

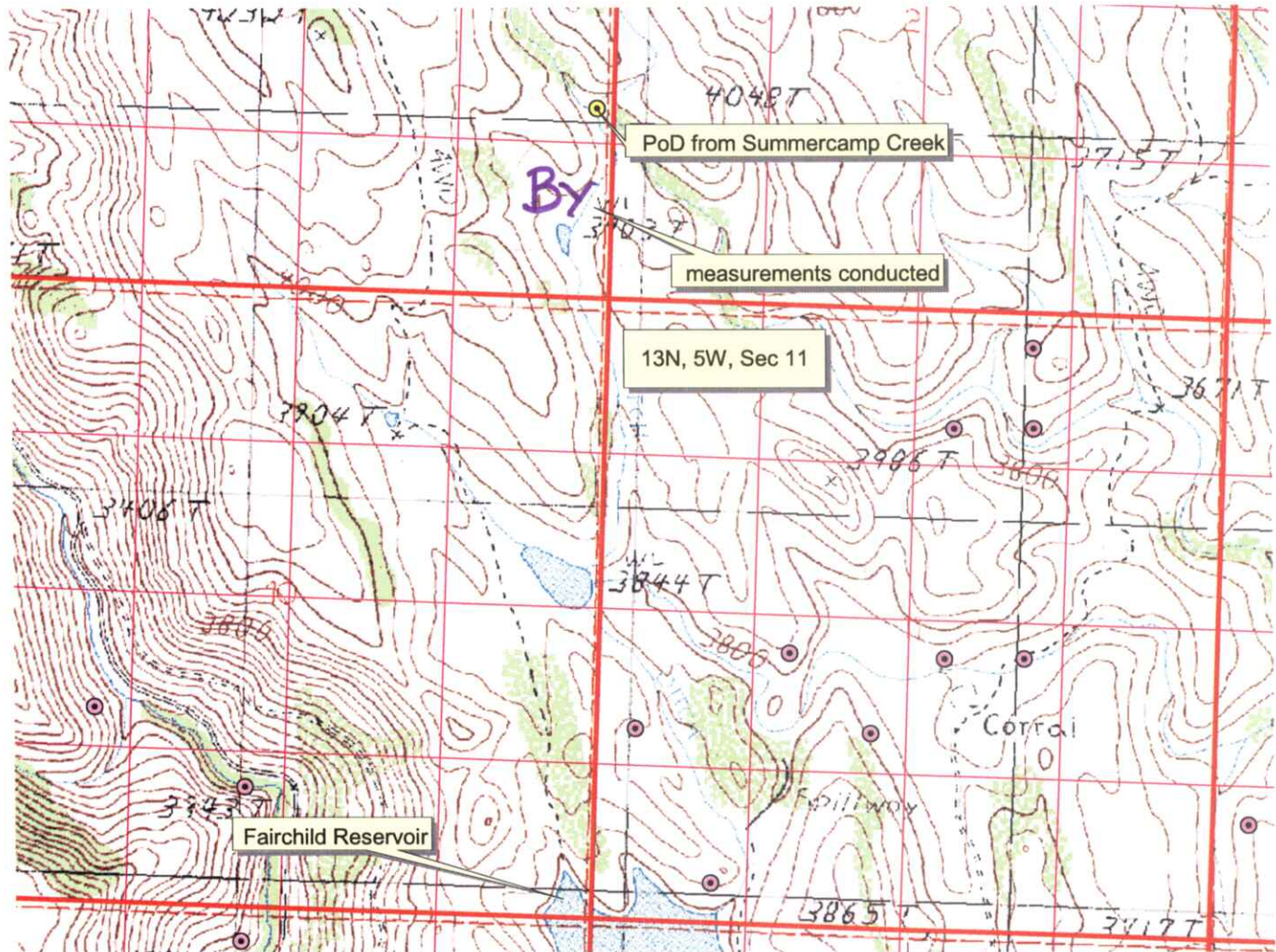
MEMORANDUM

Date: April 28, 2006
To: Water Right File 67-2390
From: eretelle
Re: field measurement

