ELEVATIONS
KB 3496'
GL 3487'

COMPANY & WELL Coral Prod #33-05D Bammes-Brunswig
LOCATION 2310' FSL, 2310' FEL, SE/4
SEC 5 TWSP 2s RGE 41w
COUNTY Cheyenne STATE Kansas

Tim J. Lauer
Petroleum Geologist

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GEOLOGIST'S REPORT
DRILLING TIME AND SAMPLE LOG

COMPANY Coral Production Corp
LEASE # 33-05D Bammes-Brunswig
FIELD Wildcat
LOCATION 2310' FSL, 2310' FEL, SE/4
SEC 5 TWSP 2s RGE 41w
COUNTY Cheyenne STATE Kansas
CONTRACTOR Duke Drilling Rig #4
SPUD 10-9-2015 COMP 10-23-2015
RTD 5480' LTD 5480'
MUD UP 3400' TYPE MUD Chemical
SAMPLES SAVED FROM 3800' TO RTD
DRILLING TIME KEPT FROM 3800' TO RTD
SAMPLES EXAMINED FROM 3800' TO RTD
GEOLOGICAL SUPERVISION FROM 3635' to RTD
GEOLOGIST ON WELL Tim J. Lauer

ELEVATIONS
KB 3496'
DF
GL 3487'
Measurements Are All From Kelly Bushing

CASING
CONDUCTOR
SURFACE 8-5/8" @ 241'
PRODUCTION

ELECTRICAL SURVEYS
Nabors Stack - DCPL, DIL, ML, PE, Sonic - Engr: Ian Mabb

FORMATION TOPS	ELECTRIC LOG		SAMPLE LOG	
Anhydrite	3458	(+38)	3456	(+40)
Topeka	4228	(-732)	4220	(-724)
Lansing	4407	(-911)	4401	(-905)
Stark	4642	(-1146)	4642	(-1146)
Marmaton	4797	(-1301)	4792	(-1296)
Cherokee Shale	4915	(-1419)	4915	(-1419)
Morrow Shale	5109	(-1613)	5110	(-1614)
Arbuckle	5365	(-1869)	5365	(-1869)
Reagan Sand	5470	(-1974)	5470	(-1974)
Total Depth	5480	(-1984)	5480	(-1984)

5

REMARKS
Due to drill stem test results, and log evaluation, operator elected to plug and abandon the location without further testing the location.

Respectfully submitted,
Tim J. Lauer
10/24/2015

LEGEND
Anhydrite, Sandstone, Limestone, Shale, Carb Sh, Cherty LS, Chert, Dolomite

LITHOLOGY | DRILL STEM TESTS | DRILLING TIME IN MINUTES PER FOOT (Rate of Penetration Decreases) 5 10 15 | SHOWS | DEPTH | SAMPLE DESCRIPTION | REMARKS

SAMPLE DESCRIPTION

Sh; flood redbeds, rust, brick red, silty-sdy IP, no cln Sd.

Sh; flood redbeds, rust, brick red, silty-sdy IP, no cln Ls or Sd.

Sh; redbeds, rust, brick red, silty-sdy IP, no cln Ls or Sd.

Sh; redbeds, rust, brick red, silty-sdy IP, no cln Ls or Sd.

Ls; flood crm-lt.gry some buff, vfn-frgrdxln, mly-gran txt, soft IP, n. flor, n. stn, n. odor

Ls; crm-lt.gry, AA, micro-frngrdxln, most dns, 1/4 mly-gran txt, pr IG por, NS, n. flor, n. stn, n. odor

Shale; incr redbeds, AA, decr Ls; most AA, micro-frgrdxln, decr mly-gran txt, pr, scat txt, pr IG por, NS, scat Sd; lt.gry, silty-vfngrd, mod sort, subrdd, mod cmt, pr IG por, n. flor, n. stn, n. odor

50% redbeds, AA, incr grn-gry & dk. gry shale, silty IP, decr to 50% Ls; AA, micro-frgrdxln, mealy-occ gran txt, w/ por AA, NS, n. flor, n. stn, n. odor

Sh; 90% redbeds, sli incr grn-gry, and dk. gry shale, scat pcs Sd; crm-lt.gry, silty-vfngrd, subrdd, calc, most dns, pr vis por, NS, n. flor, n. stn, n. odor

Sh; 60% redbeds, AA, 40% Sd; crm-lt.gry, silty-vfngrd, AA, subrdd, calc, brittle-semi-friab, scat pr IG por, NS, n. flor, n. stn, n. odor

Sh; flood redbeds, brick red, decr Sd; AA, n. odor

Ls; crm-gry-buff, sli spkl'd brn, micro-mdgrdxln, sli. foss, soft IP, mod dns, scat IXLN por, NS, n. flor, n. stn, n. odor

Sh; flood redbeds, frick red, scat Ls; AA crm-gry-dirk.gry, mott, micro-occ mdxln, scat pr IXLN por, NS, n. flor, n. stn, n. odor

Sh; abund red, rust, scat brn-tan dirty limy shale, calc IP, dns, some grn-gry, dk.gry, blk, carb IP

Sh; decr red, rust, incr brn-tan dirty limy shale AA, incr grn-gry, dk.gry, AA, occ blk, n. odor

Sh; AA, no clean Ls, n. clean sand, n. odor

Sh; AA, abund brick red, rust, n. clean Ls, n. clean sand, n. odor

Ls; flood md gry-dk.gry-blk, micro-frxln, scat mod mdxln, mostly dns, scat mly txt, pr, pr occ fr IXLN por, some Cht; brn, translucent, fresh, pr por, NS, n. flor, n. stn, n. odor (15" cfs)

