

Mon - 238  
Clinton Dist.

HARRINGTON GAS CO.

PRICE 41

Depth  
Interval  
Foot

36	to	35	Sandstone, light tan, coarse grained, sub-rounded to rounded, dirty, pyritic	
			Shale, medium gray, red and green, whole unit probably contaminated and unconsolidated	
35	to	33	Shale, medium gray, 30% -- dusky red 70%	
33	to	41	Shale, medium gray, silty, calcareous	
41	to	45	Sandstone, buff, fine grained, with some coarse well-rounded grains, some small pyrite cubes, and some medium gray shale	
45	to	50	Shale, medium gray, soft, slightly micaceous; contains some chips of light brown limestone	
50	to	55	Shale and siltstone; medium gray with some nice, some chips of light brown limestone	
55	to	61	Sandstone, white, fine grained, sub-angular, slightly chloritic, in aggregate lumps, 50% Shale, medium gray, micaceous 25% Limestone, light brown, 25%	
BUFFALO SANDSTONE	61	to	64	Shale, dusky red, medium gray; green; limestone, light brown; sandstone, white, fine grained with some hematite and chlorite in aggregate lumps
	66	to	71	Sandstone, white, fine to medium grained, sub-angular to sub-rounded, calcareous, pyritohedrons and cubes of pyrite common, large flakes of muscovite common
	71	to	76	Sandstone; similar to unit above
	76	to	83	Sandstone; similar to unit above, but less calcareous
	83	to	89	Sandstone; white, fine grained, calcareous; occasional cube of pyrite, somewhat micaceous
	89	to	93	Sandstone, very light gray, fine to very fine grained, calcareous, occasional cubes of pyrite, muscovite common

Price #1

Depth  
Interval ft.

98	to	104	Sandstone or limestone; light gray, sandstone is fine grained and in aggregate lumps with the limestone; micaceous and chlorite
104	to	113	Sandstone, very light gray, medium grained, sub-rounded very calcareous, occasional chlorite and mica present
113	to	122	Sandstone; very light gray, fine grained, slightly calcareous, occasional mica and chlorite present -- 30%, shale, medium gray - 10%
122	to	130	Shale, medium to dark gray, silty -- 50% Sandstone; white, fine to medium grained, sub-rounded, slightly pyritic -- 40% in aggregate lump with limestone, light brown to very light gray -- 10%
130	to	136	Shale, light gray, with some red and green -- 90% Sandstone, white, fine to medium grained, sub-rounded slightly micaceous, slightly calcareous -- 10%
136	to	144	Shale, light green, and some dusky red - 90% Sandstone, white, fine to medium grained, calcareous - 10%
144	to	150	Shale, medium green, hard, with 3% dusky red shale present, calcareous sandstone cavings present
150	to	157	Shale, medium gray, <del>white</del> , - 90%; sandstone, white, fine grained, calcareous, 5% - shale, dusky red - 5% - occasional specks of hematite present, pyrite rather common
157	to	162	Shale, medium gray, contains finely disseminated mica - 50% Sandstone, light gray, fine to very fine grained, calcareous, chlorite and mica common, pyrite rare - 50%
162	to	168	Shale, medium gray, silty, hard, contains coarse grains of light tan limestone, pyrite common
168	to	172	Sandstone; white, fine grained, micaceous, pyrite rare - 50%; shale, light gray, with some dusky red shale - 50%
172	to	178	Shale, medium gray, soft
178	to	186	Shale, similar to above unit but silty
186	to	196	Shale, medium to dark gray, silty, contains pyrite and bits of coal

