: Measurement rated as good.

Meas Team Initials

Bob Squires

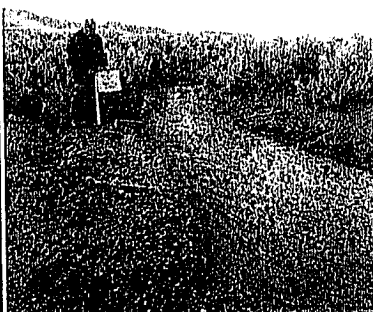
Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	K1035	
GMI ID		
Other Names or ID's, specify type		
Horse Canyon Creek		
Location		
UTM m N	UTM m E	Datum
4403625	543698	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/18/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.		



Description	Channel is gravel and sand bed. ACW is approximately 7 feet. Channel may not be natural channel but actually a diversion ditch. Horse Canyon Creek above meadow & diversions. (May not be actual channel - possibly diversion channel.)	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		KI0035			
Date	5/18/2011	Time	15:35		
Parameters					
Water Quality					Air Temp
T degrees F	54	K		pH	
				Air Temp degrees F	38

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 3.19 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	4.5	0.25	0.00	0.00	0.00	0.00			
	5.0	0.40	0.35	1.58	0.14	0.22			
	5.3	0.30	0.52	1.11	0.16	0.17			
	5.6	0.30	0.50	1.44	0.15	0.22			
	5.9	0.30	0.45	1.01	0.14	0.14		Total W	6.20
	6.2	0.30	0.50	0.80	0.15	0.12		Total A	2.07
	6.5	0.30	0.50	0.99	0.15	0.15		Total Q	3.19
	6.8	0.35	0.45	1.64	0.16	0.26			
	7.2	0.40	0.42	1.72	0.17	0.29			
	7.6	0.40	0.42	2.27	0.17	0.38			
	8.0	0.40	0.44	2.10	0.18	0.37			
	8.4	0.85	0.40	1.90	0.34	0.65			
	9.7	1.15	0.16	1.26	0.18	0.23			
	10.7	0.50	0.00	0.00	0.00	0.00			

Notes: Measurement rated good.

Meas Team Initials

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	K1038	
GMI ID		
Other Names or ID's, specify type		
West Cottonwood Creek		
Location		
UTM m N	UTM m E	Datum
4402779	540328	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	18-May	
Owner		
Use	Irrigation	
St. Eng. Water Right Ref.	V01769, R06886	



Description	Diverted to Santa Fe Ranch Meadows.	
Form Prepared by:		
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		KI038			
Date	May 18, 2011	Time	16:35		
Parameters					
Water Quality					Air Temp
T degrees F	50	K	pH	Air Temp degrees F	45

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 3.68 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	5.0	0.25	0.00	0.00	0.00	0.00			
	5.5	0.30	0.13	0.50	0.04	0.02			
	5.8	0.30	0.33	1.42	0.10	0.14			
	6.1	0.30	0.52	1.93	0.16	0.30			
	6.4	0.30	0.58	2.44	0.17	0.42			
	6.7	0.30	0.71	3.14	0.21	0.67		Total Q	3.68
	7.0	0.30	0.72	3.35	0.22	0.72			
	7.3	0.30	0.58	3.15	0.17	0.55			
	7.6	0.30	0.62	2.28	0.19	0.42			
	7.9	0.30	0.58	1.33	0.17	0.23			
	8.2	0.30	0.55	0.75	0.17	0.12			
	8.5	0.30	0.47	0.47	0.14	0.07			
	8.8	0.40	0.37	0.07	0.15	0.01			
	9.3	0.25	0	0	0.00	0.00			

Notes: Channel is incised with aspen grove roots on banks. ACW is approx 8.0 feet. Measurement rated good. Continuous stage gage installed and operated by GMI at this location.

Meas Team Initials

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	KI039	
GMI ID		
Other Names or ID's, specify type		
Unnamed Spring		
Location		
UTM m N	UTM m E	Datum
4402240	539954	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use	stock	
St. Eng. Water Right Ref.		



Description	Spring is in meadow adjacent to flowing creek.	
Form Prepared by:		
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		KI039			
Date	5/19/2011	Time	11:45		
Parameters					
Water Quality					Air Temp
T degrees C		K		pH	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 0.07 cfs (31.4 gpm)
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	4.3	0.20	0.00	0.00	0.00	0.00			
	4.7	0.35	0.22	0.40	0.08	0.03			
	5.0	0.30	0.20	0.45	0.06	0.03			
	5.3	0.30	0.16	0.20	0.05	0.01			
	5.6	0.35	0.14	0.07	0.05	0.00			
	6.0	0.20	0.00	0.00	0.00	0.00			
	1.7	1.70			Total Q	0.07			

Notes:

Meas Team Initials

Bob Squires

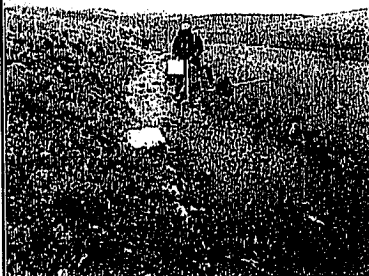
Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	K1040A	
GMI ID		
Other Names or ID's, specify type		
Unnamed - south of West Cottonwood		
Adj to K1039		
Location		
UTM m N	UTM m E	Datum
4402231	539953	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.		



Description	Creek is adjacent to Spring K1039. South edge of meadow along Creek. ACW is approximately 4.5 feet. This creek and spring are diverted to Santa Fe Ranch abv West Cottonwood Diversion (estimate 1/4 to 1/2 mile downstream).	
Form Prepared by:	RS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		KI040A			
Date	5/19/2011	Time	12:15		
Parameters					
Water Quality					Air Temp
T degrees F	55	K		pH	
				Air Temp degrees F	40

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 0.60 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	4.5	0.15	0.00	0.00	0.00	0.00			
	4.8	0.30	0.13	1.23	0.04	0.05			
	5.1	0.30	0.18	1.47	0.05	0.08			
	5.4	0.30	0.17	1.29	0.05	0.07			
	5.7	0.30	0.20	2.05	0.06	0.12			
	6.0	0.30	0.23	1.42	0.07	0.10			
	6.3	0.30	0.20	1.44	0.06	0.09			
	6.6	0.30	0.20	1.50	0.06	0.09			
	6.9	0.40	0.16	0.18	0.06	0.01		Total	0.6
	7.4	0.25	0.00	0.00	0.00	0.00			
	2.9	2.90			0.46	0.60			

Notes: Measurement rated good.

Meas Team Initials

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	KI040B	
GMI ID		
Other Names or ID's, specify type		
Unnamed - south of West Cottonwood		
Adj to KI039		
Location		
UTM m N	UTM m E	Datum
4401204	540800	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.		



Description	Tributary Stream to West Cottonwood Diversion ditch.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		K1040B			
Date	5/19/2011	Time	12:30		
Parameters					
Water Quality					Air Temp
T degrees F	54	K		pH	
				Air Temp degrees F	40

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 2.71 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	4.0	0.35	0.00	0.00	0.00	0.00			
	4.7	0.50	0.27	2.19	0.14	0.30			
	5.0	0.25	0.29	1.78	0.07	0.13			
	5.2	0.25	0.28	1.36	0.07	0.10			
	5.5	0.30	0.30	1.66	0.09	0.15		Total W	4.60
	5.8	0.30	0.37	2.20	0.11	0.24		Total A	1.24
	6.1	0.30	0.33	2.09	0.10	0.21		Total Q	2.71
	6.4	0.30	0.44	2.23	0.13	0.29			
	6.7	0.30	0.42	2.95	0.13	0.37			
	7.0	0.30	0.38	3.11	0.11	0.35			
	7.3	0.30	0.32	2.65	0.10	0.25			
	7.6	0.30	0.32	1.92	0.10	0.18			
	7.9	0.50	0.20	1.28	0.10	0.13			
	8.6	0.35	0.00	0.00	0.00	0.00			

Notes: Measurement is rated good.

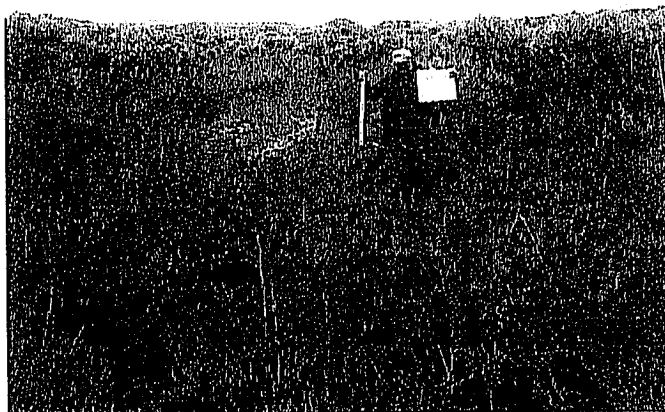
Meas Team Initials

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	K1041	
GMI ID		
Other Names or ID's, specify type		
Unnamed Spring		
Location		
UTM m N	UTM m E	Datum
4401099	0541015	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use	stock	
St. Eng. Water Right Ref.		



Description	Spring is in meadow adjacent to flowing creek.	
Form Prepared by:	RS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		

(

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 0.12 cfs (54 gpm)
Size of Vessel			
Time to fill (1)	_____	sec/min	
Time to fill (2)	_____	sec/min	
Time to fill (3)	_____	sec/min	

Swoffer Current Meter

[illegible]

Notes: Measurement rated as fair.

Meas Team Initials

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	K1043	
GMI ID		
Other Names or ID's, specify type		
Snow Water Canyon Cr		
Location		
UTM m N	UTM m E	Datum
4399015	540461	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.		



Description	Channel is boulder, cobble, gravel and sand bed. ACW is approximately 6 feet.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		

Site ID		KI0043			
Date	5/19/2011	Time	11:00		
Parameters					
Water Quality					Air Temp
T degrees F	43	K		pH	Air Temp degrees F 39

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 2.26 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	4.5	0.25	0.00	0.00	0.00	0.00			
	5.0	0.40	0.32	0.57	0.13	0.07			
	5.3	0.30	0.25	0.78	0.08	0.06			
	5.6	0.30	0.40	1.11	0.12	0.13			
	5.9	0.30	0.40	1.23	0.12	0.15		Total W	5.50
	6.2	0.30	0.40	1.38	0.12	0.17		Total A	1.61
	6.5	0.30	0.38	1.50	0.11	0.17		Total Q	2.26
	6.8	0.30	0.33	1.66	0.10	0.16			
	7.1	0.45	0.35	1.86	0.16	0.29			
	7.7	0.60	0.30	2.01	0.18	0.36			
	8.3	0.60	0.27	2.10	0.16	0.34			
	8.9	0.55	0.33	1.28	0.18	0.23			
	9.4	0.55	0.28	0.77	0.15	0.12			
	10.0	0.30	0.00	0.00	0.00	0.00			

Notes: Measurement rated as good.

Meas Team Initials

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	K1044	
GMI ID		
Other Names or ID's, specify type		
Location		
UTM m N	UTM m E	Datum
4398388	541048	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.		



Description

Spring. Mound in wet meadow.

Form Prepared by:

RS

Flow Meas. Method(s)

NA

Other notes:



Site ID		KI044			
Date	5/19/2011	Time	9:30		
Parameters					
Water Quality				Air Temp	
T degrees F		K		pH	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: No discharge - no pooled water
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Pygmy Current Meter

	Station	Width	Depth	Area	Discharge				

Notes:

Meas Team Initials

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	K1045	
GMI ID		
Other Names or ID's, specify type		
Unnamed Spring		
Location		
UTM m N	UTM m E	Datum
4396531	539612	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use		
St. Eng. Water Right Ref.		



Description	Spring is in meadow approximately 20 feet by 40 feet. Area is damp but no flow.	
Form Prepared by:		
Flow Meas. Method(s)		
Other notes:		



Site ID		K1045			
Date	5/19/2011	Time	14:25		
Parameters					
Water Quality				Air Temp	
T degrees C		K		pH	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: No Flow - No pooled water
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			

Notes:

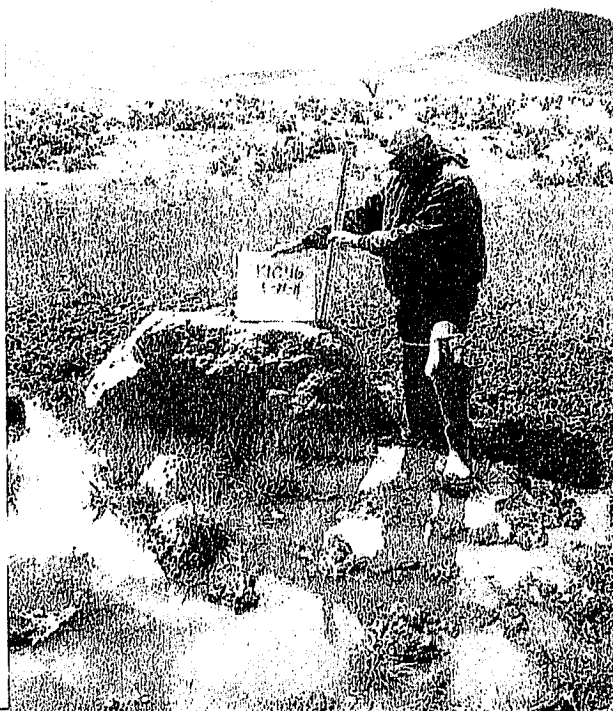
Meas Team Initials

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	K1046	
GMI ID		
Other Names or ID's, specify type		
Unnamed Spring		
Location		
UTM m N	UTM m E	Datum
4396429	539644	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use	stock	
St. Eng. Water Right Ref.		



Description	Spring is in meadow approximately 100 feet by 200 feet. There exists a 10 foot diameter pool and a stock water trough. Spring discharge is estimated as <2 gpm.	
Form Prepared by:	RS	
Flow Meas. Method(s)	Visual Estimate	
Other notes:		



Site ID		KI046			
Date	5/19/2011	Time	14:15		
Parameters					
Water Quality					Air Temp
T degrees C		K		pH	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Flow estimated at <5 gpm
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			

Notes:**Meas Team Initials**

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	KI047	
GMI ID		
Other Names or ID's, specify type		
Lower Ferguson Creek		
Location		
UTM m N	UTM m E	Datum
4393904	539552	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.	13657	



Description	Channel is gravel and sand bed. ACW is approximately 7 feet. Source to Grubbs Flat.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		K1047			
Date	5/19/2011	Time	15:00		
Parameters					
Water Quality					Air Temp
T degrees F	54	K		pH	
				Air Temp degrees F	40

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 3.51 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	4.6	0.40	0.00	0.00	0.00	0.00			
	5.4	0.55	0.47	0.66	0.26	0.17			
	5.7	0.30	0.52	1.24	0.16	0.19			
	6.0	0.30	0.54	2.07	0.16	0.34			
	6.3	0.30	0.58	2.86	0.17	0.50		Total W	5.60
	6.6	0.30	0.58	2.64	0.17	0.46		Total A	2.17
	6.9	0.30	0.58	2.08	0.17	0.36		Total Q	3.51
	7.2	0.30	0.52	1.48	0.16	0.23			
	7.5	0.30	0.53	1.64	0.16	0.26			
	7.8	0.30	0.57	1.67	0.17	0.29			
	8.1	0.45	0.42	1.06	0.19	0.20			
	8.7	0.50	0.37	1.25	0.19	0.23			
	9.1	0.75	0.28	1.34	0.21	0.28			
	10.2	0.55	0.00	0.00	0.00	0.00			

Notes: Measurement rated fair. Bank full - flow outside active channel.

Meas Team Initials

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	KI047A	
GMI ID		
Other Names or ID's, specify type		
Upper Ferguson Creek		
Main Channel		
Location		
UTM m N	UTM m E	Datum
4395206	536472	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.	4919, 13706	



Description	Channel is gravel, cobbles and sand bed. Channel is incised into the meadow. Source to Ferguson Ranch meadows. ACW is approximately 6 feet.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		KI047A			
Date	5/19/2011	Time	15:40		
Parameters					
Water Quality					Air Temp
T degrees F	54	K		pH	
				Air Temp degrees F	40

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 3.35 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	4.0	0.25	0.00	0.00	0.00	0.00			
	4.5	0.55	0.20	0.68	0.11	0.07			
	5.1	0.45	0.28	2.87	0.13	0.36			
	5.4	0.30	0.30	2.53	0.09	0.23			
	5.7	0.30	0.30	2.45	0.09	0.22		Total W	5.20
	6.0	0.30	0.37	2.35	0.11	0.26		Total A	1.45
	6.3	0.30	0.42	1.91	0.13	0.24		Total Q	3.35
	6.6	0.30	0.45	2.14	0.14	0.29			
	6.9	0.30	0.47	2.22	0.14	0.31			
	7.2	0.45	0.42	3.36	0.19	0.64			
	7.8	0.45	0.30	2.43	0.14	0.33			
	8.1	0.30	0.26	2.44	0.08	0.19			
	8.4	0.55	0.22	1.76	0.12	0.21			
	9.2	0.40	0.00	0.00	0.00	0.00			

Notes:

Meas Team Initials

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	K1047B	
GMI ID		
Other Names or ID's, specify type		
Upper Ferguson Creek		
Trib to Main Channel		
Location		
UTM m N	UTM m E	Datum
4395137	0536400	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.		



Description	Channel is gravel, cobbles and sand bed. ACW is approximately 3 feet. Source to Ferguson Ranch meadows.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		KI047B			
Date	5/19/2011	Time	15:55		
Parameters					
Water Quality					Air Temp
T degrees F	54	K		pH	
				Air Temp degrees F	40

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 0.59 cfs		
Size of Vessel					
Time to fill (1)		sec/min			
Time to fill (2)		sec/min			
Time to fill (3)		sec/min			

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	4.4	0.25	0.00	0.00	0.00	0.00			
	4.9	0.40	0.12	1.05	0.05	0.05			
	5.2	0.30	0.15	1.42	0.05	0.06			
	5.5	0.30	0.18	1.35	0.05	0.07			
	5.8	0.30	0.22	1.44	0.07	0.10		Total W	3.00
	6.1	0.30	0.17	1.57	0.05	0.08		Total A	0.43
	6.4	0.30	0.23	1.82	0.07	0.13		Total Q	0.59
	6.7	0.30	0.22	1.16	0.07	0.08			
	7.0	0.35	0.08	0.85	0.03	0.02			
	7.4	0.20	0.00	0.00	0.00	0.00			
	3.0	3.00			0.43	0.59			

Notes:

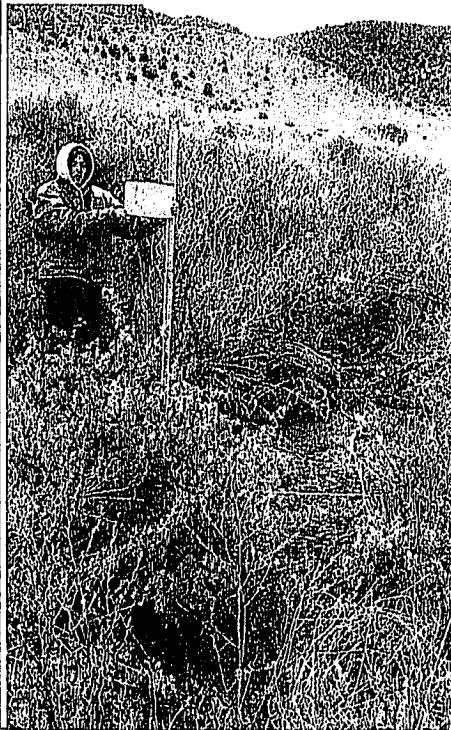
Meas Team Initials

Bob Squires

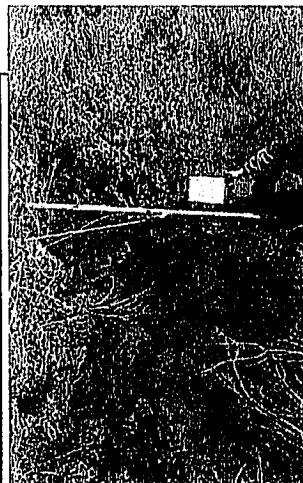
Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	KIO48	
GMI ID		
Other Names or ID's, specify type		
Flat Canyon		
Location		
UTM m N	UTM m E	Datum
		WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use		
St. Eng. Water Right Ref.		



Description	Channel bed is soil, cobbles and gravel. Channel banks are heavily vegetated. ACW is 4 feet. Source to Grubbs Flat.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		KI0048			
Date	5/19/2011	Time	14:30		
Parameters					
Water Quality					Air Temp
T degrees F	48	K		pH	
				Air Temp degrees F	54

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 1.06 cfs		
Size of Vessel					
Time to fill (1)		sec/min			
Time to fill (2)		sec/min			
Time to fill (3)		sec/min			

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	0.70	0.15	0.10	0.15	0.02	0.00			
	1.0	0.30	0.50	0.62	0.15	0.09			
	1.3	0.30	0.58	0.93	0.17	0.16			
	1.6	0.30	0.54	1.19	0.16	0.19			
	1.9	0.30	0.68	0.90	0.20	0.18		Total W	2.20
	2.2	0.30	0.74	0.88	0.22	0.20		Total A	1.19
	2.5	0.30	0.70	1.00	0.21	0.21		Total Q	1.06
	2.8	0.20	0.20	0.50	0.04	0.02			
	2.9	0.05	0.20	0.40	0.01	0.00			
	2.2	2.20			1.19	1.06			

Measured by Terry Katzer, notes by Elise Hoover.

Meas Team Initials

Terry Katzer

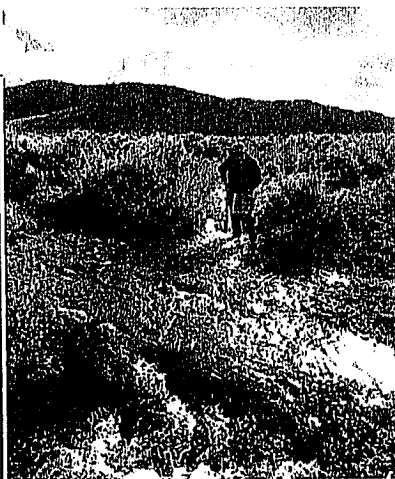
Elise Hoover

Kobeh Valley Surface Water Resource

Field ID	K1049	
GMI ID		
Other Names or ID's, specify type		
Grubbs Canyon Creek		
Location		
UTM m N	UTM m E	Datum
4390437	536168	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use		
St. Eng. Water Right Ref.	13674	



Description	Channel is boulder, gravel, cobbles and sand bed. ACW is approximately 5 feet. Source to Grubbs Flat.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		K1049			
Date	5/19/2011	Time	16:35		
Parameters					
Water Quality					Air Temp
T degrees F	54	K		pH	
				Air Temp degrees F	40

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 3.69 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	4.8	0.25	0.00	0.00	0.00	0.00			
	5.3	0.40	0.40	0.06	0.16	0.01			
	5.6	0.30	0.50	1.05	0.15	0.16			
	5.9	0.30	0.54	1.65	0.16	0.27			
	6.2	0.30	0.60	2.11	0.18	0.38		Total W	4.70
	6.5	0.30	0.60	2.84	0.18	0.51		Total A	1.94
	6.8	0.30	0.56	3.20	0.17	0.54		Total Q	3.69
	7.1	0.30	0.67	2.78	0.20	0.56			
	7.4	0.30	0.62	3.23	0.19	0.60			
	7.7	0.30	0.50	2.35	0.15	0.35			
	8.0	0.40	0.44	1.62	0.18	0.29			
	8.5	0.50	0.32	0.15	0.16	0.02			
	9.0	0.50	0.14	0.05	0.07	0.00			
	9.5	0.25	0.00	0.00	0.00	0.00			

Notes: Measurement rated fair.