Ls; flood md.gry-md.gry-dk.gry, micro-frxln, sli foss, (crinoids) pr vis por, NS, scat Cht; brn-gry, translucent, fresh, AA, NS, n. flor, n. stn, n. odor (30" and 45" cfs)

Ls; crm-gry-md.gry; s. mott, micro-frxln, most dns, 1/4 foss, crs. sharp, pr vis por, trc cht; AA, fresh, translucent, pr, incr drk shale, scat red-brn, OA NS, n. flor, n. stn, n. odor

Trip for broken wireline on SHS - no spl of bottoms up

Sh; most red-brn, drk gry, blk, s. carb IP

(4062-70) Ls; 1/3 crm-wht-lt.gry-dk.gry-blk (hvy spkl'd asphaltic stn), micro-frxln, chalky IP, scat fr-mdxln, mly txt, most pr-occ fr IXLN por, rare ppt por, NSFO, n.flor?, abund brn/blk asphalt stn, few pcs ppt w/blk tar stn, wk cut, same crush'd, gd halo, no det odor, no free oil or rainbow in spl cup. (4080 spl)

(4070-80) 70% Sh; dk.gry, blk, carb IP, AA, 30% Ls; crm-gry-blk, micro-frxln, chalky IP, AA, scat pcs IXLN por, NSFO, n. flor, n. stn, n. odor, det odor, abund spkl'd sample (4090 spl)

Sh; most drk gry, blk, s. carb IP incr red-brn, silty, dirty, occ pl. grn-crm soft clay, scat pcs w/stn AA, NSFO, n. odor.

Sh; most red-brn, AA, drk, few scat Ls; AA w/stn (slough? in 30" and 45" cfs)

Sh; most red-brn, silty-sdy, pr por, incr Ls; crm-lt.gry, sdy micro-vngrdxln, mealy-gran txt, pr, scat, pr vis por, NS, n. flor, n. stn, n. odor

Sh; decr red-brn, some grn-gry, silty-sty, sdy IP, incr Ls; crm-lt.gry, AA, dns, pr vis por, NS, n. flor, n. stn, n. odor

50% Sh; AA, red-brn, soft, scat IP, most pr vis por NS, mdxln, mealy-occ gran txt

Ls; crm-gry-scat blk (gilson stn), micro-mdxln, occ mealy txt, soft IP, pr vis por, NS, n. flor, scat pcs spkl'd blk stn, wk cut w/crush. wk halo, n. odor

Ls; crm-gry-scat blk AA, micro-mdxln, occ mealy txt, soft IP, pr vis por, fr IXLN por, 10% patchy brn/blk stn, (asphaltic) pr-fr stream'g cut, gd halo, rng in det odor

Ls; crm-lt.gry, spkl'd-patchy blk (stn), micro-crsgrdxln, scat gran-rgh txt, pr-occ fr IXLN por, scat pcs w/SSFO (tarry), n. flor?, 10% blk asphalt & gilson stn, wk-fr cut w/crush, some dns, no cut, n. det odor (4170 and 15" cfs)

Ls; most crm-buff, scat spkl'd blk stn, micro-crsgrdxln, s. foss, incr gran-rgh txt, trc pcs SSFO, n. flor?, spkl'd blk stn, few pcs w/wk-fr cut crush'd. n. det odor, scat pcs dead oil stn, n. cut. (30" and 45" cfs)

Ls; AA, scat spkl'd blk (stn) micro-mdgrdxln, subool, scat gran-rgh txt, NSFO, n. flor?, scat pcs spkl'd stn cut AA, no det odor, abund red clay (15" cfs)

Sh; vcol, drk gry, grn-gry, abund rd-brn, brick red, scat maroon, silty, scat Ls; crm-lt.gry, micro-vfnxln, s. foss, comp, pr por, NS, n. flor, n. stn, n. odor

Sh; AA, incr rd-brn, mott, dirty, scat Ls; crm-lt.gry-tan, AA, foss, gran-rgh txt, pr por, NS, n. flor, n. stn

Sh; flood rd-brn, silty-sdy, dirty, gritty text, n. clean sand.

Sh; AA, rd-brn, silty, dirty, trc Ls; crm-wht, micro-frxln, dns, pr por, NS, n. flor, n. stn, n. odor (4230 spl)

Ls; crm-wht, spkl'd-patchy blk (stn), micro-frxln, 1/5 fn-mdgrdxln, s. foss, w/gran-rgh txt, pr-scat fr IXLN por, (2 pcs) SSFO with satur blk stn, wk spkld flor, 5% spkl'd-patchy blk asphaltic stn, most wk cut w/crush only, n. det odor, gd lt.brn oil after cut, gd brn ring. (4240 & 4245 spls)

Ls; crm-wht, spkl'd-patchy blk (stn), most micro-occ mdxln, scat chalk, pr-scat fr IXLN por, trc (1 pc) SSFO w/satur blk stn, wk flor, same 5% spkl'd-patchy blk asphalt stn, wk cut w/crush, fr halo, n. det odor. (15" cfs)

Ls; crm-lt.gry-v.pl.grn, most micro-frxln, becom dns, comp, pr vis por, decr chalk, NSFO, n. flor, n. odor (30" and 45" cfs)

Ls; most crm-wht-bf, micro-fnxln, decr chalk, 1/10 fr IXLN por, NSFO, n. flor, n. stn, n. odor (15" cfs), trc pcs w/blk stn and wk cut AA (slough?), no det odor

Ls; crm-wht, vf-mdgrdxln, gran-rgh txt, scat foss, subool, brittle, abund chalk, 1/2 fr IXLN & scat ppt por, NSFO, n. flor, trace pcs w/blk aphalt stn (slough?), n. odor (15" and 30" cfs)

Ls; crm-wht-lt.gry, micro-fnxln, subool IP, most dns, scat pr IXLN por, NSFO, n. flor, trc w/blk stn AA (slough?), n. odor.