Uffington  
SHALE

## Trend 41

Depth Interval Ft.		
UFFington SHALE } 196 - 201		shale, medium to dark gray, with some <del>coal</del> shale, pyritic. <u>EASE OF CONEMAUGA</u> <sup>CALY</sup>
201 - 206		coal, blocky, bright, ~ 30% (Upper Freeport) shale, medium to dark gray, some coal - 5%
		sandstone, light tan, fine grained, micaceous, 10%
206 - 211		sandstone, light gray, fine grained, micaceous, contains small pieces of coal and coaley shale
211 - 213		sandstone, white, fine to medium grained, sub-rounded, occasional flakes of mica, black shale cavings present
213 - 220		sandstone, similar to above, but cleaner and slightly chloritic and pyritic
220 - 228		sandstone, white, medium to coarse grained, sub-rounded, some large flakes of mica, some frosted grains, 60% shale, medium gray, 40%
228 - 233		sandstone, white, medium grained, sub-rounded, slightly chloritic, slightly calcareous
233 - 243		sandstone, white, fine to medium grained, sub-rounded, somewhat chloritic, micaceous, calcareous
243 - 248		sandstone, similar to unit above, but slightly pyritic
248 - 254		siltstone, white, with some coarse sand grains ~ 30% shale, medium to light gray ~ 50%
254 - 261		sandstone, white, fine grained, slightly pyritic, slightly micaceous, 95% shale, medium gray ~ 5%
261 - 270		sandstone, similar to above ~ 50% shale, dark gray ~ 50%
270 - 277		sandstone, similar to above ~ 50% shale, similar to above ~ 50%
277 - 283		sandstone, similar to above ~ 50% shale, similar to above ~ 50%
283 - 290		sandstone, white, fine grained ~ 50% shale, medium gray, micaceous, silty ~ 50%
290 - 295		sandstone, light gray, fine grained, micaceous ~ 95% shale, medium to dark gray ~ 5%
295 - 303		siltstone, light gray to white ~ 50% shale, medium gray ~ 50%

Table 41

Depth	Interval, ft.	Description
353	- 310	Siltstone, white - 50% Shale, dark gray - 50%
310	- 278	Sandstone, white, fine grained - 25% Shale, dark gray, micaceous, silty - 75%
310	- 327	Sandstone, light gray, fine grained, micaceous - 95% Shale, medium to dark gray, carbon - 5%
327	- 331	Siltstone, medium gray, micaceous
331	- 336	Sandstone, white, fine grained, very calcareous, pyritic, micaceous - 50% Shale, medium to dark gray, 50%
336	- 246	Limestone, light gray, impure, sandy - 60% Shale, medium gray - 40%
346	- 354	Shale, medium gray, hard - 50% Limestone, light gray - 50%
354	- 260	Shale, medium to dark gray, hard - 50% Limestone, light gray, impure - 50%
360	- 366	Limestone, light gray, sandy, impure - 95% Shale, dark gray, hard - 5%
366	- 376	Siltstone, light gray, pyritic, calcareous - 95% Shale, medium to dark gray - 5%
376	- 386	Sandstone, light gray, very fine grained, pyritic, cal- careous - 85% Shale, coal, black, pyritic - 10% Coal, blocky, bright - 5% <u>BASE OF ALLEGHENY</u>

LWR KITTANNING COAL?Homewood  
Sandstone

Homewood Sandstone	386	- 398	Sandstone, light gray, fine grained - 45% Shale, coal, black - 10% Shale, medium gray, silty - 45%
	398	- 406	Shale, medium gray - 40% Shale, dark gray - 5% Siltstone, light gray and white, pyrite common - 55%
	406	- 416	Siltstone, light gray and white, micaceous - 90% Shale, medium gray - 10%
	416	- 423	Siltstones and shale, similar to above
	423	- 430	Sandstone, white, fine grained, sub-angular to sub-roundish, calcareous, large flakes of muscovite very common

TOP OF POTTSVILLE

Depth  
Interval, ft.  
430 - 439 Sandstone, white, medium grained, sub-angular to sub-rounded, muscovite, siltic present, slightly calcareous, slightly chloritic

SANDSTONE  
439 - 446 Sandstone, similar to above unit, but with a few pieces of coal shale present

446 - 456 Sandstone, similar to above unit - 30%  
Shale, black, coal - 20%  
Shale, light gray, silty - 40%  
Coal, blocky, bright - 5%

Tionesta COAL ?

