

MEMORANDUM

Date: October 25, 2012
To: Water Right File 37-8575A
From: medl
Re: license review

Applicant

The permit holder, Sinclair Oil Corporation d/b/a Sun Valley Company is represented by Scott Campbell of Moffett Thomas. My primary contact was Mr. Peter Stearns (Director, snowmaking).

In June 2011 a Notice of Change in Water Right Ownership was processed for many of the water rights held by Sinclair Oil Corporation but an equivalent assignment was not received for this permit.

IDSOS shows Sinclair Oil Corporation has been assigned filing number C165142.

Source & POD

Although the parent permit (37-8575) authorized 3 points of diversion, the examiner found only one well was fully developed for this portion. The examiner did not provide a well log but it appears that the two splits (37-8575A and 37-8575B) do not share wells. Each split has a dedicated well.

In my review of likely Well Drillers Reports, I found that at least one exploratory well was drilled before this production well. The location and status of that exploratory well is not known.

This production well has not yet been GPS d. I conferred with Mr. Peter Stearns to determine the correct location and I shared the pertinent contents of this water right file with IDWR state office groundwater protection personnel. M. Anders created the well layer shape based on the documents I provided. The POD selected for this right is the well shape that he created.

According to available Blaine county taxlot information, the property containing the POD is owned by Sun Valley Resorts.

There is evidence in the file that this right involved commingling of water sources. However, the examiner does not mention comingling, nor was permit conditioned with special requirements to address that issue.

System description

The source well was fitted with a 100 hp pump capable of delivering ground water at the permitted rate 4.46 cfs (2002 gpm) to an underground storage vault. The examiner estimated that the vault stored ~ 55000 gallons. It was tapped by five-350 hp pumps which re diverted the stored water to relift stations for use by the snow making system.

Water Use

Commercial Snow making

The examiner confirmed beneficial use during his December 1, 1997 visit. He recommended a rate but not a volume. Seven charts showing dates and times of snowmaking are included with the exam report.

The examiner stated that approximately 422 snow guns were in place at the time of the exam. My contemporary internet-based research indicates that there are more guns in place now. The lengthy

timeline for licensing this right has extended beyond the expected lifetime of the original equipment. The snow making equipment that is in place now is not likely the same as the equipment that was in place at the time of the exam. The increased number of snowmaking guns may be the result of improved efficiencies to the system and not a violation of the permit.

Rate

Both the well and the well pump are capable of the permitted rate and more.

Charts provided in the field examiner s report show the rate of water used by the snowmaking system could exceed the rate of the permit. The diversion rate from the well to the storage vault would be the limit on the system. The storage vault could be emptied in less than 9 hours if the maximum snowmaking rate is implemented coincident with the maximum permitted diversion rate.

I concur with the examiners recommendation for rate. I am recommending 4.46 cfs for the license.

Volume

The charts also show 7 days of snowmaking from Dec 1995 to Dec 1996.

The volume of water used for snowmaking in 1995 and 1996 may not be representative of a high snowmaking season. I requested additional evidence to improve the quality of my volume recommendation, but at this time, none has been provided.

NRCS personnel directed me to snow course data for Mount Baldy which indicates that 1995 and 1996 were not low snow years. That data does not allow easy sifting out the natural snow from the manufactured snow.

Weather data from the Sun Valley co-op weather station does not extend to the years when this permit was in effect.

For a volume, I assumed 7 days of snowmaking at the maximum rate. I am recommending 61.9 AFA for the license. The calculation is: $4.46 \text{ cfs} \times 7 \text{ days} \times 1.9835 = 61.92$.

Place of Use

The snowmaking shape provided by the examiner was found to be incorrect. I conferred with Mr. Peter Stearns to determine and obtain the correct shape. The POU shape selected for this right was provided by Mr. Stearns and his staff. The shape differs from the permitted place of use. An amendment will be needed before licensing.

According to available Blaine county taxlot information, the property containing the POU is either National Forest or BLM lands. Forest service personnel verified that there was an active special use permit in place and provided a map of the permitted quarter quarters. Mr. Stearns provided copy of the interagency agreement between the BLM and the FS.

Season of Use

The permit authorized commercial use 10/15-4/1 only. Splits A and B are tied together by their season of use.

Status and Combined Use

Right 37-8575B is now a municipal use right for the City of Ketchum. It was licensed in May 2012. They have a separate well but are limited to use of that well 4/1-10/15.

Snow making is a consumptive use. A portion of the diverted water is lost to evaporation at the snow gun discharge. However, at the time the permit was issued, the Department s understanding was that this use was non consumptive. I am not imposing an evaporation factor on this license.