Monica VanBussum and I went to the diversion from the stream locally known as Summercamp Creek since there was not a measurement taken at the appropriate location during the original field exam. Accompanied by Gene Mowry (208) 355-2413 from Tree Top Ranches, we drove up past the reservoir and above the 2 stock ponds to a straight stretch of stream just south of the diversion out of Summercamp Creek. At this location (labeled B on both Kay Walker's sketch and on the following topo map) Monica and I conducted a Manning's theoretical calculation of the ditch capacity. In this case, the Manning's estimate is actually a good estimate of flow since the ditch was absolutely full and flowing at its capacity. Gene indicated that this is not usually the case and the ditch has had much less water in it these past 10+ years and is usually dry or nearly so late in the summer. The reservoir has not filled all the way in the last several years either, but this wet year it is almost full already. We attempted a direct measurement to double check the theoretical calculation with a pygmy meter, but the flow was too fast to give us accurate values.

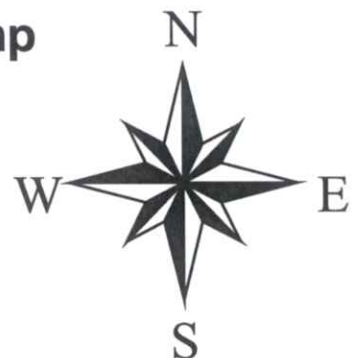
Manning's estimate: 22.75 cfs is the capacity.