456 - 467 Sandstone, white, fine to coarse grained, sub-angular to sub-rounded, occasional piece of foliated pyrite present, micaceous - 30%  
Siltstone, light gray - 30%

467 - 474 Sandstone, light to medium gray, very fine to fine grained, micaceous - 30%  
Siltstone, light gray - 10%

474 - 479 Sandstone, white, fine to medium grained, muscovite mica present, slightly chloritic

479 - 489 Sandstone, similar to above unit

489 - 500 Sandstone, similar to above unit - 30%  
Sandstone, light to medium gray, very fine grained, mica <sup>ceous</sup> - 50%

500 - 510 Sandstone, light gray, fine to medium grained - 20%  
Shale, light gray, silty, micaceous - 80%

510 - 521 Shale, medium gray, hard - 95%  
Shale, black, coal - 5%

521 - 532 Sandstone, white, fine grained, micaceous, hard - 10%  
Siltstone, light gray, micaceous - 90%

532 - 536 Sandstone, white, fine to medium grained, sub-angular to sub-rounded, micaceous - 30%  
Siltstone, light gray to light tan - 10%  
Coal, blocky, bright } 5%  
Shale, black,

UPPER OR LOWER  
Mercer COAL ?

536 - 545 Sandstone, fine to medium grained, sub-angular to sub-rounded, micaceous - 30%  
Shale, pyritic, black - 5%

545 - 554 Shale, medium gray, finely micaceous, silty

554 - 566 Sandstone, white, fine to medium grained, sub-angular to sub-rounded, micaceous - 30%  
Siltstone, medium to dark gray, pyritic, finely micaceous - 65%

566 - 573 Sandstone, white, medium grained, sub-rounded - 30%  
Shale, dark gray, silty, finely micaceous - 15%

HOMWOOD)

SANDSTONE

Tionesta COAL ?

UPPER  
CONNOCHE-  
-NASSING  
SANDSTONE

Prise #1

6.

UPPER  
CONNOCUE  
-NESSING  
SANDSTONE

Depth  
Interval, Ft.

573	-	573	Sandstone, similar to above unit, but many frosted grains - 95%
			Shale, dark gray, silty, finely micaceous - 5%

573	-	584	Sandstone, similar to above unit, but fine to medium grained Sandstone, white, medium to coarse, sub-rounded, many frosted grains, occasional chlorite, <del>coal</del> , and black shale aggregates.
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FRESH  
WATER

584	-	592	Sandstone, white, very coarse to coarse grained, sub-rounded, black shale specks common, many frosted grains, clean
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592	-	598	Sandstone, white, very coarse to medium grained, sub-angular to sub-rounded
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598	-	605	Sandstone, similar to above unit, with some chips of dark gray shale
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605	-	612	Sandstone, white, coarse grained, sub-angular to sub- rounded, occasional edges of pyrite present
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612	-	618	Sandstone, similar to above unit, but contains bits of <del>coal</del>
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618	-	625	Sandstone, white, coarse to medium grained, sub-angular, poorly sorted
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625	-	636	Sandstone, white, very coarse grained, sub-rounded, frost- ed, clean
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636	-	644	Sandstone, white, coarse to very coarse grained, sub-rounded, frosted, slightly chloritic
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644	-	650	Sandstone, white, very coarse to medium grained, sub- angular to sub-rounded
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650	-	655	Sandstone, light tan, very fine grained - 75% Silstone, dark gray - 25%
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655	-	660	Shale, medium gray, silty, slightly pyritic
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660	-	666	Shale, medium to dark gray, silty, finely micaceous
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666	-	671	Shale, black to dark gray, platy, finely micaceous
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SHOW OF  
GRS

671	-	681	Shale, medium to dark gray, silty, finely micaceous - 75% Sandstone, buff, very fine grained, finely micaceous - 25%
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681	-	691	Sandstone, white, medium to fine grained, sub-angular to sub-rounded, some large flakes of muscovite present - 30%
			Shale, dark gray - 10%

Price #1

## Depth

## Interval, ft.

691 - 698 Sandstone, white, fine to medium grained, sub-angular  
large flakes of micaeite common, contains bits  
of black shale

698 - 704 Sandstone, similar to above unit, but occasional pyrite  
cubes present, also slightly chloritic

704 - 710 Sandstone, similar to above unit

710 - 719 Sandstone, very light gray, fine to medium grained,  
~~BASE OF POTTSVILLE~~ sub-rounded, some chips of light green siltstone  
present, slightly calcareous

Top of Mauch Chunk

719 - 726 Shale, dusky red - 7%

Shale, light green - 30%, also a few calcareous sandstones  
grains present.

