GEOLOGICAL SURVEY OF CANADA

OPEN FILE 51

MOLYBDENUM AND TUNGSTEN IN SOME ACID PLUTONIC ROCKS OF SOUTHEAST YUKON TERRITORY

(Preliminary Report)

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Project 690036, Preliminary Report

Regional Geochemical Census of Plutonic Rocks in the Southeast Yukon

During the 1970 field season 74 bodies of acid plutonic rock were sampled in the area northeast of the Tintina Trench and between latitudes 62°40'N and 64°40'N. Amongst a broad range of major, minor and trace elements being analysed, the results for Mo and W show certain features of interest which are related to mineral potential. For this reason the data for these elements are being placed on open file.

The tabulations contain the following data:-

1) NTS map sheet number.
2) A Nmemonic name given to each pluton for identification.
3) The UTM coordinates of the central point of the pluton.
4) The number of sample sites in the pluton, 2 samples were collected per site, thus twice this number of samples have been analysed for the pluton.
5) The range of the data, i.e., highest and lowest value found.
6) The arithmetic mean of the data for the pluton.
7) The standard deviation of the data for the pluton.

The Mo and W were determined colorimetrically by Zinc Dithiol after an alkaline fusion, the analytical results are expressed in ppm. The detection limits of this method are 0.5 and 2.0 ppm respectively, thus values for Mo of 0.2 and for W of 1.0 represent samples where levels were below the detection limit. In both cases the distributions of the data are severely truncated at the lower end, resulting in skewed distributions. Strictly speaking it would be more correct to present the geometric means and logarithmic standard deviations. However, the impact of the data from an exploration viewpoint is reduced by doing so, for this reason the arithmetic means and standard deviations are presented. The data for Mo and W are related to the presence of molybdenite and scheelite or wolframite respectively.

