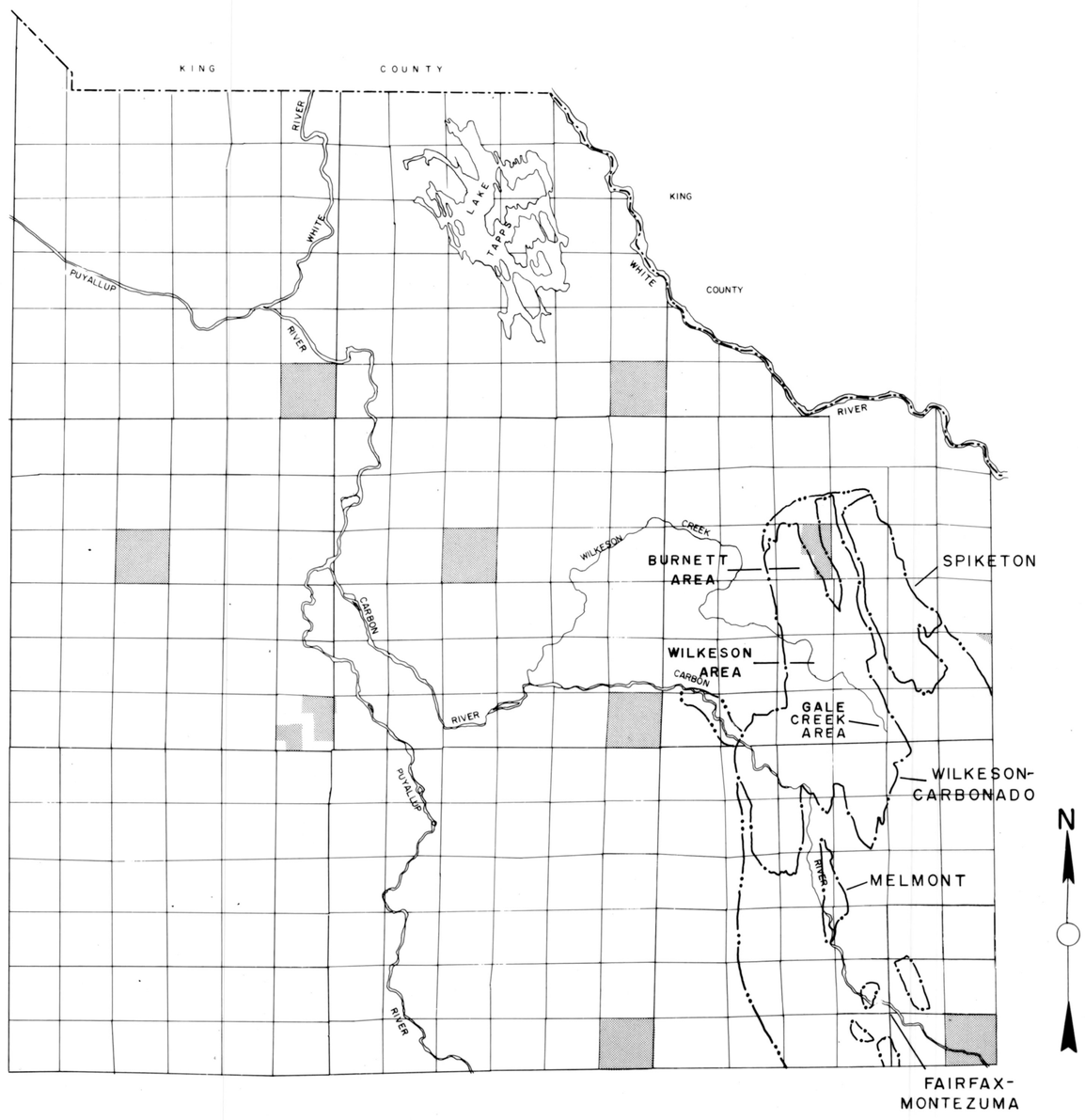
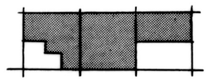


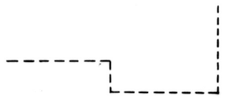
EXPLANATION



Department of Natural Resources administered land

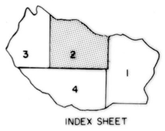
Approximate limit of coal-bearing rocks (Queried where doubtful)

Areas of established coal reserves (showing name of field)



