Wheeling Steel Corporation No. 102 Hell

Cross Creek District, Brooke County, W. Vas

By Wheeling Steel Corporation, Wheeling, W. Va-

located 0.68 mi. W. of 80°25' and 5.58 mi. S. of 40°25' -C- Steubenville

Quadrangle, 2 mi. 8. 2. of Steubenville.

Elevation, 730' Le

Permit Bro-16.

Completed Feb. 2, 1959.

Fresh water to 325 feet; salt water from 375 feet.

Small show of gas and oil in Berea; well plugged back to 1330 and will be used

for pressure well.

Casing, 10", 42'; 82", 325'; 6-5/8", 705'; 5-5/16", 980'.

Coal was encountered at 242-247, 260-263, 305-310, and 370-375'.

According to the geologic map¹ this well starts 270 feet below the 1 R. C. Tucker; Map II of Chic, Brooke and Eancock Counties, show general and economic geology; West Virginia Geological Survey; 1988.

Pittsburgh Coal horison. This makes the total thickness of the Commany Formation 455 feet. The interval from the Pittsburgh Coal to the Beres shown on the map would just the base of the Beres at a depth of 1555 feet, which checks very well with the actual depth of 1545 feet. To definite humdary between the Allegheny and Potteville Formations would be located.

Top Bottom Thiskness

Recent Alluvium, 42 foot

0	85	35	No samples; reported as sand and gravel
35	42	7	Sand, brown, coarse, gravelly (probably a river deposit) /43 † Comessaugh Formation, 200+ feet
42	80	8	Clay, gray, with considerable amount of coarse sand and pebbles, probably from overlying river deposites
			some fragments of pyrite and impure soal
50	60	10	Shale, light-green, very soft, with light-gray very fine
			textured limestone containing pyrite
60	65	5	Shale, red, soft
65	70	5	Shale, gray, soft, calcursous

Top	Bottom	Thickness	
70	76	5	No sample
75	95	20	Clay, gray, pyritic; with a little limestons and impure coal
95	105	10	Sandstone, gray, very fine; with much gray shale
105	140	36	Sandstone, very light-gray, medium-grained, rather soft;
			contains kaolin, mica and chlorite
140	150	10	Shale, dark-gray, with brown siderite or impure limestone
			containing pyrite; a little coal near bottom
150	160	10	Shale, gray, soft; with much fine textured gray limestone
			and a little coal; there is considerable pyrite, mostly
			in lumps broken free from the rock
160	165	5	Shale, gray and green; with some limestone
165	170	8	Limestone, gray, very fine textured, pyritic; with gray
			and green shale
170	175	5	Siltstone, green
175	185	10	Shale, grayich-green, silty, micaceous, containing many
			siderite spherulites
		Allegh	any and followille Formations, COT feet
185	195	10	Limestone, light-gray, very fine textured; with considerable
			gray and yellow olay or soft shale (Upper Presport
			Limestone)
195	200	5	Sandstone, gray to slightly greenish, fine
200	205	5	Shale, gray and green, with some yellow and red, very
			soft and alay like; sontains siderite spherulites and
			modules and considerable pyrite
205	215	10	Shale, green, very silty, micaceous, containing much
			siderite in small nodules and spherulites
215	220	5	Siltatone, grayish-green, with elderite
220	242	22	Shale, gray, partly sixty and partly fine and soft;
			contains siderite in spherulites and freqments of
			nodules or concretions
242	255	13	Shale, dark-gray to black, silty, pyritic; contains many
			fragmentary plant fossils (Upper Presport Coal reported
·			at 242 to 247; little coal shows in samples)

