

APPENDIX 2.5-7

**BOREHOLES CONSIDERED FOR INTERPRETATION
OF HYDROGEOLOGY
SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
62	424861	1370323	2560	GNPD - Pre-baseline
63	424915	1369017	2560	GNPD - Pre-baseline
64	427485	1369110	2539	GNPD - Pre-baseline
65	430108	1369199	2558	GNPD - Pre-baseline
66	430070	1370505	2584	GNPD - Pre-baseline
67	429401	1347960	2590	GNPD - Pre-baseline
68	428088	1347909	2568	GNPD - Pre-baseline
69	427982	1350503	2573	GNPD - Pre-baseline
70	429324	1350541	2589	GNPD - Pre-baseline
71	430608	1350587	2567	GNPD - Pre-baseline
72	430700	1347985	2602	GNPD - Pre-baseline
73	425339	1353166	2578	GNPD - Pre-baseline
74	427925	1353244	2535	GNPD - Pre-baseline
75	430596	1353405	2549	GNPD - Pre-baseline
76	427637	1363731	2578	GNPD - Pre-baseline
77	430227	1363841	2611	GNPD - Pre-baseline
78	427772	1359888	2591	GNPD - Pre-baseline
79	426410	1361140	2626	GNPD - Pre-baseline
81	432757	1369213	2555	GNPD - Pre-baseline
82	435381	1369315	2508	GNPD - Pre-baseline
83	430272	1366543	2535	GNPD - Pre-baseline
84	430438	1358622	2527	GNPD - Pre-baseline
85	430521	1356016	2538	GNPD - Pre-baseline
86	433191	1353533	2590	GNPD - Pre-baseline
87	435784	1353607	2631	GNPD - Pre-baseline
88	435701	1356210	2598	GNPD - Pre-baseline
89	435644	1358777	2572	GNPD - Pre-baseline
90	438311	1358979	2640	GNPD - Pre-baseline
91	440896	1359060	2601	GNPD - Pre-baseline
92	440844	1361655	2549	GNPD - Pre-baseline
93	440784	1364249	2530	GNPD - Pre-baseline
95	433240	1364710	2519	GNPD - Pre-baseline
96	438251	1364137	2564	GNPD - Pre-baseline

Notes:

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Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
97	435618	1364051	2540	GNPD - Pre-baseline
99	442313	1357728	2578	GNPD - Pre-baseline
101	444275	1354400	2590	GNPD - Pre-baseline
102	445853	1354243	2566	GNPD - Pre-baseline
103	446534	1373086	2462	GNPD - Pre-baseline
104	446508	1371775	2473	GNPD - Pre-baseline
105	446518	1370292	2490	GNPD - Pre-baseline
106	446475	1351216	2602	GNPD - Pre-baseline
2385	390743	1316233	2726	NDSWC
2407	414590	1337457	2628	NDSWC
2448	454812	1330510	2569	NDSWC
2519	457055	1370685	2497	NDSWC
2520	456965	1373527	2493	NDSWC
2521	460923	1370479	2500	NDSWC
2522	456674	1371666	2503	NDSWC
2579	486696	1365241	2589	NDSWC
10584	421061	1403135	2641	NDSWC
10586	404838	1341984	2621	NDSWC
10611	449018	1416189	2430	NDSWC
10630	448945	1356510	2537	NDSWC
10634	440711	1379704	2520	NDSWC
10638	449327	1345802	2530	NDSWC
10640	437100	1327230	2620	NDSWC
10683	469151	1388695	2552	NDSWC
10691	472570	1353679	2555	NDSWC
13081	460229	1397030	2500	NDSWC
18454	446009	1379890	2484	NDSWC
18457	477998	1370282	2605	NDSWC
18459	477677	1359732	2580	NDSWC
18865	461594	1367210	2543	NDSWC
18866	466771	1370022	2539	NDSWC
18867	466771	1370022	2550	NDSWC
18868	479498	1386047	2612	NDSWC

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Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
18869	438315	1348444	2625	NDSWC
18870	441414	1354610	2614	NDSWC
23210	388853	1325728	2724	NDSWC
23216	414042	1384125	2643	NDSWC
23225	436404	1389983	2504	NDSWC
23228	434888	1395261	2509	NDSWC
23229	434563	1406505	2475	NDSWC
23230	424329	1394991	2536	NDSWC
23251	455553	1409101	2510	NDSWC
23253	474060	1327911	2670	NDSWC
33320	415291	1325853	2665	NDSWC
33343	448247	1382813	2480	NDSWC
33344	454450	1351365	2500	NDSWC
33345	448076	1377308	2497	NDSWC
33346	447430	1376627	2478	NDSWC
33347	448118	1375989	2469	NDSWC
33348	438121	1366696	2527	NDSWC
33372	480863	1352244	2582	NDSWC
33373	464853	1357071	2523	NDSWC
33374	459590	1356886	2582	NDSWC
55317	435292	1391008	2516	NDSWC
55333	393401	1340599	2720	NDSWC
55334	393401	1340599	2720	NDSWC
55335	389297	1340461	2720	NDSWC
55336	390083	1315585	2723	NDSWC
55337	390083	1315585	2723	NDSWC
55338	386284	1333177	2710	NDSWC
55339	388467	1342151	2713	NDSWC
55495	422964	1407824	2516	NDSWC
55496	419226	1394449	2592	NDSWC
55497	423415	1394578	2539	NDSWC
55498	421135	1389584	2559	NDSWC
55499	414186	1397342	2575	NDSWC