/cdbs/id/snow16

Station : 14F09, MOUNT BALDY

Unit = inches

year/ card	January			February			March			April			May			June		
	date	dep	swe	date	dep	swe	date	dep	swe	date	dep	swe	date	dep	swe	date	dep	swe
49-1	K/31	36	9.0	1/31	49	13.5	2/26	66	17.8	3/31	59	20.4						
50-1	K/29	31	6.1	1/31	68	15.5	3/01	63	20.7	4/04	77	26.3	5/05	70	26.3			
51-1	1/02	40	11.0	2/02	64	17.2	3/02	72	21.2	4/03	79	27.6						
52-1	K/31	65	14.9	2/01	92	24.9	3/01	86	27.2	4/02	91	32.3	5/01	68	29.2			
53-1	K/30	40	8.7	2/01	57	16.4	3/04	61	19.2	4/02	67	24.2	4/29	59	23.0			
54-1	K/31	22	4.8	2/02	58	15.0	3/04	63	21.2	4/02	69	24.2	5/05	47	19.8			
55-1	1/05	31	5.0	2/02	33	7.0	3/01	48	9.4	3/30	51	14.0	4/27	64	17.4			
56-1	1/05	76	21.0	1/31	85	25.4	3/01	91	29.8	4/02	83	30.8	5/02	68	28.6			
57-1	K/27	30	7.4	2/01	42	10.4	2/26	65	15.0	3/27	62	17.8	5/01	62	20.8			
58-1	K/27	41	9.3	1/29	49	12.3	3/02	60	17.7	4/05	112	28.8	4/29	93	31.9			
59-1	K/27	23	4.7	1/30	37	8.1	3/04	56	15.4	3/30	59	17.3	4/29	43	15.1			
60-1	1/04	19	3.0	1/30	27	6.2	2/23	40	9.6	3/28	52	14.6	4/27	42	14.2			
61-1	K/31	34	9.6	2/01	34	9.5	2/27	49	12.9	3/28	55	16.3	4/26	48	15.3			
62-1	K/30	39	10.2	1/28	44	11.9	3/01	69	18.9	3/30	68	21.5	5/02	51	19.6			
63-1	K/26	19	4.6	2/05	46	10.6	3/01	41	10.6	3/27	41	11.9	5/01	52	17.2			
64-1	K/28	30	7.7	1/29	56	14.3	2/26	48	13.7	3/26	62	17.9	4/29	62	21.4			
65-1	K/29	85	22.5	1/28	94	31.7	2/25	83	33.1	3/31	87	34.8	4/29	93	39.9			
66-1	1/01	38	6.8	1/31	43	11.7	3/01	52	14.1	4/02	51	15.8	4/28	48	16.7			
67-1	K/30	37	10.0	1/31	73	18.1	3/01	63	19.4	3/30	80	25.1	5/03	91	31.6			
68-1	K/30	26	5.2	1/31	48	10.4	2/29	48	13.3	3/30	46	14.3	4/29	44	14.9			
69-1	K/29	53	9.6	1/28	103	24.7	3/01	110	33.0	4/02	89	34.6	4/30	73	30.7			
70-1	1/01	25	4.9	1/30	54	12.1	3/02	71	18.2	3/27	59	18.1	4/29	65	20.3			
71-1	K/31	63	15.6	1/28	72	22.1	2/24	72	24.3	4/01	86	28.6	5/05	73	29.9			
72-1	K/29	49	10.8	1/27	72	18.0	2/29	74	21.5	3/27	73	24.9	4/26	73	27.7			
73-1	K/29	29	6.3	2/01	44	10.3	3/01	50	13.4	4/02	58	16.2	5/02	49	16.1			
74-1	K/29	50	13.3	2/01	74	21.3	3/01	91	26.9	3/29	96	32.7	4/30	78	31.5			
75-1	1/02	34	6.6	1/30	38	9.2	2/28	62	17.2	3/28	82	22.7	4/30	87	27.6			
76-1	K/30	32	6.1	1/30	40	12.0	2/27	57	15.4	3/30	65	19.1	4/30	65	20.5			
77-1	E/ST		0.0	E/ST		1.4	2/28	12	2.3	3/29	21	4.6	E/ST		0.9			
78-1	K/30	40	10.4	1/30	53	16.0	2/27	72	23.2	3/31	62	24.4	4/28	78	30.8			
79-1	K/31	18	3.0	2/02	29	6.1	3/01	55	11.6	3/30	52	14.8	4/30	44	14.7			
80-1	1/01	40	6.8	2/01	57	15.6	2/28	66	18.6	3/28	71	20.2	E/ST		18.6			
81-1	K/30	30	9.0	1/30	49	11.3	2/27	48	13.6	3/30	59	16.9	4/29	49	17.8			
82-1	K/31	57	14.8	2/01	67	20.3	2/27	74	23.2	3/31	101	31.6	4/29	97	38.4			
83-1	K/30	62	15.5	1/30	65	18.2	2/25	75	22.5	3/31	109	35.0	4/26	96	36.2			
84-1	K/31	53	13.6	1/30	47	14.1	2/28	62	17.6	3/29	71	21.2	E/ST		23.2			
85-1	K/31	43	10.2	1/30	41	11.4	2/26	55	13.1	3/30	70	20.1	E/ST		16.1			
86-1	K/27	29	6.8	1/31	47	12.5	2/27	76	21.0	3/28	75	23.8	E/ST		23.2			
87-1	E/ST		2.8	1/30	31	5.9	2/27	41	10.2	3/27	48	11.0				6/01	0	0.0
88-1	K/31	29	6.4	1/28	37	9.2	2/25	38	10.7	4/01	43	13.2	E/ST		12.7			
89-1	K/30	44	10.3	1/30	48	13.6	2/27	55	16.8	3/29	74	21.7						
90-1	K/28	13	3.6	1/28	32	7.4	2/27	46	11.4	3/29	46	12.7	E/ST		9.4	E/ST		0.0
91-1	1/02	19	2.6	1/30	20	3.6	2/26	19	3.6	3/27	51	11.7						
92-1	K/30	32	6.8	1/28	34	8.1	2/26	48	11.7	3/27	49	13.2				6/01	0	0.0
93-1	K/29	38	8.0	1/29	57	14.7	2/24	72	18.5	3/27	69	20.8	4/28	73	25.8			
94-1	K/28	17	3.4	1/27	22	4.8	2/25	43	9.0	3/29	34	9.4						
95-1	K/30	35	9.7	1/30	62	15.8	2/27	60	18.8	3/27	103	32.9	4/28	86	30.6			
96-1	K/28	33	8.0	1/29	62	14.1	2/29	60	16.8	4/03	62	23.7						

