

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Coordinates for and analytical values of 30 rock, and 7 panned-concentrate samples included in the Butte 1° x 2° quadrangle between the latitudes of 46°00'00" and 46°30'00" N., and the longitudes of 112°00'00" and 112°30'00" W.

by

W. L. Campbell, S. K. McDaniel, and R. T. Hopkins, Jr.

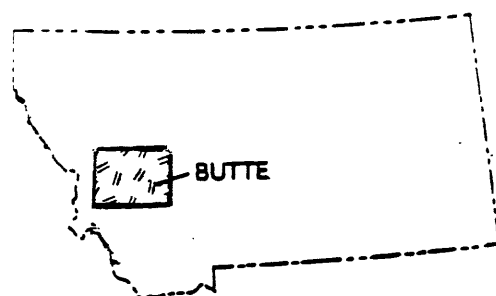
Open-File Report 82-617-*I*

1982

Chapter I

This report is preliminary and had not been reviewed for conformity with U.S. Geological Survey Editorial standards

# STUDY AREA



## ANALYSES OF SAMPLES AVAILABLE AS OF JUNE, 1982

### BUTTE 1° x 2° CUSMAP QUADRANGLE

<p><b>B</b></p> <p>221 r 494 s 261 p</p>	<p><b>C</b></p> <p>109 r 377 s 237 p</p>	<p><b>D</b></p> <p>21 r 158 s 91 p</p>	<p><b>E</b></p> <p>43 r 19 p</p>	<p>47°00'</p>
<p><b>F</b></p> <p>486 r 711 s 784 p</p>	<p><b>G</b></p> <p>322 r 327 s 369 p</p>	<p><b>H</b></p> <p>78 r 275 s 220 p</p>	<p><b>I</b></p> <p>30 r 7 p</p>	<p>46°30'</p>
<p>114°00'</p>	<p>113°30'</p>	<p>113°00'</p>	<p>112°30'</p>	<p>112°00'</p>

FIGURE 1. Chart of samples analyzed and location map of study area

# CHAPTER I

LATITUDE 46°00'-46°30' LONGITUDE 112°00'-112°30'

TABLE 1. ROCK SAMPLE LOCALITY AND ANALYSES IN THE BUTTE 1° X 2° CUSMAP QUADRANGLE, MONTANA (continued)