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Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
55500	412629	1398260	2615	NDSWC
55501	412590	1399552	2635	NDSWC
55502	411658	1396616	2582	NDSWC
55503	412708	1395678	2608	NDSWC
55504	413061	1395365	2608	NDSWC
55505	412629	1398260	2615	NDSWC
55506	412708	1395678	2608	NDSWC
55507	411812	1382353	2700	NDSWC
55508	403348	1396687	2664	NDSWC
55509	403348	1396687	2664	NDSWC
55511	402195	1395390	2657	NDSWC
55513	402488	1397007	2674	NDSWC
55514	402279	1392658	2713	NDSWC
55517	422085	1349589	2552	NDSWC
55518	414865	1378119	2667	NDSWC
55519	414183	1378098	2674	NDSWC
55520	414633	1374607	2661	NDSWC
55521	413971	1368133	2628	NDSWC
55522	413643	1367804	2641	NDSWC
55523	413643	1367804	2641	NDSWC
55524	413407	1354055	2664	NDSWC
55525	410849	1348518	2628	NDSWC
55526	407295	1347432	2651	NDSWC
55528	403615	1378376	2766	NDSWC
55529	405649	1378440	2776	NDSWC
55531	401630	1349577	2684	NDSWC
55532	424714	1341970	2579	NDSWC
55534	422330	1341570	2575	NDSWC
55535	425456	1331032	2644	NDSWC
55536	422900	1325720	2657	NDSWC
55537	423913	1326078	2621	NDSWC
55538	422900	1325720	2657	NDSWC
55539	421183	1325985	2661	NDSWC

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55540	425157	1319858	2664	NDSWC
55541	424101	1320727	2667	NDSWC
55542	418621	1325887	2644	NDSWC
55543	420345	1325627	2664	NDSWC
55545	415856	1326614	2648	NDSWC
55546	416245	1343399	2572	NDSWC
55547	413188	1338686	2657	NDSWC
55548	410590	1335868	2700	NDSWC
55549	414952	1328190	2661	NDSWC
55550	414952	1328190	2661	NDSWC
55551	413730	1324124	2651	NDSWC
55552	413402	1323795	2654	NDSWC
55553	405671	1325149	2713	NDSWC
55554	407797	1343724	2667	NDSWC
55555	402687	1338331	2628	NDSWC
55556	404351	1329158	2684	NDSWC
55557	401761	1325096	2720	NDSWC
55558	394729	1325198	2700	NDSWC
56690	451205	1410581	2484	NDSWC
56691	451205	1410581	2484	NDSWC
56692	452604	1409332	2503	NDSWC
56693	452767	1404031	2451	NDSWC
56695	454529	1403094	2461	NDSWC
56696	454865	1403434	2480	NDSWC
56698	450928	1398058	2520	NDSWC
56699	454882	1400735	2470	NDSWC
56701	450928	1398058	2520	NDSWC
56702	452376	1395355	2621	NDSWC
56703	450675	1395623	2569	NDSWC
56704	451063	1394036	2572	NDSWC
56705	452725	1395046	2618	NDSWC
56707	451142	1391481	2497	NDSWC
56708	451142	1391481	2497	NDSWC

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56709	450813	1391151	2493	NDSWC
56710	451142	1391481	2497	NDSWC
56711	450734	1393706	2572	NDSWC
56712	452376	1395355	2621	NDSWC
56713	451102	1392759	2572	NDSWC
56714	449310	1381923	2480	NDSWC
56715	448257	1382798	2484	NDSWC
56716	449662	1381629	2490	NDSWC
56717	450324	1382258	2480	NDSWC
56718	450324	1382258	2480	NDSWC
56719	450072	1388706	2539	NDSWC
56720	450072	1388706	2539	NDSWC
56721	450072	1388706	2539	NDSWC
56722	450072	1388706	2539	NDSWC
56723	450072	1388706	2539	NDSWC
56724	450072	1388706	2539	NDSWC
56725	450072	1388706	2539	NDSWC
56726	450072	1388706	2539	NDSWC
56728	447389	1387333	2457	NDSWC
56729	448792	1386088	2467	NDSWC
56731	449943	1391427	2493	NDSWC
56732	449242	1392051	2480	NDSWC
56733	449733	1398009	2520	NDSWC
56734	448334	1399244	2493	NDSWC
56735	449994	1402963	2510	NDSWC
56736	445663	1406110	2444	NDSWC
56738	447296	1409170	2421	NDSWC
56740	447296	1409170	2421	NDSWC
56752	444767	1398842	2431	NDSWC
56753	440364	1397744	2444	NDSWC
56754	442005	1389749	2503	NDSWC
56755	442005	1389749	2503	NDSWC
56756	435514	1404844	2457	NDSWC