97-1	K/31	73	18.2	1/30	25.2	2/28	75	21.8	3/28	73	2	5/01	70	28.8
98-1	K/31	21	5.2	1/29	46	11.4	2/26	64	16.6	4/01	59	18.0	E/ST	18.6
99-1	1/04	38	9.2	2/04	49	12.0	3/01	74	20.8	4/01	66	22.8		
0-1	K/30	16	3.0	2/01	39	8.8	3/01	61	15.4	3/29	59	16.1		
1-1	1/02	30	7.0	2/01	39	9.6	3/02	45	11.1	3/31	43	11.4		
2-1	1/07	36	9.4	1/31	48	12.5	2/28	47	13.1	4/02	52	16.0		
3-1	K/31	46	9.7	1/30	43	12.1	2/27	48	12.4	3/29	58	18.0		
4-1	1/01	50	8.8	1/31	42	10.8	2/29	59	16.6	4/01	43	15.3		
5-1	1/01	52	9.8	2/01	46	12.7	3/01	47	14.8	4/04	60	18.8		
6-1	1/01	55	8.6	2/01	67	18.0	2/28	75	15.6	3/30	85	27.2		
7-1	K/28	34	7.2	1/31	31	8.4	2/28	49	11.0	3/29	39	11.6		
8-1	K/31	35	8.3	2/01	60	15.8	2/29	64	18.4	4/01	67	20.2		
9-1	K/29	42	6.6	1/31	37	10.0	2/27	46	11.2	4/01	53	15.4		
10-1	K/31	28	6.2	2/01	48	9.8	3/01	46	11.6	4/01	60	15.4		
11-1	K/31	26	5.0	1/31	39	8.5	3/01	44	10.3	4/01	60	17.0		
11-1	K/30	42	9.4	2/01	35	9.8	3/01	47	12.6	4/01	73	20.2		
49-2	1/17	41	11.2	2/17	67	18.9	3/15	63	18.8					
50-2	1/15	51	10.7	2/17	68	19.4	3/16	69	21.8	4/17	74	25.6		
51-2	1/15	48	12.4	2/15	69	20.0	3/16	82	24.4	4/13	70	26.3		
52-2	1/17	101	22.2	2/19	91	27.5	3/14	90	28.9	4/15	89	32.2	5/14	53 25.0
53-2	1/16	55	14.4	2/16	57	17.7	3/16	62	20.8	4/15	71	25.6		
54-2	1/15	36	6.8	2/15	67	17.2	3/15	66	21.2	4/16	66	24.6	5/13	29 12.4
55-2	1/15	30	5.4	2/14	33	7.8	3/14	50	11.0	4/14	49	14.8	5/11	48 15.8
56-2	1/17	77	23.8	2/15	78	25.8	3/15	91	31.2	4/13	82	32.6	5/16	66 29.0
57-2	1/15	37	8.8	2/15	42	10.0	3/15	67	16.4	4/16	63	19.8	5/16	49 17.8
58-2	1/15	42	11.0	2/14	52	13.8	3/14	70	19.3				5/13	77 30.7
59-2	1/16	34	6.5	2/17	68	14.4	3/12	54	15.4	4/17	50	15.6		
60-2	1/15	30	5.5	2/13	43	9.8	3/15	52	13.6	4/13	37	12.2		
61-2	1/14	32	8.9	2/15	47	11.5	3/15	53	15.5	4/17	46	15.3		
62-2	1/16	39	10.7	2/16	72	17.5	3/15	69	20.9	4/18	55	19.7		
63-2	1/14	20	5.1	2/15	39	9.9	3/15	42	11.7	4/17	54	16.0		
64-2	1/15	31	8.4	2/14	49	14.2	3/13	65	16.6	4/15	61	20.6		
65-2	1/18	84	29.4	2/16	87	32.4	3/16	84	33.1	4/13	101	37.7	5/12	88 39.2
