

Formation:
FANTASQUE
MATTSON

Interpreted Drill Cuttings Description

100/d-57-D / 094-O-12/00

Well Name: PARA LA JOLIE
Status/RR: N/A / N/A
TD Depth/Fm: NIS / N/A
Examined: JUL-2013
JC Consulting Inc.
J Clow, P Geol
403 651-7890
2013-25
File No:

Sample Quality: VERY POOR
INVERT MUD, FINELY GROUND,
SAMPLES POORLY WASHED - ALL
COATED IN INVERT MUD FINES,
VERY STRONG INVERT ODOUR,
NO NATURAL HYDROCARBON
FLORESCENCE POSSIBLE.

Depth	Grain	Size	Lithology	Porosity Total Pores (%)	Perm (mD) Visually Estimated Perm	Geological Descriptions
2845	Coarse Crs med fine silt/clay clay/clay			20 Estimated Porosity 0	0.01 0.1 10 100 Visually Estimated Perm	
2850				20 Estimated Porosity 0	0.01 0.1 10 100 Visually Estimated Perm	2655 SH: dk brn blk, softened by invert.
2855			SS lithology indicated by gamma	?		FANTASQUE
2860				?		2660 SPL: SH: dk brn blk, softened by invert, NO SAND OBSERVED.
2865				1-3%		2665 spl: SH: dk brn blk, comly silty with PYRITE, TR GLAUC. NO SAND as possibly indicated by gamma
2870				1-3%	<0.03 mD	SS: i-u vf gr, tr CRINOIDS, mottled with argillaceous material, com OIL STAINED CLAY CLASTS, com GLAUC, siliceous, sl calcareous, RR patchy PIN POINT VUGS - ? connectivity, 1-3% predom micro por, <0.03 md
2875						Spl is 100% dk brn blk SH.
2880				1-2%	<0.02 md	MATTSON
2885				3-6%, 8% ?	<0.05 to pos 0.1 mD	SS: silt+ vf gr, ang clr qtzose, calc, fair grn relief, tr KAO clay, RARE VIS POR, 3-6% por, <0.05 to pos 0.1 mD.
2890				3-6%, 8% ?	<0.1 mD	SS: AS ABV, weakly consolidated, tr carb/larg material, 3-6 TO POS 8% ?, <0.1 mD, p spl, coated with invert mud fines material, poorly washed.
2895				?		P SPL, predom false invert mud fines cltgs, tr sh, tr SS: silt+ vf gr, ang clr qtzose, weakly consol with kao clay, 2-3% POR ?, <0.03 mD ?
2900				20 Estimated Porosity 0	0.01 0.1 10 100 Visually Estimated Perm	Tr SS, silt+ vf gr, ang clr qtzose, sil, KAO clay, weakly consolidated, patchy PYRBIT, TR VIS POR, 4-6 TO POS 8%, <0.1 mD.
2905				4-6 TO POS 8%	<0.1 md	?
2910				?	?	?
2915				1-2 OR 3%, predom micro clay po	<0.02 md	SS: i-u vf gr, ang clr qtz grs with com overths, silty, tr kao clay, SIL, sl, DOL, NO VIS POR OBSERVED.
2920						
2925				1-3%	<0.02 mD	P SAMPLES, INVERT COATED, few SLTST ctgs, v silt+carb, no vis por, 1-3% micro por.
2930				1-2 OR 3%	<0.02 mD	P SAMPLES, INVERT COATED, few SLTST ctgs, v silt+carb, no vis por, 1-3% micro por.
2935						
2940						SLTST, QTZOSE, SIL, SL CALC/DOL, no vis por.
2945						
2950				20 Estimated Porosity 0	0.01 0.1 10 100 Visually Estimated Perm	
2955				1-2%	<0.03 md	SS: silt+ vf gr, ang clr qtzose, mod-weakly consol with com qtz overths and tr KAO clay, fair relief, 1-3% POR, <0.03 md.
2960				1-3%		
2965				1-3%	<0.02 md	SS: silt+ vf gr, ang clr qtzose, sil, sl, dol, abund qtz overths, tr carb mat, no vis por.
2970				1-2%	<0.02 mD	SS: silt+ vf gr, ang clr qtzose, sil, sl, dol, poor grn relief, NO VIS POR.
2975						
2980				20 Estimated Porosity 0	0.01 0.1 10 100 Visually Estimated Perm	
2985				1-2%	<0.02 mD	SLTST: sil, dol, grn relief, arg, KAO, NO VIS POR.
2990				1-2%		
2995				1-2%	<0.02 md	SS: silt+ vf gr, ang clr qtzose, sil, calc, com arg mat, no vis por, 1-2%, <0.02 md.
3000				1-2%		
3005				1-2%	<0.02 md	SS: vf+ vf gr, ang-sb ang clr qtzose, abund qtz overths, sil, dol, NO VIS POR, 1-2%, <0.02 md.
3010				1-2%		SS: silt+ vf gr, sil, dol, NO VIS POR.
3015				3-6%	<0.05 md	SS: i-u vf gr, silty, fair to good grn relief, TR VIS POR, 3-6% por, <0.05 md
3020				20 Estimated Porosity 0	0.01 0.1 10 100 Visually Estimated Perm	Better sample quality, cleaner.
3025				3-6 to 8%	0.02-0.05 to pos 0.2 or pos 0.2 md	2665 SPL: SS: vf+ vf gr, ang clr qtzose, com overths, fair to good grn relief, com qtz overths, SIL/CALC, tr arg, TR VISIBLE POROSITY, 3-6 to 8% por, 0.02-0.05 to pos 0.05-0.1-0.2 md.
