DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

SELECTED MO AND W ASSAYS FROM STREAM-SEDIMENT SAMPLES AND PANNED HEAVY-MINERAL CONCENTRATES, CHALLIS, IDAHO 2° TOPOGRAPHIC QUADRANGLE

by

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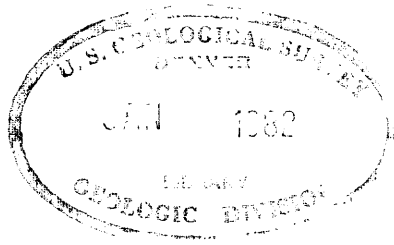

Open-File Report 81-1344

1981

Abstract

Semiquantitative spectrographic analyses for 31 elements were determined on more than 2000 stream-sediment samples and panned heavy-mineral concentrates from the Challis, Idaho 2° topographic quadrangle. Seventy stream-sediment samples (minus-200-mesh fraction) have a molybdenum concentration of ≥5 ppm and five have a tungsten concentration of ≥50 ppm. Two hundred and twenty-three nonmagnetic heavy-mineral concentrates have a molybdenum concentration of ≥10 ppm and 145 have a tungsten concentration of ≥100 ppm. The nonmagnetic heavy-mineral concentrates with both molybdenum and tungsten assays may indicate the presence of scheelite, which is known to contain molybdenum in this area.

Introduction

A reconnaissance stream-sediment geochemical survey of the Challis, Idaho 2° topographic quadrangle (lat 44°-45° N.; long 114°-116° W.) is part of the Conterminous United States Mineral Appraisal Program (CUSMAP) by the United States Geological Survey. Semiquantitative emission spectrographic analyses for 31 elements were determined on over 2000 stream sediments and heavy-mineral separates obtained during the 1979 and 1980 field programs.

Sample Procedure

During the summers of 1979 and 1980, more than 2000 stream-sediment samples and panned concentrates were collected from most accessible second-order and many first-order or unbranched drainages in the eastern and central portions of the Challis 2° topographic quadrangle. In addition, a few samples were collected from the western one-third of the area. No samples were collected in the areas covered by the reports of Kiilsgaard and others (1970) and Cater and others (1973) for the Sawtooth Wilderness and National Recreation Area and the Idaho Primitive Area.

Sediment samples were taken from stream channels, and in those instances where the channel was dry the sediment was first sieved through a 10-mesh stainless steel screen. Panned concentrates were obtained by panning sediment, mainly sand and gravel, taken from the stream channel. Both stream sediments and panned concentrates were placed in standard geochemical sample bags and air dried.

Analytical Procedure

Stream sediments were sized through 80- (0.177mm) and 200-mesh (0.074mm) screens, and the minus-80- and minus-200-mesh fractions were stored. The minus-200-mesh fraction was analyzed for 31 elements by a six-step semiquantitative spectrographic technique described by Grimes and Marranzino (1968). The minus-200-mesh fraction was used because it proved to have a concentration of Mo and W over that in the minus-80-mesh fraction, and thus better analytical sensitivity.

Panned concentrates were separated into a heavy-mineral fraction using bromoform (specific gravity, 2.80-2.89). The heavy-mineral fraction was

further subdivided into three fractions on the Frantz isodynamic separator: a strongly magnetic fraction (C-1), a weakly magnetic fraction (C-2), and a nonmagnetic fraction (C-3). The latter fraction passed through the Frantz separator at a setting of 0.6 amp. The nonmagnetic (C-3) fraction was scanned for the presence of sulfides, gold, and scheelite and was then ground and analyzed spectrographically.

Results

All minus-200-mesh fractions of the stream-sediment samples with analytical values that exceed the level of detection for Mo ($\geq$5 ppm) and W ($\geq$50 ppm) are listed in Table 1. All nonmagnetic heavy-mineral concentrates (C-3 fraction) with detectable Mo ($\geq$10 ppm) and W ($\geq$100 ppm) are listed in Table 2. Many of the heavy-mineral concentrates with high W values also have detectable Mo that may represent Mo-substitution in scheelite, which is a common tungsten mineral in this area. One scheelite sample from the Tungsten Jim Mine dump, analyzed by semiquantitative spectrographic methods, showed greater than 10,000 ppm W and 200 ppm Mo.

All samples are listed by 7 1/2' or 15' topographic sheets in alphabetical order. In Tables 1 and 2, samples are listed by field number and tag number; latitude and longitude are given for each sample site, as are the analytical values in parts per million (ppm).

