

COMPANY & WELL Culbreath O&G Hagen-Jantz #1-2  
 LOCATION 660' FSL 2240' FEL NE SW SW SE  
 SEC 22 TWP 16S RGE 36W  
 COUNTY Wichita STATE Ks

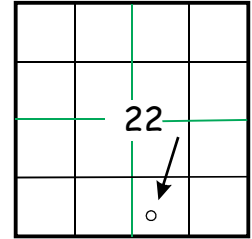
# GEOLOGICAL REPORT

**FINAL**

**Larry A. Nicholson**

NAD 83  
38.64357099  
-101.17299602

COMPANY Culbreath O&G Company, Inc.  
 API # 15-203-20346 FIELD Wildcat  
 LEASE Hagen-Jantz WELL # #1-22  
 LOCATION NE SW SW SE  
 SURVEY 660' FSL 2240' FEL  
 SECTION 22 TWP 16S RGE 36W  
 COUNTY Wichita STATE Kansas



CONTRACTOR STP Drlg TPL Lang Rig # 1  
 SPUD 06-17-19 7:45 pm COMP \_\_\_\_\_  
 RTD 4883 11:55am 06-27-19 LTD 4881  
 MUD UP AT 3388 650 bbls  
 MUD TYPE Chemical, Andy's A. Blew

### ELEVATIONS

K.B. 3202  
 D.F. \_\_\_\_\_  
 G.L. 3195  
 All measurements from K.B. 3202

SAMPLES SAVED FROM 3600 TO RTD  
 DRILLING TIME FROM 3500 TO RTD  
 SAMPLES EXAMINED FROM 3600 TO RTD  
 GEOLOGICAL SUPERVISION FROM 3600 TO RTD  
 WELLSITE GEOLOGIST LARRY A. NICHOLSON

### CASING RECORD

Conductor \_\_\_\_\_ of \_\_\_\_\_ w/ \_\_\_\_\_ sx  
 Surface 291 of 8 5/8 w/ 200 sx  
 Production \_\_\_\_\_ of \_\_\_\_\_ w/ \_\_\_\_\_ sx

**ELECTRICAL SURVEYS** Haliburton: Neu, Den, Micro, Dual, Sonic

### FORMATION TOPS & STRUCTURAL POSITION

| FORMATION     | SAMPLE TOPS | SUBSEA DATUM | ELEC LOG TOPS | SUBSEA DATUM | REFERENCE WELL |   |
|---------------|-------------|--------------|---------------|--------------|----------------|---|
|               |             |              |               |              | A              | B |
| Anhydrite     |             |              | 2338          | +728         |                |   |
| Heebner       |             |              | 2358          | -774         |                |   |
| Lansing       |             |              | 3845          | -822         |                |   |
| Stark         |             |              | 3890          | -1090        |                |   |
| BKC           |             |              | 4150          | -1184        |                |   |
| Marm          |             |              | 4227          | -1238        |                |   |
| Altamont      |             |              | 4267          | -1248        |                |   |
| Cherokee Sh   |             |              | 4284          | -1390        |                |   |
| Johnson       |             |              | 4444          | -1444        |                |   |
| Morrow Sh     |             |              | 4530          | -1526        |                |   |
| Mississippian |             |              | 4594          | -1573        |                |   |
| RTD           |             |              | 4670          | -1681        |                |   |
| LTD           |             |              | 4671          | -1679        |                |   |

REFERENCE WELLS  
 A: \_\_\_\_\_  
 B: \_\_\_\_\_

LAN 7/92, Modified 5/05, 11/11, 4/12, 4/18 1 inch = 25.4mm 8.5 x 97.5 216 mm x 2460 mm

### DRILLSTEM TEST SUMMARY :

### REMARKS & RECOMMENDATIONS:

Dst #1 4024-4038 (LKC A) 45 60 45 90 IF:38-76 FF:81-95 SI:1129-1131  
 Rec 130' MCW O spts 4" O (85W 15M) IF 4 1/2", nr  
 FF 3 1/2", nr BHT 111, RW .167@64, 56K CL

Dst #2 4060-4080 (LCK C) 60 60 30 60 IF:142-537 FF:566-817 SI:2060-2021  
 Rec 1720' MCW O spts throughout (95W 5M) IF BOB 1.5" -135" blow, nr  
 FF BOB 3: - 99" blow, nr BHT 111, RW .129@72, 58K CL

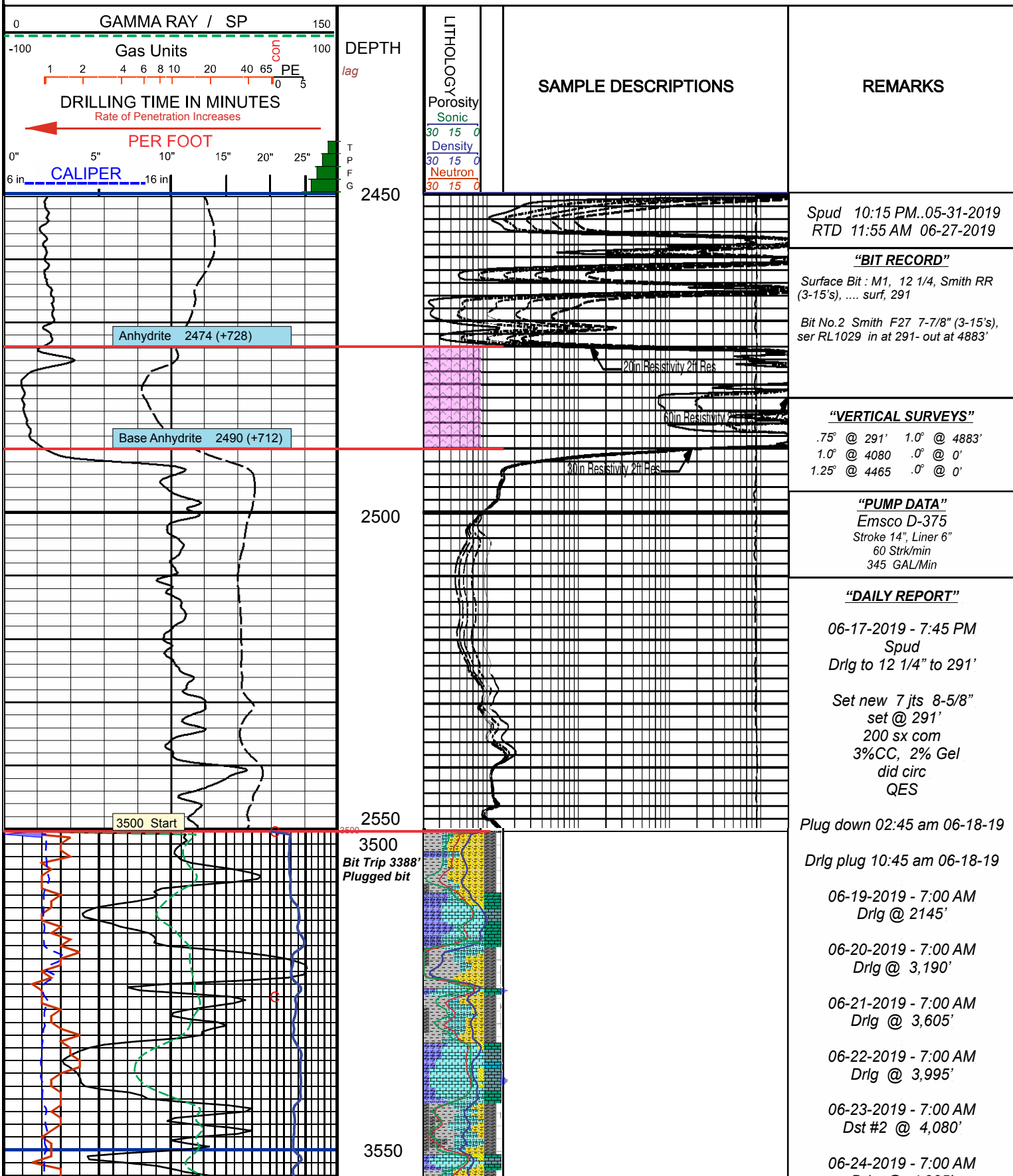
Dst #3 4239-4318 (LKC I-K) 15 45 15 60 IF:454-745 FF:810-1016 SI:2123-2083  
 Rec 1200' MCW (97W 3M) Oil spts IF 183" blow, nr FF 135" blow, nr  
 RW .155 @ 74, 51,000ppm BHT 111

