ROGER L. MARTIN

INDEPENDENT PETROLEUM GEOLOGIST 316-250-6970

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY VESS OIL CORPORATION

LEASE COMEAU #2

FIELD CODELL

LOCATION 330' FSL & 842' FWL

SECTION 7 **TOWNSHIP** 10S **RANGE** 16W

COUNTY ROOKS **STATE** KANSAS

ELEVATIONS

KB 2031' **GL** 2023'

Measurements Are All From KB: 2031'

API 15-163-24323-00-00

CONTRACTOR DISCOVERY DRILLING, RIG #1

SPUD 10/22/2016 **COMP** 10/31/2016

RTD 3575' (-1544) **LTD** 3576' (-1545)

ELECTRICAL SURVEYS

ELI: DIL, CNL/CDL, MEL

4 DST's by TRILOBITE TESTING

CASING

SURFACE 6 jts 8 5/8" 23# LS csg set @ 230.28' w/175 sx common, 2% gel 3% cc

PRODUCTION 84 jts 5 1/2" 15.5# set @ 3573'KB w/175 sx AA2

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	1227' (+804)	1225' (+806)
BASE ANHYDRITE	1267' (+764)	1268' (+763')
TOPEKA	2924' (-893)	2922' (-891)
OREAD	3086' (-1055)	3085' (-1054)
PLATTSMOUTH POR	3114' (-1083)	3113' (-1082)
HEEBNER	3151' (-1120)	3149' (-1118)
LANSING	3193' (-1162)	3191' (-1160)
STARK	3390' (-1359)	3388' (-1357)
BASE KANSAS CITY	3434' (-1403)	3432' (-1401)
ARBUCKLE	3570' (-1539)	3567' (-1536)
LTD/RTD	3576' (-1545)	3575' (-1544)

CHRONOLOGY

10/22/2016- SPUD 12 1/4" hole @ 5:15 PM. Ran 6 jts New 8 5/8", 23# LS casing. Set @ 230.28' KB. Cemented w/175 sx common, 2% gel 3% cc. Cement did circulate.

10/23/2016- Depth @ 7:00 AM: 230'. Drilled plug @ 8:30 AM.

10/24/2016- Depth @ 7:00 AM: 1299'.

10/25/2016- Depth @ 7:00 AM: 2180'.

10/26/2016- Displaced mud @ 2610'. Depth @ 7:00 AM: 2820'. Mud vis 60, wt 8.7 ppg, 3# LCM.

10/27/2016- Depth @ 7:00 AM: 3217'. DST #1- Plattsmouth to LKC 'F'

10/28/2016- Depth @ 7:00 AM: 3305' DST #2- LKC 'G'

10/29/2016- Depth @ 7:00 AM: 3450'. DST #3- LKC 'H' to B/KC

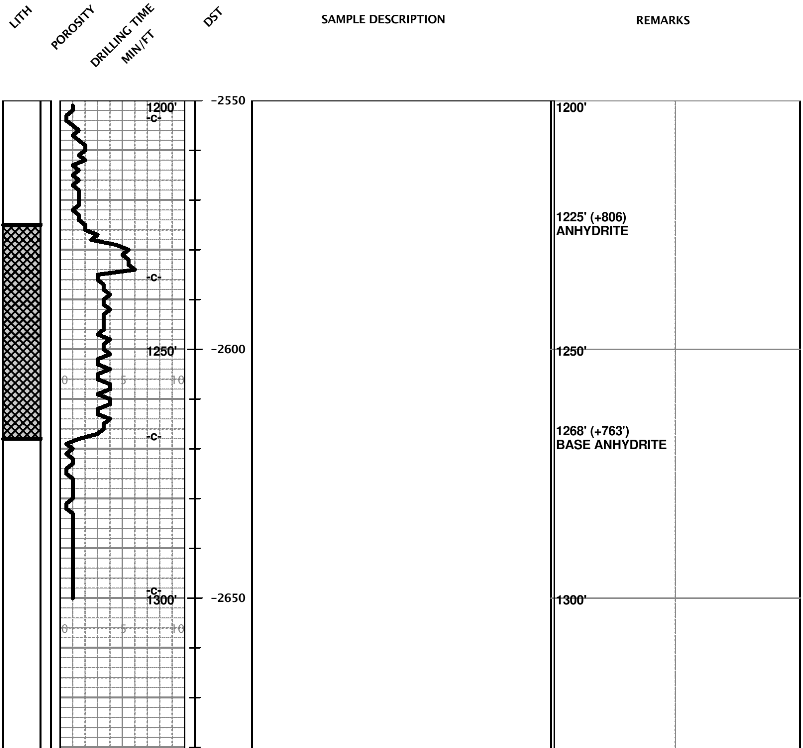
10/30/2016- Depth @ 7:00 AM: 3570'. DST #4- Arbuckle

