# ROGER L. MARTIN

INDEPENDENT PETROLEUM GEOLOGIST 316-250-6970

# GEOLOGIST'S REPORT

## DRILLING TIME AND SAMPLE LOG

COMPANY VESS OIL CORPORATION

LEASE WILSON 'A' #445

FIELD EL DORADO

LOCATION 1500' FNL & 2310' FWL

SECTION 9 TOWNSHIP 25S RANGE 05E

COUNTY BUTLER STATE KS

### ELEVATIONS

KB 1363' GL 1357'

Measurements Are All From KB

API 15-015-23959

CONTRACTOR C&G Drilling, Rig #1

SPUD 11/03/2012 COMP 11/08/2012

RTD 2495' LTD 2494'

### ELECTRICAL SURVEYS

Pioneer Energy Services: DIL, CNL/CDL, ML

### CASING

SURFACE 6 jts 8&5/8" set @ 261' w/150 sx Class A, 3% CC

PRODUCTION 60 jts 5&1/2" set @ 2494' w/125 sx Thickset

| FORMATION TOPS | LOG | SAMPLES |
|---|---|---|
| Admire 550' | NP | NP |
| Admire 650' | NP | 660' (+703) |
| Burlingame | 834' (+529) | 833' (+530) |
| White Cloud Lm | 924' (+439) | 925' (+438) |
| White Cloud Sd | 934' (+429) | 935' (+428) |
| Topeka | 1087' (+276) | 1089' (+274) |
| Oread | 1401' (-38) | 1401' (-38) |
| Heebner | 1437' (-74) | 1438' (-75) |
| Douglas | 1466' (-103) | 1469' (-106) |
| Douglas Sd | NP | NP |
| Lansing | 1717' (-354) | 1718' (-355) |
| Kansas City | 1991' (-628) | 1991' (-628) |
| B/Kansas City | 2156' (-793) | 2157' (-794) |
| Checkerboard | 2231' (-868) | 2232' (-869) |
| Hepler Sd | NP | NP |
| Altamont | 2277' (-914) | 2280' (-917) |
| Pawnee | 2315' (-952) | 2317' (-954) |
| Cherokee | 2354' (-991) | 2356' (-993) |
| Ardmore | 2417' (-1054) | 2417' (-1054) |
| Viola | 2490' (-1127) | 2491' (-1128) |
| RTD/LTD | 2494' (-1131) | 2495' (-1132) |

### CHRONOLOGY

11/02/2012- MIRU; Drill rathole in the afternoon.

11/03/2012- SPUD 12&1/4" hole @ 8 AM. Kelly pin twisted off with bit @ 158'. Fish & put new Kelly on; TD 12&1/4" hole @ 264' @ 11 PM. Run 6 jts 8&5/8" 23#/ft csg @ 253'. Set @ 261' KB. Consolidated Cement w/150 sx Class A, 3%cc, Circ, good cement. Plug down @ 2:20 AM 11/04/2012.

11/04/2012- WOC @ 264'. Drillout @ 10:30 AM.

11/05/2012- Drlg @ 1762'. Mud up @ 1600'. Run PDC bit to 2200'. SHS @ 1617 - 1/4 degree.

11/06/2012- Drlg @ 2370'. Bit trip @ 2206'. Switched to conventional bit.

11/07/2012- DTD 2495'. Preparing to run DST #1, MW 9.4, VIS 52, WL 8.2, LCM 2

11/08/2012- RTD 2495'. Ran open hole logs: neutron-density porosity, dual induction, and microlog.

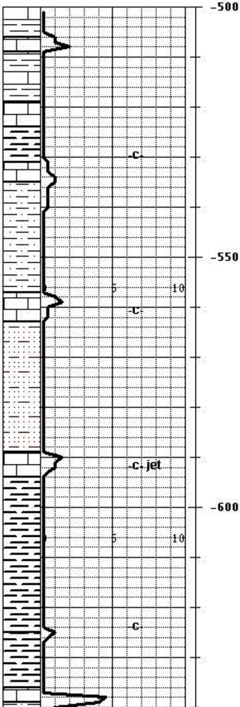
CASING JOB: Ran 60 jts 5&1/2" 14# & 15.5# J-55 ST&C Casing, Tally = 2496.44', plus float shoe = 1.00', Total = 2497.44'. Tagged TD @ 2495', Set @ 2494; Put on 6 centralizers and 2 baskets. Consolidated Services pump 500 gal mud flush. Cemented w/125 sx Thickset Cement. Caught pressure @ 33 bbls, Good circ of mud. Lift pressure to 650#, Rotated casing. Land plug @ 1100# @ 9:30 AM. Releases, it held. Set slips @ cut off casing.