References

Cater, F. W., Pinckney, D. M., Hamilton, W. B., Parker, R. L., Weklin, R. D., Close, T. J., and Zitka, N. T., 1973, Mineral resources of the Idaho Primitive Area and vicinity; Idaho: United States Geological Survey Bulletin 1304, 431 p.

Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semiquantitative analysis of geologic materials: United States Geological Survey Circular 591, 6 p.

Kiilsgaard, T. H., Freeman, V. L. and Coffman, J. G., 1970, Mineral resources of the Sawtooth Primitive Area, Idaho: United States Geological Survey Bulletin 1319-D, 174 p.

TABLE 1. Selected Mo and W concentrations from stream-sediment samples (minus-200-mesh) from the Challis, Idaho 2° quadrangle.

7 1/2 MINUTE QUADRANGLE	FIELD NUMBER	TAG NUMBER	LATITUDE NORTH	LONGITUDE WEST	MO PPM	W PPM
Antelope Flat	RS 0320	EGB 175	44° 17' 52"	114 06 46	7	
Banner Summit	DS 0183	EIL 540	44 15 08	115 12 53	5	
	DS 0188	EIL 545	44 18 49	115 13 59	5	
	DS 0189	EIL 546	44 19 27	115 13 10	5	
	DS 0195	EIL 552	44 20 16	115 09 31	5	
	DS 0196	EIL 553	44 21 08	115 08 31	5	
	DS 0197	EIL 554	44 18 11	115 08 41	5	
	DS 0198	EIL 555	44 18 04	115 08 37	5	
Bowery Creek	AS 0101	EGB 523	44 07 40	114 29 03	7	
	AS 0104	EGB 526	44 09 40	114 29 25	7	
	AS 0105	EGB 527	44 09 05	114 26 37	5	
	CS 0088	EGA 571	44 06 09	114 16 59		50
Casto	BS 0140	EIL 635	44 32 19	114 47 52	20	
Clayton	AS 0002	EGA 780	44 17 44	114 29 28	15	
	RS 0518	EGN 196	44 17 12	114 28 10	10	50
	RS 0521	EGN 199	44 16 04	114 27 38	10	
	TS 0021	EGA 903	44 16 24	114 27 34	5	
	TS 0022	EGA 904	44 16 44	114 27 52	10	
	TS 0023	EGA 905	44 17 26	114 28 22	10	
Custer	TS 0161	EGB 076	44 25 49	114 43 36	10	
	TS 0163	EGB 077	44 26 39	114 44 10	5	
	TS 0164	EGB 078	44 20 54	114 44 02	20	
	TS 0165	EGB 079	44 27 16	114 44 20	5	
	TS 0169	EGB 083	44 26 58	114 44 10	15	
Fitsum Summit	ES 0140	EIL 349	44 54 08	115 53 33	10	
Garden Valley	DS 0127	EIL 484	44 08 43	115 46 34	30	
Greyhound Ridge	CS 0277	EGB 465	44 37 48	115 11 48	5	
	CS 0279	EGB 467	44 32 48	115 08 36	10	
Jackson Peak	DS 0134	EIL 491	44 02 54	115 24 58	20	
	ES 0169	EIL 382	44 01 02	115 25 42	15	
	ES 0170	EIL 383	44 01 12	115 26 52	20	
	CS 0304	EGA 689	44 28 05	114 55 20	10	
	CS 0308	EGA 693	44 30 55	114 53 15	10	
Knapp Lakes	ES 0174	EIL 387	44 27 22	114 52 41	10	
Langer Peak	BS 0149	EIL 644	44 28 59	115 00 34	5	
Little Antelope Flat	AS 0015	EGV 182	44 23 27	114 03 27	50	
Mt. Jordan	ES 0066	EHQ 889	44 29 23	114 51 11	5	

TABLE 1. Selected Mo and W concentrations from stream-sediment samples (minus-200-mesh) from the Challis, Idaho 2° quadrangle.--continued