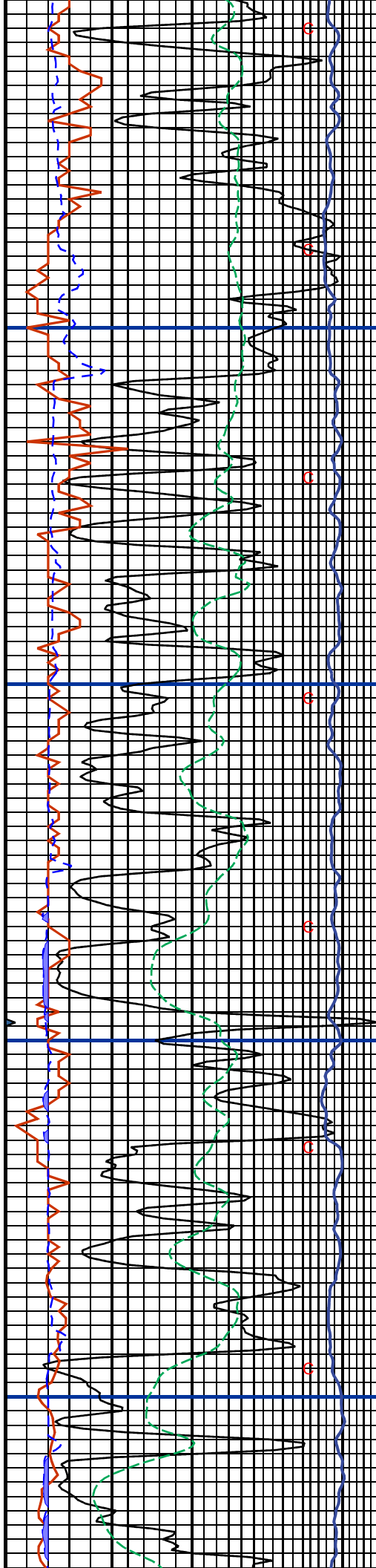
Dst #4 4433-4465 (Marmaton) 30 60 30 60 IF:25-36 FF:31-35 SI:1291-1242  
 Rec 15' O (100O) 5' OCM (200 80M) IF 1/2 blow, nr  
 FF n blow, nr BHT 110, Grav 31 API

*The structural position of the well is high.*

*Based on dst results, samples and log review the well was P&A*

# LEGEND





3600

Vis 71  
wt 8.5  
2.0#

wob 36  
rpm 80  
spm 63  
pp 700

3650

3700

wob 36  
rpm 86  
spm 60  
pp 625

Vis 60  
wt 8.5  
2.0#

3750

Ls, lt tan, vfn xln, spary calc, remn foss & ool, pr por, n stn, n odor, n sho

Ls, lt tan, vfn xln, spary calc, remn foss & ool, pr por, n stn, n odor, n sho

Sh, gry, grngry silty

Ls, lt tan, vfn xln, spary calc, remn bioclastic, pr por, n stn, n odor, n sho

Sh md gry, lt gry silty, spks pyrite

Ls, lt tan, vfn xln, spary calc & spary bioclastics, pr-fr por, n stn, n odor, n sho

Ls, lt gry micro xln, lt tan, vfn xln, spary calc, granular foss in prt, pr-fr por, scat lt gry chert, n stn, n odor, n sho

Sh, md gry, calc

Ls, crm lt gry, vfn xln, spary calc, remn foss, n-pr por, n stn, n odor, n sho

Ls, crm lt gry, vfn xln, spary calc, subsucro in part, brtl, chky, scat lt gry dull chert, n stn, n odor, n sho

Ls, crm lt gry, vfn xln, spary calc, subsucro in part, brtl, chky, scat lt gry dull chert, n stn, n odor, n sho

Ls, crm lt gry, micro-vfn xln, spary calc, dns-brtl, chky, scat lt gry dull chert, n stn, n odor, n sho

Sh, lt gry, dk gry, silty

Ls, lt crm-gry, micro-vfn xln, mostly pr por, scat lt crm chert, n stn, n odor, n sho

Ls, lt crm-gry, micro-vfn xln, mostly pr por, scat lt crm chert, few dk gry, n stn, n odor, n sho

Sh, md gry, dk gry, grygrn firm

Sh, md gry calc

Sh, md gry, brn

Ss, brn, fn-md grn, brittle.?