REMARKS:

** E-log tops by P.Ramondetta, Geologist, VOC

Respectfully submitted.
Roger L. Martin, Geologist (Wellsite)

LITH | DRILLING TIME MIN/FT | DST



SAMPLE DESCRIPTION

sm LS: cm-tn-gy, mx- fnxln, sm fos, Pr- NVP. Pred SH: gy-blk.

LS: gy-dn & argil & LS: AA. Abndt SH: blk & dk-lt gy.

LS: cm-gy, sm fos Pkst w/Pr-Fr Por, NS. sm chlky. NS. & SH: AA.

LS: tn-bn, mx- Vfnxln, dn-hd, sm dolomc, VPr- NVP, NS.

SH- SILTS: gy-lt gy, micac.

sm SS (~10%)- SD CLUST: gy- transl, Vfn-fn Gr'd, rnd'd-anglr, silty, sm fribl, Pr- Fr Por, NS. sm calc.

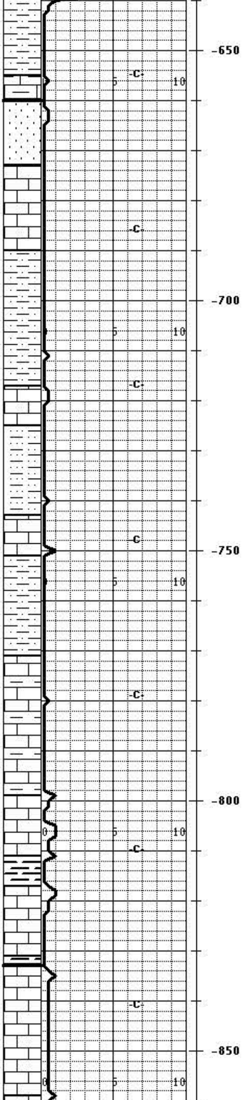
LS: cm-bf, mx- Vfnxln, sm grnlr & fos Pkst, sm chlky, Pr- NVP, NS.

SH: pred lt-dk gy- blk, sm carb.

SH: pred dk-md gy.

LS: tn-gy-cm, mx- fnx, Pred dn, VPr- NVP, NS.

REMARKS



SH: AA & SILTS: lt-dk gy.

LS: gy-tn, argil & dn Mdst.

**660' (+703)**
**ADMIRE 650'**
**{Fr SFO)**

{ADMIRE 650'} SD: lt gy & lt tn-bf- STN, ~10% Sd Clust w/brt FLR & Fr SFO, Vfn Gr'd, silty, micac, VPr- Pr visbl Por: mIGR Por, ~5% w/lt STN & FLR in dry spl, Sl Odor, Sl- Fr Cut.

LS: gy-tn, sm Vargil, sm fos- Wkst- Pkst, Pr- NVP, sm silty- sndy- Vfn Gr'd, Trc FLR- SFO & Cut, AA.

SILTS- SH: dk-lt gy & gn-gy, sm micac (VRr Sd Clust: AA w/FLR- SFO- STN- Cut, AA).

LS: cm-tn, sm dn- mx- fnx, sm argil, Pr- NVP, NS.

SILTS: lt-dk gy, sm micac, sm sndy, Vfn Gr'd, sm shly (VRr Sd Clust AA w/Por- FLR- SFO- STN).

LS: cm-bf-tn, dn- mx, Rr grnlr Pkst, sm argil Mdst.

SH- SILTS: gy, sm micac.

LS: cm-gy-tn, Pred dn- mx- Vfnx, sm grnlr & fos Pkst- Wkst, VPr- NVP, NS. Rr wh-chlky. NS. sm argil LS & SH: AA & sm blk carb SH.

