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plus 1 plate, Series A

CATEGORY VI (Colorado Plateau  
preliminary reserve estimate  
for ore blocks)

UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY



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PRELIMINARY RESERVE STATEMENT 14

RESERVE BLOCKS B AND C, LEGIN GROUP AREA, SAN MIGUEL COUNTY, COLORADO

By

Henry Bell

May 1951

Trace Elements Memorandum Report 190

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USGS-TEM Report 190

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PRELIMINARY RESERVE STATEMENT 14  
RESERVE BLOCKS B AND C, LEGIN GROUP AREA, SAN MIGUEL COUNTY, COLORADO

By Henry Bell

May 1951

Location: E $\frac{1}{2}$  sec. 28, T. 43 N., R. 19 W., New Mexico principal  
meridian.

Ownership: Government:  
Public land  
Sam and King No. 2 claims; leased to T. H. Skidmore,  
lease No. AT-(05-1)-MI-1.  
Otero; (not leased).  
Private:  
Black Jack claim; Sitton and Dulaney, Inc.  
(according to affidavit of ownership, September 1950).  
Uintah claim; W. E. Haldane, J. R. Munro, and D. G. Son  
(according to affidavit of ownership, April 1950).

Access and  
nearest mill: Three miles by graded dirt road to Colorado Highway 80,  
thence  $\frac{1}{2}$  miles via Colorado Highway 80 and U. S.  
Highway 160 to AEC Monticello mill.

Reference: Trace Elements Memorandum Report 200, February 1951.

Reserves: Reserves are calculated as in detailed reports on  
drilling projects, using a thickness cut-off of 1 foot,  
and grade cut-offs of 0.10 percent  $U_3O_8$  or 1.0 percent  
 $V_2O_5$ . In reserve blocks penetrated by only two or  
three drill holes, drill-core samples may not  
necessarily be representative of the grade or thickness  
of the reserve block. Where assay values appear  
abnormal, data on the average grade of ore produced from  
nearby mines, and data from gamma-ray drill logs,  
were used to supplement the assay data. This reserve  
statement is preliminary and subject to revision.

Block B. Indicated: 1,500 short tons; average 0.30 percent  
 $U_3O_8$ , 1.9 percent  $V_2O_5$ .

Inferred: 900 short tons; average 0.25 percent  $U_3O_8$ ,  
1.5 percent  $V_2O_5$ .

Minimum depth to reserve block: 130 feet.

Minimum distance from reserve block to nearest mine  
working: about 850 feet westward to small inactive  
mine on the Black Jack claim.

PRELIMINARY RESERVE STATEMENT 14--Continued

Block C:           Indicated: 3,500 short tons; average 0.25 percent  
                    U<sub>3</sub>O<sub>8</sub>, 1.5 percent V<sub>2</sub>O<sub>5</sub>.

Inferred: none.

Minimum depth to reserve block: 75 feet.

Minimum distance from reserve block to nearest mine  
working: about 420 feet westward to small inactive  
mine on the Black Jack claim.

Discussion:       Reserve blocks B and C are roughly tabular continuous  
masses, perhaps containing local thickenings or rolls. These reserve  
blocks are in a zone containing additional layers of mineralized rock,  
and layers that extend away from and perhaps connect the reserve  
blocks. Most of these layers are below the thickness or grade cut-offs  
of the calculated reserves, although some material that is above  
the thickness and grade cut-offs may be present. If so, the minable  
reserves may total more than the calculated reserves.

Reserve block B, penetrated by drill holes 268, 272, and 281,  
probably averages 2 feet in thickness. Block C, penetrated by drill  
holes 261, 264, 264A, and 259, probably averages 3 feet in thickness.

No additional drilling is planned by the Geological Survey  
in these blocks.

Table of assay and gamma-ray data, reserve blocks B and C,  
 Legn group area, San Miguel County, Colorado

Geological Survey exploration 1948-1950. Assays by the Geological Survey 1948-1951.

Assay data listed under "block" (i.e. block B, etc.) are within the blocks of calculated reserves discussed in this report.

Assay data listed under "other holes" are within reserve blocks not discussed in this report, or are within areas from which no reserves are calculated because the samples recovered are too thin or too weakly mineralized to qualify for the selected grade and thickness cut-offs.

Gamma-ray intensity obtained by probing of drill holes with radiometric logging unit.

