ROGER L. MARTIN

INDEPENDENT PETROLEUM GEOLOGIST 316-250-6970

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY VESS OIL CORPORATION

LEASE WILSON 'A' # 455

FIELD EL DORADO

LOCATION 990' FSL & 2260' FWL

SECTION 8 **TOWNSHIP** 25S **RANGE** 05E

COUNTY BUTLER **STATE** KANSAS

ELEVATIONS

KB 1390' **GL** 1381'

Measurements Are All From KB:1390'

API 15-015-24065-0000

CONTRACTOR C & G DRILLING, Rig #2

SPUD 8/18/16 **COMP** 8/22/16

RTD 2421' (-1031) **LTD** 2422' (-1032)

ELECTRICAL SURVEYS

ELI: DIL & CDL/CNL/PE & MEL

2 DST's by DIAMOND

CASING

SURFACE 8&5/8"set @ 262' w/165sx Class A cmt; 3%CaCl

PRODUCTION 5&1/2" 15.5#/ft; J-55 csg; set @ 2390' w/ 150sx

FORMATION TOPS	LOG	SAMPLES	CHRONOLOGY
			8/15/16; MIRU C&G Drlg Rig#2
Admire 650 SS	664' (+726)	665' (+725)	
Burlingame	784' (+606)	785' (+605)	8/17/16; Drill Rathole; start @ 1:-00 pm
White Cloud LS	908' (+482)	908' (+482)	8/18/16; Spud 12&1/4"hole @ 7:am; TD: 12&1/4"hole
White Cloud SS	918' (+472)	918' (+472)	Ran 6jts 8&5/8" 24#/ft csg=263'; set @ 273' KB.
			Consolidated Cement w/ 165sx Class A, 3%CaCl;
Topeka	1072' (+318)	1079' (+311)	Circ good cmt; Plug down @ 6:22pm 8/18/16/
Oread	1373' (-17)	1373' (-17	8/19/16; Drlg under surface @ 3:40am; Drlg @ 515' @
			7:00 AM.
Heebner SH	1410' (-20)	1413' (-18)	
			Bit Trip @ 1691'{PDC out; Tri-cone in) drlg @ 5:am.
DOUGLAS GRP	1441' (-51)	1440' (-50)	8/20/16; Drlg @ 1743' @ 7:am;
Douglas SS	1503' (-113)		Deviation Surveys: 1/4deg @ 445'; 1/2deg @ 872'
Iatan	1619' (-229)	1617' (-227)	3/4deg @ 1691'
LANSING	1682' (-292)	1682' (-292)	8/21/16; Drlg @ 2330' @ 7:00 am.
B/LANS.	1803' (-413)	1806' (-416)	Wiper short trip & DST#1 @ 2401'
KANSAS CITY	1959' (-569)	1958' (-568)	8/22/16; CFS@2411' & CFS@2416' & CFS@2421'
Stark SH	2061' (-671)	2060' (-670)	DST#2 @ 2421'; Survey: 3/4 deg @ 2421'
B/KC	2115' (-725)	2114' (-724)	
			8/23/16; LDDP@RTD:2421; LTD:2422; DP laid dwn by
Checkerboard LS	2189' (-799)	2188' (-798)	5:30am; Start csg in hole @ 6:30am.
			SEE REMARKS
Altamont LS	2235' (-845)	2233' (-843)	
Pawnee LS	2272' (-882)	2271' (-881)	
CHEROKEE	2312' (-922)	2310' (-920)	
Ardmore	2368' (-978)	2367' (-977)	
ARBUCKLE	2378' (-998)	2376' (-996)	
TOTAL DEPTH (LTD/RTD)	2422' (-1032)	2421' (-1031)	

REMARKS:

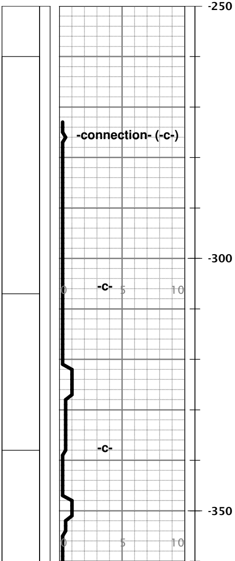
E-LOG TOPS BY PAUL RAMONDETTA, GEOLOGIST, VOC.

RAN 57 JTS OF 5&1/2" 15.5#/FT J-55 CASING; TALLY=2390.02 + PACKER SHOE =
2.50'. TOTAL=2392.52', SET @ 2390' KB; PUT ON 6 CENTRALIZERS & 1 BASKET.
TAGGED TD @ 2421', & PICKED UP 31', SET@ 2390'KB.CIRC 20MIN. PUMP 500GAL
MUD FLUSH, CEMENT RATHOLE WITH 15 SX & MOUSEHOLE W/ 10 SX.
CONSOLIDATED SERVICES CEMENTED W/ 150 SX THICKSET W/ 5#/SX KOLSEAL.
LIFT PRESSURE TO 550#. LAND PLUG @ 1000# @ 11:30 AM ON 8/23/16; RELEASE,
HELD. SET SLIPS AND CUT OFF CASING. TICKET # 51387.
BY CASEY COATS, ENGINEER, VOC.