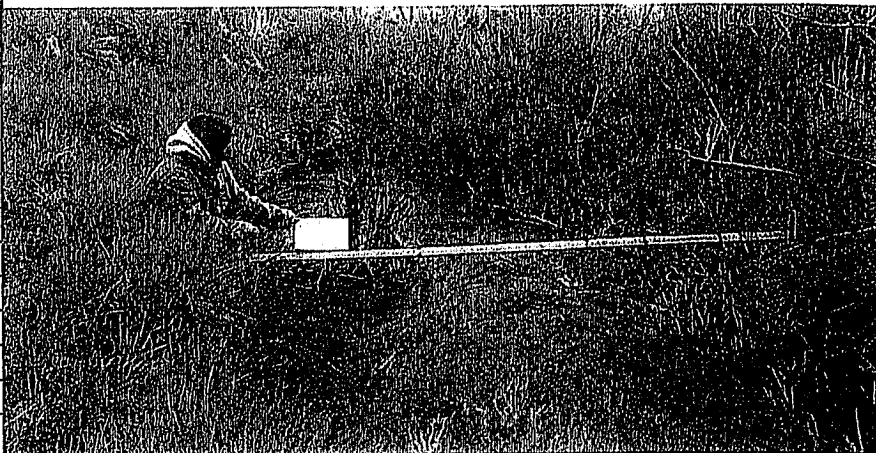
Meas Team Initials

Bob Squires

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	KI050	
GMI ID		
Other Names or ID's, specify type		
Ackerman Canyon		
Location		
UTM m N	UTM m E	Datum
4381074	530565	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use		
St. Eng. Water Right Ref.		



Description	Channel bed is gravel substrate of soil. Grass in channel. Willows on both channel banks. ACW is 5' (poor). Flows to Bean Flat.
Form Prepared by:	RRS
Flow Meas. Method(s)	Current Velocity Meter
Other notes:	Elevation 6560

Site ID		KI0050			
Date	5/19/2011	Time	12:51		
Parameters					
Water Quality				Air Temp	
T degrees F	50	K		pH	
				Air Temp degrees F	46

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 4.80 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	0.50	0.25	0.00	0.00	0.00	0.00			
	1.0	0.40	0.38	1.11	0.15	0.17			
	1.3	0.30	0.60	1.87	0.18	0.34			
	1.6	0.30	0.70	2.73	0.21	0.57			
	1.9	0.30	0.74	2.88	0.22	0.64		Total W	4.30
	2.2	0.30	0.72	3.10	0.22	0.67		Total A	2.15
	2.5	0.30	0.80	3.22	0.24	0.77		Total Q	4.80
	2.8	0.30	0.74	2.62	0.22	0.58			
	3.1	0.30	0.66	2.52	0.20	0.50			
	3.4	0.30	0.60	2.57	0.18	0.46			
	3.7	0.30	0.46	0.50	0.14	0.07			
	4.0	0.55	0.34	0.13	0.19	0.02			
	4.8	0.40	0.00	0.00	0.00	0.00			

Measured by Terry Katzer, notes by Elise Hoover. Measurement rated as good - fair.

Meas Team Initials

Terry Katzer

Elise Hoover

Kobeh Valley Surface Water Resource

Field ID	KI051	
GMI ID		
Other Names or ID's, specify type		
Water Canyon		
Location		
UTM m N	UTM m E	Datum
4379954	529683	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use		
St. Eng. Water Right Ref.		



Description	Channel bottom 3-5" cobbles up to 1.5'. ACW is 2.5-3'. Channel is ephemeral. Flows to Bean Flat.
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Form Prepared by:	RRS
Flow Meas. Method(s)	Current Velocity Meter
Other notes:	Elevation 6630



Site ID		KI0051			
Date	5/19/2011	Time	11:37		
Parameters					
Water Quality					Air Temp
T degrees F	43	K		pH	
				Air Temp degrees F	47

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 1.71 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	0.50	0.10	0.30	0.27	0.03	0.01			
	0.70	0.25	0.30	0.54	0.08	0.04			
	1.00	0.30	0.56	1.54	0.17	0.26			
	1.30	0.30	0.50	1.92	0.15	0.29			
	1.60	0.30	0.48	2.13	0.14	0.31		Total W	3.50
	1.90	0.30	0.46	2.11	0.14	0.29		Total A	1.18
	2.20	0.30	0.46	1.82	0.14	0.25		Total Q	1.71
	2.50	0.30	0.36	1.61	0.11	0.17			
	2.80	0.30	0.24	0.67	0.07	0.05			
	3.10	0.30	0.20	0.33	0.06	0.02			
	3.40	0.30	0.14	0.25	0.04	0.01			
	3.70	0.30	0.17	0.25	0.05	0.01			
	4.0	0.15	0.00	0.00	0.00	0.00			

Measured by Terry Katzer, notes by Elise Hoover. Measurement rated as fair.

Meas Team Initials

Terry Katzer

Elise Hoover

Kobeh Valley Surface Water Resource

Field ID	KI052	
GMI ID		
Other Names or ID's, specify type		
Spring		
Location		
UTM m N	UTM m E	Datum
4379738	529312	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use	stock	
St. Eng. Water Right Ref.		



Description	20' x 20' pond (higher than creek bed), outflow joins Water Canyon Creek. Discharge estimated as 2.5 gpm.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Visual Estimate	
Other notes:	Elevation 6710	



Site ID		KI0052			
Date	5/19/2011	Time			
Parameters					
Water Quality				Air Temp	
T degrees F		K		pH	
				Air Temp degrees F	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Visual estimate of flow as 2.5 gpm
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			

Measured by Terry Katzer, notes by Elise Hoover. Measurement estimated.

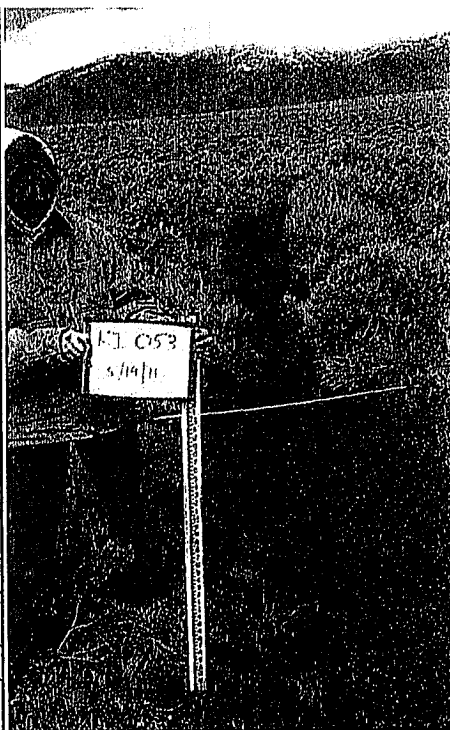
Meas Team Initials

Terry Katzer

Elise Hoover

Kobeh Valley Surface Water Resource

Field ID	KI053	
GMI ID		
Other Names or ID's, specify type		
Hickison Creeks		
Location		
UTM m N	UTM m E	Datum
4375933	527478	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/19/2011	
Owner		
Use		
St. Eng. Water Right Ref.	2913	



Description	Channel bed is coarse sand and gravel up to 2". ACW is 3 to 3.5 feet (poor). Irrigated lands in the Bobcat Ranch area.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:	Elevation 6415 feet	



Site ID		KI0053			
Date	5/19/2011	Time	10:23		
Parameters					
Water Quality					Air Temp
T degrees F	46	K		pH	
				Air Temp degrees F	45

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 1.06 cfs		
Size of Vessel					
Time to fill (1)		sec/min			
Time to fill (2)		sec/min			
Time to fill (3)		sec/min			

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	1.00	0.15	0.00	0.00	0.00	0.00			
	1.3	0.30	0.18	0.74	0.05	0.04			
	1.6	0.30	0.28	0.80	0.08	0.07			
	1.9	0.30	0.38	1.02	0.11	0.12			
	2.2	0.30	0.40	1.38	0.12	0.17		Total W	3.30
	2.5	0.30	0.40	1.86	0.12	0.22		Total A	0.85
	2.8	0.30	0.30	1.67	0.09	0.15		Total Q	1.06
	3.1	0.30	0.30	1.53	0.09	0.14			
	3.4	0.30	0.30	1.14	0.09	0.10			
	3.7	0.30	0.20	0.89	0.06	0.05			
	4.0	0.30	0.10	0.25	0.03	0.01			
	4.3	0.15	0.00	0.00	0.00	0.00			
	3.30	3.30			0.85	1.06			

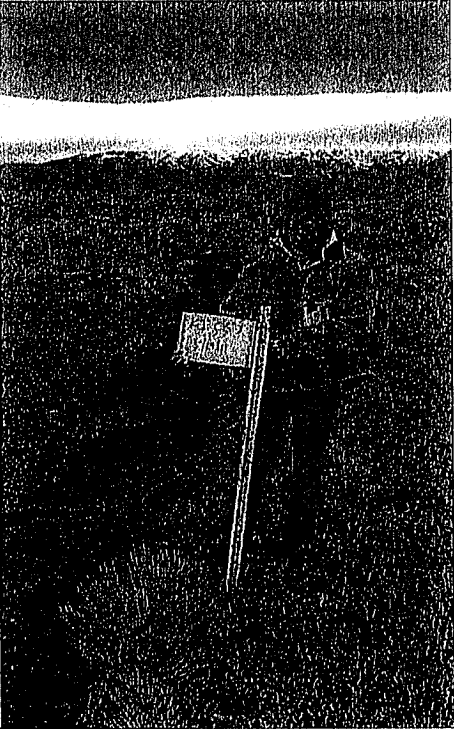
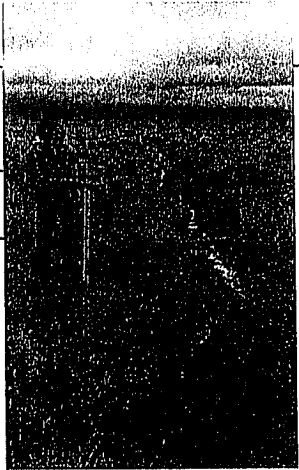
Measured by Terry Katzer, notes by Elise Hoover. Measurement rated as good. Stream flows into dispersed flow area.

Meas Team Initials

Terry Katzer

Elise Hoover

Kobeh Valley Surface Water Resource

Field ID	KI057		
GMI ID			
Other Names or ID's, specify type			
Dry Creek			
Location			
UTM m N	UTM m E	Datum	
		WGS 84	
		NAD 27	
UTM ft N	UTM ft E	Datum	
Lat	Long	Datum	
How was location determined?			
Date of Survey	5/19/2011		
Owner			
Use	irrig		
St. Eng. Water Right Ref.			
Description	Channel beds are coarse sand and gravel. Channel banks are soil with minor vegetation.		
Form Prepared by:	RRS		
Flow Meas. Method(s)	Current Velocity Meter		
Other notes:			

Site ID		KI0057			
Date	5/19/2011	Time	9:25		
Parameters					
Water Quality					Air Temp
T degrees F		K		pH	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 0.47 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	0.50	0.15	0.10	0.08	0.02	0.00			
	0.8	0.30	0.10	1.28	0.03	0.04			
	1.1	0.30	0.12	2.18	0.04	0.08			
	1.4	0.30	0.10	0.89	0.03	0.03			
	1.7	0.30	0.20	1.71	0.06	0.10		Total W	3.70
	2.0	0.30	0.16	1.09	0.05	0.05		Total A	0.41
	2.3	0.35	0.14	0.25	0.05	0.01		Total Q	0.47
	2.7	0.20	0.00	0.00	0.00	0.00			
	5.0	0.15	0.00	0.00	0.00	0.00			
	5.3	0.30	0.10	0.70	0.03	0.02			
	5.6	0.30	0.10	1.49	0.03	0.04			
	5.9	0.30	0.16	1.65	0.05	0.08			
	6.2	0.30	0.10	0.46	0.03	0.01			
	6.50	0.15	0.00	0.00	0.00	0.00			

Measured by Terry Katzer, notes by Elise Hoover. Measurement rated as good.

Meas Team Initials

Terry Katzer Elise Hoover

Kobeh Valley Surface Water Resource

Field ID	KI058	
GMI ID		
Other Names or ID's, specify type		
Stoneberger Creek		
Location		
UTM m N	UTM m E	Datum
4369828	530741	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/20/2011	
Owner		
Use		
St. Eng. Water Right Ref.		



Description	Ephemeral channel is clay armored with sand and gravel. ACW is approximately 7 feet. Label on white-board incorrect.	
Form Prepared by:	DLS	
Flow Meas. Method(s)	NA	
Other notes:		



Site ID		KI058			
Date	5/20/2011	Time	14:00		
Parameters					
Water Quality					Air Temp
T degrees F	54	K		pH	
				Air Temp degrees F	40

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: No Flow - Stream Channel is Dry
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			

Notes:

Meas Team Initials

Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	KI059 & KI060	
GMI ID		
Other Names or ID's, specify type		
	733 & 734, springs	
Location		
UTM m N	UTM m E	Datum
4386210	544936	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	eTrex handheld GPS	
Date of Survey	5/18/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.		



Description	Subirrigated meadow in Grubbs Flat. Not possible to separate 2 sites. No flow est. possible.	
Form Prepared by:	DH & EH	
Flow Meas. Method(s)	NA	
Other notes:		



Volumetric Flow Measurement

Pygmy Current Meter

Notes or Other Measurement Description:

JA5641

Kobeh Valley Surface Water Resource

Field ID	KI061	
GMI ID		
Other Names or ID's, specify type		
Gravel Pit Spring		
Location		
UTM m N	UTM m E	Datum
4384408	552399	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	eTrex handheld GPS	
Date of Survey	5/20/2011	
Owner		
Use	stock	
St. Eng. Water Right Ref.		



Description	Borrow pit next to 3 Bars Road. Ponded water with no outflow. No photograph of this site, areal image from Google Earth.
Form Prepared by:	DS
Flow Meas. Method(s)	NA
Other notes:	

Kobeh Valley Surface Water Resource

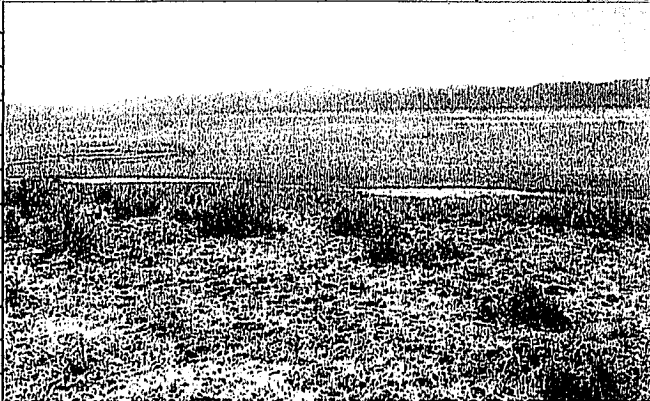
Field ID	KI062		
GMI ID			
Other Names or ID's, specify type			
Alma Woods Spring No. 1			
Location			
UTM m N	UTM m E	Datum	
4380838	54630	WGS 84	
		NAD 27	
UTM ft N	UTM ft E	Datum	
Lat	Long	Datum	
How was location determined?	loc. off Google Earth		
Date of Survey	5/18/2011		
Owner			
Use	stock/irrig		
St. Eng. Water Right Ref.	7766		
Description	Subirrigated - surfaces in particular locations. Discrete ponds connected by dispersed surface flows.		
Form Prepared by:	DH & EH		
Flow Meas. Method(s)	NA		
Other notes:			

Site ID			KI062				
Date		5/18/2011		Time			
Parameters							
Water Quality						Air Temp	
T degrees C		K		pH		Air Temp degrees C	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: No flow estimate - subirrigated meadow in Bean Flat - water table appears near land surface at "spring" location.
Size of Vessel			
Time to fill (1)	_____	sec/min	
Time to fill (2)	_____	sec/min	
Time to fill (3)	_____	sec/min	

Pygmy Current Meter

Dist from Initial pt.	Width	Depth	Obsrv. Depth	Revs.	Seconds	Vel. @ pt.	Mean Vert. Vel.	Area	Discharge		
											
								Total			

Notes or Other Measurement Description:

Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	KI009	
GMI ID	OT-6	
Other Names or ID's, specify type		
Location		
UTM m N	UTM m E	Datum
4402449	563986.5	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	Garmin 60CSX GPS	
Date of Survey	5/19/2011	
Owner	Martine Etcheverry	
Use	stock	
St. Eng. Water Right Ref.		



Description	Piped into cement trough w/ overflow diverted by pipe flow into 2 dirt stock tanks.	
Form Prepared by:	CD/JV	
Flow Meas. Method(s)	Volumetric	
Other notes:	Heavy horse usage - 3 bands present @ site. Approx 20 head of horses w/ 4 foals. Elev. 6651'.	



Site ID			KI009				
Date		5/19/2011		Time		1245	
Parameters							
Water Quality						Air Temp	
T degrees C		K		pH		Air Temp degrees C	
10		420		7.44		40F	

Volumetric Flow Measurement

Note: Repeat 3 times			Used 2" pipe and 1000 mL cup. Q = 9.0 gpm
Size of Vessel	1000 mL		
Time to fill (1)	1.82	sec	
Time to fill (2)	1.75	sec	
Time to fill (3)	1.74	sec	

Pygmy Current Meter

[illegible]

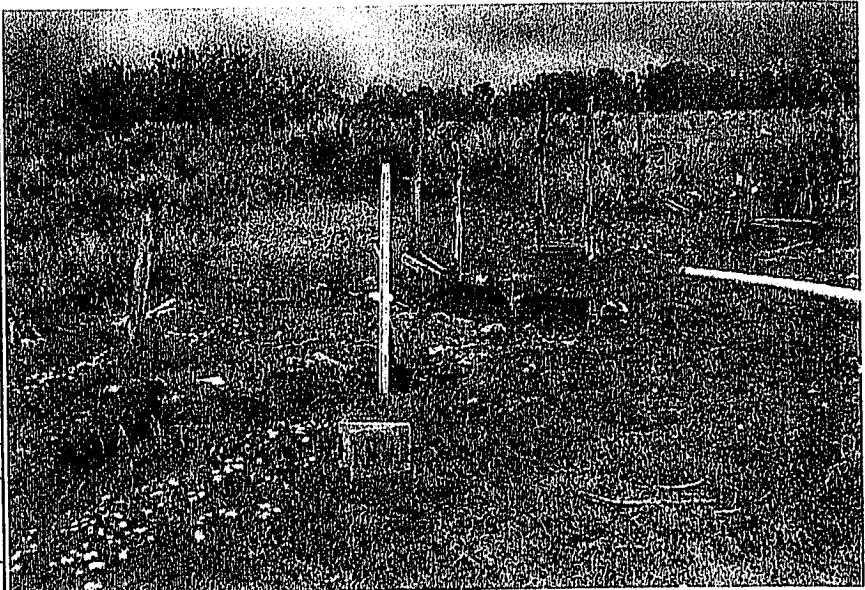
Notes or Other Measurement Description:

Meas Team Initials

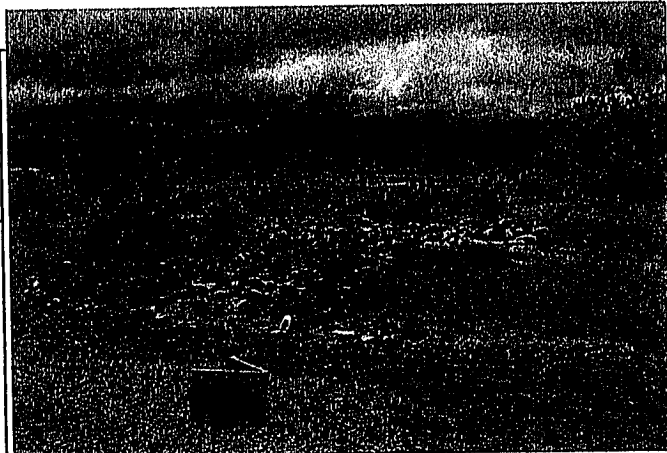
JV, CD

Kobeh Valley Surface Water Resource

Field ID	KIO10	
GMI ID	OT-7	
Other Names or ID's, specify type		
641		
Location		
UTM m N	UTM m E	Datum
4404178	563453.5	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	Garmin 60CSX GPS	
Date of Survey	5/19/2011	
Owner	Martine Etcheverry	
Use	stock	
St. Eng. Water Right Ref.		



Description	Riparian acreage 1/4-1/2 acre. Part of old enclosure fence on one side; spring source covered by lots, posts for old water trough water flows into dirt stock tank.	
Form Prepared by:	CD/JV	
Flow Meas. Method(s)	Volumetric	
Other notes:	Elev. 6896'. Heavy horse usage.	



Site ID		KI010					
Date	5/19/2011		Time		1215		
Parameters							
Water Quality						Air Temp	
T degrees C	15.9	K	528	pH	8.48	Air Temp degrees C	40F

Volumetric Flow Measurement

Note: Repeat 3 times			Measured w/ 2" pipe & 1000 mL cup. Q = 2.7 gpm
Size of Vessel	1000 mL		
Time to fill (1)	5.8	sec	
Time to fill (2)	5.85	sec	
Time to fill (3)	5.82	sec	

Pygmy Current Meter

[illegible]

Notes or Other Measurement Description:

Meas Team Initials

JV, CD

Kobeh Valley Surface Water Resource

Field ID	KI011	
GMI ID	OT-8; 630	
Other Names or ID's, specify type		
Nichols Spring		
Location		
UTM m N	UTM m E	Datum
4405284	563016.5	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	Garmin 60CSX GPS	
Date of Survey	5/19/2011	
Owner		
Use	stock	
St. Eng. Water Right Ref.		



Description	Piped spring surrounded by an enclosure fence (juniper posts/barbed wire). Old sheep herding yards, dipping vat, etc. on site. <0.2 acre of riparian vegetation adjacent to spring holding yards on edge of riparian area.	
Form Prepared by:	CD/JV	
Flow Meas. Method(s)	Volumetric	
Other notes:	Elev. 7131'. Moderate to heavy horse use evident.	