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Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
56757	434581	1401208	2490	NDSWC
56758	435514	1404844	2457	NDSWC
56759	438140	1407640	2451	NDSWC
56760	438834	1407015	2444	NDSWC
56761	437489	1406975	2457	NDSWC
56762	444375	1400435	2444	NDSWC
56763	436736	1389615	2536	NDSWC
56764	436031	1410807	2444	NDSWC
56765	433141	1399481	2566	NDSWC
56766	432440	1400100	2559	NDSWC
56767	429904	1394756	2595	NDSWC
56768	429555	1395068	2572	NDSWC
56769	430605	1394131	2569	NDSWC
56770	434492	1389851	2549	NDSWC
56771	430409	1380404	2641	NDSWC
56772	425787	1399922	2500	NDSWC
56773	427146	1399964	2490	NDSWC
56774	424897	1395736	2516	NDSWC
56775	423840	1408184	2513	NDSWC
56776	451669	1377116	2503	NDSWC
56777	455686	1378517	2477	NDSWC
56778	451955	1366581	2556	NDSWC
56780	453311	1366625	2569	NDSWC
56782	454725	1363956	2562	NDSWC
56783	453131	1350010	2507	NDSWC
56784	451262	1358827	2522	NDSWC
56785	448936	1356518	2537	NDSWC
56786	447395	1363045	2493	NDSWC
56787	446229	1369227	2499	NDSWC
56788	449297	1369008	2518	NDSWC
56789	450731	1379318	2510	NDSWC
56790	447060	1376329	2478	NDSWC
56799	448386	1377650	2490	NDSWC

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56800	446066	1375341	2476	NDSWC
56801	450812	1376768	2466	NDSWC
56802	448386	1377650	2490	NDSWC
56803	441109	1375502	2512	NDSWC
56804	440777	1375171	2490	NDSWC
56805	440777	1375171	2490	NDSWC
56806	445085	1379460	2493	NDSWC
56807	441109	1375502	2512	NDSWC
56808	440525	1352848	2656	NDSWC
56809	439426	1368027	2515	NDSWC
56810	436019	1368556	2521	NDSWC
56811	437474	1377610	2516	NDSWC
56812	437474	1377610	2516	NDSWC
56813	437413	1379526	2552	NDSWC
56814	437474	1377610	2516	NDSWC
56815	434862	1369926	2514	NDSWC
56816	430861	1364553	2567	NDSWC
56817	430861	1364553	2567	NDSWC
56818	431132	1366786	2526	NDSWC
56819	435392	1348754	2582	NDSWC
56820	433019	1348350	2589	NDSWC
56821	433019	1348350	2589	NDSWC
56822	428272	1377947	2625	NDSWC
56823	428913	1379245	2618	NDSWC
56824	455992	1347390	2513	NDSWC
56825	456910	1338908	2569	NDSWC
56826	452821	1338770	2546	NDSWC
56827	452425	1340340	2536	NDSWC
56828	453003	1333476	2552	NDSWC
56829	453310	1334447	2556	NDSWC
56830	452917	1336033	2539	NDSWC
56831	452874	1337313	2556	NDSWC
56832	454221	1327943	2595	NDSWC

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56833	454462	1330816	2569	NDSWC
56836	454549	1328272	2579	NDSWC
56837	453146	1329497	2575	NDSWC
56838	455354	1324904	2592	NDSWC
56839	455660	1325875	2582	NDSWC
56840	456364	1325259	2582	NDSWC
56841	455354	1324904	2592	NDSWC
56842	456670	1326230	2585	NDSWC
56846	455354	1324904	2592	NDSWC
56847	457326	1326891	2618	NDSWC
56851	457414	1324337	2592	NDSWC
56852	455354	1324904	2592	NDSWC
56853	454611	1326797	2595	NDSWC
56854	455354	1324904	2592	NDSWC
56855	455354	1324904	2592	NDSWC
56856	457458	1323060	2631	NDSWC
56857	455354	1324904	2592	NDSWC
56858	453645	1325165	2654	NDSWC
56859	457370	1325614	2582	NDSWC
56860	450249	1319523	2657	NDSWC
56864	452573	1321755	2648	NDSWC
56865	451619	1329137	2592	NDSWC
56866	451662	1327877	2651	NDSWC
56867	451993	1328204	2661	NDSWC
56869	451675	1337260	2543	NDSWC
56870	451626	1338707	2539	NDSWC
56871	451626	1338707	2539	NDSWC
56872	451976	1338401	2536	NDSWC
56873	449938	1338332	2585	NDSWC
56874	450771	1344509	2536	NDSWC
56875	451371	1347870	2546	NDSWC
56876	441588	1344571	2618	NDSWC
56877	443832	1342513	2589	NDSWC

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56878	446318	1339760	2569	NDSWC
56879	444707	1337310	2569	NDSWC
56880	442968	1317435	2641	NDSWC
56881	442968	1317435	2641	NDSWC
56883	437186	1332912	2651	NDSWC
56884	436982	1338179	2648	NDSWC
56885	440556	1344536	2618	NDSWC
56886	433128	1336579	2615	NDSWC
56887	429277	1324275	2697	NDSWC
56889	426384	1328854	2641	NDSWC
56890	427354	1330481	2657	NDSWC
56891	430400	1340532	2628	NDSWC
56892	427320	1340750	2598	NDSWC
57568	477738	1387038	2631	NDSWC
57570	477738	1387038	2631	NDSWC
57571	477738	1387038	2631	NDSWC
57585	476724	1381909	2628	NDSWC
57586	467223	1403197	2625	NDSWC
57600	464509	1389200	2536	NDSWC
57602	466029	1385260	2562	NDSWC
57603	460530	1381093	2523	NDSWC
57604	461170	1382344	2559	NDSWC
57605	456540	1387674	2572	NDSWC
57606	460579	1389078	2657	NDSWC
57607	456048	1391996	2585	NDSWC
57608	460245	1398368	2526	NDSWC
57609	460574	1398698	2520	NDSWC
57610	457016	1402531	2493	NDSWC
57615	485577	1373823	2595	NDSWC
57618	485577	1373823	2595	NDSWC
57619	483524	1372770	2608	NDSWC
57620	486007	1373507	2608	NDSWC
57621	487815	1369591	2562	NDSWC

