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APPENDIX A

Mine Sites of Potential Local Significance Under Criterion A

County	County Averages *		County Significance Levels **		Mine Sites		
	Tons Sold Locally (000)	Mine Site Lifespan (Years)	Tons Sold Locally (000)	Mine Site Lifespan (Years)	Site	Tons Sold Locally (000)	Mine Site Lifespan (Years)
Adams	19.1	13.2	64.8	23.9			
Adams					AD0103	66	23
Adams					AD0401	32	25
Adams					ADX048	20	29
Adams					ADX110	146	11
Billings	4.1	24.5	32.8	36.7			
Billings					BIX033	33	28
Bowman	20.8	18.7	56.8	30.7			
Bowman					BO0077	94	23
Bowman					BO0119	58	26
Burke	20.9	10.3	60.6	25.0			
Burke					BKX779	82	19
Burke					BKX926	61	9
Burleigh	31.3	15.7	75.0	25.3			
Burleigh					BL0038	237	30
Burleigh					BL0040	76	28
Divide	19.2	11.1	53.7	17.4			
Divide					DVX473	111	24
Dunn	4.4	11.7	13.6	25.9			
Dunn					DUX018	20	28
Dunn					DUX039	14	29
Dunn					DUX040	17	9
Dunn					DUX366	30	16
Golden Valley	5.0	6.3	11.7	9.2			
Golden Valley					GVX083	15	7
Grant	14.8	9.2	33.6	17.2			
Grant					GT0122	82	17
Grant					GTX119	34	24
Grant					GTX139	81	20
Hettinger	6.8	13.1	17.7	23.7			
Hettinger					HT0006	46	27
Hettinger					HT0033	38	27
Hettinger					HT0057	24	21
Hettinger					HTX089	8	22
Hettinger					HTX091	36	17
Hettinger					HTX095	18	14
Hettinger					HTX103	31	20
Hettinger					HTX108	18	26
Hettinger					HTX119	22	18

* Expressed as Mean

** Expressed as First Standard Deviation Above Mean

Mine Sites of Potential Local Significance Under Criterion A

County	County Averages *		County Significance Levels**		Mine Sites		
	Tons Sold Locally (000)	Mine Site Lifespan (Years)	Tons Sold Locally (000)	Mine Site Lifespan (Years)	Site	Tons Sold Locally (000)	Mine Site Lifespan (Years)
McKenzie McKenzie	6.6	9.9	13.6	15.3	MZX382	22	18
McLean McLean McLean McLean McLean McLean McLean McLean McLean	13.5	12.5	49.1	21.7	ML0194 MLX020 MLX045 MLX130 MLX264 MLX276 MLX277 MLX280	32 21 54 27 65 50 73 162	22 27 27 23 26 9 13 13
Mercer Mercer Mercer Mercer	37.8	10.4	239.5	19.3	MEX065 MEX455 MEX457	842 75 47	31 24 20
Morton Morton Morton Morton Morton	14.1	13.2	57.7	22.3	MOX138 MOX139 MOX340 MOY001	80 255 104 59	30 31 24 28
Mountrail Mountrail Mountrail Mountrail Mountrail Mountrail Mountrail Mountrail Mountrail	2.9	7.2	9.9	16.9	MN0161 MNX098 MNX368 MNX772 MNX777 MNX782 MNX800 MNX802	17 5 14 14 21 6 3 3	4 21 26 9 12 18 14 14
Oliver Oliver	12.6	14.4	21.8	26.3	OL0297	26	34
Renville Renville Renville	1.8	5.6	3.9	12.5	RVX069 RVX075	6 4	4 15
Slope	2.0	4.0			-none-		

* Expressed as Mean

** Expressed as First Standard Deviation Above Mean

Mine Sites of Potential Local Significance Under Criterion A

County	County Averages *		County Significance Levels**		Mine Sites		
	Tons Sold Locally (000)	Mine Site Lifespan (Years)	Tons Sold Locally (000)	Mine Site Lifespan (Years)	Site	Tons Sold Locally (000)	Mine Site Lifespan (Years)
Stark	18.0	14.7	85.1	24.7			
Stark					SK0067	226	29
Stark					SK0069	136	25
Stark					SK0090	58	26
Stark					SKX030	125	35
Ward	17.0	9.7	60.5	17.3			
Ward					WDX006	93	31
Ward					WDX162	105	32
Ward					WDX165	228	28
Ward					WDX558	68	35
Ward					WDX588	45	19
Ward					WDX592	99	13
Ward					WDX599	105	6
Ward					WDX601	61	11
Ward					WDX603	113	5
Ward					WDX606	118	23
Ward					WDX610	27	28
Ward					WDX616	121	16
Ward					WDX618	158	16
Williams	12.5	12.7	38.9	21.4			
Williams					WI0062	42	15
Williams					WI0279	17	30
Williams					WIX075	68	22
Williams					WIX081	172	23
Williams					WIX131	15	26
Williams					WIX447	40	20
Williams					WIX472	75	27
Williams					WIX491	27	32
Williams					WIX494	24	27

* Expressed as Mean

** Expressed as First Standard Deviation Above Mean

APPENDIX B

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
AD0103	Adams	FARMERS COAL MINE	23	129 094 06-7	TAYLOR & BIGHAM MINE TAYLOR MINE IHLE MINE U.S. GOVERNMENT	Slope Total->	1923	1945	68	66	1934	10
AD0401	Adams	SOUTH DAKOTA STATE C	23	129 094 08-8	S.D. STATE MINE STEVENSON AND GUNDERSON STEVENSON,A	Slope Drift Slope Total->	1911 1920 1925	1919 1923 1936	16 5 23	9 2 21	1914 1914 1930	5 5 7
ADX048	Adams	REEDER COAL MINE	23	130 098 10-4	NATIONAL BRIQUETTING A.ATWOOD CORPORATION ATWOOD HAGE MINE HJORT MINE NATIONAL BRIQUETTING SZYMANOWSKI,S	Drift Slope Total->	1916 1923	1922 1944	3 17	3 17	1919 1936	5 6
ADX049	Adams	LEFF COAL MINE	23	130 098 10-5 130 098 10-6	KNUTSON MINE LEFF,A KETTEL,K	Strip	1914	1937	9	9	1921	5

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
ADX110	Adams	RUPP COAL	23	129 094 29-5	DAKOTA COLLIERIES ARROWHEAD MINE	Total->			9	9		
						Slope	1935	1936	5	4	0	0
						Drift	1937	1945	313	142	1938	60
ADX111	Adams	SIMS MINE	23	129 095 01-7		Total->			318	146		
						Slope	1935	1938	4	4	1935	2
ADX115	Adams	BOYTON MINE	23	130 093 31-4	BAINS SUBBITUMINOUS BAIN,J WHITE BUTTE CC CM GAHR,W CM	Total->			4	4		
						Slope	1925	1932	30	21	1930	16
						Strip	1933	1935	15	5	1934	10
						Slope	1936	1940	5	5	1938	4
ADX117	Adams	TAYLOR MINE	23	130 094 03-0	CHAMBERLAIN & TANOUS CHAMBERLAIN COAL	Total->			50	31		
						Slope	1929	1934	12	12	1931	6
ADX118	Adams	ROCKY RIDGE COAL	23	130 096 25-5	RESDAHL,H	Total->			12	12		
						Drift	1923	1923	1	1	0	0
ADX120	Adams	POWELL MINE	23	130 098 13-9	POWELL,C	Total->			1	1		

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
ADX124	Adams	KOMENDA MINE	23	132 095 12-8		Strip	1923	1924	1	1	1923	2
						<i>Total-></i>			1	1		
			22	140 102 26-8	DE MORES ESTATE NP REFRIGERATOR CAR DE MORES COAL MINE HYGRADE LIGNITE CC	Slope	1925	1928	2	2	1927	6
						<i>Total-></i>			2	2		
BIX033	Billings	HIGHGRADE COAL MINE	22	140 102 26-4	HIGH GRADE LIGNITE C HI-GRADE LIGNITE COA MEDORA HIGH GRADE MI NICHOLS	Drift	1909	1929	9	0	1909	2
						<i>Total-></i>			9	0		
BKX775	Burke	ZIMDARS AND HALL COA	20	162 092 35-7	BECKEDAHL BECKKENDAHL,O	Drift	1912	1917	62	0	0	0
						Underground	1919	1922	107	1	1917	29
						Slope	1923	1923	27	27	1922	36
						Underground	1924	1924	12	0	1923	33
						Drift	1925	1930	15	1	1925	19
						Slope	1936	1936	0	0	1925	19
						Drift	1937	1945	4	4	1940	4
						<i>Total-></i>			227	33		
BKX779	Burke	TRUAX-TRAER STRIP MI	20	162 093 19-0		Slope	1917	1917	1	1	0	0
						<i>Total-></i>			1	1		

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
BKX793	Burke	OLSON COAL MINE	20	162 093 20-7	TRUAX TRAER TRUAX-TRAER COAL KINCAID MINE CONSOLIDATED COAL CONSOLIDATION	Strip	1927	1945	4303	82	1934	160
				162 093 20-6								
162 093 21-7												
162 093 28-8												
162 093 29-1												
162 094 08-5												
162 094 09-8												
162 094 14-7												
162 094 26-5												
162 094 24-1												
BKX926	Burke	CROCKETT & CO.	20	162 094 14-7								
				162 093 19-7								
BKX927	Burke	TRUAX COAL	20	162 093 19-7	CROCKETT COAL WHITTIER-CROCKETT CO WHITTIER COAL CROCKETT, E WHITTIER,H	Strip	1919	1927	776	61	1926	78
				162 093 19-0								
						Total->			4303	82		
						Total->			13	13		
						Total->			776	61		

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
BKY001	Burke	MAKEE			TRUAX,A TRUAX,E	Strip Total->	1922	1927	723	1	1926	75
					723				1			
BL0030	Burleigh	WILTON#1	19	142 080 01-5 142 080 01-6 142 080 01-7 142 080 01-8	MACKEE RUFFCORN ESTATES	Drift SH Total->	1909 1914	1913 1919	5	5	1910	6
					4				4	9		
BL0031	Burleigh	LITTLE CASINO MINE	19	142 080 22-7 142 080 22-6	WASHBURN COAL MINE WILTON MINE #1 WASHBURN MINE #1 WASHBURN LIGNITE WASHBURN LIGNITE	Underground Total->	1909	1915	1103	0	1911	300
					1103				0			
BL0032	Burleigh	VOLLAN MINE	19	142 079 11-7	PETERSON & PETERSON PETERSON COAL GRADIN MINE GRADEN MINE CASINO MINE MCCLELLAND MINE	Drift Total->	1921	1934	9	9	1931	7
					9				9			
					FOSBERG MINE							

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township (Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment						
							Begin	End	Total	Local	Year	EEs					
BL0038	Burleigh	WILTON #2	19	142 079 05-8 142 079 05-5 142 079 05-5 142 079 05-5 142 079 05-6 142 079 05-7 142 079 06-8 142 079 06-7 142 079 06-7 142 079 06-7 142 079 06-6 142 079 06-6 142 079 06-6 142 079 06-6	VOLLEN MINE	Slope Total->	1923	1942	27	27	1935	6					
					MACOMBER												
					WILTON COAL MINE												
					WASHBURN MINE #2												
					WILTON MINE												
					WASHBURN COAL MINE												
					WILTON MINE #2												
					WASHBURN LIGNITE COA												
					TRUAX-TRAER LIGNITE												
					WILTON LIGNITE COAL												
					WASHBURN LIGNITE												
											Slope	1916	1930	4092	114	1925	428
											Strip	1931	1942	2503	63	1931	125
											Slope Total->	1943	1945	897	60	1931	125
														7492	237		
BL0040	Burleigh	LIND BROS. MINE	19	142 079 06-5	LIND COAL MINE LIND,A												