Site ID		KI011					
Date	5/19/2011		Time		1130		
Parameters							
Water Quality						Air Temp	
T degrees C	10.95	K	423	pH	7.23	Air Temp degrees C	40F

Volumetric Flow Measurement

Note: Repeat 3 times			Took measurement from pipe installed at spring. Q = 9.6 gpm
Size of Vessel	1000 mL		
Time to fill (1)	1.65	sec	
Time to fill (2)	1.65	sec	
Time to fill (3)	1.64	sec	



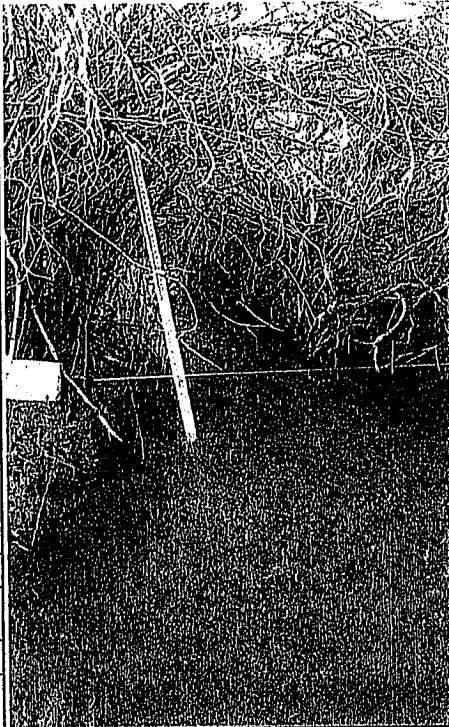
Notes or Other Measurement Description:

Meas Team Initials

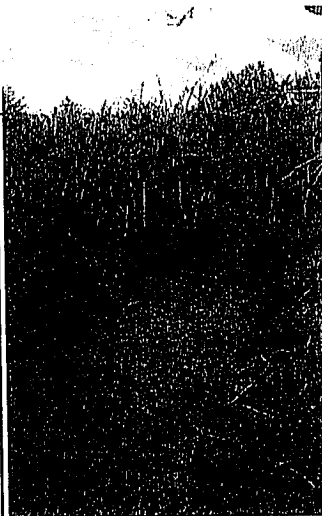
JV, CD

Kobeh Valley Surface Water Resource

Field ID	KI012	
GMI ID		
Other Names or ID's, specify type		
Lower Roberts Creek		
Location		
UTM m N	UTM m E	Datum
4402419	560130.9	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	20-May	
Owner		
Use		
St. Eng. Water Right Ref.	2732, 16802	



Description		
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity	
Other notes:	Elevation 6620	



Site ID		KI0012			
Date	5/20/2011	Time			
Parameters					
Water Quality					Air Temp
T degrees F		K		pH	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 10.9 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	3.00	0.30	0.00	0.00	0.00	0.00			
	3.60	0.60	0.56	1.06	0.34	0.36			
	4.20	0.60	0.92	2.04	0.55	1.13			
	4.80	0.45	1.10	3.22	0.50	1.59			
	5.10	0.30	1.12	3.24	0.34	1.09		Total W	5.40
	5.40	0.30	1.08	3.20	0.32	1.04		Total A	4.34
	5.70	0.30	1.10	3.11	0.33	1.03		Total Q	10.92
	6.00	0.30	1.00	3.19	0.30	0.96			
	6.30	0.30	1.00	3.04	0.30	0.91			
	6.60	0.30	1.00	2.89	0.30	0.87			
	6.90	0.30	1.00	2.70	0.30	0.81			
	7.20	0.45	1.00	1.99	0.45	0.90			
	7.80	0.60	0.52	0.81	0.31	0.25			
	8.40	0.30	0.00	0.00	0.00	0.00			

Measured by Terry Katzer, notes by Elise Hoover.

Meas Team Initials

Terry Katzer

Elise Hoover

Kobeh Valley Surface Water Resource

Field ID	KI013		
GMI ID			
Cherry Sp.			
Location			
UTM m N	UTM m E	Datum	
4404340	560697	WGS 84	
		NAD 27	
UTM ft N	UTM ft E	Datum	
Lat	Long	Datum	
How was location determined?	Garmin Handheld GPS		
Date of Survey	5/19/2011		
Owner	unk		
Use	stock		
St. Eng. Water Right Ref.			
Description	no apparent flow from spring, has been modified, creek adjacent to spring currently flowing from recent snowmelt and rain at 6-8 gpm. Spring is obvious large area of rabbitbrush		
Form Prepared by:	JMC		
Flow Meas. Method(s)	no flow		
Other notes:			

Site ID			KI013			
Date	5/19/2011		Time			
Parameters						
Water Quality					Air Temp	
T degrees C		K		pH		Air Temp degrees C

Volumetric Flow Measurement

Note: Repeat 3 times		Notes: No flow from spring
Size of Vessel		
Time to fill (1)	_____ sec/min	
Time to fill (2)	_____ sec/min	
Time to fill (3)	_____ sec/min	

Pygmy Current Meter

[illegible]

Notes or Other Measurement Description:

Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	KI014	
GMI ID		
Farrington Sp		
Location		
UTM m N	UTM m E	Datum
4404340	560697	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	Garmin Handheld GPS	
Date of Survey	5/19/2011	
Owner	unk	
Use	stock	
St. Eng. Water Right Ref.		



Description	Spring is located adjacent to Robert's Creek and is located by vegetation. Spring flow moves below ground toward Robert's Creek, and can be seen in a cutbank in the stream.	
Form Prepared by:	JMC	
Flow Meas. Method(s)	Visual Estimate	
Other notes:		

Site ID		KI014			
Date	5/19/2011	Time			
Parameters					
Water Quality					Air Temp
T degrees C		K		pH	Air Temp degrees C

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: difficult to measure all of the flow, 2-3 gpm from PVC
Size of Vessel			
Time to fill (1)	_____	sec/min	
Time to fill (2)	_____	sec/min	
Time to fill (3)	_____	sec/min	

Pygmy Current Meter

[illegible]

Notes or Other Measurement Description:

Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	KI015	
GMI ID		
Other Names or ID's, specify type		
Rutabaga Creek		
Location		
UTM m N	UTM m E	Datum
		WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	18-May	
Owner		
Use		
St. Eng. Water Right Ref.		



Description	Channel bed is sand and gravel. Channel banks are soil with heavy vegetation. No ACW is possible. Creek flow is a result of spring discharge directly upstream of the gage.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Volumetric	
Other notes:		

Site ID		KI015					
Date		5/18/2011		Time		10:45	
Parameters							
Water Quality						Air Temp	
T degrees C		K		pH		Air Temp degrees C	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: 12 gallons per minute
Size of Vessel			
Time to fill (1)	1 gal	5 sec	
Time to fill (2)	1 gal	5 sec	
Time to fill (3)	1 gal	5 sec	

Pygmy Current Meter

[illegible]

Measured by Terry Katzer, notes by Robin W. Measurement rated as excellent.

Meas Team Initials

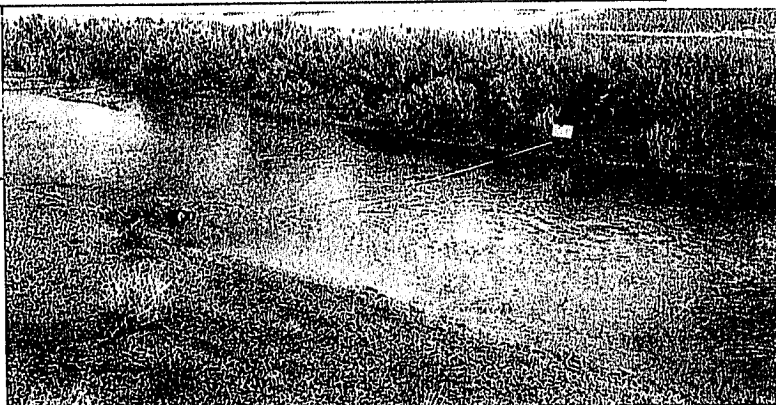
Terry Katzer Robin W

Kobeh Valley Surface Water Resource

Field ID	KI017	
GMI ID		
Other Names or ID's, specify type		
Coils Creek @		
Gold Point Road		
Location		
UTM m N	UTM m E	Datum
4399709	547092	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	18-May	
Owner		
Use		
St. Eng. Water Right Ref.		



Description	Channel bed is sand and gravel, up to 3" round. Channel is probably ephemeral.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity	
Other notes:	Elevation 6380	



Site ID		KI0017			
Date	18-May	Time	11:50		
Parameters					
Water Quality					Air Temp
T degrees F	42	K		pH	
				Air Temp degrees F	45

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q=11.2 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	3.00	1.00	0.00	0.00	0.00	0.00			
	5.0	1.50	0.42	0.39	0.63	0.25			
	6.0	1.50	0.54	0.62	0.81	0.50			
	8.0	2.00	0.70	0.85	1.40	1.19			
	10.0	1.50	0.70	1.01	1.05	1.06		Total W	18.40
	11.0	1.00	0.70	1.09	0.70	0.76		Total A	10.12
	12.0	1.00	0.68	1.58	0.68	1.07		Total Q	11.20
	13.0	1.00	0.60	1.54	0.60	0.92			
	14.0	1.00	0.60	1.46	0.60	0.88			
	15.0	1.00	0.60	1.72	0.60	1.03			
	16.0	1.50	0.66	1.64	0.99	1.62			
	18.0	2.00	0.62	1.15	1.24	1.43			
	20.0	1.70	0.48	0.59	0.82	0.48			
	21.40	0.70	0.00	0.00	0.00	0.00			

Measured by Terry Katzer, notes by Robin W. Measurement rated as good.

Meas Team Initials

Terry Katzer

Robin W

Kobeh Valley Surface Water Resource

Field ID	KI018A	
GMI ID		
Other Names or ID's, specify type		
	653, spring	
Location		
UTM m N	UTM m E	Datum
4401890	545252	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	eTrex handheld GPS	
Date of Survey	5/18/2011	
Owner	BLM?	
Use	stock?	
St. Eng. Water Right Ref.		



Description	Pond w/ dispersed outflow. Est. <5 gpm. Snowing at site.	
Form Prepared by:	DH & EH	
Flow Meas. Method(s)	Visual Estimate	
Other notes:		



Site ID							
Date	KI018A		Time				
Parameters							
Water Quality						Air Temp	
T degrees C		K		pH		Air Temp degrees C	

Volumetric Flow Measurement

Note: Repeat 3 times		Notes: Pooled water at spring, visual estimate of outflow <5 gpm
Size of Vessel		
Time to fill (1)	_____ sec/min	
Time to fill (2)	_____ sec/min	
Time to fill (3)	_____ sec/min	

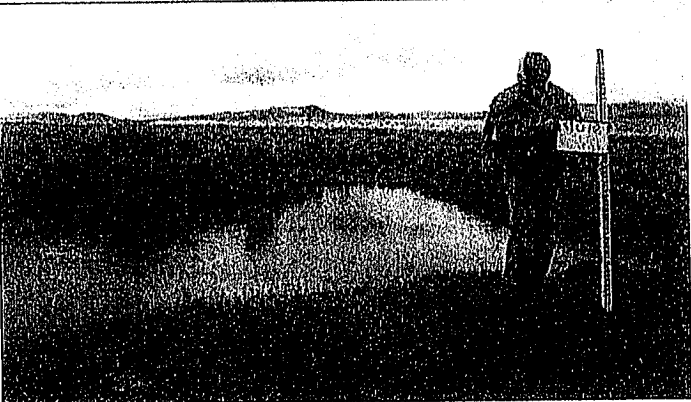
Pygmy Current Meter

[illegible]

Notes or Other Measurement Description:

Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	KI018B		
GMI ID			
Other Names or ID's, specify type			
652, spring			
Location			
UTM m N	UTM m E	Datum	
4401932	545244	WGS 84	
		NAD 27	
UTM ft N	UTM ft E	Datum	
Lat	Long	Datum	
How was location determined?	eTrex handheld GPS		
Date of Survey	5/18/2011		
Owner	BLM?		
Use	stock		
St. Eng. Water Right Ref.			
Description			
Pond w/ dispersed outflow. Est. <2 gpm.			
Form Prepared by:	DH & EH		
Flow Meas. Method(s)	Visual Estimate		
Other notes:			

Site ID			KI018B		
Date		5/18/12001		Time	
Parameters					
Water Quality					Air Temp
T degrees C		K	pH	Air Temp degrees C	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Pooled spring with estimate outflow <2 gpm
Size of Vessel			
Time to fill (1)	_____	sec/min	
Time to fill (2)	_____	sec/min	
Time to fill (3)	_____	sec/min	

Pygmy Current Meter

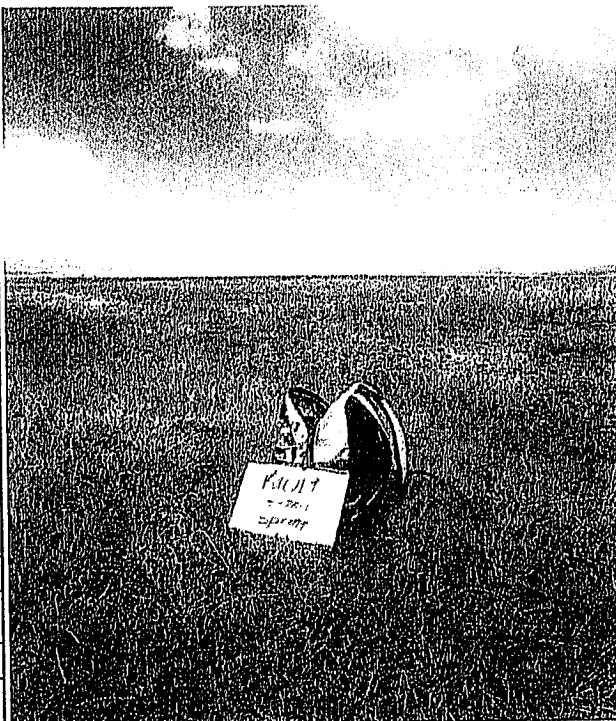
[illegible]

Notes or Other Measurement Description:

Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	KI019	
GMI ID		
Other Names or ID's, specify type		
Unnamed Spring		
Location		
UTM m N	UTM m E	Datum
4402930	0544589	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	520/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.		



Description	Springs and subirrigated meadow, estimate 3 acres of meadow, small pool in central area, produces discharge flowing out of the meadow at an estimated rate of 10 to 20 gpm.	
Form Prepared by:	DLS	
Flow Meas. Method(s)	Visual Flow Estimate	
Other notes:		



Site ID		KI019			
Date	20-May	Time	12:30		
Parameters					
Water Quality					Air Temp
T degrees F	54	K		pH	
				Air Temp degrees F	40

Volumetric Flow Measurement

Note: Repeat 3 times			
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

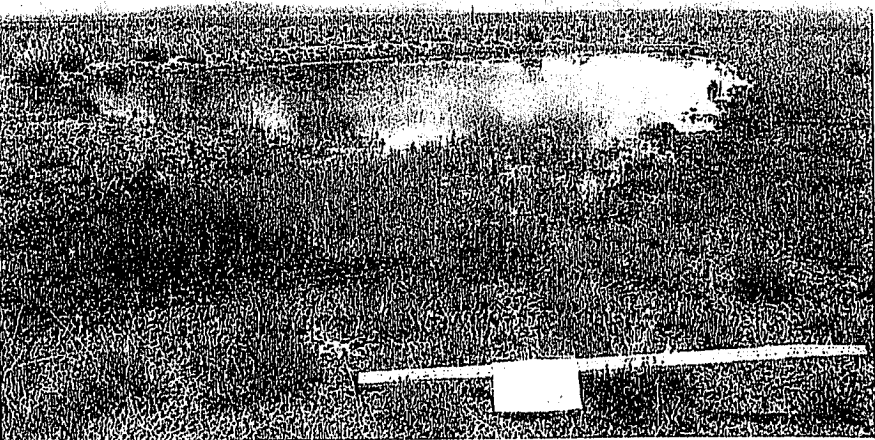
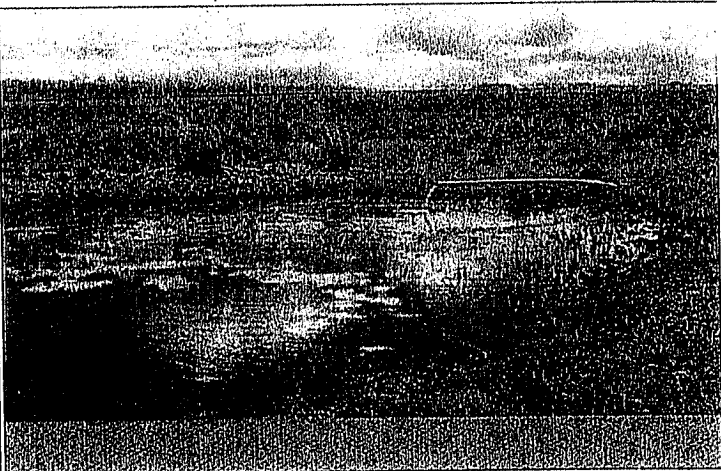
	Station	Width	Depth	Velocity	Area	Discharge			

Notes:

Meas Team Initials

Dwight Smi

Kobeh Valley Surface Water Resource

Field ID	KI020A		
GMI ID			
Other Names or ID's, specify type			
644, spring			
Location			
UTM m N	UTM m E	Datum	
4403629	544698	WGS 84	
		NAD 27	
UTM ft N	UTM ft E	Datum	
Lat	Long	Datum	
How was location determined?	eTrex handheld GPS		
Date of Survey	5/18/2011		
Owner			
Use	stock?		
St. Eng. Water Right Ref.			
Description	2 ponds - upper flows into lower. Flows from 2" PVC pipe into upper pond. Upper pond 50'x30'. Lower pond 30'x30'.		
Form Prepared by:	DH & EH		
Flow Meas. Method(s)	Volumetric		
Other notes:			

Site ID		KI020A					
Date	5/18/2011		Time				
Parameters							
Water Quality						Air Temp	
T degrees C		K		pH		Air Temp degrees C	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: measurement out of 2" PVC pipe. Q=3 gpm	Flow
Size of Vessel	5 gal. bucket			
Time to fill (1)	20	sec		
Time to fill (2)	20	sec		
Time to fill (3)	20	sec		

Pygmy Current Meter

[illegible]

Notes or Other Measurement Description:

Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	KI020B	
GMI ID		
Other Names or ID's, specify type		
645, spring		
Location		
UTM m N	UTM m E	Datum
4403552	544162	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	eTrex handheld GPS	
Date of Survey	5/18/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.		



Description	Subirrigated field.	
Form Prepared by:	DH & EH	
Flow Meas. Method(s)	NA	
Other notes:		



Site ID			KI020B		
Date	5/18/2011		Time		
Parameters					
Water Quality					Air Temp
T degrees C		K		pH	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes:
Size of Vessel			
Time to fill (1)	_____	sec/min	
Time to fill (2)	_____	sec/min	
Time to fill (3)	_____	sec/min	

Pygmy Current Meter

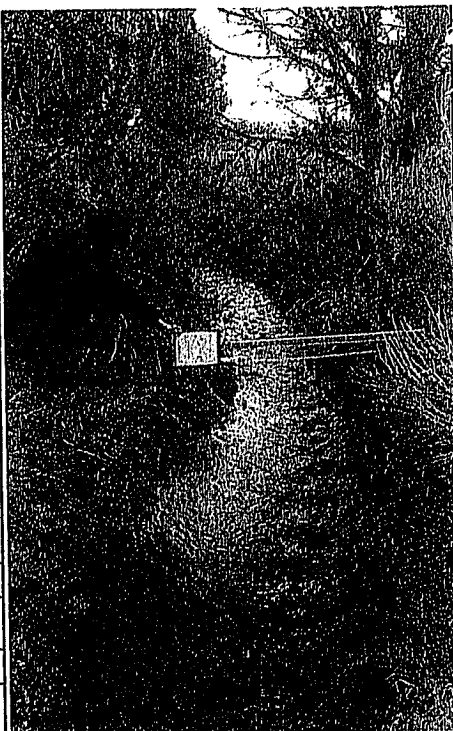
[illegible]

Notes or Other Measurement Description:

Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	KI021	
GMI ID		
Other Names or ID's, specify type		
	Cottonwood	
	Canyon Creek (Robts Mtn)	
Location		
UTM m N	UTM m E	Datum
4404117	0547140	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/18/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.	V01952	



Description	Channel bed is gravel, up to 1" round. ACW is 2 feet (fair - ephemeral). Bank is same, soil and some vegetation.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current - Velocity Meter	
Other notes:	Elevation 6560	



Site ID		KI0021			
Date	5/18/2011	Time	12:55		
Parameters					
Water Quality					Air Temp
T degrees F	45	K		pH	Air Temp degrees F
					52

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 1.14 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter Measurement

	Station	Width	Depth	Velocity	Area	Discharge			
	0.70	0.15	0.00	0.00	0.00	0.00			
	1.0	0.30	0.10	0.50	0.03	0.02			
	1.3	0.30	0.28	1.94	0.08	0.16			
	1.6	0.30	0.30	2.31	0.09	0.21			
	1.9	0.30	0.30	2.16	0.09	0.19		Total W	2.40
	2.2	0.30	0.32	2.44	0.10	0.23		Total A	0.56
	2.5	0.30	0.32	2.10	0.10	0.20		Total Q	1.14
	2.8	0.30	0.22	1.77	0.07	0.12			
	3.1	0.15	0.05	0.44	0.01	0.00			
	2.4	2.40			0.56	1.14			

Measurement rated as good.

Meas Team Initials

Terry Katzer Robyn W

Kobeh Valley Surface Water Resource

Field ID	KI022	
GMI ID		
Other Names or ID's, specify type		
Meadow Canyon Creek		
Location		
UTM m N	UTM m E	Datum
4406403	0547425	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/18/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.	V01953	



Description: Channel bed is coarse sand and gravel. Channel banks are soil with minor vegetation. No ACW is available as channel is probably ephemeral.

Form Prepared by: RRS

Flow Meas. Method(s): Current Velocity Meter

Other notes: Elevation 6630



Site ID		KI0022			
Date	5/18/2011	Time			
Parameters					
Water Quality					Air Temp
T degrees F	54	K		pH	
				Air Temp degrees F	54

Volumetric Flow Measurement

Q = 0.61 cfs			Notes: Q = 0.61 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	0.80	0.15	0.05	0.04	0.01	0.00			
	1.1	0.30	0.80	0.18	0.24	0.04			
	1.4	0.30	0.30	0.77	0.09	0.07			
	1.7	0.30	0.30	0.93	0.09	0.08			
	2.0	0.30	0.32	1.14	0.10	0.11		Total W	2.30
	2.3	0.30	0.30	1.35	0.09	0.12		Total A	0.74
	2.6	0.30	0.20	1.79	0.06	0.11		Total Q	0.61
	2.9	0.25	0.22	1.28	0.06	0.07			
	3.1	0.10	0.10	0.30	0.01	0.00			
	2.3	2.30			0.74	0.61			

Measurement rated as good.

Meas Team Initials

Terry Katzer

Robyn W

Kobeh Valley Surface Water Resource

Field ID	KI024	
GMI ID		
Other Names or ID's, specify type		
Upper Coils Creek (Trib to Coils Creek)		
Location		
UTM m N	UTM m E	Datum
4410796	545614	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/18/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.		



Description	Channel bed is coarse sand and gravel up to 3" md. Channel banks: right bank is soil, left bank is gravel bar. ACW is not possible as stream is ephemeral.
Form Prepared by:	RRS
Flow Meas. Method(s)	Current Velocity Meter
Other notes:	Elevation 6620 feet.

Site ID		KI024			
Date	5/18/2011	Time	16:00		
Parameters					
Water Quality					Air Temp
T degrees F	45	K		pH	
				Air Temp degrees F	40

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 1.39 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	3.00	0.50	0.00	0.00	0.00	0.00			
	4.0	0.75	0.20	0.06	0.15	0.01			
	4.5	0.40	0.20	0.35	0.08	0.03			
	4.8	0.30	0.20	0.84	0.06	0.05			
	5.1	0.30	0.26	0.98	0.08	0.08		Total W	5.60
	5.4	0.30	0.28	1.17	0.08	0.10		Total A	1.30
	5.7	0.30	0.30	1.48	0.09	0.13		Total Q	1.39
	6.0	0.30	0.34	1.84	0.10	0.19			
	6.3	0.30	0.32	1.79	0.10	0.17			
	6.6	0.30	0.32	1.98	0.10	0.19			
	6.9	0.30	0.32	1.59	0.10	0.15			
	7.2	0.45	0.36	1.25	0.16	0.20			
	7.8	0.70	0.30	0.42	0.21	0.09			
	8.60	0.40	0.00	0.00	0.00	0.00			

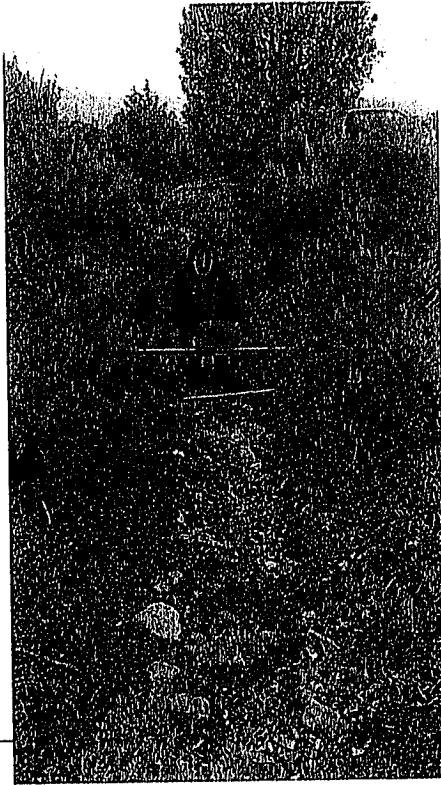
Measurement rated as good.