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425 450 22 Sandstone, light-gray, medium grained; contains mica, chlorite and kaolin and seems rather soft	Top	Bottom	Thickness	
 light-gray oley or soft shale and from 275 to 250 much horom ferruginous linestones siderite, partly in spherulites, is present throughout 200 206 16 Shale, dark-gray, miscocous, pyritic upper part is converse and silty contains siderite modules 200 206 10 Shale, dark-gray to black, with humps of pyrite and a little coal 200 305 310 8 Coal and light-brown, pyritic, very fime textured limestone, Undelse Eithenning Coal) 210 325 10 Idmestone, Drown (gray when dry), very fime textured contains a few small fossils 225 350 5 Siltstone, gray, with siderite 230 370 40 Shale, dark-gray bottom 15 feet contains considerable silt and fine sand and some carbonaseous matter 250 375 5 Shale, blacks and highly pyritic coal (5 feet of coal reported in driller's record) 255 386 10 Shale, blacks and highly gravits coal (6 feet of coal reported in driller's record) 256 480 450 22 Sendetone, light-gray, medium grained; contains mice, chlorite and karbonaseous matter 450 450 50 Shale, dark-gray, individual fragments wary from shale to fine sendetone 450 450 50 Shale, light-gray, soft, with siderite spherulites 450 510 50 Shale, light-gray, notily souties substraine to fine sendetone 450 510 50 Shale, light-gray, notily silty souties and and to fine sendetone 450 510 50 Shale, light-gray, motily silty souties and solid sour graine wary from shale to fine sendetone 450 510 50 Shale, light-gray, motily silty souties and souties and source and source and so file of the sendetone 450 510 50 Shale, light-gray, motily silty souties and source and source	255	260	5	Coal and light-gray clay (lower Freeport coal)
 much brown ferruginous linestones eiderite, partly in spherulites, is present throughout 200 205 15 Shale, daste-gray, miceacous, pyritic upper part is courser and silty contains eiderite modules 205 306 10 Shale, daste-gray to black, with lumps of pyrite and a little coal 305 310 8 Coal and light-brown, pyritic, very fime textured limestone (Eidele Eittamming Coal) 310 328 10 idensions, brown (gray when dry), very fime textured contains a few small fossils 326 350 8 Siltstone, gray, with siderite 320 370 40 Shale, daste-gray botton 15 fest contains considerable eilt and fime sand and some carbonaceous matter 370 376 8 Shale, black; and highly pyritis coal (5 fest of coal reported in driller's record) 375 386 10 Shale, light-gray, medius grained; contains mos, ohlorite and handlin and seems rather soft 450 450 51 Sandstone, light-gray, medius grained; contains mice, ohlorite and carbonaceous matter 450 450 50 Shale, dark-gray, individual fragments wary from shale to fine sendstone 450 450 50 Shale, light-gray, soft, with siderite spherulites 450 450 50 Shale, light-gray, soft, with siderite spherulites 450 510 50 Shale, light-gray, motily contains mice, ohlorite and carbonacous matter 450 450 50 Shale, light-gray, soft, with siderite spherulites 450 510 50 Shale, light-gray, soft, with siderite spherulites 450 510 50 Shale, light-gray, motily silty silty 516 516 6 Shale, gray to grayish-gray, motily silty 516 515 5 511 50 516 51 Shale, light-gray, motily silty some samples contain pieces of siderite nodules 525 566 41 Shale, dark-gray, motily silty some samples contain pieces of siderite nodules 525 525 529 Sendence, light-gray, motily silty some samples contain 	260	280	20	Siltstons, light-gray and green; with large amount of
 in spherulites, is present throughout 200 205 15 Shale, dark-gray, misseeous, pyritis, upper part is courser and silty; contains siderite modules 205 305 10 Shale, dark-gray to black, with lumps of pyrite and a little coal 305 310 5 Coal and light-brown, pyritic, very fine textured limestone (Middle Kittanning Coal) 310 325 10 Limestone, brown (gray when dry), very fine textured; contains a few scall fossils 350 570 40 Shale, dark-gray; bottom 10 feet contains considerable eilt and fine send and some carbonaceous matter 370 376 5 Shale, black; and highly pyritic coal (5 feet of coal reported in driller's record) 375 385 10 Shale, gray for Matis M 307 feet 450 450 32 Sandstone, light-gray, medium grained; contains mice, chlorite and kmolin and seems rather soft 450 450 30 Shale, dark-gray, with siderite soft 450 450 30 Shale, gray individual fregments wary from shale to fine sandstone 450 450 10 Shale, gray; not sites contains siter 450 450 10 Shale, dark-gray, mostly silty 450 510 52 Sandstone, jray to gray individual frequents wary from shale to fine sandstone 450 510 52 Shale, jray, mostly silty 516 525 9 Shale, dark-gray, mostly silty 516 526 51 Shale, dark-gray, mostly silty 516 525 9 Shale, dark-gray, mostly silty some samples contain pleoces of siderite modules 525 525 53 Shale, dark-gray, mostly silty some samples contain pleoces of siderite modules 				light-gray slay or soft shale and from 275 to 280*