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
BLX125	Burleigh	ANDERSON COAL MINE	19	142 079 23-2	A.F.ANDERSON MINE ANDERSON,B	Slope	1909	1936	77	76	1933	9
						Total->			77	76		
BLX162	Burleigh	ENGSTROM MINE	19	142 079 15-8	ENGSTROM,H	Slope	1912	1927	3	3	1925	4
						Total->			3	3		
BLX163	Burleigh	DIAMOMD COAL	19	142 079 34-0		Slope	1923	1945	23	19	1934	9
						Total->			23	19		
BLX165	Burleigh	RUPP MINE	19	142 080 27-0	HOFFER MINE HOLDEN CM	Slope	1930	1934	4	3	1930	6
						Total->			4	3		
BLX168	Burleigh	ASPLUND COAL	19	142 079 10-7	ASPLUND,H	SH	1933	1934	0	0	0	0
						Slope	1931	1942	24	1	1933	7
BO0077	Bowman	SOUTH SCRANTON MINE	22	131 100 26-5 131 100 26-5 131 100 26-6	SCRANTON LIGNITE COA ANDY'S MINE KALISIAK,T	Total->			24	1		
						Slope	1923	1945	105	94	1936	13
						Total->			105	94		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township (Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
BO0078	Bowman	BUFFALO CREEK COAL C	22	131 100 25-8		Strip	1924	1929	78	10	1928	12
						<i>Total-></i>			78	10		
BO0119	Bowman	HALLECK COAL MINE	22	132 102 15-6	CHICKOSKY MINE HALLECK,JD	Slope	1919	1929	18	18	1923	7
						Strip	1930	1930	3	3	1923	7
						Slope	1931	1944	37	37	1931	7
						<i>Total-></i>			58	58		
BO0120	Bowman	BOWMAN COAL MINE	22	132 102 14-7	CHICKOSKY-OSTOZ CHICKOSKY OSTOZ TOUHEY MINE FORCHEZ,JAMES TOUHEY,J	Slope	1914	1929	18	18	1916	7
						Strip	1930	1930	2	2	1916	7
						Slope	1931	1942	25	25	1933	2
						<i>Total-></i>			45	45		
BOX023	Bowman	JOHNSON FUEL CO COAL	22	131 100 24-7	SCRANTON MINE SCRANTON COAL MINING SCRANTON COLLIERIES NORTHWESTERN POWER JOHNSON FUEL CO MINE CONSOLIDATED COAL CONSOLIDATED	Slope	1909	1935	488	0	1919	65
						<i>Total-></i>			488	0		
BOX091	Bowman	P.A.HARDER MINE	22									

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
DUX015	Dunn	HEISER COAL MINE	23	131 100 25-8	HARDER MINE	Slope	1923	1923	1	1	0	0
						<i>Total-></i>			1	1		
DUX018	Dunn	SLOAN COAL MINE	23	143 095 17-1	VEVERKA MINE NORTHWEST ABSTRACT EVERETT REAL ESTATE VEVERKA,E	Strip	1914	1919	1	1	1915	2
						Strip	1937	1940	1	1	1937	2
						<i>Total-></i>			2	2		
DUX029	Dunn	THREE STAR COAL MINE	23	144 091 09-7	DODGE MINE SLOAN,H	Drift	1916	1919	3	3	1917	3
						Strip	1921	1921	1	1	1917	3
						Drift	1923	1929	7	7	1925	4
						Slope	1930	1935	2	2	1930	3
						Strip	1936	1936	1	1	1930	3
						Strip	1937	1937	1	1	1930	3
						Drift	1938	1945	5	5	1939	2
						<i>Total-></i>			20	20		
DUX036	Dunn	PULVER & LOGAN MINE	23	144 095 01-0	THREE STAR LIGNITE M CURLEY,S	Strip	1917	1917	1	1	0	0
						<i>Total-></i>			1	1		
				145 092 29-8	PULVER & LOGAN MINE PULVER LOGAN							

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
DUX039	Dunn	PAULSON COAL MINE	23	145 093 28-6	PAULSON,P HIGH CARBON	Strip	1917	1917	1	1	0	0
						Total->			1	1		
DUX040	Dunn	HIGH GRADE COAL MINE	23	145 093 29-8	HY GRADE MINE PELTON PELTON,H	Drift	1914	1942	35	14	1922	34
						Total->			35	14		
DUX354	Dunn	HEINERT MINE	23	142 094 25-8	TRESPASS MINE HEINERT,C	SH	1915	1922	34	16	0	0
						Slope	1923	1923	12	1	1922	21
Total->								46	17			
DUX365	Dunn	YARGER BROS.MINE	23	145 093 26-8	YARGER MINE YARGER,J	Strip	1941	1945	1	1	1942	42
						Total->			1	1		
DUX366	Dunn	DUNN CENTER COAL	23	145 094 34-5	DUNN CENTER MINE	Strip	1923	1926	1	1	1925	2
						Drift	1929	1930	1	1	1929	2
						Total->			2	2		
						Slope	1922	1924	5	3	1922	10
								17	16	1925	11	
								11	11	1925	11	
Total->								33	30			

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
DV0011	Divide	BAUKOL-NOONAN MINE	21	162 095 03-3 162 095 02-3 162 095 11-1 162 095 10-1 162 095 10-3 162 095 12-4 162 095 12-5 162 095 01-7	BAUKOL NOONAN LIGNITE	Strip	1930	1945	2571	46	1938	90
						Total->			2571	46		
DVX186	Divide	MATHIESON COAL MINE	21	161 102 14-6	MATHIESON,L	Slope	1916	1920	2	2	0	0
						Total->			2	2		
DVX196	Divide	TRUAX COAL COMPANY M	21	162 095 03-6 162 095 10-0	TRUAX COAL COMPANY M TRUAX MINE CASE MINE TRUAX,E	Slope SH	1909 1917	1916 1917	149 50	0 0	1914 1914	78 78
						Total->			199	0		
DVX197	Divide	PARKER COAL MINE	21	162 095 03-6	STATE OF NORTH DAKOTA	Drift	1909	1909	1	1	0	0
						Total->			1	1		
DVX198	Divide	LORBESKIE COAL MINE	21	162 095 03-6	EVANSON MINE NOONAN MINE							

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
DVX199	Divide	HOUGLET COAL MINE	21	162 095 03-6 162 095 10-0	LORBESKI MINE LOBESKI EVANSON,E MCDONALD,C LOUBESKI,J	Slope Total->	1910	1922	68	0	0	0
DVX202	Divide	DOUGHERTY COAL MINE	21	162 095 10-8	HAUGHT MINE HOUGHT,J	Slope Total->	1912	1928	178	26	1917	46
DVX473	Divide	FORD & LIGHT	21	162 095 03-7	DAUGHERTY MINE DOUGHERTY,C	Slope Total->	1909	1917	113	42	1914	44
DVX474	Divide	KIMBALL COAL	21	162 095 09-5	FORD & LIGHT COAL LIGHT BROTHERS MINE LIGHT COAL	SH Total->	1920	1943	201	111	1930	32
DVX475	Divide	TANDBERG COAL	21	162 095 10-0	KIMBALL COAL KIMBALL,A TAMBERG COAL	SH Total->	1919	1927	55	15	1924	19

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
DVX476	Divide	LOGELIN COAL	21	162 095 110-5	TANDBERG,E	Strip	1919	1926	15	1	0	0
					LOGELN MINE	Total->			15	1		
DVX478	Divide	ALKABO COAL	21	162 102 22-8	DEJARDINE DEJARDIVE,R	Slope	1919	1934	26	3	1923	9
						Total->			26	3		
GT0122	Grant	BANNING & WEBB MINE	23	134 090 26-7 134 090 26-8	BUNNING & WEBB COAL KETTERLING MINE	Slope	1935	1940	3	3	1939	6
						Total->			3	3		
GTX039	Grant	ROCK COAL MINE	23	133 088 02-7	ROCK,R	Slope Drift	1929 1943	1942 1945	80 15	67 15	1930 1943	7 6
						Total->			95	82		
GTX048	Grant	PATZER COAL MINE	23	133 090 110-0	PATZER,A	Strip	1916	1916	1	1	0	0
						Total->			1	1		
GTX116	Grant	BUCHANAN MINE	23	132 090 02-6	EASTMAN MINE	Drift	1917	1917	1	1	0	0
						Total->			1	1		
						Strip	1923	1923	1	1	0	0

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
GTX117	Grant	ROGER MINE	23	132 090 27-7	ROGERS MINE RODGER MINE	Total->			1	1		
						Strip Total->	1923	1927	2	2	1923	1
GTX119	Grant	KOLBANK COAL	23	133 087 07-8	BABEL MINE PEDERSON,S	Total->			2	2		
						Slope Total->	1922	1945	34	34	1926	6
GTX121	Grant	LAH MINE	23	133 088 01-3	VAN HOUTEN MINE LAH COAL MINING MILLER & KETTERLING	Total->			39	22		
						SH Total->	1927	1941	39	22	1932	21
GTX124	Grant	KNOPPALA MINE	23	133 089 06-2	KNOPPLA MINE KNOPPLA,A	Total->			1	1		
						Strip Total->	1921	1923	1	1	0	0
GTX125	Grant	KNAPP MINE	23	133 090 10-5 133 090 10-6	KNOPP MINE	Total->			3	3		
						Drift Total->	1923	1930	3	3	1925	3
GTX128	Grant	CIRCLE BUTTE COAL	23	134 086 30-8	OTTERSTROM BROTHERS	Total->			3	3		
						Drift	1923	1926	3	3	1923	6

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
GTX130	Grant	CARSON MINE	23	134 087 11-0		Total->			3	3		
						Drift	1927	1928	3	3	1927	4
						Slope	1929	1933	10	10	1930	4
						SH	1934	1934	1	1	1930	4
GTX134	Grant	WALFORTH MINE	23	134 088 08-0	DIETZ MINE	Total->			14	14		
						Strip	1931	1934	2	2	1932	5
GTX139	Grant	DAVENPORT MINE	23	134 090 34-8		Total->			2	2		
GTX141	Grant	PAHL MINE	23	135 090 35-5	PAHL,J	Strip	1926	1945	107	81	1931	13
						Total->			107	81		
GVX015	Golden Valley	SENTINEL BUTTE COAL	22	139 104 05-0	HUNTER LAND MISSOURI SLOPE LAND & CO.	Total->			5	5		
						Drift	1914	1923	3	3	1914	2
GVX019	Golden Valley	KUSSICK COAL MINE	22	139 104 08-0	CUSICK MINE KUSSICK MINE HUNTER LADD COMPANY CUSICK,J	Total->			3	3		
						Drift	1913	1917	1	1	1913	2
GVX020	Golden Valley	ROHL COAL MINE	22			Total->			1	1		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
GVX083	Golden Valley	SCHAUER MINE	22	139 105 08-0	ROHL,A	Strip	1910	1912	1	1	1911	2
				<i>Total-></i>		<i>1</i>	<i>1</i>					
HT0006	Hettinger	WATSON COAL MINE	23	139 106 34-5		SH	1939	1945	15	15	1940	6
				<i>Total-></i>		<i>15</i>	<i>15</i>					
HT0033	Hettinger	KALLIS COAL MINE	23	132 093 28-8 132 093 28-8	WATSON,T	Strip	1919	1945	48	46	1925	6
				<i>Total-></i>		<i>48</i>	<i>46</i>					
				134 091 24-6 134 091 25-5 134 091 24-6	KALLIS COAL MINE UTTER MINE KALLIS BROTHERS KOENIG MINE KELIN,W.F. UTTER,J KALLIS,W	Strip	1916	1917	1	1	1916	2
						Strip	1916	1917	1	1	1916	2
						Strip	1923	1925	5	3	1923	5
						Drift	1926	1926	1	1	1923	5
						Underground	1927	1927	1	1	1923	5
						Slope	1928	1928	1	1	1927	1
						Strip	1929	1932	2	2	1930	4
						Drift	1933	1934	1	1	1930	4
						Slope	1935	1944	23	23	1937	7
						Strip	1945	1945	4	4	1937	7
						<i>Total-></i>		<i>40</i>	<i>38</i>			

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
HT0055	Hettinger	SE HAVELOCK A	23	134 096 02-5 134 096 02-5 135 096 35-6	WEINANDY COAL MINE	Drift	1920	1935	31	7	1926	9
						Slope	1936	1940	3	3	1937	1
						Total->			34	10		
HT0056	Hettinger	HAVELOCK D	23	135 096 27-5	SCHORSCH MINE HAVELOCK COAL MINE SCHORSCH COAL MINE ADAMS,E	Drift	1914	1919	4	2	1917	4
						Drift	1933	1936	2	2	1934	1
						Strip	1939	1939	0	0	1934	1
						Drift	1940	1940	1	1	1934	1
						Slope	1941	1944	1	1	1943	2
												Total->
HT0057	Hettinger	HAVELOCK A	23	135 096 28-6 135 096 28-7	HAVELOCK COAL CO. HAVELOCK FUEL CO. MINE QUALITY COAL CO.	Slope	1922	1942	58	24	1925	18
												Total->
HTX009	Hettinger	SQUARE DEAL COAL MIN	23	133 091 35-3	CARRY MINE CRARY,W	Strip	1925	1926	1	1	1925	4
												Total->
HTX011	Hettinger	RUMPF COAL MINE	23	133 092 30-8								