Meas Team Initials

Terry Katzer Robyn W

Kobeh Valley Surface Water Resource

Field ID	KI025	
GMI ID		
Other Names or ID's, specify type		
Jack Ass Creek		
Location		
UTM m N	UTM m E	Datum
4410970	0546719	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/18/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.	V01957	



Description	Channel bed is 3-5" md rock, gravel and soil. Channel banks are soil. ACW is 1.5 feet.
Form Prepared by:	RRS
Flow Meas. Method(s)	0.00 cfs
Other notes:	Elevation 6795 feet

Site ID		KI0025			
Date	5/18/2011	Time	15:00		
Parameters					
Water Quality					Air Temp
T degrees F		K		pH	
				Air Temp degrees F	43

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Channel is dry, but recent flow within last few days, ephemeral
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			

Measurement rated as excellent.

Meas Team Initials

Terry Katzer Robyn W

Kobeh Valley Surface Water Resource

Field ID	KI026	
GMI ID		
Other Names or ID's, specify type		
Basin Spring Creek		
Location		
UTM m N	UTM m E	Datum
4410324	0543428	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/18/2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.	V01954, V01955	



Description	Channel is gravel, cobbles and sand bed. ACW is approximately 8 feet.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		K10026			
Date	5/18/2011	Time	13:00		
Parameters					
Water Quality					Air Temp
T degrees F		K		pH	Air Temp degrees F
					41

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 2.56 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	4.8	0.45	0.00	0.00	0.00	0.00			
	5.7	0.85	0.28	0.37	0.24	0.09			
	6.5	0.60	0.30	1.80	0.18	0.32			
	6.9	0.40	0.32	1.70	0.13	0.22			
	7.3	0.40	0.30	1.35	0.12	0.16		Total W	6.70
	7.7	0.40	0.35	1.50	0.14	0.21		Total A	1.79
	8.1	0.40	0.44	2.04	0.18	0.36		Total Q	2.56
	8.5	0.40	0.46	1.68	0.18	0.31			
	8.9	0.40	0.32	1.14	0.13	0.15			
	9.3	0.40	0.33	1.99	0.13	0.26			
	9.7	0.40	0.30	1.98	0.12	0.24			
	10.1	0.40	0.30	0.94	0.12	0.11			
	10.5	0.70	0.18	1.06	0.13	0.13			
	11.5	0.50	0.00	0.00	0.00	0.00			

Notes: Measurement rated as good.

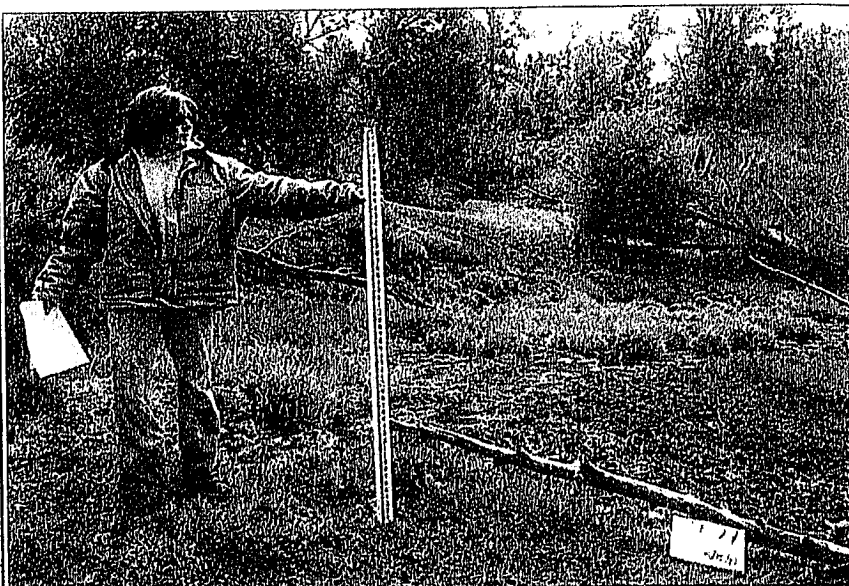
Meas Team Initials

Bob Squires

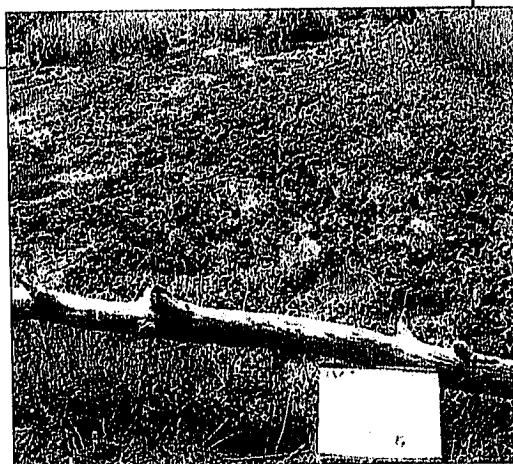
Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	KI027	
GMI ID		
Other Names or ID's, specify type		
	515, spring	
Location		
UTM m N	UTM m E	Datum
4412390	546729	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	eTrex handheld GPS	
Date of Survey	5/18/2011	
Owner	BLM?	
Use	stock?	
St. Eng. Water Right Ref.		



Description	"Hot" vapor area @ 4412415N, 546743E. Spring surfaces in areas where ground has failed on hillside. (2 areas) Est. <5 gpm.	
Form Prepared by:	DH & EH	
Flow Meas. Method(s)	Visual Estimate	
Other notes:		



Site ID		KI027			
Date	5/18/2011	Time			
Parameters					
Water Quality					Air Temp
T degrees C		K		pH	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Visual Flow Estimate = <5 gpm
Size of Vessel			
Time to fill (1)	_____	sec/min	
Time to fill (2)	_____	sec/min	
Time to fill (3)	_____	sec/min	

Pygmy Current Meter

[illegible]

Notes or Other Measurement Description:

Meas Team Initials

Kobeh Valley Surface Water Resource

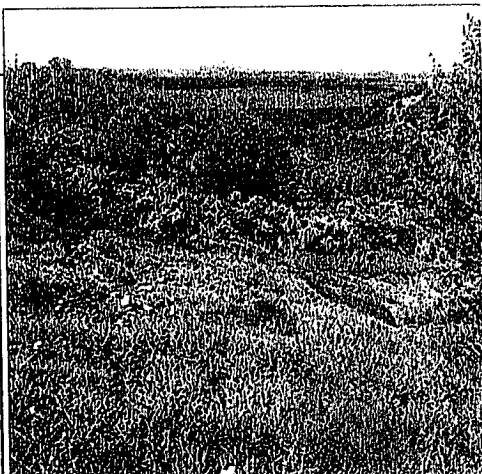
Field ID	KI028		
GMI ID			
Other Names or ID's, specify type			
514, spring			
Location			
UTM m N	UTM m E	Datum	
4412467	546766	WGS 84	
		NAD 27	
UTM ft N	UTM ft E	Datum	
Lat	Long	Datum	
How was location determined?	eTrex handheld GPS		
Date of Survey	5/18/2011		
Owner	BLM?		
Use	stock?		
St. Eng. Water Right Ref.			

Description Limestone outcrops at site. Est. <5 gpm. Dispersed flow at surface.

Form Prepared by: DH & EH

Flow Meas. Method(s) NA

Other notes:



Site ID			KI018		
Date		5/18/2011		Time	
Parameters					
Water Quality					Air Temp
T degrees C		K	pH	Air Temp degrees C	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Visual Flow Estimate = <5 gpm
Size of Vessel			
Time to fill (1)	_____	sec/min	
Time to fill (2)	_____	sec/min	
Time to fill (3)	_____	sec/min	

Pygmy Current Meter

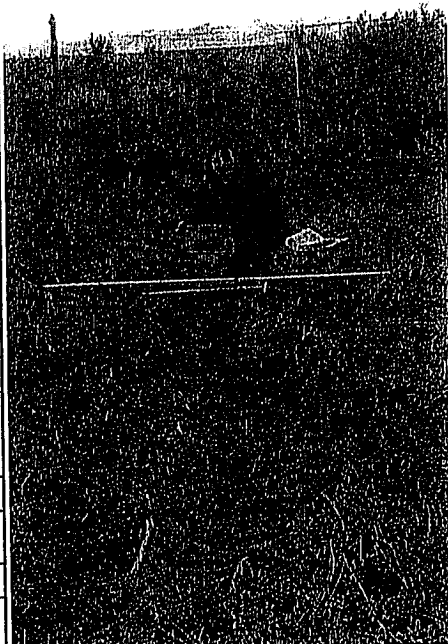
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Notes or Other Measurement Description:

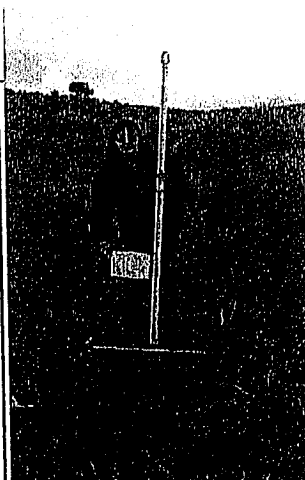
Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	KI029	
GMI ID		
Other Names or ID's, specify type		
Dry Canyon Creek		
Location		
UTM m N	UTM m E	Datum
4413150	546137	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	5/18/2011	
Owner		
Use		
St. Eng. Water Right Ref.		



Description	Vegetation on sides and in the channel. Ephemeral channel.	
Form Prepared by:	RRS	
Flow Meas. Method(s)		
Other notes:	Elevation 6710 feet.	



Site ID		KI0029			
Date	5/18/2011	Time	15:45		
Parameters					
Water Quality					Air Temp
T degrees F		K		pH	
				Air Temp degrees F	44

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: No Flow
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

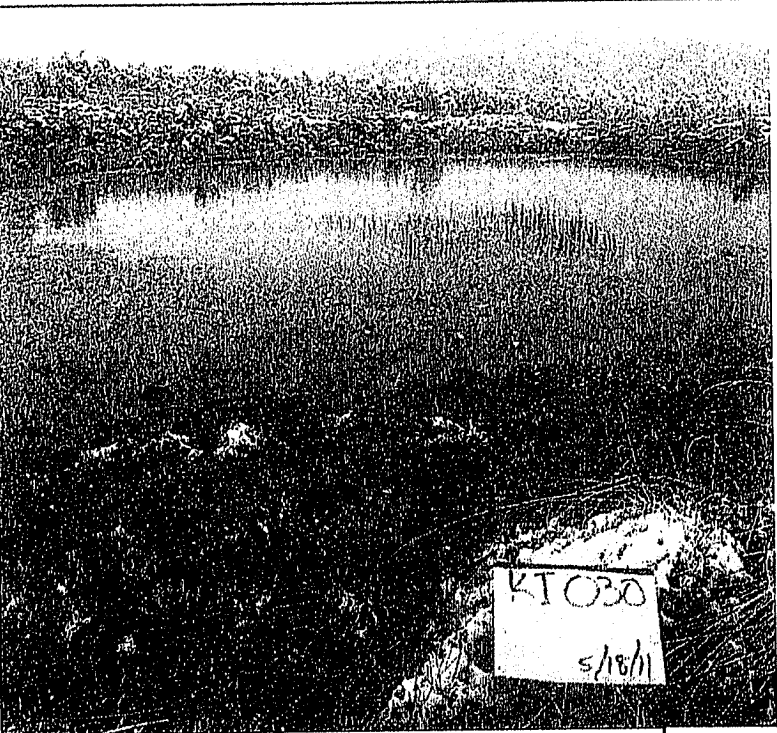
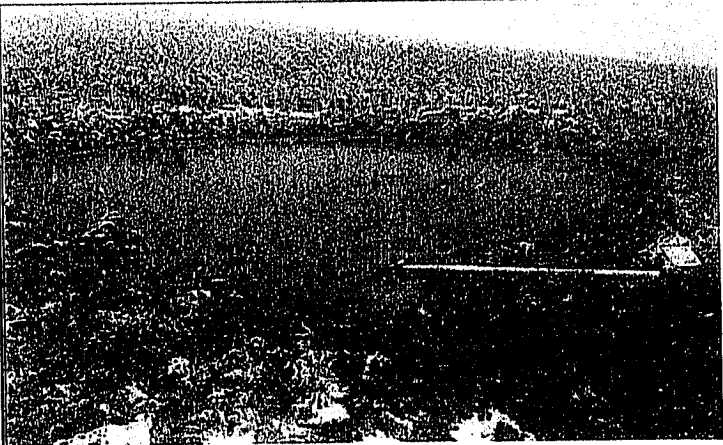
Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			

Meas Team Initials

Terry Katzer Robin W

Kobeh Valley Surface Water Resource

Field ID	KI030		
GMI ID			
Other Names or ID's, specify type			
444, spring			
Location			
UTM m N	UTM m E	Datum	
4414832	547454	WGS 84	
		NAD 27	
UTM ft N	UTM ft E	Datum	
Lat	Long	Datum	
How was location determined?	eTrex handheld GPS		
Date of Survey	5/18/2011		
Owner			
Use	stock?		
St. Eng. Water Right Ref.			
Description			
Pond with additional dispersed flow. 32' diameter. Est. <5 gpm. Snowing at site.			
Form Prepared by:	DH & EH		
Flow Meas. Method(s)	Visual Estimate		
Other notes:			

Site ID		KI030			
Date	5/18/2011	Time			
Parameters					
Water Quality					Air Temp
T degrees C		K		pH	
					Air Temp degrees C

Volumetric Flow Measurement

Note: Repeat 3 times		Notes: Estimated Flow <5 gpm
Size of Vessel		
Time to fill (1)	_____ sec/min	
Time to fill (2)	_____ sec/min	
Time to fill (3)	_____ sec/min	

Pygmy Current Meter

[illegible]

Notes or Other Measurement Description:

Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	KI031	
GMI ID		
Other Names or ID's, specify type		
Middle Mountain Spring		
Location		
UTM m N	UTM m E	Datum
4415752	545046	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	May 18, 2011	
Owner		
Use	Stockwater	
St. Eng. Water Right Ref.	45120	



Description	Spring pool is 25' by 10'.	
Form Prepared by:	RS	
Flow Meas. Method(s)	Volumetric	
Other notes:		



Site ID		KI031			
Date	May 18, 2011	Time	11:45		
Parameters					
Water Quality				Air Temp	
T degrees F	48	K		pH	
				Air Temp degrees F	40

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 47.4 gallons per minute
Size of Vessel	5 gallons		
Time to fill (1)	6.2 sec	sec/min	
Time to fill (2)	6.2 sec	sec/min	
Time to fill (3)	6.6 sec	sec/min	

Pygmy Current Meter

	Station	Width	Depth	Area	Discharge				

Notes: Measured Discharge at outlet of pool.

Meas Team Initials

Bob Squires

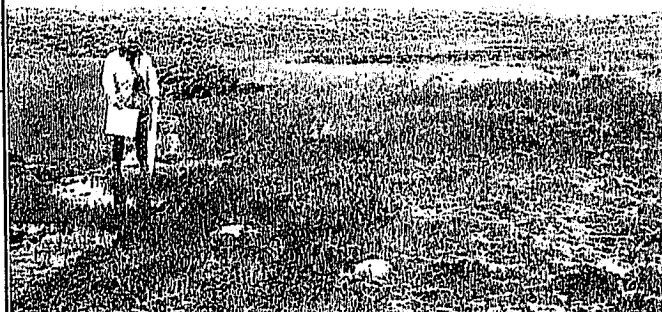
Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	KI032	
GMI ID		
Other Names or ID's, specify type		
Coils Spring		
Location		
UTM m N	UTM m E	Datum
4415833	0544221	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	May 18, 2011	
Owner		
Use	Stockwater	
St. Eng. Water Right Ref.	45121	



Description	Spring pool 50x50'. ACW 6'. Measured discharge at outlet of pool. Elev. 6900'.	
Form Prepared by:		
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID			KI032				
Date		May 18, 2011		Time		11:20	
Parameters							
Water Quality						Air Temp	
T degrees F		52		K		Air Temp degrees F	
				pH		40	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 0.11 cfs
Size of Vessel			
Time to fill (1)	_____	sec/min	
Time to fill (2)	_____	sec/min	
Time to fill (3)	_____	sec/min	

Swoffer Current Meter

[illegible]

Notes: Measured Discharge at outlet of pool. Measurement rated as fair

Meas Team Initials

Bob Squires

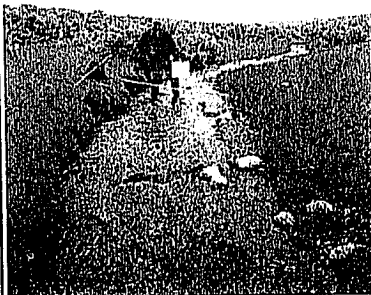
Dwight Smith

Kobeh Valley Surface Water Resource

Field ID	KI033	
GMI ID		
Other Names or ID's, specify type	Little Cottonwood Canyon	
Location		
UTM m N	UTM m E	Datum
4407834	542720	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS	
Date of Survey	May 18, 2011	
Owner		
Use	irrig	
St. Eng. Water Right Ref.	V01956	



Description	Channel is gravel, cobbles and sand bed. ACW is approximately 6.5 feet. Little Cottonwood Canyon abv confluence with Dead Horse Canyon channel is cobble, gravel, sand. ACW approx. 6.5'.	
Form Prepared by:	RRS	
Flow Meas. Method(s)	Current Velocity Meter	
Other notes:		



Site ID		KI0033			
Date	May 18, 2011	Time	14:10		
Parameters					
Water Quality					Air Temp
T degrees F	56	K		pH	Air Temp degrees F
					38

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Q = 2.38 cfs
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

	Station	Width	Depth	Velocity	Area	Discharge			
	1.0	0.25	0.00	0.00	0.00	0.00			
	1.5	0.50	0.15	0.77	0.08	0.06			
	2.0	0.50	0.15	1.43	0.08	0.11			
	2.5	0.50	0.18	1.64	0.09	0.15			
	3.0	0.50	0.18	1.90	0.09	0.17		Total W	6.30
	3.5	0.50	0.18	1.59	0.09	0.14		Total A	1.54
	4.0	0.50	0.22	1.54	0.11	0.17		Total Q	2.38
	4.5	0.50	0.24	1.47	0.12	0.18			
	5.0	0.50	0.34	1.40	0.17	0.24			
	5.5	0.50	0.42	0.66	0.21	0.14			
	6.0	0.50	0.50	2.35	0.25	0.59			
	6.5	0.50	0.38	2.11	0.19	0.40			
	7.0	0.40	0.18	0.64	0.07	0.05			
	7.3	0.15	0.00	0.00	0.00	0.00			

Notes: Measurement rated as good.

Meas Team Initials

Bob Squires

Dwight Smith

IN THE SUPREME COURT OF THE STATE OF NEVADA

EUREKA COUNTY, A POLITICAL
SUBDIVISION OF THE STATE OF
NEVADA; KENNETH F. BENSON,
INDIVIDUALLY; DIAMOND CATTLE
COMPANY, LLC, A NEVADA LIMITED
LIABILITY COMPANY; AND MICHEL
AND MARGARET ANN ETCHEVERRY
FAMILY, LP, A NEVADA REGISTERED
FOREIGN LIMITED PARTNERSHIP,

Appellants,

vs.

THE STATE OF NEVADA STATE
ENGINEER; THE STATE OF NEVADA
DIVISION OF WATER RESOURCES;
AND KOBEH VALLEY RANCH, LLC, A
NEVADA LIMITED LIABILITY
COMPANY,

Respondents.

Case No. 61324

District Court Case No.

CV 1108-15; CV 1108-156;
CV 1108-157; CV 1112-164;
CV 1112-165; CV 1202-170

Electronically Filed
Dec 27 2012 02:17 p.m.