 200 205 15 Shale, dark-gray, missoons, pyritic, upper part is converse and silty contains siderite modules 205 505 10 Shale, dark-gray to black, with lumps of pyrite and a little scal 206 510 5 Coal and light-brown, pyritic, vary fine textured limestone (Middle Kittanning Coal) 210 325 10 Limestone, brown (gray when dry), very fine textured; contains a few small fossils 256 350 5 Siltstone, gray, with siderite 250 570 40 Shale, dark-gray, botton 10 feet contains considerable silt and fine send and some carbonaceous matter 257 375 5 Shale, black; and highly pyritic coal (5 feet of coal reported in driller's record) 258 425 43 Sandetone, light-gray, botty corted; some grains very coarse; has knolin in the cament and seems rather soft 450 450 52 Sandetone, light-gray, very silty contains mice, chlorite and haolin and seems rather soft 450 450 10 Shale, gray, individual fragments wary from shale to fine sandstone 450 450 50 Shale, gray, brown, and green, mostly silty 510 516 5 Shale, gray to gray is by sorted; some samples contains 510 510 50 Shale, gray to gray individual fragments wary from shale to fine sandstone 450 450 50 Shale, gray, brown, and green, mostly silty 516 525 9 Siltstome, gray to grayish-green, micescous 525 525 9 Sandetone, light-gray, mostly silty contains and some samples contain places of siderite modules 530 510 50 Shale, dark-gray, sortly silty some samples contain places of siderite modules 531 535 535 53 53 53 53 53 53 53 53 53 53 5				much brown ferruginous limestone; siderite, partly
 consress and silty; contains siderite modules 295 505 10 Shale, dark-gray to black, with lumps of pyrite and a little coal 505 510 5 Coal and light-brown, pyritic, very fime textured limestone (Fiddle Eittenning Coal) 510 525 10 Limestone, brown (gray when dry), very fine textured; contains a few small fossile 526 530 5 Siltatone, gray, with siderite 530 570 40 Shale, dark-gray; botton 15 feet contains considerable allt and file seand and some carbonaceous matter 570 575 5 Shale, black; and highly pyritic coal (5 feet of coal reported in driller's record) 575 585 10 Shale, gray For MAT 50M 307 feet 586 10 Shale, gray For MAT 50M 307 feet 586 45 Sandstone, light-gray, andum graines very coarse; has knolin in the conset and seems rather soft 450 450 52 Sandstone, light-gray, notains siderite modules, pyrite and carbonaceous matter 450 450 10 Shale, dark-gray; brown, and green, mothy silty 510 510 50 Shale, light-gray, notive silty some semples contain to fine sandstone 450 510 50 Shale, dark-gray, moth siderite spherulites 510 516 517 50 Shale, light-gray, moth siderite spherulites 518 585 9 Siltatone, gray to gray thy some semples contain pieces of siderite modules 526 52 59 Sandstone, light-gray, motive grays must shale 				in spherulites, is present throughout
 265 506 10 Shale, dark-gray to black, with lumps of pyrite and a little coal 305 510 5 Coal and light-brown, pyritic, very fine textured limestone (Biddle Eittenning Coal) 310 325 10 Limestone, brown (gray when dry), very fine textured; contains a few small fossils 350 570 40 Shale, dark-gray; bottom 15 feet contains considerable silt and fine sand and some carbonaceous matter 370 375 5 Shale, black; and highly pyritic coal (5 feet of coal reported in driller's record) 375 385 10 Shale, gray for MatioN, 307 feet 386 45 Bendetons, light-gray, medium grained; contains mice, chlorite and kaolin and seems rather soft 450 450 50 Shale, dark-gray; very silty; contains siderite modules, pyrite and carbonaceous matter 450 450 50 Shale, light-gray, soft, with eiderite spherulites 450 510 20 Shale, light-gray, soft, with eiderite spherulites 510 510 50 Shale, jray to grayind, some samples contain pieces of siderite nodules 526 450 21 Shale, light-gray, medium grained; some samples contains pieces of siderite nodules 536 510 20 Shale, light-gray, medium-grained, broken small 	280	295	25	Shale, dark-gray, micaceous, pyritic; upper part is
 little coal S05 510 5 Coal and light-brown, pyritic, very fine textured limestone (Middle Eithenning Coal) S10 525 10 Limestone, brown (gray when dry), very fine textured; contains a few small foscile S25 350 5 Silitatone, gray, with siderite S50 570 40 Shale, dark-gray; botton 15 feet contains considerable silt and fine sand and some carbonaceous matter S70 576 5 Shale, black; and highly pyritic coal (5 feet of coal reported in driller's record) S75 585 10 Sin le, gray for MATSOM, 307fccJ S86 488 48 Sendetone, light-gray, medium grained; contains mice, chlorite and knolin and seems rather soft 450 450 50 Shale, dark-gray, very silty; contains siderite modules, pyrite and carbonaceous matter 450 450 10 Shale, light-gray, soft, with siderite spherulites 510 510 20 Shale, light-gray, soft, with siderite spherulites 510 516 4 Shale, light-gray, mostly silty; some semples contain pieces of siderite nodules 525 566 41 Shale, dark-gray, mostly silty; some semples contain pieces of siderite nodules 566 595 29 Sendetone, light-gray, medium-grained, broken small 				coarser and silty; contains siderite modules
 305 310 5 Geal and light-brown, pyritio, very fine textured limestone (Middle Eithaming Coal) 310 325 10 Limestone, brown (gray when dry), very fine textured; contains a few small fossile 325 350 5 Silistone, gray, with siderite 350 370 40 Shale, dark-gray; bottom 15 feet contains considerable eilt and fine sand and some carbonaceous matter 370 376 5 Shale, blacks and highly pyritic coal (5 feet of coal reported in driller's record) 375 385 10 Shale, gray point of the contains on grains very coarse; has knolin in the contains and some rather soft 428 450 32 Sandstone, light-gray, medium grained; contains mice, chlorite and knolin and seems rather soft 450 480 50 Shale, dark-gray; very silty; contains siderite modules, pyrite and carbonaceous matter 450 490 10 Siltstone, gray individual frequents vary from shale to fine sandstome 450 510 50 Shale, light-gray, mostly silty; some samples contain fine samples of siderite modules 566 595 29 Sandstone, light-gray, motium-grained, broken small 	295	305	10	Shale, dark-gray to black, with lumps of pyrite and a