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Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
HTX029	Hettinger	SWITZER COAL MINE	23	134 095 10-7	RUMPH,C	Strip	1916	1917	2	2	0	0
						Drift	1928	1930	3	3	1917	3
						Strip	1931	1934	4	4	1931	2
						Total->			9	9		
HTX032	Hettinger	NELSON COAL MINE	23	134 095 35-7	SWITZER,P	Strip	1916	1917	1	1	0	0
						Total->			1	1		
HTX089	Hettinger	KELSCH MINE	23	132 091 04-6	W.H.BROWN & CO. W.H.BROWN LAND CO. BROWN,W	Strip	1914	1917	1	1	1915	2
						Total->			1	1		
HTX091	Hettinger	LAMBIE MINE	23	132 091 33-6	KELSCH BROS.MINE KELSCH,J	Strip	1923	1944	11	8	1923	9
						Total->			11	8		
HTX093	Hettinger	DUNCANSON MINE	23	132 093 34-0		Strip	1929	1945	36	36	1933	5
						Total->			36	36		
HTX094	Hettinger	WATROUS O.K. LIGNITE	23	133 091 31-5	WATROUS O.K. LIGNITE	Slope	1933	1935	2	1	1933	3
						Total->			2	1		
						Strip	1923	1924	1	1	1923	12
						Total->			1	1		

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township (Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment								
							Begin	End	Total	Local	Year	EEs							
HTX095	Hettinger	LOE MINE	23	133 092 20-8	LOE MINE LOE,I	Strip	1921	1922	4	4	1921	4							
													Slope	1923	1924	3	3	1923	6
													Drift	1925	1934	11	11	1925	4
													<i>Total-></i>			18	18		
HTX102	Hettinger	JACKSON & BLANK MINE	23	134 095 05-6	JACKSON & BLANK MINE RED STAR MINE BLANK JACKSON	Slope	1923	1927	6	0	1923	11							
													<i>Total-></i>			6	0		
HTX103	Hettinger	REESE MINE	23	134 095 09-0	RUE MINE WAGGONER MINE REGENT MINE	Strip	1926	1945	32	31	1928	11							
													<i>Total-></i>			32	31		
HTX108	Hettinger	CULVER MINE	23	134 097 14-7	CULVER & SON MINE CULVER,C	Strip	1916	1941	18	18	1935	10							
													<i>Total-></i>			18	18		
HTX112	Hettinger	WEINBERGER MINE	23	135 094 13-0		Strip	1931	1942	2	2	1931	3							
													<i>Total-></i>			2	2		
HTX113	Hettinger	HAMBRE MINE	23	135 094 14-0		Strip	1931	1934	1	1	0	0							
													<i>Total-></i>						

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
HTX114	Hettinger	DOBBINS MINE	23	135 094 14-0		Total->			1	1		
						Strip	1933	1945	8	7	1936	5
HTX115	Hettinger	KOUBA BROS.MINE	23	135 095 33-7	KOUBA BROS.MINE KOUBA MINE	Total->			8	7		
						Slope	1926	1926	1	1	0	0
						Strip	1927	1927	1	1	1926	3
						Drift	1928	1934	2	2	1929	4
						Strip	1935	1945	12	12	1943	2
HTX116	Hettinger	HORNE MINE	23	135 096 04-0		Total->			16	16		
HTX119	Hettinger	HAVELOCK QUALITY COA	23	135 096 28-3	QUALITY COAL COMPANY	Strip	1925	1938	11	11	1932	4
						Total->			11	11		
HTX127	Hettinger	AABY LIGHT & POWER	23	136 097 21-6	AABY LIGHT & POWER ABBAY LIGHT & POWER	Slope	1923	1940	28	22	1923	7
						Total->			28	22		
HTX128	Hettinger	MORRIS MINE	23	136 097 21-0		Strip	1920	1924	8	8	1920	7
						Total->			8	8		
ME0137	Mercer	DAKOTA COLLIARY	23	144 089 23-7		Drift	1932	1932	2	2	0	0
						Slope	1933	1934	1	1	1932	7
						Total->			3	3		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment		
							Begin	End	Total	Local	Year	EEs	
ME0138	Mercer	ACRES COAL MINE	23	144 089 26-8	LUCKY STRIKE MINE SLOWERY FIELD STROPE GULAG COAL CO.	Slope	1917	1923	195	1	0	0	
				144 080 30-0			Drift	1925	1937	383	5	1923	123
<i>Total-></i>									578	6			
ME0395	Mercer	REICHENBERG	23	144 089 23-6	DRY FLINT COAL MINE UNITED LIGNITE	Drift	1921	1927	10	1	1923	24	
				<i>Total-></i>									10
ME0521	Mercer	BORNER MINE	23	144 086 08-8	REICHENBURG COAL MINE GAWLONA BARTELL REICHENBERG,JACK	Slope	1915	1915	1	1	0	0	
				<i>Total-></i>									5
ME0522	Mercer	SAILOR MINE	23	144 085 14-5	BORNER,R	Underground	1944	1945	0	0	0	0	
				144 085 14-5			<i>Total-></i>						
ME0633	Mercer	WHITE FLAME MINE	23		BROCKWAY BROCKWAT, W.F.	Slope	1927	1930	2	2	1927	3	
<i>Total-></i>									2	2			

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
ME0711	Mercer	LEROY BOECKEL MINE	23	144 085 23-5	SMITH MINE JANSSEN TEUBER JANSSEN,BEN	SH Drift <i>Total-></i>	1927 1928	1927 1939	1 10 <i>11</i>	1 10 <i>11</i>	0 1928	0 4
				145 087 19-7 145 087 19-6 145 087 19-7	SCHMIDT MINE SCHMIDT,G	Slope <i>Total-></i>	1914	1927	6 6	6 6	1916	5
ME0763	Mercer	BEVEN	23	145 088 26-8 145 088 26-8 145 088 26-8	WOODY DRAW MINE BAUER MINE #2 BOUER MINE BEVEN	Underground <i>Total-></i>	1936	1945	7 7	7 7	1944	2
MEX051	Mercer	OTNESS COAL MINE	23	144 086 20-6	OTNESS,E	Slope <i>Total-></i>	1917	1917	1 <i>1</i>	1 <i>1</i>	0	0
MEX065	Mercer	BLACK DIAMOND COAL M	23	144 087 04-0 144 087 05-0 144 087 06-0 144 087 07-0								

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MEX075	Mercer	MYERS COAL MINE	23	144 087 08-0	KNIFE RIVER MINE BEULAH MINE KNIFE RIVER COAL MINE UNITED PUBLIC UTILITY SEMMLER,C MOUNTS,M INSULL INTERESTS	SH	1915	1922	264	8	0	0
				144 087 09-0								
				144 087 16-0								
				144 087 17-0								
				144 087 18-0								
				144 087 20-0								
				144 087 21-0								
				144 087 23-0								
				144 088 12-0								
				144 088 13-0								
144 088 25-0												
MEX084	Mercer	KREM COAL MINE	23	144 090 09-7	MYERS,H	Drift	1917	1917	1	1	0	0
				145 086 22-4								
MEX084	Mercer	KREM COAL MINE	23	145 086 20-0	KREM ROLLER MILL MALKE,F	SH	1914	1915	4	4	1914	4
				Total->								

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MEX093	Mercer	KESLER COAL MINE	23	144 088 12-5	KESSLER,G	Drift Slope Total->	1917 1925	1922 1929	2 1 3	1 1 2	1917 1926	4 2
MEX444	Mercer	ELDER MINE	23	141 089 24-0		Strip Total->	1941	1945	1 1	1 1	0	0
MEX448	Mercer	HAZEN MINE	23	144 086 08-8	DANUSAR COAL DANUSAR DANZER,S	Underground Total->	1919	1926	11 11	9 9	1919	3
MEX455	Mercer	ZAP COLLIERY	23	143 088 06-0 144 088 19-0 144 088 20-0 144 088 29-0 144 088 30-0 144 088 31-0 144 088 32-0 144 088 33-0 144 089 24-0 144 089 25-0 144 089 36-0	DAKOTA COLLIERIES INDIAN HEAD MINE NORTH AMERICAN COAL REPUBLIC COAL DAKOTA MINES	Strip Total->	1922	1945	3718 3718	75 75	1942	144

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MEX457	Mercer	KAMINS COAL	23	144 089 17-3 144 089 20-5	KAMINS,A	Drift	1924	1943	321	47	1940	76
						<i>Total-></i>			321	47		
MEX458	Mercer	ZAP COAL	23	144 089 22-5	ZAP COAL GUNDERSON COAL	Underground	1923	1926	11	2	1923	11
						Drift	1927	1935	68	5	1928	14
						Slope	1936	1938	39	20	1928	14
						Drift	1939	1941	52	1	1940	32
						<i>Total-></i>			170	28		
MEX468	Mercer	DAKOTA STAR MINE	23	145 086 16-8 145 086 17-0 145 086 18-6 145 086 19-5 145 086 20-0 145 086 21-0	HAZEN MINE TRUAX-TRAER COAL CONSOLIDATION COAL	Strip	1945	1945	65	3	0	0
						<i>Total-></i>			65	3		
MEX473	Mercer	KRAUSE MINE	23	146 088 30-5		Strip	1935	1945	6	6	0	0
						<i>Total-></i>			6	6		
ML0194	McLean	STEVENS BROS MINE	21	148 084 19-0 148 084 18-3 148 084 18-5	STEVENS BROS.CO.							

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment				
							Begin	End	Total	Local	Year	EEs			
ML0208	McLean	PULVER MINE AND DUMP	19	146 082 23-6 146 082 23-6 146 082 23-7 146 082 26-5	STEVENS BROS. STENES BROS.	Strip <i>Total-></i>	1922	1943	1263	32	1922	150			
ML0219	McLean	KOENIG MINE	19	146 082 35-8 146 082 34-5	MUMMERT BROS. MINE UNDERWOOD COAL	Strip <i>Total-></i>	1945	1945	1	1	0	0			
MLX012	McLean	BITUMINA COAL MINE	19	144 082 06-7 144 082 06-8 144 083 01-6	HANSON KOENIG,J	Strip <i>Total-></i>	1917	1917	1	1	0	0			
MLX019	McLean	YOUNGQUIST COAL MINE	19	144 083 10-5 144 083 10-6	SATTERLUND MINE SATTERLUND,J	Slope Drift <i>Total-></i>	1921	1925	2	0	1922	5			
					YOUNGQUIST ESTATE	Drift Slope Drift	1909	1925	3	3	1909	3			
							1926	1929	2	2	1926	5			
							1930	1932	2	2	1930	3			