Tracie K. Lindeman
Clerk of Supreme Court

JOINT APPENDIX

Volume 30

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Attorneys for Appellant,
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**CHRONOLOGICAL APPENDIX TO
APPEAL FROM JUDGMENT**

<u>DOCUMENT</u>	<u>DATE</u>	<u>VOL</u>	<u>JA NO.</u>
Petition for Judicial Review	08/08/2011	1	01-06
Notice of Verified Petition for Writ of Prohibition, Complaint and Petition for Judicial Review	08/10/2011	1	07- 08
Verified Petition for Writ of Prohibition, Complaint and Petition for Judicial Review	08/10/2011	1	09-59
Summons and Proof of Service, Kobeh Valley Ranch, LLC	08/11/2011	1	60-62
Summons and Proof of Service, Jason King	08/11/2011	1	63-65
Affidavit of Service by Certified Mail	08/11/2011	1	66-68
Notice of Petition for Judicial Review	08/11/2011	1	69-117
Summons and Proof of Service, Kobeh Valley Ranch, LLC	08/15/2011	1	118-120
Summons and Proof of Service, Jason King	08/15/2011	1	121-123
Summons and Proof of Service, The State of Nevada	08/17/2011	1	124-128
First Additional Summons and Proof of Service, State Engineer, Division of Water Resources	08/17/2011	1	129-133
Order Allowing Intervention of Kobeh Valley Ranch, LLC, to Intervene as a Respondent	09/14/2011	1	134-135

<u>DOCUMENT</u>	<u>DATE</u>	<u>VOL</u>	<u>JA NO.</u>
Partial Motion to Dismiss, Notice of Intent to Defend	09/14/2011	1	136-140
Order Allowing Intervention of Kobeh Valley Ranch, LLC, as a Party Respondent	09/26/2011	1	141-142
Answer to Verified Petition for Writ of Prohibition, Complaint and Petition for Judicial Review by Kobeh Valley Ranch, LLC	09/28/2011	1	143-149
Answer to Petition for Judicial Review by Kobeh Valley Ranch, LLC	09/29/2011	1	150-154
Answer to Petition for Judicial Review by Kobeh Valley Ranch, LLC	09/29/2011	1	155-160
Order Directing the Consolidation of Action CV1108-156 and Action No. CV1108-157 with Action CV1108-155	10/26/2011	1	161-162
Summary of Record on Appeal	10/27/2011	2-26	163-5026
Request for and Points and Authorities in Support of Issuance of Writ of Prohibition and in Opposition to Motion to Dismiss	11/10/2011	27	5027-5052
Order Setting Briefing Schedule	12/02/2011	27	5053-5055
Reply in Support of Partial Motion to Dismiss and Opposition to Request for Writ of Prohibition	12/15/2011	27	5056-5061

<u>DOCUMENT</u>	<u>DATE</u>	<u>VOL</u>	<u>JA NO.</u>
Kobeh Valley Ranch's Reply to Conley/Morrison's Request for and Points and Authorities in Support of Issuance of Writ of Prohibition and in Opposition to Motion to Dismiss	12/15/2011	27	5062-5083
Kobeh Valley Ranch's Joinder in the State of Nevada and Jason King's Partial Motion to Dismiss	12/15/2011	27	5084-5086
Petition for Judicial Review	12/29/2011	27	5087-5091
Petition for Judicial Review	12/30/2011	27	5092-5097
Summons and Proof of Service, The State of Nevada	01/11/2012	27	5098-5100
First Additional Summons and Proof of Service, State Engineer, Division of Water Resources	01/11/2012	27	5101-5103
First Amended Petition for Judicial Review	01/12/2012	27	5104-5111
Opening Brief of Conley Land & Livestock, LLC and Lloyd Morrison	01/13/2012	27	5112-5133
Petitioners Kenneth F. Benson, Diamond Cattle Company, LLC, and Michel and Margaret Ann Etcheverry Family LP's Opening Brief	01/13/2012	27	5134-5177
Eureka County's Opening Brief	01/13/2012	27	5178-5243
Eureka County's Summary of Record on Appeal - CV1112-0164	01/13/2012	28	5244-5420
Eureka County's Supplemental Summary of Record on Appeal - CV1108-155	01/13/2012	29-30	5421-5701

<u>DOCUMENT</u>	<u>DATE</u>	<u>VOL</u>	<u>JA NO.</u>
Order Granting Extension	01/26/2012	31	5702-5703
Answer to Petition for Judicial Review	01/30/2012	31	5704-5710
Answer to First Amended Petition for Judicial Review	01/30/2012	31	5711-5717
Supplemental Petition for Judicial Review	01/31/2012	31	5718-5720
Petition for Judicial Review	02/01/2012	31	5721-5727
Summary of Record on Appeal	02/03/2012	31	5728-5733
Record on Appeal, Vol. I, Bates Stamped Pages 1-216	02/03/2012	31	5734-5950
Record on Appeal, Vol. II, Bates Stamped Pages 217-421	02/03/2012	32	5951-6156
Record on Appeal, Vol. III, Bates Stamped Pages 422-661	02/03/2012	33	6157-6397
Answer to Petition to Judicial Review	02/23/2012	34	6398-6403
Answering Brief	02/24/2012	34	6404-6447
Respondent Kobeh Valley Ranch, LLC's Answering Brief	02/24/2012	34	6448-6518
Reply Brief of Conley Land & Livestock, LLC and Lloyd Morrison	03/28/2012	34	6519-6541
Petitioners Kenneth F. Benson, Diamond Cattle Company, LLC, and Michel and Margaret Ann Etcheverry Family LP's Reply Brief	03/28/2012	34	6542-6565
Eureka County's Reply Brief	03/28/2012	34	6566-6638

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Transcript for Petition for Judicial Review	04/03/2012	35	6639-6779
Corrected Answering Brief	04/05/2012	35	6780-6822
Findings of Fact, Conclusions of Law, and Order Denying Petitions for Judicial Review	06/13/2012	36	6823-6881
Notice of Entry of Findings of Fact, Conclusions of Law, and Order Denying Petitions for Judicial Review	06/18/2012	36	6882-6944
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Petitioners Benson, Diamond Cattle Co., and Etcheverry Family LP's Notice of Appeal	07/12/2012	36	6950-6951
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**ALPHABETICAL APPENDIX TO
APPEAL FROM JUDGMENT**

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Affidavit of Service by Certified Mail	08/11/2011	1	66-68
Answer to Verified Petition for Writ of Prohibition, Complaint and Petition for Judicial Review by Kobeh Valley Ranch, LLC	09/28/2011	1	143-149
Answer to Petition for Judicial Review by Kobeh Valley Ranch, LLC	09/29/2011	1	150-154
Answer to Petition for Judicial Review by Kobeh Valley Ranch, LLC	09/29/2011	1	155-160
Answer to Petition for Judicial Review	01/30/2012	31	5704-5710
Answer to First Amended Petition for Judicial Review	01/30/2012	31	5711-5717
Answer to Petition to Judicial Review	02/23/2012	34	6398-6403
Answering Brief	02/24/2012	34	6404-6447
Corrected Answering Brief	04/05/2012	35	6780-6822
Eureka County's Supplemental Summary of Record on Appeal - CV1108-155	01/13/2012	29-30	5421-5701
Eureka County's Summary of Record on Appeal - CV1112-0164	01/13/2012	28	5244-5420
Eureka County's Opening Brief	01/13/2012	27	5178-5243
Eureka County's Reply Brief	03/28/2012	34	6566-6638
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First Additional Summons and Proof of Service, State Engineer, Division of Water Resources	08/17/2011	1	129-133
First Additional Summons and Proof of Service, State Engineer, Division of Water Resources	01/11/2012	27	5101-5103
First Amended Petition for Judicial Review	01/12/2012	27	5104-5111
Kobeh Valley Ranch's Reply to Conley/Morrison's Request for and Points and Authorities in Support of Issuance of Writ of Prohibition and in Opposition to Motion to Dismiss	12/15/2011	27	5062-5083
Kobeh Valley Ranch's Joinder in the State of Nevada and Jason King's Partial Motion to Dismiss	12/15/2011	27	5084-5086
Notice of Verified Petition for Writ of Prohibition, Complaint and Petition for Judicial Review	08/10/2011	1	07- 08
Notice of Petition for Judicial Review	08/11/2011	1	69-117
Notice of Entry of Findings of Fact, Conclusions of Law, and Order Denying Petitions for Judicial Review	06/18/2012	36	6882-6944
Notice of Appeal	07/10/2012	36	6945-6949
Opening Brief of Conley Land & Livestock, LLC and Lloyd Morrison	01/13/2012	27	5112-5133

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Order Allowing Intervention of Kobeh Valley Ranch, LLC, as a Party Respondent	09/26/2011	1	141-142
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Petitioners Kenneth F. Benson, Diamond Cattle Company, LLC, and Michel and Margaret Ann Etcheverry Family LP's Opening Brief	01/13/2012	27	5134-5177
Petitioners Kenneth F. Benson, Diamond Cattle Company, LLC, and Michel and Margaret Ann Etcheverry Family LP's Reply Brief	03/28/2012	34	6542-6565
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Reply Brief of Conley Land & Livestock, LLC and Lloyd Morrison	03/28/2012	34	6519-6541
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<u>DOCUMENT</u>	<u>DATE</u>	<u>VOL</u>	<u>JA NO.</u>
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Verified Petition for Writ of Prohibition, Complaint and Petition for Judicial Review	08/10/2011	1	09-59

CERTIFICATE OF APPENDIX (NRAP 30(g)(1))

In compliance with NRAP 30(g)(1) I hereby certify that this Appendix consists of true and correct copies of the papers in the District Court file.

DATED: December 21, 2012.

/s/ KAREN A. PETERSON

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EUREKA COUNTY

**Water Resources Inventory Data
Collection Report
Kobeh Valley – NDWR Hydrographic
Basin 139**

June 16, 2011

Water Resources Inventory Data Collection Report

Kobeh Valley – NDWR Hydrographic Basin 139

Prepared under the responsible charge of:

Dwight L. Smith, PE, WRS No. 1045
Principal Hydrogeologist
Interflow Hydrology, Inc.
Truckee, CA

June 16, 2011

SROA 075

JA5503

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Summary of Water Appropriated and Available for Appropriation in Kobeh Valley

Kobeh Valley Ranch, LLC engaged Interflow Hydrology, Inc. to assist with its response to the State Engineer's request for additional information dated April 20, 2011. Interflow Hydrology, Inc. has conducted numerous field inspections in Kobeh Valley and has studied the hydrogeology of basin extensively since 2007 in connection with its work on the Mt. Hope Project. The enclosed water rights and resources data were collected and compiled for the Kobeh Valley hydrographic basin in May and June of 2011.

Tables 1 and 2 summarize the amount of decreed, certified, or permitted groundwater and surface water rights in Kobeh Valley, respectively, together with the name of each owner of record as set forth in the State Engineer's records. Table 3 summarizes the total amount of surface water claimed under vested and reserved water right claims, which although expressly excluded from an inventory under NRS 533.364(1)(a) are summarized herein because many of the sources were inspected in May 2011. Tables 1-3 are based on the information contained in the State Engineer's records as of June 3, 2011.

The information contained in Table 4 is based on field inspections of valley floor springs and primary stream sources in Kobeh Valley in May 2011. Inspection locations are shown in Plate 2. Primary stream sources are named creeks and streams on U.S. Geological Survey (USGS) 7.5-minute topographic maps and streams that have been appropriated in accordance with a decreed, certified, or permitted water right, or claimed as a vested water right. During the field inspection, flow measurements were recorded and are summarized in Table 4. Field inspection measurements are detailed in Appendix B. Major streams in the basin have been historically developed to support irrigation and have existing certified or permitted water rights, or vested claims. However, the following stream sources where significant flow was observed have not been appropriated or claimed as a vested water right:

1. Dry Creek: Used to irrigate approximately 30 to 60 acres of pasture and meadows along the creek at the Dry Creek Ranch (Section 12, T19N, R46E; Site KI057);
2. Two un-named steams between West Cottonwood Creek and Snow Water Canyon (KI040A and KI040B): Used to irrigate lands on the Santa Fe Ranch (Section 36, T22N, R48E). The place of use is partially the lands irrigated under vested claim V01769 from West Cottonwood Creek, which irrigates 91.58 acres (current pasture-meadow area estimated at 130 acres, with additional 190 acres of fenced land surrounding pastures);
3. Snow Water Canyon (KI043): Also is used to irrigate meadows at the Santa Fe Ranch (Section 36, T22N, R48E; same pasture-meadow as above);

4. Horse Canyon Creek (KI035): Used to irrigate approximately 140 acres of meadows and pasture, within 250 fenced acres (Section 17, T22N, R49E) south of the 3Bars Ranch and west of 3Bars Road; and
5. Dead Horse Canyon Creek (KI033): Tributary to Little Cottonwood Canyon Creek and used to irrigate meadows at the 3Bars Ranch (additional source to V01952-V01957, probably no additional non-supplemental duty).

The US Geological Survey (USGS) National Hydrography Dataset (NHD) for mapped springs is plotted on Plate 2. Field inspections were conducted in May 2011 for the USGS NHD mapped springs on the valley floor (Table 4, Appendix B). At many springs, the source appeared to be used for stock water, and some spring sources have water rights for stock water and/or "other" uses (reserved claims for stock water and wildlife uses). The amount of water available for appropriation from valley floor springs that have not been appropriated by a decreed, certified, or permitted water right, or vested or reserved claim, and therefore are available for appropriation, is estimated to be less than 400 acre-feet annually. This estimate is based on the observed size and magnitude of flows in May 2011 and professional hydrogeologic experience regarding the annual yield of the types of springs observed.

Many springs in the mountain block are available for stock water or wildlife uses, but only a few springs have been appropriated or have a claim of vested rights. The flows of the mountain block springs are highly variable and heavily dependent on seasonal and long-term climatic conditions. The flow of mountain block springs that are tributary to perennial or intermittent streams was captured by measuring the flow of the stream source. The flows of mountain block springs that are not tributary to perennial or intermittent streams are estimated to be a few hundred acre-feet annually (estimated range 100 to 500 acre-feet annually). Based on the NHD dataset, there are approximately 170 springs located in the mountain blocks. Based on a review of topographic maps, approximately 100 of the NHD springs do not appear to be directly tributary to a measured stream site.

As of June 3, 2011 the total amount of decreed, certified, and permitted groundwater rights in Kobeh Valley is 13,048.51 acre-feet annually (Table 1). This total does not include any groundwater that may be used from a well for domestic purposes pursuant to NRS 534.180, which may not exceed 2 acre-feet annually. The perennial yield of the Kobeh Valley administrative groundwater basin is 16,000 acre-feet (Rush and Everett, 1964). Therefore, based on the information set forth above, the estimated amount of groundwater that is available for appropriation in the basin is 2,951.49 acre-feet annually. There are 7 known domestic wells in Kobeh Valley, which may use a combined maximum of 14 acre-feet annually. Locations of domestic wells are shown on Plate 1. Domestic well locations were determined using the State Engineer's Well Log database, with adjustments based on field observations made in May 2011. The location of groundwater that is available for appropriation is the Kobeh Valley administrative groundwater basin.

As of June 3, 2011, the total amount of decreed, certified, and permitted surface water rights in Kobeh Valley is 2,264.09 acre-feet annually. This total does not include surface water claimed

under vested or reserved water right claims (summarized in Table 3) because they are not required to be part of an inventory under NRS 533.364(1)(a) and the State Engineer is not required to quantify them for the purpose of the inventory before approving an application for an interbasin transfer.

Based on May 2011 field inspections, an estimate of additional surface water that is available for appropriation is approximately 6,200 to 7,700 acre-feet annually (rounded), including existing claims of vested or reserved rights to 5,530.57 acre-feet annually (Table 3), plus 650 to 2,200 acre-feet annually, as summarized below:

Valley floor springs:	200 to 400 acre-feet annually;
Mountain block springs:	100 to 500 acre-feet annually;
Horse Canyon Creek:	200 to 600 acre-feet annually;
Snow Water Canyon:	50 to 400 acre-feet annually (assuming additional 40 to 100 acres to proof of appropriation V01769);
Dry Creek at Dry Creek Ranch:	50 to 200 acre-feet annually;
Dead Horse Creek:	50 to 100 acre-feet annually, commingled with water claimed under V01952-V01957 and used to irrigate the same acreage.

Many small ephemeral drainages exist in Kobeh Valley. Field observations show they are unlikely to provide sufficient flows or volumes that are necessary to support any sustained use.

Table 1
KOBEH VALLEY
(Basin 139)

Volume of Groundwater Rights - Decreed, Certified, and Permitted

Application Number	Amount Appropriated (Acre-Feet per Year)	Owner of Record
9682	474.00	KOBEH VALLEY RANCH, LLC
10426	15.50	KOBEH VALLEY RANCH, LLC
11016	11.20	3F LLC
11072	330.50	KOBEH VALLEY RANCH, LLC and FISH CREEK RANCH LLC
11105	1.20	DAMELE FARMS, INC.
11188	1.70	ROY R AND MARY E RISI
11382	6.70	3F LLC
11410	12.30	DAMELE, PETER
11448	0.70	DAMELE FARMS, INC.
11449	0.70	DAMELE FARMS, INC.
11836	6.90	3F LLC
13849 ¹	1,110.64	DAMELE, TOM G. & PETER JOE; KOBEH VALLEY RANCH LLC
13955	11.20	DAMELE FARMS, INC.
13956	677.60 -439.20 ²	M W CATTLE CO
18100	5.60	3F LLC
18544 ³	1,292.40	KOBEH VALLEY RANCH, LLC
19421	11.20	DAMELE, PETER J.
20836	11.20	SANTA FE LAND AND CATTLE COMPANY
23549	48.00	ROY R AND MARY E RISI
23951 ⁴	332.64	KOBEH VALLEY RANCH, LLC
23952 ⁵	238.64	KOBEH VALLEY RANCH, LLC
24170	6.70	3F LLC
24376	11.20	3F LLC
43025	5.20	BLM
43026	7.80	BLM
44744	1.10	BLM
44748	17.50	BLM
44749	13.50	BLM
44774	6.80	BLM
44775	6.80	BLM
45686	22.40	PETER DAMELE & SON
45687	22.40	PETER DAMELE & SON
45688	22.40	PETER DAMELE & SON

Application Number	Amount Appropriated (Acre-Feet per Year)	Owner of Record
48684	8.70	ETCHEVERRY FAMILY LTD PARTNERSHIP
56274	5.60	DAMELE, PETER JOE AND TOM G.
70099	9.50	3F LLC
71594	11.20	RISI, ROY
35866 64616	819.24 ^A	KOBEH VALLEY RANCH, LLC
54093 54094 60281 60282 60283 60284 60285 60286	1389.59 ^B	KOBEH VALLEY RANCH, LLC
72580 72581 72582 72583 72584 72585 72586 72587 72588	6337.32 ^C	KOBEH VALLEY RANCH, LLC
76058 77205	9.52 ^D	PETER JOE AND TOM DAMELE
76059 76592	150.48 ^E	PETER JOE AND TOM DAMELE
78937 78938	2.24 ^F	GARY AND MELODY GARAVENTA
TOTAL	<u>13,048.51</u>	

¹ 950.34 acre-feet forfeited by Ruling 5966

² 109.8 acres are supplemental to 13657 and 13658

³ Forfeited by Ruling 5966

⁴ Forfeited by Ruling 5966

⁵ Forfeited by Ruling 5966

^A The total combined duty of these permits may not exceed 819.24.

^B The total combined duty of these permits may not exceed 1,389.59.

^C The total combined duty of these permits may not exceed 6,337.32.

^D The total combined duty of these permits may not exceed 9.52.

^E The total combined duty of these permits may not exceed 150.48.

^F The total combined duty of these permits may not exceed 2.24.

Table 2
KOBEH VALLEY
(BASIN 139)

Volume of Surface Water Rights - Decreed, Certified, and Permitted

Application Number	Amount Appropriated (Acre-Feet per Year)	Owner of Record
9456	4.90	FISH CREEK RANCH LLC
11790	6.70	3F LLC
12748	10.86	ETCHEVERRY FAMILY LTD PARTNERSHIP
13678	4.60	FERREIRA, VINCE
13706	296.12	DAMELE FARMS, INC.
15040	24.00	DAMELE, MRS. PETER
15041	13.40	DAMELE, MRS. P.
15533	4.10	DAMELE FARMS, INC.
15534	4.10	DAMELE FARMS, INC.
16802	117.00	ETCHEVERRY FAMILY LTD PARTNERSHIP
1871	8.00	DAMELE, PETER
2243	9.10	PARSONS, CHARLES W. AND MARY F.
38639	3.62	BUCKINGHAM, KENNETH R.
45119	22.40	BUCKINGHAM, KENNETH R.
45120	9.10	BUCKINGHAM, KENNETH R.
45121	4.50	BUCKINGHAM, KENNETH R.
4527	11.20	BLM, EUREKA LAND AND LIVESTOCK
4528	2.24	BLM, EUREKA LAND AND LIVESTOCK
4529	2.24	BLM, EUREKA LAND AND LIVESTOCK
4768	24.20	ETCHEVERRY FAMILY LTD PARTNERSHIP
4919	84.32	FERGUSON, W.O. MRS.
5047	1.80	JOHN UHALDE & CO.
5375	1.10	3F LLC
6049	0.74	3F LLC
6263	4.30	DAMELE, PETER
6264	4.30	DAMELE, PETER
6861	1.12	3F LLC
7002	1.12	3F LLC
7458	1.70	3F LLC
7509	0.99	3F LLC

Application Number	Amount Appropriated (Acre-Feet per Year)	Owner of Record
7596	4.40	3F LLC
7766	3.30	3F LLC
7767	0.80	3F LLC
7768	2.76	3F LLC
8256	7.80	ROY R AND MARY E RISI
8330	3.28	3F LLC
8331	5.09	3F LLC
8890	14.58	DAMELE FARMS, INC.
8891	14.58	SMITH, DONALD RICHARDSON AND WILMA MARINER
8892	14.58	DAMELE FARMS, INC.
8893	14.58	DAMELE FARMS, INC.
8894	14.58	SMITH, DONALD RICHARDSON AND WILMA MARINER
9442	67.21	DIAMOND STAR RANCH CORP.
11835	6.94	3F LLC
12040	24.35	3F LLC
12057	6.72	3F LLC
12058	6.94	FISH CREEK RANCH LLC
124	80.00	WILSON, I.J.
13657	439.20	DAMELE FARMS, INC.
13658	533.00 -439.20 ¹	DAMELE FARMS, INC.
13674	231.92	DAMELE FARMS, INC.
2732	72.60	ETCHEVERRY FAMILY LTD PARTNERSHIP
2913	104.00	DAMELE, PETER
2948	90.00	OUT-BACH RANCH, A NEVADA LLC
3669	58.90	3F LLC
425	30.00	WILSON, I.J.
7608	37.72	FISH CREEK RANCH LLC
7620	<u>129.60</u>	3F LLC
TOTAL	<u>2,264.09</u>	

¹ 109.8 acres are supplemental to 13657

Table 3
KOBEH VALLEY
(BASIN 139)

Volume of Surface Water Rights - Unadjudicated Vested & Reserved Claims

Application Number	Amount Appropriated (Acre-Feet per Year)	Owner of Record
V01950	1.50	DAMELE, BERNARD AND PETER
V01951	2.25	DAMELE, BERNARD AND PETER
V01769	366.00	DAMELE FARMS, INC.
V01952	350.00 ¹	DAMELE, BERNARD AND PETER
V01953		DAMELE, BERNARD AND PETER
V01954		BLM AND EUREKA LIVESTOCK COMPANY
V01955		EUREKA LIVESTOCK COMPANY
V01956		DAMELE, BERNARD AND PETER
V01957		DAMELE, BERNARD AND PETER
V04511	5.60	ROY R AND MARY E RISI
V04512	0.69	ROY R AND MARY E RISI
V04513	4,436.20	KOBEH VALLEY RANCH, LLC
V04514	511.8 -431.00 ²	KOBEH VALLEY RANCH, LLC
R06871	11.57	BLM
R06872	9.85	BLM
R06873	9.85	BLM
R06874	9.85	BLM
R06875	9.85	BLM
R06876	11.42	BLM
R06877	11.42	BLM
R06878	11.42	BLM
R06879	11.42	BLM
R06880	11.42	BLM
R06881	11.42	BLM
R06882	11.42	BLM
R06883	11.42	BLM
R06884	11.42	BLM
R06885	11.42	BLM

Application Number	Amount Appropriated (Acre-Feet per Year)	Owner of Record
R06886	11.42	BLM
R06887	11.42	BLM
R06888	11.42	BLM
R06889	11.42	BLM
R06890	11.42	BLM
R06891	11.42	BLM
R06892	11.42	BLM
R06893	11.42	BLM
R06894	11.42	BLM
R06948	3.93	BLM
R06949	3.93	BLM
R06950	3.93	BLM
R06951	3.93	BLM
R06952	<u>3.93</u>	BLM
TOTAL	<u>5,530.57</u>	

¹ Proofs of appropriation V01952-57 irrigate the same 700 acres and claim a duty of 0.5 acre-feet/acre. Accordingly, the maximum volume claimed under the Proofs is 350 acre-feet per season (700 acres x 0.5 acre-feet/acre)

² 107.76 acres are supplemental to V04513

Table 4 – Summary of Field Inventory Measurements, Kobeh Valley Hydrographic Basin (139), May 2011

KVR LLC Field ID	UTM N	UTM E	Site Type	Common Name	Observed (Apparent) Use	Water Right Permit(s) on Source	Flow	Flow Units	Date of Measurement	Comments
KI002A	4381584	574266.5	spring		stock/irrig		4.5	gpm	5/19/2011	Piped into pasture, overflow to stock pond
KI002B	4381433	574499.5	spring		stock/irrig	V04514	5.9	gpm	5/19/2011	subirrigated meadow
KI003	4381972	573126.5	spring		--	V04512	NA		5/19/2011	small pool – no discharge
KI004	4382582	572719.5	spring		irrig		NA		5/19/2011	
KI005	4381224	568580	stream	Slough Creek	irrig	V04513, V04511	NA		5/17/2011	some ponded water in channel – evidence of recent flow
KI006	4387243	568070	Spring		--	R06949	NA		5/20/2011	No spring present – phreatophyte vegetation
KI007	4384795	560545	spring	Lone Mountain Spring	stock	R06951	NA		5/20/2011	circular depression; no visible flow
KI008	4387450	561496	spring	Mud Spring	stock	12748	<5	gpm	5/17/2011	depression with ponded water and well casing; flow visually estimated
KI009	4402449	563986.5	spring		stock		9.0	gpm	5/19/2011	One trough and two stock tanks
KI010	4404178	563453.5	spring		stock		2.7	gpm	5/19/2011	water flows into dirt stock tank
KI011	4405284	563016.5	spring	Nichols Spring	stock		9.6	gpm	5/19/2011	Evidence of historic sheep herding and dipping vat
KI012	4402419	560130.9	stream	Lower Roberts Creek	irrig	2732, 16802	10.9	cfs	5/20/2011	Measurement at lower gage site
KI013	4404340	560697	spring	Cherry Spring	stock		NA		5/19/2011	large area of rabbitbrush; creek adjacent to spring
KI014	4404340	560697	spring	Farrington Spring	stock		2-3	gpm	5/19/2011	Flow visually estimated, difficult to capture all flow
KI015			spring	Rutabaga Creek	--		12	gpm	5/18/2011	
KI017	4399709	547092	stream	Coils Creek	--		11.2	cfs	5/18/2011	Lower Coils Creek @ Gold Point Road; probably ephemeral