7 1/2 MINUTE QUADRANGLE	FIELD NUMBER	TAG NUMBER	LATITUDE NORTH	LONGITUDE WEST	MO PPM	W PPM
Meyer's Cove Point	RS 0352	EGB 321	44° 50' 39"	114 30 42	10	
	RS 0354	EGB 323	44 50 36	114 27 52	10	
	RS 0364	EGB 335	44 46 13	114 29 00	5	
	RS 0418	EGB 931	44 47 40	114 35 21	5	
	RS 0427	EGB 940	44 48 17	114 31 27	5	
Opal Lake	RS 0376	EGB 559	44 53 45	114 20 50	7	
	RS 0377	EGB 560	44 54 24	114 21 27	5	
Pinyon Peak	CS 0307	EGA 692	44 30 04	114 54 23	50	
	CS 0309	EGA 694	44 32 20	114 52 36	5	
	CS 0311	EGA 698	44 32 15	114 52 54	5	
	CS 0312	EGA 699	44 31 56	114 56 12	5	
	CS 0324-A	EGA 712	44 31 18	114 56 33	10	
	CS 0325	EGA 714	44 31 12	114 59 17	10	
	CS 0327	EGA 716	44 32 18	114 59 09	10	
	CS 0328	EGA 717	44 32 58	114 59 15	5	
	CS 0328-A	EGA 718	44 32 58	114 59 15	5	
	CS 0329	EGA 720	44 33 05	114 59 12	7	
	CS 0330	EGA 721	44 33 35	114 57 52	5	
	CS 0331	EGA 722	44 33 28	114 57 50	5	
	ES 0067	EHQ 890	44 35 37	114 57 24	5	
Potaman Peak	AS 0114	EGB 536	44 08 23	114 26 55	5	
	TS 0237	EGB 919	44 11 00	114 24 27	10	
Pungo Mt.	FS 0008	EIL 704	44 50 32	115 02 16	10	
	FS 0011	EIL 707	44 50 22	115 01 22	5	
	FS 0012	EIL 708	44 51 20	115 02 01	5	
	FS 0013	EIL 709	44 51 18	115 02 27	10	
Stibnite	BS 0183	EIL 677	44 57 06	115 17 24		150
Sunbeam	TS 0230	EGB 912	44 15 22	114 41 15	5	150
Thompson Creek	ES 0009	EHQ 575	44 18 24	114 34 54		700
	TS 0206	EGB 883	44 15 18	114 33 19	7	
Tyee Mt.	BS 0186	EIL 680	44 00 01	115 17 34	10	
	BS 0188	EIL 682	44 03 37	115 18 54	5	
Wards Butte	DS 0055	EIL 411	44 50 44	114 12 57	5	
	DS 0056	EIL 412	44 49 58	114 07 39	5	
Warm Lake	CS 0292	EGB 481	44 35 15	115 32 18	20	
	CS 0295	EGB 484	44 33 18	115 33 05	5	

TABLE 2. Selected Mo and W concentrations from nonmagnetic heavy-mineral concentrates from the Challis, Idaho 2° quadrangle.

7 1/2 MINUTE QUADRANGLE	FIELD NUMBER	TAG NUMBER	LATITUDE NORTH	LONGITUDE WEST	MO PPM	W PPM
Bald Mt.	RP 0044	EGH 238	44° 17' 08"	114 18 03		100
Banner Summit	DP 0185	EIL 806	44 17 17	115 13 32	10	
	DP 0186	EIL 807	44 17 21	115 13 28	10	200
	DP 0188	EIL 809	44 18 49	115 13 59		200
	DP 0189	EIL 810	44 19 27	115 13 16	20	
	DP 0198	EIL 819	44 18 04	115 08 37		100
Basin Butte	BP 0002	EHQ 813	44 18 53	114 53 02	50	
	BP 0008	EHQ 819	44 20 59	114 54 20	10	
Bayhorse Lake	AP 0034	EGP 952	44 22 55	114 16 12		100
	AP 0035	EGP 953	44 23 08	114 16 38	20	200
	AP 0036	EGP 954	44 23 38	114 18 00	20	200
	MP 0096	EGK 054	44 27 28	114 20 13	50	
	MP 0133	EGK 443	44 24 34	114 15 04	50	
	MP 0136	EGK 446	44 22 48	114 15 26	20	
	MP 0138	EGK 448	44 22 55	114 16 10	50	100
	MP 0140	EGK 450	44 23 18	114 17 12		100
	MP 0143	EGK 453	44 23 35	114 18 07	50	
	RP 0273	EGP 128	44 27 52	114 27 41	50	
	TP 0099	EGD 46	44 23 48	114 18 30	50	1000
Bear Valley	BP 0051	EHQ 802	44 28 01	115 26 09	10	
	DP 0160	EIL 782	44 24 59	115 22 59	30	
Blackmare	EP 0136	EIL 846	44 50 25	115 50 51		100
Black Mt.	BP 0101	EIL 909	44 51 10	114 22 12		100
Blue Bunch Mt.	DP 0161	EIL 783	44 23 34	115 22 14	10	
	DP 0164	EIL 786	44 24 54	115 18 47	10	
	DP 0165	EIL 787	44 29 30	115 18 56	30	
	DP 0166	EIL 788	44 28 49	115 18 56	10	
	DP 0167	EIL 789	44 28 40	115 19 00	10	
	DP 0168	EIL 790	44 28 08	115 19 34	20	
	DP 0169	EIL 791	44 28 03	115 18 22	20	
	DP 0171	EIL 792	44 26 22	115 18 49	10	
	DP 0172	EIL 793	44 26 43	115 18 31	10	
	DP 0175	EIL 796	44 25 14	115 18 11	10	
Bowery Creek	AP 0105	EGV 223	44 09 05	114 26 37		100
	CP 0374	EGP 288	44 04 23	114 27 40	50	
	TP 0001	EGK 372	44 06 48	114 26 17		500
	TP 0002	EGK 373	44 07 04	114 28 08		100