67-02390

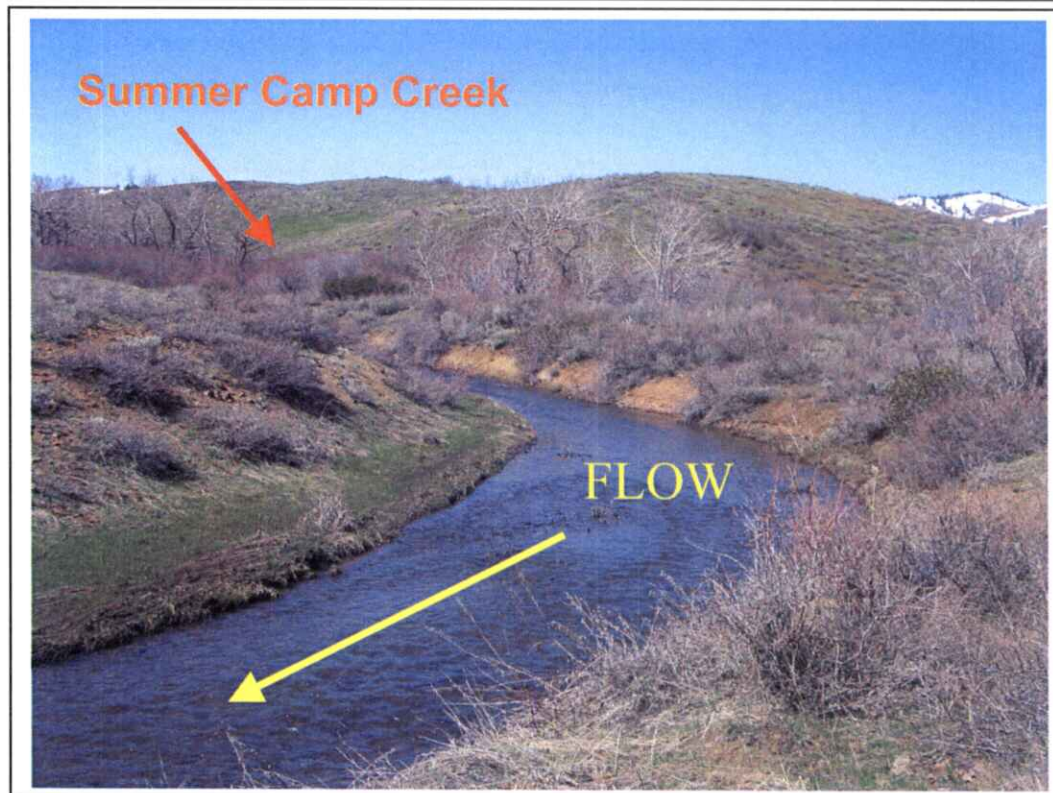
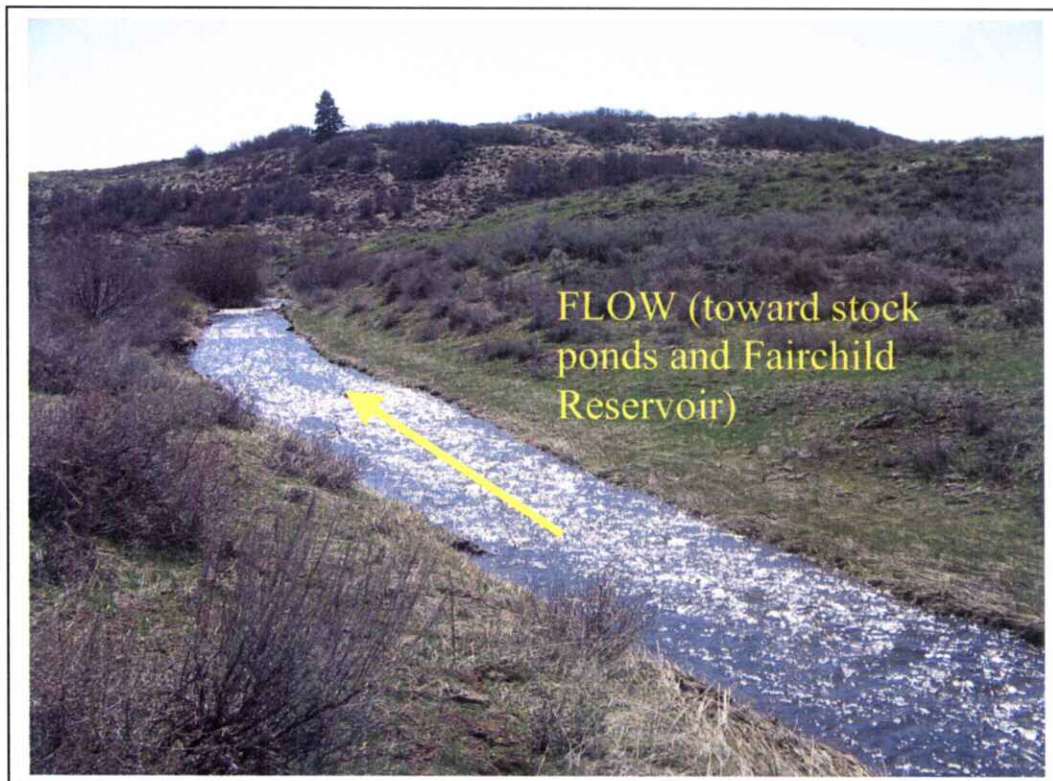


0.4 0 0.4 0.8 Miles

- Right POD
- Administrative BasinsAdminbas.shp
- Township/Range
- Sections
- QQ



Unnamed Stream branching off Summer Camp Creek (ditch),
tributary to Sage Creek



airchild Tree Top Ranches

MANNING EQUATION CHANNEL CAPACITY FIELD EXAM FORM

Today's date:	4-19-06
File Number:	67-2309
Claimant:	Tree Top Ranches
Channel measured:	Unnamed stream trib to Sage Creek
Date of measurement:	4-19-06
Location of diversion:	
1) TRSQQ:	
2) POD name (if known):	
3) GPS file name:	SAC
4) GPS tag number:	none
Calculation prepared by:	Monica Van Bussum
Comments about the measurement:	

unnamed stream
trib to Sage Creek
GPS: SAC

Rod Readings

Basis (mark one):	high water mark	ditch capacity
Location notes:		

Number	Rod Reading	Distance
1	7.4	0
2	7.7	0.5
3	8.2	0.8
4	8.4	1
5	8.6	1.2
6	8.6	1.2
7	8.8	1.4
8	8.8	1.4
9	8.7	1.3
10	8.6	1.2
11	8.3	0.9
12	7.7	0.3
13		
14		
15		
16		
17		
18		