Sh, md gry, fossilif

Ls, lt tan brn motld, micro xln, lt gry foss, pr por, 10% vfn xln, n stn, n odor, n sho

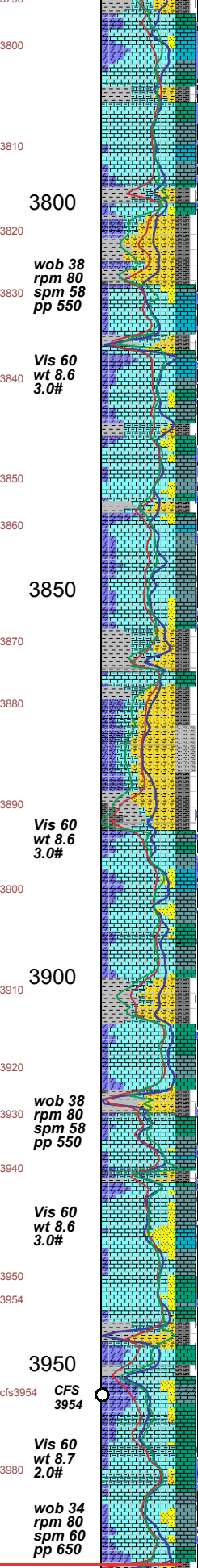
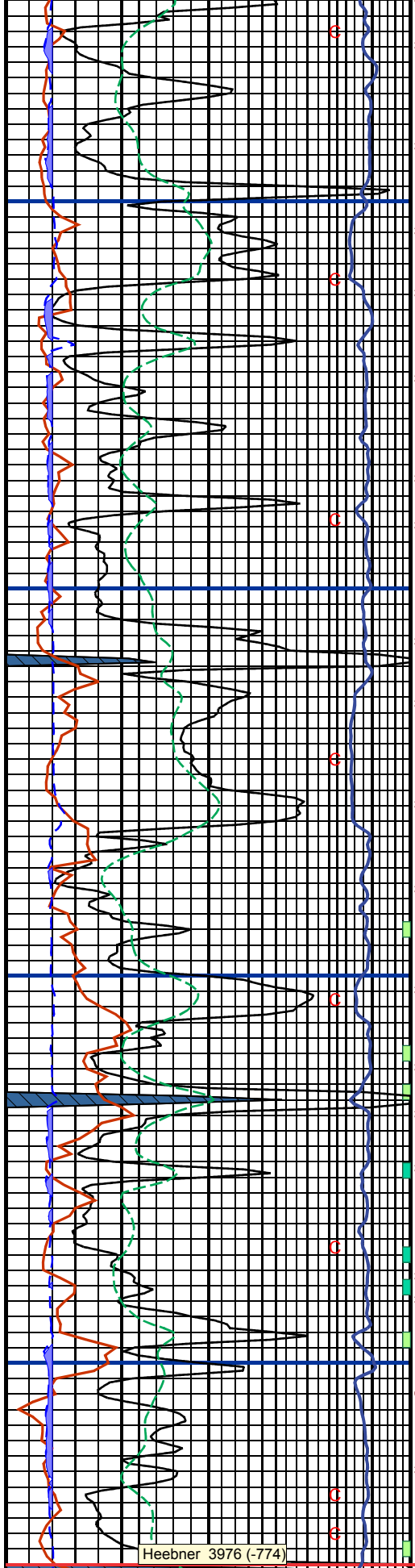
Ls, lt tan gry, micro xln, lt gry foss, pr por, 10% vfn xln, dol, scat lt gry chert, n stn, n odor, n sho

Sh, md gry, lt gry grn vsft clay

Drig @ 4,285'  
06-25-2019 - 7:00 AM  
Drig @ 4,415'  
06-26-2019 - 7:00 AM  
Drig @ 4,524'  
06-27-2019 - 7:00 AM  
Drig @ 4,825'  
06-27-2019 - 11:55 AM  
RTD @ 4,883'  
06-27-2018 - 4:30 PM  
Rig up Haliburton  
LTD @ 4,,881

Plugged Hole  
50sx 2520  
80sx 1560  
50sx 780  
50sx 330  
20sx 60  
30sx rathole  
Plug down @ 9:00 am  
6-28-19

Mud Check 4 at 3,730'  
vis: 57 wt: 8.5 Chlor: 9,500  
LCM: 3# Ph: 10.0 WL:8.8



Sh, md gry,  
 Ls, lt crm gry, vfn xln, dull, fr por, trc spary calc, trc lt gry chert, n stn, n odor, n sho  
 Sh, md gry carb  
 Ls, lt tan, vfn xln, trc spary calc, few motld gry, foss, pr por, lt crm chert, n stn, n odor, n sho  
 Ls, lt gry sli motld, vfn xln, sli dol, spary calc fross frag & xln, fr ppt por, chlky, lt gry chert, n stn, n odor, n sho  
 Sh, motld lt gry carb  
 Ls, lt tan, vfn xln, sli dol, spary calc xln, sli granular, micro xln, motld dns, scat tan chert, n stn, n odor, n sho  
 Ls, lt tan, vfn xln, sli dol, spary calc xln, sli granular, micro xln, motld dns, scat tan chert, n stn, n odor, n sho  
 Ls, lt tan, vfn xln, sli dol, spary calc, lt gry bioclastic, fr ppt in tra xln por, scat tan chert, n stn, n odor, n sho  
 Ls, lt tan, vfn xln, sli dol, spary calc, lt gry bioclastic, pr intra xln por, scat tan chert, n stn, n odor, n sho  
 Sh, dk gry, blk silty  
 Ls, lt tan sli motld, vfn xln, sli dol, spary calc xln, pr por, chalky, dull lt gry chert, n stn, n odor, n sho  
 Sh, lt gry clay  
 Ls, lt tan & gry, vfn-micro, britl, trc spary calc, trc spary calc, lt gry chert, chalky, n stn, n odor, n sho  
 Ls, lt tan, vfn xln, trc spary calc, pr por, lt tan chert, 3 lt tan chert cutn w/spks O on edge, n odor, nsfo  
 Ls, lt tan gry, micro-vfn xln, mostly tite, n vis por, 4 cutn w/spks md brn O on break, tite, vint odor, wht cut, patchy-sat dry, nsfo  
 Sh, blk carb  
 Ls, lt crm, vfn xln, trc spary calc xln, 5 cutn spks brn O, patch dk brn dry, pr por, vint odor, nsfo  
 Ls, lt crm, micro xln dns, vfn xln, trc spary calc xln, pr por, 4 cutn spts md brn O, varies dol spary xln w/fr por, ppt vugs sat stn dry to vfn xln tite patchy stn, yel edge Ofior, flash wht cut, fnt-fr odor, nsfo  
 Ls, lt crm gry, micro xln, trc spary calc xln & fn foss, n-pr por, 3-4 granular cutn, spks dk brn O on break w/asphaltic spks, vvfnt odor, nsfo  
 Ls, lt tan, micro xln, lithic, vfn xln, sli dol, spary calc bioclastic, britl, fr por, wht chert, chalky, n stn, n odor, n sho  
 Ls, lt tan, micro-vfn xln, trc spary calc, britl, pr por, lt tan chert, 3 cutns spts O on edge/surf, vvfnt odor, nsfo  
 Sh, blk carb, wht spks,  
 Ls, lt tan, micro-vfn xln, sli dol, spary calc bioclastic, britl, pr por, lt tan chert, 5 cutns sli gran, ppt vug w/spts dk brn O on break, vvfnt odor, nsfo

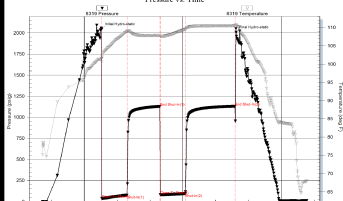
**DST (1) 4024-4038**  
**LKC A**  
 30-60-45-90