RESPECTFULLY SUBMITTED,
ROGER L MARTIN, GEOLOGIST (WELLSITE)

LITH | POROSITY | DRILLING TIME MIN/FT | DST

SAMPLE DESCRIPTION | **REMARKS**



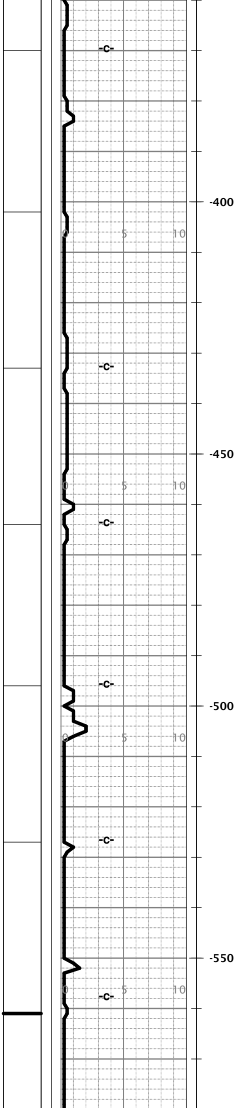
307'sample(spl} LS: wh-bf-tn, microXln(mx) to fnXln; & fos- Pkst; pred pr-Fr visbl Porosity(Poro) InterGranular Poro(IGr) & InterXlnPoro(IXP) & vug & moldc Poro; Very rare (Vrr) <5% w/ bright (brt) FLR & SlSFO & Fr milky Cut, Sl Odor; sm argil LS & SH: gray(gy) & green(gn) & black(bk) carb.

Slight Show Free Oil {SlSFO)

338'spl} LS: wh-gy-tn, sm mx- prt fnXln{fnX) & sm Pkst: fos & ool; Vrr oomldc; ~10% w/ pr-Fr Poro: pin point (pp) & I.ool & I.fos, & IGr Poro w/ spt'd to subsat brt FLR & SlSFO & Cut.

{SlSFO)

370'spl} LS: As Above (AA) & Abndt SH: dk-lt-gy.



402'spl} LS: AA; & tn dn- mx-fnX; pred Vpr Poro to No Visbl Poro (NVP) No Show (NS)

Trace Show Free Oil {TrcSFO)

433'spl} LS: wh-gy, semi-chlky Pkst- granulr; pred pr visbl Poro w/ NS; (Trc LS: AA w/ SFO & STN & FLR & Cut); & SH: AA; sm bk & pyrtc.

464'spl} V.Abndt SH: VC, gy-bk, & gn-gy, sm pyrtc; LS: cm-gy, sm tn- Trc O.STN; sm granlr Pkst, & sm mx-fnXln, w/ Trc MdX-CrsX- 2nd ReX; Vrr <5% w/ spt'd- sat FLR & O.STN & SlSFO & Cut.

{SlSFO)

496'spl} Trc LS: AA; & LS: Pk'd Grst, & fnXln-sucro w/ pr-Fr IXP & IGr Poro; spt'd - sat STN & FLR & SlSFO & Cut, sm pyrtc; sm dn & semi-chlky LS w/ pred Vpr-NVP; & Abndt SH: AA.

{SlSFO)

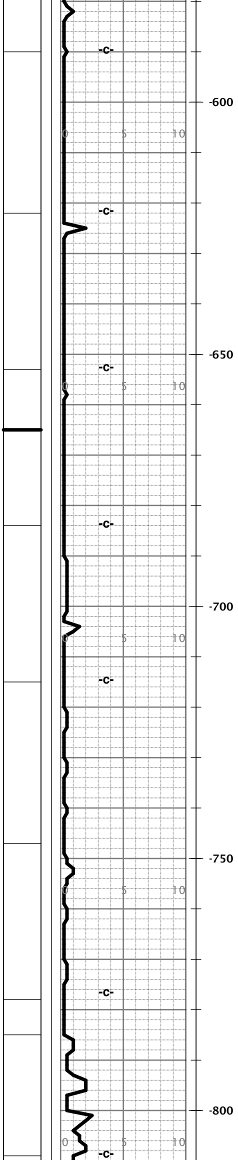
527'spl} Incrs LS: gy-wh, dn & argil Mdst & subchlky; w/ pred Vpr-NVP w/ NS.

558'spl} Abndt SH: gy-bk, sm bk carb; sm LS: AA; pred Mdst-Wkst, & Rare(Rr) Pkst w/ pred pr-NVP w/ NS.

590'spl} V.Abndt SH: bk carb- V.carb, & pyrtc; & gy SH: AA; & Rr LS: sm dn hd Mdst.

561'(+829)
ADMIRE 550 Sd
{SlSFO)

622'spl} Silts: gy, Sndy- VfnGr'd, sm calc, micac, Vrr FLR & O.STN & Trc SFO & Cut; Vrr Silty Sd Clusters: gy, VfnGr'd, Rnd'd-anglr, subfribl w/ pr visbl Poro; <5% w/ brt FLR & O.STN & SlSFO & Cut; Sl Odor; sm dn & argil LS: AA; & Abndt SH: gy-bk.



653'spl} Silts:AA, incrs gy-gn sm calc & Sndy: VfnGr'd; Vrr (<5%) Silty Sd Clusters: gy- tn-O.STN; VfnGr'd AA; pr-Fr Poro w/ Sl-Fr SFO & FLR & STN & Cut; Fr Odor; & SH: AA; Trc dn & argil LS: AA.

684'spl} SH: AA; & Abndt Silts & SH: dull gy, sm calc & micac, sm sndy;

Trc dn & argil LS: AA.