Slope Data

Basis (mark one):	high water mark	ditch capacity
Level Readings:		
Length of channel:	100	feet
	upstream	downstream
Stadia:	8.0	8.8

Determining Roughness Coefficient

(from Roughness Coefficient worksheet Value column)

CHANNEL MATERIAL	
SURFACE IRREGULARITY	
VARIATIONS IN SIZE AND SHAPE OF CROSS-SECTION	
CHANNEL OBSTRUCTIONS	
VEGETATION	
DEGREE OF MEANDERING	

} see reverse

BASIC ROUGHNESS COEFFICIENT, OR "n"

CHANNEL MATERIAL

	Value	Rank
earth	0.020	1
rock	0.025	2
fine gravel	0.024	3
coarse gravel	0.028	4

SURFACE IRREGULARITY

	Value	Rank
smooth	0.000	1
minor	0.005	2
moderate	0.010	3
severe	0.020	4

VARIATIONS IN SIZE AND SHAPE OF CROSS-SECTION

	Value	Rank
gradual	0.000	1
occasional	0.005	2
frequent	0.010	3
	0.015	4

CHANNEL OBSTRUCTIONS

	Value	Rank
negligible	0.000	1
minor	0.010	2
	0.015	3
appreciable	0.020	4
	0.030	5
severe	0.040	6
	0.050	7
	0.060	8

VEGETATION

	Value	Rank
low	0.005	1
	0.010	2
medium	0.015	3
	0.020	4
	0.025	5
high	0.030	6
	0.040	7
	0.050	8
very high	0.060	9
	0.075	10
	0.100	11

DEGREE OF MEANDERING

	Value	Rank
minor	1.00	1
appreciable	1.15	2
severe	1.30	3

CROSS SECTION NUMBER 1

For File Number 67-2309 for the Unnamed stream trib to Sage Creek

Number	Rod Reading	Water Depth	Distance
1	0.00	0.00	0.00
2	0.50	0.50	1.00
3	0.80	0.80	2.00
4	1.00	1.00	3.00
5	1.20	1.20	4.00
6	1.20	1.20	5.00
7	1.40	1.40	6.00
8	1.40	1.40	7.00
9	1.30	1.30	8.00
10	1.20	1.20	9.00
11	0.90	0.90	10.00
12	0.30	0.30	11.00

The area for this cross section is 11.05 square feet
and the wetted perimeter is 11.44 feet.

CROSS SECTION NUMBER 1

For File Number 67-2309 for the Unnamed stream trib to Sage Creek

Number	Rod Reading	Water Depth	Distance
1	0.00	0.00	0.00
2	0.50	0.50	1.00
3	0.80	0.80	2.00
4	1.00	1.00	3.00
5	1.20	1.20	4.00
6	1.20	1.20	5.00
7	1.40	1.40	6.00
8	1.40	1.40	7.00
9	1.30	1.30	8.00
10	1.20	1.20	9.00
11	0.90	0.90	10.00
12	0.30	0.30	11.00

The area for this cross section is 11.05 square feet
and the wetted perimeter is 11.44 feet.

File Number: 67-2309

Claimant: Tree Top Ranches

Channel measured: Unnamed stream trib to Sage Creek

Date of measurement: 4-19-2006

Measurement location:

Measurement taken on straight stretch of unnamed stream just south of Summer Camp Creek.

Calculation prepared by: Monica Van Bussum

Comments about the measurement:

The results of the calculation are:

The length of the channel measured is 100 feet.

The upstream and downstream rod readings are 8.00 and 8.80 feet.

The channel cross section is 11.05 ft-sq.

The wetted perimeter is 11.44 feet.

The hydraulic radius is 0.97 feet.

