

HEADER

WellSight Systems

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: #1 DON SELENKE
Location: sec 22 - twp 13S - rge 31W GOVE COUNTY
License Number: API #15-063-22,103 Region: KANSAS
Spud Date: 15 APR 2013 Drilling Completed: 25 APR 2013
Surface Coordinates: 600' FSL & 1,140' FEL
60' S & 150' W of W2 - SE - SE
Bottom Hole deviation surveys: 0.5 degree @ 220, 1.0 degree @ 3,977,
Coordinates: 1.0 degree @ 4,670
Ground Elevation (ft): 2,879 K.B. Elevation (ft): 2,884
Logged Interval (ft): 3,500 To: 4,670 Total Depth (ft): 4,670
Formation: WABAUNSEE to MISSISSIPPIAN
Type of Drilling Fluid: CHEMICAL; displace @ 3,358

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

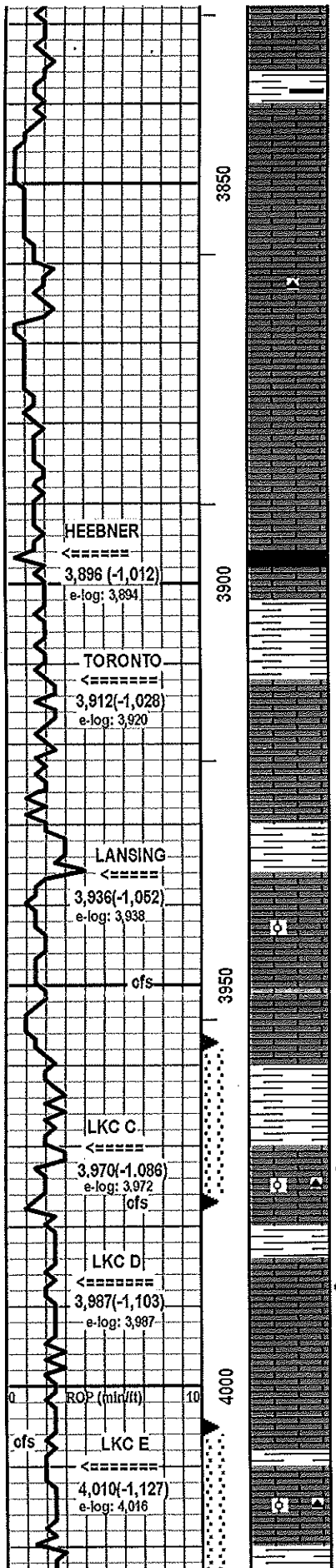
Company: Ritchie Exploration, Inc. lic. # 4,767
Address: P.O. Box 783188
Wichita, Kansas 67278-3188

GEOLOGIST

Name: Ted Jochems, Jr.
Company: Consulting Geologist
Address: 212 North Market ste 517
Wichita, Kansas 67202

COMMENTS

CONTRACTOR: W W Drilling, rig #6
(Jason Richeson, toolpusher)
MUD: Mud-Co (Reid Atkins)
DRILL STEM TESTS: Trilobite Testing (Brandon Turley)
ELECTRIC LOGS: Nabors Services (Mitch Rupp)
DIL, CDL/CNL
SURFACE CASING: 8.625" @ 220
PRODUCTION CASING: 5.5" run to Mississippian



LS: lt gry, microxtln, cal floodd, loc abt relict forams. no vis por. NS

SH: gry to blk, argil, loc micae, loc carb.

LS: gry, microxtln, wkly cal floodd. no vis por. NS

LS: wht, chalky, mushy. poor vis por. NS

LS: tan to lt gry, microxtln, wkly cal floodd, loc chalky, loc ool. poor vis por. NS

LS: pale gry to wht, microxtln, cal floodd, loc silofd to cht (lt gry, cryptxtln, sil vnits, fusulinids & other relict fossls). v poor vis por. NS

LS: wht to tan, crypt-microxtln, pelletal, loc v chalky (mushy), relict fossls (incl bivalves). poor vis por. NS

LS: tan, microxtln, chalky, loc wkly cal floodd, relict fossls. poor vis por. brn stns & flakes (no odor, no cut, VSSG on brk), NSO

SH: blk, carb, micae, calc.