3030				3-6 to 8%		
3035				4-8 or 9%	0.02-0.05 to pos 0.2 or 0.3 md	2880 SPL: Various sands, silt+ vf gr, v silt/calc, p grn relief, no vis POR; SS: vf+ vf gr, ang qtz grs, sil, fair to good grn relief, TR-COM VIS POR, tr PYRBIT, 4-8 or 9% por, 0.02-0.05 to pos 0.2 or 0.3 md.
3040						
3045				1-3%	<0.02 md	SS: vf+ vf gr, ang clr qtz grs, mod-weakly consolidated, com qtz overths, fair to poor grn relief, NO VIS POR, 1-3% por, <0.02 md
3050				20 Estimated Porosity 0	0.01 0.1 10 100 Visually Estimated Perm	SS: vf+ vf gr, ang clr qtzose, weakly consolidated with presence of KAO clay, patchy PYRBIT, TR VIS POR, 5-8 or 9% por, 0.05-0.3 md.
3055				5-8 or 9% por		
3060				1-2%	<0.02 md	2610 spl: SS: vf+ vf gr, ang clr qtzose, abund occluding qtz overths, NO VIS POR.
3065				1-2% ?	<0.02 md ?	POOR SPL, PREDOM soft invert fines mud material, tr SS: silt+ vf gr, sil, carb, pyrbt, NO VIS POR.
3070				5-9%	0.05-0.2 or 0.3 ? md	SS: silt+ vf gr, ang clr qtz gr with comcarb/pybit material, SIL, NO VIS POR.
3075				1-2%	<0.02 md	2930 SPL: SS: vf+ vf gr, com u f gr, pos tr i med gr, ang-sb ang clr qtz grs with com overths, fair to good grn relief, mod-weakly consolidated, TR-COM VIS POR, 5-9% por, 0.05-0.2 to pos 0.3 md.
3080						
3085				1-2%	<0.02 md	SH, com SS, as abv, cavings ?, com vf gr siliceous sand, no vis por.
3090						P samples, coated in invert mud fines.
3095				20 Estimated Porosity 0	0.01 0.1 10 100 Visually Estimated Perm	SS: vf gr, sil, kao, no vis por.
3100				1-2%	<0.02 md	P SAMPLES, abund sft invert fines false cuttings, tr SS: vf gr, qtzose, sil, no vis por.
3105				1-2% ?	<0.02 mD	SS: silt+ vf gr, ang clr qtzose, sil, NO VIS POR.
3110				1-2%	<0.02 mD	SS: silt+ vf gr, ang clr qtzose, sil, NO VIS POR.
3115				?	?	V POOR SPL, false invert fines 'cuttings'
3120				1-2%	<0.02 md	tr SS: vf gr, sil, no vis por.
3125						SH, com v siliceous SLTST.
3130				20 Estimated Porosity 0	0.01 0.1 10 100 Visually Estimated Perm	SS: silt+ vf gr, SS, sil, NO VIS POR.
3135				1-2%	<0.02 mD	SLTST grading to i vf gr SS, sil, dol, NO VIS POR.
3140				1-2%	<0.02 mD	SS: silt+ vf gr, ang clr qtzose, v silt/dol, NO VIS POR.
3145						
3150				1-2%	<0.02 mD	SS: vf+ vf gr, ang clr qtzose, sil, dol, NO VIS POR.
3155				1-2%	<0.02 md	SS: silt+ vf gr, ang clr qtzose, sil, dol, NO VIS POR.
3160				20 Estimated Porosity 0	0.01 0.1 10 100 Visually Estimated Perm	SS: i-u vf gr, sil, dol, NO VIS POR.
3165				1-2%	<0.02 mD	3060 SPL: SS: abund in spl, i-u vf gr, ang clr qtzose, tr argillaceous material, silt/dol, NO VIS POR, <0.02 md.
3170						3065 spl: SPL is predom invert mud fines material, no sand observed.
3175				?	?	3070 spl: 100% invert mud fines material.
3180						
3185						3075 SPL: SLTST, sil, dol, NO VIS POR.
3190						
3195						3080 SLTST, v silt/dol, NO VIS POR.
3200						
3205						SH, com argillaceous & siliceous SLTST.
3210				1-2%	<0.02 md	Poor sample, SS: silt+ vf gr, silt+ vf gr, 1 SS cutting - vf gr, v sil, NO VIS POR.
3215				20 Estimated Porosity 0	0.01 0.1 10 100 Visually Estimated Perm	SS: silt+ vf gr, v vf+ vf gr, v sil, v sil, v sil, v sil, v sil, NO VIS POR.
3220				1-2%	<0.02 md	Wholly sft invert mud fines material and dardk softened and fines material coated dk SH, 1 SS cuttings as abv.
3225				1-2%	<0.02 md	SS: vf+ vf gr, ang clr qtzose, v silt/dol, tr PYRBIT, NO VIS POR observed in few ctgs present.
3230						
3235				2-4%	<0.05 md	Tr SS cuttings, vf+ vf gr, ang clr qtz grs with abund qtz overths, sl dol, rare carb grs, RARE TO TR VIS POR, 2-4% por, <0.05 md.
3240				1-2 OR 3%	<0.02 md	Silty SH mottled with silt+ vf gr silt/dol SS inclusions, 1-2 OR 3% POR, <0.20 md.