PROJECT 690036, REGIONAL GEOCHEMISTRY OF ACID PLUTONIC ROCKS, S.E. YUKON

SUMMARY BY PLUTONS FOR MO

NTS	PLUTON	UTM	COORDINATES	SITES	RANGE OF VALUES		MEAN, PPM	STD DEV
105I	OGRADY	9	506600 6973500	55	.2	10.0	1.0	.9
105I	PELLYR	9	467000 6958200	7	.2	.2	.2	0
105I	HI-MIN	9	455900 6960700	5	.2	50.0	5.7	10.9
105I	MTWLSN	9	464400 6973100	6	.2	.2	.2	0
105I	S ITSI	9	450500 6966600	11	.2	2.0	.5	.4
105J	E ITSI	9	449000 6980000	15	.2	2.0	1.2	.8
105J	W ITSI	9	437300 6975600	21	.2	3.0	1.5	.5
105J	WNDYPK	9	402200 6982900	3	1.0	2.0	1.2	.3
105J	MTSHDN	9	393400 6956700	4	1.0	2.0	1.6	.3
105J	TG6923	9	365600 6970700	5	1.0	3.0	1.8	.6
105J	ORCHLK	9	352400 6894700	23	.2	2.0	.8	.5
105K	FLSCYN	8	645600 6884400	15	.2	6.0	1.6	.9
105K	MTSLUS	8	630000 6982500	30	.2	8.0	.9	.8
105K	SOLOPK	8	643500 6986000	2	.2	3.0	1.5	.1
105K	TG6609	8	646300 6981200	4	.2	2.0	.8	.6
105M	MNTOVL	8	454200 7065200	15	.2	1.0	.2	.1
105M	RPLKS1	8	512600 7083200	20	.2	1.0	.3	.2
105M	RPLKS2	8	524000 7073600	9	.2	.5	.2	.1
105M	MTHALD	8	459300 7080300	10	.2	1.0	.2	.1
105M	HGHLK2	8	509600 7030000	5	.2	1.0	.3	.2
105M	2BUTES	8	481200 7039300	15	.2	82.0	3.4	10.5
105M	MCRTHR	8	465800 6998700	74	.2	8.0	.3	.5
105N	LNSGRG	8	605000 7072700	11	1.0	3.0	1.6	.5
105N	MTAMTG	8	584600 7013400	14	.2	9.0	.8	1.2
105N	EAMSTG	8	591600 7016600	8	1.0	2.0	1.4	.4
105N	WAMSTG	8	568900 7020000	6	1.0	2.0	1.3	.3
105N	RSTYPK	8	606000 7020000	12	.2	.5	.3	.1
105N	TG5348	8	633700 7022800	3	.2	1.0	.6	.3
105N	TG6688	8	621700 7002800	4	1.0	4.0	1.9	.9
105N	HSKYDG	8	638700 6999700	2	1.0	2.0	1.8	.4
105N	TG6259	8	632200 7006800	2	1.0	2.0	1.5	0
1050	ICEBKT	9	441800 6999000	11	.2	.2	.2	0
1050	KEELPK	9	435600 7036800	18	.2	68.0	3.9	15.0
1050	UBCCMP	9	446200 7024400	7	.2	.2	.2	0
1050	ROSSRV	9	449200 6990000	23	.2	3.0	.7	.6
1050	TG6900	9	427000 7000900	22	.2	1.0	.2	.1
1050	ROGUER	9	353400 7061900	4	.2	2.0	.4	.5
1050	ROGUE1	9	373200 7051400	12	.2	.2	.2	0
1050	OLDCBN	9	381900 7065900	3	1.0	3.0	2.0	.5
1050	ARRWHD	9	397400 7059800	3	2.0	3.0	2.3	.3
1050	TG6904	9	380800 7031000	12	.2	4.0	1.8	.6
1050	HESSRV	9	406000 7050000	25	1.0	8.0	2.4	1.0
1050	HORNPK	9	390000 7051000	10	.2	4.0	1.7	1.1
1050	NDDRYL	9	381400 7017800	2	1.0	2.0	1.3	.4
1050	TG6764	9	390200 7008000	5	1.0	6.0	2.3	.7
1050	MTALLN	9	441800 7018200	53	.2	25.0	1.5	3.1
1050	RKSLMT	9	442500 7013000	18	.2	8.0	1.0	1.7
105P	KEELER	9	460000 7000000	18	.2	2.0	.5	.5
105P	CHRSTI	9	473700 6987400	24	.2	7.0	.7	.7
105P	NATLAR	9	479200 6993200	15	.2	2.0	.3	.3

PROJECT 690036, REGIONAL GEOCHEMISTRY OF ACID PLUTONIC ROCKS, S.E. YUKON

SUMMARY BY PLUTONS FOR MO

NTS	PLUTON	UTM	COORDINATES		SITES	RANGE OF VALUES		MEAN, PPM	STD DEV
105P	TG7654	9	455400	7027800	15	.2	8.0	.7	1.0
105P	TG7364	9	453400	7034700	11	.2	.2	.2	0
105P	TG7663	9	455600	7009400	9	.2	2.0	1.1	.4
106D	GLLGLC	8	456600	7099400	14	.2	.5	.2	.0
106D	PTTHLS	8	462000	7101200	24	.2	3.0	.7	.6
106D	LYNXCK	8	472500	7102400	15	.2	1.0	.3	.1
106D	HNSNLK	8	477800	7100000	18	.2	1.0	.2	.1
115P	ETHLLK	8	443700	7029500	4	.2	.2	.2	0
115P	STWRTX	8	401400	7040000	15	.2	2.0	.7	.5
115P	CRKDCK	8	426000	7000000	22	.2	1.0	.3	.2
115P	SCHLDM	8	437700	7073800	15	.2	1.0	.3	.1
115P	PLT 5K	8	437200	7067600	23	.2	3.0	.9	.5
115P	MNTOLK	8	440000	7064200	5	.2	1.0	.4	.2
115P	SNSHCK	8	421200	7078400	13	.2	3.0	.5	.4
115P	ERIDGE	8	415100	7074300	3	1.0	2.0	1.2	.3
115P	ESTRDG	8	416000	7074700	13	.2	2.0	.5	.3
115P	WSTRDG	8	398500	7080500	24	.2	19.0	.9	2.4
115P	VANCRK	8	401400	7071800	15	.2	2.0	.3	.3
115P	CLRCRK	8	380000	7070000	13	.2	1.0	.3	.1
115P	REDMTN	8	414800	7093600	15	.2	4.0	1.1	.7
115P	SENTRG	8	387700	7094500	31	.2	8.0	1.4	1.0
116B	TMBSTN	7	615500	7147100	28	.2	3.0	.6	.6
116B	CHNDND	7	589600	7155200	17	.2	4.0	.4	.6
116B	OBRNCK	7	635600	7131400	9	.2	3.0	1.4	.7