 limestone (Middle Kittanning Coal) S10 325 10 Kinestone, brown (gray when dry), very fine textured; contains a few small fossils S25 350 5 Slitstone, gray, with siderite S50 370 40 Shale, dark-gray; bottom 15 feet contains considerable slit and fine sand and some carbonaceous matter S70 375 5 Shale, black; and highly pyritic coal (5 feet of coal reported in driller's record) S75 385 10 Shale, black; and highly pyritic social (5 feet of coal reported in driller's record) S75 385 10 Shale, gray Port 1100 Form at \$04, 307 feet S85 428 45 Sandatome, light-gray, medium grained; contains wire, chorite and knolin and seems rather soft 450 450 52 Sandatome, gray; wry slity; contains siderite modules, pyrite and carbones satter 450 450 10 Silatone, gray; individual fragments vary from shale to fine sandstome 450 510 20 Shale, light-gray, soft, with siderite spherulites 510 516 6 Shale, fray, brown, and green, mostly silty 516 525 9 Siltatome, gray to grayish-green, micenceus 525 566 41 Shale, dark-gray, motule silty; some samples contain pieces of siderite modules 566 595 29 Sandatome, light-gray, medium-grained, broken small 				little coal
 510 525 10 Idmestone, brown (gray when dry), very fine textured; ountains a few small feasile 525 550 5 Siltstone, gray, with siderite 530 570 40 Shale, dark-gray; bottom 15 feet contains considerable silt and fine sand and some carbonaceous matter 570 575 5 Shale, black; and highly pyritic coal (5 feet of coal reported in driller's record) 575 585 10 Simile, gray 585 423 45 Sunderdow, Tight-gray, botty sorted; some grains very coarse; has knolin in the commt and seems rather soft 428 450 82 Sandstone, light-gray, medium grained; contains mice, chlorite and knolin and seems rather soft 450 450 50 Shale, dark-gray; very silty; contains siderite modules, pyrite and carbonaceous matter 450 450 10 Siltstone, gray; individual frequents very from shale to fine semistors 490 510 50 Shale, light-gray, soft, with siderite spherulites 510 616 6 Shale, gray to grayish-green, micecous 525 566 41 Shale, dark-gray, mostly silty; some samples contain pieces of siderite modules 566 595 29 Sandstone, light-gray, modium-grained, broken small 	305	810	5	Coal and light-brown, pyritic, very fine textured
oontains a few small fossils 525 550 5 Silistone, gray, with siderite 550 570 40 Shale, dark-gray; botton 15 feet contains considerable silt and fine sand and some carbonaseous matter 570 575 5 Shale, black; and highly pyritic coal (5 feet of coal reported in driller's record) 575 585 10 Shale, gray Pottevilke For MatioN, 307feed 585 428 45 Sumistons, light-gray, population and seems rather soft 428 450 52 Sundstone, light-gray, medium grained; contains mice, ohlerite and kachin and seems rather soft 450 480 50 Shale, dark-gray, wry silty; contains siderite modules, pyrite and carbonaceous matter 450 490 10 Siltstone, gray; individual fragments wary from shale to fine sendstone 490 510 50 Shale, light-gray, soft, with siderite spherulites 510 616 Shale, light-gray, mostly silty 516 585 9 517 586 41 586 595 89 586 595 59 586 595 59 587 59				limestone (Middle Kittenning Coal)
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 350 570 40 Shale, dark-gray; bottom 15 feet contains considerable silt and fine sand and some carbonaceous matter 370 575 5 Shale, black; and highly pyritic coal (5 feet of coal reported in driller's record) 375 385 10 Shale, gray Port Ation 307 feet 385 428 43 Sundetons, light-gray, patrix outs and some rather soft 428 450 32 Sandetons, light-gray, medium grained; contains mice, chlorite and haolin and seems rather soft 450 480 50 Shale, dark-gray, very silty; contains siderite modules, pyrite and carbonaceous matter 450 490 10 Siltstons, gray; individual freqments very from shale to fine semistors 450 510 50 Shale, light-gray, soft, with siderite spherulites 510 516 6 Shale, gray to grayish-green, micaceous 525 566 41 Shale, dark-gray, motily silty; some samples contain pieces of siderite modules 566 595 29 Sandetone, light-gray, medium-grained, broken small 				contains a few shall fossils
silt and fine sand and some carbonassous matter 870 875 5 Shale, black; and highly pyritic coal (5 feet of coal reported in driller's record) 876 885 10 Shale, gray Potterning Formation 307 feet 888 428 43 Sundetons, Tight-gray, peoply sorted; some grains very coarse; has knolin in the causant and seems rather coft 428 450 22 Sandstone, light-gray, medium grained; contains mice, chlorite and knolin and seems rather soft 450 480 50 Shale, dark-gray, very silty; contains siderite modules, pyrite and carbonaceous matter 450 490 10 Siltstone, gray; individual fragments vary from shale to fine sandstone 490 510 80 Shale, light-gray, soft, with siderite spherulites 510 516 6 Shale, gray, brown, and green, mostly silty 516 525 9 Siltstone, gray to grayish-green, micaceous 525 566 41 Shale, dark-gray, mostly silty; some samples contain pisces of siderite modules 566 595 29 Sandstone, light-gray, medium-grained, broken small	325	350	8	Siltatone, gray, with siderits
 370 376 5 Shale, black; and highly pyritic coal (5 feet of coal reported in driller's record) 375 386 10 Shale, gray Port and a 97 feet Port and 98 feet Port and 98 feet Port and 198 feet Port and Port and Port and Port and 98 feet Port and 98 feet Port and 98 feet Port and 98 feet Port and 198 feet Port and 98 feet Port and 98 fe	330	370	40	Shale, dark-gray; bottom 15 feet contains considerable