TABLE 2. Selected Mo and W concentrations from nonmagnetic heavy-mineral concentrates from the Challis, Idaho 2° quadrangle.--Continued

Bradbury Flat	RP 0499	EGV 260	44	28	28	114	08	54	20	
Bull Trout Point	BP 0043	EHQ 794	44	15	56	115	19	23	50	
Cache Creek	BP 0044	EHQ 795	44	18	06	115	25	16		100
	DP 0137	EGV 759	44	15	14	115	28	46	10	
	DP 0138	EIL 760	44	15	27	115	28	50	10	
	DP 0139	EIL 761	44	15	37	115	28	42	10	
	DP 0141	EIL 763	44	16	55	115	28	42	20	
	DP 0142	EIL 764	44	17	36	115	29	14		300
	DP 0143	EIL 765	44	17	18	115	29	32		500
	DP 0149	EIL 771	44°	19'	28"	115	27	49	20	
	DP 0150	EIL 772	44	19	48	115	27	40	15	
	DP 0153	EIL 775	44	21	24	115	24	23	10	
Caton Lake	BP 0174	EIM 011	44	54	23	115	35	04	20	
	BP 0175	EIM 012	44	53	12	115	35	54	20	
Cape Horn Lakes	BP 0197	EIM 034	44	29	51	115	10	46	20	
	BP 0199	EIM 036	44	29	46	115	10	44	10	
	BP 0201	EIM 038	44	25	57	115	11	47		100
	DP 0079	EIM 063	44	23	53	115	08	52	10	
	DP 0084	EIM 067	44	24	02	115	04	06	20	
	DP 0085	EIM 068	44	25	05	115	04		06	10
Casto	BP 0127	EIL 964	44	36	32	114	47	41		200
	BP 0128	EIL 965	44	35	15	114	49	22		100
	BP 0130	EIL 967	44	34	04	114	50	48	10	
	BP 0132	EIL 969	44	33	05	114	50	58	20	
	BP 0133	EIL 970	44	33	07	114	51	04	10	100
	BP 0135	EIL 972	44	32	36	114	51	35		100
	BP 0136	EIL 973	44	32	31	114	51	31		200
	BP 0138	EIL 975	44	32	34	114	49	27	20	
	BP 0139	EIL 976	44	32	20	114	48	11	20	
	BP 0140	EIL 977	44	32	19	114	47	52	50	
	BP 0141	EIL 978	44	31	03	114	46	28	30	
	DP 0066	EIM 050	44	35	26	114	45	50	10	
	DP 0067	EIM 051	44	36	00	114	48	05	20	
	DP 0069	EIM 053	44	35	40	114	49	12	10	200
	DP 0070	EIM 054	44	35	09	114	49	43	10	100
	DP 0071	EIM 055	44	35	03	114	49	37		100
	DP 0072	EIM 056	44	34	08	114	51	50		150
	DP 0073	EIM 057	44	35	34	114	52	25	200	
	DP 0075	EIM 059	44	31	08	114	51	48	20	
Chilcoot Peak	BP 0179	EIM 016	44	47	44	115	27	07	10	
	DP 0110	EIL 732	44	50	02	115	24	11		150

TABLE 2. Selected Mo and W concentrations from nonmagnetic heavy-mineral concentrates from the Challis, Idaho 2° quadrangle.--Continued