IF: 4 1/2" blow  
 IS: nr  
 FF: 3 1/2" blow  
 FS: nr

Total Rec: 130' MCW, 4" O (85W 15M)

FP: 38-76      FFP: 81-95  
 SIP: 1129      FSIP: 1131  
 HP: 2042      FHP: 2008

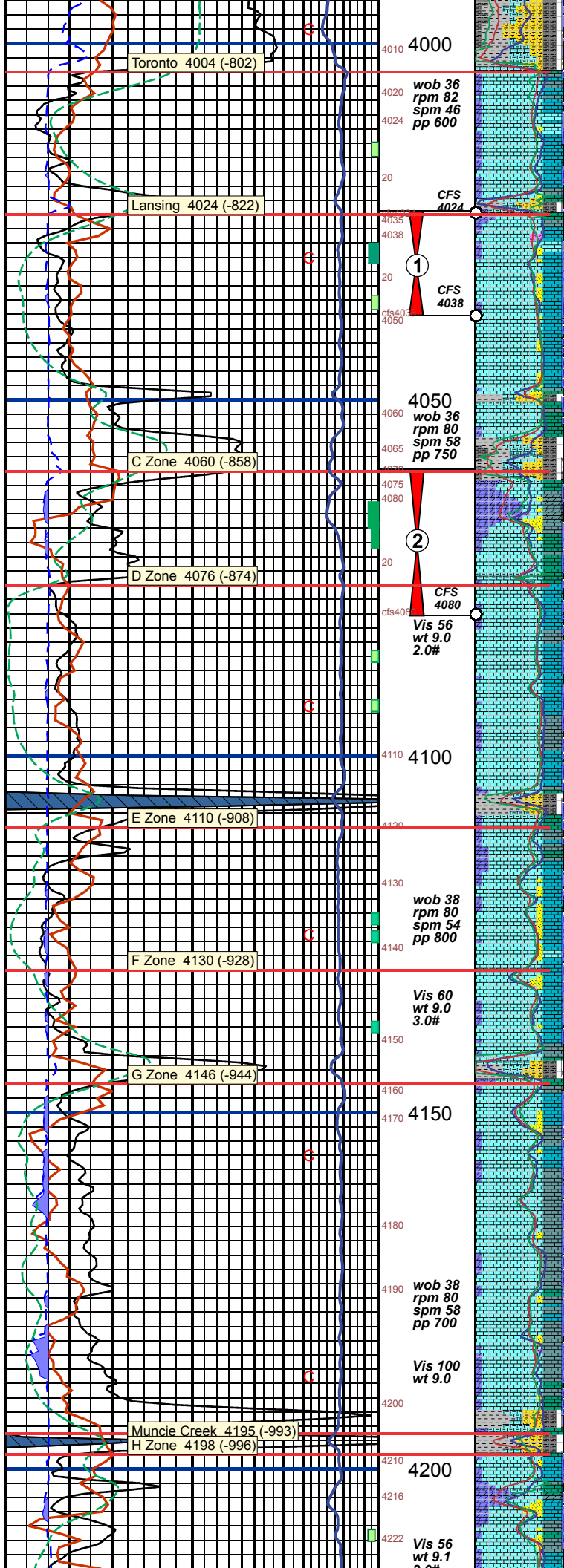
BHT 111°F RW .167 @ 64°F  
 Chloride 56,000 ppm



Heebner 3976 (-774)

wob 38 rpm 80 spm 58 pp 550  
 Vis 60 wt 8.6 3.0#  
 wob 34 rpm 80 spm 60 pp 650  
 Wipter trip to collars 3990 CFS 3990  
 wip3990

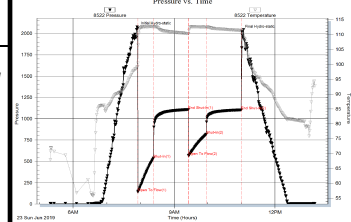




Sh, md gry, dk gry, grngry wxy, brn  
 Ls, lt tan gry, micro xln, dns, lt brn, micro xln, rem foss, few w/wedge trc spks dk brn O, n odor, nsfo  
 Ls, lt tan gry, micro xln, dns, few gry fn foss frag inclu, n-pr por, vfn xln, britl, sli chalky, scat crm & trnl gry chert, n stn, n odor, n sho  
 Ls, lt tan gry, micro xln, lithic, n-pr por, vfn xln, britl, few w/spks ppt por bleeding sparcs drops oil, tite, sli chalky, scat crm & trnl gry chert, vfn odor, nsfo  
 Ls, wht crm, micro xln, lithic, n por, wht chert, crm lt brn micro xln, trc spary calc rem grnstrn, few edge ppt spks O, vfn odor, Ls, crm lt brn micro xln, micro -vfn xln, lithic, 2% remn spary calc subsucro ool grnstrn, spsts dk brn O in ppt por, spsts fo in tray, mostly dk brn sat in dry, n Oflor, fr odor  
 Ls, crm lt brn micro xln, micro -vfn xln, lithic, few cutns granular w/spts dk brn O & tary O on break, gd odor  
 Ls, wht crm, micro xln, lithic, n por, 10% vfn xln, spary calc xln, p por, remn ool grnstrn pr por, few intrx ool w/spts tary O scat crm & lt crm chert, chiky, n odor, nsfo  
 Ls, wht crm, micro-vfn xln, lithic, n -p por, remn ool grnstrn lt crm chert, n stn, n odor, nsfo  
 Lmy Dol clean fn xln in top. Sh, md gry, aqua gm  
 Dol ls, lt tan, fn xln, 15% dev rhob xln, pr-fr intra xln por w/few xln vugs, dk brn O bleeding from por, scat lt tan chert, n Oflor, wht flash cut w/dk brn ring (hvyO), gd odor changing to more sour in 60 min. few spsts in tray.  
 Sh, brn, olive grn gry, lt brn vsft.  
 Ls, wht, ool grnstrn, hvy sec cmt, pr intra ool por w/blk spks O, fr sli sour odor, n Oflor, nsfo  
 Ls, wht lt gry, micro xln, lithic, dns trc fn bioclastic, pr intra xln por, scat wht chert, whethrd sparce ppt vug in chert w/spks blk asphaltic O, fr odor, nsfo  
 Ls, crm lt gry, micro xln, dns pr intra xln por, scat lt brn chert, n stn, n odor, n sho  
 Sh, blk, dk gry, aqugrngry, brn  
 Ls, crm lt gry, micro xln, dns pr intra xln por, scat lt brn chert, n stn, n odor, n sho  
 Sh, aqua gm gry, brn  
 Ls, wht lt crm, micro xln, lithic dns, 2% rnd bioclastic, hvy cmt, pr por, few spks O in vugs, scat wht chert, n stn, vfn odor, nsfo  
 Ls, crm lt tan, micro xln, dns, lt tan gry chert, vfn odor  
 Ls, wht lt crm, micro xln, lithic dns, 2% rnd bioclastic, hvy cmt, pr por, few spks O in vugs, scat wht chert, n stn, vfn odor, nsfo  
 Ls, wht, micro xln, dns, n por, wht dull chert, vfn odor, few weathered cutn w/spks, nsfo  
 Ls, lt tan, micro xln, dns, trc rem ool hvy cmt, pr por, sli chiky, n stn, n odor, n sho  
 Ls, lt tan brn, micro xln, dns, trc rem oolite, hvy sec calc cmt, n intra oolitic por, scat wht/ lt tan chert, n odor, n stn, nso  
 Ls, wht lt tan, micro xln, dns, wht lt tan chert, chiky, n stn, n odor, n sho  
 Ls, crm lt tan gry, micro xln, dns, few rem oolites, scat lt tan- gry chert, n stn, n odor, n  
 Sh, blk carb, n burn, coal odor  
 Ls, wht lt crm, micro xln, dns, imbedded md gry oolite, n-pr por, chiky, scat wht lt crm chrt, 6 cutn vfn xln, w/sat brn Ostrn, fnt odor, nsfo