SAMPLE	LATITUDE	LONGITUDE	S-FEX	S-MGZ	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE
BAS0179R	46 25 21	112 17 20	1.5	.07	<.05	.100	200	5.0	N	N	10	200	5.0
BAS0182R	46 25 40	112 17 15	1.5	.07	.15	.030	300	5.0	<200	N	20	100	3.0
E0020A	46 10 45	112 3 10	.3	10.00	15.00	.100	150	N	N	N	50	<20	1.0
E0021C	46 10 55	112 3 35	1.5	1.50	.10	.200	50	1.0	N	N	150	500	1.5
E0026B	46 12 20	112 5 55	2.0	7.00	10.00	.150	700	N	N	N	N	500	1.0
E0026C	46 12 20	112 5 55	2.0	.70	.15	.150	300	N	N	N	10	150	2.0
E0166A	46 28 29	112 14 44	5.0	.15	<.05	.070	>5,000	300.0	>10,000	N	10	70	1.5
E0166B	46 28 29	112 14 44	7.0	.02	<.05	.002	100	500.0	>10,000	N	N	20	N
E0166C	46 28 29	112 14 44	10.0	<.02	<.05	.002	1,500	3,000.0	>10,000	10	N	20	N
E0166D	46 28 29	112 14 44	10.0	<.02	<.05	.002	3,000	2,000.0	>10,000	N	N	20	N
E0166E	46 28 29	112 14 44	.7	.07	.07	.200	50	10.0	200	N	50	50	1.5
E0168A	46 29 55	112 14 50	20.0	.20	<.05	.015	200	200.0	>10,000	N	>2,000	20	1.5
E0168B	46 29 25	112 14 50	7.0	1.50	3.00	.015	5,000	1,500.0	7,000	N	500	20	1.5
E0168C	46 29 25	112 14 50	10.0	1.00	.10	.050	300	150.0	>10,000	N	>2,000	20	5.0
E9126A	46 25 38	112 17 12	2.0	.03	<.05	.010	70	2.0	N	N	10	N	2.0
E9126B	46 25 38	112 17 12	.5	.02	<.05	.010	150	2.0	N	N	15	N	5.0
JEF0173R	46 29 15	112 14 36	10.0	1.50	.70	.150	300	3.0	700	N	>2,000	20	1.0
JEF0175R	46 29 15	112 14 36	7.0	.30	<.05	.200	300	200.0	>10,000	N	2,000	150	1.5
JEF0176R	46 29 15	112 14 36	5.0	.30	.05	.500	150	30.0	5,000	N	300	500	1.5
JEF0177R	46 28 6	112 14 55	2.0	.20	.07	.150	5,000	20.0	2,000	N	200	1,000	2.0
JEF0178R	46 28 6	112 14 55	1.0	.30	.20	.200	700	.5	N	N	200	1,500	2.0
JEF2055R	46 20 0	112 7 28	3.0	.70	.15	.500	300	20.0	N	N	70	1,000	1.5
JEF2056R	46 20 0	112 7 28	.7	.70	.07	.300	300	20.0	N	N	150	300	1.5
JEF2057R	46 18 39	112 10 0	3.0	.20	.07	.150	>5,000	50.0	7,000	N	200	100	1.5
JEF2061R	46 19 50	112 12 31	3.0	.30	<.05	.200	700	30.0	300	N	300	150	1.5
JEF2064R	46 21 30	112 10 25	5.0	.50	.05	.500	300	150.0	1,500	N	300	300	<1.0
JEF2065R	46 21 30	112 10 25	1.5	.30	<.05	1.000	300	15.0	300	N	150	700	N
JEF2067R	46 22 0	112 8 23	7.0	.02	<.05	.070	200	150.0	>10,000	15	300	30	<1.0
JEF2073R	46 23 12	112 6 44	10.0	.30	<.05	.200	500	50.0	3,000	N	300	500	1.5
JEF2080R	46 23 7	112 7 23	1.5	.50	<.05	.300	300	30.0	1,000	20	150	150	2.0

# CHAPTER I

LATITUDE 46°00'-46°30' LONGITUDE 112°00'-112°30'

TABLE 1. ROCK SAMPLE LOCALITY AND ANALYSES IN THE BUTTE 1° X 2° CUSMAP QUADRANGLE, MONTANA (continued)