LS: lt brn, microxtln, cal floodd. no vis por. minor brn stns (no odor, no cut), NSO

SH: gry, argil, silty, plant fragments.

LS: gry, microxtln, cal floodd, chalky partings, wk cal crusts. no vis por. NS

LS: off wht to pale gry, microxtln, cal floodd, loc chalky, loc sil. no/poor vis por. NS

SH: red-brn > lt grn, earthy hematite, silty.

LS: wht to pale gry, microxtln, chalky, loc cal floodd, loc ool, wk cal crusts, fusulinids, relict bivalves, specular hematite. poor vis por, scarce isolated vugs. 1 pc w/ wk brn stn (no odor, no cut), NSO

LS: pale gry, microxtln, cal floodd, chalky partings, minor py, loc silofd to cht (pale gry, cryptxtln, fossl). no intxln por, minor isolated vugs. 1 pc w/ brn stn on fracture (no odor, no cut), NSO

SH: gry & red-brn, argil, earthy hematite, loc sl silty.

LS: pale gry, lt brn & tan, microxtln, cal floodd, loc ool, pyr, loc druzy cal & wk cal crusts, loc sil, chalky @ base. poor intxln por, loc fair Intool por. fair SO (dk brn, no odor, good flash cut, patchy to satd brn dry stn, VSSG)

SH: grn & red-brn, loc silty mixed oxidation: abt py & earthy hmt.

LS: wht to crm, microxtln, cal floodd, chalk partings, loc relict grainst. poor vis por. minor brn stns (no odor, no cut). some questionable show pos @ top (?cavings?)

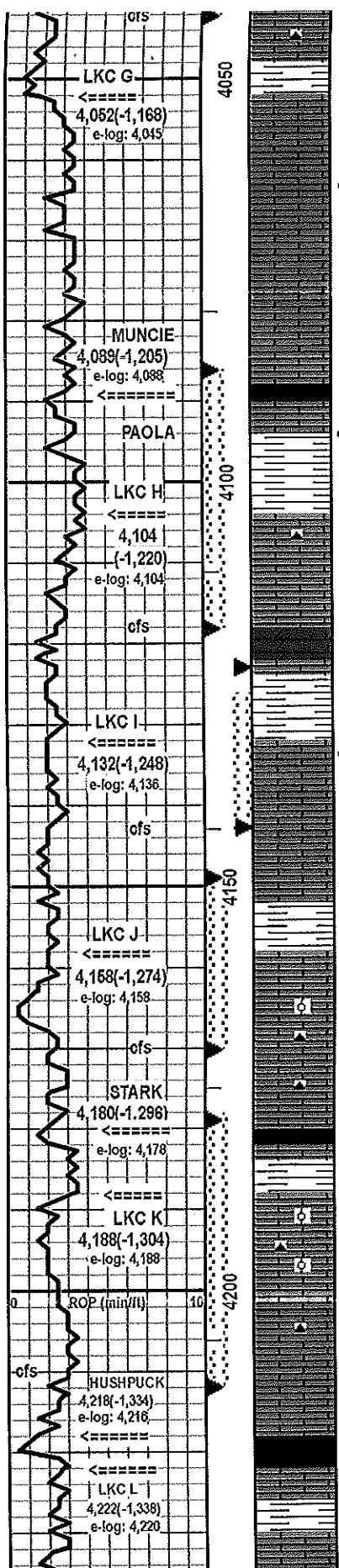
LS: crm to lt gry, microxtln, cal floodd, wk cal crusts & druzy cal. no intxln por, scarce isolated vugs. minor brn stns (no odor, no cut, scarce patchy brn dry stn), 1 pc poss v wk SO (v slow wk cut, patchy brn dry stn), NSFO

SH: grn & red-brn, loc silty, earthy hematite.