Abbreviations used for gamma-ray intensity:

- W Weak; concentrations of radioactive material in which the equivalent U<sub>3</sub>O<sub>8</sub> content probably ranges from 0.05% to 0.09%.
- S Strong; concentrations of radioactive material in which the equivalent U<sub>3</sub>O<sub>8</sub> content probably ranges from 0.10% to 0.99%.
- VS Very strong; concentrations of radioactive material in which the equivalent U<sub>3</sub>O<sub>8</sub> content probably is 1.0% or more.

Note: Barren holes are omitted from this table. Holes with intensities no greater than the background effect of barren rock are listed as "barren."

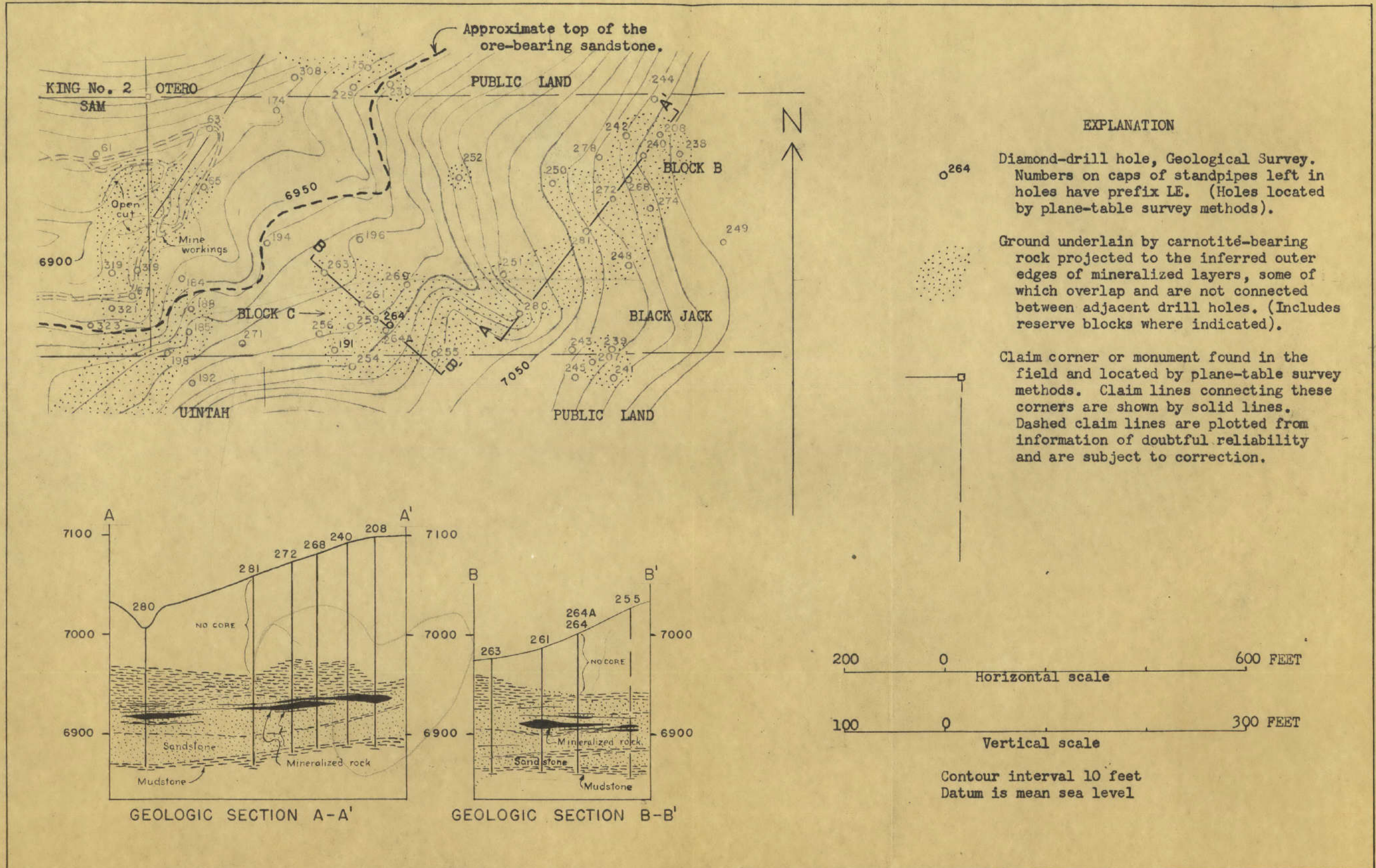
- 1/ Appreciable gamma-ray intensity attributed to contamination along walls of hole.
- 2/ Abandoned hole. Re-drilled as 264A.
- < Less than.