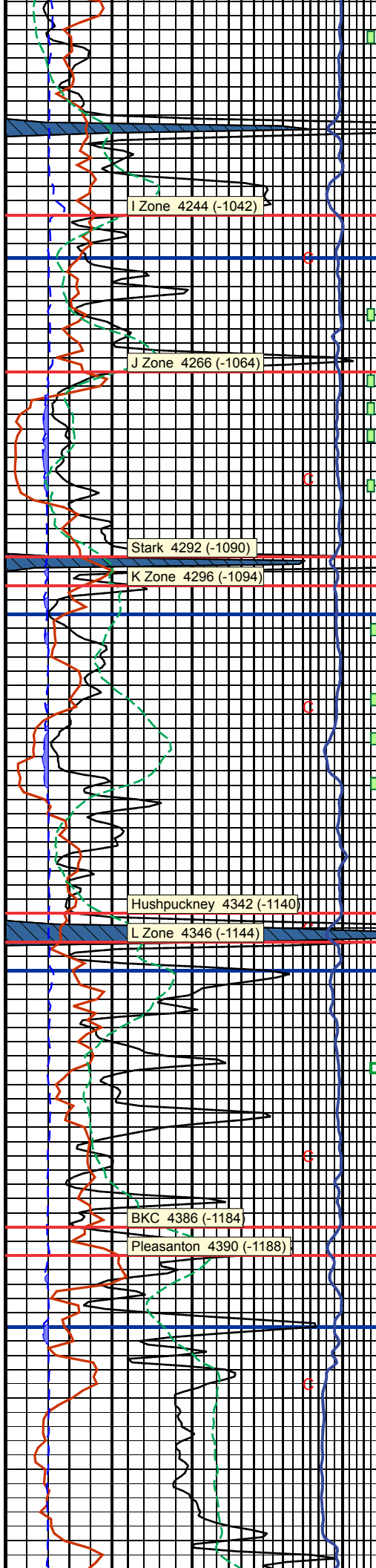
Mud Check 5 at 4,008'  
 vis: 56 wt:8.8 Chlor: 10,000  
 LCM: 3# Ph: 10.0 WL:9.6  
 Strap 3997.92'  
 Board 3998.92'  
 Strap short 1'

**DST (2) 4060-4080**  
**LKC C**  
**30 60 30 60**  
 IF: BOB 1.5" - 135" blow  
 IS: nr  
 FF: BOB 3" - 99" blow  
 FS: nr  
 Total: 1720' MCW (95W 5M)  
 O spts through out  
 FP: 147-537 FFP: 566-817  
 SIP: 1108 FSIP: 1104  
 HP: 2060 FHP: 2021  
 BHT 111°F RW .129 @ 72°F  
 Chloride 58,000 ppm



Mud Check 6 at 4,080'  
 vis: 55 wt: 9.0 Chlor: 9,000  
 LCM: 2# Ph: 10.5 WL:8.4

(Empty section for additional data or notes)



2.0#

CFS 4222  
cfs4222

wob 38 rpm 80 spm 60 pp 750

I Zone 4244 (-1042)

4250

CFS 4260  
cfs4260

Vis 53 wt 9.1 2.0#

J Zone 4266 (-1064)

Den > Son Porosity Oolmoldic

CFS 4280  
cfs4280

wob 36 rpm 78 spm 55 pp 650

Stark 4292 (-1090)

K Zone 4296 (-1094)

4300

CFS 4318  
cfs4318

Hushpuckney 4342 (-1140)

L Zone 4346 (-1144)

4350

Vis 60 wt 9.0 2.0#

BKC 4386 (-1184)

Pleasanton 4390 (-1188)

4400

4410

4420

4430

Vis 54 wt 9.0 1.0#

wob 34 rpm 64 spm 53 pp 700

4440

Ls, lt crm tan, micro xln, dns, n por, trc rem ool, scat lt gry tranl chert, 8 cutn vfn ppt spts O break, m brn sat stn dry, gd odor,

Ls, lt crm tan, micro xln, dns, n por, trc rem ool, scat lt gry tranl chert. few stn cutn AA, gd odor, nsfo

Ls, crm lt tan, micro xln, dns, few gry fn pisoli inclu, n por, few vfn md brn sat cutn, fnt odor, nsfo

Ls, lt crm gry, micro xln, lithic, scat lt gry chert, few spks md brn O in edge chert, vfn odor, nsfo

Ls, wht crm & lt gry, micro xln, trc brn ool grnstrn hvy cmt, pr intra ool por, spks brn O, scat crm chert, fr odor, nsfo

Ls, lt tan gry, micro xln, lithic, , trc ool & fn bioclastic, brn O edge stn, n-pr vis por, wht tranl chert, fr odor, nsfo

Ls, crm lt brn, micro xln, dns, n por, sli spary calc fn bioclastic hash, n-pr por, scat wht chert, 8 cutn surf spts O, sat-patch stn dry, vfn odor, nsfo

Ls, crm lt tan, micro xln, lithic, 6 cutn, ool grnstrn rexln intra ool cmt, w/trc md brn O in ppt por, spts O on crush, spnd brn stn, few ool moldic, vfn odor, nsfo

Ls, crm lt tan, micro xln, 20% oolmoldic, n intra mold por, trc brn stn in molds, spts md brn O, fr odor, nsfo

Ls, lt tan brn, 3% ool grnstrn Aa, microxln, dns, scat lt tan crm chert, chlky, trc brn edge stn, n odor

Sh, blk carb, burns, coal odor, org, brn

Ls, crm lt tan, micro xln, lithic, 3% cutn, ool grnstrn dns rexln intra ool cmt, w/trc blk O spts in molds, sat brn stn, fr odor, nsfo