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MLX020	McLean	PFISTER COAL MINE	19	144 083 11-8	PFISTER,F	Slope	1933	1933	0	0	1930	3
						Drift	1934	1934	0	0	1930	3
						Total->			7	7		
						Drift	1916	1917	2	1	1916	2
						Underground	1919	1922	4	4	1921	5
						Drift	1923	1930	12	11	1925	5
						Slope	1931	1942	4	4	1931	3
MLX042	McLean	ELM POINT COAL MINE	19	145 084 35-1		Strip	1945	1945	1	1	1931	3
						Total->			23	21		
						Drift	1916	1920	4	2	0	0
MLX045	McLean	FJELDDAL COAL MINE	19	146 081 18-4	WAGNER MINE REITMAN FJELDDAHL MINE WAGENER MINE FJELDDAL,T REITMAN,J	Total->			4	2		
						Slope	1916	1917	3	3	1916	3
MLX046	McLean	HANSEN COAL MINE	19	146 081 18-4	LARSON MINE HANSON MINE PAYNE MINE LARSON & PAYNE MINE HANSEN,P	SH	1920	1925	11	11	1923	9
						Slope	1926	1926	3	3	1923	9
						SH	1927	1944	37	37	1930	10
						Total->			54	54		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township (Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MLX103	McLean	ULRICH COAL MINE	21	148 083 17-8 148 083 18-8	LARSON,L	Drift	1910	1911	1	1	0	0
						Slope	1912	1913	4	4	1911	7
						Drift	1914	1917	14	14	1913	6
						Underground	1919	1922	1	1	1919	3
						Slope	1923	1923	1	1	1919	3
						Underground	1924	1924	1	1	1923	4
						Drift	1925	1929	5	5	1926	4
<i>Total-></i>			27	27								
MLX104	McLean	JOHNSON COAL MINE	21	148 083 18-6	U.S.GOVERNMENT ANDERSON,A	Slope	1913	1916	8	8	1913	6
						<i>Total-></i>			8	8		
MLX105	McLean	KUNKEL COAL MINE	21	148 084 18-2	SWAN JOHNSON MINE JOHNSON,S	Slope	1913	1933	11	11	1917	6
						<i>Total-></i>			11	11		
MLX112	McLean	DUCHENE BLACK DIAMOND	21	148 086 16-6	KUNKEL,J NORTH DAKOTA DUCHENE,J	Strip	1912	1913	3	3	0	0
						Drift	1914	1915	5	5	1914	5
						Underground	1922	1922	14	3	1914	5
						Slope	1923	1923	72	7	1922	32
						Underground	1924	1924	4	1	1923	35
						<i>Total-></i>			98	19		
						Strip	1909	1910	1	1	0	0

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MLX130	McLean	MINTER STRIP MINE	21	149 085 12-5	SAYLOR MINE	Total->			1	1		
						Strip	1923	1945	27	27	1923	13
MLX134	McLean	ROSEGLEN COAL MINE	21	149 087 17-6 149 087 20-8	ROSEGLEN CITY MINE SHAW	Total->			27	27		
						Slope	1925	1937	31	31	0	0
MLX264	McLean	KUGLER MINE	19	144 082 06-0 144 082 07-0	FALKIRK COAL FIGENSKAU MINE #1 SHOMAN MINE HALPERN CRESCENT LIG.COAL	Total->			31	31		
						Underground	1919	1944	121	65	1923	15
MLX265	McLean	BROWN MINE	19	144 083 10-0	BROWN,J	Total->			121	65		
						Drift	1935	1942	3	3	1937	2
MLX272	McLean	MONTGOMERY MINE	19	145 084 35-0		Total->			3	3		
						Drift	1926	1927	1	1	1926	1
MLX276	McLean	ZELLER MINE	19	146 08 130-6	ZELLAR MINE ZELLER,D	Total->			1	1		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township (Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MLX277	McLean	JOHNSON MINE	19	146 081 30-6	JOHNSON,A	SH Total->	1932	1940	50	50	1936	14
MLX278	McLean	ISWACSON COAL	19	146 082 12-5	ISSACSON MINE ISAACSON,A	SH Total->	1933	1945	75	73	1942	13
MLX279	McLean	ANDERSON MINE	19	146 082 12-0	VANDERSON MINE	Slope Total->	1921	1927	4	4	1924	3
MLX280	McLean	FIGENSKAU MINE #2	19	146 082 13-0 146 082 24-8	FIGENSKAU COAL MINE	SH	1933	1934	0	0	0	0
MLX285	McLean	MALLOY MINE	19	146 082 32-0	UNDERWOOD MINE	SH Total->	1933	1945	234	162	1942	60
MLX290	McLean	BOGER BROS.MINE	21	148 083 17-0 148 083 18-5	KEMPF MINE STEINWAND CM	SH Total->	1931	1937	6	6	1933	6
MLX291	McLean	ZOOK MINE	21			Slope Total->	1934	1944	28	28	1939	8

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment						
							Begin	End	Total	Local	Year	EEs					
MLX292	McLean	HUMMEL MINE	21	148 083 17-5	ZOOK,E	Slope	1923	1938	29	17	1935	16					
				148 083 18-5					Total->	29			17				
MLX295	McLean	RUPP MINE	21	148 083 18-5		Slope	1926	1937	16	16	1928	8					
									Total->	16			16				
MLX296	McLean	RUPP STRIP MINE	21	148 084 17-8		SH	1920	1926	105	16	0	0					
				148 085 17-0					Total->	105			16				
MLX297	McLean	GARRISON MINE	21	148 084 18-5		Strip	1926	1931	118	21	1927	78					
									Total->	118			21				
MLX298	McLean	ROBINSON COAL	21	148 084 18-2	GARRISON CREEK MINE GARRISON COAL,LIGHT COAL,LIGHT,& POWER	Slope	1916	1917	17	7	0	0					
									Underground	1919			1920	2	0	1919	18
									Strip	1921			1921	1	1	1919	18
									Underground	1922			1924	2	1	1921	2
									Total->					22	9		
MLX300	McLean	BURNS & SONS MINE	21	148 084 30-6	GARRISON COAL SCHLICHTING COAL ROBINSON,D	Strip	1925	1942	74	34	1932	13					
									Total->	74			34				

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MN0161	Mountrail	DALEN MINE	21	148 085 30-0	BURNS MINE BURNS & WRETILING MINE B & W WRETILING	Strip Total->	1935	1945	32 32	32 32	1944	9
				152 090 13-6 152 090 13-6	SKOGEN SITE A	SH Total->	1935	1938	17 17	17 17	1937	11
MN0163	Mountrail	BOWMAN COAL MINE	21	153 089 18-7	OLMSTEAD SITE BOWMAN,CHARLES	SH Total->	1910	1915	2 2	2 2	1912	4
MNX098	Mountrail	HOPPE COAL MINE	21	153 090 21-6	HOEPPE MINE LANDAKER MINE MOERKE HOEPPE,H MOERKE,H LANDAKER,J	Strip Slope Strip Total->	1910 1933 1935	1917 1934 1945	3 1 1 5	3 1 1 5	0 1917 1940	0 3 2
MNX102	Mountrail	NORTH STAR COAL MINE	21	153 090 28-5	ROSENO,A MOERKE,H	Strip	1912	1914	1	1	0	0

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MNX104	Mountrail	ROSENO COAL MINE	21	153 090 28-5	SELLERS MINE ROSENO,A SELLERS,W	Total->			1	1		
						Strip	1914	1917	3	3	1916	2
MNX105	Mountrail	SUNDAY COAL MINE	21	153 090 28-5	ROSENO,A	Total->			3	3		
						Drift	1913	1914	1	1	0	0
MNX363	Mountrail	BARTO COAL MINE	21	156 094 10-0	BARTO,J	Total->			1	1		
						Drift	1913	1915	1	1	1913	3
MNX368	Mountrail	PORGER COAL MINE	21	156 094 09-6 156 094 10-7 156 094 15-8 156 094 16-1	PORGER,G PODGER CM	Total->			1	1		
						Drift	1909	1917	3	3	1913	2
						Strip	1923	1924	0	0	1913	2
						Drift	1925	1935	9	9	1930	5
						Slope	1936	1936	1	1	1930	5
						Drift	1937	1939	1	1	1938	1
						Total->			14	14		
MNX372	Mountrail	EVERSON COAL MINE	21	156 094 22-3 156 094 23-3	EVERSON,J	Underground	1917	1919	1	1	0	0

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MNX374	Mountrail	COMMON COAL MINE	21	156 094 23-6	NORTH DAKOTA	Total->			1	1		
						Strip	1911	1911	1	1	0	0
MNX569	Mountrail	GAMBLE COAL MINE	21	158 093 30-8	BLICKRE MINE BLICKRE & SLATTEN NORTH DAKOTA	Total->			1	1		
						Strip	1909	1913	1	1	1910	3
MNX570	Mountrail	NEW COAL MINE	21	158 093 30-8	NEW MINE TOVESON,P	Total->			1	1		
						Strip	1909	1909	1	1	0	0
MNX772	Mountrail	DIAMOND STRIP MINE	21	151 089 06-0	SOMMERFELD BROS.COAL	Total->			14	14	1932	12
						Strip	1930	1938	14	14		
MNX777	Mountrail	PARSHALL COAL	21	152 089 19-0	DALEN ROUNSBACK,A	Total->			21	21	1923	9
						SH	1923	1934	21	21		
MNX781	Mountrail	OSBURN MINE	21	152 092 16-5	OSBORNE MINE OSBORN MINE	Total->			1	1	0	0
						Drift	1930	1930	1	1	1930	3
						Underground	1931	1931	1	1		

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MN782	Mountrail	STRINGER MINE	21	152 092 16-0	SUPERIOR MINE JESS STRINGER MINE	Strip	1932	1934	1	1	1932	3
						Drift	1935	1935	1	1	1932	3
						Total->			4	4		
MN787	Mountrail	SMITH MINE	21	154 089 17-0	SPEIGEL MINE	Strip	1923	1936	4	4	1926	5
						Slope	1937	1940	2	2	1926	5
						Total->			6	6		
MN788	Mountrail	MORMAN MINE	21	154 089 17-0	MORMANN MINE	SH	1932	1940	1	1	1934	4
						Total->			1	1		
						SH	1925	1931	3	3	1928	5
MN790	Mountrail	WILLIAMS MINE	21	155 094 22-5	WILLIAMS,B	Total->			3	3		
						Strip	1913	1915	1	1	1913	2
						Total->			1	1		
MN793	Mountrail	OLSON MINE	21	156 094 23-6		Strip	1925	1925	1	1	0	0
						Drift	1926	1930	1	1	1926	2
						Total->			2	2		
MN795	Mountrail	MOORE STRIP MINE	21	157 093 19-6	MOORE,T	Strip	1923	1925	1	1	0	0
						Drift	1930	1931	1	1	1930	2
						Total->			2	2		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township (Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MNX796	Mountrail	GATHMAN MINE	21	157 094 12-5	GATHMAN,E	Drift Total->	1927	1927	1 1	1 1	0	0
MNX799	Mountrail	GARBER MINE	21	158 093 30-5		Slope Total->	1925	1927	1 1	1 1	0	0
MNX800	Mountrail	ANDERSON MINE	21	158 093 30-1		Strip Total->	1930	1943	3 3	3 3	1931	6
MNX802	Mountrail	LEEF MINE	21	158 093 30-8	LEAF MINE LEEF,C	Strip Total->	1923	1936	3 3	3 3	1933	3
MNY001	Mountrail	MOORE			NORTH DAKOTA	Drift Total->	1910	1911	1 1	1 1	0	0
MOX013	Morton	COOPERHAVEN COAL MIN	23	134 084 15-5	COOPENHAVER MINE COPPENHAVER,A	Strip Total->	1914	1916	2 2	2 2	0	0
MOX071	Morton	FELAND COAL MINE	23	138 086 13-7	FELAND,T	Drift Total->	1909	1913	13 13	0 0	1909	8
MOX076	Morton	LINDSTOM COAL MINE	23	138 088 21-6								

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MOX077	Morton	LANGE MINE	23	138 088 22-5 138 088 22-7 138 088 27-0 138 088 28-0	LINDSTROM MINE MONSON,G LINDSTROM,C LINDSTROM,A SPRING VALLEY PRODUCTS GLEN ULLIN TRUST	Drift <i>Total-></i>	1914	1931	46	15	1921	63
				138 088 23-8	LANG MINE	Strip Strip <i>Total-></i>	1916 1936	1917 1941	1 1	1 1	1916 1916	2 2
MOX093	Morton	KRAMER COAL MINE	23	139 085 07-7	KRAMER & KIESEL MINE KIESEL MINE KRAMER,F	Slope Strip <i>Total-></i>	1916 1927	1917 1929	4 1	4 1	0 1928	0 4
MOX102	Morton	RICHTER COAL MINE	23	139 088 13-0	RICHTER,B	Strip <i>Total-></i>	1925	1945	34	33	1941	6
MOX103	Morton	PLEASANT RIDGE COAL	23	139 088 20-7	TAVIS MINE TRAVIS,A	Slope	1914	1934	18	17	1922	6