Sh; red-brn, silty, dirty, some rd-purple, scat dk.gry, pl. grn.

Sh; red-brn, AA, some dk.gry, grn-gry.

Ls; most crm-lt.gry, most micro-vfnxln, comp, pr por, 1/10 md. gry, micro-frngrdxln, s. foss, gran txt, brittle, pr IG por, NSFO, n. flor, few pcs w/spkl'd blk gilson stn, n. cut, n. odor

Ls; crm-gry, tan-bf, crypto-microxln, dns, comp, pr por, NS, n. flor, n. stn, n. odor

Ls; crm-gry-tan, most crypto-microxln, dns, comp. sharp, pr por, NS, n. flor, n. stn, n. odor

Ls; AA, incr tan, cryptoxln, dns, comp, pr por NS some lt.gry, micro-vfnxln, AA, pr por, NS, n. flor, n. stn, n. odor

Sh; gry, dk.gry, vcol red, blk, pl. grn., platy.

Ls; crm-wht-bf, abund blk stn, 2/3 micro-fnxln, dns, pr por, NS, 1/3 fn-mdgrdxln, s. foss, subool, gran-rgh txt, pr-fr IG & IXLN por, scat pcs (4-5 tray) SSFO (hvy, brn) & spkl'd flor, same 1/3 w/patchy-satur blk asphaltic stn, fr stream'g cut wk brk, xcel halo & ring in dimple dish, faint? odor (4350 spl)

Ls; crm-wht-tan, decr blk stn, most micro-vfnxln, becom dns, decr foss, most pr por, 1/10 AA w/spkl'd-patchy blk asphaltic stn, NSFO, decr to wk cut w/crush only, n. odor (4360 spl)

Ls; crm-lt.gry, most microxln, dns, comp, pr por, scat pcs with stn, NSFO, n. flor, n. odor (15", 30" and 45" cfs)

Ls; crm-gry-tan, micro-vfnxln, dns, comp, pr por scat pcs with stn, NSFO, n. flor, n. stn, n. odor

Sh; red, brn, drk.gry, deep green, scat black, abund Ls; AA, n. odor

Sh; red, brn, drk.gry, vcol AA, scat black, abund Ls; crm-gry-tan, microxln, AA, pr por, n. odor

Sh; red, brn, drk.gry, md-dk.green, scat black

(4401-07) Ls; crm-gry-tan, micro-frxln, dns, comp, pr vis por, NS, few pcs micro-frxln, pr vis por, NS, n. flor?, most blk asphaltic stn, n. odor

(4407-20) Ls; crm-gry, spkl'd-patchy brn/blk (asphaltic stn), micro-frxln, dns, 1/10 mly-occ rgh txt, pr-fr IXLN por, scat pcs w/SSFO (brn/blk droplets), sli. brk brn stn, fr-gd flor, 5% spkl'd-patchy asphaltic stn, wk-fr cut w/crush, fr-gd halo, n. odor (45" cfs still has SSFO)

Ls; crm-gry-md.gry, micro-frxln, most dns, comp, pr por, NS, n. flor, n. stn, n. odor

Ls; crm-gry-md.gry, micro-frxln, dns, comp, pr por, NS, n. flor, n. stn, n. odor

Sh; most dk.gry-blk, some pl.grn-gry, vcol red-brn, scat slough AA, microxln, dns, n. odor

(4467-75) Sdy Sh; most lt.gry, 30% Sd; gry-clr-tan, sli mica, vf-crsgrd, fresh, pr rdd por, NS, n. flor, s. pr IG por, NSFO, n. flor, abund spkl'd blk asphalt stn, 3% spkl'd asphaltic stn, n. odor (4480 spl)

Ls; crm-wht-gry, spkl'd brn/blk (stn), micro-frxln, dns, pr por, 1/5 spkl'd-patchy brn/blk, pr-fr IXLN por, 2 pcs w/SSFO, n. flor, 3% spkl'd asphaltic stn, wk cut, n. odor (4490 spl)

Ls; crm-gry-md.gry, micro-vfnxln, dns, comp, some tan, micro-crxln, vis por, scat mealy txt, pr por, NS, n. flor, n. stn, n. odor (2 pcs w/spkl'd blk stn in 4500 spl)

Ls; tan, micro-vfnxln, dns, NS, n. flor, n. stn, n. odor, some drk vcol shale (15" and 30" cfs)

Sh; abund red-brn, drk.gry, blk, scat sd and Ls slough, pr por, n. odor

Sh; drk, gry, vcol, AA, scat blk, occ sd slough w/blk asphaltic stn, n. odor

Sh; flood red-brn, silty, some pl.grn, blk, n. stn n. odor

Ls; most crm-gry, micro-frxln, crystalline, vfn-translucIP, few scat pcs w/soft wht chalk, n. vis por, NS, n. flor, n. stn, n. odor (4560 spl - 95% Ls)

Ls; most crm-wht, crypto-vfnxln, comp, AA, pr por, NS, incr md-gry-blk, micro-frxln, dns, pr por, NS, n. flor, n. stn, n. odor (incr blk shale in 45" cfs)

Sh; drk, gry, incr blk and red-brn.