665' (+725)
ADMIRE 650 Sd
{Fr-GdSFO)
(Fair to Good
Show Free Oil)

684'spl.cont'd & 715'spl} SS: >10%<20% Sd Clusters: gy-tn- O.STN; Vfn-fn Gr'd, w/ Trc Md Gr's; Rnd'd to anglr; pred fn Gr'd subRnd'd to subanglr w/ mod sphr; sm VfnGr'd & V.silty, pred sl calc; sm V.friabl Sd Clust w/ Fr-VGr'd Poro w/ subsat- sat brt FLR & O.STN, w/ Fr-Gd SFO & Fr-Gd milky Cut, Strong Odor.

715'spl.cont'd} Rr Sd Clusters: AA; ~5% w/ SFO-STN-FLR-Cut; Pred Silts & SH: lt-dk-gy & bk SH.

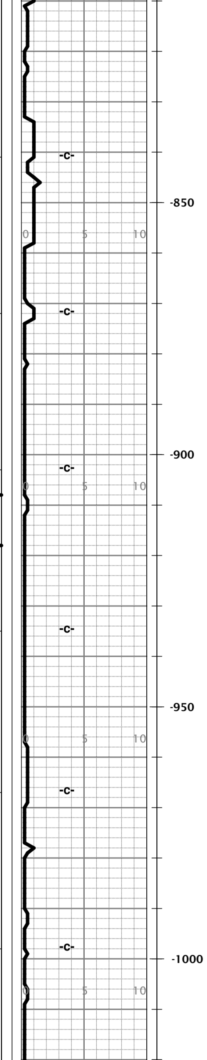
747'spl} SS: Abndt Sd Clusters: (>20%) gy, Vfn-fn Gr'd, Rnd'd to anglr Gr's; pred silty & calc to V.calc, sm well cmt'd & sm fribl; ~99%Barren; (Trc Sd Clust AA w/ FLR-SFO-STN-Cut).

788'spl} SH: AA; Sm LS: gy, dn & argil Mdst & Wkst.
Silts-SH: lt-dk-gy, micac; sm bk carb;
& sm LS: pred gy dn Mdst.

809'spl} Pred SH: gy-bk & gn-gy, sm pyrtc;
sm LS: gy, dn, Mdst.

785' (+605)
BURLINGAME LS
{TrcSFO)

841'spl} Rr LS: tn-gy-wh, pred dn- mx; & Mdst-Wkst; Trc Pkst; Vpr-pr visbl Poro; Trc FLR-SFO-STN-Cut; & SH:AA.



872'spl} >10%<20% LS: wh-gy-bf-tn, sm chlky & subchlky; sm dn Mdst-Wkst; Rr Pkst; Trc fn-MdXln- sm 2nd ReX; Vpr-pr visbl Poro; Trc FLR-SFO-STN-Cut; pred barren.

{TrcSFO)

903'spl} Abndt LS: gy-wh, & tn, pred dn- mx-fnX; & Mdst-Wkst; Trc Pkst; pred pr Poro to NVP w/ NS.

Abndt SH: gy-bk.

935'spl} Pred SH: dk-gy-bk, sm bk carb; & sm gy Silts.

908' (+482)
WHITE CLOUD LS

967'spl} Trc LS: gy, dn, Mdst; pred SH & Silts: AA.

918' (+472)
WHITE CLOUD SS
{VSI-SISFO)

967'spl.cont'd} Wh.Cloud SS: V.rare(Vrr) Sd Clust: gy-bf-tn-O.STN, Vfn Gr'd, silty, micac, pred fribl w/ Fr-Gd Poro; VSl-Sl SFO & subsat-sat FLR & STN & milky Cut; VSl Odor {<5% Sd Clust w/ FLR-SFO-STN-Cut).

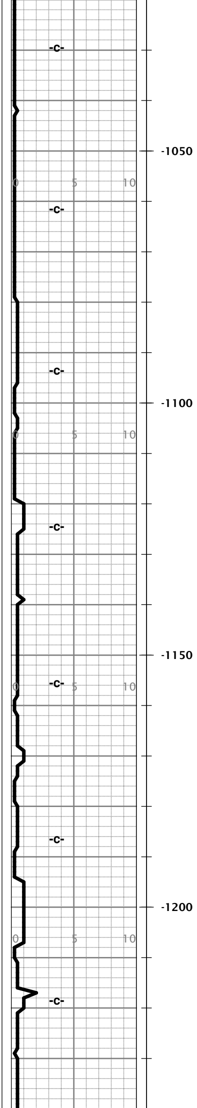
FUD MUD RPT
11:45AM; 8/19/16
Drlg @ 934'
Wt:8.6; Vis:28
Cl: 500 ppm
Ca: 40 ppm

998'spl} Pred SH: gy-bk, sm carb;
(Trc Sd Clust: AA)

998'spl.cont'd} ~20% LS: lt-dk-gy & tn, sm Wkst & Pkst w/ Vpr-pr visbl Poro; Trc milky Cut; w/ NSFO.

1030'spl} Abndt gy-bk SH: AA.

1030'spl.cont'd} LS: lt-dk-gy & tn, sm Wkst & granlur Pkst w/ Vpr-pr Poro; Trc milky Cut, AA; NSFO; sm dn & argil Mdst.



1062'spl} Pred SH: dk-gy-bk, & Silts: dk-gy-bk, & lt-md-gy, micac & sndy, & sm sl calc.

1062'spl.cont'd} Vrr (<5%) Sd Clusters: gy -bf-tn-O.STN; Vfn Gr'd, silty, sm sl calc, sm fribl w/ Fr Poro w/ subsat-sat brt FLR {wet & dry) & O.STN; Sl-Fr SFO; & strmg to milky Cut, VSl Odor; & Vrr Silts w/ FLR-SFO-STN-Cut; AA.

