

EXPLANATION

THICK IN COAL BED SECTION

COAL THICKNESS

STRUCTURE BOUNDARY (shown in top of sheet)

OVERBURDEN BOUNDARY

FAULT

MOUNTAIN MEASURE (see sheet)

INDICATED RESERVE BASE

STRIKES

UNCONFORMITY

VARIOUS PRE-HANNA FORMATION ROCKS

UNNAMED COAL

CARBON NO. 6 RIDERS

UPPER & LOWER CARBON NO. 6 (5'-8')

UPPER & LOWER CARBON NO. 7

BED NO. 111

BED NO. 110

BED NO. 109, UPPER & LOWER BENCHES (5'-8')

BED NO. 108

BED NO. 107

BED NO. 106

BED NO. 105 (5')

FINCH BED (5'-12.5'), CARBON NO. 4 (5'-12.5')

JOHNSON RIDERS (5'-12.5')

JOHNSON BED (5'-25'); CARBON NO. 5 (5'-12.5')

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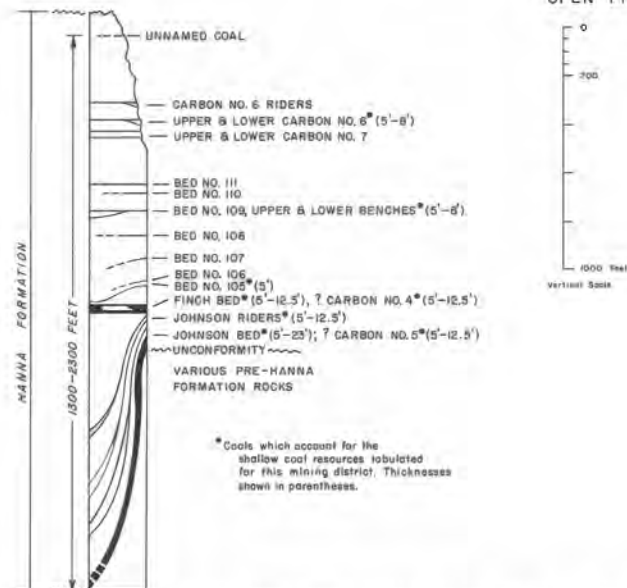
JOHNSON RIDERS (5'-12.5')

JOHNSON BED (5'-25'); CARBON NO. 5 (5'-12.5')

UNCONFORMITY

VARIOUS PRE-HANNA FORMATION ROCKS

UNNAMED COAL



* Coals which account for the shallow coal resources tabulated for this mining district. Thicknesses shown in parentheses.

COAL NOMENCLATURE IN THE CARBON MINING DISTRICT OF THE HANNA COAL FIELD¹

SUMMARY OF COAL RESOURCES AND RESERVE BASE IN MILLIONS OF TONS

Coal name (Weighted average thickness, feet)	MEASURED RESERVE BASE			INDICATED RESERVE BASE			TOTAL RESERVE BASE			INFERRED RESOURCES			GRAND TOTAL		
	Overburden thickness (feet):			Overburden thickness (feet):			Overburden thickness (feet):			Overburden thickness (feet):			Overburden thickness (feet):		
	0-100	100-200	0-200	0-100	100-200	0-200	0-100	100-200	0-200	0-100	100-200	0-200	0-100	100-200	0-200
Bed No. 109 (5.89)	3.93	2.46	5.39	2.43	4.04	5.47	6.36	6.50	12.86	—	—	—	6.36	6.50	12.86
Bed No. 105 (5.00)	0.28	0.29	0.57	0.32	1.12	1.44	0.80	1.41	2.01	—	—	—	0.60	1.41	2.01
Carbon No. 4 (10.10)	0.22	0.22	0.44	—	—	—	0.22	0.22	0.44	—	—	—	0.22	0.22	0.44
Johnson Rider (6.55)	4.13	2.55	6.68	2.03	8.66	10.69	6.16	0.21	17.37	—	—	—	6.16	11.21	17.37

COAL ANALYSES

ANALYTICAL DATA FOR:

Bed No. 109

Carbon No. 4

APPARENT RANK:

High volatile C bituminous-Subbituminous A

High volatile C bituminous

AS RECEIVED BASIS

RANGE ANALYSIS

PROXIMATE ULTIMATE

PROXIMATE ULTIMATE

MOISTURE (%) 7.7-9.8
VOLATILE MATTER (%) 21.4-36.1
FIXED CARBON (%) 17.9-31.5
ASH (%) 26.0-50.9
SULFUR (%) 0.9-4.0
HYDROGEN (%) 3.7-5.0
CARBON (%) 28.9-49.2
NITROGEN (%) 0.6-1.1
OXYGEN (%) 14.7-16.5
BTU / LB. 5,070-8,990

AVERAGE
(3 samples)
8.7
30.3
26.5
34.5
2.5
4.5
42.2
0.9
15.4
7,580 (3 samples)

AVERAGE
(1 sample)
10.53
34.95
44.12
10.40
0.54
—
—
—
10,560 (1 sample)

FORMS OF SULFUR (AS RECEIVED BASIS)
(3 samples)

PYRITIC (%) 0.61-1.40
SULFATE (%) 0.01-0.02
ORGANIC (%) 0.28-1.08

RANGE ANALYSIS AVERAGE
(3 samples)
0.94
0.02
0.78

ASH FUSION TEMPERATURES (°F)
(3 samples)

INITIAL DEFORMATION 2100-2610
SOFTENING TEMPERATURE 2210-2720
FLUID TEMPERATURE 2310-2800

RANGE ANALYSIS AVERAGE
(3 samples)
2290
2390
2490

ASH COMPOSITION (%)
(3 samples)

SiO₂ 45.0-61.0
Al₂O₃ 17.0-20.0
CaO 3.3-11.0
MgO 1.49-1.81
Na₂O 0.16-0.26
K₂O 1.5-2.4
Fe₂O₃ 5.2-17.0
TiO₂ 0.73-0.85
P₂O₅ <1.0
SO₂ 2.1-6.2

RANGE ANALYSIS AVERAGE
(3 samples)
50.7
18.3
7.3
1.65
0.20
1.93
11.1
0.81
<1.0
4.6

References: Glass, Gary B. and Roberts, Jay T., 1979. Resolving Stripedale Coal Resources and Stripedale Reserve Base in the Hanna Coal Field of Southcentral Wyoming. Geological Survey of Wyoming Report of Investigation No. 79, 186 p.

STRUCTURE, COAL THICKNESS, AND SHALLOW OVERBURDEN FOR COAL BEDS NO. 109, NO. 105, CARBON NO. 4 AND JOHNSON RIDER IN THE CARBON MINING DISTRICT, HANNA COAL FIELD, SOUTH-CENTRAL WYO.

By
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1979

This map has not been reviewed for conformity with the editorial standards of the Geological Survey of Wyoming.