The slope is 0.0080

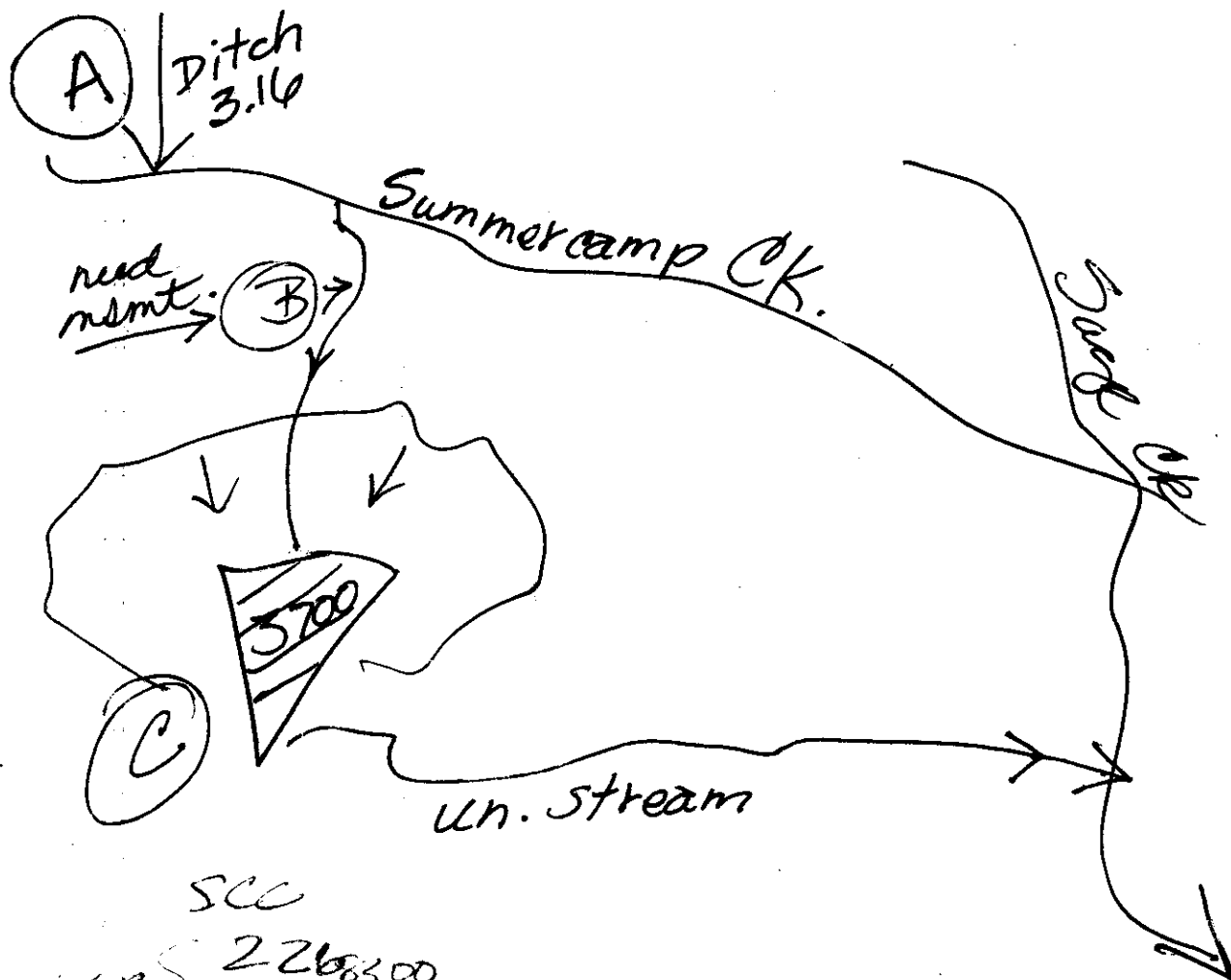
The roughness coefficient is 0.0632

The flow velocity is 2.059 ft/sec.

The rate of flow is 22.75 cfs.