Notes:

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APPENDIX 2.5-7

**BOREHOLES CONSIDERED FOR INTERPRETATION
OF HYDROGEOLOGY
SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
57623	486191	1368230	2589	NDSWC
57625	478263	1359636	2575	NDSWC
57626	480369	1368067	2651	NDSWC
57627	479629	1369955	2641	NDSWC
57628	482597	1375724	2641	NDSWC
57629	477729	1376321	2641	NDSWC
57630	476329	1350196	2566	NDSWC
57631	477567	1354058	2615	NDSWC
57632	472709	1352978	2552	NDSWC
57633	471692	1375124	2615	NDSWC
57635	467440	1378929	2618	NDSWC
57636	469502	1378354	2621	NDSWC
57637	467481	1377652	2654	NDSWC
57639	470240	1376465	2618	NDSWC
57640	466716	1363042	2562	NDSWC
57641	463064	1360690	2533	NDSWC
57642	463106	1358616	2520	NDSWC
57643	467364	1351511	2579	NDSWC
57644	458279	1355569	2598	NDSWC
57645	457141	1359024	2602	NDSWC
57646	457203	1357119	2582	NDSWC
57647	458854	1358762	2572	NDSWC
57648	487931	1340017	2644	NDSWC
57650	485576	1335279	2697	NDSWC
57652	484764	1334597	2710	NDSWC
57665	482022	1328110	2661	NDSWC
57666	482022	1328110	2661	NDSWC
57667	480101	1324213	2710	NDSWC
57668	481009	1327755	2651	NDSWC
57669	483786	1326574	2690	NDSWC
57670	484162	1325630	2680	NDSWC
57672	483166	1346405	2585	NDSWC
57674	481009	1327755	2651	NDSWC

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APPENDIX 2.5-7

**BOREHOLES CONSIDERED FOR INTERPRETATION
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SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
57675	475468	1344504	2585	NDSWC
57676	476842	1334360	2612	NDSWC
57677	478209	1334407	2602	NDSWC
57678	470612	1322131	2615	NDSWC
57680	471737	1328890	2661	NDSWC
57682	471737	1328890	2661	NDSWC
57684	472397	1329552	2674	NDSWC
57686	472397	1329552	2674	NDSWC
57687	472616	1343351	2569	NDSWC
57688	472418	1339165	2589	NDSWC
57689	471123	1348631	2562	NDSWC
57690	463363	1348038	2575	NDSWC
57691	462998	1348359	2575	NDSWC
57692	463653	1340790	2585	NDSWC
57693	467350	1343155	2641	NDSWC
57694	467018	1342824	2648	NDSWC
57696	464805	1327480	2635	NDSWC
57697	460621	1325085	2589	NDSWC
57698	458219	1325323	2582	NDSWC
57699	429743	1361764	2591	NDSWC
57701	458100	1328703	2618	NDSWC
57702	459809	1328442	2671	NDSWC
57705	459809	1328442	2671	NDSWC
57707	459809	1328442	2671	NDSWC
57709	459809	1328442	2671	NDSWC
57711	459809	1328442	2671	NDSWC
57714	459809	1328442	2671	NDSWC
57715	462237	1337654	2618	NDSWC
57716	457786	1337824	2575	NDSWC
57717	462348	1343255	2575	NDSWC
57718	457751	1338643	2552	NDSWC
57719	458080	1338972	2559	NDSWC
57720	457687	1340552	2562	NDSWC

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APPENDIX 2.5-7

**BOREHOLES CONSIDERED FOR INTERPRETATION
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SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
57721	459678	1341892	2533	NDSWC
57722	461776	1340052	2562	NDSWC
57723	461776	1340052	2562	NDSWC
57724	462147	1339109	2592	NDSWC
57822	435700	1399554	2516	NDSWC
57823	429752	1398739	2510	NDSWC
57824	453131	1350010	2507	NDSWC
57825	443389	1354091	2640	NDSWC
57826	443389	1354091	2640	NDSWC
57827	443389	1354091	2640	NDSWC
57828	440331	1374403	2492	NDSWC
57829	440331	1374403	2492	NDSWC
64781	455166	1330202	2579	NDSWC
64785	455166	1330202	2579	NDSWC
64789	455166	1330202	2579	NDSWC
64793	455166	1330202	2579	NDSWC
64797	455166	1330202	2579	NDSWC
64801	455166	1330202	2579	NDSWC
64805	455166	1330202	2579	NDSWC
64809	455166	1330202	2579	NDSWC
64814	455166	1330202	2579	NDSWC
64819	455166	1330202	2579	NDSWC
64823	455166	1330202	2579	NDSWC
64829	455166	1330202	2579	NDSWC
64831	455166	1330202	2579	NDSWC
64833	455166	1330202	2579	NDSWC
64835	455166	1330202	2579	NDSWC
66515	418172	1400026	2595	NDSWC
66522	404701	1328856	2690	NDSWC
66660	408188	1400454	2651	NDSWC
67042	417852	1320257	2654	NDSWC
67050	478105	1377929	2671	NDSWC
67127	396209	1334140	2651	NDSWC