Sh; drk gry, vcol AA, scat Ls; crm-wht-lt.gry, microxln, dns, pr por, NS, n. odor

(4577-86) Ls; most crm-bf, tan, mott gry, scat blk stn, micro-frxln, fr IXLN pr-fr IG and scat ppt por, scat pcs w/SSFO (hvy, drk), n flor?, 5% patchy-occ sat blk asphalt stn, wk cut w/o brk, fr-gd halo, sli det odor (15", 30" and 45" cfs)

(4586-95) Ls; crm-gry-md.gry, micro-vfnxln, decr por, NSFO, n. flor, scat pcs AA w/asphltc stn (slough?), n. cut, n. odor (45" cfs)

Ls; crm-buff-lt.gry, micro-frxln, dns, comp, pr vis por, NSFO, n. flor, n. cut, n. odor, some blk carb shale

Shly Sd; md.gry, vfngrd, silty, pyritic IP, most semi-friab, pr IG por, NSFO, n. flor, n. odor, when crush'd n. det odor

Sh; most red-brn, some gry, blk, sharp decr silty sd AA, n. odor.

(4620-32) Ls; most crm-gry, micro-vfnxln, scat blk (stn), comp, occ subsucr txt, chalky IP, most dns, scat pcs fr IXLN por, NSFO, n. flor, scat pcs w/blk stn, n. cut, n. odor (15" and 30" cfs)

Sh; drk gry, blk, carb, pyritic IP, incr red-brn

(4646-57) Sdy Siltstn; lt.gry, incr wht, vfngrd, subang, soft, some brittle, OA pr por, NS, n. flor, n. stn, n. odor

Sdy Siltstn; lt.gry-grn-clr, vfn-fngrd, subang, some mly txt, NS, n. flor, n. stn, n. odor (15", 30" and 45" cfs)

(4672-80) Ls; crm-bf, scat spkl'd blk (stn), micro-frxln, pr-fr IXLN por, s. chalky, NS, 1/10 spkl'd blk stn, n. odor (4680 spl)

Ls; crm-bf-lt.gry, most micro-fnxln, becom dns, chalky, OA pr vis por, NS, n. flor, n. stn, n. odor

(4700-10) Ls; crm-wht, micro-fnxln, scat mdxln, dns, pr por, NS, 10% fn-mdxln, n. flor, scat pcs w/blk asphaltic stn, n. cut, n. odor (4710 spl)

(4710-15) Ls; crm-wht-gry, micro-vfnxln, dns, comp, AA, most pr vis por, NS n. flor, n. stn, n. odor

Ls; crm-lt.gry, micro-vfnxln, most dns, pr vis por, NS, n. flor, n. stn, n. odor, microxln, crinkl'd txt, pr por, NS, n. odor

Sh; flood drk, vcol, blk, n. odor

Sh; incr red-brn, some grn-gry, micro-frxln, dns, pr por, NS, n. flor, n. odor

Ls; most crm-bf, micro-fnxln, crinkl'd-scat mealy txt, pr-scat fr IXLN por, scat chalky, NS, n. flor, n. stn, n. odor

Ls; crm-gry, micro-frxln, dns, comp, pr por, NS, n. flor, n. stn, n. odor

Sh; drk gry, abund red-brn, silty, n. odor

Silty Sd; most red-brn, vfn-fngrd, silty, NS, n. flor, n. stn, n. odor (4780 spl)

Sh; most red-brn, scat vcol grn, blk.

(4792-96) Ls; crm-gry-tan, crypto-microxln, foss (ool), most dns, sharp, pr vis por, NS, n. flor, n. stn, n. odor. (flood in 15" cfs)

(4796-4800) Ls; crm-buff, some md.gry, micro-mdgrdxln, chalky IP, scat pcs fr IXLN por, 10% spkl'd blk stn, wk cut w/crush, n. odor

(4801-07) Ls; most crm-bf, AA, micro-fnxln, dns, pr por, NS, n. flor, n. stn, n. odor

(4807-11) Ls; crm-gry-md.gry, micro-vfnxln, dns, some shale, NS, n. odor

(4829-31) Ls; flood brn-gry, micro-mdxln, dns, pr por, NS, n. flor, n. stn, n. odor

(4831-40) Ls; crm-bf-tan, micro-fnxln, ool (subool), 1/4 fr chlky, fr IXLN por, 1/10 SSFO (4 tray), patchy spkl'd blk stn, wk fr cut w/crush, fr halo, n. odor

Ls; sharp incr md-gry-brn, micro-vfnxln, most dns, comp, crinkl'd text, pr vis por, NS, n. flor, n. odor

Sh; most md-dk.gry-grn, silty, dirty

Ls; most md-dk.gry, micro-frxln, crinkl'd txt, some crm-gry, micro-fnxln, dns, pr por, NS, n. flor, n. odor (4880 spl)

Ls; most md-dk.gry, micro-mdgrdxln, sli. foss, subool, dns, sharp, pr vis por, NS, some drk.gry, micro-frxln, dns, pr por, NS, n. flor, n. stn, n. odor.

Sh; drk gry, blk, carb, abund Ls; AA, dns, NS, n. odor.

Ls; most crm-md.gry, AA, s. foss, dns, scat mealy txt, pr por, NS, incr tan-gry/brn, micro-mdxln, scat IXLN por, NS, scat crm-bf chalk, soft, n. odor.