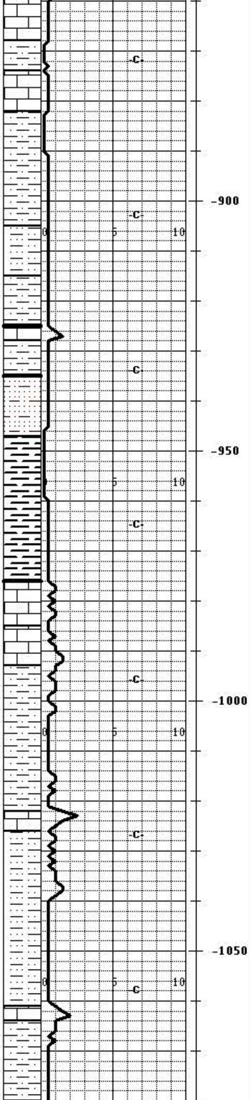
LS: cm-tn & gy-wh, Pred dn- chlky & mx- fnx w/VPr- Pr Por: pp Por, IX Por, NS.

SH: gy & blk carb.

LS: cm-tn, sm dn, sm grnlr Pkst- Wkst w/VPr- Pr Por, NS. sm wh-chlky & dn Mdst, Pr- NVP, NS. sm argil LS.

**833' (+530)**
**BURLINGAME**

{BURLINGAME} LS: wh-tn, chlky & dn- mx- fnx, sm grnlr Pkst & fos Pkst- Wkst, sm Pr- Fr Por: lGr Por, lfos Por, pp- vug Por, NS. VSl Cherty. NS.



LS: gy-tn-cm, pred dn & argil.

SH- SILTS: gy, sm micac.

LS: gy-bf, mx & Vfnly grnlr & argil, sm cm-wh, sm chlky, Pr- NVP, NS.

SH- SILTS: dk-md gy, pred micac.

SILTS & SILTY SS: <5% w/subsat- sat brt FLR & VSI- SI SFO.

**{VSI- SI SFO)**

SH- SILTS: AA.

**925' (+438)**
**WHITE CLOUD LM**

{WHITE CLOUD} LS: gy-tn, dn- mx, sm argil.

SH- SILTS: lt-dk gy, micac.

**935' (+428)**
**WHITE CLOUD SD**

{WHITE CLOUD} VRr SS: lt-md gy w/Tn STN, Vfn Gr'd, silty, fribl w/Pr- Fr IGr Por, subsat-sat FLR & STN, VSI- SI SFO & Cut & VRr Sndy Silts w/ VPr- Pr visbl Por, brt FLR & VSI SFO & Cut. >95% SH- SILTS: AA.

SH: dk- lt gy.

{HOWARD} LS: tn-gy-wh, dn- mx, sm chlky, VPr- NVP, NS; sm argil LS.

LS: tn-gy-wh, sm mot Pkst- Wkst & mx- fnx, VPr- NVP, sm argil, NS.

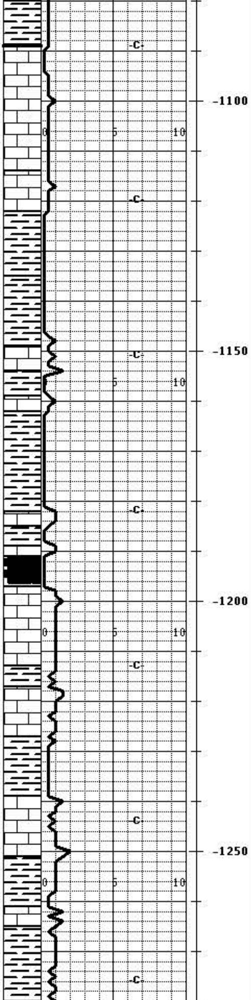
SILTS: dk-lt gy, micac, sm sndy & SH: lt-dk gy, sm micac.

LS: tn-gy-wh, dn- mx- fnx, sm SI fos, sm chlky, sm argil, VPr- NVP, NS.

SILTS: lt-dk gy & gn-gy, sm sndy: Vfn Gr'd & micac.

LS: tn-gy-wh, Pred dn- mx & subchlky w/VPr- NVP, NS.