Hole No.	Assay data		Thickness (feet)	Percent			Gamma-ray intensity	Gamma-ray data		
	Depth in feet From	To		U <sub>3</sub> O <sub>8</sub>	V <sub>2</sub> O <sub>5</sub>	CaCO <sub>3</sub>		Depth in feet From	To	Thickness (feet)
Block B, Black Jack claim										
208	150.50	150.78	0.28	0.008	0.08	6.8	Not probed			
	151.11	151.79	0.28	0.006	0.13	7.1				
	152.59	153.09	0.50	0.006	0.09	4.4				
	154.74	155.30	0.56	0.008	0.06	5.9				
	156.55	157.33	0.78	0.014	0.32	23.4				
	157.57	158.50	0.93	0.010	0.34	6.8				
	158.50	159.10	0.60	0.048	1.17	0.93				
	159.10	162.05	2.95	0.009	0.25	2.7				
238	160.80	161.60	0.80	0.038	0.26	1.9	W	161.3	162.5	1.2
	161.60	162.35	0.75	0.025	0.16	2.5				
240	153.35	154.10	0.75	0.021	<0.05	2.9	W	152.5	153.2	0.7
	154.90	156.20	1.30	<0.01	<0.05	Undet.				
	156.20	157.00	0.80	0.064	1.39	0.3				
	157.00	157.70	0.70	0.055	0.60	<0.1				
	157.70	159.45	1.75	0.023	0.16	5.3				
242	143.45	143.60	0.15	0.010	0.34	0.3	W	142.8	143.6	0.8
	143.60	143.90	0.30	0.020	1.19	0.1				
	144.60	145.35	0.75	0.010	0.05	1.8				
248	132.70	132.95	0.25	0.006	<0.05	3.4	W	139.2	143.4	4.2
	134.45	135.45	1.00	0.022	<0.05	1.4				
	136.45	136.95	0.50	0.006	<0.05	2.4				
	139.25	139.75	0.50	0.010	0.26	2.0				
	139.90	143.10	3.20	0.022	0.25	6.6				
	143.10	144.10	1.00	0.017	0.09	3.5				
250	149.60	150.10	0.50	0.006	<0.05	1.9	Barren			
251	97.60	98.55	0.95	0.012	0.07	3.9	W	96.6	97.7	1.1
	100.35	103.00	2.65	0.014	<0.05	2.4				
268	145.70	147.70	2.00	0.011	<0.05	6.9	S 1/	149.8	150.8	0.4
	148.80	149.10	0.30	<0.01	<0.05	Undet.				
	149.10	149.70	0.60	0.26	1.63	6.3				
	149.70	150.90	1.20	0.22	0.44	19.1				
	150.90	151.70	0.80	0.84	3.73	6.6				
	151.70	152.40	0.70	0.15	1.11	16.6				
	152.40	155.05	2.65	0.011	0.10	8.2				
	272	139.80	141.40	1.60	0.012	<0.05				
142.40		143.00	0.60	0.006	<0.05	4.6				
143.00		143.80	0.80	0.19	0.53	3.2				

Table of assay and gamma-ray data, reserve blocks B and C,  
Lekin group area, San Miguel County, Colorado--Continued