Sh; drk gry, blk, carb, brick red, pyritic IP, (4930 spl)

Ls; most crm-buff, micro-mdgrdxln, dns, pr por, occ mdgrdxln, NS, 20% chalk, crm-wht, pr-scat fr IXLN por, NS, n. flor, n. stn, n. odor

Ls; crm-buff-lt.gry, micro-fnxln, dns, crinkl'd-scat mealy txt, pr por, NS, decr chalk, AA w/scat pr IXLN por, NS, n. flor, n. stn, n. odor

Ls; most crm-bf-lt.gry, micro-frxln, becom dns, crinkl'd txt, most pr vis por, NS, n. flor, n. stn, n. odor

Sh; most red-brn, drk gry, blk, carb, some grn.

(4946-54) Ls; crm-buff, some crm-md.gry, micro-frxln, most dns, 1/10 chalky, softer, pr-fr IXLN por, scat pcs (3-4 tray) spkl'd blk stn, SSFO (microdroplets w/ brk), no patchy flor, fr flash cut w/o brk, same crush'd, n. odor - best show in 4970 spl. most of show in chalky Ls.

(4954-64) Ls; crm-buff, some crm-md.gry, micro-frxln, most smokey, translucent, fresh, n. vis por, NS, n. flor, n. stn, n. odor

Ls; crm-tan-gry AA, micro-frxln, dns, comp, OA pr por, NS, n. flor, n. odor (15" cfs)

Sh; shrp incr rd-brn, blk, carb, some grn.

Ls; crm-tan-gry AA, microxln, comp, dns, crinkl'd txt, pr vis por, NS, n. flor, n. stn, n. odor

Sh; strong vcol red-brn, blk, carb, grn, dk.gry, platy.

Sd; crm-buff-gry-pink, vfn-crsgrd, pr sort, subang-rdd qtz, brittle, most cln, well cem, pr IG por, NS, n. flor, n. stn, n. odor

Sd; crm-gry-pink, vfn-crsgrd, s.glauc, pr sort, qtz, brittle-friab, most cln, fr IG por, NS, n. flor, n. stn, n. odor, incr sh

Ls; crm-bf-gry, micro-fnxln, most dns, pr por, NS, some Sd; clr-gry, spkld grn & blk, glauc, fn-crsgrd, subrdd, qtz, friab, v. gd IG por, NS, n. flor, n. stn, n. odor.

Ls; most lt-md.gry, some tan, brn, micro-mdxln, dns, pr vis por, NS, 5% Cht; crm, smoky, translucent, fresh, glauc, n. flor, n. stn, n. odor.

Ls; crm, gry, microxln, dns, pr por, NS, some Cht; crm-translucent, n. flor, n. stn, n. odor, abund dk. vcol shales

Shly Sd; dk.gry, blk, red, grn, 50% Sd; clr-lt.pink, md-v.crs grd, some v.crs, most brittle-friab, glassy txt, subang-ang, qtz, most pr-occ fr IG por, NS, scat Cht; gry, smokey, fresh, sharp, n. vis por, NS, n. flor, n. stn, n. odor

Ls; flood crm-bf-lt.gry, most micro-frxln, scat fn-mdxln, s. chalky IP, most dns, pr vis por, NS, n. flor, n. stn, n. odor

Ls; crm-bf-lt.gry, micro-occ fnxln, dns, pr vis por, NS, scat Sd clusters, frgrd, clr, brittle-friab, fr IG por, NS, n. flor, n. stn, n. odor (5070 spl)

Ls; crm-bf, some gry, micro-occ pl. grn, most micro-v fnxln, fn-mdxln, pr por, NS, scat Cht; tan, milky, smoky, translucent, fresh, n. vis por, n. flor, n. stn, n. odor.

Ls; crm-bf, some gry-brn, AA, incr cryptoxln, pr por, NS, scat cht, lt.tan-smoky, translucent, fresh, NS, n. flor, n. stn, n. odor, Some Sh; drk.gry, red-brn, maroon, dk.grn-gry

Ls; crm-md.gry-drk.gry, crypto-vfnxln, crinkl'd txt, dns, few pcs fn-mdxln, pr por, s. chalky IP, NS, scat Cht, smoky, milky, translucent, fresh, NS, scat Sd; gry/grn, vfn-fngrd, cln qtz, sub. rdd, pr vis por, NS, n. flor, n. stn, n. odor

Ls; crm-bf, some lt.gry, micro-frxln, chalky, softer, pr-scat fr IXLN por, scat pcs chalk w/weath txt, NSFO, n. flor, trc (1 pc) spkl'd blk stn, wk cut crush'd only, fr halo, n. odor (5110 spl)

Ls; crm-buff-lt.gry, AA, micro-fnxln, incr chalk, soft, pr IXLN por, NSFO, n. flor, n. stn, n. odor (15" cfs)

Ls; incr md.gry/brn, most micro-fnxln, dns, pr vis por, NS, shaly IP, drk, grn-gry, blk, vcol. (45" cfs)

Sh; most drk, strong vcol gry, blk, grn, purple, rd-brn, scat Ls microxln; comp, dns, n. vis por, NS, no clean sand, interval has n. odor (5130 spl)

Sh; drk, vcol, AA, scat Ls chips, AA, some dk gry, blk, microxln, dns, no clean sand, NS, n. flor, n. stn, n. odor.

Sh; drk, vcol AA, scat Ls chips, AA, microxln, dns, no clean sand, NS, n. odor. (30" and 45" cfs)

Sh; drk, vcol, AA, scat Ls chips, AA, few pcs silty Sd; lt.gry, vfngrd, pr vis por, soft, NS, n. flor, n. stn, n. odor (5155 spl)

Sdy Sh; drk, strong vcol AA, decr Ls, 20% Sd; crm-gry-grn, spkl'd blk stn, scat rdd, mdgrd, pyritic, brittle-friab IP, OA fr IG por NS, n. flor, n. stn, n. cut, n. odor (15" & 30" cfs)

Sh; dk.gry, strong vcol, platy, pyritic IP, sharp decr Sd; AA, n. flor, n. stn, n. odor (45" cfs)

Sh; dk.gry, blk, platy, some grn, brn, n. clean sd, n. odor.