Ls, crm lt tan, micro xln, lithic, decr, ool grnstrn dns rexln intra ool cmt, chlky, few edge Ostn, fr odor, nsfo

Ls, crm lt tan, micro xln, lithic, 3 cutn, vfn xln, n-pr por, sat-patch stn, vfn odor, nsfo

Ls, crm lt tan, micro xln, lithic vfn xln, n-pr por, 3 oolmoldic vugs w/bk O stn, vfn odor, nsfo

Ls, lt crm gry, micro xln, lithic, few fossil frag, 2 cutn with dk brn edge stn, n odor, nsfo

Sh, blk carb, burns, coal odor

Ls, lt crm tan, micro xln, dull, dns, n por, 3% vfn xln, scat lt crm chert, n stn, vfn odor, n sho

Ls, lt gry crm, micro xln, scat lt gry chert,

Ls, lt gry crm, micro xln, lithic, dns, 3% vfn xln, trc spary calc, scat lt gry tranl chert, n odor, nsfo

Ls, lt gry crm, micro xln, lithic, dns, 3% vfn xln, trc spary calc xln, 2% cutn rem foss, n por, scat lt gry chert, chlky, n stn, n sho

Sh, md gry, blk

Ls, lt tan-lt gry, micro xln, lithic, n vis por, few pisolites, scat lt brn tranl chert, n odor,

Ls, crm lt brn, micro xln, lithic, rem embed pisolites, n por, few ool moldic, n stn, n odor, n sho

Ls, crm lt brn, micro xln, lithic, rem embed pisolites, scat tan chert, n stn, n odor, n sho

Ls, brn, micro xln, lithic, rem embed pisolites, scat tan chert, n stn, n odor, n sho

Sh, brn, lt brn vsft, lt gry grn vsft

Ls, md brn, dns pisolite, n por, scat lt tan chert, lt gry lithic, n stn, n odor, n sho

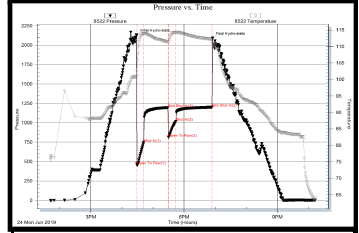
**DST (3) 4239-4318**  
LKC J-K  
15 45 15 60

IF: 183" blow  
IS: nr  
FF: 135" blow  
FS: nr

Total Rec: 1200' MCW,  
(97W 3M),  
Oil spts on top

FP: 454-745 FFP: 810-1016  
SIP: 1196 FSIP: 1200  
HP: 2123 FHP: 2083

BHT 112°F RW .155 @ 7<sup>4</sup>F  
Chloride 51,000 ppm



Mud Check 7 at 4,318'  
vis: 49 wt: 9.0 Chlor: 15,000  
LCM: 2# Ph: 9.5 WL: 10.0

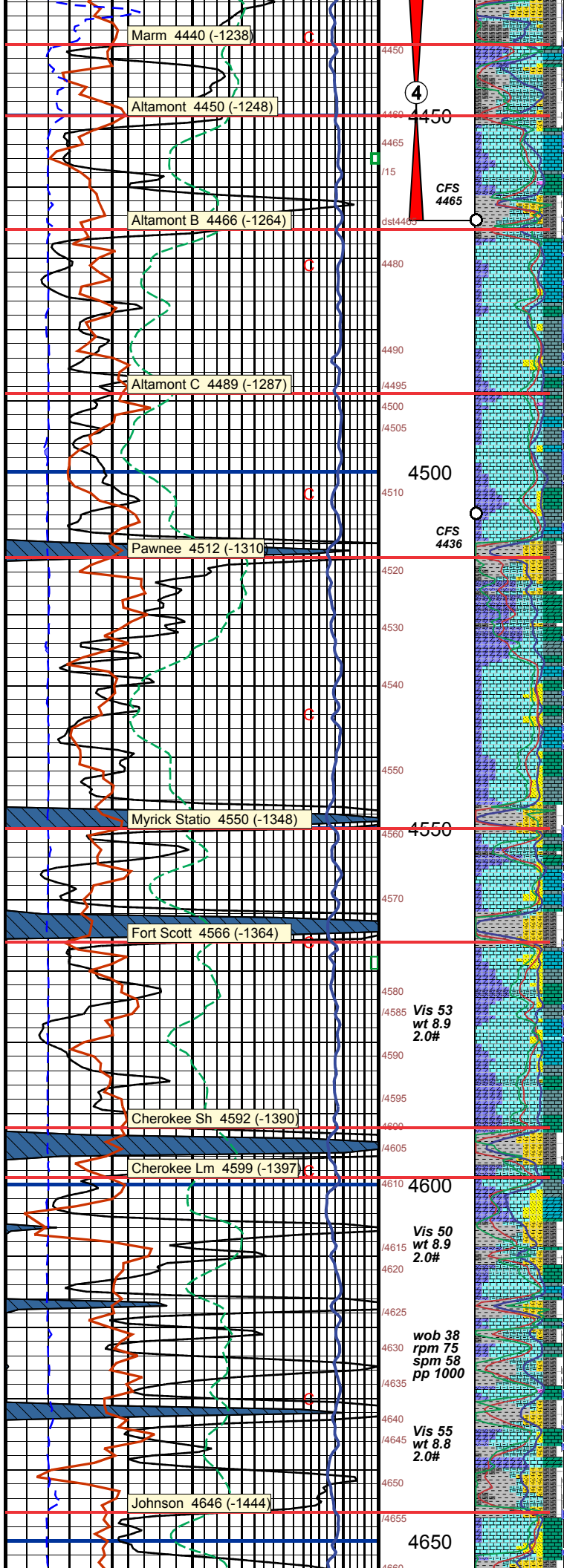
**DST (4) 4433-4465**  
Marmaton  
30 60 30 60

IF: 1/2" blow  
IS: nr  
FF: n blow  
FS: nr

Total Rec: 20'  
15' O, (1000)  
5' OCM (200 80M)

FP: 25 34 FFP: 31 35





Ls, md brn, dns pisolite, n por, scat lt tan chert, lt gry lithic, n stn, n odor, n sho

Ls, lt tan gry, micro xln, dull, dns, n por, vfn xln, trc calc xln, 2% ool grmstr, hvy sec cmt, n intra ool por, 7 cutn w/trc intra ool xln por, n Olor, sat stn in dry, wht cut, fnt odor, nsfo

Ls, lt tan gry, micro xln, dull, dns, few cutn rnd bioclastic, hvy sec cmt, 3-4 pr intra grn por, cutn sat-patch brn stn, d spts O on

Sh, aqua grn gry, brn, few crs qtz grns

Ls, lt tan crm, micro xln, lithic, few embd rem oolites, n por, vfn brittle, 3 granular chert spts O on break, vvfnt odor, nsfo