66-2	1/17	45	11.6	2/15	50	13.7	3/14	55	16.2	4/15	46	15.8	5/21	14 5.6
67-2	1/14	39	10.5	2/14	67	19.2	3/17	79	24.4	4/14	83	28.1		
68-2	1/15	40	9.0	2/16	47	11.6	3/14	49	13.6	4/15	47	15.4		
69-2	1/14	72	15.4	2/14	99	28.3	3/17	95	31.9	4/15	84	33.1		
70-2	1/16	44	8.1	2/13	48	12.4	3/16	62	17.5	4/15	66	19.7		
71-2	1/15	78	19.8	2/15	71	23.2	3/15	87	24.3	4/14	83	30.4		
72-2	1/14	57	14.2	2/14	62	18.7	3/16	71	25.5					
73-2	1/14	33	7.6	2/15	50	12.4	3/14	52	14.5	4/15	56	17.0		
74-2	1/14	61	16.9	2/15	67	22.2	3/15	94	30.1	4/17	89	32.6	5/21	54 22.9
75-2	1/14	38	8.4	2/14	75	16.4	3/14	63	18.2	4/16	84	25.0		
76-2	1/15	44	10.2	2/13	42	11.4	3/15	59	16.8	4/16	69	19.0		
77-2	1/17	10	1.8	2/15	10	2.0	3/15	20	3.7					
78-2	1/13	50	13.4	2/13	82	24.0	3/13	75	26.5	4/13	70	26.7		
79-2	1/15	30	5.0	2/15	44	8.3	3/15	42	12.0	4/13	53	15.1		
80-2	1/15	66	14.2				3/14	69	21.1	4/14	73	24.0		
49-3										K/15	42	9.3		
57-3						J/30	21	4.0					4/02	93 26.6
58-3						J/29	16	2.7						
59-3						K/03	11	2.3	K/16	15	3.0			
74-3						K/04	36	9.9						

FIRST OF MONTH MEASUREMENTS

average depth and swe :

38	8.4	51	13.1	59	16.5	65	20.4	66	22.7	0	0.0
years	62	64	63	64	64	64	64	34	42	2	3
1971-2000 average :											
	37	8.2	49	12.5	59	16.2	66	20.3	20.7		

MID-MONTH MEASUREMENTS

average depth and swe :

47	11.5	59	16.5	66	19.9	67	22.9	53	22.0		
years	32	32	31	31	32	32	28	28	9	9	0 0
1971-2000 average :											

SPECIAL MEASUREMENTS

average depth and swe :

				21	4.7	28	6.2	93	26.6		
years	0	0	0	0	4	4	2	2	1	1	0 0

NOTES: O/dd - October, J/dd - November, K/dd - December, E/ST - estimate

Card type 1 = First of Month, 2 = Mid-Month, and 3 = Special Measurement

Weather Report

Lifts & Trails

My Map

Upload My Photo/Video



Bald Mountain 9,150ft

Old Baldy Express

Old Baldy Express

Summit Springs Day Lodge

River Run Plaza 5,750ft

Dollar Mountain 6,638ft

Ketchikan

Summit Highway 23

Summit Highway 23

Sun Valley Village

Dollar Mountain Lodge