National Forest boundary

Mined-out areas



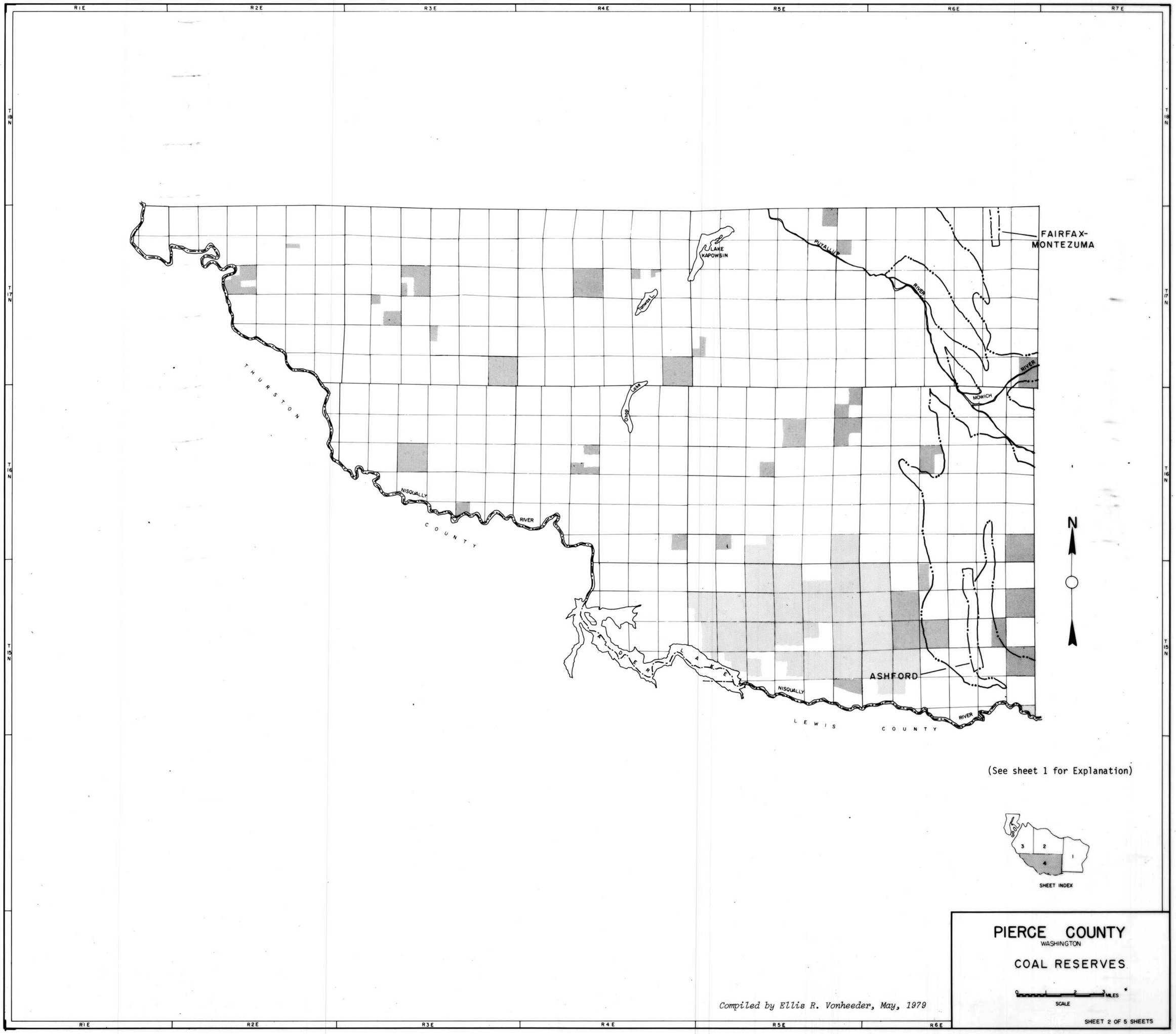
PIERCE COUNTY
WASHINGTON

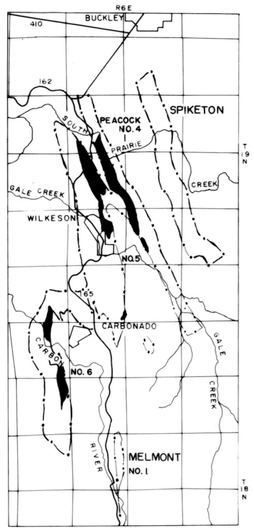
COAL RESERVES

0 1 2 3 MILES
SCALE

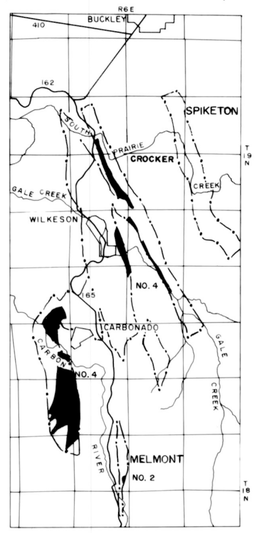
SHEET 1 OF 5 SHEETS

Compiled by Ellis R. Vonheeder, May, 1979

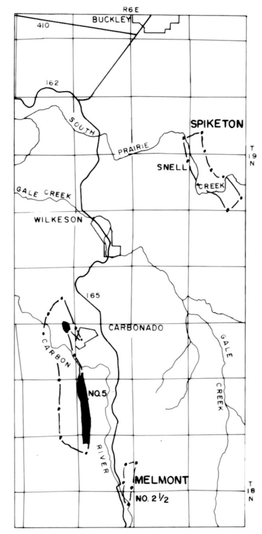

R1E
R2E
R3E
R4E
R5E
R6E
R7E
T18N
T17N
T16N
T15N
LAKE KAPOWSIN
Tanwax
Ohop Lake
PUYALLUP
RIVER
FAIRFAX-MONTEZUMA
MOWICH
RIVER
THURSTON
COUNTY
NISQUALLY
RIVER
KIDDER LAKE
ASHFORD
NISQUALLY
RIVER
LEWIS
COUNTY
N
(See sheet 1 for Explanation)
SHEET INDEX
3
2
4
1
PIERCE COUNTY
WASHINGTON
COAL RESERVES
SCALE
MILES
SHEET 2 OF 5 SHEETS
Compiled by Ellis R. Vonheeder, May, 1979



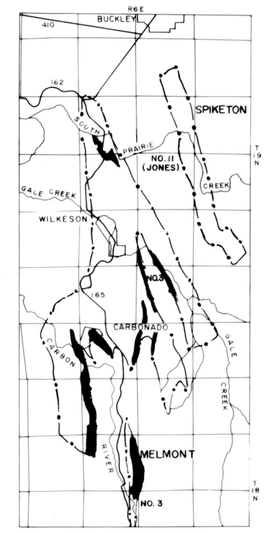
NO. 1 BED OF MELMONT, NO. 5 BED OF WILKESON, AND PEACOCK (NO. 6) BED OF SPIKETON