1094'spl} SH: dk-md-gy;
(Trc Sd Clust: AA; w/ FLR-SFO-STN-Cut)

{Sl-Fr SFO)

1079' (+311)
TOPEKA

1094'spl.cont'd} ~50% Topeka LS: wh-tn, fos- Pkst, sm chlky; sm pr-Fr fos mold Poro w/ NS.

1126'spl} Pred SH: AA;
~30% LS: wh-gy-tn, fos (Fusulinids) Pkst; w/ pr-Fr Poro: fos.mold; & sm mx-fnXln- 2nd ReX; Trc subsat- sat FLR & O.STN, Trc SFO & Cut.

{Trc SFO)

1156'spl} Pred SH: gy, & gn-gy, & bk carb.
~30% LS: gy-tn-wh, pred dn Mdst, sm Wkst-Pkst; Vrr pp Poro w/ spt'd-subsat FLR & O.STN & SlSFO & Cut; VSl Odor.

{SlSFO)

1188'spl} Pred SH: dk gy-bk, sm bk carb, sm gn-gy, pyrtc; (~60%SH).

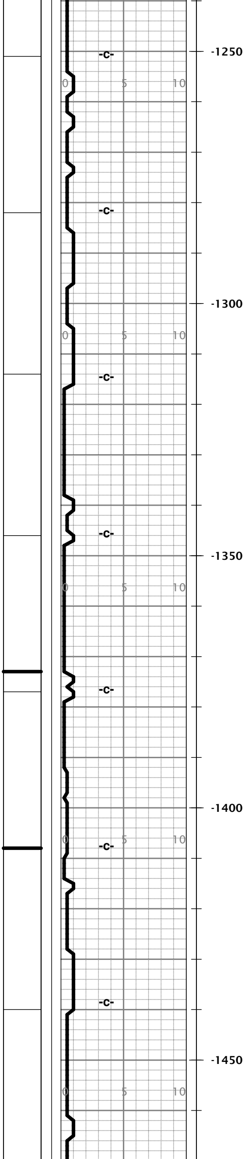
1188'spl.cont'd} ~40% LS: wh-gy-tn; pred dn Mdst-Wkst w/ pred Vpr-NVP w/ NS; (Trc LS: AA w/ SFO-FLR-STN-Cut) >99% barren.

1219'spl} ~40% SH: AA;

~60% LS: wh-gy & tn, prt chlky Mdst-Wkst; Rr Pkst; pred Vpr-NVP w/ NS.

1251'spl} LS: tn-gy-wh, sm Pkst: fos & ool, & prt chlky, & sm prt fn-MdXln- 2nd ReX, sm pr-Fr Poro: pp & I.Gr & IXP w/ NS.

1282'spl} V.Abndt SH: dk-gy-bk, & gn-gy, sm pyrtc, sm bk carb.
(sm LS: AA; pred wh-chlky to dn Mdst, & mx-fnX w/ pr-NVP & NS.)



1314'spl} sm bk V.carb SH.
Abndt LS: (>60%) wh-gy-tn, sm chlky; sm dn- Mdst & argil; sm mx-fnXln w/ Rr MdX's-CrsX's- 2nd ReX; Vrr Fr visbl & aprnt Poro w/ NS.

1346'spl} sm LS: wh-chlky, & tn-gy, sm dn- mx, sm prt fnXln-MdXln, & Rr CrsX's- sm 2nd ReX & IXP w/ NSFO.

1346'spl.cont'd} Abndt SH: gy-bk & gn-gy, pyrtc & micac.

1377'spl} ~70% SH: gy-bk, sm bk carb, & sm micac & pyrtc, & gn-gy; (sm LS:AA).

1408'spl} Pred SH: gy-bk, sm micac.

1373' (+17)
OREAD
{Trc SFO)

1408'spl.cont'd} OREAD} sm LS: cm-tn, gy-wh, sm dn Mdst-Wkst, & chlky, sm mx-fnX, & sm Pkst w/ pr-Fr Poro; Trc SFO-FLR-STN-Cut.

1439'spl} Incrs LS: (>50) wh-tn-gy, sm chlky, & sm dn Mdst-Wkst; Rr Pkst: ool & fos; Vrr pr-Fr Poro; Trc FLR-SFO-STN-Cut.

{Trc SFO)

1408' (-18)
HEEBNER SH

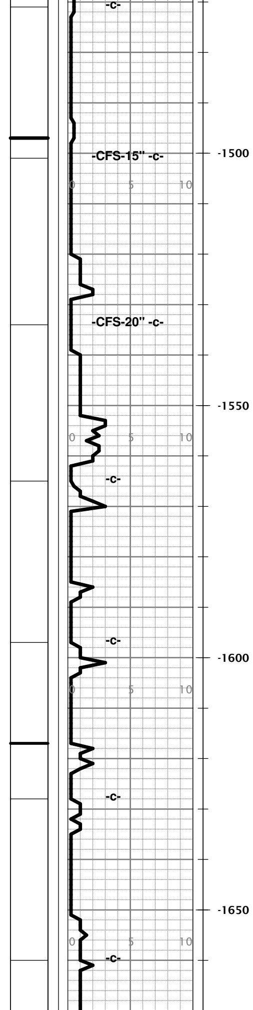
1439'spl.cont'd} HEEBNER} sm SH: bk carb- V.carb.