Chinook Mt.	CP 0155	EGK 507	44	32	45	115	28	11	30	
	CP 0157	EGK 509	44	33	18	115	26	32	10	
	CP 0158	EGK 510	44	32	51	115	27	04	20	
	CP 0160	EGK 511	44	33	11	115	26	25	20	
	CP 0161	EGK 512	44	33	18	115	24	42	20	
	CP 0162	EGK 513	44	32	54	115	24	15	10	
	CP 0165	EGK 457	44	31	57	115	22	54	20	
	CP 0170	EGK 462	44	32	30	115	20	58	20	
	CP 0171	EGK 463	44	32	42	115	20	06	20	
	CP 0172	EGK 464	44	33	30	115	19	09	70	
	CP 0173	EGK 465	44	34	55	115	18	23	30	
	CP 0174	EGK 466	44	34	57	115	18	23	30	
	CP 0176	EGK 469	44	34	11	115	17	55	20	
	CP 0176-A	EGK 470	44	34	09	115	18	00	50	200
	CP 0177	EGK 472	44	34	12	115	17	36	30	
	CP 0211	EGK 832	44	37	21	115	15	46	10	100
	CP 0212	EGK 833	44	37	31	115	16	38	10	100
	CP 0213	EGK 834	44	37	35	115	16	34	10	100
	CP 0213-A	EGK 835	44	37	38	115	16	34	10	
	CP 0214	EGK 837	44	38	35	115	16	30	10	100
	CP 0215	EGK 838	44	38	30	115	19	14	10	100
	CP 0216	EGK 839	44	38	29	115	18	42	10	
	CP 0217	EGK 840	44	38	24	115	19	19	10	
	CP 0218	EGK 841	44	37	27	115	20	34	10	
	CP 0219	EGK 842	44	37	17	115	17	29	10	
	CP 0220	EGK 843	44	37	12	115	17	30	10	
	CP 0224	EGK 847	44	36	06	115	20	24		100
	CP 0225	EGK 848	44	35	48	115	21	10		100
	CP 0226	EGK 851	44	35	34	115	24	03	10	
	CP 0227	EGK 852	44	35	09	115	25	42	10	
	CP 0228	EGK 853	44	39	42	115	29	34	10	
	CP 0229	EGK 854	44	41	12	115	29	10	10	
	CP 0230	EGK 855	44	41	10	115	29	02		100
	CP 0231	EGK 856	44	41	18	115	28	00	20	100
	CP 0232	EGK 857	44	44	12	115	27	57		100
	CP 0233	EGK 858	44	44	15	115	28	22		100
	CP 0251	EGK 873	44	31	42	115	17	36	30	
	CP 0252	EGK 874	44	31	06	115	16	04	20	
Clayton	AP 0001	EGK 424	44	15	43	114	27	30	10	100
	AP 0002	EGK 425	44	17	44	114	29	28	20	
	AP 0003	EGK 426	44	18	10	114	28	30	1000	
	AP 0005	EGK 427	44	20	18	114	28	30	10	
	EP 0023	EHQ 629	44	21	29	114	25	47	10	
	RP 0514	EGV 275	44	15	23	114	24	07	15	100
	RP 0518	EGV 279	44	17	12	114	28	10	50	1000
	RP 0519	EGV 280	44	19	44	114	27	57	10	
	RP 0520	EGV 281	44	19	47	114	27	59	20	
	RP 0521	EGV 282	44	16	04	114	27	38	20	
	RP 0532	EGV 295	44	21	24	114	27	46	20	200

TABLE 2. Selected Mo and W concentrations from nonmagnetic heavy-mineral concentrates from the Challis, Idaho 2° quadrangle.--Continued