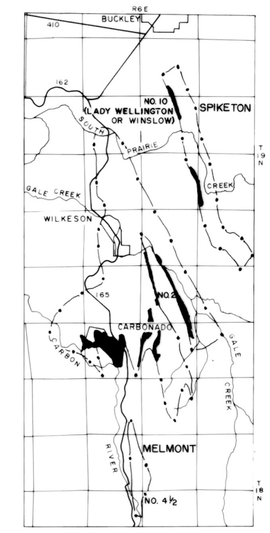
NO. 2 BED OF MELMONT, NO. 4 BED OF WILKESON, AND CROCKER BED OF SPIKETON



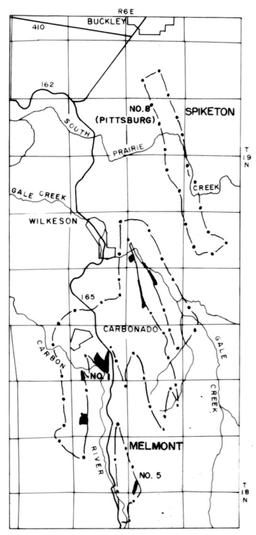
NO. 2½ BED OF MELMONT, NO. 5 BED OF CARBONADO, AND SNELL BED OF SPIKETON



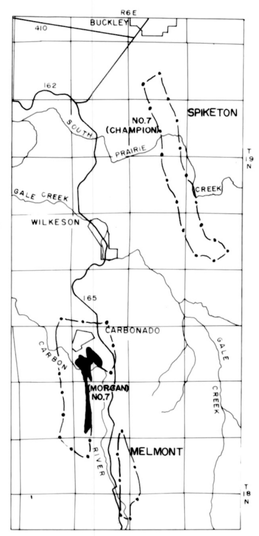
NO. 3 BED OF MELMONT, NO. 3 BED OF WILKESON, AND NO. 11 JONES BED OF SPIKETON



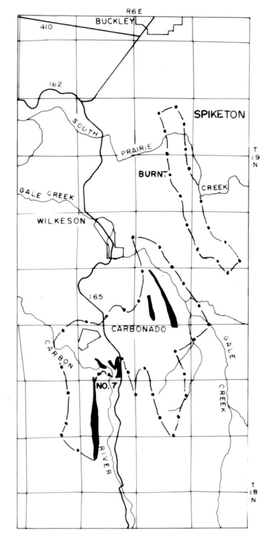
NO. 4½ BED OF MELMONT, NO. 2 BED OF WILKESON, AND NO. 10 (LADY WELLINGTON OR WINSOR) BED OF SPIKETON



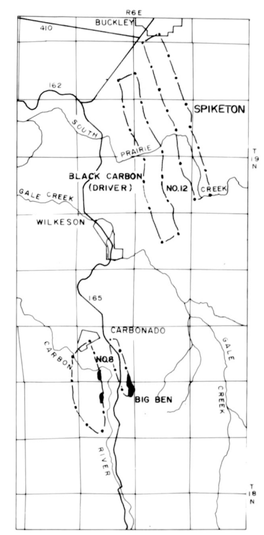
NO. 5 BED OF MELMONT, NO. 1 BED OF WILKESON, AND NO. 8 (PITTSBURG) BED OF SPIKETON



NO. 6 BED OF MELMONT, MORGAN NO. 7 BED OF CARBONADO, AND NO. 7 (CHAMPION) BED OF SPIKETON

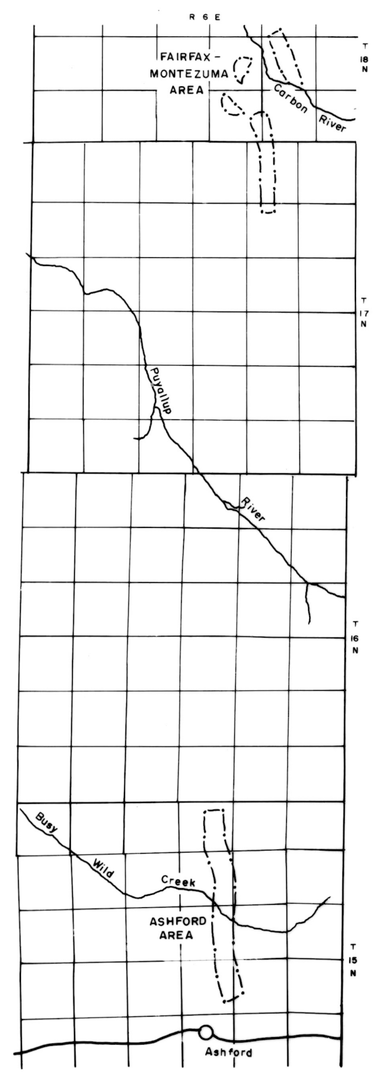


NO. 7 BED OF WILKESON AND BURNT BED OF SPIKETON

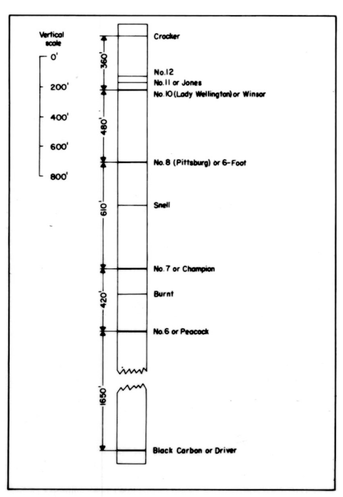


NO. 8 AND BIG BEN BEDS OF CARBONADO AND BLACK CARBON (DRIVER) AND NO. 12 BEDS OF SPIKETON

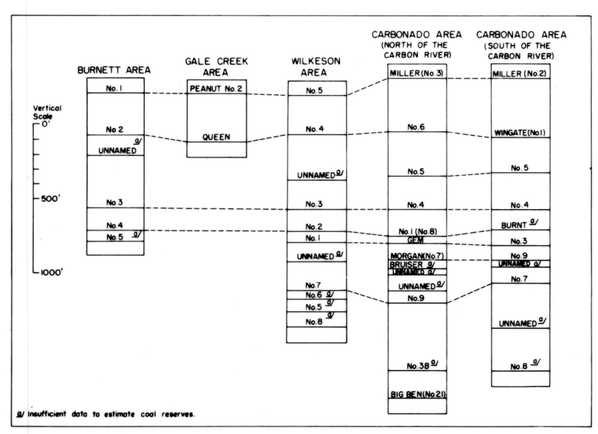
GENERALIZED SECTIONS SHOWING STRATIGRAPHIC RELATIONSHIP OF BEDS IN PIERCE COUNTY COAL FIELDS (AFTER BEIKMAN, 1961)



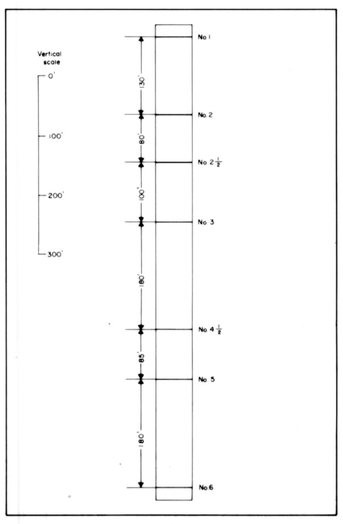
(See sheet 1 for Explanation)



PRINCIPAL COAL BEDS IN THE SPIKETON AREA



COAL BEDS IN THE WILKESON-CARBONADO AREA AND THEIR CORRELATIONS



PRINCIPAL COAL BEDS IN THE MELMONT AREA

Compiled by Ellis R. Vonheeder, May, 1979

PIERCE COUNTY
WASHINGTON
COAL RESERVES

SHEET 3 OF 5 SHEETS

COAL RESERVES, PIERCE COUNTY, WASHINGTON[1]