SH- SILTS: dk- lt gy, micac & SI pyrtc.



SH: gn-gy & blk.

{TOPEKA} LS: cm-tn, mx- fnx, VRr mdx- 2nd ReX, prt wh-chlky, fos- fusul'ds, sm grnlr Pkst, Pr- Fr Por: IX Por, IGr Por, IFos Por, NS. Sl Cherty: dk blu-gy, sm fos, shrp,

LS: AA, sm wh-chlky, NS.

SH: gy-blk, semi carb, micac.

SH: AA.

LS: tn-gy-bn, dn- mx- fnx, VRr Md- VCrsX's, sm argil-shly, VPr- NVP, NS.

SH: gy & gn-gy, Rr pyrtc, sm blk carb SH.

LS: whtn-gy, mx- fnx, VRr Md- VCrsX's- 2nd ReX, sm grnlr Pkst, prt chlky, sm Pr- Fr Por, NS.

SH: blk carb- Vcarb.

LS: AA & dn Mdst & LS: AA w/Pr- Fr Por: IX Por, IGr Por, NS.

SH: gy-blk & gn-gy.

LS: tn-gy-wh, dn- mx- fnx, sm fos, Pr- NVP, NS, sm argil.

SH: AA.

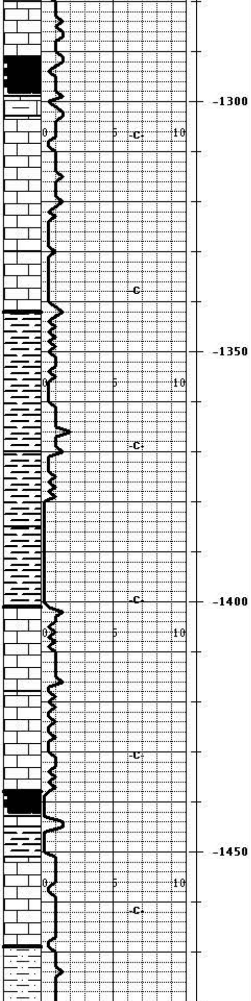
LS: tn-gy-wh, dn- mx- fnx, prt chlky, sm grnlr Pkst, VPr- NVP, NS.

SH: gy & gn-gy & blk carb.

LS: tn-gy-wh, dn- mx & argil, VPr- NVP.

SH: AA.

**1089' (+274)**
**TOPEKA**



LS: wh-gy-tn, prt chlky & mx- fnx, sm fos, VPr- NVP.

SH: blk carb- Vcarb.

LS: gy, dn- argil & gn-gy SH.

LS: wh-tn, prt chlky, & mx- fnxln, VRr prt Mdxln- Crs 2nd ReX: Pr- Fr Por: IX Por, pp- vug Por, I Gr Por, NSFO, VRr FLR, NC.

LS: tn-wh, mx- fnxln, Rr prt Mdxln- CrsX's- 2nd ReX, sm chlky, Pr- Fr Por, Trc Gd Por, NS.

{KANWAKA} SH: gy-blk, micac.

SH: md-dk gy & blk, micac.

SH: AA & gn-gy.

**1401' (-38)**
**OREAD**

{OREAD} LS: wh-tn, prt chlky, mx- fnxln, VRr prt MdX- 2nd ReX, Pred Pr- NVP w/NS.

LS: bf-tn-wh, sm dn, prt chlky, sm mx- Mdx, Pred Pr- NVP, NS, sm dn Mdst.

**1438' (-75)**
**HEEBNER SH**

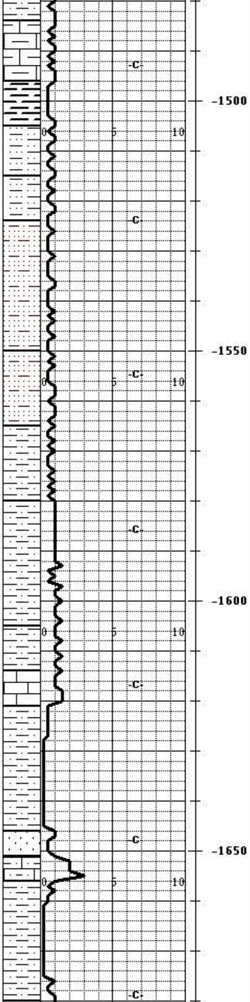
{HEEBNER{ SH: blk carb- Vcarb. LS: AA & gy dn Mdst

SH: gy-blk & gn.