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SUMMARY BY PLUTONS FOR W

NTS	PLUTON	UTM COORDINATES	SITES	RANGE OF VALUES		MEAN, PPM	STD DEV
105I	OGRADY	9 506600 6973500	55	1.0	18.0	1.4	1.7
105I	PELLYR	9 467000 6958200	7	1.0	1.0	1.0	0
105I	HI-MIN	9 455900 6960700	5	1.0	2.0	1.1	.2
105I	MTWLSN	9 464400 6973100	6	1.0	1.0	1.0	0
105I	S ITSI	9 450500 6966600	11	1.0	1.0	1.0	0
105J	E ITSI	9 449000 6980000	15	1.0	1.0	1.0	0
105J	W ITSI	9 437300 6975600	21	1.0	12.0	1.3	1.2
105J	WNDYPK	9 402200 6982900	3	1.0	1.0	1.0	0
105J	MTSHDN	9 393400 6956700	4	1.0	1.0	1.0	0
105J	TG6923	9 365600 6970700	5	1.0	1.0	1.0	0
105J	ORCHLK	9 352400 6894700	23	1.0	1.0	1.0	0
105K	FLSCYN	8 645600 6884400	15	1.0	1.0	1.0	0
105K	MTSLUS	8 630000 6982500	30	1.0	1.0	1.0	0
105K	SOLOPK	8 643500 6986000	2	1.0	1.0	1.0	0
105K	TG6609	8 646300 6981200	4	1.0	1.0	1.0	0
105M	MNTOVL	8 454200 7065200	15	1.0	1.0	1.0	0
105M	RPLKS1	8 512600 7083200	20	1.0	2.0	1.0	.1
105M	RPLKS2	8 524000 7073600	9	1.0	4.0	1.2	.5
105M	MTHALD	8 459300 7080300	10	1.0	1.0	1.0	0
105M	HGHLK2	8 509600 7030000	5	1.0	1.0	1.0	0
105M	2BUTES	8 481200 7039300	15	1.0	480.0	29.5	66.7
105M	MCRTHR	8 465800 6998700	74	1.0	6.0	1.1	.4
105N	LNSGRG	8 605000 7072700	11	1.0	1.0	1.0	0
105N	MTAMTG	8 584600 7013400	14	1.0	4.0	1.4	.6
105N	EAMSTG	8 591600 7016600	8	1.0	1.0	1.0	0
105N	WAMSTG	8 568900 7020000	6	1.0	1.0	1.0	0
105N	RSTYPK	8 606000 7020000	12	1.0	4.0	1.3	.6
105N	TG5348	8 633700 7022800	3	1.0	2.0	1.2	.3
105N	TG6688	8 621700 7002800	4	1.0	8.0	1.9	1.8
105N	HSKYDG	8 638700 6999700	2	1.0	1.0	1.0	0
105N	TG6259	8 632200 7006800	2	1.0	1.0	1.0	0
1050	ICEBKT	9 441800 6999000	11	1.0	1.0	1.0	0
1050	KEELPK	9 435600 7036800	18	1.0	24.0	1.7	2.7
1050	UBCCMP	9 446200 7024400	7	1.0	1.0	1.0	0
1050	ROSSRV	9 449200 6990000	23	1.0	1.0	1.0	0
1050	TG6900	9 427000 7000900	22	1.0	4.0	1.1	.3
1050	ROGUER	9 353400 7061900	4	1.0	1.0	1.0	0
1050	ROGUE1	9 373200 7051400	12	1.0	1.0	1.0	0
1050	OLDCBN	9 381900 7065900	3	1.0	1.0	1.0	0
1050	ARRWHD	9 397400 7059800	3	1.0	4.0	1.5	.9
1050	TG6904	9 380800 7031000	12	1.0	1.0	1.0	0
1050	HESSRV	9 406000 7050000	25	1.0	1.0	1.0	0
1050	HORNPK	9 390000 7051000	10	1.0	1.0	1.0	0
1050	NDDRYL	9 381400 7017800	2	1.0	1.0	1.0	0
1050	TG6764	9 390200 7008000	5	1.0	8.0	1.7	1.6
1050	MTALLN	9 441800 7018200	53	1.0	80.0	3.5	8.0
1050	RKSLMT	9 442500 7013000	18	1.0	1.0	1.0	0
105P	KEELER	9 460000 7000000	18	1.0	16.0	1.8	3.5
105P	CHRSTI	9 473700 6987400	24	1.0	14.0	1.3	1.3
105P	NATLAR	9 479200 6993200	15	1.0	16.0	1.8	2.1