726 - 732 Shale, dusky red - 5%  
Shale, light green, pyritic - 6%  
Sandstone, light gray, fine grained, calcareous - 30%

732 - 741 Shale, dusky red - 20%  
Shale, light to medium gray - 50%  
Sandstone, light gray to white, fine grained, calcareous - 30%

742 - 748 Shale, dusky red - 7%  
Sandstone, light gray, fine grained, calcareous - 30%

748 - 752 Shale, dusky red - 35%  
Siltstone, light green - 35% }  
Sandstone, white, fine grained, pyritic - 30% } Calcareous

752 - 758 Shale, dusky red - 30% }  
Shale, light green - 25% } Calcareous  
Sandstone, white, fine grained  
25% }

758 - 765 Sandstone, light green, very fine grained, micaceous,  
some calcareous, red shale cavings present

765 - 772 Sandstone, light green, fine grained, micaceous, somewhat  
chloritic, red shale cavings present

772 - 779 Sandstone, light gray, fine to medium grained, micaceous,  
chloritic, somewhat calcareous, red shale cavings  
present

779 - 786 Sandstone, white to light gray, fine grained, micaceous,  
chloritic, somewhat calcareous, dirty, some red  
shale cavings present

786 - 793 Sandstone, similar to above unit, but with a few chips of  
dark gray shale present

Profile #1

<u>Depth</u>		
<u>Interval, Ft.</u>		
723	-	804 Sandstone, similar to above.
804	-	819 Sandstone, white, medium grained, sub-angular to sub-rounded, <sup>61.247%</sup> chloritic, micaceous, a few knots of pyrite present, somewhat calcareous - 90% shale, medium to dark gray - micaceous - 10%
814	-	822 Sandstone and shale, similar to unit above
822	-	830 Sandstone, white, fine to medium grained, <sup>SLIGHTLY</sup> <del>some</del> chloritic, <sup>51.247%</sup> calcareous, micaceous, a few cubes of pyrite present
830	-	837 Sandstone, similar to above unit
837	-	848 Sandstone, similar to above unit
848	-	855 Sandstone, similar to above unit - 45% Shale, medium gray, micaceous, silty - 30% Limestone, light gray - 5%
855	-	862 Sandstone, white, fine grained, calcareous, pyritic, (in knots) micaceous - 30% Silicate, light gray, micaceous - 70%
862	-	873 Sandstone, white to light green, very fine to fine grained, micaceous, calcareous - 80% Shale, light to medium gray, micaceous - 10% Shale, dusky red - 10%
873	-	878 Sandstone and shale, similar to unit above, but with chart (?)
878	-	886 Silicate, light green, micaceous, somewhat calcareous, slightly pyritic, contains black (only?) species
886	-	894 Silicate, similar to above - 20% Shale, dusky red, micaceous, silty - 80%
894	-	900 Silicate, similar to above - but 40% Shale similar to above, but - 60%
900	-	905 Silicate, similar to above - but 15% Shale, similar to above - (60%) Shale, light gray - 20% Limestone, light brown; somewhat pyritic - 5%
905	-	912 Silicate, light gray, micaceous, calcareous - 30% Shale, medium gray - 60% Shale, dusky red - 5% (covings)
912	-	918 Silicate, light gray, micaceous, calcareous - 30% Shale, medium gray, micaceous - 70%

Section #1

8.

Depth Interval, Ft.		
925 - 926		Limestone, light gray, micaceous, calcareous - 20% Shale, medium gray - 30% <sup>CALCITE CRYSTALS</sup> Limestone, dark gray, with <del>shells</del> - 50%
926 - 932		Limestone, dark gray, silty
932 - 937		Limestone, similar to above unit
937 - 944		Limestone, similar to above unit - 30% Sandstone, light gray, fine grained, micaceous - 10%
944 - 948		Shale, dusky red, calcareous - 20% Limestone, dark gray - 30% Small pieces of white chert present.
948 - 954		Shale, dusky red - 30% Limestone, medium gray, impure - 50% contains bits of chert
954 - 960		Limestone, light brownish-gray, calcite crystals present - pure appearing - 50% Siltstone and sandstone, white to light green, fine grained, calcareous - 20% red shale cavings present.