LS: lt brn & lt gry, microxtln, cal floodd, loc ool, cal crusts, druzy cal, loc silofd to cht (orange, brn & wht, crypt-microxtln, fossl, hematite, sil vnits). no intxln por, poor-fair vug por. SSO (minute dk brn drplts, wk odor, good cut, patchy to satd brn dry stn, SSG)

DST #1
3,957 - 3,977
REC 93' GO, 248' MCW
SIP 1,137 - 1,122#
details above

DST #2
4,005 - 4,042
REC 794' GO, 992' MCGO, 186'
MWCGO, 1,322' GIP
SIP 1,188 - 1,177#
details above



LS: gry, microxtln, cal floodd, pyr, loc silcfd to cht (gry, cryptxtln). no vis por. NS
 SH: gry, red-brn & maroon, silty, earthy hematite.

LS: orm to pale gry, microxtln (loc vfgr-fgr), cal floodd, chalky partings, minor relict fossils. no vis por. NS
 LS: orm to pale gry, micro-fgr xtln, cal floodd, chalky partings, minor druzi cal. no/poor vis por. scarce brn stns (no odor, no cut, 1 pc w/ v wk brn dry stn), NSO(?)

LS: lt gry, microxtln, cal floodd, chalky partings, cal crusts, minor druzi cal, loc relict forams, loc pelletal. no vis por. NS

LS: gry, micro-vfgr xtln, cal floodd, wk cal crusts. no vis por. NS

SH: blk, carb, micae, cal inclusions.
 LS: dk brn, micro-vfgr xtln, cal floodd, dns, abt druzi cal, cal crusts, rare relict fossils, rare dk gry cht. no vis por. brn stns & flakes (fnt odor, no cut, brn dry stn), ?SSO?
 SH: grn, gry & red-brn, argil, micae, loc silty, earthy hmt.
 LS: tan & lt gry, microxtln, cal flood, wk cal crusts, loc chalky, druzi cal, loc fossl, rare py, loc silcfd to cht (tan, microxtln, xlsent). no/poor vis por (loc fair in druzi cal). brn stn & SO in druzi cal (fnt odor, v wk to good cut, patchy lt brn dry stn, VSSG)

DOL: tan, vfgr xtln, suor, v few pes. v poor vis por. NS
 SH: grn & red-brn (loc mottled) & gry, silty, rarely micae, loc rock granules, mixed oxidatn: py & earthy hematite.

LS: brn & lt gry microxtln, cal floodd, druzi cal, cal crusts, rarely sil. no matrix por, loc good vug por in druzi cal. VSSO (minute brn drpls, no odor, fair cut, patchy brn dry stn)
 LS: off wht to pale gry, micro-vfgr xtln, cal floodd + rextld, chalky partings, cal crusts, druzi cal, relict fossils, minor py. grainstn (fossil, sil) @ base of unit. poor matrix por, fair in druzi cal. SSO (minute drpls, fair odor, good cut, patchy lt brn dry stn, rare FO, SSG)
 SH: grn, gry & red-brn, argil, loc silty, py, earthy hematite, plant fragments, loc calc w/ rock granules.

LS: orm to tan, microxtln, rextlzd + cal floodd, chalky partings, loc ool & ooc (lt gry & lt brn, vfgr matr), vfgr - fgr druzi cal, loc sil (gry, ool). fair ooc & druzi por. SSO (brn, wk odor, fair - good cut, minor FO, VSSG, patchy to satd brn dry stn)