1471'spl} sm dn LS- Mdst-Wkst, & subchlky w/ pred Vpr-NVP w/ NS.
Abndt SH: AA, & gn-gy.

sm LS: wh-gy-tn, pred dn Mdst-Wkst, & chky LS; >99% w/ pr Poro to NVP w/ NS; (Vrr LS:AA w/ Trc SFO-FLR-STN-Cut).

1440' (-50)
DOUGLAS SH

1501'spl} DOUGLAS} SH: pred dn gy-bk, sm micac; sm bk carb; Rr gn-gy SH; sm LS:AA; & tn-gy, dn Mdst-Wkst w/ pr-NVP w/ NS.



1501'+15min.circ.spl} Abndt SH: AA.

& Silts: lt-gy, sm sndy

1497 (-107)
DOUG.SS {TrcSFO)

1501'+15min.cont'd} Vrr Sd Clusters: gy, VfnGr'd, silty, sm micac, sm fribl w/ Fr Poro; Trc FLR, Trc SFO, Trc Lt-STN & Cut, Trc Odor.

{VSI-SI SFO)

1534'drlg&20min.circ.spls} Rr Sd Clusters: lt-md-gy, pred VfnGr'd, & Vfn-fnGr'd, silty & micac; Vrr fribl w/ Fr-Gd Poro w/ FLR & VSl-Sl SFO & Cut, Trc Lt O.STN & Cut;

1534'+20min.spl.cont'd} Pred SH:AA & Silts: (incrs) lt-dk-gy, sm sndy, micac, sl calc.

1565'spl} SH-Silts: AA; pred dk-gy-bk & gn-gy; (Vrr Sd Clust:AA; w/ FLR-SFO-STN-Cut) Rr LS: bf-tn & gy, sm dn Mdst-Wkst, & sm mx-VfnXln, & Pkst w/ sm pr-Fr Poro: pp, IGr & IXP w/ FLR-SFO-STN-Cut.

1597'spl} SH-Silts: pred gy-bk, sm micac, & sm bk carb; sm LS: tn-gy, dn Mdst-Wkst; & sm mx-fnX & Pkst w/ pr-Fr Poro: IGr & IXP; I.fos & pp Poro; Vrr spt'd-sat FLR & Lt.O.STN & VSlSFO & Sl-Fr milky Cut.

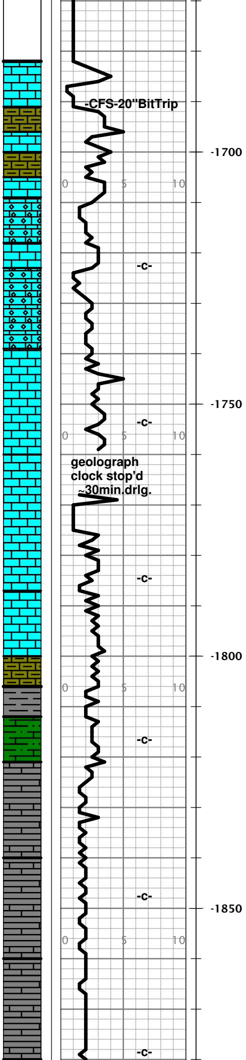
1628'spl} Pred SH: dk-gy-bk, sm micac, sm carb & pyrtc; sm LS: tn-gy-cm, Mdst-Wkst.

1617' (-227)
IATAN {VSISFO)

1628'&1660'spls} IATAN} Rr LS: gy-tn-cm, mx-VfnXln; & Pkst- fos, w/ pr-Fr Poro: pp, IXP & IGr.Poro w/ spt'd- Trc sat O.STN & FLR & VSlSFO & milky Cut; pred barren w/ Vpr-NVP.

1660'spl.cont'd} Pred SH: gy-bk, & md gy; sm micac SH & Silts; (Vrr LS:AA w/ Trc FLR-SFO-STN-Cut).

1691'drlg.spl} Pred SH: AA; incrs bk subcarb-carb.



1691'drlg.spl.cont'd} Vrr LS:AA; & dn Mdst-Wkst; Trc fn-CrsXln- 2nd ReX w/ FLR-SFO-STN-Cut

1691'+20min.circ.spl} LANSING} sl incrs in LS: (~10%LS) sm gy-tn dn Mdst-Wkst; Vrr Pkst w/ IGr.Poro w/ spt'd O.STN & FLR & SlSFO & Cut; & SH: AA.

1700'&1720'spls} sm SH:AA; LS: gy-tn-cm, sm dn Mdst-Wkst; Rr Pkst & mx-fnXln w/ pr visbl Poro: IXP, IGr & I.ool &fos Poro; ~5%<10% w/ brt FLR & Sl-Fr SFO & Cut, & spt'd to sat O.STN; Strong Odor.

LS: gy-bf-wh, w/ sm tn-bn O.STN; pred Pkst: fn ool & fos, & Vrr oomldc, & Vrr Grst; sm mx-fnXln; 30%-40% w/ Fr-Gd Poro: I.ool & I.fos & I.Gr, IXP, & oomldc Poro; w/ sptd to sat brt FLR & O.STN, Fr-Gd SFO & Fr-Gd strmg- milky Cut; Trc MdX- V.CrsXln- 2nd ReX w/ FLR-SFO-STN & Cut; Strong Odor.

LS: AA; incrs ool & fos Pkst & Grst; >30%<40% w/ Fr-Gd Poro: AA w/ spt'd to sat FLR & O.STN & Fr-Gd SFO & Cut; Strong Odor.

LS: gy-wh, sm tn; <5% Pkst-Grst & Xln LS:AA w/ FLR-SFO-STN-Cut AA; sm chlky; pred dn Mdst-Wkst w/ Vpr-NVP; sm argil.