KVR, LLC Field ID	UTM-N	UTM-E	Site Type	Common Name	Observed (Apparent) Use	Water Right Permit(s)/on Source	Flow Units	Date of Measurement	Comments
KI018A	4401890	545252	spring		stock		<5 gpm	5/18/2011	Flow visually estimated
KI018B	4401932	545244	spring		stock		<2 gpm	5/18/2011	Flow visually estimated
KI019	4402930	544589	spring		irrig		10-20 gpm	5/20/2011	visual estimate of flow from small pool from subirrigated meadow; lower Horse Creek meadows
KI020A	4403629	544698	spring		stock		3 gpm	5/18/2011	2" PVC pipe flows into upper of two ponds
KI020B	4403552	544162	spring		irrig		NA	5/18/2011	Subirrigated meadow; lower Horse Creek meadows
KI021	4404117	547140	stream	Cottonwood Canyon Creek	irrig	V01952	1.14 cfs	5/18/2011	Tributary to Coils Creek - 3 Bars Ranch lower meadows; measurement location at ephemeral stream
KI022	4406403	547425	stream	Meadow Canyon Creek	irrig	V01953	0.61 cfs	5/18/2011	Tributary to Coils Creek, 3 Bars Ranch; probably ephemeral
KI024	4410796	545614	stream	Upper Coils Creek	irrig		1.39 cfs	5/18/2011	A primary trib to upper Coils Creek; irrigation water to meadows at 3 Bars Ranch
KI025	4410970	546719	stream	Jack Ass Creek	irrig	V01957	NA	5/18/2011	damp channel bottom; ephemeral
KI026	4410324	543428	stream	Basin Spring Creek	irrig	V01954, V01955	2.56 cfs	5/18/2011	Trib to Coils Creek and 3 Bars Ranch meadows
KI027	4412390	546729	spring		stock		<5 gpm	5/18/2011	"hot" vapor area nearby; flow visually estimated
KI028	4412467	546766	spring		stock		<5 gpm	5/18/2011	limestone outcrops; dispersed flow; flow visually estimated
KI029	4413150	546137	stream	Dry Canyon Creek	--		NA	5/18/2011	ephemeral

KVR, LLC Field ID	UTM N	UTM E	Site Type	Common Name	Observed (Apparent) Use	Water Right Permit(s) on Source	Flow	Flow Units	Date of Measurement	Comments
KI030	4414832	547454	spring		stock		<5	gpm	5/18/2011	stock pond with additional dispersed flow; flow visually estimated
KI031	4415752	545046	spring	Middle Mountain Spring	stock	45120	47	gpm	5/18/2011	stock pond at site
KI032	4415833	544221	spring	Coils Spring	stock	45121	0.11	cfs	5/18/2011	stock pond at site
KI033	4407834	542720	stream	Little Cottonwood Canyon	irrig	V01956	2.38	cfs	5/18/2011	Irrigation use at 3 Bars Ranch (trib to Coils Creek); measured up-stream of confluence with Dead Horse Creek
KI034	4407866	542725	stream	Dead Horse Creek	irrig		2.24	cfs	5/18/2011	Irrigation use at 3Bars Ranch (trib to Coils Creek); measured up-stream of confluence with Little Cottonwood Creek
KI035	4403625	543698	stream	Horse Canyon Creek	irrig		3.19	cfs	5/18/2011	Irrigates meadows on lower Horse Creek – visually estimated at 100+ acres
KI038	4402779	540328	stream	West Cottonwood Creek	irrig	V01769, R06886	3.68	cfs	5/18/2011	Diverted to Santa Fe Ranch meadows
KI039	4402240	539954	spring		stock		31	gpm	5/19/2011	Spring adjacent to creek
KI040A	4402231	539953	stream	Unnamed –South of West Cottonwood Creek	irrig		0.6	cfs	5/19/2011	Diverted to Santa Fe Ranch above West Cottonwood Diversion
KI040B	4401204	540800	stream	Unnamed – South of West Cottonwood Creek	irrig		2.71	cfs	5/19/2011	Diverted to Santa Fe Ranch via West Cottonwood Diversion
KI041	4401099	541015	spring		stock		54	gpm	5/19/2011	spring in meadow adjacent to flowing creek

KVR, LLC Field ID	UTM N	UTM E	Site Type	Common Name	Observed (Apparent) Use	Water Right Permit(s) on Source	Flow	Flow Units	Date of Measurement	Comments
KI043	4399015	540461	stream	Snow Water Canyon Creek	irrig		2.26	cfs	5/19/2011	Flow diverted to meadows at Santa Fe Ranch
KI044	4398388	541048	spring		irrig		NA		5/19/2011	Mound in wet meadow (subirrigation source) at the Santa Fe Ranch, no flowing discharge
KI045	4396531	539612	spring		--		NA		5/19/2011	damp area in meadow, but no flow
KI046	4396429	539644	spring		stock		<5	gpm	5/19/2011	estimated visually flow; pool and stock water trough
KI047	4393904	539552	stream	Lower Ferguson Creek	irrig	13657	3.51	cfs	5/19/2011	Source of water to Grubbs Flat
KI047A	4395206	536472	stream	Upper Ferguson Creek; Main channel	irrig	4919, 13706	3.35	cfs	5/19/2011	Source of water to Ferguson Ranch meadows
KI047B	4395137	536400	stream	Upper Ferguson Creek; Tributary to main channel	irrig		0.59	cfs	5/19/2011	Source of water to Ferguson Ranch meadows
KI048	4382823	533590	stream	Flat Canyon	--		1.06	cfs	5/19/2011	Source of water to Grubbs Flat
KI049	4390437	536168	stream	Grubbs Canyon Creek	--	13674	3.69	cfs	5/19/2011	Source of water to Grubbs Flat
KI050	4381074	530565	stream	Ackerman Canyon	--		4.8	cfs	5/19/2011	Flows to Bean Flat
KI051	4379954	529683	stream	Water Canyon	--		1.71	cfs	5/19/2011	ephemeral stream, flows to Bean Flat
KI052	4379738	529312	spring		stock		2.5	gpm	5/19/2011	Visual flow estimate, pond outflow joins Water Canyon creek
KI053	4375933	527478	stream	Hickison Creeks	--	2913	1.06	cfs	5/19/2011	Irrigated lands west of the Bobcat Ranch

KVR LLC Field ID	UTM N	UTM E	Site Type	Common Name	Observed (Apparent) Use	Water Right Permit(s) on Source	Flow	Flow Units	Date of Measurement	Comments
KI057	4373391	522961	stream	Dry Creek	irrig		0.47	cfs	5/19/2011	Source of water to Dry Creek Ranch meadows, flow measured at point below ranch
KI058	4369828	530741	stream	Stoneberger Creek	--		NA		5/20/2011	ephemeral wash
KI059	4386210	544936	spring		irrig		NA		5/18/2011	subirrigated field in Grubbs Flat; unable to discern separate sites
KI060	4386210	544936	spring		irrig		NA		5/18/2011	subirrigated field in Grubbs Flat; unable to discern separate sites
KI061	4384408	552399	spring	Gravel Pit Spring	stock		NA		5/20/11	Borrow pit next to 3Bars Road, ponded water with no outflow
KI062	4380838	546320	spring	Alma Woods Spring No. 1	stock - irrig	7766	NA		5/18/2011	subirrigated fields in Bean Flat; discrete ponds connected by dispersed surface flows
KI063	4379559	547019	spring	Alma Woods Spring No. 2	stock - irrig	7767	NA		5/18/2011	subirrigated fields in Bean Flat; discrete ponds connected by dispersed surface flows
KI064	4377471	545539	spring	Alma Woods Spring No. 3	stock - irrig	7768	NA		5/18/2011	Subirrigated field
KI066	4374494	552187	spring	Twin Springs	stock	6047, R06872	<5	gpm	5/17/2011	Visual flow estimate, no outflow from excavated spring pond
KI068	4375347	552408	spring		--		NA		5/18/2011	area of rabbitbrush; no flow
KI069	4375263	552434	spring	Cold Spring	--	6861	NA		5/18/2011	area of rabbitbrush; no flow
KI070	4375484	552421	spring		--		NA		5/18/2011	wet area; no surface water
KI071	4375559	552474	spring		stock		<1	gpm	5/18/2011	Visual flow estimate; pool at site
KI072	4375569	552569	spring		stock		<2	gpm	5/18/2011	pool, but no flow
KI073	4375569	552637	spring	Warm Spring	stock	5375, R06874	20-30	gpm	5/18/2011	Flow visually estimated 20-30 gpm; feeds approx. 3 acres grassland

KVR, LLC Field ID	UTM N	UTM E	Site Type	Common Name	Observed (Apparent) Use	Water Right Permit(s) on Source	Flow	Flow Units	Date of Measurement	Comments
KI074	4374011	553807	spring	Clover Spring	stock	8330	<5	gpm	5/18/2011	Visual flow estimate; pool at site
KI075	4373923	553810	spring		stock		<2	gpm	5/18/2011	Visual flow estimate; pool at site
KI076	4373283	553528	spring	Shamrock Spring	stock	8331	NA		5/18/2011	excavated spring; dry; piping present
KI077	4378873	554953	spring	Hotspring Hill	stock	R06871	1.9	gpm	5/18/2011	Well casing feeds to tub - pool and small meadow
KI078	4378870	554979	spring	Hotspring Hill	stock		<5	gpm	5/18/2011	Flow visually estimated; pool feeds into meadow
KI079	4378956	554915	spring	Hotspring Hill	stock		23	gpm	5/18/2011	Hot spring mound; feeds several acres of meadow
KI080	4378967	554964	spring	Hotspring Hill	stock		NA		5/18/2011	several spring "outflow" points; no surface flow; stock can access water in holes
KI081	4378911	555031	spring	Hotspring Hill	stock		<0.5	gpm	5/18/2011	Visual flow estimate; small spring; no surface outflow; small area of grasses
KI082	4363177	536911	stream	Reynolds Creek	irrig - stock	7620, 12057	2.07	cfs	5/19/2011	up-stream of meadows along lower creek
KI083	4364438	538500	stream	Kelly Creek	irrig	425	1.92	cfs	5/19/2011	down-stream of meadows along upper stream
KI085	4367501	542227	spring	Jackrabbit Spring	stock	7002	NA		5/18/2011	excavated area piped to stock troughs; water in troughs, but no inflow visible at time of inspection
KI086	4367850	543288	stream	Pedlar Creek	--		NA		5/19/2011	dry creek bed
KI087	4367571	544210	stream	Willow Creek	irrig	3669, 11835, 12040	0.28	cfs	5/19/2011	measured up-stream of Willows Ranch

KVR, LLC Field ID	UTM N	UTM E	Site Type	Common Name	Observed (Apparent) Use	Water Right Permit(s) on Source	Flow	Flow Units	Date of Measurement	Comments
KI088	4368204	543940	spring		irrig		NA		5/19/2011	modified spring adjacent to Willow Creek; subirrigated meadow
KI091	4367310	551169	spring	Paroni Spring	stock	7596	NA		5/18/2011	improved spring box outfitted with pump, generator, and storage tanks
KI092	4364073	552066	stream	Dagget Creek	--		NA		5/19/2011	dry creek bed
KI093	4367357	559696	spring	Bradford Spring	--	13678	NA		5/17/2011	circular depression, excavated?; dry -- but water right is for a stock water source
KI094	4371834	561969	stream	Antelope Wash	--		NA		5/17/2011	dry wash

Appendix A – Active Water Rights Abstract

Basin	App	Change App.	Cert	File Date	Status	Source	POD QQ	POD Qtr	POD Sec	POD Twn	POD Rng	Div Rate (CFS)	Type of Use	Sup	Annual Duty	Units	County	Owner of Record
139	9456		2104	5/1/1931	CER	LAK	SW	SW	10	19N	50E	0.001	STK		1.012737	AFA	EU	FISH CREEK RANCH LLC
139	11790		3068	3/3/1947	CER	OSW	NW	NE	35	19N	47E	0.00899999	STK		6.720891	AFA	LA	3F LLC
139	12748		5880	12/3/1948	CER	SPR	NE	NE	1	20N	50E	0.015	STK		10.863906	AFA	EU	ETCHEVERRY FAMILY LTD PARTNERSHIP
139	13678		3843	4/12/1951	CER	SPR	NE	NE	11	18N	50E	0.007	STK		4.6	AFA	EU	FERREIRA, VINCE
139	13706		4266	5/7/1951	CER	SPR	NE	SW	10	21N	48E	1	IRR		286.12	AFA	EU	DAMELE FARMS, INC.
139	15040		4474	5/12/1953	CER	SPR	SE	NE	16	20N	47E	0.1	IRR		24	AFS	LA	DAMELE, MRS. PETER
139	15041		5670	5/12/1953	CER	SPR	NW	SW	16	20N	47E	0.019	STK		13.533849	AFA	LA	DAMELE, MRS. P.
139	15533		4399	3/5/1954	CER	SPR	NW	NE	30	21N	48E	0.014	STK		4.173704	AFS	LA	DAMELE FARMS, INC.
139	15534		4400	3/5/1954	CER	SPR	NE	NE	29	21N	48E	0.014	STK		4.173704	AFS	LA	DAMELE FARMS, INC.
139	16802		5078	12/5/1955	CER	SPR	NW	NE	24	22N	50E	0	IRR		117	AFA	EU	ETCHEVERRY FAMILY LTD PARTNERSHIP
139	1871		88	11/10/1910	CER	SPR		NE	25	18N	45E	0.025	IRR		8	AFA	LA	DAMELE, PETER
139	2243		194	10/14/1911	CER	SPR			36	19N	46E	0.017	STK		9.053255	AFS	LA	PARSONS, CHARLES W.
139	38639			7/23/1979	PER	SPR	NW	NW	3	23N	49E	0.005	STK		3.62	AFA	EU	BUCKINGHAM, KENNETH R.
139	45120		16392	12/10/1981	CER	SPR	NW	NE	4	23NH	49E	0.0125	STK		9.05	AFA	EU	BUCKINGHAM, KENNETH R.
139	45121		16393	12/10/1981	CER	SPR	SE	NE	5	23N	49E	0.00625	STK		4.52	AFA	EU	BUCKINGHAM, KENNETH R.
139	4528		1197	7/26/1917	CER	SPR	NW	SE	26	23N	48E	0.003	STK		2.17	AFA	EU	BLM
139	4529		1198	7/26/1917	CER	SPR	SE	SW	14	23N	48E	0.003	STK		2.17	AFA	EU	BLM
139	4768		1986	12/8/1917	CER	SPR	NE	NW	11	22N	51E	0.1	STK		24.213621	AFS	EU	ETCHEVERRY FAMILY LTD PARTNERSHIP
139	4919		1685	2/18/1918	CER	SPR	NE	NE	9	21N	48E	0.546	IRR		84.3199899	AFS	WP	FERGUSON, W.O. MRS.
139	5047		907	5/2/1918	CER	SPR	SE	NE	17	19N	62E	0.015	STK		1.810651	AFA	WP	JOHN UHALDE & CO.
139	5375		597	1/29/1919	CER	SPR	NE	NW	18	19N	50E	0.002	STK		1.074115	AFA	EU	3F LLC
139	6049		865	4/5/1920	CER	SPR	SW	SW	18	19N	50E	0.001	STK		0.736536	AFA	EU	3F LLC
139	6263		816	9/15/1920	CER	SPR	SE	SE	1	20N	47E	0.01	STK		4.265771	AFS	LA	DAMELE, PETER
139	6264		817	9/15/1920	CER	SPR	NW	NW	18	20N	48E	0.01	STK		4.265771	AFS	LA	DAMELE, PETER
139	6861		1312	2/5/1923	CER	SPR	SE	NW	18	19N	50E	0.002	STK		1.12	AFA	EU	3F LLC
139	7002		1303	11/16/1923	CER	SPR	NE	NE	12	18N	48E	0.002	STK		1.135493	AFA	EU	3F LLC
139	7458		1701	8/1/1925	CER	SPR	SE	SW	10	18N	49E	0.005	STK		3.37579	AFA	EU	3F LLC
139	7509		1302	9/18/1925	CER	SPR	NE	SE	11	18N	49E	0.002	STK		0.869981	AFA	EU	3F LLC
139	7596		1691	12/7/1925	CER	SPR	NE	NE	12	18N	49E	0.00899999	STK		4.357838	AFA	EU	3F LLC
139	7766		2102	6/1/1926	CER	SPR	NW	NE	33	20N	49E	0.001	STK		4.480594	AFA	EU	3F LLC
139	7767		1982	6/1/1926	CER	SPR	SE	SE	33	20N	49E	0.002	STK		1.135493	AFA	EU	3F LLC
139	7768		2103	6/1/1926	CER	SPR	SW	NE	8	19N	49E	0.001	STK		4.48	AFA	EU	3F LLC
139	8256		1852	8/1/1927	CER	SPR	SW	NE	36	20N	51E	0.011	STK		7.856384	AFA	EU	ROY R AND MARY E RISI
139	8330		2489	10/1/1927	CER	SPR	NW	SW	20	19N	50E	0.006	STK		3.345101	AFA	EU	3F LLC
139	8331		2490	10/1/1927	CER	SPR	NW	SW	20	19N	50E	0.01	STK		5.094374	AFA	EU	3F LLC
139	8890		2055	5/1/1929	CER	SPR	SW	SW	10	22N	48E	0.02	STK		14.577275	AFA	EU	DAMELE FARMS, INC.
139	8891		2056	5/1/1929	CER	SPR	NW	NE	10	22N	48E	0.02	STK		14.577275	AFA	EU	SMITH, DONALD RICHARDSON
139	8892		2057	5/1/1929	CER	SPR	NE	NE	21	22N	48E	0.02	STK		14.577275	AFA	EU	DAMELE FARMS, INC.
139	8893		2058	5/1/1929	CER	SPR	SE	SW	26	22N	48E	0.02	STK		14.577275	AFA	EU	DAMELE FARMS, INC.
139	8894		2059	5/1/1929	CER	SPR	SE	NE	28	22N	48E	0.02	STK		14.577275	AFA	EU	SMITH, DONALD RICHARDSON

Basin	App	Change App.	Cert	File Date	Status	Source	POD QQ	POD Qir	POD Sec	POD Twn	POD Rng	Div Rate (CFS)	Type of Use	Sup	Annual Duty	Units	County	Owner of Record
139	9442		2002	4/23/1931	CER	SPR	SW	NW	12	22N	51E	0.094	STK		67.20891	AFA	EU	DIAMOND STAR RANCH CORP.
139	R06871			12/9/1994	RES	SPR	NE	NE	5	19N	50E	0.016	OTH		11.569753	AFA	EU	BLM
139	R06872			12/9/1994	RES	SPR	SW	SW	18	19N	50E	0.015	OTH		9.851169	AFA	EU	BLM
139	R06873			12/9/1994	RES	SPR	SE	NW	18	19N	50E	0.015	OTH		9.851169	AFA	EU	BLM
139	R06874			12/9/1994	RES	SPR	NE	NW	18	19N	50E	0.015	OTH		9.851169	AFA	EU	BLM
139	R06875			12/9/1994	RES	SPR	NW	NE	23	20N	49E	0.015	OTH		9.851169	AFA	EU	BLM
139	R06876			12/9/1994	RES	SPR	NW	NW	2	21N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06877			12/9/1994	RES	SPR	SE	NE	2	21N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06878			12/9/1994	RES	SPR	SE	NW	3	21N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06879			12/9/1994	RES	SPR	NW	NW	4	21N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06880			12/9/1994	RES	SPR	SW	NE	8	21N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06881			12/9/1994	RES	SPR	NE	SE	7	21N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06882			12/9/1994	RES	SPR	NE	NW	8	21N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06883			12/9/1994	RES	SPR	SW	NW	8	21N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06884			12/9/1994	RES	SPR	NW	SE	9	21N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06885			12/9/1994	RES	SPR	SW	SW	16	21N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06886			12/9/1994	RES	SPR	SW	NE	14	22N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06887			12/9/1994	RES	SPR	NE	NE	21	22N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06888			12/9/1994	RES	SPR	NE	SE	21	22N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06889			12/9/1994	RES	SPR	NE	NE	22	22N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06890			12/9/1994	RES	SPR	SE	SW	26	22N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06891			12/9/1994	RES	SPR	SW	NW	33	22N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06892			12/9/1994	RES	SPR	SW	NE	33	22N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06893			12/9/1994	RES	SPR	NW	NW	33	22N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06894			12/9/1994	RES	SPR	NW	SE	34	22N	48E	0.015	OTH		11.416308	AFA	EU	BLM
139	R06946			12/9/1994	RES	SPR	SW	SW	10	19N	50E	0.005	OTH		3.928192	AFA	EU	BLM
139	R06949			12/9/1994	RES	SPR	NE	NE	3	20N	51E	0.005	OTH		3.928192	AFA	EU	BLM
139	R06950			12/9/1994	RES	SPR	NW	NW	18	20N	52E	0.005	OTH		3.928192	AFA	EU	BLM
139	R06951			12/9/1994	RES	SPR	SW	NE	13	20N	50E	0.005	OTH		3.928192	AFA	EU	BLM
139	R06952			12/9/1994	RES	SPR	SW	NE	21	20N	50E	0.005	OTH		3.928192	AFA	EU	BLM
139	V01950			11/25/1925	VST	SPR	NW	NE	7	22N	50E	0.5	STK		1.5	AFA	EU	DAMELE, BERNARD
139	V01951			11/25/1925	VST	SPR	NE	SE	12	22N	49E	0.5	STK		2.25	AFA	EU	DAMELE, BERNARD
139	V04512			8/12/1985	VST	SPR	SE	NE	19	20N	52E	0.05	STK		0.69	AFA	EU	ROY R AND MARY E RISI
139	11835		3093	4/25/1947	CER	STR	NE	SE	6	18N	49E	0.01	STK		6.935714	AFA	EU	3F LLC
139	12040		3617	10/13/1947	CER	STR	SE	NE	31	19N	49E	0.1	IRR		24.35	AFA	EU	3F LLC
139	12057		3741	10/22/1947	CER	STR	NW	SW	16	18N	48E	0.01	STK		6.720891	AFA	EU	3F LLC
139	12058		3610	10/22/1947	CER	STR	NW	SW	14	18N	48E	0.01	STK		6.9449207	AFA	EU	FISH CREEK RANCH LLC
139	124		572	6/14/1906	CER	STR				20N	48E	1	IRR		80	AFA	EU	WILSON, I.J.
139	13657		5310	3/14/1951	CER	STR	NE	NE	8	20N	49E	1.6	IRR		439.2	AFS	EU	DAMELE FARMS, INC.
139	13658		5311	3/14/1951	CER	STR	NE	SW	8	20N	49E	1.6	IRR		533	AFS	EU	DAMELE FARMS, INC.