LS: gry, microxtln, cal floodd, cal crusts, chalky partings, pyr, minor gry cht (cryptxtln). no/poor vis por. NS
 SH: blk, carb, micae, cal inclusions.
 LS: dk brn, microxtln, hvly cal floodd, cal crusts. NVP NS
 SH: grn, gry & red-brn, argil, py, earthy hematite (mxd oxidatn).
 LS: off wht, tan & brn, mgr ool, druzi cal, loc chalky, loc sil. fair-good intgran por. GSO (brn, good odor, good flash cut, FO in tray, SSG, patchy to satd brn dry stn)
 LS: lt gry (tan @ base intv), microxtln, cal floodd, fgr-mgr druzi cal, cal crusts, scarce py, loc silcfd to cht (wht, lt gry & gry, crypt - micro xtln, opa, fossl, wht xenoliths). no intxln por, fair druzi por. SO (brn, good odor, scarce FO in tray, patchy to satd brn dry stn)

LS: off wht, microxtln, rextlzd, chalky, loc cal floodd, rare py. poor vis por. rare brn stns (no odor), NSO
 SH: blk, carb, micae, minor cal inclusions, rare nodules.
 LS: dk brn, microxtln, hvly cal floodd, cal crusts, loc mealy NVP NS
 SH: gry, grn & red-brn, argil, silty, loc sdy, earthy hmt.

LS: gry & off wht, micro (loc vfgr) xtln, cal floodd, loc v chalky, cal crusts, relict forams (?ool?) & bivalves, rare py. no/poor vis por.

vis 53 wt 9.1 lcm 2#

strap @ 4,042
 board 4,048.04
 strap 4,040.87
 board 7.17' long <== NOTE BUST

DST #3
 4,086 - 4,118
 REC 80' GOCM, 60' MWCGO
 SIP 1,161 - 1,166#
 details above

DST #4
 4,123 - 4,143
 REC 134' WCM 186' SW
 SIP 1,062 - 1,026#
 details above

ofs before connection.

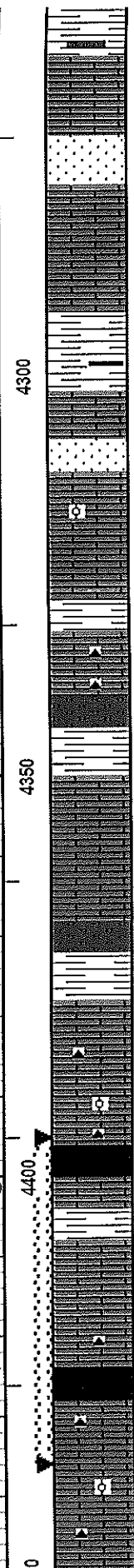
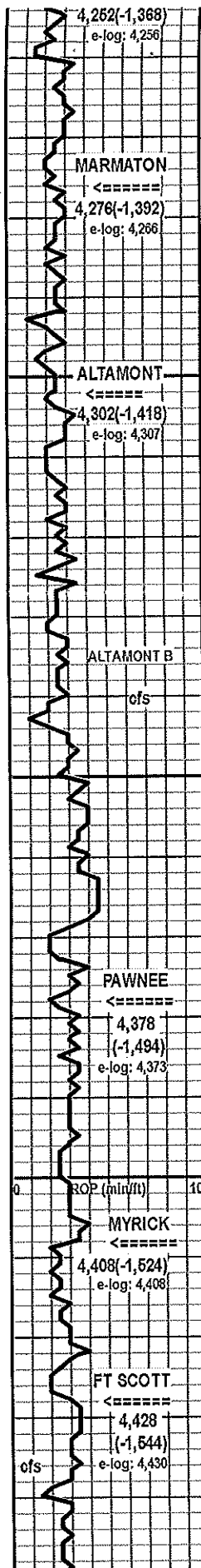
DST #5
 4,149 - 4,170
 REC 212' MCW
 SIP 1,068 - 1,057#
 details above

DST #6
 4,178 - 4,210
 REC 1,765' GO, 120' GOCM
 SIP 1,051 - 1,054#
 details above

vis 60 wt 9.2 lcm 2# before dst
 vis down; run in premix after dst

vis 40 wt 9.0+ lcm 2#

add premix.