WILKESON-CARBONADO AREA

Coal bed	Overburden (in feet)	Reserves, in millions of short tons, in beds of thickness shown: Measured and indicated 14 to 28 inches	Measured and indicated 28 to 42 inches	Measured and indicated 42 or more inches	Measured and indicated Total	Inferred 14 to 28 inches	Inferred 28 to 42 inches	Inferred 42 or more inches	Inferred Total	All categories 14 to 28 inches	All categories 28 to 42 inches	All categories 42 or more inches	All categories Total
T. 19 N., R 6 E.													
Wilkeson No. 5	0-1,000	-----	1.73	3.60	5.33	-----	0.73	4.15	4.88	-----	2.46	7.75	10.21
	1,000-2,000	-----	.95	-----	.95	-----	1.93	3.07	5.00	-----	2.88	3.07	5.95
	2,000-3,000	-----	-----	-----	-----	-----	.15	-----	.15	-----	.15	-----	.15
Bed total		-----	2.68	3.60	6.28	-----	2.81	7.22	10.03	-----	5.49	10.82	16.31
Wilkeson No. 4	0-1,000	-----	4.61	0.03	4.64	-----	2.29	1.86	4.15	-----	6.90	1.89	8.79
	1,000-2,000	-----	-----	-----	-----	-----	7.68	.61	8.29	-----	7.68	.61	8.29
	2,000-3,000	-----	-----	-----	-----	-----	.72	-----	.72	-----	.72	-----	.72
Bed total		-----	4.61	0.03	4.64	-----	10.69	2.47	13.16	-----	15.30	2.50	17.80
Carbonado No. 5	0-1,000	-----	-----	0.35	0.35	-----	-----	-----	-----	-----	-----	0.35	0.35
	1,000-2,000	-----	-----	-----	-----	-----	-----	0.58	0.58	-----	-----	.58	.58
Bed total		-----	-----	0.35	0.35	-----	-----	0.58	0.58	-----	-----	0.93	0.93
Wilkeson No. 3	0-1,000	-----	-----	8.99	8.99	-----	-----	0.46	0.46	-----	-----	9.45	9.45
	1,000-2,000	-----	-----	7.88	7.88	-----	-----	9.75	9.75	-----	-----	17.63	17.63
	2,000-3,000	-----	-----	-----	-----	-----	-----	10.81	10.81	-----	-----	10.81	10.81
Bed total		-----	-----	16.87	16.87	-----	-----	21.02	21.02	-----	-----	37.89	37.89
Wilkeson No. 2	0-1,000	-----	-----	5.41	5.41	-----	-----	0.80	0.80	-----	-----	6.21	6.21
	1,000-2,000	-----	-----	2.44	2.44	-----	-----	11.35	11.35	-----	-----	13.79	13.79
	2,000-3,000	-----	-----	.14	.14	-----	-----	8.19	8.19	-----	-----	8.33	8.33
Bed total		-----	-----	7.99	7.99	-----	-----	20.34	20.34	-----	-----	28.33	28.33
Wilkeson No. 1	0-1,000	0.15	1.79	-----	1.94	0.19	0.64	-----	0.83	0.34	2.43	-----	2.77
	1,000-2,000	-----	.98	-----	.98	1.72	.34	-----	2.06	1.72	1.32	-----	3.04
	2,000-3,000	-----	.16	-----	.16	-----	.90	-----	.90	-----	1.06	-----	1.06
Bed total		0.15	2.93	-----	3.08	1.91	1.88	-----	3.79	2.06	4.81	-----	6.87
Morgan (No. 7)	0-1,000	-----	-----	-----	-----	-----	-----	0.01	0.01	-----	-----	0.01	0.01
	1,000-2,000	-----	-----	-----	-----	-----	-----	.64	.64	-----	-----	.64	.64
Bed total		-----	-----	-----	-----	-----	-----	0.65	0.65	-----	-----	0.65	0.65
Wilkeson No. 7	0-1,000	-----	-----	3.03	3.03	-----	-----	1.31	1.31	-----	-----	4.34	4.34
	1,000-2,000	-----	-----	2.14	2.14	-----	-----	3.90	3.90	-----	-----	6.04	6.04
	2,000-3,000	-----	-----	-----	-----	-----	-----	2.65	2.65	-----	-----	2.65	2.65
Bed total		-----	-----	5.17	5.17	-----	-----	7.86	7.86	-----	-----	13.03	13.03
Township total		0.15	10.22	34.01	44.38	1.91	15.38	60.14	77.43	2.06	25.60	94.15	121.81
T. 18 N., R. 6 E.													
Wilkeson No. 5	0-1,000	-----	0.27	2.27	2.54	-----	0.25	0.07	0.32	-----	0.52	2.34	2.86
	1,000-2,000	-----	-----	.31	.31	-----	.01	1.19	1.20	-----	.01	1.50	1.51
Bed total		-----	0.27	2.58	2.85	-----	0.26	1.26	1.52	-----	0.53	2.84	4.37
Wilkeson No. 4	0-1,000	-----	-----	1.24	1.24	-----	2.21	0.34	2.55	-----	2.21	1.58	3.79
	1,000-2,000	-----	-----	.81	.81	-----	.07	1.23	1.30	-----	.07	2.04	2.11
Bed total		-----	-----	2.05	2.05	-----	2.28	1.57	3.85	-----	2.28	3.62	5.90
Carbonado No. 5	0-1,000	-----	-----	2.71	2.71	-----	-----	-----	-----	-----	-----	2.71	2.71
	1,000-2,000	-----	-----	-----	-----	-----	-----	2.58	2.58	-----	-----	2.58	2.58
Bed total		-----	-----	2.71	2.71	-----	-----	2.58	2.58	-----	-----	5.29	5.29
Wilkeson No. 3	0-1,000	-----	-----	3.52	3.52	-----	-----	5.05	5.05	-----	-----	8.57	8.57
	1,000-2,000	-----	-----	4.06	4.06	-----	-----	2.24	2.24	-----	-----	6.30	6.30
	2,000-3,000	-----	-----	.20	.20	-----	-----	1.97	1.97	-----	-----	2.17	2.17
Bed total		-----	-----	7.78	7.78	-----	-----	9.26	9.26	-----	-----	17.04	17.04
Wilkeson No. 2	0-1,000	-----	-----	5.22	5.22	-----	-----	3.44	3.44	-----	-----	8.66	8.66
	1,000-2,000	-----	-----	.34	.34	-----	-----	3.44	3.44	-----	-----	3.78	3.78
	2,000-3,000	-----	-----	-----	-----	-----	-----	.40	.40	-----	-----	.40	.40
Bed total		-----	-----	5.56	5.56	-----	-----	7.28	7.28	-----	-----	12.84	12.84
Wilkeson No. 1	0-1,000	1.58	0.05	-----	1.63	2.69	1.03	-----	3.72	4.27	1.08	-----	5.35
	1,000-2,000	-----	-----	-----	-----	2.47	.29	-----	2.76	2.47	.29	-----	2.76
	2,000-3,000	-----	-----	-----	-----	-----	.01	-----	.01	-----	.01	-----	.01
Bed total		1.58	0.05	-----	1.63	5.16	1.33	-----	6.49	6.74	1.38	-----	8.12
Morgan (No. 7)	0-1,000	-----	-----	1.98	1.98	-----	-----	2.22	2.22	-----	-----	4.20	4.20
	1,000-2,000	-----	-----	.22	.22	-----	-----	4.41	4.41	-----	-----	4.63	4.63
	2,000-3,000	-----	-----	-----	-----	-----	-----	2.29	2.29	-----	-----	2.29	2.29
Bed total		-----	-----	2.20	2.20	-----	-----	8.92	8.92	-----	-----	11.12	11.12
Wilkeson No. 7	0-1,000	-----	-----	0.07	0.07	-----	-----	14.05	14.05	-----	-----	14.12	14.12
	1,000-2,000	-----	-----	-----	-----	-----	-----	11.18	11.18	-----	-----	11.18	11.18
	2,000-3,000	-----	-----	-----	-----	-----	-----	.30	.30	-----	-----	.30	.30
Bed total		-----	-----	0.07	0.07	-----	-----	25.53	25.53	-----	-----	25.60	25.60
Carbonado No. 8	0-1,000	-----	-----	1.08	1.08	-----	-----	2.40	2.40	-----	-----	3.48	3.48
	1,000-2,000	-----	-----	-----	-----	-----	-----	2.99	2.99	-----	-----	2.99	2.99
	2,000-3,000	-----	-----	-----	-----	-----	-----	1.59	1.59	-----	-----	1.59	1.59
Bed total		-----	-----	1.08	1.08	-----	-----	6.98	6.98	-----	-----	8.06	8.06
Big Ben	0-1,000	-----	-----	-----	-----	-----	-----	1.92	1.92	-----	-----	1.92	1.92
Township total		1.58	0.32	24.03	25.93	5.16	3.87	65.30	74.33	6.74	4.19	89.33	100.26
Grand total		1.73	10.54	58.04	70.31	7.07	19.25	125.44	151.76	8.80	29.79	183.48	222.07