Clayton	RP 0533	EGV 296	44	16	52	114	28	05	50	150
	RP 0536	EGV 299	44	27	44	114	40	52	20	
	RP 0536-A	EGV 300	44	27	45	114	40	53	10	
	TP 0007	EGV 378	44	17	26	114	24	25	20	
	TP 0008-A	EGV 385	44	17	56	114	24	08		300
	TP 0021	EGV 398	44	16	24	114	27	34	10	
	TP 0023	EGV 400	44	17	26	114	28	22	50	
	TP 0024	EGV 401	44	17	56	114	28	35	30	
	TP 0025	EGV 402	44	17	58	114	28	32	70	
	TP 0203	EGV 163	44	15	15	114	26	42	500	
Custer	TP 0139	EGP 092	44	23	56	114	39	58	700	
	TP 0158	EGP 112	44	25	56	114	43	08		100
	TP 0161	EGP 115	44	25	49	114	43	36	30	
	TP 0162	EGP 116	44	26	13	114	43	45	50	100
	TP 0163	EGP 117	44	26	39	114	44	10	20	
	TP 0164	EGP 118	44	26	54	114	44	02	20	
	TP 0165	EGP 119	44	27	16	114	44	20	10	
Degan Mt.	RP 0481	EGV 116	44	57	11	114	00	00	30	
	RP 0481-A	EGV 117	44	57	11	114	00	00	20	
	RP 0478-A	EGV 112	44	54	33	114	01	03	20	100
	RP 0479	EGV 114	44	54	15	114	01	17	10	100
	RP 0480	EGV 115	44	54	08	114	00	10	50	
East Basin Creek	EP 0018	EHQ 624	44	20	47	114	45	09		100
Edaho Mt.	BP 0184	EIM 021	44	06	58	115	13	00	10	100
Eightmile Mt.	BP 0191	EIM 028	44	11	28	115	19	18	10	
	BP 0192	EIM 029	44	12	46	115	22	16	20	
	BP 0193	EIM 030	44	12	47	115	22	17	10	
	DP 0119	EIL 741	44	14	24	115	18	30	200	
	DP 0120	EIL 742	44	14	23	115	18	22	1000	
	EP 0158	EIL 869	44	10	53	115	19	20	100	
	EP 0159	EIL 870	44	10	53	115	19	58	10	
Elk Meadow	BP 0018	EHQ 829	44	21	26	115	02	56	20	
	BP 0019	EHQ 830	44	21	21	115	02	51	20	
	BP 0021	EHQ 832	44	21	57	115	05	16	20	
	BP 0022	EHQ 833	44	21	09	115	06	11	20	
Fitsum Summit	DP 0096	EIL 719	44	54	16	115	54	50		100
Garden Valley	CP 0135	EGK 486	44	04	18	115	45	25	30	
	CP 0136	EGK 487	44	05	48	115	45	18	50	
	CP 0141	EGK 492	44	04	36	115	45	21	30	
	DP 0126	EIL 748	44	02	26	115	46	38	100	500
	EP 0171	EIL 883	44	11	56	115	48	14		200

TABLE 2. Selected Mo and W concentrations from nonmagnetic heavy-mineral concentrates from the Challis, Idaho 2° quadrangle.--Continued

Greyhound Ridge	BP 0153	EIL 990	44	31	00	115	03 46	20	
	BP 0154	EIL 991	44	32	20	115	04 12	10	
	BP 0155	EIL 992	44	32	33	115	04 12		200
	BP 0156	EIL 993	44	32	22	115	03 55	50	100
	BP 0158	EIL 995	44	32	26	115	01 26		150
	BP 0160	EIL 997	44	22	56	155	00 58		150
	BP 0161	EIL 998	44	33	28	115	07 10	10	
	BP 0162	EIL 999	44	33	24	115	07 08	10	
	BP 0164	EIM 001	44	34	52	115	04 22		100
	CP 0239	EGK 863	44	31	00	115	14 30	20	
	CP 0240	EGK 864	44	32	26	115	10 18	30	100
	CP 0241	EGK 865	44	33	20	115	11 00	10	
	CP 0242	EGK 866	44	34	15	115	10 54	20	1000
	CP 0253	EGK 875	44	29	47	115	13 53	10	
	CP 0254	EGK 876	44	35	00	115	11 36	10	
	CP 0256	EGK 878	44	34	18	115	12 10	20	100
	CP 0258	EGK 879	44	33	36	115	12 12	20	200
	CP 0258-A	EGK 880	44	33	36	115	12 12	20	100
	CP 0259	EGK 882	44	33	48	115	13 42	700	200
	CP 0260	EGK 883	44	35	52	115	12 20	20	
	CP 0261	EGK 884	44	35	48	115	12 23	20	100
	CP 0262	EGK 885	44	35	48	115	12 30	20	100
	CP 0264	EGK 886	44	36	25	115	12 35	20	100
	CP 0278	EGK 905	44	37	12	115	13 36	20	100
	CP 0279	EGK 906	44	32	48	115	08 36	30	100
	CP 0281	EGK 910	44	34	30	115	06 48		100
Hat Creek	RP 0483	EGV 120	44	52	18	114	02 21	20	
	RP 0486	EGV 123	44	51	10	114	00 02	10	
Herd Lake	CP 0121	EGH 018	44	02	35	114	14 25	30	
	CP 0120	EGH 017	44	02	40	114	14 27		100
Horse Basin	RP 0143	EGK 547	44	08	28	114	02 17	30	
	RP 0143-A	EGK 548	44	08	28	114	02 17	30	
	WP 0036	EGH 426	44	08	10	114	00 03	10	
	WP 0037	EGH 427	44	08	37	114	00 00	30	
Jackson Peak	EP 0169	EIL 881	44	01	02	115	25 42		100
	EP 0170	EIL 882	44	01	12	115	26 52	20	
Jerry Peak	WP 0020	EGH 410	44	01	15	114	02 50	20	
	WP 0033	EGH 423	44	05	18	114	00 00	50	
	WP 0035	EGH 425	44	07	52	114	00 00	30	
Knapp Lake	CP 0179-A	EGK 476	44	25	19	114	54 55		100
	CP 0180	EGK 477	44	25	35	114	54 56		100
	CP 0183	EGK 481	44	25	25	114	56 18	20	
	CP 0184	EGK 482	44	24	49	114	59 20	10	