reported in driller's record) 575 585 10 Shale, gray Pottariiic Formation 307 feet 385 483 48 Sundetone, light-gray, peoply sorted; some grains very ocaree; has knolin in the cament and seems rather soft 428 450 82 Sandetone, light-gray, medium grained; contains mice, ohlorite and knolin and seems rather soft 450 480 50 Shale, dark-gray, very silty; contains siderite modules, pyrite and carbonaceous matter 480 490 10 Siltstone, gray; individual frequents very from shale to fine sandstone 490 510 80 Shale, light-gray, soft, with siderite spherulites 510 516 6 Shale, gray to grayish-green, micaceous 528 566 41 Shale, dark-gray, mostly silty; some samples contain pieces of siderite nodules 566 595 89 Sandstone, light-gray, medium-grained, broken small				silt and fine sand and some carbonapeous matter
 375 385 10 Shale, gray Portarily For Mation 307 feet 385 428 43 Sumstaw, light-gray, poly sorted; some grains very coarse; has knolin in the cament and seems rather soft 428 460 22 Sandstone, light-gray, medium grained; contains mice, chlorite and knolin and seems rather soft 450 480 50 Shale, dark-gray, very silty; contains siderite modules, pyrite and carbonaceous matter 480 490 10 Siltstone, gray; individual fragments vary from shale to fine sandstome 490 510 20 Shale, light-gray, soft, with siderite spherulites 516 515 9 Siltstone, gray to grayish-green, miceceous 528 566 41 Shale, dark-gray, mostly silty; some samples contain pieces of siderite modules 566 595 29 Sandstone, light-gray, medium-grained, broken small 	370	375	8	Shale, black; and highly pyritic coal (5 feet of coal
 385 488 43 Potternia For Mation, Softer some grains very coarse; has knolin in the omment and seems rather soft 428 460 82 Sandstone, light-gray, medium grained; contains mice, chlorite and knolin and seems rather soft 450 480 50 Shale, dark-gray, very silty; contains siderite modules, pyrite and carbonaceous matter 450 400 10 Siltstone, gray; individual fragments vary from shale to fine sandstome 490 510 20 Shale, light-gray, soft, with siderite spherulites 510 516 6 Shale, gray, brown, and green, mostly silty 516 585 9 Siltstone, gray to grayish-green, micecous 566 595 29 Sandstone, light-gray, medium-grained, broken small 				reported in driller's record)
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428 450 \$2 Sandstone, light-gray, medium grained; contains mice, ohlerite and kaolin and seems rather soft 450 480 50 Shale, dark-gray, vary silty; contains siderite modules, pyrite and carbonaceous matter 450 490 10 Siltstone, gray; individual fragments vary from shale to fine sandstome 490 510 20 Shale, light-gray, soft, with siderite spherulites 510 516 6 Shale, gray, brown, and green, mostly silty 516 525 9 Siltstome, gray to grayish-green, miceceous 528 566 41 Shale, dark-gray, mostly silty; some samples contain pieces of siderite nodules 566 595 29 Sandstome, light-gray, modium-grained, broken small	385	428	43	Sandstons, light-gray, peorly sorted; some grains very
chlorite and kmolin and seems rather soft 450 480 50 Shale, dark-gray, very silty; contains siderite modules, pyrite and carbonaceous matter 480 490 10 Siltstone, gray; individual fragments vary from shale to fine sandstone 490 510 20 Shale, light-gray, soft, with siderite spherulites 510 516 6 Shale, gray, brown, and green, mostly silty 516 525 9 Siltstone, gray to grayish-green, miceceous 528 566 41 Shale, dark-gray, mostly silty; some samples contain pieces of siderite nodules 566 595 29 Sandstone, light-gray, medium-grained, broken small				coarse; has knolin in the cement and seems rather soft
 450 480 50 Shale, dark-gray, very silty; contains siderite modules, pyrite and carbonaceous matter 450 490 10 Siltstone, gray; individual fragments vary from shale to fine sandstone 490 510 20 Shale, light-gray, soft, with siderite spherulites 510 516 6 Shale, gray; brown, and green, mostly silty 516 525 9 Siltstone, gray to grayish-green, micaceous 528 566 41 Shale, dark-gray, mostly silty; some samples contain pieces of siderite nodules 566 595 29 Sandstone, light-gray, medium-grained, broken small 	426	450	22	Sandstone, light-gray, medium grained; contains mica,
pyrite and carbonaceous matter48049010Siltstone, gray; individual fragments wary from shale to fine sandstone49051020Shale, light-gray, soft, with siderite spherulites5105166Shale, gray, brown, and green, mostly silty5165259Siltstone, gray to grayish-green, micesceus52856641Shale, dark-gray, mostly silty; some samples contain pieces of siderite nodules56659529Sandstone, light-gray, medium-grained, broken small				chlorite and kaolin and seems rather soft
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510 516 6 Shale, gray, brown, and green, mostly silty 516 525 9 Siltstone, gray to grayish-green, micaceous 525 566 41 Shale, dark-gray, mostly silty; some samples contain pieces of siderite nodules 566 595 29 566 595 29 Sandstone, light-gray, medium-grained, broken small				to fine sandstone
516 525 9 Siltstone, gray to grayish-green, micaceous 528 568 41 Shale, dark-gray, mostly silty; some samples contain pieces of siderite nodules 566 595 29 Sandstone, light-gray, medium-grained, broken small	490	510	20	Shale, light-gray, soft, with siderite spherulites
525 566 41 Shale, dark-gray, mostly silty; some samples contain picces of siderite nodules 566 595 29 Sandstone, light-gray, medium-grained, broken small	510	516	6	Shale, gray, brown, and green, mostly silty
pieces of siderite nodules 565 595 29 Sandstone, light-gray, medium-grained, broken small	516	5 2 5	9	Siltstone, gray to grayish-green, micaceous
566 595 29 Saudstone, light-gray, medium-grained, broken small	528	566	41	Shale, dark-gray, mostly silty; some samples contain
				pieces of siderite modules
595 606 11 Siltstone, gray, shaly, carbonaceous	566	595	29	Sandstone, light-gray, medium-grained, broken small
	595	606	11	Siltstone, gray, shaly, carbonaceous