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MOX138	Morton	HARNISCH COAL MINE	23	140 090 08-5 140 090 08-8	MARNISCH MINE HARNISCH BROTHERS	Total->			18	17		
						Drift	1916	1928	30	30	0	0
						Slope	1929	1932	20	20	1930	8
						Drift	1933	1933	3	1	1930	8
						Slope	1934	1939	16	16	1936	14
						Drift	1940	1940	3	3	1936	14
						Slope	1941	1945	10	10	1942	5
						Total->			82	80		
MOX139	Morton	HEBRON BRICK CO.COAL	23	140 090 02-7 140 090 11-0	HEBRON BRICK COMPANY HEBRON MINE HEBRON BRICK & COAL HEBRON FIRE & PRESSED BRICK	Total->						
						Drift	1909	1930	252	252	1916	13
						Slope	1931	1939	3	3	1931	3
						Total->			255	255		
MOX140	Morton	ELMER COAL MINE	23	140 090 24-6	ELMER,J	Total->						
						Slope	1917	1919	1	1	1917	3
						Total->			1	1		
MOX292	Morton	CAMPBELL MINE	23	137 081 14-6		Total->						
						Drift	1923	1926	1	1	1925	4
MOX293	Morton	MICKELSON MINE	23	137 081 14-6	MICHELSON MINE	Total->			1	1		
						SH	1925	1925	1	1	0	0

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MOX294	Morton	TEPPO MINE	23	137 081 23-6	TEPPO,R	Drift	1926	1938	9	9	1935	7
						Slope	1939	1939	1	1	1935	7
						Total->			11	11		
MOX295	Morton	LEHTO BROS.MINE	23	137 081 23-6		SH	1923	1934	9	9	1931	6
						Slope	1935	1938	2	2	1935	6
						Total->			11	11		
MOX298	Morton	KOPONEN MINE	23	137 081 25-8		Slope	1938	1941	0	0	0	0
MOX301	Morton	NAUCKE MINE	23	137 084 05-0	NAUCKE MINE BLUE DIAMOND MINE NAUKE MINE	Drift	1923	1929	1	1	1925	2
MOX302	Morton	BETHKE MINE	23	137 084 08-0		Total->			6	6	1939	2
						Strip	1934	1944	6	6		
						Total->			6	6		
MOX310	Morton	BEAN MINE	23	138 085 05-0	SCHMIDT & BEAN MINE SCHMIDT	Strip	1935	1937	1	1	0	0
						Strip	1938	1945	5	5	1940	5
						Strip	1938	1945	7	6	1940	5
						Total->			13	12		
MOX311	Morton	SCHMITT MINE	23			Strip	1929	1934	1	1	1929	1
						Total->			1	1		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MOX314	Morton	MAX JUST MINE	23	138 085 05-0	SCHMIDT MINE DRY MINE COAL	Strip Total->	1935	1945	6	6	1944	2
										6	6	
MOX315	Morton	GUNDER & ITRICK MINE	23	138 085 08-0	MAX JUST MINE JUST MINE	Strip Total->	1921	1935	1	1	1928	2
										1	1	
MOX316	Morton	JOERSZ MINE	23	138 085 08-0	GUNDER & ITRICK MINE ITRICK MINE ITRICH MINE	Strip Total->	1927	1944	2	2	1927	2
										2	2	
MOX321	Morton	GARTNER MINE	23	138 085 09-0	ROCK RIDGE MINE JOERZ MINE	Strip Total->	1927	1945	3	3	1932	1
										3	3	
MOX325	Morton	THIEL MINE	23	138 087 19-5		Strip Total->	1936	1942	2	2	1938	1
										2	2	
MOX332	Morton	HOGER MINE	23	138 087 34-0		Strip Total->	1942	1943	1	1	0	0
										1	1	
				139 084 02-0	HAGER MINE	Strip	1926	1937	3	3	1927	7

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MOX340	Morton	MCCORMICK COAL	23	139 085 21-8	DEEP MINE COAL PEDERSON,C MCCORMICK,J SULLIVAN,J GAINES,A	Total->			3	3		
MOX341	Morton	BACKSEN MINE	23	139 085 28-0		SH Total->	1922	1945	377	104	1928	36
MOX347	Morton	CARBON MINE	23	139 086 23-8	TIMPE & NELLIS COAL CARBON MINE #1 CARBON MINE #2 NILLES & SONS COAL	Strip Total->	1934	1940	2	2	1938	4
MOX350	Morton	FILIBECK MINE	23	139 088 13-0		Strip Total->	1942	1945	9	9	0	0
MOY001	Morton	NORTH STAR			HAVEN & MURRAY	Strip Total->	1928	1941	2	2	1931	4
MZX362	McKenzie	O.KAY MINE	22	149 099 07-0	O.KAY MINE	Drift Slope Underground Total->	1909	1911	3	3	1909	4
							1912	1926	42	42	1925	12
							1927	1936	14	14	1928	6
									68	68		
						Strip	1945	1945	1	1	0	0

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
MZX364	McKenzie	BUSHEE MINE	22	149 100 01-0		Total->			1	1		
						Strip	1927	1934	2	2	1927	9
MZX365	McKenzie	FLANNIGAN MINE	22	149 100 02-5		Total->			2	2		
					FLANAGAN MINE FLANNEGAN MINE FLANIGAN MINE	Strip	1929	1942	6	6	1936	3
MZX366	McKenzie	TORSTENSON MINE	22	149 100 10-5		Total->			6	6		
					THORSTENSON MINE	Strip	1929	1940	6	6	1929	10
MZX378	McKenzie	EDWARDSON MINE	22	152 096 23-8		Total->			6	6		
					EDWARDSON'S MINE	Strip	1937	1944	4	4	1941	4
MZX381	McKenzie	SKOGHEIM MINE	22	152 098 24-0		Total->			4	4		
						Strip	1938	1945	5	5	1943	5
MZX382	McKenzie	SHELLEY MINE	22	152 098 33-6		Total->			5	5		
						Strip	1928	1945	22	22	1943	5
OL0297	Oliver	PLEASANT VALLEY	23	142 084 08-6 142 084 08-6 142 084 08-6 142 084 08-6 149 084 08-0		Total->			22	22		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
OLX012	Oliver	NELSON COAL MINE	23	141 084 12-7	BORNEMANN MINE BORNEMAN MINE BOERNER,V	Strip Total->	1912	1945	26	26	1925	7
							26	26				
OLX022	Oliver	TRIPP COAL MINE	23	142 083 29-8	SPRING VALLEY MINE NELSON,N	Strip Total->	1910	1923	16	16	1921	17
							16	16				
OLX121	Oliver	SCHENK MINE	23	142 083 29-8	TRIPP,M NELSON,N	Strip Total->	1914	1925	11	11	1921	10
							11	11				
OLX124	Oliver	SCHMIDT MINE	23	142 084 13-5		Strip Total->	1940	1941	1	1	0	0
							1	1				
RVX068	Renville	WHITE ASH COAL MINE	20	158 086 28-7	WHITE ASH COAL MINE CARROLL,D	Strip Total->	1936	1945	9	9	1940	9
							9	9				
RVX069	Renville	JEWELL COAL MINE	20	158 086 29-7 158 086 29-8	WAHR	Slope Drift Total->	1908 1917	1909 1924	1 1	1 1	0 1917	0 2
							2	2				

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
RVX075	Renville	SPRING FARM COAL MIN	20	158 086 33-5	WAHL,G	Slope	1909	1912	6	6	1909	4
						<i>Total-></i>			6	6		
RVX079	Renville	WOOSTER COAL MINE	20	158 086 34-0	TEHELKA,P	Drift	1909	1909	1	1	0	0
						<i>Total-></i>			3	3	1914	4
RVX301	Renville	JENSEN BROS.MINE	20	158 086 29-0 158 085 34-0	WOOSTER,B RASMUSSEN,S	Slope	1910	1923	4	4		
						<i>Total-></i>			1	1	1913	3
RVX303	Renville	BAKKEN & MANDT MINE	20	158 086 34-5	BAKKEN & MANDT MINE MANDT MINE BAKKEN MANDT	Drift	1913	1915	1	1	1913	3
						<i>Total-></i>			1	1		
RVX304	Renville	BAKKEN & DANIELSON M	20	158 086 34-0	BAKKEN & DANIELSON M	Slope	1934	1936	1	1	1934	4
						<i>Total-></i>			1	1		
RVX306	Renville	MATTSON MINE	20	161 086 31-5	BAKKEN DANIELSON	Slope	1935	1940	2	2	1938	4
						<i>Total-></i>			2	2		
RVX306	Renville	MATTSON MINE	20	161 086 31-5		Drift	1933	1934	1	1	0	0
						<i>Total-></i>			1	1		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
SK0067	Stark	BINEK B SITE	23	139 095 07-5	MATTSON MINE MATTSON,T	SH Total->	1926	1927	1	1	0	0
					HOKOS & BENEK MINE BENEK FAMILY	SH Total->	1917	1945	226	226	1921	22
SK0068	Stark	OLD LEHIGH MINE	23	139 095 08-7 139 095 08-6 139 095 17-8								
SK0069	Stark	BINEK C	23	139 095 17-8 139 095 17-7 139 095 17-7 139 095 18-2	BINEK A LEHIGH MINE CONSOLIDATED COAL	Slope Total->	1912	1917	121	22	1912	36
					REPUBLIC MINE LEHIGH BRIQUETING LEHIGH COAL MINING DAKOTA BRIQUETS DAKOTA TAR PRODUCTS	SH Total->	1921	1945	1040	136	1942	78
SK0090	Stark	ZENITH	23	139 098 06-7 139 098 06-8 139 099 01-6 139 099 01-6								

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment		
							Begin	End	Total	Local	Year	EEs	
SK0804	Stark	WILES	23	139 098 06-7	ZARAK MINE ZENITH BRIQUET DAKOTA LIGNITE MINES	Slope	1909	1922	201	50	1909	70	
				139 098 06-7			SH	1923	1923	9	1	1909	70
							Underground	1924	1924	3	1	1923	24
							Slope	1925	1925	1	1	1924	15
							Drift	1926	1928	3	3	1926	6
							Strip	1929	1929	1	1	1926	6
							Drift	1930	1934	1	1	1930	2
							Total->			219	58		
				SKX018			Stark	BUNKER HILL MINE	23	140 098 26-7	WALTERS MINE MARSH MINE WILEY MINE NORTH CREEK MINE MARSH WALTER MINE WILES,DEANE WILEY,C	Strip	1913
	Total->				10	10							
SKX030	Stark	PELTON COAL MINE	23	139 092 04-8	WEBB,B	Slope	1915	1915	1	1	0	0	
					Total->				1	1			
				139 095 05-3 139 095 06-6 139 095 07-0 139 095 08-8	PITTSBURGH MINE								

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
SKX047	Stark	GROSS COAL MINE	23	140 099 34-2	DAKOTA LIGNITE MINES DICKINSON MINE MCGILORY,M DAKOTA FUEL	Slope	1910	1944	544	125	1917	40
					<i>Total-></i>			544	125			
SKX092	Stark	ELKIN MINE	23	138 093 03-8	PODOLANCHUK CROSS MINE GROSS,P PODOLANCHUK,C	Slope	1913	1919	1	1	1914	2
					<i>Total-></i>			1	1			
SKX093	Stark	JOHNSON MINE	23	138 093 10-5	ELKINS MINE	Strip	1936	1942	2	2	1938	2
					<i>Total-></i>			2	2			
SKX098	Stark	RICHARDTON MINE	23	139 092 04-5	JOHNSON MINE JOHNSON FARM STRIP MINE	Strip	1936	1942	4	4	1938	10
					<i>Total-></i>			4	4			
SKX101	Stark	NORTH STAR MINE	23	139 092 05-1	SENN MINE	Drift	1933	1933	0	0	0	0
					<i>Total-></i>	Slope	1934	1938	5	5	1937	5
Strip	1939	1939	1	1		1937	5					
Slope	1940	1945	5	5		1944	4					
						<i>Total-></i>			11	11		
					OSTOJ MINE							

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

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							Begin	End	Total	Local	Year	EEs
SKX103	Stark	WHITE ASH COAL	23	139 095 08-5	KOESEL,A OSTOJ,J OSTOJ FAMILY	Underground	1914	1928	21	21	1916	5
						Drift	1933	1935	1	1	1933	2
						Total->			22	22		
SKX107	Stark	ADAMSKI MINE	23	139 097 18-0	REILLY COAL	Drift	1926	1934	32	21	1930	8
						Slope	1935	1935	4	0	1930	8
						Drift	1936	1937	9	9	1935	8
						Total->			45	30		
SKX108	Stark	PERZINSKI MINE	23	139 097 18-6		Strip	1925	1945	16	16	1933	4
SKX111	Stark	EASTERN STAR MINE	23	139 099 04-0	EASTERN MINE	Strip	1923	1945	7	7	1923	4
						Total->			7	7		
SKX113	Stark	HANSON MINE	23	139 099 19-0		Slope	1929	1942	12	12	0	0
						Total->			12	12		
SKX114	Stark	DIETZ MINE	23	139 099 20-0	DEITZ MINE	Slope	1931	1933	1	1	1932	2
						Total->			1	1		
						Strip	1936	1938	1	1	0	0
						Strip	1943	1945	1	1	0	0
Total->			2	2								