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APPENDIX 2.5-7

**BOREHOLES CONSIDERED FOR INTERPRETATION
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SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
67573	452554	1400389	2533	NDSWC
68113	459298	1325044	2582	NDSWC
68163	449585	1410220	2480	NDSWC
68287	463682	1322897	2605	NDSWC
68562	425294	1364611	2572	NDSWC
68563	425294	1364611	2572	NDSWC
68564	431774	1368818	2584	NDSWC
68565	431774	1368818	2584	NDSWC
68566	437064	1369634	2499	NDSWC
68567	437064	1369634	2499	NDSWC
68568	437064	1369634	2499	NDSWC
68569	438000	1359095	2616	NDSWC
68570	438000	1359095	2616	NDSWC
68571	438000	1359095	2616	NDSWC
68572	438221	1375002	2490	NDSWC
68573	438221	1375002	2490	NDSWC
68574	439173	1363762	2551	NDSWC
68575	439173	1363762	2551	NDSWC
68576	441430	1353957	2631	NDSWC
68577	441430	1353957	2631	NDSWC
68578	441430	1353957	2631	NDSWC
68579	443735	1366546	2543	NDSWC
68580	443735	1366546	2543	NDSWC
68581	445655	1369249	2506	NDSWC
68582	445655	1369249	2506	NDSWC
68583	445655	1369249	2506	NDSWC
68584	446020	1354100	2562	NDSWC
DX-360-16	441083	1354534	2618	GNPD - Pre-baseline
DX-360-17	438198	1364204	2563	GNPD - Pre-baseline
DX-360-18	435668	1359619	2589	GNPD - Pre-baseline
DX-360-19	435866	1352661	2660	GNPD - Pre-baseline
DX-360-20	430629	1347954	2606	GNPD - Pre-baseline
DX-360-21	429325	1363868	2624	GNPD - Pre-baseline

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APPENDIX 2.5-7

**BOREHOLES CONSIDERED FOR INTERPRETATION
OF HYDROGEOLOGY
SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
DX-360-23	425389	1350568	2580	GNPD - Pre-baseline
DX-360-24	430005	1372979	2594	GNPD - Pre-baseline
DX-360-25	438395	1380060	2567	GNPD - Pre-baseline
DX-360-26	426163	1358480	2613	GNPD - Pre-baseline
NPRR-E10	440579	1372158	2492	GNPD - Pre-baseline
NPRR-E11	440418	1377485	2510	GNPD - Pre-baseline
NPRR-E12	437653	1374743	2506	GNPD - Pre-baseline
NPRR-E13	430179	1367350	2530	GNPD - Pre-baseline
NPRR-E14	435449	1370747	2520	GNPD - Pre-baseline
NPRR-E15	430360	1360652	2554	GNPD - Pre-baseline
NPRR-E15A	430366	1360402	2547	GNPD - Pre-baseline
NPRR-E16	430335	1361579	2572	GNPD - Pre-baseline
NPRR-E17	435742	1356820	2591	GNPD - Pre-baseline
NPRR-E18	430547	1354124	2529	GNPD - Pre-baseline
NPRR-E19	440899	1361404	2554	GNPD - Pre-baseline
NPRR-E20	446438	1353879	2564	GNPD - Pre-baseline
NPRR-E21	440756	1366745	2510	GNPD - Pre-baseline
NPRR-E23	443120	1348385	2583	GNPD - Pre-baseline
NPRR-E25	449254	1348599	2545	GNPD - Pre-baseline
NPRR-E28	447719	1359239	2538	GNPD - Pre-baseline
NPRR-E4	448205	1369800	2509	GNPD - Pre-baseline
NPRR-E41	450754	1354078	2520	GNPD - Pre-baseline
NPRR-E42	430382	1359802	2542	GNPD - Pre-baseline
NPRR-E43	450354	1354064	2520	GNPD - Pre-baseline
NPRR-E44	449404	1354029	2530	GNPD - Pre-baseline
NPRR-E45	449654	1354038	2524	GNPD - Pre-baseline
NPRR-E46	435642	1360818	2537	GNPD - Pre-baseline
NPRR-E47	435645	1360668	2547	GNPD - Pre-baseline
NPRR-E48	433171	1364014	2533	GNPD - Pre-baseline
NPRR-E49	433021	1363989	2547	GNPD - Pre-baseline
NPRR-E50	432846	1363959	2552	GNPD - Pre-baseline
NPRR-E52	430343	1361292	2568	GNPD - Pre-baseline
NPRR-E53	430418	1358453	2534	GNPD - Pre-baseline