LS: gy-wh, bf-tn, sm Pkst & mx-fnXln, Trc prt MdX-CrsX-2nd ReX; >5%<10% w/ pr-Fr IGr & IXP w/ subsat-sat FLR & tn O.STN, SlSFO & Sl-Fr milky Cut, Sl Odor; pred dn Mdst-Wkst.

LS: wh-bf-gy, prt chlky; sm Pkst, & sm mx-MdXln, w/ Trc CrsX- V.CrsX- 2nd ReX; pr-Fr visbl Poro: IXP & IGr & pp-vug Poro; >5%<10% w/ spt'd-sat FLR & lt-tn STN, & VSl-Sl SFO; Sl-Fr Milky Cut, Sl Odor.

LS: (Trc AA w/ Poro w/ SFO-FLR-STN-Cut) pred dn Mdst-Wkst, prt chlky; sm argil; pred Vpr-NVP w/ NS; sm argil.

LS: AA; incrs argil & dn Mdst-Wkst.

SH: gy-bk, sm calc.

Pred SILTS: gy, calc, sm sndy: VfnGr'd; & sm LS: gy-tn, dn & argil Mdst

Pred SH: dk-gy-bk, sm calc, sm micac.

SH: dk-gy-bk, sm calc, sm micac.

SH: AA.

1682' (-292)
LANSING
{Sl SFO)

{Sl-Fr SFO)

{Fr-Gd SFO)

{Fr-Gd SFO)

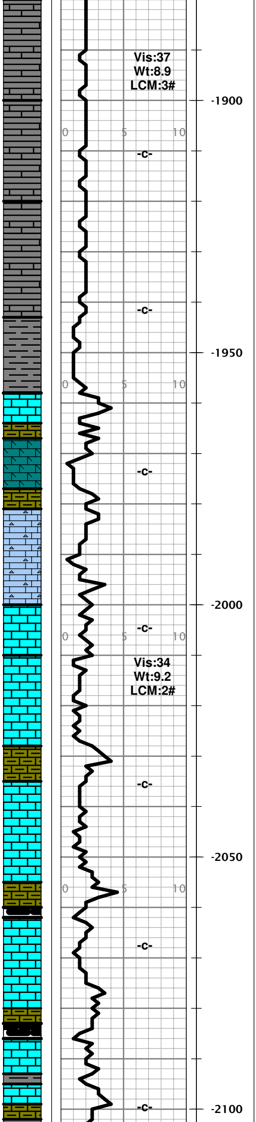
{Sl SFO)

{Sl SFO)

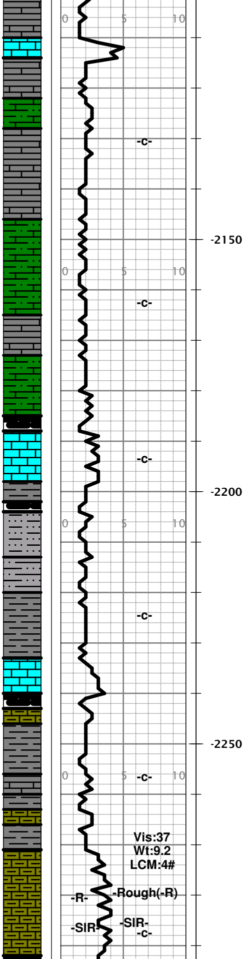
{VSl-Sl SFO)

1806' (-416)
B/LANS.

FUD MUD RPT
10:00AM; 8/20/16
Drlg @ 1795'
Wt:8.6; Vis:46
PV:26; YP:18
pH:9.5; WL:8.8
Cl: 1000 ppm
Ca: 40 ppm
LCM: 4#
ECD: 9.99#/gal.