LS: gy-tn & wh, Pred dn to chlky, sm grnlr Pkst & mx- Vfnx w/Pr- VPr Por, NS.

**1469' (-106)**
**DOUGLAS SH**

{DOUGLAS} SH- SILTS: dk-lt gy, micac, sm sndy Silts & silty Sd Clust: gy, Vfn Gr'd, micac, sm calc, Vwell cmt'd, VPr- Pr Por, NS.



LS: gy, argil Mdst & Wkst & Pkst w/VPr- NVP.

SH: gy-blk, micac.

SILTS: dk-lt gy, micac, sm sndy.

SILTS & SILTY SS: lt-dk gy, Vfn Gr'd, micac, sm calc, Pr-NVP.

SS- SD CLUST: lt gy-wh, bf-gy, Vfn- fn Gr'd, rnd'd- anglr Gr's, well sort'd, well cmt'd to Rr fribl w/Pr- Fr IGr Por w/NS, NF, NC. sm VSilty & shly.

SS- SD CLUST: AA, well cmt'd to VRr fribl, Pr- Fr Por w/NS, NF, NC. sm Vsilty & shly Sd Clust & Silts, AA.

SH: gy-blk subcarb & SILTS: lt-dk gy, sm Sndy: Vfn-fn Gr'd.

Pred SH: gy- blk, sm SILTS: AA, VRr Sd Clust: AA, NS.

SH- SILTS: AA & SH: gn-gy.

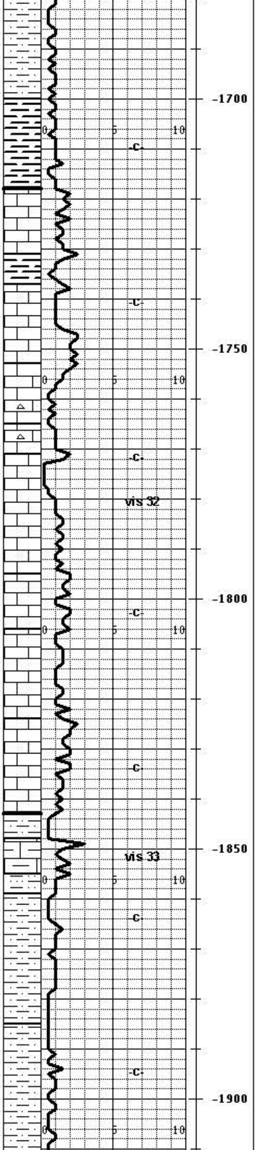
LS: bf-tn, gy-wh, mx- fnxln, Pr- NVP, NS, sm chlky w/NS.

SH- SILTS: lt-dk gy & blk, sm Sdy Silts & Silty SS: AA w/NS.

SS: lt gy-wh, Vfn- fn Gr'd, well cmt'd, rnd'd- anglr, Pr Por, NS.

LS: gy-tn, dn- mx- Vfnxln, VPr- NVP, sm argil- silty & sndy.

SH: gy-blk, sm carb. & SILTS: AA.



SH- SILTS: AA.

SH: gy-blk, AA.

{LANSING} LS: wh-tn, mx- fnxln, VRr prt Mdxln- 2ReX, prt chlky, sm dn hd.

SH: gy- blk.

LS: tn-gy-wh, sm mot Pkst, mx- fnxln, prt chlky, Pr- NVP, NS.

LS: wh-tn, chlky to dn & mxln- Vfnxln, mIX Por, IGr Por, pp Por, <5% w/FLR, Trc STN & Cut, NFO. Cherty: cm-gy-tn, shrp.

LS: AA, chlky & sm grnlr Pkst, Pr- NVP, Trc FLR- Cut.

LS: wh-tn, prt chlky sm mx- Vfnxln, sm prt oomldc w/Fr Gd Por, sm grnlr, Pr- Fr IGr Por & IX Por, Trc STN-FLR-Cut, NFO, >99% Barren.