SH: grn, gry & red-brn, earthy hematite, argil, silty, py, rock granules, stringers of SLTST (grn, argil loc sdy, v poor por, NS)

LS: gry & brn, microxtln (loc vfgr xtln), cal floodd, cal crusts, soarce druzy cal (mgr), minor relict forams. no vis por. tr wk brn stns (no odor, no cut), NSO

SS: gry to brn, vfgr gran, rndd, cal cmt, minor rndd rock grns (tr mgr), plant fragments. v poor por. NS

LS: off wht, tan & pale gry, microxtln, cal floodd, chalky partings, minor cal crusts & druzy cal, relict forams & bivalves. no/poor vis por. NS

LS: off wht to brn, microxtln, cal floodd, chalky partings, wk cal crusts, rare cht (tan, cryptxtln). no/poor vis por. rare brn stn (no odor, no cut), NSO

SH: gry, grn & red-brn, argil, earthy hematite, loc micae, loc sdy, rare py, loc blk & carb.

LS: off wht to tan, microxtln, cal floodd, chalky partings, cal crusts, druzy cal. no/poor vis por. NS

SS: gry vfgr gran, cal cmt, rndd, cal crusts, plant fragments. v poor por. NS

LS: off wht, gry, brn & tan, microxtln, cal floodd, chalky partings, loc ool, cal crusts, loc earthy hematite & limonite stn. no/poor vis por. tr brn stn (no odor, no cut), NSO

SH: gry, grn & red-brn, argil, silty, earthy hematite, tr py.

LS: off wht to tan, microxtln, cal floodd, chalky partings, cal crusts, loc abt forams, minor earthy hmt, abt silicfn to cht (off wht, tan & orange, cryptxtln, xlsent, rare bryozoans). no/poor vis por. rare wk brn stns (no odor, no cut, VSSG on brk), NSO

SLTST: gry-grn, argil, v friable, plant fragments. NVP NS

SH: grn, gry & red-brn, argil, silty, earthy hmt, loc micae.

LS: crm & gry, microxtln, cal floodd, chalky partings, minor cal crusts, loc silicfd to cht (tan & gry, cryptxtln, xlsent). v poor por. NS

LS: gry, micro-vfgr xtln, wkly cal floodd, sandd, v poor por. NS

LS: crm, microxtln, sl cal floodd, chalky. poor vis por. NS

SLTST: gry, v argil, v friable. poor vis por. NS

SH: gry, grn & red-brn, argil, micae, minor earthy hematite & yel limonite stn.

LS: wht, microxtln, wkly cal floodd, chalky, loc silicfd to cht (wht, opa, fossil). v poor vis por. NS

LS: brn & gry, microxtln, cal floodd, cal crusts, druzy cal, loc ool, abt silicfn to cht (brn & gry, cryptxtln). NVP NS

SH: blk, carb, micae, cal inclusions.

LS: dk brn, microxtln, hvty cal floodd, wk cal crusts, loc mealy loc silicfd to cht (dk brn, cryptxtln, fossil). no vis por. NS

SH: grn > red-brn, argil, minor earthy hematite.

LS: crm, microxtln, rextlzd, chalky, druzy cal, cal crusts, loc silicfd to cht (wht, brn, gry & blue, cryptxtln, fossil). poor vis matrix por, poor-fair druzy por. few pcs VSSO (amber, no odor, wk-fair cut, patchy-satd brn dry stn.

SH: blk, carb, micae, cal inclusions.

LS: gry to off wht, microxtln, cal floodd, chalky partings, cal crusts, minor py, loc silicfd to cht (gry & wht, cryptxtln, xenoliths, relict fossils). no/poor por. brn & blk stns & flakes, subtle SSO (no odor, no cut, 3 drpits FO, wk patchy brn dry stn, VSSG)

LS: brn & off wht, microxtln, mildly cal floodd, loc rextlzd & chalky, loc ool, wk cal crusts, rare py, loc silicfd to cht (brn & lt gry, microxtln, fossil). no/poor vis por. NS