SAMPLE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V	S-W
BA50179R	N	N	<5	<10	10	20	20	70	<5	50	N	<5	N	N	10	N
BA50182R	N	N	N	10	20	20	<5	70	5	70	N	<5	10	N	<10	N
EO020A	N	N	N	15	<5	20	N	N	5	30	N	5	N	100	10	N
EO021C	N	N	<5	100	20	70	N	N	7	30	N	15	N	<100	50	N
EO026B	N	N	7	50	30	20	N	N	20	10	N	5	N	100	30	N
EO026C	N	N	5	20	20	20	70	N	70	15	N	5	N	N	200	N
EO166A	10	>500	7	N	1,000	20	N	N	10	>20,000	500	<5	20	N	30	N
EO166B	1,000	N	70	<10	7,000	20	N	N	5	10,000	2,000	N	N	N	10	N
EO166C	10	>500	N	<10	20,000	20	N	N	<5	>20,000	7,000	N	70	N	<10	N
EO166D	<10	>500	N	<10	15,000	20	N	N	<5	>20,000	7,000	N	70	N	<10	200
EO166E	N	N	N	50	30	20	<5	N	5	500	N	5	N	<100	70	<50
EO168A	N	150	N	15	200	N	N	N	<5	>20,000	200	N	N	N	10	N
EO168B	N	>500	7	<10	20,000	30	N	N	<5	>20,000	10,000	<5	N	N	10	N
EO168C	10	N	5	<10	700	N	N	N	5	>20,000	300	5	10	200	70	N
E9126A	N	N	N	N	10	N	N	50	N	20	N	N	N	N	N	N
E9126B	N	N	N	N	5	N	N	50	N	<10	N	N	N	N	N	N
JEFO173R	N	N	10	15	500	<20	<5	N	30	150	N	20	70	500	200	N
JEFO175R	10	100	5	10	700	20	N	<20	7	15,000	1,000	10	15	<100	100	N
JEFO176R	70	N	7	30	150	30	15	<20	5	3,000	<100	7	N	N	100	<50
JEFO177R	<10	N	5	N	500	20	<5	N	5	2,000	N	5	N	<100	20	N
JEFO178R	N	N	7	<10	7	20	N	<20	5	70	N	5	N	200	15	N
JEFO2055R	10	N	<5	30	200	30	15	N	5	2,000	N	10	20	<100	150	N
JEFO2056R	30	N	<5	<10	15	30	N	N	<5	7,000	N	10	15	N	70	N
JEFO2057R	N	N	5	<10	150	20	N	N	5	700	<100	5	N	N	50	N
JEFO2061R	N	N	5	<10	500	30	N	N	5	1,000	100	7	N	N	50	N
JEFO2064R	20	N	5	70	150	20	N	N	5	1,000	<100	15	N	<100	200	N
JEFO2065R	<10	N	5	70	20	30	N	N	5	300	N	15	N	N	200	N
JEFO2067R	N	N	N	<10	5,000	20	N	N	<5	>20,000	200	5	30	<100	30	<50
JEFO2073R	15	N	<5	<10	300	20	15	N	5	5,000	N	5	15	N	70	N
JEFO2080R	N	N	5	50	100	30	<5	N	5	1,000	N	5	N	N	70	N

# CHAPTER I

LATITUDE 46°00'--46°30' LONGITUDE 112°00'--112°30'

TABLE 1. ROCK SAMPLE LOCALITY AND ANALYSES IN THE BUTTE 1° X 2° CUSMAP QUADRANGLE, MONTANA (continued)

SAMPLE	S-Y	S-ZN	S-ZR	S-TH	AA-AU	AA-CU	AA-PB	AA-ZN	AA-AG	AA-CD	AA-BI	AA-SB
BAS0179R	30	N	200	N	--	9	27	6	2.05	.13	1	2
BAS0182R	50	N	100	N	1.20	21	47	32	2.62	.29	N	5
E0020A	<10	N	50	N	<.05	--	--	--	--	--	--	--
E0021C	10	N	50	N	<.05	--	--	--	--	--	--	--
E0026B	20	N	50	N	<.05	--	--	--	--	--	--	--
E0026C	20	N	70	N	<.05	--	--	--	--	--	--	--
E0166A	10	>10,000	150	N	<.05	--	--	--	--	--	--	--
E0166B	N	1,500	N	N	.15	--	--	--	--	--	--	--
E0166C	N	>10,000	N	N	<.05	--	--	--	--	--	--	--
E0166D	N	>10,000	N	N	.70	--	--	--	--	--	--	--
E0166E	15	300	150	N	.07	--	--	--	--	--	--	--
E0168A	N	>10,000	N	N	<.05	--	--	--	--	--	--	--
E0168B	<10	>10,000	20	N	<.05	--	--	--	--	--	--	--
E0168C	<10	700	30	N	1.10	--	--	--	--	--	--	--
E9126A	30	N	100	N	.50	--	--	--	--	--	--	--
E9126B	20	N	70	N	.45	--	--	--	--	--	--	--
JEF0173R	N	N	100	N	.06	52	68	10	1.24	1.27	1	3
JEF0175R	<10	10,000	100	N	1.60	210	>1,000	550	79.70	9.80	7	410
JEF0176R	30	300	100	N	--	120	>1,000	172	23.40	9.33	36	18
JEF0177R	10	1,500	70	N	--	200	>1,000	300	7.42	5.68	4	8
JEF0178R	15	N	70	N	--	3	29	17	.16	.30	N	1
JEF2055R	20	700	150	N	--	160	2,200	640	33.30	1.95	8	1
JEF2056R	15	N	150	N	--	2	2,000	9	30.00	<.05	4	1
JEF2057R	<10	5,000	100	N	--	78	1,000	520	40.00	3.00	1	20
JEF2061R	<10	700	150	N	--	110	1,000	50	31.20	.35	<1	15
JEF2064R	15	N	150	N	--	145	240	45	160.00	.70	4	15
JEF2065R	20	N	200	N	--	3	25	2	9.00	.08	1	3
JEF2067R	N	1,500	20	N	--	800	>5,000	140	100.00	5.70	2	170
JEF2073R	15	700	150	N	--	165	>5,000	400	50.00	1.00	8	28
JEF2080R	10	N	200	N	--	110	350	37	40.60	.12	1	1