TABLE 2. Selected Mo and W concentrations from nonmagnetic heavy-mineral concentrates from the Challis, Idaho 2° quadrangle.--Continued

Knapp Lake	CP 0188	EGK 325	44	24	19	114 57 12	10	100
	CP 0191	EGK 327	44	24	22	114 56 48	10	
	CP 0195	EGK 331	44	25	39	114 52 32	300	
	CP 0209	EGK 346	44	29	39	114 58 45		200
	CP 0300	EGK 928	44	28	32	114 58 37	10	
	CP 0301	EGK 929	44	23	40	114 58 50	20	100
	CP 0303	EGK 931	44	23	33	114 58 55		200
	CP 0304	EGK 932	44	28	05	114 55 20	20	
	CP 0306	EGP 236	44	27	40	114 55 07	20	200
Langer Peak	BP 0142	EIL 979	44	26	39	115 05 25	20	
	BP 0143	EIL 980	44	26	40	115 05 18	15	
	BP 0146	EIL 983	44	27	05	115 03 04	20	
	BP 0147	EIL 984	44	27	50	115 01 34	10	
	BP 0148	EIL 985	44	28	28	115 01 12	15	
	BP 0149	EIL 986	44	28	59	115 00 34		500
	BP 0151	EIL 988	44	29	02	115 00 16	10	100
	BP 0152	EIL 989	44	30	50	115 04 04	10	100
	DP 0091	EIL 714	44	27	21	115 05 52		100
Little Antelope Flat	RP 0510	EGV 271	44	23	21	114 05 35	20	
Log Mt.	BP 0177	EIM 014	44	50	58	115 34 25	10	
	BP 0178	EIM 015	44	47	12	115 31 06	20	
Lone Pine Peak	TP 0030	EIM 407	44	15	26	114 11 48	10	
Meyers Cove	DP 0057-A	EIM 040	44	51	27	114 23 50	10	
Miller Mt. East	BP 0195	EIM 032	44	08	00	115 28 23		100
	EP 0161	EIL 872	44	10	30	115 23 44	15	
	EP 0162	EIL 873	44	10	27	115 24 05	10	
Mt. Jorden	DP 0012	EHQ 763	44	25	24	114 51 35	50	
	DP 0013	EHQ 764	44	25	27	114 51 35	50	100
	DP 0014	EHQ 759	44	26	18	114 48 15		500
	DP 0016	EHQ 768	44	25	25	114 51 09	50	
Opal Lake	DP 0051	EIL 018	44	59	58	114 19 32		100
Paddy Flat	EP 0134	EIL 844	44	50	22	115 55 47		200
Pine Flat	CP 0143	EGK 494	44	04	20	115 44 22	50	
	CP 0144	EGK 495	44	04	18	115 43 40	30	
	DP 0129	EIL 751	44	04	01	115 43 42	50	

TABLE 2. Selected Mo and W concentrations from nonmagnetic heavy-mineral concentrates from the Challis, Idaho 2° quadrangle.