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SUMMARY BY PLUTONS FOR W

NTS	PLUTON	UTM COORDINATES	SITES	RANGE OF VALUES		MEAN, PPM	STD DEV
105P	TG7654	9 455400 7027800	15	1.0	20.0	2.2	3.2
105P	TG7364	9 453400 7034700	11	1.0	1.0	1.0	0
105P	TG7663	9 455600 7009400	9	1.0	1.0	1.0	0
106D	GLLGLC	8 456600 7099400	14	1.0	1.0	1.0	0
106D	PTTHLS	8 462000 7101200	24	1.0	72.0	9.7	13.3
106D	LYNXCK	8 472500 7102400	15	1.0	34.0	2.8	4.5
106D	HNSNLK	8 477800 7100000	18	1.0	1.0	1.0	0
115P	ETHLLK	8 443700 7029500	4	1.0	1.0	1.0	0
115P	STWRTX	8 401400 7040000	15	1.0	4.0	1.2	.5
115P	CRKDCK	8 426000 7000000	22	1.0	1.0	1.0	0
115P	SCHLDM	8 437700 7073800	15	1.0	56.0	5.0	10.7
115P	PLT 5K	8 437200 7067600	23	1.0	2.0	1.0	.1
115P	MNTOLK	8 440000 7064200	5	1.0	1.0	1.0	0
115P	SNSHCK	8 421200 7078400	13	1.0	20.0	2.1	2.7
115P	ERIDGE	8 415100 7074300	3	1.0	1.0	1.0	0
115P	ESTRDG	8 416000 7074700	13	1.0	40.0	4.2	6.5
115P	WSTRDG	8 398500 7080500	24	1.0	140.0	5.2	17.3
115P	VANCRK	8 401400 7071800	15	1.0	1.0	1.0	0
115P	CLRCRK	8 380000 7070000	13	1.0	2.0	1.1	.2
115P	REDMTN	8 414800 7093600	15	1.0	4.0	1.4	.8
115P	SENTRG	8 387700 7094500	31	1.0	22.0	2.1	2.7
116B	TMBSTN	7 615500 7147100	28	1.0	8.0	1.5	1.1
116B	CHNDND	7 589600 7155200	17	1.0	2.0	1.0	.1
116B	OBRNCK	7 635600 7131400	9	1.0	1.0	1.0	0