Hole No.	Assay data			Percent			Gamma-ray data			
	Depth in feet From	To	Thickness (feet)	U <sub>308</sub>	V <sub>205</sub>	CaCO <sub>3</sub>	Gamma-ray intensity	Depth in feet From	To	Thickness (feet)
Block B, Black Jack claim--Continued										
272--Continued										
	143.80	145.10	1.30	0.026	0.44	6.0	W	144.8	145.9	1.1
	145.10	146.30	1.20	0.14	1.30	9.6	S	145.9	147.2	1.3
	146.30	146.80	0.50	0.11	7.40	0.4	S	149.6	150.0	0.4
	146.80	147.00	0.20	0.024	1.50	3.6				
	147.00	148.70	1.70	0.044	0.39	5.7				
	149.05	150.15	1.10	0.007	0.38	6.6				
274	150.30	151.30	1.00	0.009	<0.05	2.4	W	151.6	152.3	0.7
	151.55	151.80	0.25	<0.01	<0.05	Undet.	W	155.3	156.5	1.2
	152.05	152.35	0.30	0.021	<0.05	1.4				
	156.00	157.10	1.10	0.046	<0.05	0.8				
280	76.95	77.65	0.70	0.017	<0.05	9.6	W	85.2	86.5	1.3
	78.25	79.20	0.95	0.011	<0.05	8.8	W	88.5	89.3	0.8
	83.30	83.80	0.50	<0.01	<0.05	Undet.	S	89.3	90.6	1.3
	85.45	89.55	4.10	0.012	<0.05	5.2	S	94.1	94.7	0.6
	89.55	90.55	1.00	0.027	0.07	7.0	W	94.7	95.2	0.5
	90.55	92.05	1.50	0.009	<0.05	9.8				
	93.30	95.40	2.10	0.018	<0.05	6.3				
281	130.15	131.20	1.05	0.016	0.15	3.8	W	130.3	130.8	0.5
	131.20	131.70	0.50	0.17	0.35	9.5	S	130.8	131.8	1.0
	131.70	132.20	0.50	0.41	1.73	7.8	W	138.1	139.2	1.1
	132.20	132.80	0.60	0.23	1.48	0.6				
	132.80	133.10	0.30	0.034	0.33	2.5				
	139.10	140.10	1.00	0.018	0.12	2.0				
	153.00	153.25	0.25	<0.01	<0.05	Undet.				
Block C, Black Jack claim										
191	78.80	79.80	1.0	0.009	0.11	1.71	Not probed			
	82.17	83.46	1.29	0.018	0.38	3.0				
254	80.54	81.79	1.25	0.016	0.26	4.6	W	80.9	82.0	1.1
	82.04	82.54	0.50	0.008	0.35	2.8	W	96.6	101.3	4.7
	99.48	102.28	2.80	0.015	0.07	6.6				
255	109.95	110.55	0.60	0.020	0.05	0.7	W	121.0	122.7	1.7
	118.40	120.30	1.90	0.013	0.36	3.0				
	120.85	123.80	2.95	0.017	0.15	6.7				
259	61.50	62.00	0.50	<0.01	0.05	Undet.	W	58.9	59.2	0.3
	62.25	63.25	1.00	0.016	0.18	0.6	W	63.2	63.5	0.3
	63.50	64.00	0.50	0.009	<0.05	0.2				
	69.23	69.80	0.57	0.009	<0.05	2.8				
	69.80	72.80	2.40	0.048	0.21	3.8				
	72.20	75.10	2.90	0.016	0.41	0.4				
	75.10	75.30	0.20	0.064	0.33	8.2				
	75.30	76.40	1.10	0.15	0.40	3.5				
	76.40	77.20	0.80	0.019	0.27	7.8				
	77.20	77.90	0.70	0.15	1.07	2.8				
	77.90	78.70	0.80	0.024	0.63	4.8				
261	59.50	60.10	0.60	0.023	0.22	3.4	W	59.6	60.2	0.6
	68.97	69.22	0.25	0.016	0.20	2.0	W	71.3	71.8	0.5
	71.34	73.70	2.36	0.013	0.30	3.0	W	72.6	74.6	2.0
	73.70	74.80	1.10	0.055	1.07	0.6	S	74.6	76.4	1.8
	74.80	75.10	0.30	0.042	1.34	1.2	W	76.4	77.2	0.8
	75.10	75.70	0.60	0.18	1.37	1.7	S	77.2	78.3	1.1
	75.70	76.10	0.40	0.33	1.92	0.4				
	76.10	77.20	1.10	0.092	0.86	1.3				
	77.20	78.55	1.35	0.11	1.98	2.3				
	78.55	79.50	0.95	0.007	0.82	2.4				
263	88.10	88.85	0.75	0.019	<0.05	3.0	W	87.8	88.7	0.9
264 2/	80.43	81.93	1.50	0.009	0.05	2.6	Not probed			
	82.47	83.22	0.75	0.014	0.48	2.0				
	84.23	85.82	1.29	0.011	<0.05	4.6				
	90.88	92.10	1.22	0.010	0.28	1.5				
	92.10	92.60	0.50	0.003	4.46	0.1				
	92.60	93.40	0.80	0.035	0.27	2.1				
	93.40	94.10	0.70	0.049	1.33	4.5				
	94.10	96.20	2.10	0.040	1.78	0.8				
	96.20	96.70	0.50	0.21	1.23	<0.1				





Map and geologic sections of reserve blocks B and C, E<sub>2</sub> sec. 28, T. 43 N., R. 19 W.,  
Legion group area, San Miguel County, Colorado