LS: wh-gy-tn, prt chlky, Pred dn, Trc Por & STN, sm argil- shly.

LS: wh chlky, sm grnlr Pkst w/Pr- Fr Por w/NFP, Trc FLR-STN- Cut, ~99% barren.

LS: gy-tn-wh, pred dn Mdst, sm argil- shly, sm chlky, VPr-NVP, NS.

{BASE/LANSING} SH- SILTS: gy & gn-gy, calc.

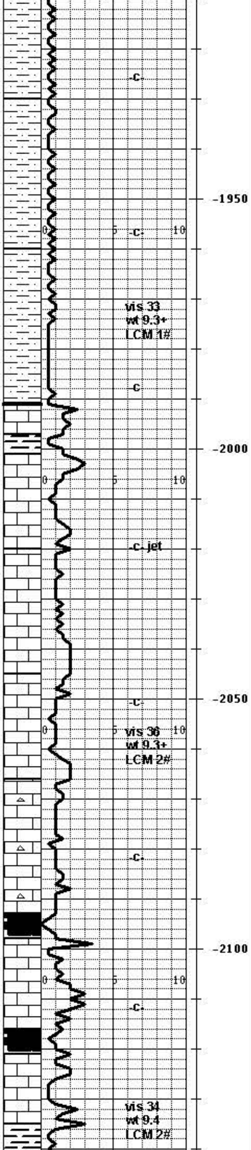
LS: gy, Vargil- shly- silty.

SILTS: gy & gn-gy, Vcalc & lmy.

SH- SILTS: gn-gy, sm micac.

SH- SILTS: gn-gy, sm calc.

**1718' (-355)**
**LANSING**



SILTS- SH: gy, sm calc.

SH- SILTS: gy, sm calc.

**1991' (-628)**
**KANSAS CITY**

{KANSAS CITY} LS: gy-tn-bn, sm mot, pred dn, sm argil.

SH: gy-blk.

**{VSI SFO)**

LS: wh-tn-gy, sm mot, mx- Mdx- sm 2nd ReX, prt chlky, VPr- Pr visbl Por: pp- vug Por, IX Por, ~5% w/spt'd- sat FLR- STN, VSI SFO & VSI milky Cut, VSI Odor.

**{VSI SFO)**

LS: wh-gy-tn, sm mot Pkst, prt chlky, Pred VPr- Pr visbl Por: pp- vug Por, IGr Por, Trc lt STN & Cut, <5% w/spt'd-sat FLR, VSI SFO, >99% barren w/Pr- NVP. Abndt dn Mdst.

**{Trc SFO)**

LS: wh-gy-tn, prt chlky & mot- ool & fos Pkst w/Pr- Fr Por: mIGr Por, lool Por, fos Por, Trc FLR, Trc SFO- STN- Cut, ~99% barren; sm dn Mdst- Wkst w/VPr- NVP.

**{Trc SFO)**

LS: wh-tn, mx- fnxln, prt chlky, sm fos Pkst, VPr- Pr IGr Por, lfos Por, IX Por, Trc SFO- FLR- STN- Cut, >99% barren, sm 2nd ReX. Cherty: wh-bf-gy, shrp.

{STARK} SH: blk carb- VCarb.

**{Trc SFO)**

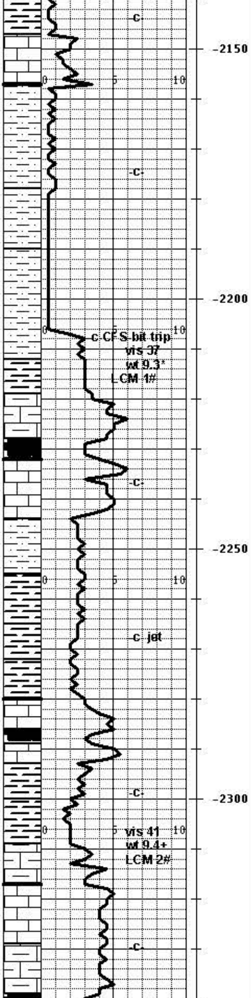
LS: wh-tn-gy, mx- fnxln, VRr Md- VCrsX's- sm 2nd ReX, VRr Fr- Gd Por: IX Por, vug Por, Trc SFO, <5% w/spt'd-sat FLR & Tn OSTN, sm Pr IGr & IX Por w/Trc STN, Trc SFO- FLR- STN & Cut.