SH: AA; pred gy-bk, Rr pyritc.	
SH: AA.	
SH: AA; sm gy-bk, sm calc.	
SH: AA; sm blk calc & Lmy, & sm bk carb SH.	
{KC} LS: gy-bf-wh, pred dn Mdst-Wkst, sm Pkst, sm prt chlky, sm argil-shly; Vrr mx-VfnXln, Trc m-IXP & pp Poro w/ FLR-SFO-STN-Cut; VSl Odor.	**1958' (-568)** **KANSAS CITY** **{SlSFO)**
LS-DLS: gy-wh & cm, sm w/ tn-bn O.STN; sm Pkst-Grst; sm mx-MdXln w/ Trc Crs-VCrsX's- 2nd ReX; sm sucro Dolomitic LS (DLS) ~40%~50% w/ Fr-Gd Poro: IXP, IGr, pp-vug Poro w/ subsat-sat brt FLR & O.STN, Sl-Fr SFO; Fr-Gd strmg-milky Cut, Frly Strong Odor.	**{Sl-Fr SFO)**
LS: cm-bf, sm w/ tn-bn O.STN, prt mx-fnXln w/ Trc prt MdX-CrsX- 2nd ReX; sm Pkst, & sm wh-chlky; sm Fr-Gd Poro: IXP, IGr, pp-vug Poro; ~30%~40% w/ spt'd to sat FLR & O.STN; Sl-Fr SFO; Sl-Gd Cut, Strong Odor; Sl Cherty: cm-gy, opq, shrp.	**{Sl-Fr SFO)**
LS: wh-cm-tn, sm chlky, sm dn Mdst-Wkst, sm Pkst: AA; sm Fr-Gd Poro:AA; ~30% w/ spt'd-sat brt FLR & lt-tn O.STN, Sl-Fr SFO; Sl-Gd Cut, Frly Strong Odor	**{Sl-Fr SFO)**
LS: wh-bf-tn, mx-fnXln, w/ Rr MdX- VCrsX's- 2nd ReX; sm Fr-Gd Poro: IXP, pp-vug, IGr Poro; ~40% w/ spt'd-sat FLR & lt-tn O.STN; VSl-Sl SFO; Sl milky Cut to Gd strmg-milky Cut, sm Pkst: AA w/ Poro w/ FLR-SFO-STN-Cut, Fr Odor.	**{VSl-Sl SFO)**
Sm dn Mdst-Wkst & chlky LS.	
LS: cm-gy-tn, sm tn-bn O.STN; Abndt Pkst, prt wh-chlky, & mx-fnXln, w/ sm MdXln - VCrsX's- 2nd ReX; sm Fr-Gd Poro: IGr & IXP, pp-vug, & moldc Poro; >30%<40% w/ spt'd-subsat brt FLR, spt'd-sat O.STN, & Sl-Fr SFO; Sl-Gd milky Cut, Frly Strong Odor.	**{Sl-Fr SFO)**
LS: Abndt Pkst & Xln LS: AA w/ Poro w/ FLR-SFO-STN-Cut {~40%); sm dn Mdst-Wkst & argil LS w/ Vpr-NVP.	
{STARK} V.Abndt SH: bk carb- V.carb.	
{SWOPE} LS: cm-gy-tn, w/ sm rich tn-O.STN; Pkst & mx-VCrsXln- 2nd ReX; sm Fr-Gd Poro: pp-vug, IGr & IXP; ~5%<10% w/ spt'd-subsat brt FLR & SlSFO; ~20% w/ spt'd-sat O.STN, & Sl-Gd milky Cut; Sl Odor.	**2062' (-672)** **SWOPE** **{Fr SFO)**
LS: sm AA w/ Poro w/ FLR-SFO-STN-Cut; & sm dn Mdst-Wkst w/ Vpr-NVP.	
{HUSHPUCKNEY} SH: bk carb-Vcarb. {HERTHA} LS: dk-gy-bn-tn-cm, sm mot; mx-MdXln, w/ Trc Crs-VCrsX's- 2nd ReX; & sm Pkst; sm pr-Fr IXP, IGr, & pp-vug Poro; ~5% w/ spt'd-sat FLR & VSl-Sl SFO; >10%<20% w/ spt'd-sat-rich-tn-bn O.STN w/ Sl-Gd milky Cut, VSl Odor. Sm argil & dn LS.	**2086' (-696)** **HERTHA** **{VSl-Sl SFO)**



SH-Silts: dk-md-gy, sm calc, micac, sl pyrtc.

(Vrr LS:AA w/ Poro w/ FLR-SFO-STN-Cut) LS: Pred gy-bn, Wkst-Pkst, sm argil w/ Vpr-NVP.

2114' (-724)
B/KC

{B/KC} SH: gy-bk, sm bk carb;

sm calc SH & Silts: sm micac & sl pyrtc.

SH: gy-bk, sm pyrtc, sm calc & Lmy; Rr argil dn LS- Mdst.

SILTS: md-dk-gy, sm calc & micac.

SILTS: AA; & Rr SH: AA.

2188' (-798)
CHECKERBOARD

SILTS: AA; & SH: bk subcarb to carb, pyrtc.

{CHECKERBOARD} LS: Pred Pkst: gy-tn-cm, mot, mx-fnXln, Vrr MdX's, sm dn & argil Wkst-Mdst; pr Poro- NVP; NS.

SH: bk carb & V.carb; & dk-md-gy & gn-gy SH & sm SILTS;
Rare(Rr) Sndy SILTS: gy, Trc bn STN, Vfn Gr'd, Vpr visbl Poro; NSFO; Trc STN & milky Cut, & resid.Cut.

Pred SH: dk-gy & gn-gy, & maroon & violet V.gt'd SH; sm dn & argil- shly LS.

2233' (-843)
ALTAMONT

{ALTAMONT} LS: gy-tn-cm, pred dn Mdst-Wkst, sm Pkst: ool & fos w/ pr Poro- NVP w/ NS.
SH: bk carb- Vcarb.
LS: gy, dn & argil Mdst-Wkst w/ Vpr-NVP; NS.

SH: gy-bk, sm carb, sm pyrtc.

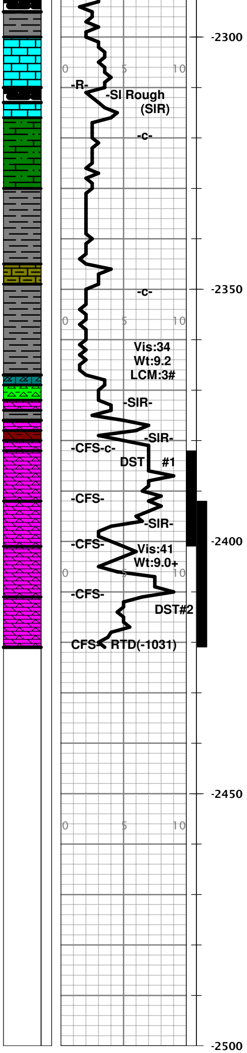
sm lt-dk-gn-gy, pyrtc, sm calc & Lmy.

SH: AA; incrs bk carb SH.

2271' (-881)
PAWNEE

{PAWNEE} LS: gy-tn-wh, pred dn Mdst-Wkst, & prt chlky, sm V.argil- shly w/ gn-gy SH; Pred Vpr-NVP w/ NS; (Trc LS: AA w/ Trc O.STN & Wk Cut).