Basin	App	Change App.	Cert	File Date	Status	Source	POD Q1	POD Q2	POD Q3	POD Q4	POD Rng	Div Rate (CFS)	Type of Use	Sup	Annual Duty	Units	County	Owner of Record
139	13574		4990	4/9/1951	CER	STR	NE	SE	34	21N	48E	1.6	IRR		231.92	AFA	EU	DAMELE FARMS, INC.
139	2732		480	6/12/1913	CER	STR	NE	NE	24	22N	50E	0.3	IRR		120	AFA	EU	ETCHEVERRY FAMILY LTD PARTNERSHIP
139	2913		293	3/16/1914	CER	STR	NE	NE	9	19N	47E	0.26	IRR		104	AFA	LA	DAMELE, PETER
139	2948		1972	4/24/1914	CER	STR	NE	SE	34	18N	48E	0.427	IRR		90	AFA	EU	OUT-BACH RANCH, A NEVADA LLC
139	3669		2011	11/3/1915	CER	STR	SE	SW	8	18N	49E	0.483	IRR		58.9	AFA	EU	3F LLC
139	425			4/10/1907	PER	STR	SE	SE	15	18N	48E	1	IRR		30	AFA	EU	WILSON, I.J.
139	7608		2185	12/28/1925	CER	STR	NW	SW	14	19N	48E	0.3123	IRR		37.72	AFS	EU	FISH CREEK RANCH LLC
139	7620		1511	1/14/1926	CER	STR	NW	SW	16	18N	48E	0.612	IRR		129.6	AFA	EU	3F LLC
139	V01789			8/22/1921	VST	STR	SW	NE	13	22N	48E	0.915	IRR		0		EU	DAMELE FARMS, INC.
139	V01952			11/25/1925	VST	STR	NE	SE	2	22N	49E	0	IRR		350	AFS	EU	DAMELE, BERNARD
139	V01953			11/25/1925	VST	STR	NE	NE	3	22N	50E	0	IRR		350	AFS	EU	DAMELE, BERNARD
139	V01954			11/25/1925	VST	STR	SE	SW	14	23N	48E	0	IRR		350	AFS	EU	BLM
139	V01955			11/25/1925	VST	STR	SW	NE	23	23N	48E	0	IRR		350	AFS	EU	EUREKA LIVESTOCK COMPANY
139	V01956			11/25/1925	VST	STR	NW	SE	26	23N	48E	0	IRR		350	AFS	EU	DAMELE, BERNARD
139	V01957			11/25/1925	VST	STR	NW	NE	22	23N	49E	0	IRR		350	AFS	EU	DAMELE, BERNARD
139	V04511			8/12/1985	VST	STR	NW	SE	22	20N	52E	0.05	STK		5.6	AFA	EU	ROY R AND MARY E RISI
139	V04513			8/12/1985	VST	STR	NE	SW	13	20N	51E	0	IRR		0	AFA	EU	KOBEH VALLEY RANCH LLC
139	V04514			8/12/1985	VST	STR	NW	SE	20	20N	52E	2.5	IRR		0	AFA	EL	KOBEH VALLEY RANCH LLC
139	10426		2782	9/28/1939	CER	UG	SW	NW	20	19N	49E	0.05	IRR		15.5	AFA	EU	KOBEH VALLEY RANCH LLC
139	11016		2815	9/30/1943	CER	UG	NW	NE	13	19N	48E	0.016	STK		11.569753	AFA	EU	3F LLC
139	11072		2880	2/25/1944	CER	UG	NE	SE	17	19N	50E	0.78	IRR		330.5	AFA	EU	FISH CREEK RANCH LLC
139	11105		4202	4/14/1944	CER	UG	NE	SW	23	20N	49E	0.003	STK		1.196871	AFS	EU	DAMELE FARMS, INC.
139	11188		4039	10/21/1944	CER	UG	SW	NE	21	20N	50E	0.005	STK		1.587855	AFA	EU	ROY R AND MARY E RISI
139	11382		3478	10/10/1945	CER	UG	SW	NE	7	18N	48E	0.00899999	STK		6.506068	AFA	EU	3F LLC
139	11410		3180	10/29/1945	CER	UG	SE	NE	9	19N	47E	0.017	STK		12.306289	AFA	LA	DAMELE, PETER
139	11448		4088	12/17/1945	CER	UG	NW	SE	35	21N	48E	0.003	STK		0.675158	AFA	EU	DAMELE FARMS, INC.
139	11449		4089	12/17/1945	CER	UG	NE	SW	10	20N	48E	0.003	STK		0.675158	AFA	EU	DAMELE FARMS, INC.
139	11836		3094	4/25/1947	CER	UG	SW	NW	20	19N	49E	0.01	STK		6.935714	AFA	EU	3F LLC
139	13849		4922	10/1/1951	CER	UG	NE	SE	5	19N	49E	0.72	IRR		160	AFA	EU	DAMELE, TOM G. & PETER JOE
139	13955		4066	12/31/1951	CER	UG	SW	SW	16	21N	49E	0.016	STK		11.201485	AFA	EU	DAMELE FARMS, INC.
139	13956		5334	12/31/1951	CER	UG	SE	SW	9	20N	49E	1	IRR		677.6	AFA	EU	M W CATTLE CO
139	18100		5463	7/10/1959	CER	UG	NE	SW	18	19N	49E	0.01	STK		5.616087	AFA	EU	3F LLC
139	18544		6457	1/28/1960	CER	UG	NE	NE	30	19N	49E	5.4	IRD		1292.4	AFA	EU	KOBEH VALLEY RANCH LLC
139	19421		5737	1/3/1961	CER	UG	NW	NW	36	19N	47E	0.016	STK		11.201485	AFA	LA	DAMELE, PETER J.
139	20836		6300	11/8/1962	CER	UG	NE	NE	5	19N	50E	0.016	STK		11.201485	AFA	EU	SANTA FELAND AND CATTLE COMPANY
139	23549		7899	12/15/1966	CER	UG	NW	SE	20	20N	52E	1	IRR		48	AFA	EU	ROY R AND MARY E RISI
139	23951		8002	6/23/1967	CER	UG	SW	SW	29	19N	49E	2.45	IRD		332.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	23952		8003	6/23/1967	CER	UG	NE	NE	30	19N	49E	2.7	IRD		238.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	24170		6847	10/5/1967	CER	UG		LT10	2	18N	49E	0.00899999	STK		0.337578	AFA	EU	3F LLC
139	24376		7643	2/20/1968	CER	UG	NW	SE	30	19N	50E	0.016	STK		11.201485	AFA	EU	3F LLC

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139	35866			9/11/1978	PER	UG	SW	SW	16	19N	47E	1.21	IRR	Y	819.24	AFA	LA	BOBCAT RANCH, LLC
139	43025		11338	12/31/1980	CER	UG	NE	SE	7	20N	51E	0.007	STK		0.030689	AFA	EU	BLM
139	43026		11371	12/31/1980	CER	UG	SW	NE	27	19N	51E	0.01	STK		7.242604	AFA	EU	BLM
139	44744		11341	10/29/1981	CER	UG	NW	SE	21	20N	52E	0.001	STK		0.736536	AFA	EU	BLM
139	44748		11342	10/29/1981	CER	UG	NW	SW	9	18N	48E	0.01	STK		7.242604	AFA	EU	BLM
139	44749		11343	10/29/1981	CER	UG	SE	NE	33	19N	48E	0.01	STK		7.242604	AFA	EU	BLM
139	44774		11352	10/29/1981	CER	UG		LT04	31	22N	50E	0.0089999	STK		6.506068	AFA	EU	BLM
139	44775		11353	10/29/1981	CER	UG	NW	NW	17	21N	50E	0.008	STK		5.769532	AFA	EU	BLM
139	45686		11447	5/19/1982	CER	UG	SE	NW	22	19N	48E	0.031	STK		22.40297	AFA	EU	PETER DAMELE & SON
139	45687		11448	5/19/1982	CER	UG	NE	NE	31	19N	47E	0.031	STK		22.40297	AFA	LA	PETER DAMELE & SON
139	45688		11449	5/19/1982	CER	UG	SE	NE	4	19N	49E	0.031	STK		22.40297	AFA	EU	PETER DAMELE & SON
139	48684		12338	1/4/1985	CER	UG	NW	NW	25	21N	48E	0.012	STK		8.684987	AFA	EU	ETCHEVERRY FAMILY LTD PARTNERSHIP
139	54093			10/17/1989	PER	UG	NE	SW	35	22N	50E	1	MM	Y	723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	54094			10/17/1989	PER	UG	SW	SW	22	22N	50E	1	MM	Y	723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	56274		14826	5/8/1991	CER	UG	SW	NW	3	18N	47E	0.008	STK		5.616087	AFA	LA	DAMELE, PETER JOE
139	60281			7/28/1994	PER	UG	NW	SW	27	22N	49E	1	MM	Y	272.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	60282			7/28/1994	PER	UG	NW	SW	27	22N	49E	1	MM	Y	723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	60283			7/28/1994	PER	UG	NE	SE	28	22N	49E	1	MM	Y	272.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	60284			7/28/1994	PER	UG	NE	SE	28	22N	49E	1	MM	Y	723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	60285			7/28/1994	PER	UG	NE	SE	28	22N	49E	1	MM	Y	723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	60286			7/28/1994	PER	UG	NE	SE	28	22N	49E	1	MM	Y	272.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	64616			11/16/1998	PER	UG	NE	NE	21	19N	47E	2.24	IRR	Y	819.24	AFA	LA	BOBCAT RANCH, LLC
139	70099		17200	6/9/2003	CER	UG	NE	SW	30	19N	49E	0.0133	STK		9.54	AFA	EU	3F LLC
139	71594		17500	8/20/2004	CER	UG	SW	SE	36	21N	51E	0.016	STK		11.2	AFA	EU	RISI, ROY
139	72580			4/12/2005	PER	UG	SE	SE	15	19N	47E	0.45	IRR	Y	300.76	AFA	LA	KOBEH VALLEY RANCH LLC
139	72581			4/12/2005	PER	UG	NW	NE	23	19N	47E	4.7	IRR	Y	1142.4	AFA	LA	KOBEH VALLEY RANCH LLC
139	72582			4/12/2005	PER	UG	NW	NE	23	19N	47E	2	IRR	Y	500	AFA	LA	KOBEH VALLEY RANCH LLC
139	72583			4/12/2005	PER	UG	SW	NW	23	19N	47E	1	IRR	Y	211.25	AFA	LA	KOBEH VALLEY RANCH LLC
139	72584			4/12/2005	PER	UG	NE	SE	21	19N	47E	3.99	IRR	Y	842.91	AFA	LA	KOBEH VALLEY RANCH LLC
139	72585			4/12/2005	PER	UG	SW	SW	22	19N	47E	2.72	IRR	Y	1280	AFA	LA	KOBEH VALLEY RANCH LLC
139	72586			4/12/2005	PER	UG	SW	SW	22	19N	47E	0.82	IRR	Y	300.76	AFA	LA	KOBEH VALLEY RANCH LLC
139	72587			4/12/2005	PER	UG	SW	NW	23	19N	47E	5	IRR	Y	1280	AFA	LA	KOBEH VALLEY RANCH LLC
139	72588			4/12/2005	PER	UG	SW	SW	22	19N	47E	5	IRR	Y	1280	AFA	LA	KOBEH VALLEY RANCH LLC
139	72695			5/3/2005	RFP	UG	SE	SE	35	21N	51E	22.28	MM		0	AFA	EU	KOBEH VALLEY RANCH LLC
139	72696			5/3/2005	RFP	UG	NW	NW	35	21N	51E	22.28	MM		0	AFA	EU	KOBEH VALLEY RANCH LLC
139	72697			5/3/2005	RFP	UG	SW	SW	35	21N	51E	22.28	MM		0	AFA	EU	KOBEH VALLEY RANCH LLC
139	72698			5/3/2005	RFP	UG	NE	NE	35	21N	51E	22.28	MM		0	AFA	EU	KOBEH VALLEY RANCH LLC
139	73545			12/5/2005	RFP	UG	SE	SE	10	20N	51E	22.28	MM		0	AFA	EU	KOBEH VALLEY RANCH LLC
139	73546			12/5/2005	RFP	UG	SW	SE	11	20N	51E	22.28	MM		0	AFA	EU	KOBEH VALLEY RANCH LLC
139	73547			12/5/2005	RFP	UG	SE	NW	11	20N	51E	22.28	MM		0	AFA	EU	KOBEH VALLEY RANCH LLC

Basin	App	Change App.	Cert.	File Date	Status	Source	POD Q	POD Qtr	POD Sec	POD Twn	POD Rng	Div Rate (CFS)	Type of Use	Sup	Annual Duty	Units	County	Owner of Record
139	73548			12/5/2005	RFP	UG	NE	SW	35	21N	51E	22.28	MM		0	AFA	EU	KOBEH VALLEY RANCH LLC
139	73549			12/5/2005	RFP	UG	NE	NE	26	21N	51E	22.28	MM		0	AFA	EU	KOBEH VALLEY RANCH LLC
139	73550			12/5/2005	RFP	UG	NW	NW	26	21N	51E	22.28	MM		0	AFA	EU	KOBEH VALLEY RANCH LLC
139	73551			12/5/2005	RFP	UG	NE	SW	26	21N	51E	6	MMD	Y	2669.5	AFA	EU	KOBEH VALLEY RANCH LLC
139	73552			12/5/2005	RFP	UG	NE	SE	23	21N	51E	6	MMD	Y	2669.5	AFA	EU	KOBEH VALLEY RANCH LLC
139	74587			8/2/2006	RFA	UG	NE	NW	7	21N	52E	22.28	MM		0	AFA	EU	KOBEH VALLEY RANCH LLC
139	75988			6/29/2007	RFP	UG	SE	NW	21	22N	51E	1	MM	Y	723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	75989			6/29/2007	RFP	UG	SE	NE	30	22N	51E	1	MM	Y	723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	75990			6/29/2007	RFP	UG	NW	SE	13	22N	50E	1	MM	Y	272.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	75991			6/29/2007	RFP	UG	NW	SE	13	22N	50E	1	MM	Y	723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	75992			6/29/2007	RFP	UG	NW	SW	26	22N	50E	1	MM	Y	272.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	75993			6/29/2007	RFP	UG	NW	SW	26	22N	50E	1	MM	Y	723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	75994			6/29/2007	RFP	UG	NW	SW	26	22N	50E	1	MM	Y	723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	75995			6/29/2007	RFP	UG	NW	SW	26	22N	50E	1	MM	Y	272.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	75996			6/29/2007	RFP	UG	SW	SW	21	22N	51E	0.45	MM	Y	300.76	AFA	EU	KOBEH VALLEY RANCH LLC
139	75997			6/29/2007	RFP	UG	SE	NW	21	22N	51E	4.7	MM	Y	1142.4	AFA	EU	KOBEH VALLEY RANCH LLC
139	75998			6/29/2007	RFP	UG	SE	NW	21	22N	51E	2	MM	Y	500	AFA	EU	KOBEH VALLEY RANCH LLC
139	75999			6/29/2007	RFP	UG	SW	SW	21	22N	51E	1	MM	Y	211.25	AFA	EU	KOBEH VALLEY RANCH LLC
139	76000			6/29/2007	RFP	UG	SE	NE	30	22N	51E	3.99	MM	Y	842.91	AFA	EU	KOBEH VALLEY RANCH LLC
139	76001			6/29/2007	RFP	UG		LT4	2	21N	50E	2.72	MM	Y	1280	AFA	EU	KOBEH VALLEY RANCH LLC
139	76002			6/29/2007	RFP	UG		LT4	2	21N	50E	0.82	MM	Y	300.76	AFA	EU	KOBEH VALLEY RANCH LLC
139	76003			6/29/2007	RFP	UG	SW	SW	21	22N	51E	5	MM	Y	1280	AFA	EU	KOBEH VALLEY RANCH LLC
139	76004			6/29/2007	RFP	UG		LT4	2	21N	50E	5	MM	Y	1280	AFA	EU	KOBEH VALLEY RANCH LLC
139	76058			7/13/2007	PER	UG	SW	SW	16	19N	47E	0.014	STK	Y	9.52	AFA	LA	PETER JOE AND TOM DAMELE
139	76059			7/13/2007	PER	UG	SE	SW	16	19N	47E	0.41	IRR	Y	150.48	AFA	LA	PETER JOE AND TOM DAMELE
139	76483			11/14/2007	RFP	UG	SE	NW	21	22N	51E	0.05	MM		15.5	AFA	EU	KOBEH VALLEY RANCH LLC
139	76484			11/14/2007	RFP	UG	SE	NW	32	22N	51E	5.4	MM		1292.4	AFA	EU	KOBEH VALLEY RANCH LLC
139	76485			11/14/2007	RFP	UG	NW	SW	26	22N	50E	2.45	MM		332.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	76486			11/14/2007	RFP	UG	SE	NW	21	22N	51E	2.7	MM		238.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	76592			1/4/2008	PER	UG	SW	SW	16	19N	47E	0.223	IRR	Y	150.48	AFA	LA	PETER JOE AND TOM DAMELE
139	76744			2/13/2008	RFP	UG	SE	NE	30	22N	51E	4.28	MM		950.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	76745			2/13/2008	RFP	UG	SE	NE	30	22N	51E	1.21	MM	Y	819.24	AFA	EU	KOBEH VALLEY RANCH LLC
139	76746			2/13/2008	RFP	UG	SE	NE	30	22N	51E	2.24	MM	Y	819.24	AFA	EU	KOBEH VALLEY RANCH LLC
139	76989			4/23/2008	RFP	UG	SE	NE	30	22N	51E	0.6554	MM	Y	474	AFA	EU	KOBEH VALLEY RANCH LLC
139	76990			4/23/2008	RFP	UG	SE	NE	30	22N	51E	0.76	MM	Y	322.5	AFA	EU	KOBEH VALLEY RANCH LLC
139	77171			6/20/2008	RFP	UG	SE	NW	19	22N	51E	5	MM		1280	AFA	EU	KOBEH VALLEY RANCH LLC (C/O GENERAL MOLY INC)
139	77174			6/20/2008	RFP	UG	NE	NE	36	22N	50E	2.45	MM		332.64	AFA	EU	KOBEH VALLEY RANCH LLC (C/O GENERAL MOLY INC)
139	77175			6/20/2008	RFP	UG	NW	NE	31	22N	51E	5.4	MM		1292.4	AFA	EU	KOBEH VALLEY RANCH LLC (C/O GENERAL MOLY INC)
139	77205			7/1/2008	PER	UG	SE	SW	16	19N	47E	0.026	STK	Y	9.52	AFA	LA	PETER JOE AND TOM DAMELE
139	77525			10/23/2008	RFP	UG	SW	NE	3	21N	50E	1	MM		272.64	AFA	EU	KOBEH VALLEY RANCH LLC

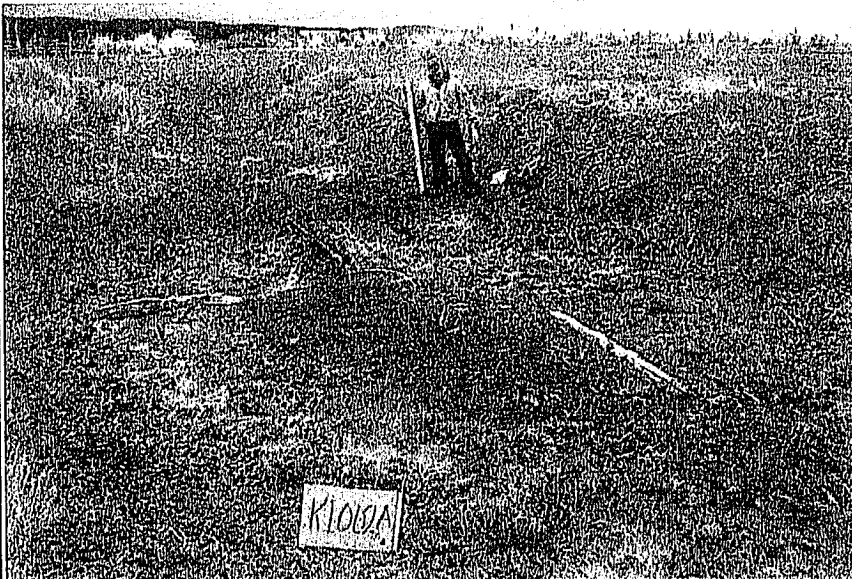
Basin	App	Change App.	Cert	File Date	Status	Source	POD Q1	POD Q2	POD Q3	POD Q4	POD Rng	Div Rate (CFS)	Type of Use	Sup	Annual Duty	Units	County	Owner of Record
139	77526			10/23/2008	RFP	UG	SE	NW	16	21N	51E	0.45	MM		300.76	AFA	EU	KOBEH VALLEY RANCH LLC
139	77527			10/23/2008	RFP	UG	SE	SE	7	21N	51E	2.35	MM		571.2	AFA	EU	KOBEH VALLEY RANCH LLC
139	77553			11/3/2008	RFP	UG	SE	NW	5	21NH	52E	2.35	MM		571.2	AFA	EU	KOBEH VALLEY RANCH LLC
139	78271			4/17/2009	RFP	UG	NE	NE	30	19N	48E	6	IRR		0	AFA	EU	GENERAL MOLY INC
139	78272			4/17/2009	RFA	UG	NW	NE	23	19N	47E	6	IRR		0	AFA	LA	KOBEH VALLEY RANCH LLC
139	78273			4/17/2009	RFA	UG	SW	NW	23	19N	47E	6	IRR		0	AFA	LA	KOBEH VALLEY RANCH LLC
139	78274			4/17/2009	RFA	UG	NE	SE	21	19N	47E	6	IRR		0	AFA	LA	KOBEH VALLEY RANCH LLC
139	78275			4/17/2009	RFA	UG	SW	SW	22	19N	47E	6	IRR		0	AFA	LA	KOBEH VALLEY RANCH LLC
139	78937			10/1/2009	PER	UG	NW	SE	17	20N	52E	0.05	STK	Y	2.24	AFA	EU	GARY AND MELODY GARAVENTA
139	78938			10/1/2009	PER	UG	SW	NW	17	20N	52E	0.05	STK	Y	2.24	AFA	EU	GARY AND MELODY GARAVENTA
139	79030			11/19/2009	RFA	UG	SE	SW	16	19N	47E	0.026	STK		9.52	AFA	LA	PETER JOE AND TOM DAMELE
139	79911			6/15/2010	RFP	UG	SW	SE	7	21N	51E	6	MM		2669.5	AFA	EU	KOBEH VALLEY RANCH LLC
139	79912			6/15/2010	RFP	UG	SW	NE	23	21N	50E	6	MM		2669.5	AFA	EU	KOBEH VALLEY RANCH LLC
139	79913			6/15/2010	RFP	UG	SW	SW	31	21N	51E	5	MM		1280	AFA	EU	KOBEH VALLEY RANCH LLC
139	79914			6/15/2010	RFP	UG	SW	SW	31	21N	51E	3	MM		2000	AFA	EU	KOBEH VALLEY RANCH LLC
139	79915			6/15/2010	RFP	UG	SE	SE	32	21N	50E	5	MM		1280	AFA	EU	KOBEH VALLEY RANCH LLC
139	79916			6/15/2010	RFP	UG	SE	SE	32	21N	50E	3	MM		2000	AFA	EU	KOBEH VALLEY RANCH LLC
139	79917			6/15/2010	RFP	UG	NW	NW	12	21N	50E	4.7	MM		1142.4	AFA	EU	KOBEH VALLEY RANCH LLC
139	79918			6/15/2010	RFP	UG	NW	NW	12	21N	50E	3	MM		2000	AFA	EU	KOBEH VALLEY RANCH LLC
139	79919			6/15/2010	RFP	UG	SE	SW	35	21N	50E	1	MM		723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	79920			6/15/2010	RFP	UG	SE	SW	35	21N	50E	0.45	MM		300.76	AFA	EU	KOBEH VALLEY RANCH LLC
139	79921			6/15/2010	RFP	UG	SE	SW	35	21N	50E	1	MM		211.25	AFA	EU	KOBEH VALLEY RANCH LLC
139	79922			6/15/2010	RFP	UG	SE	SW	35	21N	50E	1	MM		723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	79923			6/15/2010	RFP	UG	SE	SW	35	21N	50E	0.6554	MM		474	AFA	EU	KOBEH VALLEY RANCH LLC
139	79924			6/15/2010	RFP	UG	SE	SW	35	21N	50E	1	MM		272.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	79925			6/15/2010	RFP	UG	SE	SW	35	21N	50E	1	MM		723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	79926			6/15/2010	RFP	UG	NE	NE	36	22N	50E	3.99	MM		842.91	AFA	EU	KOBEH VALLEY RANCH LLC
139	79927			6/15/2010	RFP	UG	NE	NE	36	22N	50E	0.82	MM		300.76	AFA	EU	KOBEH VALLEY RANCH LLC
139	79928			6/15/2010	RFP	UG	NE	NE	36	22N	50E	3	MM		2000	AFA	EU	KOBEH VALLEY RANCH LLC
139	79929			6/15/2010	RFP	UG	NW	NE	31	22N	51E	1	MM		272.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	79930			6/15/2010	RFP	UG	NW	NE	31	22N	51E	1	MM		723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	79931			6/15/2010	RFP	UG	NW	NE	31	22N	51E	1	MM		723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	79932			6/15/2010	RFP	UG	NW	NE	31	22N	51E	2	MM		500	AFA	EU	KOBEH VALLEY RANCH LLC
139	79933			6/15/2010	RFP	UG	NW	NE	31	22N	51E	1	MM		723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	79934			6/15/2010	RFP	UG	SW	NE	30	22N	51E	1.22	MM		819.24	AFA	EU	KOBEH VALLEY RANCH LLC
139	79935			6/15/2010	RFP	UG	SW	NE	30	22N	51E	0.76	MM		322.5	AFA	EU	KOBEH VALLEY RANCH LLC
139	79936			6/15/2010	RFP	UG	SW	NE	30	22N	51E	1	MM		272.64	AFA	EU	KOBEH VALLEY RANCH LLC
139	79937			6/15/2010	RFP	UG	SW	NE	30	22N	51E	1	MM		723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	79938			6/15/2010	RFP	UG	SW	NE	30	22N	51E	1	MM		723.97	AFA	EU	KOBEH VALLEY RANCH LLC
139	79939			6/15/2010	RFP	UG	SW	NE	30	22N	51E	1	MM		723.97	AFA	EU	KOBEH VALLEY RANCH LLC