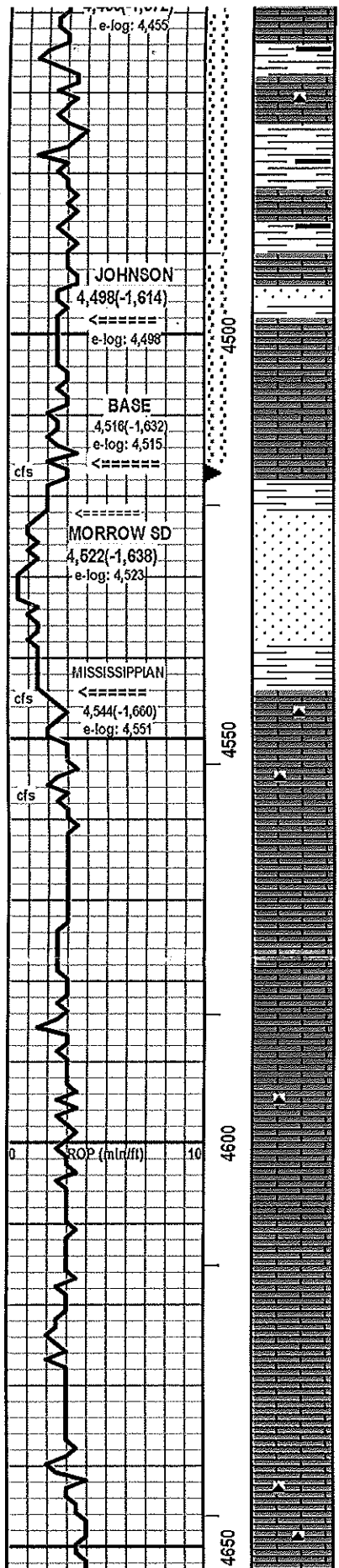
run in treated pick-up mud

vis 66 wt 9.1 lcm 3#

vis 64 wt 9.2 lcm 2#

DST #7
4,395 - 4,436
REC 244' MCGO
SIP 884 - 884#
details above

16 stand short trip before dst



LS: crm to tan, microxtln, wkly rextlzd & chalky, loc cal floodd, druzi cal, cal crusts. poor vis por. NS

SH: gry & grn > red-brn, argil, silty, tr py, rock granules, minor earthy hmt, loc blk & carb w/ granules.

LS: lt gry to lt brn, micro-vfgr xtln, cal floodd, cal crusts, pyr, loc pellets, tr cht (lt brn, cryptxtln, fossi). no vis por. NS

SH: gry & grn > red-brn, argil, silty, loc micao, minor py & earthy hmt, loc blk & carb w/ rock granules.

LS: lt gry & lt brn, microxtln, cal floodd, cal crusts, pyr. NVP NS

SH: gry & grn, argil, silty, pyr, loc blk & carb.

LS: lt gry & lt brn, microxtln, cal floodd, loc chalky, pyr. NVP NS

SS: gry, vfgr-fgr gran, rndd, 20% cht grns, cal cmt, glauc, sl pyr, ?fish scales?. few clusters found; loose sd in tray poor vis por. NS

LS: brn to dk brn, microxtln, cal floodd, loc hummocky, chalky partings, cal crusts, vfgr-mgr druzi cal, minor relict fossils. no matrix por, fair-gd vug & druzi por. GSO (brn, dk brn & blk drplts, gd odor, gd cut, FO in tray, VSSG, patchy to satd brn dry stn)

gry, chalkier & much less showy in lower part of unit.

SH: dove gry & grn, argil, minor limonite stn, rock granules.

SS: wht, vfgr-fgr tr mgr, rndd qtz grns (1% hvy mins), sl cmt (rarely quartzitic & blocky), loc friable, loc chalky, rarely pale brn-gry (no odor, no cut), minor limonite stn, minor glauc. poor vis por. NS

lnor mgr (less well sorted) @ base.

SH: gry, grn, lime grn, maroon & red-brn, argil, earthy hematite, limonite stn, loc silty.