{HUSHPUCKNEY} SH: blk carb- Vcarb.

LS: wh-gy-TN (STN), mx- fnxln, sm grnlr, Pr- Fr IX Por & IGr Por, <5% w/spt'd- sat FLR & STN, Trc SFO, Pr- Fr Cut, Pred dn to chlky LS, sm argil- shly. Sl Cherty: cm-blu-gy, shrp.

**{Trc SFO)**

SH: gn-gy & blk carb & bn.



LS: tn-gy-wh, sm mot Pkst, mx- Vfnxln, VPr- Pr Por, NS.

{BASE/ KANSAS CITY} SH: dk gy-blk subcarb & gy micac Silty SH.

**2157' (-794)**
**BASE/KANSAS CITY**

SILTY SH- SILTS: lt-md gy, micac.

SILTS- SH: AA & sm calc & lmy.

SH: gy-blk, sm calc & lmy.

LS: gy-blk, Vargil- shly & Sl fos, VPr- NVP.

SH: blk carb & gn-gy.

**2232' (-869)**
**CHECKERBOARD**

{CHECKERBOARD} LS: tn-wh-gy, sm mot- ool & fos Pkst, sm dn & argil Mdst- Wkst, sm shly, VPr- NVP, NS.

SH: gn & mrn-rd & gn-gy, VC & SILTS: gy, micac, sm Sndy: Vfn Gr'd.

SH: gn-gy & mrn-rd.

SH: Gy, sm calc, Sl micac.

SH: AA.

**2280' (-917)**
**ALTAMONT**

{ALTAMONT} LS: tn-gy-cm, Pred dn Mdst- Wkst, sm argil.

SH: blk carb & VCarb.
LS: gy-tn-cm, ool & fos Pkst w/Pr- NVP, NS.

SH: AA & gn-gy & dk gy, sm pyrtc.

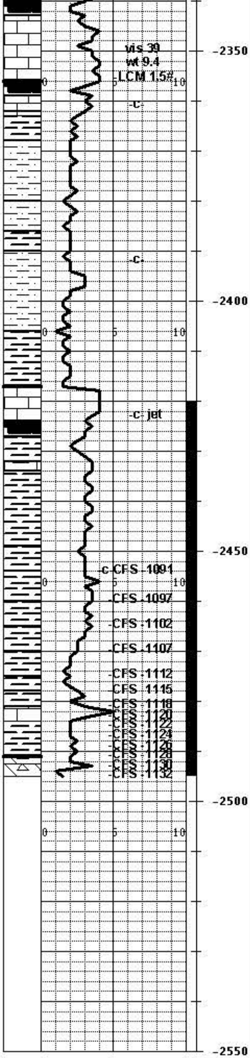
SH: blk subcarb- carb, sm lmy & calc.

LS: wh-tn & gy- blk, Vargil & shly.

**2317' (-954)**
**PAWNEE**

{PAWNEE} LS: wh-gy-tn, sm mot- ool & fos Pkst & mx-fnx w/VPr- Pr Por, NS, prt chky w/NS.

LS: dk- lt gy-tn, dn & argil Mdst- Wkst, sm argl- shly.



SH: blk carb- Vcarb (VAbndt in 2350' spl).

LS: tn-gy-wh, Pred dn Mdst- Wkst & Rr Pkst, sm chky, VPr- NVP, NS.

{CHEROKEE} SH: blk carb.
& LS: gy-tn-wh, Mdst- Wkst, VRr Pkst, VPr- NVP.

SH: blk subcarb- Vcarb & gn-gy.

SILTY SH: gyy & gn-gy, micac.

SH- SILTS: lt gy, micac.

SH: gy- blk.

SH- SILTS: lt- dk gy, micac. SILTS: lt- dk gy, micac, calc.

SH: gy-blk, micac.

{ARDMORE} LS: tn-wh, Pred dn hd & mx- fnx, sm prt chlky, sm argil- shly.

