

CHEMICAL ANALYSES

<b>A</b>		<b>G</b>	
1	Soft ore	3	Hard ore
Fe	56.75	Fe	32.53
SiO <sub>2</sub>	9.29	SiO <sub>2</sub>	4.82
Al <sub>2</sub> O <sub>3</sub>	2.86	Al <sub>2</sub> O <sub>3</sub>	3.89
CaCO <sub>3</sub>	.07	CaCO <sub>3</sub>	44.5
P	.50	P	.072
<b>B</b>		<b>H</b>	
1	Soft ore	4	Hard ore
Fe	56.1	Fe	32.78
SiO <sub>2</sub>	11.4	SiO <sub>2</sub>	7.28
Al <sub>2</sub> O <sub>3</sub>	.32	Al <sub>2</sub> O <sub>3</sub>	3.14
CaCO <sub>3</sub>	.43	CaCO <sub>3</sub>	38.49
P	.392	P	.51
2	Soft ore	5	Soft ore
Fe	51.13	Fe	57.1
SiO <sub>2</sub>	15.17	SiO <sub>2</sub>	6.55
Al <sub>2</sub> O <sub>3</sub>	4.97	Al <sub>2</sub> O <sub>3</sub>	5.57
CaCO <sub>3</sub>	.28	CaCO <sub>3</sub>	.52
P	.584	P	.197
3	Soft ore	6	Soft ore
Fe	58.48	Fe	45.0
SiO <sub>2</sub>	10.91	SiO <sub>2</sub>	7.95
Al <sub>2</sub> O <sub>3</sub>	1.76	Al <sub>2</sub> O <sub>3</sub>	24
CaCO <sub>3</sub>	4.04	CaCO <sub>3</sub>	16.62
P	.227	P	.66
4	Soft ore	7	Hard ore
Fe	57.49	Fe	23.2
SiO <sub>2</sub>	10.46	SiO <sub>2</sub>	34.4
Al <sub>2</sub> O <sub>3</sub>	3.63	Al <sub>2</sub> O <sub>3</sub>	7.2
CaCO <sub>3</sub>	1.53	CaCO <sub>3</sub>	17.2
P	.37	P	.44
5	Soft ore	8	Hard ore
Fe	48.94	Fe	32.53
SiO <sub>2</sub>	22.46	SiO <sub>2</sub>	4.82
Al <sub>2</sub> O <sub>3</sub>	2.14	Al <sub>2</sub> O <sub>3</sub>	3.89
CaCO <sub>3</sub>	.53	CaCO <sub>3</sub>	44.5
P	.10	P	.072
6	Soft ore	9	Hard ore
Fe	53.53	Fe	32.78
SiO <sub>2</sub>	14.81	SiO <sub>2</sub>	7.28
Al <sub>2</sub> O <sub>3</sub>	5.23	Al <sub>2</sub> O <sub>3</sub>	3.14
CaCO <sub>3</sub>	2.16	CaCO <sub>3</sub>	38.49
P	.423	P	.51
<b>C</b>		<b>I</b>	
1	Soft ore	1	Soft ore
Fe	55.56	Fe	40.9
SiO <sub>2</sub>	12.41	SiO <sub>2</sub>	7.95
Al <sub>2</sub> O <sub>3</sub>	2.33	Al <sub>2</sub> O <sub>3</sub>	24
CaCO <sub>3</sub>	1.69	CaCO <sub>3</sub>	16.62
P	.411	P	.66
2	Soft ore	2	Soft ore
Fe	49.14	Fe	57.1
SiO <sub>2</sub>	13.49	SiO <sub>2</sub>	6.55
Al <sub>2</sub> O <sub>3</sub>	.04	Al <sub>2</sub> O <sub>3</sub>	5.57
P	.21	CaCO <sub>3</sub>	.52
3	Soft ore	3	Soft ore
Fe	40.6	Fe	45.0
SiO <sub>2</sub>	12.14	SiO <sub>2</sub>	7.95
P	.497	Al <sub>2</sub> O <sub>3</sub>	24
4	Soft ore	4	Soft ore
Fe	53.8	Fe	47.3
SiO <sub>2</sub>	9.5	SiO <sub>2</sub>	48.96
P	.1208	SiO <sub>2</sub>	21.8
5	Soft ore	5	Soft ore
Fe	32.76	Fe	25.6
SiO <sub>2</sub>	34.55	SiO <sub>2</sub>	35.2
Al <sub>2</sub> O <sub>3</sub>	9.14	SiO <sub>2</sub>	13.95
