
KSA 82a-1212

PITTSBURG #1 MONITORING WELL SAMPLE LOG

Depth (ft)	Cuttings Description/Driller Comments
0-20	03/13/06 No samples collected; surface casing set at 21 ft.
20-30	03/14/06 Gray silty shale and sandy siltstone. Started drilling at 7:45AM
30-40	-do-
40-50	Gray shale
50-60	Do
60-70	-do-
70-80	Gray siltstone; very fine sand
80-90	-do-
90-100	-do-
110-120	-do-
120-130	-do-
130-140	-do-
140-150	-do- carbonaceous or heavy oil?
150-160	-do- smell of petroleum; lots of subangular to angular chert grains; some fine sand; Mississippian top at 158 (driller)
160-170	Gray siltstone, sandstone chert granules, heavy oil globules;
170-180	White, speckled limestone some chert
180-190	Tan to light gray limestone
190-200	-do-
200-210	-do- water wet
210-220	-do- water wet
220-230	-do- dry sample
230-240	Tan fossiliferous limestone
240-250	-do-
250-260	White to light gray limestone
260-270	Light gray and tan limestone; some chert
270-280	Light gray limestone and chert
280-290	Tan and light gray limestone; some chert
290-300	Tan and light gray limestone and abundant chert; wet sample
300-310	Light gray and some tan limestone and white opaque chert abundant
310-320	Dark tan dolostone and abundant white to gray chert
320-330	Brown fine grained dolostone and chert
330-340	Chert dark gray to gray and brown dolostone; disseminated pyrite
340-350	-do-
350-360	-do-
360-370	-do- some red silt; driller notes porosity from 330-380; hole producing water.
370-380	Gray and white chert; dark gray dolostone; rare white limestone?
380-390	Dark gray dolostone some chert; some reddish silt
390-400	Gray chert; brown dolostone
400-410	Light gray and gray chert; brown dolostone; rare fragments of clear quartz

410-420	-do-
420-430	Gray dolomitic limestone and chert
430-440	Dark tan dolostone; some chert
440-450	Tan limestone; some chert
450-460	-do-
460-470	-do- Northview at 463 (driller)
470-480	Soft gray to greenish gray shale with disseminated pyrite
480-490	Gray green shale
490-500	Gray-green shale and tan limestone
500-510	Tan limestone (Top of the Cotter at 510 ft.)
510-520	Tan dolostone. (Casing point at 516 ft.) Stopped drilling at 12:30PM
520-530	03/15/06 Tan and gray dolostone; minor translucent to white chert with oolites. Started drilling at 8:30 AM
530-540	-do- with minor green shale pieces
540-550	Brown dolostone with minor translucent to white opaque chert minor black and green shale
550-560	-do- green shale absent
560-570	Brown dolostone with abundant oolite-bearing brown to white translucent to opaque chert and gray dolostone
570-580	Gray and tan dolostone with minor opaque gray to white chert
580-590	Brown and gray dolostone; sandy dolostone and clear quartz; gray shale
590-600	Light tan dolostone; sandy dolostone; gray shale
600-610	Brown dolostone; chert with oolites; some sandy dolostone
610-620	Tan dolostone, chert, white, more abundant; silicified sandstone
620-630	-do- green shale; pyrite
630-640	Tan dolostone; clear and translucent quartz and some chert
640-650	Tan to brown sandy dolostone; white chert and clear quartz; silicified sandstone; green shale
650-660	Brown dolostone; white silicified sandstone; white opaque chert
660-670	-do-
670-680	Brown dolostone; silicified dolostone; white chert containing silicified oolites
680-690	-do- and brown sandy dolostone; trace amounts of pyrite
690-700	-do-
700-710	-do- silicified oolites more abundant
710-720	Brown dolostone; minor chert and trace of pyrite
720-730	Tan dolostone, translucent to white chert; green shale; pyrite
730-740	Brown dolostone; sandy dolostone; green shale, translucent to white chert
740-750	Brown dolostone; chert with ooids
750-760	Brown dolostone; white silicified sandstone; ooids in chert; white translucent to opaque chert; green shale
760-770	-do- chert abundant
770-780	-do- translucent chert and clear quartz fragments very abundant
780-790	Gray dolostone; white silicified sandstone; green shale. Driller notes increasing water flow into the borehole since the casing point.

790-800	Gray dolostone; white to gray sandstone with minor glauconite and pyrite; trace green shale
800-810	Tan dolostone; light gray sandy dolomite with sand grains set in a matrix of fine grained carbonate; glauconite
810-820	Light gray and white sandy dolostone; green shale; pyrite.
820-830	Gray to tan gray medium grained dolostone medium. Stopped drilling at about 830+. Potential drilling bit problems. 11PM
830-840	03/16/06 Pulled stem out of the hole and changed bits at 9:30AM. Started drilling from 833 at 10:23 AM Tan dolostone with what appear to be oolites; sandy dolostone
840-850	-do- trace of green shale; white chert and clear quartz
850-860	Tan sandy dolomite; free sand grains fine to medium grained
860-870	Gray dolostone
870-880	Gray to light tan dolostone; white quartz sandstone; trace amounts of pyrite disseminated in dolomite and sandstone
880-890	Fine to very fine quartz sand; no sample collected
890-900	Fine to very fine quartz sand; no sample collected. Harder to drill than the previous 10 ft. Drilling ended at 12:30PM