Funds combined limits -
send licenses on 7899 & 7732
through -

OBTAIN msmt. @ "B"
below before license
issuance



SCC
USR { 2268300
148047
3891

all claimed
under # 67-14107

Basin	Sequence	Basis	Source	Water Use(s)	Owner(s)	Source Table
67	638	Decreed	SAGE CREEK	IRRIGATION	FAIRCHILD, BENJAMIN R ; FEDERAL LAND BANK OF SPOKANE	wrWaterRight
67	639	Decreed	SAGE CREEK	IRRIGATION	FAIRCHILD TREE TOP RANCH LTD	wrAdjudicationClaim
67	639	Decreed	SAGE CREEK	IRRIGATION	FAIRCHILD TREE TOP RANCH LTD	wrAdjudicationRecommendation
67	639	Decreed	SAGE CREEK	IRRIGATION	FAIRCHILD, BENJAMIN R ; FEDERAL LAND BANK OF SPOKANE	wrWaterRight
67	644	Decreed	SAGE CREEK	IRRIGATION	WARREN, JOHN	wrWaterRight
67	645	Decreed	SAGE CREEK	IRRIGATION	WARREN, JOHN	wrWaterRight
67	646	Decreed	SAGE CREEK	IRRIGATION	WARREN, JOHN	wrWaterRight
67	647	Decreed	SAGE CREEK	IRRIGATION	WARREN, JOHN	wrWaterRight
67	648	Decreed	SAGE CREEK	IRRIGATION	WARREN, JOHN	wrWaterRight
67	649	Decreed	SAGE CREEK	IRRIGATION	SLOAN, HUGH J	wrWaterRight
67	650	Decreed	SAGE CREEK	IRRIGATION	SLOAN, HUGH J	wrWaterRight
67	651	Decreed	SAGE CREEK	IRRIGATION	MORRIS, MARY M	wrWaterRight
67	652	Decreed	SAGE CREEK	IRRIGATION	TIMPKE, F E	wrWaterRight
67	653	Decreed	SAGE CREEK	IRRIGATION	MEIR, FRANK	wrWaterRight
67	2390	Permit		IRRIGATION FROM STORAGE, IRRIGATION STORAGE, STOCKWATER FROM STORAGE, STOCKWATER STORAGE	FAIRCHILD TREE TOP RA	wrAdjudicationClaim
67	2390	License	SAGE CREEK , UNNAMED STREAM	DIVERSION TO STORAGE, IRRIGATION FROM STORAGE, IRRIGATION STORAGE, STOCKWATER	TREE TOP RANCHES LP	wrWaterRight
67	2390		SAGE CREEK , UNNAMED STREAM	IRRIGATION, STOCKWATER	FAIRCHILD, ARTHUR A	wrWaterPermit
67	7732		SAGE CREEK	DIVERSION TO STORAGE, IRRIGATION FROM STORAGE, IRRIGATION STORAGE	FAIRCHILD, ARTHUR A	wrWaterApplication
67	7732		SAGE CREEK	DIVERSION TO STORAGE, IRRIGATION FROM STORAGE, IRRIGATION STORAGE	FAIRCHILD, ARTHUR A	wrWaterPermit
67	7732	License	SAGE CREEK	DIVERSION TO STORAGE, IRRIGATION FROM STORAGE, IRRIGATION STORAGE	TREE TOP RANCHES LP	wrWaterRight
67	7899		SAGE CREEK	DIVERSION TO STORAGE, IRRIGATION FROM STORAGE, IRRIGATION STORAGE	FAIRCHILD, ARTHUR A	wrWaterApplication
67	7899		SAGE CREEK	DIVERSION TO STORAGE, IRRIGATION FROM STORAGE, IRRIGATION STORAGE	FAIRCHILD, ARTHUR A	wrWaterPermit
67	7899	License	SAGE CREEK	DIVERSION TO STORAGE, IRRIGATION FROM STORAGE, IRRIGATION STORAGE	TREE TOP RANCHES LP	wrWaterRight
67	11659	Beneficial Use	GROUND WATER	DOMESTIC, STOCKWATER	TREE TOP RANCHES LP	wrAdjudicationRecommendation
67	11659	Decreed	GROUND WATER	DOMESTIC, STOCKWATER	TREE TOP RANCHES LP	wrWaterRight
67	14107	Decreed	SAGE CREEK	IRRIGATION	FAIRCHILD TREE TOP RANCH LTD	wrAdjudicationClaim

← combo
of old
decree
rights