CaCO <sub>3</sub>	.53	Al <sub>2</sub> O <sub>3</sub>	15.66
P	.36	CaCO <sub>3</sub>	23.0
6	Soft ore	6	Soft ore
Fe	40.56	Fe	29.51
SiO <sub>2</sub>	35.89	SiO <sub>2</sub>	46.67
P	.59	SiO <sub>2</sub>	9.07
7	Soft ore	7	Soft ore
Fe	36.67	Fe	10.3
SiO <sub>2</sub>	42.86	SiO <sub>2</sub>	36.6
P	.144	Al <sub>2</sub> O <sub>3</sub>	10.3
8	Soft ore	8	Soft ore
Fe	53.15	Fe	.1
SiO <sub>2</sub>	15.68	SiO <sub>2</sub>	53.92
P	.067	Al <sub>2</sub> O <sub>3</sub>	12.74
<b>D</b>		<b>J</b>	
1	Soft ore	1	Soft ore
Fe	52.55	Fe	45.16
SiO <sub>2</sub>	12.81	SiO <sub>2</sub>	7.95
Al <sub>2</sub> O <sub>3</sub>	5.68	Al <sub>2</sub> O <sub>3</sub>	24
CaCO <sub>3</sub>	.5	CaCO <sub>3</sub>	16.62
P	.275	P	.66
2	Soft ore	2	Soft ore
Fe	30	Fe	50.02
P	.40	SiO <sub>2</sub>	19.75
3	Soft ore	3	Soft ore
Fe	38.15	Fe	51.52
SiO <sub>2</sub>	54.12	SiO <sub>2</sub>	9.72
Al <sub>2</sub> O <sub>3</sub>	6.20	Al <sub>2</sub> O <sub>3</sub>	5.55
CaCO <sub>3</sub>	7.77	CaCO <sub>3</sub>	1.50
P	.73	P	.15
4	Soft ore	4	Soft ore
Fe	36.15	Fe	48.3
SiO <sub>2</sub>	54.12	SiO <sub>2</sub>	35.8
Al <sub>2</sub> O <sub>3</sub>	6.20	Al <sub>2</sub> O <sub>3</sub>	23.25
CaCO <sub>3</sub>	7.77	CaCO <sub>3</sub>	2.0
P	.73	P	.378
5	Soft ore	5	Soft ore
Fe	42.72	Fe	29.51
SiO <sub>2</sub>	4.98	SiO <sub>2</sub>	46.67
Al <sub>2</sub> O <sub>3</sub>	2.78	SiO <sub>2</sub>	9.07
CaCO <sub>3</sub>	25.8	Al <sub>2</sub> O <sub>3</sub>	10.3
P	.501	CaCO <sub>3</sub>	36.6
6	Hard ore	6	Hard ore
Fe	26.86	Fe	.1
SiO <sub>2</sub>	6.89	SiO <sub>2</sub>	53.92
Al <sub>2</sub> O <sub>3</sub>	2.18	Al <sub>2</sub> O <sub>3</sub>	12.74
CaCO <sub>3</sub>	53.4	CaCO <sub>3</sub>	2.00
P	.266	P	
7	Soft ore	7	Soft ore
Fe	37.98	Fe	10.3
SiO <sub>2</sub>	10.9	SiO <sub>2</sub>	36.6
Al <sub>2</sub> O <sub>3</sub>	2.59	Al <sub>2</sub> O <sub>3</sub>	10.3
CaCO <sub>3</sub>	2.52	CaCO <sub>3</sub>	36.6
P	.503	P	.42
8	Soft ore	8	Soft ore
Fe	38	Fe	50
SiO <sub>2</sub>	44.7	SiO <sub>2</sub>	56.4
Al <sub>2</sub> O <sub>3</sub>	30.9	Al <sub>2</sub> O <sub>3</sub>	4
CaCO <sub>3</sub>	15.14	CaCO <sub>3</sub>	4
P	.117	P	.32
9	Soft ore	9	Soft ore
Fe	56.34	Fe	56.70
SiO <sub>2</sub>	11.47	SiO <sub>2</sub>	10.14
Al <sub>2</sub> O <sub>3</sub>	3.58	Al <sub>2</sub> O <sub>3</sub>	.14
CaCO <sub>3</sub>	3.46	CaCO <sub>3</sub>	.14
P	.117	P	.14
<b>E</b>		<b>L</b>	
1	Soft ore	1	Soft ore
Fe	54.67	Fe	45.9
SiO <sub>2</sub>	8.05	SiO <sub>2</sub>	32.1
Al <sub>2</sub> O <sub>3</sub>	31.72	Al <sub>2</sub> O <sub>3</sub>	19.65