Sh; dk.gry, flood blk, dk gry/grn, pyritic IP, n. cln sd, n. od.

Sh; dk.gry, blk, incr gry/grn, few clusters Silty Sd; lt.gry, silty-vfngrd, soft, pr vis por, NS, n. clean sand, n. odor

Sh; dk.gry, blk, dk gry/grn, pyritic IP, n. clean sand.

(5198-5208) Sd; wht, crm, clr, spkl'd grn & blk, vfn-crsgrd, pr-fr sort, ang-subang, qtz, glauc, s. mica, silica cem, brittle IP, most friab, fr-scat gd IG, NS, n. flor, n. stn, n. odor (15" & 30" cfs)

(5208-10) Sd, wht, crm, clr, spkl'd grn AA, friab, fr-scat gd IG, NS, n. flor, n. stn, n. odor, incr shale, dk.gry, vcol. (45" cfs)

(5210-20) Shaly Sd, wht, crm, clr, spkl'd grn, vfn-crsgrd, pyritic, fr IG, NSFO, n. flor, n. stn, n. odor, incr to 40% blk, vcol dk.red (5230 spl)

Sh; dk.gry, blk, red-brn (30% of 5240 spl)

(5221-32) Sd; wht, crm, clr, spkl'd grn & blk, md-v.crsgrd, mod sort, ang-rdd, qtz, glauc, silica cem, most brittle, OA fr-gd IG por, NS, scat Cht; crm-clr, translucent, fresh, n. flor, n. stn, n. cut, n. odor. (5240 spl)

Sd; wht-crm-dk.gry-clr, mott, w/spkl'd grn & blk inclusions, mdgrd-v.crsgrd, pr-md sort qtz, ang-subrdd, glauc, some brittle-friab, fr-gd IG por, NS, n. flor, n. stn, n. odor, 50% sand and 50% drk shales (5250 spl)

Sd; wht-crm-gry-clr, mott, AA, mdgrd-v.crsgrd, pr sort qtz, glauc, fr-gd IG por NS, scat Cht; clear, translucent, fresh-weather'd txt, pr por, NSFO, n. flor, n. stn, n. odor (50% shale in 5270 spl)

Sd; wht-crm-gry-clr, AA, scat pcs w/dolomitic matrix, n. stn, n. odor (50% shale in 5273 spl)

Dolo; crm-lt.gry-spkl'd-mott grn, glauc, fn-mdgrdxln, sdy gran-sucr txt, 1/2 dns, NS, 1/2 brittle, pr-occ fr IXLN por, scat Cht; milky-crm, opaq-translucent, weath'd IP, pr por, NS, dull gld flor (n. cut), n. oil flor, n. stn, n. odor (15" & 30" cfs)

Dolo; crm-bf-tan/brn, micro-vfnxln, most dns, pr por, NS, n. oil flor, n. stn, n. cut, n. odor, AA, 20% Sd; AA (silica cem), NS (30" & 45" cfs)

(5278-95) Chty Dolo; crm-bf-tan/brn, micro-frxln, some dns, scat pr-occ fr IXLN por, NS, n. flor, n. stn, n. odor, 30% Cht; (glauc) foss, spicul, opaq-translucent, ½ sub-trip-weath IP, n. odor (5300 spl)

(5295-5300) Chty Dolo; crm-bf, tan, brn, micro-frxln, subsucr txt, pr-fr IXLN por, NS, n. oil flor, n. stn, n. cut, n. odor, 30% Cht; AA, foss, translucent, most sharp, pr por, n. odor (15" cfs)

(5300-12) Dolo; most bf-tan, dk.brn, vfn-fnxln, s. glauc, occ chalk? crm, soft, pr-occ fr IXLN por, NS, n. flor, n. stn, n. cut, n. odor. (30" & 45" cfs)

(5312-24) Dolo; bf-tan, dk.brn, vfn-fnxln, subsucr txt, scat pr-fr IXLN por, NS, n. flor, n. stn, n. odor, 5% Cht; crm-milky, AA, foss, n. odor, scat chalk, wht, soft

(5324-30) Dolo; 2/3 dk.gry-brn, vfn-fngrdxln, subsucr txt, dns, pr por, 1/3 bf-tan, vfn-crsgrdxln, sucr-gran txt, scat fr-gd IXLN por, NS, 5% Cht, crm-milky, AA, opaq, n. flor, n. stn, n. odor in any circ spls.

(5330-41) Dolo; most crm-milky-tan, AA, vfn-fngrdxln, subsucr txt, some sharp, most pr vis por NS, n. flor, n. stn, n. odor (15" and 30" cfs)

Dolomitic Ls; crm-lt.tan, micro-frxln, most subsucr txt, soft IP, pr-scat fr IXLN por, NS, n. flor, n. stn, n. odor (5360 spl)

No representative spl - 80% Shale, mix AA, 20% Basal Sand and Ls mix AA, n. odor (5370 spl)

Dolo; crm-bf-lt.gry, vfn-mdgrdxln, sucr-scat gd rhomb txt, dns, 1/5 fr-gd IXLN and fr vug por, NS, n. oil flor, n. stn, n. cut, n. odor (5380 spl)