LS: crm to tan, microxtln, cal floodd + chalky, relict forams (?ool?), loc slicfd to cht (orange, red, crm & brn, cryptxtln, hematite pseudomorphs after py). v poor por. 1 pc w/ blk stn in fracture (no odor, no cut), NSO

LS: crm to tan, microxtln, chalky, loc wkly cal floodd, sandd, loc relict forams (?ool?), wk cal overgrths. v poor vis por. rare wk brn stn (no odor, no cut), NSO

LS: crm, microxtln, cal floodd, loc chalky, sandd, loc relict grainst texture, relict forams. v poor vis por. minor brn stns (no odor, no cut, NSO

LS: lt gry-brn, crypt-microxtln, cal floodd, loc v chalky w/ relict fossils, cal overgrths. no / poor vis por. tr stns (no odor, no out), NSO see note =====>

LS: brn, gry-brn, crypt-microxtln, cal floodd, loc v chalky, wk cal crusts, rare py, rare yel limonite stn, rare glauc, loc slicfd to cht (orange, brn & olr, cryptxtln, hematite stns). no/poor vis por. NS

LS: crm to tan, microxtln, wkly rextlzd, chalky, loc cal floodd, relict forams, sl sandd. poor vis por. tr brn stns (no odor, no out), NSO

LS: off wht, tan & pale gry, microxtln, wkly rextlzd, chalky, loc wkly cal floodd, relict forams, minor cht (olr & orange, cryptxtln, xlsent). poor vis por. NS

LS: wht to off wht, microxtln, sl rextlzd, v chalky, sandd, tr relict forams. v poor vis por. NS see note =====>

LS: tan to lt brn to brn, microxtln, variably cal floodd, loc chalky, loc relict forams (?ool?). no/poor vis por. NS

LS: crm to lt brn, microxtln, cal floodd, chalky partings, minor cal crusts, loc abt relict forams (?ool?), loc slicfd to cht (smoky gry, crypt-microxtln, loc xlsent). no/ poor vis por. rare brn stns (no

DST #8
4,463 - 4,517
REC 434' GO, 310' MCGO, 372' GOCM
SIP 966 - 974#
details above

cfs interval may have cut into underlying Morrow Sand (wht, vfgr)

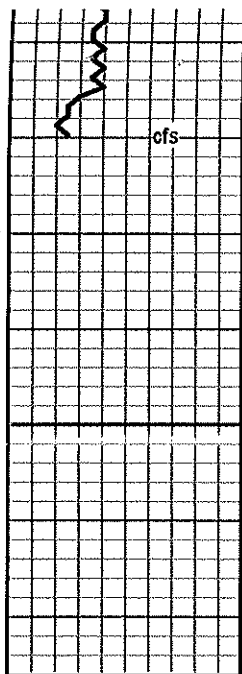
?reworked Mississippian?

=====> 1 drplt of v dk brn FO in tray: assumed to be from nearby showy Johnson zone caving. no other FO or shows.

vis 53 wt 9.2 lcm 2#

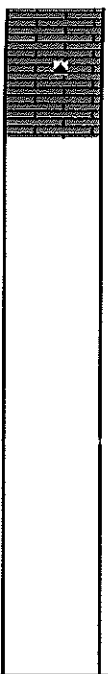
=====> no apparent SS development; no clusters other than tr Morrow sd cavings, no loose sand in tray (sample catcher using sieve). 3-4 pos of cht w/ wk glauc coatings (?Morrow cavings?).

vis 54 wt 9.3 lcm 2#



efs

4700



odor, no cut), NSO

LS: tan to lt gry, microxtin, rextlzd, chalky, loc cal floodd, abt dk gry pellets (>60% of rock), loc mariy. poor vis por. tr brn stns (no odor, no cut), NSO

RTD 4,670
LTD 4,671

Ritchie Exploration, Inc.
#1 Don Selenke
600' FSL & 1,140' FEL
seo 22 - twp 13S - rge 31W
Gove County, Kansas

abt sh cavings.

short trip before log.