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Top	Bottom	Thickness	
606	627	21	Sandstone, light-gray, coarse; contains little besides
			quarte
627	657	80	Shale, gray, very silty; with large amount of light-gray
			to white, fine sandstone; samples also contain much
			fine textured brown siderite, probably from nodules
			in the shale
657	692	36	Sandstone, gray, fine to very fine, shaly; all samples
			contain some silty shale or siltstone which is darker
			than most of the sandstone
		0	reenbrier Limestone, 74 feet
692	700	8	Limestone, light-brown (mostly gray when dry), very
			fine textured
700	705	8	Limestone, light grayish brown, sandy; sand is not well
			sorted; larger grains are rounded and frosted
705	760	61	Sandstone, light-gray, caleareous, medium- to fine grained;
			all samples contain metallic iron and rust which tend
			to obsoure the natural color; some colites at least
			from 717 to 745' and possibly a few through a larger
			interval; larger quarts grains are rounded and frosted;
			from 750 to 766" there is considerable quarts esfine
			as silt, and a very little glauconits (Loyalhanna
			Linestone)
			Posono Formation, 579 Fine
786	786	22	Sandstone, grayish-green to very fine, misaseous;
			not calcareous except for contamination at top by
			material from above; broken mostly in small chips

Sendstone, white, fine; broken up into individual grains Sandstone, light-gray, hard; broken mostly into small chips Shale, dark-gray, mostly silty

