

Interpreted Drill Cuttings Description200/b-097-A / 094-O-03/00

Formation
UNDIFFERENTIATED RUNDLE

Sample Cutting Quality: Good

Well Name: GULF STATES POPLAR HILLS
Status/RR/TD: DRLD & ABD / 1958
Examined: JUN / 2009

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The Mississippian carbonates consist of a crypto-micro crystalline and commonly cherty limestone. Minor intercrystalline porosity is present in several small intervals and reaches 3-6% with 0.02-0.5 mD permeability. This unit appears to be generally argillaceous and bituminous representative of a deep water environment.

Evidence for the presence of OPEN FRACTURES consist of blocky calcite on the surface of several limestone cuttings at the depth of 930 ft.

Depth (ft)	Grain Size	Lithology	Porosity Total Porosity (%)	Perm (mD) Visually Estimated Perm	Geological Descriptions
850			20 Estimated Porosity 0	0.01 Visually Estimated Perm 100	SH: dk gy blk. SLTST: clr ang qtzose, 5-10% carb mat, v calcareous, grading to slty limestone, no vis por. CHERT: black bituminous silicified LS, tr crinoids, syringapora (?), possible bryozoa, v dense. UNDIFFERENTIATED RUNDLE LS: micro-vf xln, tr indecernable bioclastic debris, arg, bit, poor por/perm. CHT: com silicified ls, bioclastic.
900			1-2%	<0.02 mD	SLTST: thin bedded, calc, carb, no vis por. SH: dk gy blk; LS: crypto-micro xln, comly v slty & bituminous, sl arg.
950			1-2%	<0.02 md	LS: micro-vf xln, crinoidal wackest-packst, v sl slty, tr arg mat, tr bit, 1-2% por, <0.02 md. OPEN FRAC: tr xln clear calcite on grn sfc, good intxln & open pores. OPEN FRAC: chert fragment with crystalline calcite on one side.
1000			1-2%	<0.02 md	LS: micro-vf xln, as abv, com BLK BITUMINOUS CHERT - SILICIFIED LS, com crinoids and solitary corals, por bryozoa, wackest.
1050			1-2%	<0.02 md	LS: micro-xf xln, micro-vf xln, bituminous, sl arg, comly crinodal wackst-pckst, 1-2%.
1100			1-2%	<0.02 md	LS AS ABV, com CHERT, com LCM material - com loose qtz grs, clr & com rose, varicol.
1150			1-2%	<0.02 md	LS: crypto-micro xln blk bituminous/arg, com DK CHERT - silicified ls with com bioclastic material, crinoidal,
1200			1-2%	<0.02 md	LS: micro xln - chalky/earthy, sl arg.
1250			1-2%	<0.02 md	LS: crypto-micro xln, sl-v slty, off wt-lt brn, 1-2%.
1300			1-2%	<0.02 md	LS: cryptoxln-micro xln, com slty, com arg mat, no bioclastic material observed, com CHERT - silicified bioclastic LS, crinoids; tr MICRO-VF XLN,
1350			1-2%	<0.02 md	LS: crypto-micro xln, lt brn, com blk bituminous, tr crinoids/solitary septate corals, wackest, tr-com dk fossiliferous silidified ls, comly arg, p intxln por, 1-2%, 0.02 md.
1400			3-5%	0.02-0.05 to pos 0.1-0.2 md	LS: as abv, com blk bituminous SH.
1450			1%	0.01 md	LS: VF XLN, good intxln por, 3-5% por, 0.02-0.05 to po 0.1-0.2 md.
1500			1%	0.01 md	LS: crypto-micro xln, com crinoids, wackest-pckst, com CHT- silicified LS, p
1550			1-2%	<0.02 md	LS: crypto xln, dk brn blk with argillaceous and bituminous material, appears to be devoid of bioclastics.
1600			1-2%	0.01 mD	SH: blk & bituminous.
1650			1-2%	0.01 mD	SH, blk & bituminous, tr bituminous/argillaceous LS, tr crinoids, wackest
1700			1-2%	0.01 mD	SH: blk & bituminous.
1750			1-2%	<0.02 mD	LS: micro-f & med xln, off wh-lt brn, crinoidal / bioclast packst,
1800			1%	0.01 md	LS: crypto-micro xln, dk gy blk with bituminous material, comly v argillaceous, sl slty, dense.
1850			1-2%	<0.02 md	LS: crypto-micro xln, off wh-lt brn, sl earthy.