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**BOREHOLES CONSIDERED FOR INTERPRETATION
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SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
NPRR-E54	430350	1361002	2558	GNPD - Pre-baseline
NPRR-E55	449837	1364597	2493	GNPD - Pre-baseline
NPRR-E56	449688	1364592	2486	GNPD - Pre-baseline
NPRR-E57	448710	1364480	2485	GNPD - Pre-baseline
NPRR-E58	450348	1359331	2495	GNPD - Pre-baseline
NPRR-E59	430487	1356114	2537	GNPD - Pre-baseline
NPRR-E6	446109	1364488	2520	GNPD - Pre-baseline
NPRR-E60	430502	1355674	2541	GNPD - Pre-baseline
NPRR-E61	435472	1367371	2511	GNPD - Pre-baseline
NPRR-E7	445892	1374632	2467	GNPD - Pre-baseline
NPRR-E8	444517	1369664	2517	GNPD - Pre-baseline
NPRR-E9	445743	1380293	2479	GNPD - Pre-baseline
SH02-01C	446017	1354883	2551	GNPD - Pre-baseline
SH02-02C	443596	1353936	2646	GNPD - Pre-baseline
SH02-03C	441181	1356769	2611	GNPD - Pre-baseline
SH02-04C	445078	1358320	2641	GNPD - Pre-baseline
SH02-05C	446361	1359837	2586	GNPD - Pre-baseline
SH02-06	443628	1360041	2602	GNPD - Pre-baseline
SH02-07C	443579	1363407	2558	GNPD - Pre-baseline
SH02-08	443439	1365774	2572	GNPD - Pre-baseline
SH02-09C	445905	1366975	2508	GNPD - Pre-baseline
SH02-10C	442197	1369319	2510	GNPD - Pre-baseline
SH02-11C	440431	1374763	2489	GNPD - Pre-baseline
SH02-12C	440465	1364015	2532	GNPD - Pre-baseline
SH02-13C	438095	1359046	2624	GNPD - Pre-baseline
SH02-14C	437785	1361508	2592	GNPD - Pre-baseline
SH02-15	438275	1367673	2506	GNPD - Pre-baseline
SH02-16A	438492	1369913	2502	GNPD - Pre-baseline
SH02-16B	438492	1369913	2502	GNPD - Pre-baseline
SH02-17C	436639	1373328	2523	GNPD - Pre-baseline
SH02-18A	435579	1362704	2516	GNPD - Pre-baseline
SH02-18B	434805	1361770	2516	GNPD - Pre-baseline
SH02-18C	435512	1364235	2534	GNPD - Pre-baseline

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**BOREHOLES CONSIDERED FOR INTERPRETATION
OF HYDROGEOLOGY
SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
SH02-18D	434775	1364158	2515	GNPD - Pre-baseline
SH02-18E	434979	1363237	2518	GNPD - Pre-baseline
SH02-19A	436552	1362710	2546	GNPD - Pre-baseline
SH02-19B	436365	1361547	2546	GNPD - Pre-baseline
SH02-20	435317	1369193	2508	GNPD - Pre-baseline
SH02-21C	433356	1366537	2526	GNPD - Pre-baseline
SH02-22	430369	1363994	2599	GNPD - Pre-baseline
SH02-23	430302	1369085	2562	GNPD - Pre-baseline
SHMW-02	446330	1353961	2560	GNPD - Baseline
SHMW-03	445930	1369603	2501	GNPD - Baseline
SHMW-04	443811	1366818	2544	GNPD - Baseline
SHMW-05	441206	1353789	2639	GNPD - Baseline
SHMW-06	438877	1364184	2550	GNPD - Baseline
SHMW-07	437912	1375290	2507	GNPD - Baseline
SHMW-08	437791	1358944	2609	GNPD - Baseline
SHMW-10	436730	1370596	2502	GNPD - Baseline
SHMW-12	432062	1369166	2559	GNPD - Baseline
SHMW-13	425009	1364906	2568	GNPD - Baseline
SHOB-01R	446831	1361206	2542	GNPD - Baseline
SHOB-02R	446782	1363799	2505	GNPD - Baseline
SHOB-03R	445681	1354560	2565	GNPD - Baseline
SHOB-04R	445475	1362459	2541	GNPD - Baseline
SHOB-05R	445416	1365075	2526	GNPD - Baseline
SHOB-06(B)R	445376	1366390	2516	GNPD - Baseline
SHOB-07R	445355	1367701	2508	GNPD - Baseline
SHOB-08R	444324	1355820	2583	GNPD - Baseline
SHOB-09R	444106	1363733	2575	GNPD - Baseline
SHOB-10R	443989	1368973	2516	GNPD - Baseline
SHOB-11R	442945	1358399	2567	GNPD - Baseline
SHOB-12R	442880	1361030	2573	GNPD - Baseline
SHOB-13R	442807	1363684	2536	GNPD - Baseline
SHOB-14R	442772	1364991	2546	GNPD - Baseline
SHOB-15C	442783	13666325	2555	GNPD - Baseline