MELMONT AREA

Coal bed	Overburden (in feet)	Reserves, in millions of short tons, in beds of thickness shown: Measured and indicated 14 to 28 inches	Measured and indicated 28 to 42 inches	Measured and indicated 42 or more inches	Measured and indicated Total	Inferred 14 to 28 inches	Inferred 28 to 42 inches	Inferred 42 or more inches	Inferred Total	All categories 14 to 28 inches	All categories 28 to 42 inches	All categories 42 or more inches	All categories Total
T. 18 N., R. 6 E.													
No. 1	0-1,000	------	------	0.29	0.29	------	------	0.47	0.47	------	------	0.76	0.76
No. 2	0-1,000	------	------	1.25	1.25	------	------	2.37	2.37	------	------	3.62	3.62
	1,000-2,000	------	------	------	------	------	------	.25	.25	------	------	.25	.25
Bed total		------	------	1.25	1.25	------	------	2.62	2.62	------	------	3.87	3.87
No. 2½	0-1,000	------	------	------	------	------	------	1.28	1.28	------	------	1.28	1.28
No. 3	0-1,000	------	------	0.04	0.04	------	------	0.29	0.29	------	------	0.33	0.33
	1,000-2,000	------	------	------	------	------	------	.69	.69	------	------	.69	.69
Bed total		------	------	0.04	0.04	------	------	0.98	0.98	------	------	1.02	1.02
No. 4½	0-1,000	------	------	------	------	------	0.99	------	0.99	------	0.99	------	0.99
	1,000-2,000	------	------	------	------	------	.65	------	.65	------	.65	------	.65
Bed total		------	------	------	------	------	1.64	------	1.64	------	1.64	------	1.64
No. 5	0-1,000	------	------	------	------	------	------	2.32	2.32	------	------	2.32	2.32
	1,000-2,000	------	------	------	------	------	------	1.69	1.69	------	------	1.69	1.69
Bed total		------	------	------	------	------	------	4.01	4.01	------	------	4.01	4.01
No. 6	0-1,000	------	------	------	------	------	------	1.73	1.73	------	------	1.73	1.73
	1,000-2,000	------	------	------	------	------	------	2.18	2.18	------	------	2.18	2.18
Bed total		------	------	------	------	------	------	3.91	3.91	------	------	3.91	3.91
Grand total		------	------	1.58	1.58	------	1.64	13.27	14.91	------	1.64	14.85	16.49