SH: blk carb.

LS: gy-blk & tn dn & argil- shly Mdst.

SH: lt- dk gy & aqu-turq-tn, sm wxy, sm olv-gn SH.

SH: Pred dk gy & gn-gy.

SH: gn-gy.

SH: gn-gy, sm pyrtc.

SH: Pred dk gn-gy.

SH: lt gn-gy & lt- dk gy-bn (Trc LS AA)

SH: gy-bn-blk, subcarb, Rr pyrtc.
SH: AA, Incrs pyrtc.
LS: dk-lt gy, bf-tn, mx-Vfnxln, argil- dolmc & pyrtc.
SH:gy-bn-blk, subcarb-Rr carb, pyrtc, phos..
SH: AA, sm hydrocarb Odor.
SH: AA
{VIOLA} DOLO: (2493' 20 min} ~60% Viola, Pred CHERT: >90% wh-gy, cm-bf, sm domomc, subshrp, sm mot, Sl- Vwthr'd w/IGr Por, pp Por, Vug Por, Trc VGd vug Por, spt'd-subsat brt FLR, Tn OSTN, Sl- Fr SFO; <5% DOLO: bf-tn, mx- Vfnxln, silic Cherty & VRr sucro w/Pr- Fr visbl Por: mIX Por- IX Por, subsat brt FLR- STN, Sl- Fr SFO & Sl- Fr milky Cut, Fr Odor. (45 min} >30% <40% CHERT: AA, Sl wthr'd w/sm 2nd ReX, drusy qtz X's- aprnt Frc Edgs & wthr'd Edgs w/FLR- SFO & STN; sm dolomc Chert w/FLR- SFO & STN. ~5% DOLO (VSl Incrs): bf-tn-STN, mx- Vfnxln, Pred cherty & silic, VRr sucro w/Fr IX Por, Pred Pr visbl Por & mIX Por, spt'd to sat rich Tn OSTN, brt FLR, Sl- Fr SFO- Gsy & Sl- Fr Cut, Fr Odor. (2495' 20 min} (~40% Viola) Pred DOLO: (~80% DOLO) Rich Tn OSTN- pred sat, Vfnxln- ssucro w/Fr Por: IX Por & mIX Por w/sat brt FLR & rich tn STN, Fr-Gd SFO- Gasy; Fr- Gd Strmg Cut & milky Cut, Strng Odor. Cherty: wh-gy, semi- wthr'd w/FLR- SFO (~20% Chert). (45min} Pred DOLO: (~70% DOLO) Rich Tn-sat OSTN, Pred Vfnxln & mxln, sucro w/Fr- Gd IX Por w/sat brt FLR & STN & Fr-Gd SFO- Gsy & Fr-Gd Strmg & milky Cut, Strong Odor. VCherty: (~30% Chert) wh-gy-bf, sm semishrp- wthr'd & sm triplc & dolomc, sm Pr-Fr Por, spt'd-subsat FLR- STN- SFO & Cut in Chert.

**2356' (-993)**
**CHEROKEE**

**2417' (-1054)**
**ARDMORE**

**2491' (-1128)**
**VIOLA**
**{Fr-Gd SGsy Oil)**
**2495' (-1132)**
**RTD**

**VESS OIL CORP**
**WILSON 'A' #445**
**1500'FNL I 2310' FWL**
**Sec 9-25S-05E**
**BUTLER CO., KS**
**API#15-015-23959**

**DST #1**
**VIOLA**
**2420'-2495'**
**30-45-45-60**
**1st Op: BOB in 4 min, No BB**
**2nd Op: BOB in 6.5 min, No BB**
**Rec: 108'**
**VSWHOCM**
**(20% O, 1% W, 79% M)**
**496' GWHOCM**
**(23% O, 11% G, 14% W, 52% M)**
**DC 178' GOCMW**
**(10% O, 8% G, 51% W, 31% M)**
**TF: 782'**
**TOOL SPL:**
**11% O, 76% W, 13% M**
**IHP: 1182**
**IFP: 17-244**
**ISIP: 576**
**FFP: 229-368**
**FSIP: 578**
**FHP: 1181**
**BHT: 103.8 F**