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township (Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
SKX123	Stark	KARSKY MINE	23	140 098 27-6		Strip	1932	1945	5	5	1932	2
						<i>Total-></i>			5	5		
SKX128	Stark	LERFALD LIGNITE MINE	23	140 099 28-6	LERFIELD LIGNITE MINE	Drift	1923	1930	15	15	1923	7
						Slope	1931	1932	3	3	1923	7
						Strip	1933	1933	1	1	1932	2
						<i>Total-></i>			19	19		
SKX129	Stark	THOMAS MINE	23	140 099 28-0	INDIVIDUAL MINE	Strip	1945	1945	1	1	0	0
						<i>Total-></i>			1	1		
SKX131	Stark	POLANCHEK MINE	23	140 099 34-0	ANDY'S MINE	Strip	1935	1945	5	5	1944	3
						<i>Total-></i>			5	5		
SLX079	Slope	BOSTON MINE	22	133 098 23-7	BOSTON,H	Slope	1924	1925	1	1	0	0
						<i>Total-></i>			1	1		
SLX081	Slope	HENDRICKSON MINE	22	133 099 17-0		Strip	1933	1938	4	3	1933	13
						<i>Total-></i>			4	3		
WD0110	Ward	NELSON COAL MINE	20	152 081 29-5	WAGNER COAL MINE WYMAN COAL MINE GROSSE,A.M. SCHENWALD,D							

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WDX006	Ward	LEESON COAL MINE	20	152 08 1 19-5 152 08 1 19-8	LEESON MINE #2 LEESON WEST MINE LEESON & WEST MINE LEESON,J	Slope	1942	1945	6	6	1943	9
						Total->			6	6		
						Strip	1909	1909	4	4	1912	7
						Drift	1910	1930	42	42	1922	11
						Slope	1931	1932	3	3	1932	6
						Drift	1933	1934	8	8	1933	9
WDX013	Ward	TREE BOSCH COAL MINE	20	152 08 1 30-1 152 08 1 30-6	TREE-BAUSCH MINE TREE MINE BAUSCH TREE,R BAUSCH,J	Slope	1935	1939	36	36	1939	18
						Total->			93	93		
						Strip	1910	1922	5	5	1921	7
						Total->			5	5		
						Drift	1909	1911	1	1	1909	2
						Total->			1	1		
WDX014	Ward	KNORR COAL MINE	20	152 08 1 30-5	KNORR,G	Drift	1908	1909	2	2	0	0
						Total->			2	2		
WDX017	Ward	STAFFORD COAL MINE	20	152 082 15-5	STAFFORD LAND	Drift	1908	1909	2	2	0	0
						Total->			2	2		
WDX159	Ward	SCOTTY COAL MINE	20									

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WDX162	Ward	COLTON COAL MINE	20	155 084 01-6	BARRIE,A	SH Total->	1909	1911	2	2	1909	3
WDX165	Ward	BURLINGTON CITY COAL	20	155 083 06-7 155 084 01-6 155 084 12-2	COLTON COAL MINE COLTON,L	SH Slope Total->	1912	1913 1941	8	8	1912	10
WDX169	Ward	HOUSTON COAL MINE	20	155 084 02-0 155 084 11-0 155 084 03-0	PERLICHEK COAL FOOTE & BRUNNER FOOTE BRUNNER PERLICHEK,P	Slope SH Total->	1913	1938 1940	251	215	1934	40
WDX290	Ward	SCOTT COAL MINE	20	155 084 03-0	CHERRY VALE LIGNITE HOUSTON,D	Slope Total->	1917	1923	8	2	1920	13
WDX316	Ward	DES LACS COAL MINE	20	156 084 32-7		Drift Total->	1909	1909	5	0	0	0

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township (Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WDX437	Ward	SPENCER COAL MINE	20	156 085 02-0	FOXHOLM MINE ALLEN,J SIMMONS,F	Slope	1910	1913	4	4	1911	27
						SH	1914	1923	31	23	1919	16
						Slope	1925	1927	2	2	1926	2
<i>Total-></i>								37	29			
WDX469	Ward	SQUARE DEAL COAL MINE	20	159 087 31-5	KLONDIKE MINE SPENCER,W	Drift	1909	1917	2	2	1916	4
						<i>Total-></i>						2
WDX470	Ward	BADEN COAL MINE	20	159 088 25-7	MINNESOTA LOAN & TRUST HODGEN HODGSON,S	Drift	1912	1920	5	4	1919	6
						<i>Total-></i>						5
WDX471	Ward	COULEE COAL MINE	20	159 088 26-6	JOHNSON,J CHRISTIANSON,A HANSEN,C FRENCH,H	Drift	1909	1911	4	4	1909	6
						Slope	1912	1913	2	2	1909	6
						<i>Total-></i>						6
WDX488	Ward	SMITH DRY COAL MINE	20	159 088 26-8	FRENCH,H	SH	1909	1909	1	1	0	0
<i>Total-></i>								1	1			

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment		
							Begin	End	Total	Local	Year	EEs	
WDX498	Ward	DIAMOND COAL MINE	20	160 088 06-0	NATIONAL MINE PEOPLES POWER,FUEL,& NATIONAL BRIQUETTING	Slope	1909	1911	21	0	1909	40	
				160 088 07-0			Underground	1912	1913	17	7	1909	40
				160 088 18-0			Drift	1914	1920	83	33	1917	46
				<i>Total-></i>					121	40			
WDX504	Ward	VADNEIS COAL MINE	20	160 088 20-6	VON NEIDA,G PECK,H	Drift	1909	1913	11	0	1910	17	
				160 088 29-0			Slope	1914	1919	8	8	1916	5
				<i>Total-></i>					19	8			
				<i>Total-></i>									
WDX514	Ward	BRICK YARD COAL MINE	20	160 088 29-5	VADNAIS MINE VADNEIS BROTHERS VADNEIS ADAMS	Drift	1909	1911	2	2	1909	4	
				160 088 29-6			Slope	1912	1915	2	2	1914	7
				<i>Total-></i>					2	2	1916	4	
				<i>Total-></i>					6	6			
WDX514	Ward	BRICK YARD COAL MINE	20	160 088 32-5	KENMARE BRICK & COAL	Drift	1909	1911	12	0	0	0	
				<i>Total-></i>					6	2	1911	20	
				<i>Total-></i>					5	2	1914	8	
				<i>Total-></i>					23	4			

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WDX516	Ward	PIERCE COAL MINE	20	160 088 33-0	FOX,J	Slope Total->	1913	1914	1 1	1 1	0	0
WDX558	Ward	BERTELSON COAL MINE	20	161 088 29-4 161 088 29-6	JOHNSON MINE BERTELSON MINE #1 BERTELSON,M MOTT,J JOHNSON,J	Underground Underground Slope Drift Drift Slope Slope Total->	1909 1912	1911 1917	17 29	17 29	1909 1916	15 12
WDX560	Ward	CROSBY COAL MINE	20	161 088 30-6	CROSBY,J PECK,H	Drift Total->	1909	1917	13 13	13 13	1912	9
WDX561	Ward	INGISON COAL MINE	20	161 088 30-0	INGESON MINE INGISON,J	Drift Total->	1909	1911	2 2	2 2	1909	5
WDX588	Ward	TRUAX-TRAER COAL	20	151 081 01-0 151 081 02-0								

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WDX589	Ward	QUIST MINE	20	152 08 1 19-4	TRUAX-TRAER LIGNITE CONSOLIDATION COAL VELVA MINE COFFIN,JW CM	Strip	1927	1945	5486	45	1943	144
				152 08 1 27-0								
				152 08 1 28-0								
				152 08 1 30-5								
				152 08 1 33-5								
				152 08 1 34-0								
				152 08 1 35-6								
				152 08 1 35-8								
				152 08 1 35-8								
				152 08 1 36-7								
				152 08 2 11-8								
				152 08 2 23-6								
				152 08 2 24-6								
				152 08 2 24-7								
Total->			5486	45								
WDX591	Ward	P & M MINE	20	151 08 1 01-5	PETTYS MINE	Drift	1925	1932	10	10	1926	3
				Total->								
WDX592	Ward	VIX MINE	20	152 08 1 19-7		Slope	1937	1941	6	6	0	0
				Total->								
WDX594	Ward	FAUL MINE	20	152 08 1 19-7		Slope	1931	1943	99	99	1941	15
				152 08 2 24-6								
Total->									99	99		
				152 08 1 28-8								

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WDX595	Ward	BUCKHOLZ MINE	20	152 08 1 29-0	GROSSE,A	Drift	1935	1939	37	37	1936	12
						Slope	1940	1942	8	8	1940	10
						<i>Total-></i>			45	45		
WDX596	Ward	NEW MURRAY MINE	20	152 08 1 29-5	SCHMIKE MINE BUCHHOLZ MINE	Slope	1933	1934	8	8	0	0
						Drift	1935	1938	24	24	1935	10
						Slope	1939	1942	10	10	1940	13
						<i>Total-></i>			42	42		
WDX598	Ward	SCHMEICHEL MINE	20	152 08 1 29-5	HEIZELMAN MINE	Drift	1935	1938	12	12	0	0
						Slope	1939	1942	32	32	1941	14
						<i>Total-></i>			44	44		
WDX599	Ward	MILLER MINE	20	152 082 11-8		Slope	1936	1941	15	15	1938	6
						<i>Total-></i>			15	15		
WDX601	Ward	WEST SIDE MINE	20	152 082 11-0	SAWYER FUELS MILLER STRIP	Strip	1940	1945	105	105	1944	18
						<i>Total-></i>			105	105		
WDX602	Ward	BALDING MINE	20	152 082 23-0		Underground	1935	1945	61	61	1942	16
						<i>Total-></i>			61	61		
				152 082 24-0		Drift	1933	1934	1	1	0	0

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WDX603	Ward	QUALITY LIGNITE	20	152 082 24-0		Slope	1935	1936	2	2	1935	3
						Total->			3	3		
WDX604	Ward	BECHTOLD MINE	20	152 082 24-5	BECKTOLD MINE	Drift	1941	1943	18	18	0	0
						Strip	1944	1945	95	95	1944	25
						Total->			113	113		
WDX605	Ward	SCHOOP MINE	20	152 082 24-8	SHOPP COAL HIRSCHY MINE HIRSCHY,Z	Slope	1923	1923	1	1	0	0
						Drift	1925	1937	40	36	1931	12
						Total->			41	37		
WDX606	Ward	VIX COAL	20	152 082 24-6 152 082 24-7 152 082 25-0	VIX & TRIEBWASSER	Slope	1920	1923	1	1	1920	2
						Drift	1925	1927	7	7	1926	5
						Total->			8	8		
WDX607	Ward	SCHUELER MINE	20	152 082 24-6 152 082 24-7	SCHEULER MINE	Slope	1923	1945	119	118	1932	20
						Total->			119	118		
						Drift	1929	1929	1	1	0	0
						Slope	1930	1931	5	5	1929	2
						Drift	1932	1932	1	1	1931	7
						Slope	1933	1945	33	33	1944	20