Ls, lt tan crm, micro xln, lithic, dns, vfn xln, n-pr por, few cuting fn bioclastic, pr por, n odor, n sho, Sh grygrn brn

Ls, lt tan crm, micro xln, lithic, dns, vfn xln, n-pr por, few cuting dns pisolite, and fn bioclastic, pr por, odor, n stn, n sho

Ls, lt tan gry, micro xln, lithic, dns, n-pr por, few cuting fn bioclastic, pr por, scat lt gry chert, chlky, n odor, n stn, n sho

Ls, lt tan gry, micro xln, lithic, dns, n-pr por, few cuting fn bioclastic and pisolite, pr por, scat lt crm chert, chlky, n odor, n stn, n sho

Ls, lt tan gry, micro xln, lithic, dns, Aa Sh, blk carb, burns, coal odor, md gry, gry grn

Ls, tan lt gry, micro xln, dull, dns, n vis por, scat lt tan chert, n stn, n odor, n sho

Ls, lt tan gry, dull, dns, scat lt gry chrt, n sho

Ls, lt tan gry, motld in part, micro xln, lithic, dns, md gry tranl chert, sli chlky

Ls, brn, sli motld dns, lt gry chert, n por, n stn, n sho

Sh, blk carb, burns, coal odor, md gry

Ls, lt tan, micro-vfn xln, scat lt gry tranl chert, n stn, n odor, n sho

Ls, lt tan, micro-vfn xln, scat lt gry tranl chert, n stn, n odor, n sho

Sh, blk carb, burns, coal odor, md gry

Ls, lt tan, micro xln, mealy rem oolites, n vis por,

Ls, lt gry tan, micro xln, mealy, rem oolites/dns pisolite, hvy cmt, scat lt gry tranl chert, n vis por, n stn, n odor, n sho

Ls, lt gry tan, micro xln, mealy, rem oolites/dns pisolite, hvy cmt, scat lt gry tranl chert, n vis por, n stn, n odor, n sho

Sh, blk carb, burns, coal odor, trc bubble, brn, aqua gry grn

Ls, lt tan gry, micro xln, dns, dull, few motld, scat lt grybrn, lt gry chlky, n stn, n odor, n sho

Ls, lt gry, micro xln, dns, n por, few w/bioclastic inclusions, scat lt gry chert, n

Ls, lt gry brn, micro xln, lithic, n por, few w/bioclastic inclusions, n stn, n odor, n sho

Sh, blk carb,

Ls, lt gry brn, motld, micro xln, lithic, n por, few w/bioclastic inclusions, few vfn xln britl, n stn, n odor, n sho

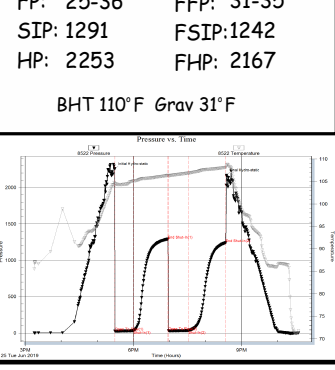
Sh, blk, gry grn, brn

Ls, lt gry brn, motld, micro xln, lithic, n por, scat lt gry chert, n sho

Sh, blk carb,

Sh, lt gry, vsft clay

Ls, lt brn, motld, micro xln, few gry pisolite, hvy sec cmt, scat lt brn chert, n stn, n odor, n sho



Mud Check 8 at 4,460'  
 vis: 50 wt: 8.8 Chlor: 10,500  
 LCM: 2# Ph: 10.5 WL: 9.4

Mud Check 9 at 4,580'  
 vis: 49 wt: 9.4 Chlor: 13,500  
 LCM: 2# Ph: 10.0 WL: 9.4

4

CFS 4465

4500

CFS 4436

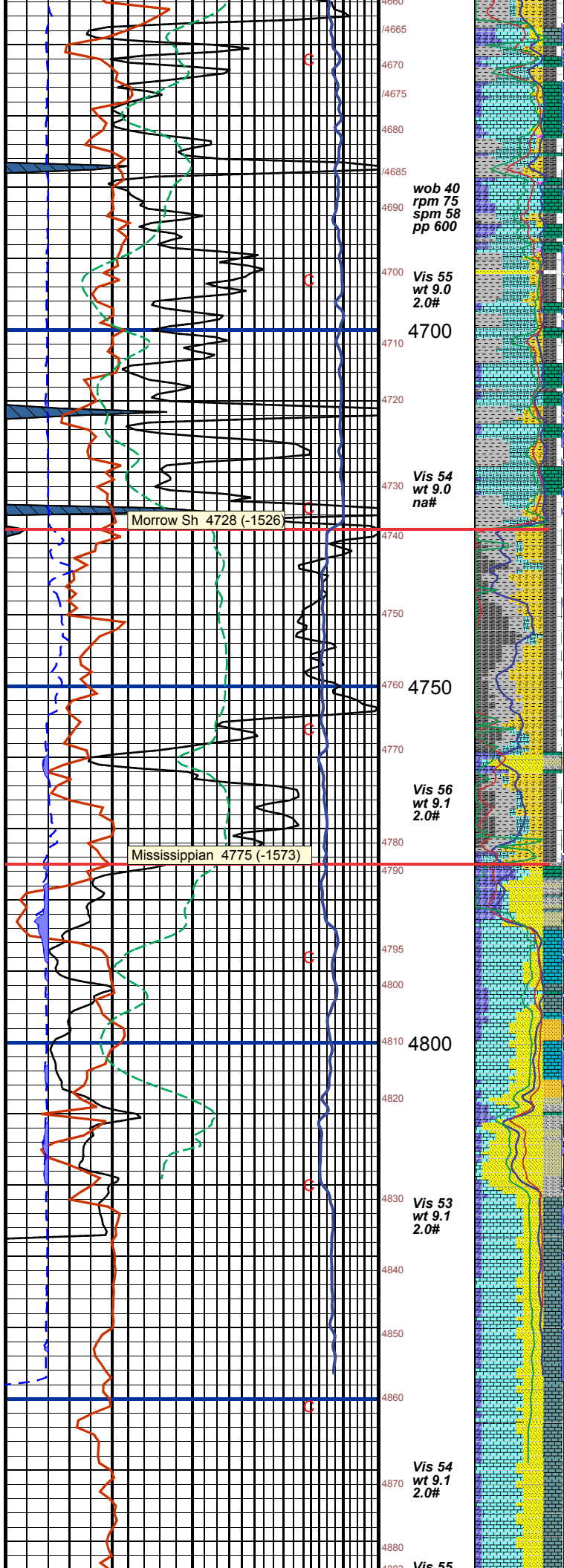
4550

Vis 53 wt 8.9 2.0#

wob 38 rpm 75 spm 58 pp 1000

Vis 55 wt 8.8 2.0#

4650



Ls, lt brn, motld, micro xln, lithic, trc fn gry foss, n por, scat brn tranl chert, n stn, n odor, n sho  
 Sh, blk, dkgrnry