CaCO <sub>3</sub>	15.28	CaCO <sub>3</sub>	8.40
P	.166	P	.34
2	Hard ore	2	Hard ore
Fe	31.72	Fe	21.91
SiO <sub>2</sub>	15.28	SiO <sub>2</sub>	55.62
Al <sub>2</sub> O <sub>3</sub>	4.17	Al <sub>2</sub> O <sub>3</sub>	4.82
CaCO <sub>3</sub>	28.6	CaCO <sub>3</sub>	7.72
P	.91.2	P	.57
3	Hard ore	3	Hard ore
Fe	32.02	Fe	31.9
SiO <sub>2</sub>	6.92	SiO <sub>2</sub>	5.43
Al <sub>2</sub> O <sub>3</sub>	3.49	Al <sub>2</sub> O <sub>3</sub>	5.13
CaCO <sub>3</sub>	22.4	CaCO <sub>3</sub>	5.12
P	.37	P	.81
4	Soft ore	4	Soft ore
Fe	50.02	Fe	51.52
SiO <sub>2</sub>	19.75	SiO <sub>2</sub>	9.72
P	.168	Al <sub>2</sub> O <sub>3</sub>	5.55
5	Soft ore	5	Soft ore
Fe	46.32	Fe	1.82
SiO <sub>2</sub>	21.48	SiO <sub>2</sub>	1.50
Al <sub>2</sub> O <sub>3</sub>	6.28	Al <sub>2</sub> O <sub>3</sub>	.15
CaCO <sub>3</sub>	1.57	CaCO <sub>3</sub>	.15
P	.17	P	.15
<b>F</b>		<b>M</b>	
1	Soft ore	1	Soft ore
Fe	59.86	Fe	19.67
SiO <sub>2</sub>	8.38	SiO <sub>2</sub>	4.76
Al <sub>2</sub> O <sub>3</sub>	1.57	Al <sub>2</sub> O <sub>3</sub>	4.76
CaCO <sub>3</sub>	.15	CaCO <sub>3</sub>	60.8
P	.40	P	.447
2	Hard ore	2	Hard ore
Fe	23.06	Fe	2.51
SiO <sub>2</sub>	5.16	SiO <sub>2</sub>	7.95
Al <sub>2</sub> O <sub>3</sub>	4.05	Al <sub>2</sub> O <sub>3</sub>	24
CaCO <sub>3</sub>	44.1	CaCO <sub>3</sub>	16.62
P	.32	P	.66
3	Soft ore	3	Soft ore
Fe	46.37	Fe	57.1
SiO <sub>2</sub>	9.07	SiO <sub>2</sub>	6.55
Al <sub>2</sub> O <sub>3</sub>	.20	Al <sub>2</sub> O <sub>3</sub>	5.57
CaCO <sub>3</sub>	20.6	CaCO <sub>3</sub>	.52
P	.423	P	.197
4	Soft ore	4	Soft ore
Fe	38.92	Fe	45.0
SiO <sub>2</sub>	7.13	SiO <sub>2</sub>	7.95
Al <sub>2</sub> O <sub>3</sub>	3.60	Al <sub>2</sub> O <sub>3</sub>	24
CaCO <sub>3</sub>	1.59	CaCO <sub>3</sub>	16.62
P	.473	P	.66
5	Soft ore	5	Soft ore
Fe	29.94	Fe	57.1
SiO <sub>2</sub>	32.68	SiO <sub>2</sub>	6.55
Al <sub>2</sub> O <sub>3</sub>	11.27	Al <sub>2</sub> O <sub>3</sub>	5.57
CaCO <sub>3</sub>	6.5	CaCO <sub>3</sub>	.52
P	.261	P	.197
<b>G</b>		<b>N</b>	
1	Soft ore	1	Soft ore
Fe	34.72	Fe	22.75
SiO <sub>2</sub>	7.67	SiO <sub>2</sub>	11.72
Al <sub>2</sub> O <sub>3</sub>	1.98	Al <sub>2</sub> O <sub>3</sub>	27.56
CaCO <sub>3</sub>	35.1	CaCO <sub>3</sub>	46.5
P	.17	P	.473
2	Hard ore	2	Hard ore
Fe	40.27	Fe	8.47
SiO <sub>2</sub>	7.93	SiO <sub>2</sub>	70.79
Al <sub>2</sub> O <sub>3</sub>	4.18	Al <sub>2</sub> O <sub>3</sub>	3.9
CaCO <sub>3</sub>	30.9	CaCO <sub>3</sub>	
P	.35	P	