Dolo; dk.gry-brn, fn-crsgrdxln, sucr-rhombic txt, most dns, 1/4 fr-gd IXLN, rhombic, and vug por, NS, n. oil flor, n. stn, n. cut, n. odor (5390 spl)

Dolo; crm-gry brn, some crm-md.gry, fn-mdgrdxln, sucr-rhomb txt, 1/4 fr-gd IXLN, rhomb & vug por, NS, n. oil flor, n. stn, n. odor (5400 spl)

Dolo; AA, dk.gry brn, some crm-md.gry, fn-mdgrdxln, sucr-rhomb txt, 1/4 w/por AA, NS, n. oil flor, n. stn, n. odor (5410 spl)

(5396-5408) Dolo; most crm-wht, heavily spkl'd w/grn & blk inclusions, vfn-crsgrdxln, sucr txt, scat pr-fr IXLN por, NS, n. oil flor, n. stn, n. odor (5420 spl)

Dolo; pred crm-wht, v. spkl'd grn & blk inclusions, (glauc & phosphate?) vfn-crsgrdxln, sucr-rhombic txt, 1/10 pr-fr IG and scat fr-gd IXLN por, NS, n. flor, n. stn, n. odor

Dolo; 2/3 crm-wht, heavily spkl'd w/grn & blk inclusions, AA, vfn-crsgrdxln, scat gd IXLN por, NS, 1/3 crm-lt.gry-lt.tan, vfn-fngrdxln, mly-v.gran txt, scat pr IXLN por, NS, n. flor

Dolo; most crm-lt.gry-lt.tan, AA, vfn-fngrdxln, mly-s.gran txt, pr IXLN por NS, scat pcs spkld grn and blk AA, por AA, NS, n. flor, n. stn, n. od.

Dolo; most crm-lt.gry-lt.tan, AA, vfn-fngrdxln, mly-s.gran txt, scat pr IXLN por, NS, n. flor, n. stn, n. odor (5460 spl)

Sdy Dolo; crm-wht-lt.gry, spkl'd grn, v. glauc, fn-crsxln, gran-rgh txt, soft sucrose, brittle, semi-friab IP, scat pr-occ fr IG & IXLN por, NS, n. flor, n. stn, n. odor (5470 spl)

Dolomitic Sd; crm-wht-lt.gry, spkl'd grn, v. glauc, fn-crsgrdxln, gran-rgh txt, brittle-semi-friab, subang-subrd, scat pr-occ fr IG & IXLN por, NS, n. flor, n. stn, n. odor (5480 & 15" cfs)

Sd; most clr-pink-crm-wht, fn-crsgrd, most vcrs grd, subang-rdd, gran-rgh txt, silica cem, most vf-crs grains in lrg, ang, qtzite, v. pyritic, brittle, most fr-gd IG por, NS, n. flor, n. stn, n. odor (45" & 60" cfs)

REMARKS

SPUD 3:15 PM 10-9-2015
RTD 7:00 AM 10-23-2015

"BIT RECORD"
1.) Varel HE21MSV (New) Under Surface to 5273'
2.) Varel HE21MSV (Rerun) 5273' to 5360'
3.) Varel HE21MSV (Rerun) 5360' to 5480' RTD

"VERTICAL SURVEYS"
1/2" @ 241'
3/4" @ 1253'
1/2" @ 2008'
3/4" @ 3267'
3/4" @ 4053'
3/4" @ 4420'
3/4" @ 4730'
3/4" @ 5360'

10-9-2015 - MIRT, RURT Prep to Spud
10-10-2015 - 7:00 AM Drlg @ 345' set 8-5/8"@ 287'
10-11-2015 - 7:00 AM Drlg @ 2115'
10-12-2015 - 7:00 AM Drlg @ 2960'
10-13-2015 - 7:00 AM Drlg @ 3474'
10-14-2015 - 7:00 AM Drlg @ 3962'
10-15-2015 - 7:00 AM PTD @ 4170' Running DST (1)
10-16-2015 - 7:00 AM CFS @ 4420' Prep for DST (2)
10-17-2015 - 7:00 AM Drlg @ 4520'
10-18-2015 - 7:00 AM Drlg @ 4635' after DST(3)
10-19-2015 - 7:00 AM Drlg @ 4751'
10-20-2015 - 7:00 AM Drlg @ 4840'
10-21-2015 - 7:00 AM CFS @ 5110'
10-22-2015 - 7:00 AM Drlg @ 5275'
10-23-2015 - 7:00 AM RTD @ 5458' CFS, Prep for Nabors ELogs
10-24-2015 - 7:00 AM RTD @ 5480' Plg and Abdn Loc

Geologist on location 3636' 5:00 PM 10-13-2015

Full Trip at 4053 To retrieve SHS tool lost when wireline broke during survey.

Mud Check at 4053: vis: 44 wt: 9.2 Chlor: 700 LCM: 4# Ph: 9.5 WL: 10.4

DST (1) 4042' - 4170'
30-30-45-90
Blow: good, built to 8 3/4" on IFP; no blowback on ISIP; good, built to 9 1/2" on FFP, no blowback on FSIP
200' MW, NS
(0% gas, 0% oil, 10% mud, 90% wtr)
IHP: 1998 FFP: 58-116
IFP: 27-54 FSIP: 1371
ISIP: 1350 FHP: 1938
Temp: 142°F
Chlorides MUD: 700 PPM DST: 25,000 PPM
Rw = 0.340 Ohms @ 59°F
Both Shut-in curves broken over

Rig check before DST vis: 70 wt: 8.9 LCM: 4#

Pipe Strap on DST (1)
Board: 4179.37'
Strap: 4178.42'
Diff: 0.95' short

Mud Check at 4170 (after DST): vis: 70 wt: 9.0 Chlor: 500 LCM: 3.0# Ph: 9.0 WL: 9.2