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WDX608	Ward	SCHOENWALD MINE	20	152 082 24-7		Total->			40	40		
						Slope	1936	1943	9	9	1940	5
WDX609	Ward	SHAW BROS.COAL	20	152 082 24-7		Total->			9	9		
						Slope	1938	1941	5	5	1940	4
WDX610	Ward	BARTOSHIVICH MINE	20	152 082 24-0	BARTOSSHIVICH MINE BARTOSSIVICH MINE BARTOSHEVICH MINE BARTOSHEWICH MINE BARTOSHIVICH,M	Total->			5	5		
						Drift	1914	1922	6	6	1920	7
						Underground	1923	1924	2	2	1923	4
						Drift	1925	1930	9	9	1926	3
						Slope	1931	1938	9	8	1935	4
						Drift	1939	1941	2	2	1940	4
						Total->			28	27		
						Strip	1921	1923	1	1	0	0
						Slope	1925	1925	1	1	1923	4
						Strip	1926	1927	1	1	1926	2
WDX611	Ward	REED MINE	20	153 082 27-7		Total->			3	3		
						Strip	1921	1923	1	1	0	0
WDX613	Ward	NORTHERN COLLIERIES	20	153 082 34-8		Total->			11	10	0	0
						Slope	1939	1941	11	10	0	0
WDX614	Ward	LIGNITE PRODUCTS	20	155 083 07-8		Total->			1	1	0	0
						Slope	1937	1938	1	1	0	0

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township (Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WDX616	Ward	DUHAMEL MINE	20	1551084102-7 1551084102-8 1551084103-0	ROOSEVELT MINE BURLINGTON MUTUAL AI MUTUAL AID MINING QUALITY LIGNITE CO CM	Slope Total->	1930	1945	121	121	1940	26
WDX617	Ward	MIDWAY COAL	20	1551084103-0 1561084133-0		Drift Total->	1919	1925	139	1	1924	62
WDX618	Ward	MILLER COAL	20	1551084111-0		Slope SH Slope Total->	1926	1928	24	24	0	0
WDX619	Ward	PERLICHEK MINE	20	1551084112-5		Slope Total->	1919	1927	16	14	1922	17
WDX620	Ward	UNION MINE	20	1551084112-0		Slope Total->	1923	1926	17	16	1923	19
WDX621	Ward	KANDOFF MINE	20	1561084132-7		Slope Drift Slope Total->	1923	1923	1	0	0	0
WDX622	Ward	CARLSON MINE	20			Drift Slope Total->	1925	1927	5	5	1925	8
							1928	1934	3	3	1928	4
									9	8		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WDX623	Ward	HAIDER COAL	20	156 085 02-0		Slope Total->	1931	1936	2	2	1932	3
WDX630	Ward	KREUELKA MINE	20	156 085 12-0		Slope Total->	1933	1938	10	10	1934	6
WDX631	Ward	BIG FOUR MINE	20	160 088 06-0	KRENELKA MINE	Slope Total->	1934	1936	2	2	1935	7
WDX632	Ward	FOSMARCK MINE	20	160 088 07-0		SH Slope Total->	1934	1936	7	7	1934	4
WDX634	Ward	O'NEIL MINE	20	160 088 28-2	FASMARK MINE FOSMARK MINE	Slope Total->	1921	1931	7	7	1925	6
WDX635	Ward	HUFFMAN MINE	20	160 088 32-0	SAUNDERS	Drift Total->	1923	1923	1	1	0	0
WDX636	Ward	CLARK MINE	20	160 088 32-0	HOFFMAN MINE	Slope Total->	1930	1937	4	4	1934	5
				160 088 33-0	KENMARE NATIONAL BANK							

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WDX637	Ward	SMITH MINE	20	160 089 01-0	FARMERS MINE	Slope	1916	1917	2	2	0	0
						Total->			2	2		
WDX638	Ward	BARA MINE	20	160 089 12-0		Underground	1923	1935	3	3	1925	2
						Total->			3	3		
WDX639	Ward	ANKENBAUER MINE	20	160 089 12-0		Slope	1934	1945	6	6	1938	4
						Total->			6	6		
WDX643	Ward	RICH MINE	20	161 088 30-5 161 088 30-8	RICH,R	Slope	1935	1941	1	1	0	0
						Total->			1	1		
WDX644	Ward	KEMP MINE	20	161 088 30-6	KAMP MINE LONGRE MINE VIDDLE,J	Drift	1913	1915	3	3	1914	4
						SH	1916	1919	2	1	1914	4
WDX645	Ward	TALBOT MINE	20	161 088 30-0		Total->			5	4		
						Drift	1923	1928	13	13	1923	11
WI0062	Williams	STANDARD COAL	21	154 100 20-5 154 100 20-5		Total->			13	13		
						Slope	1934	1938	4	4	1935	10
						Total->			4	4		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WI0279	Williams	LOVEJOY MINE	21	154 100 20-6	AILES,E	Slope	1931	1934	4	4	0	0
						Drift	1935	1945	38	38	1944	8
						Total->			42	42		
WI0281	Williams	LESTAK COAL	21	154 100 10-5	AVOCA MINE	Drift	1916	1945	134	17	1923	38
				154 100 10-6	LOVEJOY,E							
						Total->			134	17		
WIX022	Williams	VIZINA COAL MINE	21	154 100 10-5	LEDAHL MINE	Strip	1945	1945	10	10	0	0
				154 100 10-6	LOVEJOY,E							
				154 100 10-5		Total->			10	10		
WIX071	Williams	LOW LEVEL COAL MINE	21	153 100 04-6	VIZINA,C	Drift	1916	1923	2	1	1917	2
						Total->			2	1		
WIX073	Williams	ELLITHORPE COAL MINE	21	154 100 03-3	BRUEGGER LIGNITE COAL	Slope	1909	1912	45	0	0	0
					BRUEGGER,J							
						Total->			45	0		
				154 100 07-0	BROWN MINE							
					BROWN,J							
					ELLITHORPE,M							

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WIX075	Williams	GOVERNMENT COAL MINE	21	154 100 07-5 154 100 08-8	ELLITHORPE,C	Drift	1910	1913	4	4	1911	4
						Slope	1914	1915	7	7	1914	6
						Drift	1916	1917	15	14	1916	16
						Total->			26	25		
WIX081	Williams	HUSEBYE & ELLITHORPE	21	154 100 17-6 154 100 17-7	RECLAMATION SERVICE GOVERNMENT MINE BUREAU OF REC.MINE US GOVERNMENT MONTANA-DAKOTA POWER	Drift	1909	1930	203	68	1911	40
						Total->			203	68		
WIX088	Williams	BLACK DIAMOND COAL	21	154 100 33-5	HUSEBY MINE WILLISTON COAL & ICE HUSEBYE ELLITHORPE	SH	1913	1913	1	1	0	0
						Underground	1914	1915	20	16	1913	3
						Underground	1916	1917	31	25	1915	17
						Drift	1919	1936	265	130	1923	43
						Total->			317	172		
WIX089	Williams	POWELL COAL MINE	21	154 100 33-6	WILLISTON LAND WILLISTON COAL & POWER JACKSON,J	Drift	1909	1925	56	0	1920	8
						Total->			56	0		

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Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WIX090	Williams	BRYNE COAL MINE	21	154 100 33-6	WILLISTON LIGNITE MINE POWELL,D POWELL,R POWELL,M	Drift	1909	1915	31	0	1911	15
					Total->			31	0			
WIX094	Williams	HEAD COAL MINE	21	154 101 07-3 154 101 07-8	BRYN MINE HANSON BRYN,M HANSON, H BRYNE,O	Drift	1912	1919	15	14	1917	8
					Total->			15	14			
WIX131	Williams	MOORMAN COAL MINE	21	155 097 29-7 155 097 29-8	MOORMAN,J	Drift	1909	1913	4	4	1911	6
						Slope	1914	1915	3	3	1914	4
						Drift	1916	1926	14	14	1917	9
						Total->			21	21		
WIX147	Williams	GOOD COAL MINE	21	155 101 36-7	GOOD COAL MINE STATE OF NORTH DAKOTA NORTH DAKOTA	Drift	1909	1934	16	15	1922	4
					Total->			16	15			
						Drift	1908	1909	1	1	0	0
						Total->			1	1		

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WIX174	Williams	COW CREEK COAL MINE	21	156 102 14-0	BIG FOUR MINE COW CREEK COAL FEDJE SKOGBERG,H FEDGE,B	Drift Total->	1913	1929	10 10	10	1915	4
WIX319	Williams	HAUGEN COAL MINE	21	159 102 24-5	HAUGEN,E	Drift Total->	1917	1917	1 1	1	0	0
WIX321	Williams	LEIN COAL MINE	21	159 102 11-6	LIND MINE LEIN,O	Drift Total->	1917	1920	1 1	1	1917	4
WIX348	Williams	ELLITHORPE COAL MINE	21	154 100 20-6	PIERSON,H	Drift Total->	1917	1920	3 3	2 2	1919	6
WIX446	Williams	BLACK DIAMOND MINE	21	153 100 04-5	BLACK DIAMOND FUEL BLACK DIAMOND MINE#2	Drift Total->	1935	1945	12 12	12	1941	4
WIX447	Williams	THOMPSON MINE	21	153 100 04-6		Drift Total->	1926	1945	40 40	40	1939	6
WIX448	Williams	WILLISTON VIEW MINE	21									

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WIX449	Williams	HOLLAND MINE	21	1531100 04-6	POWELL MINE	Drift	1938	1945	19	19	1944	7
				<i>Total-></i>				19	19			
WIX451	Williams	CEDAR COULEE MINE	21	1531100 09-0	CEDAR COULEE MINE#2 ROSENQUIST MINE	Drift	1931	1942	27	27	1932	3
				Slope		1943	1944	4	4	1943	4	
				Drift		1945	1945	1	1	1943	4	
<i>Total-></i>			32	32								
WIX452	Williams	CEDAR COULEE MINE	21	154 097 17-7	CEDAR COULEE MINE #1 STEWART MINE #1 STEWART MINE #2 CEDAR COULEE MINE #2	Drift	1929	1942	14	14	1935	5
				Slope		1943	1945	4	4	1943	5	
<i>Total-></i>				18	18							
WIX453	Williams	VAN ALLEN MINE	21	154 097 17-7	VAN ALLEN MINE #1 VAN ALLEN #2	Drift	1928	1945	10	10	1932	4
				<i>Total-></i>				10	10			
WIX453	Williams	VAN ALLEN MINE	21	154 097 20-5	VAN ALLEN MINE #1 VAN ALLEN #2	Drift	1939	1939	4	4	1938	4
				Slope		1939	1940	1	1	1938	4	
				Drift		1941	1942	1	1	1938	4	
				<i>Total-></i>				6	6			

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume I, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township (Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WIX455	Williams	HOVING MINE	21	154 098 11-0		Drift	1923	1936	3	3	1929	2
						Strip	1937	1940	1	1	1929	2
						<i>Total-></i>			4	4		
WIX460	Williams	CARBON COAL	21	154 100 07-6	CARBON MINE	Drift	1919	1923	18	0	1921	15
						<i>Total-></i>			18	0		
WIX461	Williams	DELANEY MINE	21	154 100 07-6	BLUE FLAME MINE	Slope	1921	1936	13	13	1923	4
						<i>Total-></i>			13	13		
WIX464	Williams	ARCTIC MINE	21	154 100 17-0	ARTIC MINE	Drift	1935	1935	1	1	0	0
						<i>Total-></i>			1	1		
WIX468	Williams	FERENC MINE	21	154 100 21-7		Drift	1919	1924	2	2	1920	3
						Slope	1928	1934	6	6	1929	4
						<i>Total-></i>			8	8		
WIX472	Williams	SQUARE DEAL MINE	21	154 100 33-5		Drift	1919	1942	70	68	1923	8
						Slope	1943	1944	5	5	1943	3
						Drift	1945	1945	2	2	1943	3
						<i>Total-></i>			77	75		
WIX473	Williams	POWELL MINE	21	154 100 33-5		Drift	1927	1934	21	21	1929	4
						<i>Total-></i>			21	21		
WIX475	Williams	PETERSON MINE	21									

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WIX479	Williams	BEAVER CREEK MINE	21	154 101 05-0	PEFERSON MINE	Drift Total->	1921	1926	7	7	1921	5
				7					7			
WIX488	Williams	NORDLIEN MINE	21	155 096 29-6		Drift Slope Total->	1923	1925	5	5	1923	12
				1926					1938	19		
WIX491	Williams	FOLVOG MINE	21	158 101 09-6	NORDLEIN MINE NORDLEIN,O	Drift Total->	1921	1923	3	3	1921	3
				3					3			
WIX492	Williams	LOHSE MINE	21	158 103 10-5	FOLVAG MINE DACOTEAU,L	Underground Total->	1914	1945	27	27	1923	3
				158 103 10-6					27	27		
WIX494	Williams	BLUE VEIN MINE	21	159 099 23-0		Slope Total->	1931	1940	16	16	1934	13
				16					16			
WIX494	Williams	BLUE VEIN MINE	21	159 102 12-2	BLUE VEIN MINE STANLEY BRANCH COAL BUQUA MINE KIRSCH MINE KINNEY-LYMAN MINE KINNEY MINE LIEN,O	Drift	1919	1945	25	24	1942	6
				25					24			

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

Profile of North Dakota Lignite Mine Sites, 1908-1945*

Site ID	County	Site Name	Eco. Zone	Township Range Section -Quarter	Other Site Names	Mode	Mode Dates		Tons (000) Produced		Peak Employment	
							Begin	End	Total	Local	Year	EEs
WIX495	Williams	EIDE MINE	21	159 102 12-6		Total->			25	24		
						Drift	1926	1928	2	2	1926	2
WIX496	Williams	HANKS COAL	21	159 102 13-5 159 102 13-8		Total->			2	2		
						Drift	1920	1934	51	15	1922	28
WIX497	Williams	OLAND COAL	21	159 102 24-0	DRANGSTAD MINE OLAND MINE	Total->			51	15		
						Slope	1929	1929	1	1	0	0
						Drift	1930	1930	2	2	1929	2
						Slope	1931	1934	4	1	1931	8
						Strip	1935	1937	3	3	1931	8
						Drift	1938	1938	2	2	1931	8
						Total->			12	9		

*Source: John M. Kjos and Michele H. Schreiner, "Technical Report: AML Resources Study," Volume 1, Appendix 3. Prepared for Abandoned Mine Lands Division, North Dakota Public Service Commission, 1984.