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**BOREHOLES CONSIDERED FOR INTERPRETATION
OF HYDROGEOLOGY
SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
SHOB-16R	442706	1367607	2529	GNPD - Baseline
SHOB-17R	441700	1355739	2602	GNPD - Baseline
SHOB-18R	441675	1357059	2594	GNPD - Baseline
SHOB-19R	441597	1359662	2563	GNPD - Baseline
SHOB-20R	441522	1362334	2541	GNPD - Baseline
SHOB-21R	441484	1363579	2528	GNPD - Baseline
SHOB-22R	441454	1364940	2520	GNPD - Baseline
SHOB-23R	441421	1366253	2524	GNPD - Baseline
SHOB-24R	441344	1368886	2503	GNPD - Baseline
SHOB-25C	440232	1360918	2568	GNPD - Baseline
SHOB-26R	440178	1363594	2545	GNPD - Baseline
SHOB-27R	440139	1364913	2534	GNPD - Baseline
SHOB-28R	440096	1366253	2514	GNPD - Baseline
SHOB-29R	440072	1367554	2509	GNPD - Baseline
SHOB-30C	439954	1372841	2518	GNPD - Baseline
SHOB-31R	438954	1359614	2618	GNPD - Baseline
SHOB-32R	438897	1362235	2602	GNPD - Baseline
SHOB-33R	438840	1364865	2534	GNPD - Baseline
SHOB-34R	438808	1366202	2517	GNPD - Baseline
SHOB-35R	438569	1374125	2502	GNPD - Baseline
SHOB-36R	437598	1360883	2585	GNPD - Baseline
SHOB-37R	437534	1363512	2565	GNPD - Baseline
SHOB-38R	437522	1364827	2540	GNPD - Baseline
SHOB-39R	437289	1372764	2517	GNPD - Baseline
SHOB-40R	436311	1359525	2565	GNPD - Baseline
SHOB-41R	436198	1363463	2542	GNPD - Baseline
SHOB-42R	436046	1370055	2501	GNPD - Baseline
SHOB-43R	435939	1374054	2519	GNPD - Baseline
SHOB-44R	434761	1368692	2522	GNPD - Baseline
SHOB-45R	432247	1364634	2550	GNPD - Baseline
SHOB-46R	432157	1367294	2540	GNPD - Baseline
SHOB-47R	430880	1365958	2536	GNPD - Baseline
SHOB-48R	430797	1368569	2550	GNPD - Baseline

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**BOREHOLES CONSIDERED FOR INTERPRETATION
OF HYDROGEOLOGY
SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
SHOB-101R	445511	1361125	2569	GNPD - Baseline
SHOB-102R	445455	1363760	2540	GNPD - Baseline
SHOB-103R	443681	1365044	2570	GNPD - Baseline
SHOB-104R	443579	1367673	2545	GNPD - Baseline
SHOB-105R	443015	1355776	2589	GNPD - Baseline
SHOB-106R	442978	1357081	2576	GNPD - Baseline
SHOB-107R	443359	1359766	2580	GNPD - Baseline
SHOB-108R	442840	1362345	2560	GNPD - Baseline
SHOB-109R	442668	1368941	2526	GNPD - Baseline
SHOB-110R	441641	1358301	2583	GNPD - Baseline
SHOB-111R	441582	1360982	2549	GNPD - Baseline
SHOB-112R	441359	1367584	2523	GNPD - Baseline
SHOB-113R	440276	1359624	2599	GNPD - Baseline
SHOB-114R	440209	1362246	2546	GNPD - Baseline
SHOB-115R	440423	1368454	2501	GNPD - Baseline
SHOB-116R	440075	1370177	2497	GNPD - Baseline
SHOB-117R	439944	1371502	2508	GNPD - Baseline
SHOB-118R	439881	1374171	2490	GNPD - Baseline
SHOB-119R	438498	1360892	2604	GNPD - Baseline
SHOB-120R	438751	1367510	2531	GNPD - Baseline
SHOB-121R	438716	1368804	2515	GNPD - Baseline
SHOB-122R	438682	1370152	2499	GNPD - Baseline
SHOB-123R	438633	1371464	2507	GNPD - Baseline
SHOB-124R	438588	1372808	2509	GNPD - Baseline
SHOB-125R	437977	1361825	2585	GNPD - Baseline
SHOB-126R	437642	1359541	2603	GNPD - Baseline
SHOB-127R	437451	1366219	2511	GNPD - Baseline
SHOB-128R	437443	1367429	2506	GNPD - Baseline
SHOB-129R	437416	1368806	2503	GNPD - Baseline
SHOB-130R	437353	1370096	2499	GNPD - Baseline
SHOB-131R	436293	1360819	2542	GNPD - Baseline
SHOB-132R	436649	1362134	2562	GNPD - Baseline
SHOB-133R	436181	1364789	2527	GNPD - Baseline