FAIRFAX-MONTEZUMA AREA

Coal bed	Overburden (in feet)	Reserves, in millions of short tons, in beds of thickness shown: Measured and indicated 14 to 28 inches	Measured and indicated 28 to 42 inches	Measured and indicated 42 or more inches	Measured and indicated Total	Inferred 14 to 28 inches	Inferred 28 to 42 inches	Inferred 42 or more inches	Inferred Total	All categories 14 to 28 inches	All categories 28 to 42 inches	All categories 42 or more inches	All categories Total
T. 18 N., R. 6 E. (North of Carbon River)													
Blacksmith	0-1,000	0.37	-----	-----	0.37	-----	-----	-----	-----	0.37	-----	-----	0.37
	1,000-2,000	.37	-----	-----	.37	-----	-----	-----	-----	.37	-----	-----	.37
	2,000-3,000	.37	-----	-----	.37	-----	-----	-----	-----	.37	-----	-----	.37
Bed total		1.11	-----	-----	1.11	-----	-----	-----	-----	1.11	-----	-----	1.11
No. 2	0-1,000	0.20	-----	-----	0.20	-----	-----	-----	-----	0.20	-----	-----	0.20
	1,000-2,000	.20	-----	-----	.20	-----	-----	-----	-----	.20	-----	-----	.20
	2,000-3,000	.20	-----	-----	.20	-----	-----	-----	-----	.20	-----	-----	.20
Bed total		0.60	-----	-----	0.60	-----	-----	-----	-----	0.60	-----	-----	0.60
McNeill	0-1,000	-----	0.63	-----	0.63	-----	-----	-----	-----	-----	0.63	-----	0.63
	1,000-2,000	-----	.82	-----	.82	-----	-----	-----	-----	-----	.82	-----	.82
	2,000-3,000	-----	.82	-----	.82	-----	-----	-----	-----	-----	.82	-----	.82
Bed total		-----	2.27	-----	2.27	-----	-----	-----	-----	-----	2.27	-----	2.27
(South of Carbon River)													
No. 1	0-1,000	0.15	-----	-----	0.15	-----	-----	-----	-----	0.15	-----	-----	0.15
	1,000-2,000	.15	-----	-----	.15	-----	-----	-----	-----	.15	-----	-----	.15
	2,000-3,000	.15	-----	-----	.15	-----	-----	-----	-----	.15	-----	-----	.15
Bed total		0.45	-----	-----	0.45	-----	-----	-----	-----	0.45	-----	-----	0.45
No. 2	0-1,000	0.21	-----	-----	0.21	-----	-----	-----	-----	0.21	-----	-----	0.21
	1,000-2,000	.21	-----	-----	.21	-----	-----	-----	-----	.21	-----	-----	.21
	2,000-3,000	.21	-----	-----	.21	-----	-----	-----	-----	.21	-----	-----	.21
Bed total		0.63	-----	-----	0.63	-----	-----	-----	-----	0.63	-----	-----	0.63
No. 3	0-1,000	0.21	-----	-----	0.21	0.07	-----	-----	0.07	0.28	-----	-----	0.28
	1,000-2,000	.21	-----	-----	.21	.07	-----	-----	.07	.28	-----	-----	.28
	2,000-3,000	.21	-----	-----	.21	.07	-----	-----	.07	.28	-----	-----	.28
Bed total		0.63	-----	-----	0.63	0.21	-----	-----	0.21	0.84	-----	-----	0.84
No. 4	0-1,000	0.09	0.05	-----	0.14	0.04	-----	-----	0.04	0.13	0.05	-----	0.18
	1,000-2,000	.09	.05	-----	.14	.04	-----	-----	.04	.13	.05	-----	.18
	2,000-3,000	.09	.05	-----	.14	.04	-----	-----	.04	.13	.05	-----	.18
Bed total		0.27	0.15	-----	0.42	0.12	-----	-----	0.12	0.39	0.15	-----	0.54
No. 5	0-1,000	0.13	-----	-----	0.13	0.08	-----	-----	0.08	0.21	-----	-----	0.21
	1,000-2,000	.13	-----	-----	.13	.08	-----	-----	.08	.21	-----	-----	.21
	2,000-3,000	.13	-----	-----	.13	.08	-----	-----	.08	.21	-----	-----	.21
Bed total		0.39	-----	-----	0.39	0.24	-----	-----	0.24	0.63	-----	-----	0.63
No. 6	0-1,000	0.23	-----	-----	0.23	0.11	-----	-----	0.11	0.34	-----	-----	0.34
	1,000-2,000	.23	-----	-----	.23	.11	-----	-----	.11	.34	-----	-----	.34
	2,000-3,000	.23	-----	-----	.23	.11	-----	-----	.11	.34	-----	-----	.34
Bed total		0.69	-----	-----	0.69	0.33	-----	-----	0.33	1.02	-----	-----	1.02
Unnamed	0-1,000	-----	-----	-----	-----	-----	0.31	-----	0.31	-----	0.31	-----	0.31
	1,000-2,000	-----	-----	-----	-----	-----	.31	-----	.31	-----	.31	-----	.31
	2,000-3,000	-----	-----	-----	-----	-----	.31	-----	.31	-----	.31	-----	.31
Bed total		-----	-----	-----	-----	-----	0.93	-----	0.93	-----	0.93	-----	0.93
Unnamed	0-1,000	-----	-----	-----	-----	-----	0.24	-----	0.24	-----	0.24	-----	0.24
	1,000-2,000	-----	-----	-----	-----	-----	.24	-----	.24	-----	.24	-----	.24
	2,000-3,000	-----	-----	-----	-----	-----	.24	-----	.24	-----	.24	-----	.24
Bed total		-----	-----	-----	-----	-----	0.72	-----	0.72	-----	0.72	-----	0.72
Unnamed	0-1,000	-----	-----	-----	-----	-----	-----	0.33	0.33	-----	-----	0.33	0.33
	1,000-2,000	-----	-----	-----	-----	-----	-----	.33	.33	-----	-----	.33	.33
	2,000-3,000	-----	-----	-----	-----	-----	-----	.33	.33	-----	-----	.33	.33
Bed total		-----	-----	-----	-----	-----	-----	0.99	0.99	-----	-----	0.99	0.99
Township total		4.77	2.42	-----	7.19	0.90	1.65	0.99	3.54	5.67	4.07	0.99	10.73
T. 17 N., R. 6 E.													
No. 1	0-1,000	0.08	-----	-----	0.08	0.19	-----	-----	0.19	0.27	-----	-----	0.27
	1,000-2,000	.08	-----	-----	.08	.19	-----	-----	.19	.27	-----	-----	.27
	2,000-3,000	.08	-----	-----	.08	.19	-----	-----	.19	.27	-----	-----	.27
Bed total		0.24	-----	-----	0.24	0.57	-----	-----	0.57	0.81	-----	-----	0.81
No. 2	0-1,000	0.15	-----	-----	0.15	0.25	-----	-----	0.25	0.40	-----	-----	0.40
	1,000-2,000	.15	-----	-----	.15	.25	-----	-----	.25	.40	-----	-----	.40
	2,000-3,000	.15	-----	-----	.15	.25	-----	-----	.25	.40	-----	-----	.40
Bed total		0.45	-----	-----	0.45	0.75	-----	-----	0.75	1.20	-----	-----	1.20
No. 3	0-1,000	0.10	0.36	-----	0.46	-----	0.34	-----	0.34	0.10	0.70	-----	0.80
	1,000-2,000	.10	.36	-----	.46	-----	.34	-----	.34	.10	.70	-----	.80
	2,000-3,000	.10	.36	-----	.46	-----	.34	-----	.34	.10	.70	-----	.80
Bed total		0.30	1.08	-----	1.38	-----	1.02	-----	1.02	0.30	2.10	-----	2.40
No. 4	0-1,000	-----	0.40	-----	0.40	-----	0.17	-----	0.17	-----	0.57	-----	0.57
	1,000-2,000	-----	.40	-----	.40	-----	.17	-----	.17	-----	.57	-----	.57
	2,000-3,000	-----	.40	-----	.40	-----	.17	-----	.17	-----	.57	-----	.57
Bed total		-----	1.20	-----	1.20	-----	0.51	-----	0.51	-----	1.71	-----	1.71
No. 5	0-1,000	0.05	0.38	-----	0.43	-----	0.29	-----	0.29	0.05	0.67	-----	0.72
	1,000-2,000	.05	.38	-----	.43	-----	.29	-----	.29	.05	.67	-----	.72
	2,000-3,000	.05	.38	-----	.43	-----	.29	-----	.29	.05	.67	-----	.72
Bed total		0.15	1.14	-----	1.29	-----	0.87	-----	0.87	0.15	2.01	-----	2.16
No. 6	0-1,000	0.44	-----	-----	0.44	0.27	-----	-----	0.27	0.71	-----	-----	0.71
	1,000-2,000	.44	-----	-----	.44	.27	-----	-----	.27	.71	-----	-----	.71
	2,000-3,000	.44	-----	-----	.44	.27	-----	-----	.27	.71	-----	-----	.71
Bed total		1.32	-----	-----	1.32	0.81	-----	-----	0.81	2.13	-----	-----	2.13
Township total		2.46	3.42	-----	5.88	2.13	2.40	-----	4.53	4.59	5.82	-----	10.41
Grand total		7.23	5.84	-----	13.07	3.03	4.05	0.99	8.07	10.26	9.89	0.99	21.14