Basin	App	Change App.	Cert	File Date	Status	Source	POD QQ	POD Qtr	POD Sec	POD Twn	POD Rng	Div Rate (CFS)	Type of Use	Sup	Annual Duty	Units	County	Owner of Record
139	79940			6/15/2010	RFP	UG	SE	NW	3	21N	50E	5	MM		2500	AFA	EU	KOBEH VALLEY RANCH LLC
139	79941			6/15/2010	RFP	UG	NW	NE	34	22N	51E	2.24	MM		819.24	AFA	EU	KOBEH VALLEY RANCH LLC
139	79942			6/15/2010	RFP	UG	NW	NW	35	22N	51E	2.72	MM		1280	AFA	EU	KOBEH VALLEY RANCH LLC
139	79962			6/29/2010	RFA	UG	NE	SE	17	19N	50E	3.2	IRR		0	AFA	EU	WISE FAMILY DEVELOPMENT LLC
139	79963			6/29/2010	RFA	UG	SE	NE	17	19N	50E	3.2	IRR		0	AFA	EU	WISE FAMILY DEVELOPMENT LLC
139	79964			6/29/2010	RFA	UG	SW	NW	16	19N	50E	3.2	IRR		0	AFA	EU	WISE FAMILY DEVELOPMENT LLC
139	8084T			5/27/2011	RFA	UG	NW	NE	23	19N	47E	0.015	STK		0	AFA	LA	KOBEH VALLEY RANCH LLC
139	9682		2780	7/25/1933	CER	UG	SE	NE	17	19N	50E	0.655	IRR		474	AFA	EU	KOBEH VALLEY RANCH LLC

Appendix B – Surface Water Field Inspection Data – May 2011

Kobeh Valley Surface Water Resource

Field ID	KI002A	
GMI ID	KV064	
Other Names or ID's, specify type		
Location		
UTM m N	UTM m E	Datum
4381584	574266.5	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	Garmin 60CSX GPS	
Date of Survey	5/19/2011	
Owner	Risi	
Use	stock	
St. Eng. Water Right Ref.		



Description	Piped into pasture - overflow diverted to stock pond/reservoir. 2.5 acre riparian area.	
Form Prepared by:	CD/JV	
Flow Meas. Method(s)	volumetric	
Other notes:	Private pasture horses in pasture, heavily grazed. Elev. 6036'.	



Site ID		KI002A					
Date	5/19/2011		Time		1345		
Parameters							
Water Quality						Air Temp	
T degrees C	14.52	K	431	pH	7.35	Air Temp degrees C	40F

Volumetric Flow Measurement

Note: Repeat 3 times			Flow measured from pipe installed at site. Ave time 3.52 sec, Q = 4.5 gpm
Size of Vessel	1000 mL		
Time to fill (1)	3.57	sec	
Time to fill (2)	3.45	sec	
Time to fill (3)	3.53	sec	

Pygmy Current Meter

[illegible]

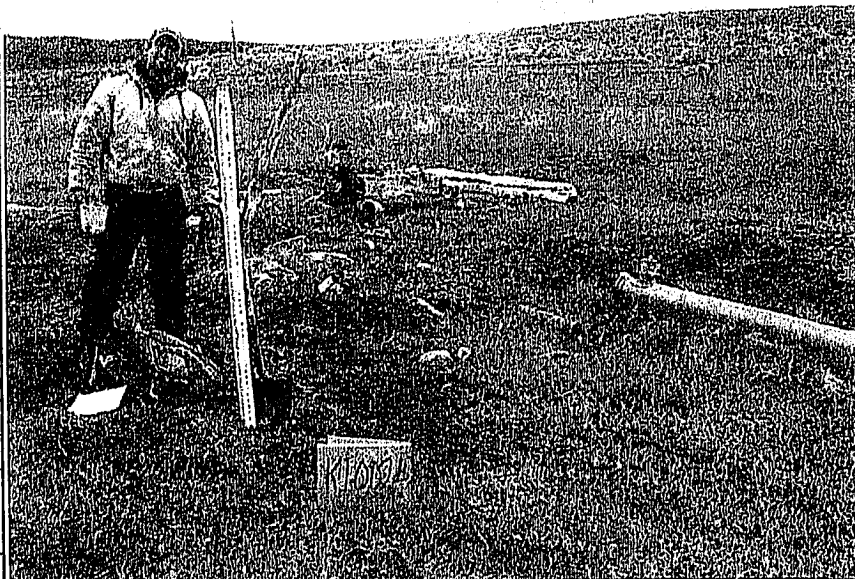
Notes or Other Measurement Description:

Meas Team Initials

JV, CD

Kobeh Valley Surface Water Resource

Field ID	KI002B	
GMI ID		
Other Names or ID's, specify type		
Location		
UTM m N	UTM m E	Datum
4381433	574499.5	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	Garmin 60CSX GPS	
Date of Survey	5/19/2011	
Owner	Risi	
Use	stock/irrigation	
St. Eng. Water Right Ref.	V04514	



Description	In private pasture - flows into dirt stock tank/reservoir. Source is irrigation well (10" casing). Pipe coming off of side of casing @ ground level. Riparian area from flow approx. 2 acres.	
Form Prepared by:	CD/JV	
Flow Meas. Method(s)	volumetric	
Other notes:	Private field - water used for irrigation purposes & livestock water - horse in pasture. Elev. 6050'.	



Site ID		KI002B					
Date		5/19/2011		Time		1410	
Parameters							
Water Quality						Air Temp	
T degrees C		K		pH		Air Temp degrees C	
16.77		472		7.38		40F	

Volumetric Flow Measurement

Note: Repeat 3 times			Measurement taken from pipe coming off of well casing. Ave time to fill 1 liter = 2.69 sec, Q = 5.9 gpm
Size of Vessel	1000 mL		
Time to fill (1)	2.65	sec	
Time to fill (2)	2.85	sec	
Time to fill (3)	2.58	sec	

Pygmy Current Meter

[illegible]

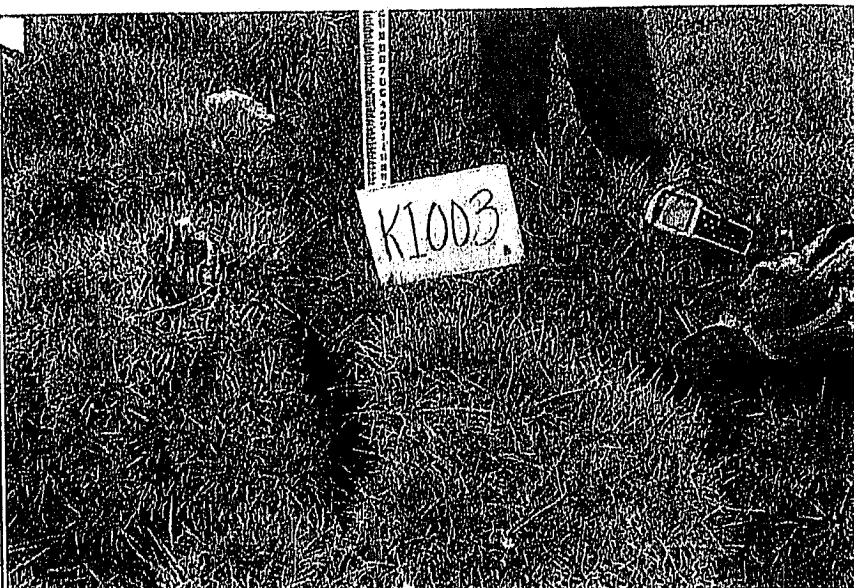
Notes or Other Measurement Description:

Meas Team Initials

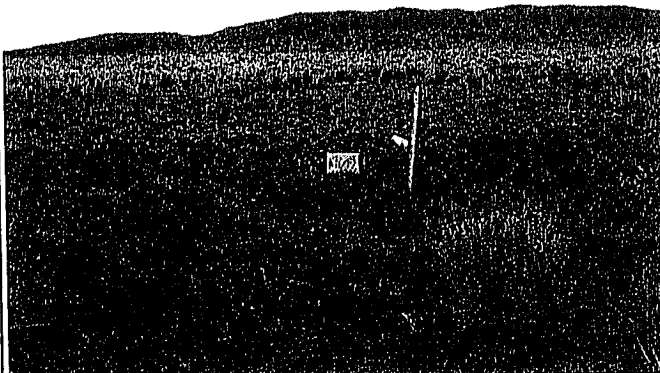
JV, CD

Kobeh Valley Surface Water Resource

Field ID	K1003	
GMI ID		
Other Names or ID's, specify type		
Location		
UTM m N	UTM m E	Datum
4381972	573126.5	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	Garmin 60CSX GPS	
Date of Survey	5/19/2011	
Owner	Risi	
Use		
St. Eng. Water Right Ref.	V04512	



Description	7.1 acre of riparian vegetation, rabbit brush encroachment. One small pool of water between hummocks where small mammals have dug into water. Non-flowing.	
Form Prepared by:	CD/JV	
Flow Meas. Method(s)	NA - small pool	
Other notes:	Elev. 6039'. Nebraska sedge & Baltic Rush dominating flora surrounding small pool.	



Site ID		KI003					
Date	5/19/2011		Time		1500		
Parameters							
Water Quality						Air Temp	
T degrees C	6.74	K	395	pH	6.28	Air Temp degrees C	40F

Volumetric Flow Measurement

Note: Repeat 3 times			Small pool of water - non-flowing.
Size of Vessel			
Time to fill (1)		sec	
Time to fill (2)		sec	
Time to fill (3)		sec	

Pygmy Current Meter

[illegible]

Notes or Other Measurement Description:

Meas Team Initials

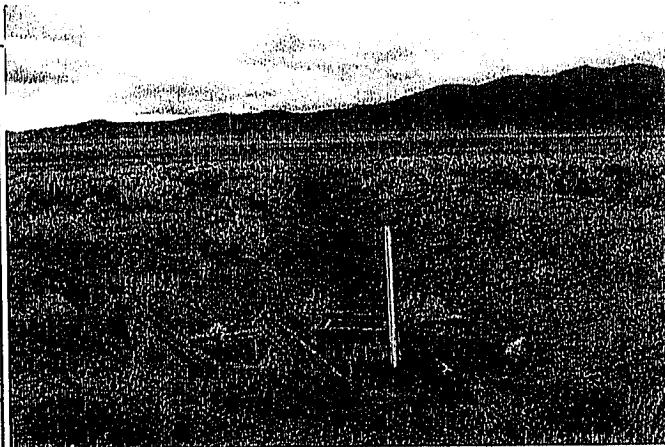
JV, CD

Kobeh Valley Surface Water Resource

Field ID	KI004	
GMI ID		
Other Names or ID's, specify type		
Location		
UTM m N	UTM m E	Datum
4382582	572719.5	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	Garmin 60CSX GPS	
Date of Survey	5/19/2011	
Owner	Risi	
Use	Irrigation	
St. Eng. Water Right Ref.		



Description	15.4' bottom of casing; DTW 5.05' from top of casing. (Elevation - 6019') 8" casing, old wooden structure around well casing w/ 28"x30" wood box. No piping or valves present. Structure appears to have supported motor and/or pump.	
Form Prepared by:	CD/JV	
Flow Meas. Method(s)	NA- water in well casing	
Other notes:	Elev. 6019'. Meadow riparian area adjacent to well connected by 150' ditch.	



Kobeh Valley Surface Water Resource

Field ID	KI005		
GMI ID			
Other Names or ID's, specify type			
KV-Strm 32 V04513, V04514, Slough Cr			
Location			
UTM m N	UTM m E	Datum	
4381224	568580	WGS 84	
		NAD 27	
UTM ft N	UTM ft E	Datum	
Lat	Long	Datum	
How was location determined?	eTrex handheld GPS		
Date of Survey	5/17/2011		
Owner	GMI		
Use	irrig. Risi meadows		
St. Eng. Water Right Ref.	V04513, V04514		
Description	Not flowing. Some ponded water. Recent flow in double 3.8'hx6'w, 1.5'deep.		
Form Prepared by:	DH		
Flow Meas. Method(s)	NA		
Other notes:			

Site ID		KI005					
Date		5/17/2001		Time		1:00 PM	
Parameters							
Water Quality						Air Temp	
T degrees C		K		pH		Air Temp degrees C	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Pools in channel, but no flow. ACW approx. 15 ft, clay-armored, ephemeral channel
Size of Vessel			
Time to fill (1)	_____	sec/min	
Time to fill (2)	_____	sec/min	
Time to fill (3)	_____	sec/min	

Pygmy Current Meter

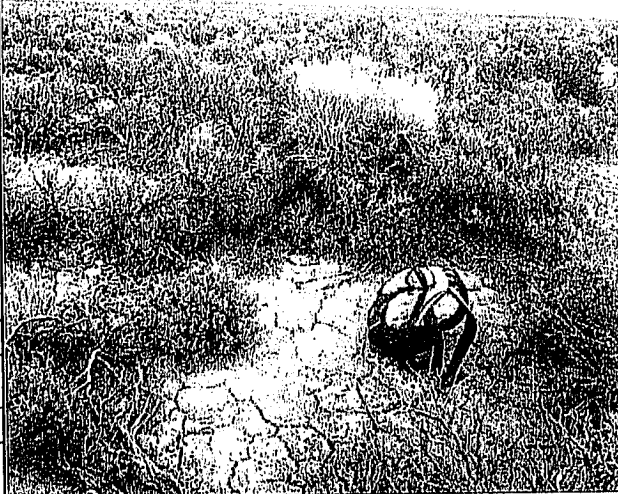
[illegible]

Notes or Other Measurement Description:

Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	K1006	
GMI ID		
Other Names or ID's, specify type		
Location		
UTM m N	UTM m E	Datum
4387243	568070	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	eTrex handheld GPS	
Date of Survey	5/20/2011	
Owner	BLM	
Use		
St. Eng. Water Right Ref.	R06949	



Description	Not flowing. Rabbitbrush and greasewood vegetation change (sage surrounding) indicates shallow depth to groundwater.	
Form Prepared by:	DS	
Flow Meas. Method(s)	NA	
Other notes:		



Site ID		KI006					
Date	5/20/2011		Time		9:30		
Parameters							
Water Quality						Air Temp	
T degrees C		K		pH		Air Temp degrees C	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: No spring observed at the location - only vegetation change to phreatophytes
Size of Vessel			
Time to fill (1)	_____	sec/min	
Time to fill (2)	_____	sec/min	
Time to fill (3)	_____	sec/min	

Pygmy Current Meter

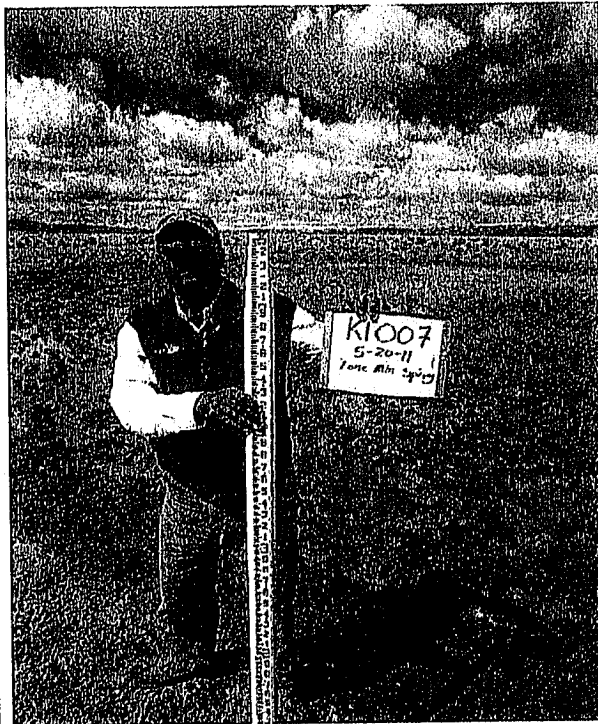
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Notes or Other Measurement Description:

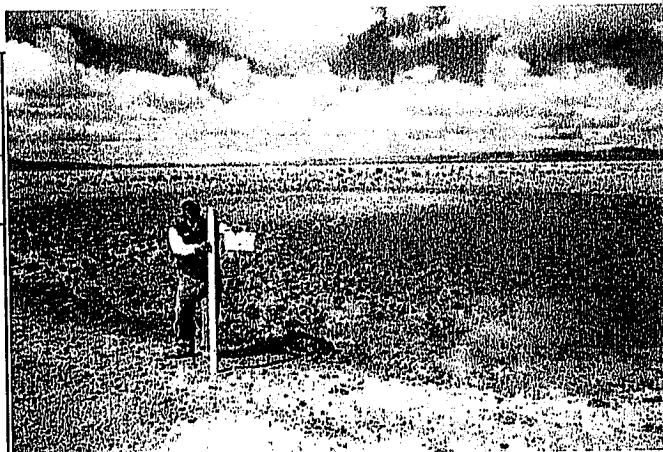
Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	KI007	
GMI ID	759	
Other Names or ID's, specify type	742, KV635	
Lone Mtn Spring		
Location		
UTM m N	UTM m E	Datum
4384795	560545	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	GPS Garmin 60CSx	
Date of Survey	20-May	
Owner		
Use	Stockwater	
St. Eng. Water Right Ref.	R06951	



Description	Circular depression 140 ft diameter; 3 ft deep with 2-3 inches water standing & sedges - marsh grasses & no obvious flow; in the middle is a 4 ft diameter hole with sand boils on the bottom, approx 1.5 ft deep.	
Form Prepared by:	DBH	
Flow Meas. Method(s)	No outflow - pooled water	
Other notes:		



Site ID		KI007					
Date	5/20/2011		Time		10:34		
Parameters							
Water Quality						Air Temp	
T degrees F	14.4	K	200	pH	9.66	Air Temp degrees F	50

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: No Flow - Stream Channel is Dry
Size of Vessel			
Time to fill (1)		sec/min	
Time to fill (2)		sec/min	
Time to fill (3)		sec/min	

Swoffer Current Meter

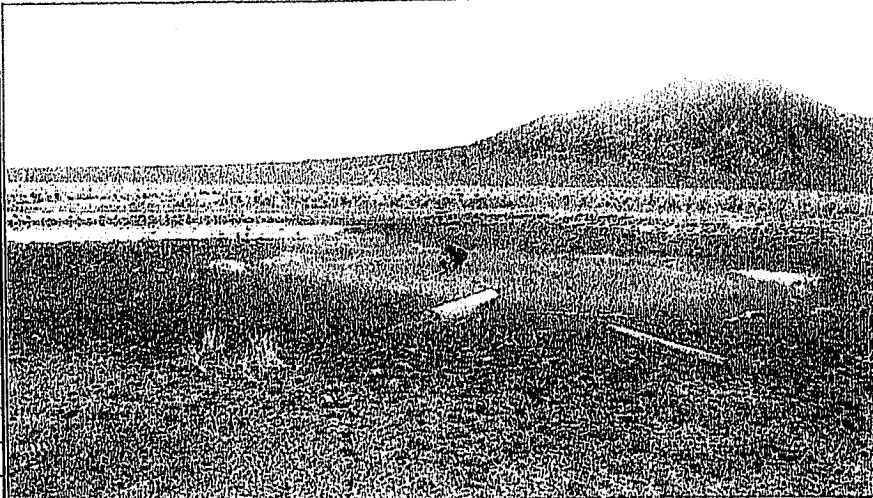
	Station	Width	Depth	Velocity	Area	Discharge			

Notes:

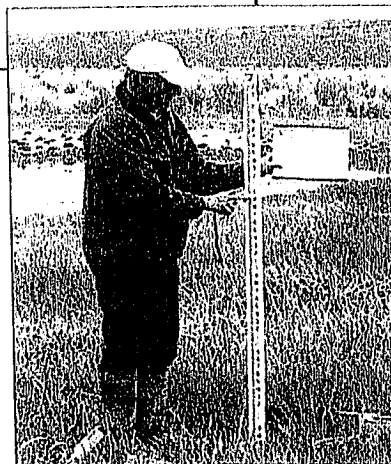
Meas Team Initials

Kobeh Valley Surface Water Resource

Field ID	K1008	
GMI ID		
Other Names or ID's, specify type		
719 & 721, Mud Spring		
Location		
UTM m N	UTM m E	Datum
4387450	561496	WGS 84
		NAD 27
UTM ft N	UTM ft E	Datum
Lat	Long	Datum
How was location determined?	eTrex handheld GPS	
Date of Survey	5/17/2011	
Owner	Etchevery Family Partnership	
Use	stock	
St. Eng. Water Right Ref.	12748	



Description	Large circular depression approx. 150' diameter. Moist in the bottom w/ 8" well casing flowing <1.0 gpm. Casing is 11.2' deep w/ soft bottom; depression has ponded water and marsh grasses.	
Form Prepared by:	DH	
Flow Meas. Method(s)	NA	
Other notes:		



Site ID		KI008					
Date		5/17/2011		Time		1:45PM	
Parameters							
Water Quality						Air Temp	
T degrees C		K		pH		Air Temp degrees C	

Volumetric Flow Measurement

Note: Repeat 3 times			Notes: Discharge from well casing is less than 1 gpm, total discharge from spring estimated <5 gpm
Size of Vessel			
Time to fill (1)	_____	sec/min	
Time to fill (2)	_____	sec/min	
Time to fill (3)	_____	sec/min	

Pygmy Current Meter

[illegible]

Notes or Other Measurement Description:

Meas Team Initials