# CHAPTER I

LATITUDE 46°00'-48°30' LONGITUDE 112°00'-112°30'

TABLE 2.PAN-CONCENTRATE SAMPLE LOCALITY AND ANALYSES IN THE BUTTE 1°x2°CUSMAP QUADRANGLE, MONTANA(continued)

SAMPLE	LATITUDE	LONGITUDE	S-FEX	S-MGX	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
BAS183	46 25 40	112 17 15	10	<.05	<.50	.15	150	150	N	200	<20	70	3	N
BAS183P	46 25 40	112 17 15	10	.10	<.50	.15	700	10	N	N	20	500	5	N
JEF180P	46 29 18	112 14 40	3	.30	.10	.20	300	100	>10,000	N	700	100	1	<10
JEF180P	46 29 18	112 14 40	20	<.05	<.10	.15	500	500	>20,000	N	700	50	N	<20
JEF2068P	46 21 46	112 7 12	20	.07	.15	.20	>10,000	300	7,000	N	150	50	2	20
JEF2075P	46 23 12	112 6 44	3	.20	<.10	.70	700	700	1,500	N	500	2,000	2	300
JEF2076P	46 23 12	112 6 44	3	.20	.15	.50	200	1,500	2,000	N	200	700	3	200

# CHAPTER 1

LATITUDE 46°00'–46°30' LONGITUDE 112°00'–112°30'

TABLE 2. PAN-CONCENTRATE SAMPLE LOCALITY AND ANALYSES IN THE BUTTE 1°x2° CUSMAP QUADRANGLE, MONTANA (continued)

SAMPLE	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y
BAS183	N	15	<20	150	N	10	70	10	700	N	<10	N	N	20	N	70
BAS183P	N	<10	<20	100	<50	<10	70	10	700	N	N	N	N	50	N	50
JEF180P	70	5	10	700	20	N	<20	5	20,000	700	5	10	<100	50	N	10
JEF180P	200	20	N	1,500	<50	N	N	30	50,000	1,500	<10	N	N	30	N	20
JEF2068P	700	50	30	500	<50	N	N	70	>50,000	300	<10	N	<200	70	N	20
JEF2075P	N	<10	30	300	700	N	N	10	>50,000	500	<10	N	<200	70	<100	150
JEF2076P	N	<10	30	1,000	50	N	N	10	>50,000	200	<10	30	500	50	N	<20

# CHAPTER 1

LATITUDE 46°00'–46°30' LONGITUDE 112°00'–112°30'

TABLE 2. PAN-CONCENTRATE SAMPLE LOCALITY AND ANALYSES IN THE BUTTE 1°x2° CUSMAP QUADRANGLE, MONTANA (continued)

SAMPLE	S-ZN	S-ZR	S-TH	AA-AU
BAS183	2,000	700	N	--
BAS183P	1,500	300	N	--
JEF180P	7,000	150	N	1.14
JEF180P	20,000	200	N	--
JEF2068P	>20,000	50	N	.29
JEF2075P	700	500	N	<.05
JEF2076P	700	200	N	31.20