[1] (after Beikman, 1961)

(Continued next page)

Compiled by Ellis R. Vonheeder, May, 1979

PIERCE COUNTY
WASHINGTON
COAL RESERVES

COAL RESERVES, PIERCE COUNTY (continued)

SPIKETON AREA

Coal bed	Overburden (in feet)	Reserves, in millions of short tons, in beds of thickness shown: Measured and indicated 14 to 28 inches	Measured and indicated 28 to 42 inches	Measured and indicated 42 or more inches	Measured and indicated Total	Inferred 14 to 28 inches	Inferred 28 to 42 inches	Inferred 42 or more inches	Inferred Total	All categories 14 to 28 inches	All categories 28 to 42 inches	All categories 42 or more inches	All categories Total
T. 19 N., R. 6 E.													
Crocker	0-1,000	0.58	------	------	0.58	1.12	------	------	1.12	1.70	------	------	1.70
	1,000-2,000	.58	------	------	.58	1.12	------	------	1.12	1.70	------	------	1.70
	2,000-3,000	.58	------	------	.58	1.12	------	------	1.12	1.70	------	------	1.70
Bed total		1.74	------	------	1.74	3.36	------	------	3.36	5.10	------	------	5.10
No. 12	0-1,000	------	0.93	------	0.93	------	1.74	------	1.74	------	2.67	------	2.67
	1,000-2,000	------	.93	------	.93	------	1.74	------	1.74	------	2.67	------	2.67
	2,000-3,000	------	.93	------	.93	------	1.74	------	1.74	------	2.67	------	2.67
Bed total		------	2.79	------	2.79	------	5.22	------	5.22	------	8.01	------	8.01
No. 11	0-1,000	0.59	0.88	------	1.47	0.39	0.26	------	0.65	0.98	1.14	------	2.12
	1,000-2,000	.59	.88	------	1.47	.39	.79	------	1.18	.98	1.67	------	2.65
	2,000-3,000	.59	.88	------	1.47	.39	.79	------	1.18	.98	1.67	------	2.65
Bed total		1.77	2.64	------	4.41	1.17	1.84	------	3.01	2.94	4.48	------	7.42
No. 10	0-1,000	------	------	2.77	2.77	------	------	0.74	0.74	------	------	3.51	3.51
	1,000-2,000	------	------	3.02	3.02	------	------	1.87	1.87	------	------	4.89	4.89
	2,000-3,000	------	------	3.02	3.02	------	------	1.87	1.87	------	------	4.89	4.89
Bed total		------	------	8.81	8.81	------	------	4.48	4.48	------	------	13.29	13.29
No. 8	0-1,000	------	------	2.88	2.88	------	------	1.00	1.00	------	------	3.88	3.88
	1,000-2,000	------	------	3.07	3.07	------	------	2.12	2.12	------	------	5.19	5.19
	2,000-3,000	------	------	3.07	3.07	------	------	2.12	2.12	------	------	5.19	5.19
Bed total		------	------	9.02	9.02	------	------	5.24	5.24	------	------	14.26	14.26
Snell	0-1,000	0.37	------	------	0.37	0.24	------	------	0.24	0.61	------	------	0.61
	1,000-2,000	.37	------	------	.37	.24	------	------	.24	.61	------	------	.61
	2,000-3,000	.37	------	------	.37	.24	------	------	.24	.61	------	------	.61
Bed total		1.11	------	------	1.11	0.72	------	------	0.72	1.83	------	------	1.83
No. 7	0-1,000	------	------	2.67	2.67	------	------	1.22	1.22	------	------	3.89	3.89
	1,000-2,000	------	------	2.67	2.67	------	------	2.03	2.03	------	------	4.70	4.70
	2,000-3,000	------	------	2.67	2.67	------	------	2.03	2.03	------	------	4.70	4.70
Bed total		------	------	8.01	8.01	------	------	5.28	5.28	------	------	13.29	13.29
Burnt	0-1,000	------	0.76	------	0.76	------	1.60	------	1.60	------	2.36	------	2.36
	1,000-2,000	------	.76	------	.76	------	1.60	------	1.60	------	2.36	------	2.36
	2,000-3,000	------	.76	------	.76	------	1.60	------	1.60	------	2.36	------	2.36
Bed total		------	2.28	------	2.28	------	4.80	------	4.80	------	7.08	------	7.08
No. 6	0-1,000	0.36	0.47	1.17	2.00	0.42	------	0.23	0.65	0.78	0.47	1.40	2.65
	1,000-2,000	.36	.47	1.17	2.00	.42	------	1.09	1.51	.78	.47	2.26	3.51
	2,000-3,000	.36	.47	1.17	2.00	.42	------	1.09	1.51	.78	.47	2.26	3.51
Bed total		1.08	1.41	3.51	6.00	1.26	------	2.41	3.67	2.34	1.41	5.92	9.67
Black Carbon	0-1,000	------	------	1.18	1.18	------	------	1.49	1.49	------	------	2.67	2.67
	1,000-2,000	------	------	1.18	1.18	------	------	1.93	1.93	------	------	3.11	3.11
	2,000-3,000	------	------	1.18	1.18	------	------	1.93	1.93	------	------	3.11	3.11
Bed total		------	------	3.54	3.54	------	------	5.35	5.35	------	------	8.89	8.89
Grand total		5.70	9.12	32.89	47.71	6.51	11.86	22.76	41.13	12.21	20.98	55.65	88.84