LS: AA; incrs prt chlky, dn Mdst-Wkst w/ Vpr-NVP w/ NS.



SH: bk carb- V.carb; & subcarb pyrtc; sm gn-gy.

LS: gy-tn-wh, pred dn Mdst-Wkst, sm chky; Vpr-NVP; w/ NS.

{CHEROKEE} SH: bk carb;
LS; gy-bn-tn, dn Mdst; & mx-fnXln, & argil LS w/ pred Vpr-NVP w/ NS.

SILTS: gn-gy, sm Sndy, calc, sm micac.

SH-SILTS: md-dk-gy, sm calc.

SH: pred dk-gy-bk, sm carb, sm pyrtc; Trc Coal.

Rr LS: dk-gy-bk, dn & argil Mdst.

SH: bk carb & subcarb & V.pyrtc; Abndt Pyrite.

SH: AA.

{EROS.ARB} 2380'spl} DOLO-DLS: gy-tn, mx-fnXln, pred dn; Trc FLR-SFO-STN-Cut; Cherty: lt-dk-blu-gy, & cm-wh. 2382'circ.spls}~60%ARB in 40min} DOLO: gy, mx-fnXln, pred dn w/ pr visbl IXP, ~50% w/ FLR-SFO-Cut; ~10% fnX-MdXln w/ Fr-Gd IXP, vug, moldc Poro w/ spt'd-sat FLR & tn-bn O.STN & Fr-Gd SFO & Cut; Strg Odor; sl Cherty. (2392'spls} DOLO: cm-bf-gy, w/ tn-bn STN, pred mx-fnXln w/ pr-Fr IXP ~50% w/ FLR-SFO-STN-Cut; ~10% sucro w/ Fr-Gd IXP, sat FLR & STN & GdSFO & Cut, Strong Odor; Cherty: blu-gy, vit, Rr ool Chert.

{2401'spls} DOLO: AA; & bf-tn, fnXln-MdXln sucro-Rhombic; ~20% w/ Fr-Gd IXP & vug & moldc Poro; spt'd-sat FLR & STN & Fr-GdSFO & Cut, StrngOdor; Cherty. {2411'spls} DOLO: gy w/ sm tn-bn O.STN; ~10% fnXln-MdXln w/ Fr-Gd IXP & vug Poro w/ subsat-sat FLR & O.STN & Fr-Gd SFO & Cut, Abndt gy, mx-VfnXln pred dn, sm shly & pyrtc, w/ pr visbl Poro to NVP; ~50% w/ spt'd FLR & SFO & Cut, Frly Strong Odor; Abndt Chert: cm-blu-gy & tn, mot & oolc. (2421'spls} DOLO: bf-gy w/ tn-bn O.STN, mx-MdXln; sm dn to pr Poro; >10%<20% fnXln-MdXln w/ Fr-Gd IXP & vug & moldc Poro w/ spt'd to sat FLR & O.STN & Fr-GdSFO & Cut, Strong Odor; Chert:aa.

2310' (-920)
CHEROKEE

2367' (-977)
ARDMORE

2376' (-986)
ARBUCKLE
(Corrected)
{Fr-Gd SFO)

{Fr-Gd SFO)

{Fr-Gd SFO)

{Fr-Gd SFO)

{Fr-Gd SFO)

RTD: 2421'(-1031)
LTD: 2422'(-1032)

FUD MUD RPT
5:45AM; 8/22/16
CFS @ 2411'
Wt:9.0; Vis:43
PV:26; YP:18
pH:9.0; WL:7.6
Cl: 500 ppm
Ca: 0 ppm
LCM: 3#/bbl
ECD: 9.39#/gal.

VESS OIL CORP
WILSON A #455
990' FSL
2260' FWL
SEC: 8-25S-5E
EL DORADO
BUTLER CNTY
KANSAS
API#15-015-24065-0000

FUD MUD RPT
1:30PM; 8/21/16
CFS @ 2401'
Wt:9.0; Vis:46
PV:26; YP:18
pH:9.0; WL:7.8
Cl: 500 ppm
Ca: 0 ppm
LCM: 3#/bbl
ECD: 9.39#/gal.

DST#1; ARB.
Interval:2382'-2401'
30-45-45-60 min.
IF: Opened tool; lost ~10' mud down hole; incrs WOT, bled off; blow incrs to 1/2inch.
ISI: No Blow Back
FF: No blow for !st ~10min; 1/2" blow by 45min.
FSI: NBB.
Rec: 20' Cln Oil (38 gravity)
10' HOCM (30%Oil, 70%Mud)
60' SIOCM (5%Oil, 95%Mud)
90' Total Fluid
IHP: 1065
IFP: 44--63
ISIP: 779
FF: 42--73
FSIP: 749
FHP: 1052
Temp: 106 deg.F

DST#2; ARB
Interval:2392'-2421'
30-45-45-60 min.
IF: Wk to Fr Blow; Incrs to 9"
ISI: NBB
FF: Fr-Gd Blow Incrs to 11 inches
FSI: surface blow back; died off.
Rec: 20' Cln Oil (38 gravity)
120' HOCWM (32%Oil, 18%Wtr, 50%Mud)
120' GCHOCWM (15%Gas, 25%Oil, 30%Wtr, 30%Mud)
260' Total Fluid
Rw:0.32@80deg.F
IHP: 1050
IFP: 14--98
ISIP: 757
FFP: 62--143
FSIP: 728
FHP: 1030
Temp: 106 deg.F