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APPENDIX 2.5-7

**BOREHOLES CONSIDERED FOR INTERPRETATION
OF HYDROGEOLOGY
SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
SHOB-134R	436088	1366088	2508	GNPD - Baseline
SHOB-135R	436131	1367403	2505	GNPD - Baseline
SHOB-136R	436016	1368720	2515	GNPD - Baseline
SHOB-137R	434931	1364604	2512	GNPD - Baseline
SHOB-138R	434802	1366098	2510	GNPD - Baseline
SHOB-139R	433527	1364688	2514	GNPD - Baseline
SHOB-140R	433513	1366037	2520	GNPD - Baseline
SHOB-141R	433279	1367623	2558	GNPD - Baseline
SHOB-142R	432202	1366009	2519	GNPD - Baseline
SHOB-143R	430917	1364599	2563	GNPD - Baseline
SHOB-144R	430844	1367262	2527	GNPD - Baseline
US71-008	390729	1359998	2768	USGS - 1971
US71-015	384955	1375657	2744	USGS - 1971
US71-036	386454	1328053	2724	USGS - 1971
US71-043	375382	1343501	2722	USGS - 1971
US71-052	421055	1403252	2560	USGS - 1971
US71-053	421055	1403252	2545	USGS - 1971
US71-060	416418	1381985	2647	USGS - 1971
US71-072	405720	1386950	2656	USGS - 1971
US71-092	422238	1366299	2590	USGS - 1971
US71-120	422902	1345059	2570	USGS - 1971
US71-132	413066	1323577	2665	USGS - 1971
US71-139	407066	1344481	2620	USGS - 1971
US71-157	451914	1430273	2430	USGS - 1971
US71-161	451914	1430273	2440	USGS - 1971
US71-162	451914	1430273	2414	USGS - 1971
US71-163	451914	1430273	2420	USGS - 1971
US71-215	452582	1409442	2456	USGS - 1971
US71-218	452927	1398869	2545	USGS - 1971
US71-238	437464	1387828	2504	USGS - 1971
US71-239	437268	1393113	2509	USGS - 1971
US71-241	439369	1400685	2468	USGS - 1971
US71-246	436772	1408990	2423	USGS - 1971

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APPENDIX 2.5-7

**BOREHOLES CONSIDERED FOR INTERPRETATION
OF HYDROGEOLOGY
SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
US71-247	436772	1408990	2449	USGS - 1971
US71-248	436772	1408990	2475	USGS - 1971
US71-253	426715	1392864	2529	USGS - 1971
US71-257	453671	1377936	2540	USGS - 1971
US71-260	453966	1367398	2545	USGS - 1971
US71-261	454275	1356817	2585	USGS - 1971
US71-265	454443	1351481	2515	USGS - 1971
US71-268	448937	1356626	2520	USGS - 1971
US71-283	448392	1377765	2488	USGS - 1971
US71-292	443087	1377596	2517	USGS - 1971
US71-295	438559	1350939	2625	USGS - 1971
US71-298	438559	1350939	2660	USGS - 1971
US71-299	438395	1356270	2620	USGS - 1971
US71-300	438249	1361534	2540	USGS - 1971
US71-301	438249	1361534	2562	USGS - 1971
US71-303	438249	1361534	2585	USGS - 1971
US71-304	438114	1366812	2498	USGS - 1971
US71-308	438114	1366812	2504	USGS - 1971
US71-310	437815	1377415	2570	USGS - 1971
US71-319	428010	1350571	2600	USGS - 1971
US71-320	428010	1350571	2578	USGS - 1971
US71-323	427702	1361182	2640	USGS - 1971
US71-324	427702	1361182	2610	USGS - 1971
US71-325	427409	1371773	2580	USGS - 1971
US71-332	455344	1325025	2575	USGS - 1971
US71-343	451648	1344293	2546	USGS - 1971
US71-355	439501	1324441	2605	USGS - 1971
US71-356	439501	1324441	2611	USGS - 1971
US71-357	439326	1329727	2604	USGS - 1971
US71-358	439326	1329727	2611	USGS - 1971
US71-359	439326	1329727	2620	USGS - 1971
US71-360	438953	1340281	2702	USGS - 1971
US71-370	485201	1399853	2529	USGS - 1971

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APPENDIX 2.5-7

**BOREHOLES CONSIDERED FOR INTERPRETATION
OF HYDROGEOLOGY
SOUTH HEART LIGNITE MINE**

Point ID	Northing (ft)	Easting (ft)	Ground Elevation (ft amsl)	Source
US71-377	485526	1389285	2544	USGS - 1971
US71-382	479892	1383944	2595	USGS - 1971
US71-385	479520	1394419	2565	USGS - 1971
US71-386	473698	1410078	2543	USGS - 1971
US71-394	469326	1383628	2574	USGS - 1971
US71-395	469144	1388812	2554	USGS - 1971
US71-396	468950	1394106	2610	USGS - 1971
US71-410	463117	1409779	2540	USGS - 1971
US71-412	463844	1388653	2577	USGS - 1971
US71-416	458369	1393779	2542	USGS - 1971
US71-417	458369	1393779	2585	USGS - 1971
US71-419	458181	1399058	2494	USGS - 1971
US71-422	458005	1404327	2573	USGS - 1971
US71-423	458005	1404327	2494	USGS - 1971
US71-424	457839	1409619	2510	USGS - 1971
US71-425	485836	1378911	2569	USGS - 1971
US71-427	485836	1378911	2649	USGS - 1971
US71-428	486015	1373618	2620	USGS - 1971
US71-431	486015	1373618	2600	USGS - 1971
US71-438	486666	1352547	2636	USGS - 1971
US71-451	470290	1352061	2555	USGS - 1971
US71-456	469654	1373186	2602	USGS - 1971
US71-473	459582	1357003	2580	USGS - 1971
US71-478	487215	1336746	2640	USGS - 1971
US71-491	476454	1325785	2670	USGS - 1971
US71-504	460429	1330487	2670	USGS - 1971
USGS-103	430924	1353369	2552	GNPD - Pre-baseline

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References:

- Trapp, Henry Jr. 1971.
- North Dakota State Water Commission. 2007.
- Great Northern Project Development (GNPD). no date.