TOP of BIG LIME      GREENBRIER SERIES

960 - 964		Limestone, light brownish-gray, pure appearing, much white calcite present
964 - 970		Limestone, light brownish-gray, and medium gray - 60% Siltstone, dusky red - 25%
970 - 976		Limestone, light brownish-gray, pure appearing - 60% Limestone, medium gray, impure appearing - 30% Shale, dusky red, calcareous, ~5% (cavings ?)
976 - 982		Limestone, light brownish-gray, pure appearing - white calcite, vein-filling caser, occasional fragments of chert present
982 - 986		Limestone, similar to above
986 - 992		Limestone, similar to above
992 - 999		Limestone, similar to above
999 - 1006		Limestone, similar to above, occasional pyrite crystals present
1006 - 1013		Limestone, similar to above

Brick II

Depth Interval, ft.		
1017 - 1020	Limestone, dark gray, (some light brownish-gray), pure appearing, silty	
1020 - 1025	Limestone, similar to above unit	
1025 - 1030	Limestone, medium gray, some crystalline, calcite common - 9%	
	Sandstone, white, very fine grained, cemented with calcite - 10%	
1030 - 1032	Limestone, very light gray, pure appearing, calcite common - 3%	
	Limestone, medium gray - 4%	
	Sandstone, white, very fine grained, calcite cemented - 1%	
1032 - 1034	Limestone, very light gray, pure appearing, some white, very fine sandstone present	
1034 - 1037	Limestone, light brownish-gray, pure appearing - 4%	
	Limestone, medium to dark gray, impure	}
	Sandstone, white, very fine grained, calcite cemented - 15%	
1037 - 1042	Limestone, light gray, to light brownish-gray, pure appearing	
1042 - 1043	Shale, dusky red, silty - 5%	
	Shale, medium gray, silty - 5%	
	Limestone cavings	
1043 - 1049	Shale, dusky red, silty - 4%	
	Shale, medium gray, silty - 4%	
	Sandstone, white, fine grained, calcareous - 2%	
1049 - 1052	Shale, dusky red, silty - 10%	
	Shale, medium gray, silty - 2%	
	Sandstone, white, fine to medium grained, with some calcite, calcareous - 6%	
1052 - 1053	Shale, dusky red, silty - 1%	
	Shale, medium gray, silty - 1%	
	Sandstone, white, medium to fine, sub-rounded, some frosted grains, calcareous - 7%	
<u>TOP OF BIG INJUN</u>		
1053 - 1069	Shale, dusky red - 3%	
	Shale, light green - 3%	
	Sandstone, white, fine grained, very calcareous - 90%	
1069 - 1072	Sandstone, similar to above unit	
1071 - 1077	Sandstone, light tan, medium to fine grained, sub-rounded calcareous	
<i>Show of GAS</i> → 1077 - 1081		Sandstone, similar to above unit

*Show of GAS* →

Depth Interval ft.		
1081 - 1086		Sandstone, similar to above, but very calcareous
1086 - 1090		Sandstone, similar to above unit
1090 - 1093		Sandstone, similar to above unit - 9%
		Limestone, light brownish-gray, pure appearing - 16%
1093 - 1096		Sandstone and limestone, similar to above unit
1096 - 1099		Sandstone and limestone, similar to above unit
1099 - 1103		Sandstone, similar to above unit
1103 - 1107		Sandstone, light tan, fine grained, sub-angular to sub-rounded, very calcareous
1107 - 1110		Sandstone, similar to above unit, but medium to fine grained
1110 - 1115		Sandstone, similar to above unit
1115 - 1120		Sandstone, light tan, fine to coarse grained, sub-angular to rounded, very calcareous
1120 - 1125		Sandstone, white to very light tan, fine to very fine grained, with some coarse, rounded grains, somewhat calcareous, some medium gray shale cavings
1125 - 1128		Sandstone, similar to above unit, but medium to coarse grained
1128 - 1133		Sandstone, white, medium to fine grained, sub-angular to sub-rounded, with some frosted, large rounded grains, slightly calcareous, some light gray shale cavings
1133 - 1137		Sandstone, similar to above unit
1137 - 1144		Sandstone, similar to above unit - 6%
		Shale, mostly medium gray, but some light gray, red, very dusky red, silty, very slightly calcareous - 15%
1144 - 1150		Sandstone, white, fine grained, well-sorted, clean, very slightly calcareous - 9%
		Shale, similar to above unit - 16%
1150 - 1155		Shale, medium gray, silty, micaceous, with some dusky red and light gray shale - 6%
		Sandstone, similar to above sandstone, but slightly uncalcareous - 4%