1955 MAGNETIC DECLINATION  
VARIES FROM 3° EASTERLY  
FOR THE WEST SIDE TO 1°45'  
EASTERLY FOR THE EAST SIDE  
OF THE MAP. ANNUAL CHANGE  
IS APPROXIMATELY 0°01' WEST-  
ERLY.

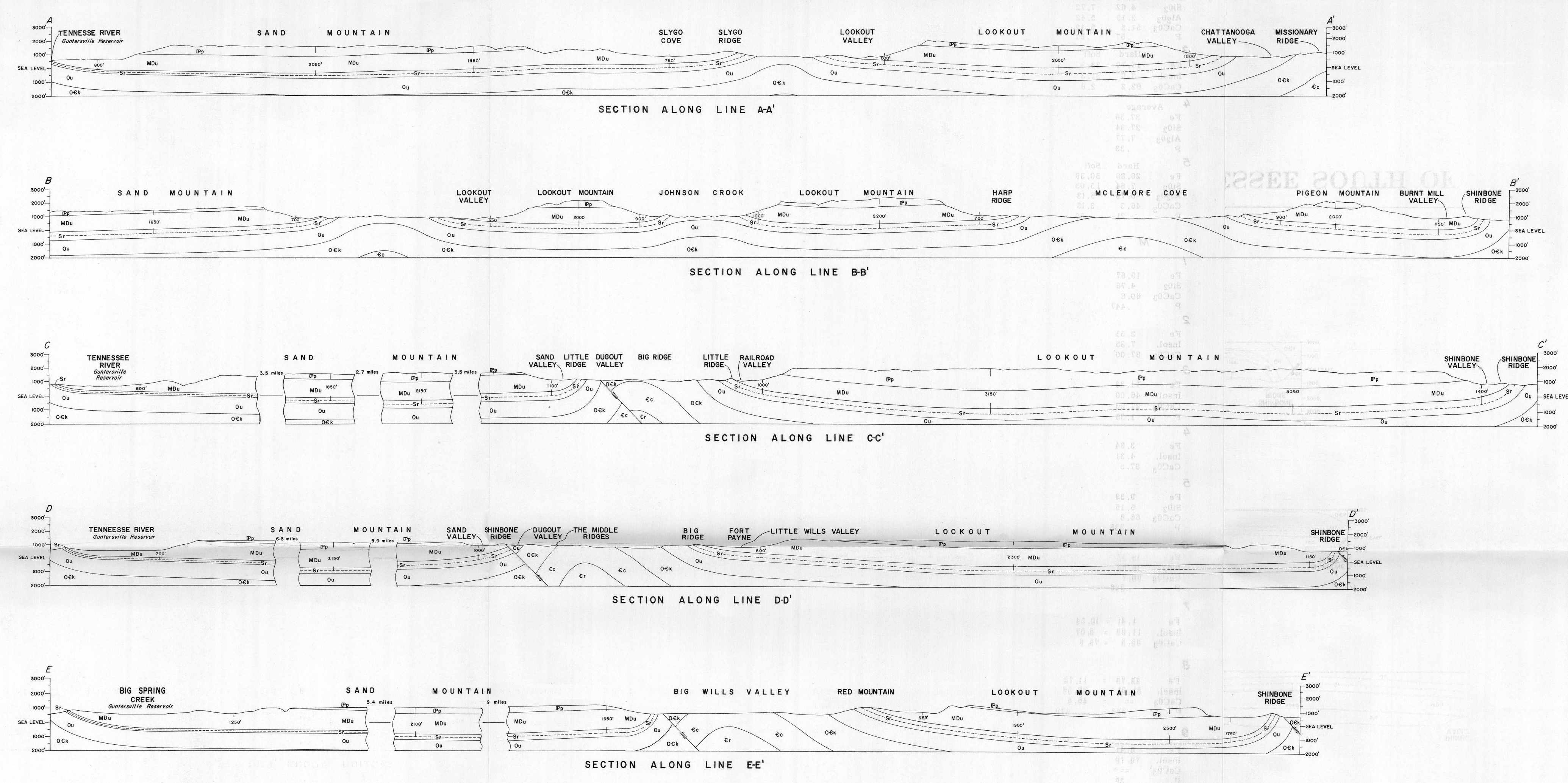


EXPLANATION

- Area known or believed to be underlain by Silurian (red) iron ore
- Outcrop of Silurian iron ore
- Strike and direction of dip of iron ore beds
- Strike of vertical iron ore beds
- Strike of overturned iron ore beds
- Area mined, usually to the economic limit
- Drill hole that penetrated ferruginous beds of Silurian age
- Thickness, in inches
- Locality of chemical analysis

First number, thickness of the principal iron ore bed; middle number, total thickness of the iron ore bed or beds; last number, total thickness of iron ore-bearing stratigraphic section, including non-ore-bearing beds such as clay, shale, or sandstone. Brackets left where values not known.

Line of cross section  
Dashes indicate parts omitted



EXPLANATION

- Pottsville formation
- Chattanooga formation
- Silurian iron ore beds
- Rome formation

RED IRON-ORE BEDS OF SILURIAN AGE IN NORTHEASTERN ALABAMA, GEORGIA, AND EASTERN TENNESSEE SOUTH OF 35° LATITUDE

By  
Jesse W. Whitlow

SCALE 1:250,000  
CONTAINING INTERVAL 50 AND 100 FEET  
DATUM IS MEAN SEA LEVEL