Ls, lt brn, motld, micro xln, lithic, dk gry fn foss, n por, scat brn tranl chert, n stn, n odor, n sho

Ls, lt tan micro xln, lithic, vfn xln, n-pr or, few cmt dsn ool grmsnt, lt brn chert, sli chlky, n stn, n odor, n sho

Ls, lt tan micro xln, lithic, vfn xln, n-pr or, few cmt dsn ool grmsnt, lt brn chert, 3 cutn w/bleed spks O, few sat stn dry, vfn odor, nsfo

Ls, lt tan gry, micro xln, dull, dns, few rnd clastics, n por, scat lt tan chert, n stn, n odor, n sho

Ls, tan gry, micro xln, fn rnd bioclastics, scat lt brn rootbeer chert, n stn, n odor, n sho

Sh, grn gry, gry, brn, pink chert

Ls, tan gry, micro xln, dull, n por, lt brn chert, n stn, n odor, n sho

Ls, lt tan gry brn, micro xln, lithic, rnd foss inclu, scat lt brn chert, n sho

Ls, brn, lithic, dns, n por, trc brn chert, n stn, n odor, n sho

Sh, dk grygrn, blk

Ls, brn, lithic, dns, n por, 2% lt tan tite ool grmsnt, trc dk brn blocky chert, n stn, n odor, n sho

Sh, dk grygrn, blk

Ls, brn, lithic, dns, n por, 2% lt tan tite ool grmsnt, trc dk brn blocky chert, n stn, n odor, n sho

Sh, dk grygrn, blk

Ls, lt brn, micro xln, lithic, dns, 3% Ss wht lt grn, subrnd-ang, hvy sec cmt, pr por, n odor, n sho

Sh, dk aqu grygrn,

Ls, lt tan, brn micro xln, dns, 2% dk gry rnd foss, lt tan brn chert, nsho

Ls, lt tan, micro xln, lithic, brn sli motld, rnd foss, scat brn chert, 2% wht sndy dol, n stn, n odor, n sho

Sh, dk aqu grygrn, yelgry

Ls, lt brngry, micro xln, lithic, few fn rnd bioclastics, scat dul brn chert, wht sndy dol, Ss, dk grn Aa, n odor, n sho

Ls, wht sandy, britl, lt brngry, micro xln, lithic, scat dul brn chert, n odor, n sho

Sh, aqu grn, brn, dk grngry

Ls, wht sandy, britl, lt brngry, micro xln, lithic, scat dul brn chert, n odor, n sho

Ls, wht sandy, britl, lt brn, vfn-micro xln, ln por, scat dul brn chert, n odor, n sho

Ls, wht sandy, britl, lt brn, vfn-micro xln, ln por, scat dul brn chert, n odor, n sho

Ls, lt dull brn gry, micro xln, dns, scat brn glasy chert, pyrite, blk lmy sh, n sho

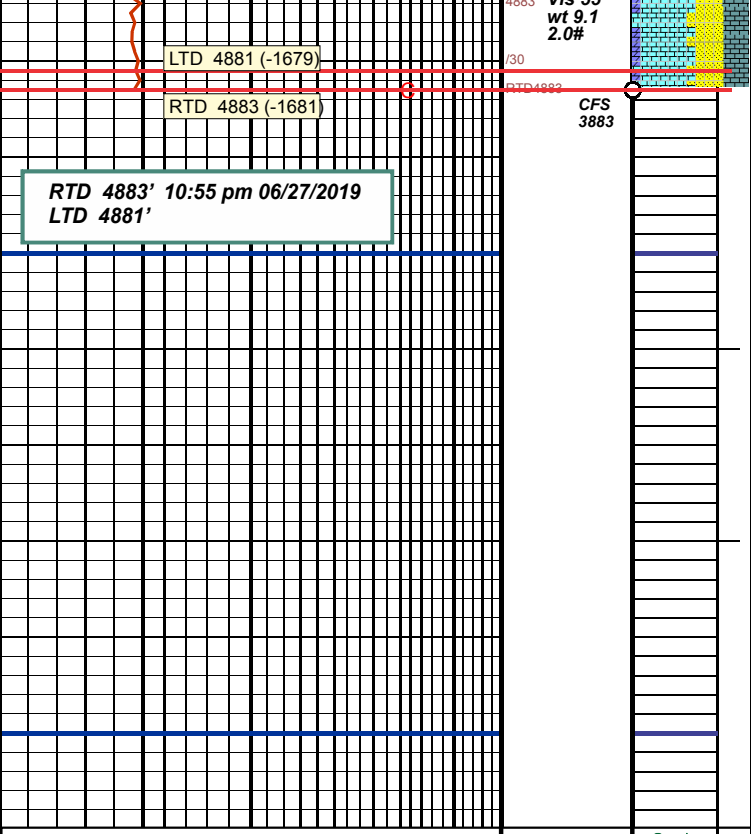
Ls, lt dull brn gry, micro xln, dns, scat brn glasy chert, pyrite, blk lmy sh, n sho

Ls, lt dull brn gry, micro xln, dns, Ls, wht sandy, trc lt tan foss chert, n sho

Ls, lt dull brn gry, micro xln, dns, trc dk gry & lt brn rnd foss, dns, trc lt tangry chert, n sho

Mud Check 10 at 4,843'  
 vis: 46 wt: 9.1 Chlor: 15,000  
 LCM: 2# Ph: 9.5 WL: 10.4





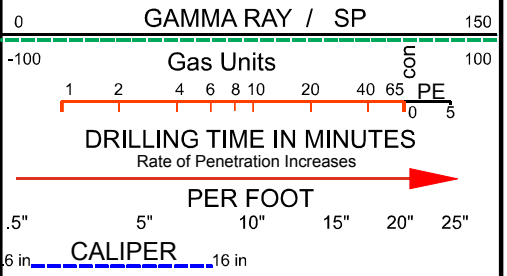
Ls. lt dull brn gry, micro xln, dns, Ls, wht sandy, trc lt tan foss chert, n sho

4603 vis 33 wt 9.1 2.0#

RTD 4883

CFS 3883

16 Stand short trip  
Circ 1.5 hr  
TOH for Logs



Sonic  
30 15 0

Density  
30 15 0

Neutron  
30 15 0

DEPTH

LITHOLOGY

SAMPLE DESCRIPTIONS

REMARKS

COMPANY Culbreath O&G Company, Inc.

LEASE Hagen-Jantz #1-22 NE SW SW SE

LOCATION 660' FSL 2240' FEL SEC. 22 TWP 16S RGE 36W

COUNTY Wichita STATE Ks

ELEVATIONS

K.B. 3202

D.F. \_\_\_\_\_

G.L. 3195

All measurements from K.B. 3202