Rig Check at 4360: vis: 55 wt: 8.9 LCM: 7#

DST (2) 4304' - 4420'
30-30-30-60
Blow: weak built to 3/4" on IFP; no blowback on ISIP; no blow on FFP; no blowback on FSIP
5' Mud, NS
IHP: 2258 FFP: 12-15
IFP: 13-14 FSIP: 79
ISIP: 84 FHP: 2149
Temp: 138°F
Chlorides MUD: 500 PPM DST: NA
Rw = NA

Mud Check at 4420 during DST(1): vis: 51 wt: 9.3 Chlor: 500 LCM: 4.5# Ph: 9.5 WL: 9.4

Mud Check at 4480: vis: 75 wt: 9.2 Chlor: 500 LCM: 4.5# Ph: 9.5 WL: 9.4

DST (3) 4550' - 4630'
30-30-30-60
Blow: weak built to 1/4" on IFP; no blowback on ISIP; no blow on FFP; no blowback on FSIP
2' Mud, NS
IHP: 2311 FFP: 19-20
IFP: 12-15 FSIP: 22
ISIP: 18 FHP: 2278
Temp: 141°F
Chlorides MUD: 500 PPM DST: NA
Rw = NA

Mud Check at 4730: vis: 54 wt: 9.3 Chlor: 800 LCM: 4.5# Ph: 9.0 WL: 9.0

DST (4) 4666' - 4730'
30-30-30-60
Blow: wk surface blow, died 18" on IFP; no blowback on ISIP; no blow on FFP; no blowback on FSIP
5' Mud, NS
IHP: 2492 FFP: 14-16
IFP: 12-16 FSIP: 532*
ISIP: 242* FHP: 2406
Temp: 145°F
Chlorides MUD: 500 PPM DST: NA
Rw = NA
*Note: Both Shut-in curves still bldg, neither curve shows any breakover

Mud Check at 4818: vis: 52 wt: 9.3 Chlor: 500 LCM: 4# Ph: 10.0 WL: 8.0

DST (5) 4793' - 4840'
30-30-30-60
Blow: wk 1/4" decr to surface blow on IFP; no blowback on ISIP; no blow on FFP; no blowback on FSIP
2' Mud, Oil Spots in tool
IHP: 2467 FFP: 12-13
IFP: 18-14 FSIP: 772*
ISIP: 305* FHP: 2438
Temp: 148°F
Chlorides MUD: 500 PPM DST: NA
Rw = NA
*Note: Both Shut-in curves still bldg, neither curve shows any breakover

Mud Check at 4876: vis: 57 wt: 9.6 Chlor: 500 LCM: 3# Ph: 9.5 WL: 8.0

Mud Check at 5155: vis: 56 wt: 9.2 Chlor: 500 LCM: 3# Ph: 11.0 WL: 7.6

Trip for bit at 5273 Circ bottoms up prior to trip

Mud Check at 5335: vis: 52 wt: 9.5 Chlor: 500 LCM: 5.5# Ph: 10.0 WL: 8.0

Trip for bit at 5360 Did not Circ bottoms up

5480' RTD reached 7:00 A.M. 10-23-2015

COMPANY & WELL Coral Prod #33-05D Bammes-Brunswig
LOCATION 2310' FSL, 2310' FEL, SE/4
SEC 5 TWSP 2s RGE 41w
COUNTY Cheyenne STATE Kansas

ELEVATIONS
KB 3496'
GL 3487'

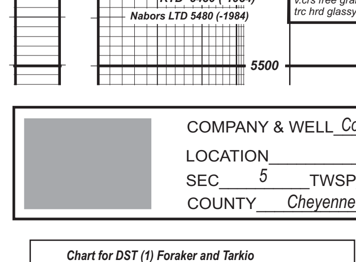
Chart for DST (1) Foraker and Tarkio


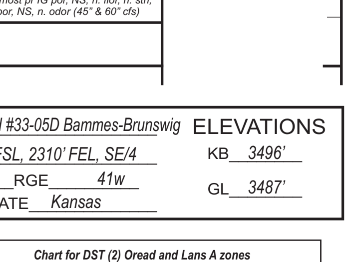
Chart for DST (2) Oread and Lans A zones


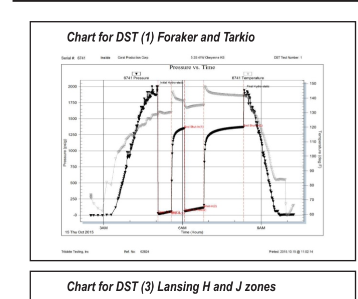
Chart for DST (3) Lansing H and J zones


Chart for DST (4) Lansing K and L zones

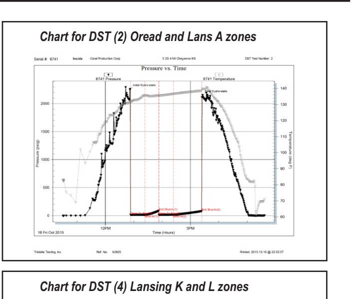
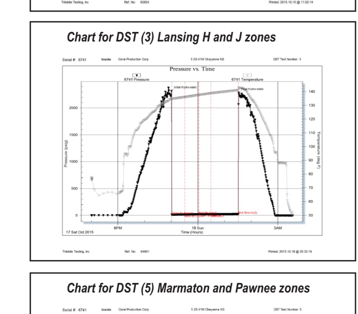




Chart for DST (5) Marmaton and Pawnee zones