Pinyon Peak	CP 0307	EGP 237	44	30	04	114	54	23		300
	CP 0310	EGP 240	44	32	16	114	52	43		200
	CP 0310-A	EGP 241	44	32	16	114	52	43		100
	CP 0311	EGP 243	44	32	15	114	52	54		200
	CP 0312	EGP 244	44	31	56	114	56	12		100
	CP 0324-A	EGP 257	44	31	18	114	56	33		100
	CP 0325	EGP 259	44	31	12	114	59	17		2000
	CP 0326	EGP 260	44	32	21	114	59	03		2000
	CP 0327	EGP 261	44	32	18	114	59	09		1000
	CP 0328	EGP 262	44	32	58	114	59	15		100
	CP 0328-A	EGP 263	44	32	58	114	59	15		2000
	DP 0017	EHQ 769	44	35	30	114	56	15		700
	DP 0018	EHQ 770	44	34	23	114	59	05		100
Potaman Peak	EP 0020	EHQ 626	44	13	00	114	29	10		100
	RP 0515	EGV 276	44	14	36	114	26	06	10	
	RP 0517	EGV 278	44	14	24	114	25	47	20	
	TP 0234	EGV 200	44	11	52	114	24	15		50
Rock Creek	DP 0065	EIM 049	44	39	25	114	37	23	10	
Sheldon Peak	DP 0007	EHQ 759	44	37	52	114	36	16		100
Stibnite	DP 0112	EIL 734	44	59	20	115	20	35	30	
	EP 0152	EIL 863	44	57	14	115	17	24		100
Sunbeam	EP 0017	EHQ 623	44	20	46	114	40	18	50	200
	MP 0149	EGK 935	44	21	06	114	43	27		150
	MP 0152	EGK 940	44	20	23	114	43	25	20	
	MP 0153	EGK 941	44	19	58	114	43	05		200
	MP 0154	EGK 942	44	19	22	114	42	51		200
	MP 0155	EGK 943	44	19	06	114	41	52		200
	MP 0156	EGK 944	44	19	08	114	41	50		500
	MP 0157	EGK 945	44	19	04	114	42	36		500
	TP 0221	EGH 185	44	19	00	114	38	30		300
	TP 0223	EGH 187	44	18	12	114	38	49		200
	TP 0226	EGH 192	44	16	44	114	39	04		200
	TP 0227	EGH 193	44	16	23	114	39	05		1500
	TP 0228	EGH 194	44	15	30	114	38	52		500
	TP 0233	EGH 199	44	21	23	114	44	16		150
Teapot Mt.	BP 0170	EIM 007	44	52	55	115	42	36		100
Thompson Creek	EP 0175	EIL 887	44	15	28	114	30	52		200
	EP 0176	EIL 888	44	16	01	114	30	48	10	100
	EP 0178	EIL 890	44	17	12	114	31	47		150
	EP 0179	EIL 891	44	17	13	114	32	36	20	300
	EP 0180	EIL 892	44	17	27	114	33	17		500
	EP 0181	EIL 893	44	17	34	114	34	18	10	700
	EP 0182	EIL 894	44	18	04	114	34	45	50	1000

TABLE 2. Selected Mo and W concentrations from nonmagnetic heavy-mineral concentrates from the Challis, Idaho 2° quadrangle.--Continued

Thompson Creek	EP 0183	EIL 895	44	18	24	114	34	54	30	1000
	EP 0184	EIL 896	44	18	00	114	35	12	100	1000
	EP 0185	EIL 897	44	19	31	114	35	22	100	2000
Tyee Mt.	BP 0185	EIM 022	44	00	16	115	16	12		100
	BP 0186	EIM 023	44	00	01	115	17	34	10	100
	BP 0187	EIM 024	44	03	43	115	18	48		150
	BP 0190	EIM 027	44	04	03	115	21	15	20	100
	EP 0156	EIL 867	44	04	11	115	16	44	20	
	EP 0157	EIL 868	44	03	50	115	20	04	10	100
Warm Lake	CP 0196	EGK 332	44	36	45	115	15	04	30	
	CP 0266	EGK 890	44	40	24	115	32	00	20	
	CP 0270	EGK 894	44	42	36	115	33	34	10	100
	CP 0271	EGK 895	44	43	30	115	33	24		100
	CP 0271-A	EGK 896	44	43	30	115	33	24		100
	CP 0275	EGK 902	44	45	00	115	30	24	20	100
	CP 0276	EGK 903	44	43	12	115	30	10	10	
	CP 0282	EGK 911	44	39	12	115	32	24	10	
	CP 0288	EGK 917	44	37	57	115	31	24	30	
	CP 0331	EGP 267	44	33	28	114	57	50		100
Warm Lake	EP 0132	EIL 842	44	40	36	115	44	12		100
Yellowpine	DP 0111	EIL 733	44	55	20	115	26	10		200
Ziegler Basin	RP 0010	EGH 199	44	11	28	114	16	04	20	