## Price 41

## Depth

## Interval, ft.

1133 -	1160	Shale and sandstone, similar to above unit, but sandstone is buff colored - 30% and 50%
1160 -	1163	Sandstone, light tan, very fine grained, dirty - 30% Shale, light to medium gray, silty, micaceous - 70%
1165 -	1170	SANDSTONE AND SHALE, similar to above unit <i>SHALE</i>
1170 -	1174	Sandstone and shale, similar to above unit
1174 -	1177	Sandstone, light tan, fine grained, sub-rounded to sub-angular, micaceous - 65% Shale, medium gray, silty, micaceous - 35%
1177 -	1183	Sandstone and shale, similar to above unit
1183 -	1189	Shale, medium gray, silty, micaceous, with some sandstone cappings
1189 -	1196	Shale, medium gray, silty, somewhat pyritic
1196 -	1205	Shale, light to medium gray, silty, somewhat micaceous - 65% Sandstone, light gray, very fine grained, micaceous - 35%
1205 -	1211	Shale and sandstone, similar to above unit
1211 -	1219	Shale, medium gray, micaceous, silty
1219 -	1229	Shale, medium gray, micaceous, silty - 70% Sandstone, light gray, very fine grained, micaceous - 30%
1226 -	1234	Shale, medium gray, micaceous, silty, with fine grained sandstone capping
1234 -	1239	Shale, similar to above - 90% Sandstone, light tan, fine grained - 10%
1239 -	1244	Shale, medium gray, silty, micaceous - 50% Sandstone, light tan, fine grained - 50%
1244 -	1250	Shale, similar to above - 20% Sandstone, light to very light gray, fine to very fine grained, micaceous - 80%
1250 -	1256	Shale, medium to dark gray, silty, micaceous - 10% Sandstone, light tan and light gray, with some white, fine grained, micaceous and somewhat pyritic - 90%
1256 -	1259	Shale, medium to dark gray, some coaly - 10% Sandstone, light tan to white, fine grained, micaceous - 90% pyritic
<i>TOP OF S9 UAW</i>		1259 - 1264 Sandstone, white, medium grained, sub-angular to subrounded, somewhat pyritic, micaceous, slightly chloritic,

Table A1

Fig. 13

Depth  
Interval, ft.

		clean, very slightly calcareous - some dark gray and black coaley shale cavings.	
1264	-	1276	Sandstone, similar to above unit, but with some coarse grains.
1276	-	1278	Sandstone, light tan, medium grained, sub-angular to sub-rounded, micaceous, fairly clean, well sorted
1278	-	1290	Sandstone, white, medium grained, sub-angular to sub-rounded, micaceous, slightly chloritic, clean, well sorted.
1290	-	1294	Sandstone, similar to above, but fine grained
1294	-	1297	Sandstone, light tan, fine to medium grained, pyritic, micaceous, with medium gray shale cavings
1297	-	1299	Shale, medium gray, micaceous
1299	-	1304	Shale, medium gray, micaceous
1296	-	1300	Sandstone, white, fine grained, chloritic - 50% Shale, medium gray, micaceous - 50%
1300	-	1304	Sandstone, similar to above Shale, similar to above
1304	-	1310	Shale, medium to dark gray, silty, micaceous - 50% Sandstone, white, fine grained - 50%

BOTTOM OF HOLE