Sendstone, light-gray to yellowish, medium- to finegrained; many of the querts grains have crystal faces due to secondary growth; small amounts of muscowite, biotite, chlorite and pyrite are unevenly distributed

Top	Bottom	Thickness	
901	965	64	Sandstone, light-gray to yellowish, fine; similar to
			last but mostly finer and contains a little more of
			minerals other than quarts
965	972	7	Siltstone, gray; with some gray shale
972	985	18	Sanistone, light-gray, very fine; sample much contaminated
			by rusty from
985	1085	100	Shale, gray, silty, micaceous, interstratified with
			gray to greenish siltstone; some samples contain more
			siltatone than true shale
1085	1106	19	Biltetone, light-gray; contains small amounts of mice,
			chlorite and pyrite
1104	1274	170	Shale, gray, silty, micaseous, with streaks of lighter
			gray siltatons; except for a very few fragments both
			shale and siltstone are non-calcareous; some samples
			are more siltatone than shale
1274	1291	16	Siltstone, gray, shale; not sharply separated from the
			shale above
1291	1325	34	Shale, dark-gray, mostly fine but some silty and misaceous
			(Sumbury or Grangerville Shale)
1325	1383	8	Sandstone, light-gray, fine; there is a concentration
			of pyrite at the contact with the overlying shale;
·			samples stained yellow and brown by iron rust from drill
			steel; calcareous from 1331 to 1333 (Berea Sandstone;
			soft, with traces of gas and oil from 1527' to 1329)
1555	1345	18	Sandstone, light-gray, very fine, broken into chips
			up to about 2 inch; contains a little mica, pyrite and
			specks of ocaly material
		Demonstern of	· Mesteliniat Shelas St. Pack

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Devomian or Mississippish Shales, 8+ feet

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1345	1565	8	Shale,	gPAY:	with	lighter	gray,	micaceous	siltstone
	1358		Total (leyth					

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