ASHFORD AREA

Coal bed	Overburden (in feet)	Reserves, in millions of short tons, in beds of thickness shown: Measured and indicated 14 to 28 inches	Measured and indicated 28 to 42 inches	Measured and indicated 42 or more inches	Measured and indicated Total	Inferred 14 to 28 inches	Inferred 28 to 42 inches	Inferred 42 or more inches	Inferred Total	All categories 14 to 28 inches	All categories 28 to 42 inches	All categories 42 or more inches	All categories Total
T. 15 N., R. 6 E.													
Nisqually	0-1,000	-----	-----	-----	-----	-----	-----	4.47	4.47	-----	-----	4.47	4.47
	1,000-2,000	-----	-----	-----	-----	-----	-----	4.47	4.47	-----	-----	4.47	4.47
	2,000-3,000	-----	-----	-----	-----	-----	-----	4.47	4.47	-----	-----	4.47	4.47
Bed total		-----	-----	-----	-----	-----	-----	13.41	13.41	-----	-----	13.41	13.41
Township total		-----	-----	-----	-----	-----	-----	13.41	13.41	-----	-----	13.41	13.41

TOTAL RESERVE TONNAGE, PIERCE COUNTY 361.95

SELECTED ANALYSES OF COAL SAMPLES, PIERCE COUNTY, WASHINGTON

(As-received basis unless otherwise noted)
(M-Moisture; VM-Volatile Matter; FC-Fixed Carbon; BTU-British Thermal Units per pound)

Section	T	R	Mine or Prospect	Coal Seam	Proximate (percent) M	VM	FC	Ash	Sulfur (percent)	Btu	Source of analysis	Remarks	Number of samples used to obtain average
				Ashford									
22	15N	6E	Mashel	Unnamed	4.1	24.4	44.7	26.8	.4	10,290	1	Coking quality,FSI-unk	1
15	15N	6E	Ashford	Nisqually Chief	5.8	15.3	64.7	24.2	.4	10,410	1	Coking quality,FSI-unk	1
27	15N	6E	Ashford	Nisqually Chief	2.4	22.8	50.1	24.7	.6	10,669	3	FSI = 1.0	1
				Fairfax-Montezuma									
26	18N	6E	Fairfax	#3 McNeil	1.9	23.3	64.5	10.3	0.5	13,720	2		1
26	18N	6E	Fairfax	Blacksmith	3.3	21.0	63.0	12.7	.7	13,050	2		3
34	18N	6E	Fairfax	1	2.9	21.3	63.8	12.0	.7	13,240	1		1
34	18N	6E	Fairfax	2	3.0	20.6	63.4	16.3	.4	13,050	1		1
34	18N	6E	Fairfax	3	3.3	22.5	65.5	8.2	.5	13,787	2		3
34	18N	6E	Fairfax	4	2.0	21.9	64.7	11.4	.6	13,490	2		1
34	18N	6E	Fairfax	5	3.1	20.9	65.0	10.9	.4	13,390	2		1
34	18N	6E	Prospect	1	4.8	26.4	60.7	8.1	1.1	13,630	2		1
34	18N	6E	Prospect	2	2.6	24.8	52.8	19.8	.7	11,860	2		1
2	17N	6E	Montezuma	1	5.7	19.2	62.4	12.7	1.0	12,640	2		1
2	17N	6E	Montezuma	2	3.0	18.1	56.2	22.7	.7	11,250	2		1
2	17N	6E	Montezuma	3	4.0	18.1	58.5	19.4	.5	11,820	2		1
2	17N	6E	Montezuma	4	2.6	21.0	65.6	10.8	.6	13,420	2		1
				Melmont									
2	18N	6E	Melmont	1	9.2	9.4	63.7	17.7	.7	11,130	2		
2	18N	6E	Melmont	2	5.8	12.1	64.9	17.2	.4	11,770	2		3
2	18N	6E	Melmont	3	5.4	22.5	59.9	15.2	.4	12,580	2		
				Wilkeson									
27, 34	19N	6E	Wilkeson	Wilkeson #5	3.9	33.3	54.5	8.4	0.8	13,475	2		6
27, 34	19N	6E	Wilkeson	Wilkeson #4	3.3	34.2	52.1	10.3	1.1	13,468	2	Coking quality,FSI-unk	24
4	18N	6E	Carbonado	Carbonado #5	3.8	34.9	50.6	10.6	.6	12,910	2	Coking quality,FSI-unk	4
27, 34	19N	6E	Wilkeson	Wilkeson #3	2.8	31.4	51.4	14.2	.4	12,637	2		18
27, 34	19N	6E	Wilkeson	Wilkeson #2	3.7	28.8	52.4	14.9	.6	12,302	2		16
27, 34	19N	6E	Wilkeson	Wilkeson #1	2.7	28.7	52.7	15.7	1.1	12,483	1		6
4, 9	18N	6E	Carbonado #4 N.	Morgan (#7)	2.6	29.9	48.7	18.7	.5	12,398	1		6
27, 34	19N	6E	Wilkeson	Wilkeson #7	2.8	24.3	61.9	10.8	.5	13,410	1		5
27, 34	19N	6E	Carbonado	Big Ben	3.7	29.9	53.3	13.0	.5	12,843	1		3
				Spiketon									
22	19N	6E	South Willis	#10 (Windsor)	4.91	31.46	43.80	19.82	.41	10,938	2		1
22	19N	6E	Pittsburg	#8 (Pittsburg)	4.69	32.71	42.22	20.38	.55	10,856	2		1
22	19N	6E	Snell	Snell	6.70	25.71	50.10	17.50	.78	11,560	2		1
SW¼SE¼ 15	19N	6E	Black Carbon	Black Carbon	5.08	32.82	39.14	22.96	.54	10,442	2		1

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Compiled by Ellis R. Vonheeder, May, 1979

PIERCE COUNTY
WASHINGTON
COAL RESERVES