APPENDIX C

**COAL MINING IN THE COAL BEARING REGIONS OF NORTH DAKOTA, 1870-1940
RESEARCH PLAN**

Prepared for:

**State Historical Society of North Dakota
North Dakota Heritage Center
Bismarck, North Dakota 58505**

Prepared by:

**Hess, Roise and Company and William Casey
710 Grain Exchange Building
Minneapolis, Minnesota 55415**

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COAL MINING IN THE COAL BEARING REGIONS OF NORTH DAKOTA, 1870-1940
RESEARCH PLAN

1. Introduction

This project is a joint venture of two co-equal parties: Hess, Roise and Company and William Casey, both of Minneapolis, Minnesota. It was initiated by means of a contract between those parties and the Division of Archeology and Historic Preservation of the State Historical Society of North Dakota.

2. Objective

The objective of this project is the preparation of a Multiple Properties Documentation Form addressing the topic, "Coal Mining in the Coal Bearing Regions of North Dakota, 1870-1940." It is understood that this form will be prepared in accordance with National Register Guidelines (Bulletin 16), as further defined by "Attachment G" of the project RFP.

3. Personnel

Jeffrey A. Hess of Hess, Roise and Company will serve as principal investigator and overall project administrator. In addition to supervising all phases of the work, he will participate directly in documentary research and data analysis, as well as writing the Multiple Properties Documentation Form. William Casey will be responsible for creating an appropriate computerized database for the project and will assist in the analysis and interpretation of the data, especially by means of computer-generated graphs and maps. Demian Hess and Robert

Hybben of Hess, Roise and Company will serve as research assistants, primarily responsible for documentary research. They will also assist in data analysis and the writing of all reports.

4. Methodology

4.1 Background

Two previous studies have addressed the historic North Dakota coal mining sites: (a) DSKS Research, J.V., "AML Cultural Resource Study," 7 vols, 1984; (b) a computerized list of approximately 700 North Dakota coal mining sites abstracted from the "AML Cultural Resources Study" and from site files of the Archeology and Historic Preservation Division of the State Historical Society of North Dakota (hereafter referred to as "the client"). It is understood that these studies will furnish the bulk of documentary data for the present project, in terms of both historical information on the development of North Dakota coal mining and the total sample of coal mining sites subject to analysis. The client has provided the contractor with copies of both studies, except for Volume 4 of the AML Study (the annotated bibliography).

4.2 Task #1: Review of Previous Studies

As specified in the proposal, the contractor has reviewed the AML Study and the computerized listing of coal mining sites and has begun to identify (a) the specific historical and technological issues that will serve as a framework for the historical context; (b) the various geographic, economic, historical, and technological factors to be correlated by the computerized database; (c) the precise nature of the historic coal mine sample; (d) shortcomings in the research that need to be remedied to achieve the objectives of the present

project. This review was accompanied by a search for relevant coal mining literature in the following bibliographic sources: Engineering Index, Industrial Arts Index, Agricultural Index, Poole's Index to Periodical Literature, Reader's Guide to Periodical Literature, and International Index to Periodicals.

We believe that the AML Study provides a good general history of North Dakota's coal mining industry. The study, however, lacks detailed information on coal mining property types, and additional research into this area will be required to complete the Multiple Properties Documentation Form. We plan to investigate both those structures directly involved in the mining process, such as tipples and shafts, and associated properties such as mining towns. Our study of mining towns will be modelled on Margaret M. Mulrooney's seminal work: Legacy of Coal: The Coal Company Towns of Southwestern Pennsylvania (Historic American Building Survey, 1989). We will, as Mulrooney did, define a coal mining town as those settlements entirely built by coal companies. Without this strict definition, the potential number of associated properties could be so large that a detailed study would be impossible. We also need to examine the development of technology for small mines -- the AML Study concentrates on larger mines -- to identify further property types. Finally, other elements briefly discussed in the AML Study -- specifically the demographics of the workforce, the history of labor unions and the role of the railroads in the development of coal mining -- must be examined in more depth to determine their contributions to the significance of the industry's property types.

4.3 Task #2: Documentary Research

Further documentary research will primarily focus on (a) those issues identified in section 4.2 as needing further development in the context; (b) information on individual mines to be keyed into the computer database. To this end, we have initiated a search for research files and

computerized data pertaining to the AML Study. We have contacted the following individuals: Michelle H. Schreiner, co-author of the AML Study; Louis Ogaard, Director of the AML Division of the Public Service Commission; Jim Thomson, an engineer with RPM, Inc. of Bismarck, who in 1981 identified and inspected the sites included in the AML Study. Thomson seems to be an especially valuable contact, since he believes that he took field notes on most AML sites, including descriptions of surviving structures and machinery. He is presently searching his firm's files for these materials.

We anticipate additional research at four locations: the State Historical Society of North Dakota, Bismarck; the AML Division of the Public Service Commission, Bismarck; the University of North Dakota, Grand Forks; the Minnesota Historical Society, Saint Paul. The purpose of examining the AML files is to locate research records deposited with the agency by Michelle Schreiner, as part of the 1984 AML Study. The search of AML files may also identify various reports prepared by Thomson during his 1981 study. The necessity of the research trip to Grand Forks is based upon the fact that the University there has been the country's leading center of lignite research for over a half century. The importance of the Minnesota Historical Society to the research program derives from the fact that it is the custodian of the corporate papers of both the Northern Pacific and Great Northern Railways, which were instrumental in developing the North Dakota coal fields. A preliminary search of each collection's index revealed a number of files on coal and coal mining. Several additional collections at MHS, most notably the Stanley Washburn Papers, also contain files pertaining to lignite mining in North Dakota.

4.4 Task #3: Compilation and Analysis of Computer Database

To assist in the identification of significant historical patterns and property types, we will compile a computer database for comparative analysis of various geographic, historical, economic, and technological characteristics of the historic coal mine sample. Ideally, this comprehensive analysis will permit us to make certain predictions about individual mines, thereby facilitating future evaluations of significance. Our initial work will be to establish a foundation computer file, containing basic descriptor data on each site, such as historic name, site number, AML number, and location (expressed as county, ecozone, and legal description). After further research, we will develop a data structure plan, which will enable us to record changes that occurred at each site over time. This data will be keyed into the program by year. Possible examples include production levels for the first, last, and highest year of production; year of highest employment level; year of unionization; ethnic composition of mines at various periods; changes in mine type over time; year of initial railroad and highway connections; and construction and demolition dates of various mine structures. We anticipate that the data will be expressed and interpreted by means of spreadsheets, graphs, and maps. Additional documentary research will be conducted as necessary, especially in standard engineering and mining texts, and in reference works relating to North Dakota history.

4.5 Task #4: Field Verification of Research Hypotheses

Based on the results of Tasks 3 and 4, we will formulate certain hypotheses concerning the design, function, modification, and preservation of various types of North Dakota coal mines. These hypotheses will play a central role in the subsequent development of property types and registration criteria, especially in regard to integrity issues. To increase the value of the hypotheses, it is essential that they be subjected to at least a limited measure of field testing

and subsequent revision. This field survey will be limited to 5 to 10 sites which our research indicates are central to understanding the historical development and technological typology of the North Dakota coal mining industry and selected in consultation with the client.

4.6 Task #5: Preparation of Draft Context Statement

The results of documentary research, computer analysis, and field verification will be synthesized into an appropriately annotated and illustrated Multiple Properties Documentation Form addressing the topic, "Coal Mining in the Coal Bearing Regions of North Dakota, 1870-1940." It is understood that this Multiple Properties Documentation Form will be prepared in accordance with National Register Guidelines (Bulletin 16), as further defined by "Attachment G" of the project RFP.

The context statement will be organized into the following six basic sections: (1) a narrative historical overview of the North Dakota coal mining industry, 1870-1940; (2) an analysis of property types relating to the coal mining industry, with a discussion of registration criteria, integrity issues, and period of significance for each type; (3) a comparative categorization of the known sample of historic North Dakota coal mining sites by property type and ecozone; (4) an explanation of project methodology with a discussion of research gaps and promising areas for future investigation; (5) a brief discussion of preservation goals and strategies; (6) a bibliography of published and unpublished sources upon which the study was based.

In terms of the conceptual content of the historical overview, we agree that all of the "subtopics" listed in the RFP (p.34) are germane to the study, although we emphasize that the purpose of the historical overview is to establish a context for evaluating the significance and property types of North Dakota coal mining and not to provide a comprehensive study of the

industry's economics, demographics, labor-management relations, or technology. These issues therefore will be discussed only insofar as they contribute to the identification and evaluation of the industry's property types. As a rough conceptual outline, we suggest that it would be appropriate to begin by explaining the physical geography and geology of North Dakota coal, and then proceed with a discussion of the economic factors that led to the industry's development (especially railroad-related issues); the technological factors that permitted its exploitation; the labor-management relationships that governed its social organization; and the production and consumption issues that in large measure dictated its importance to the state.

Since a coal mine is a functionally related technological system, we anticipate that our property-type analysis will rely heavily on functional rather than morphological typologies. In practice, this means that even a large mining site may comprise a single property type with several sub-components. In terms of both technological history and preservation management, we believe that this approach is far more valid than dividing a site into numerous property types based on isolated function or formal morphology (i.e., mine shaft or pit, tibble, cleaning house, etc.).

4.7 Task #6: Preparation of Final Context Statement

In accordance with review comments provided by the client, the draft context statement will be revised into a final report. Ten copies will be submitted. At the same time, we will submit a summary article on the project suitable for general-interest publication.

5. Research Expectations

At this early phase of research, we have only a general knowledge of the sources available on North Dakota's coal mining industry. We know, however, that certain sources, such as mine inspector's reports, are likely to yield valuable information on the property types associated with the coal mining industry. We also anticipate that the holdings of the State Historical Society at Bismarck will contain survey forms for at least some abandoned mine lands and possibly a number of historic photographs. Additionally, the Society's newspaper records probably contain articles on operations at specific mines. We also expect that the records for the 1981 RPM study and the 1984 AML study contain photographs and structural data and that a number of locally-published magazines, such as Dakota Farmer and North Dakota Engineer, provide information on specific mines. In addition, preliminary research has indicated that the records of the Great Northern and Northern Pacific Railways at the Minnesota Historical Society contain a great deal of industry-related information.

We also anticipate that several standard sources will be valuable to this study. Census records, for example, should provide demographic data that may be used in the computer database. Standard mining references, such as Milo Ketchum, Design of Mine Structures (1912) and Howard N. Eavenson, First Century and a Quarter of American Coal Industry (1942), provide basic information on the industry's development and its general property types, as do industry trade journals, such as Coal Age and Mining Congress Journal. Colleen Oihus' "History of Coal Development in North Dakota" (MA Thesis, University of North Dakota, Grand Forks, 1978) should complement the 1984 AML Study as a general history of the industry.