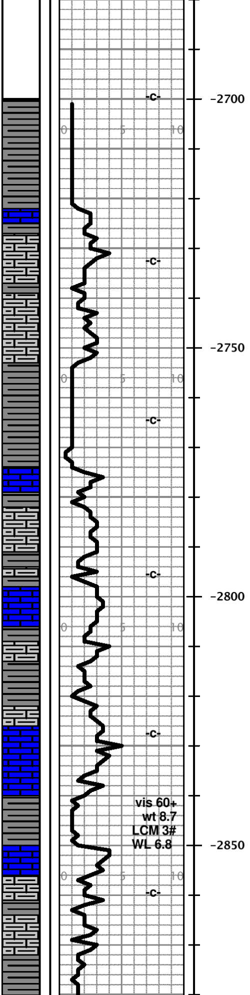
10/31/2016- Depth @ 7:00 AM: 3575'. Run Porosity, DIL & Caliper log. Prep hole to run production casing.

REMARKS: PRODUCTION CASING JOB (by Roger Martin): Ran 84 jts new 5 1/2" 15.5 J-55 set @ 3573' KB. Cemented by Basic w/175 sx AA2 and landed plug w/1400# @ 6:30 PM. DV tool @ 1244'. Cemented second stage w/150 sx A-Conn 30 sx in RH & 20 sx in MH. Circ'd 20 sx of cement to pit. Landed plug w.1400# @ 9:45 PM. Released rig @ 10:15 PM.

E-log tops by: P. Ramondetta, Geologist (VOC)

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





Pred SH: gy & blk & mrn-rd, Vgt'd, sm dn & argil LS w/VPr- NVP.

LS: lt-dk gy, Pred dn & argil Mdst; sm argil & shly Wkst-Pkst w/VPr- NVP, NS. sm pyrtc argil LS & pyrtc blk carb SH. VRr fos Pkst w/VPr visbl Por, NS. Trc oomldc LS w/Gd Por, NS.

SH: Pred blk carb & dk gy, sm lt gy SH & SILTS & sm mrn-rd Vgt'd.

LS: cm-bf & gy, sm dn Mdst & Wkst & mx- Vfnxln; & gy argil Mdst- Wkst w/VPr- NVP, NS. & SH: AA. & SILTS: gy, sndy, Vfn Gr'd.

SH: gy-blk, sm calc & lmy.

LS: lt-dk gy & tn-cm, Pred dn & subchlky & mx- fnx, sm Wkst- Pkst, prt argil- shly, VPr- NVP, NS.

Abndt SH: AA & calc & lmy, sm blk carb.

LS: AA, abndt argil, sm wh-chlky, gy-tn dn Mdst- Wkst, sm Pkst, mx- fnxln w/VPr- Pr visbl Por w/NS.

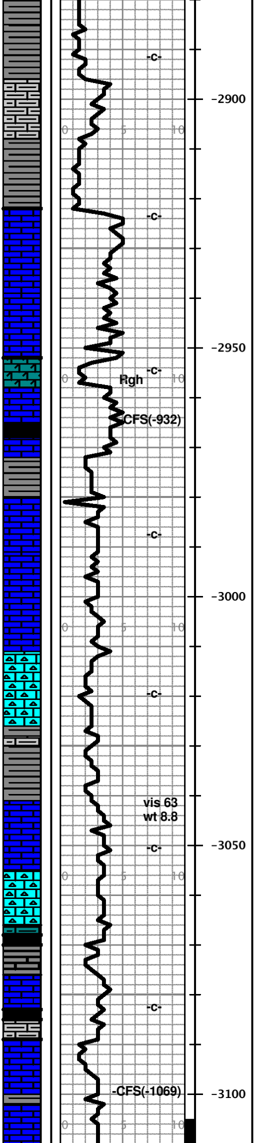
MUD CHECKS
by: MUD-CO:
@ 2845':
Wt 8.7, Vis 60+
PV 19, YP 33
pH 11.5, WL 6.8
Cl 2300, LCM 3#

SH: Pred dk-md gy, sm pyrtc & blk carb.

LS: lt-dk gy-tn, Pred dn Mdst & Wkst, sm argil- shly, VPr- NVP, NS. VRr fos Pkst w/VPr- Pr Por, NS.

LS: dk-md gy, argil- shly Mdst- Wkst w/VPr- NVP w/NS.

SH: md-dk gy, sm calc & lmy & sm micac, sm blk carb.



Abndt SH: AA & gn-gy.

LOAD PREMIX

LS: dk-lt gy, dn & argil Mdst & mx, VPr- NVP, NS.

SH: dk-lt gy & blk, sm micac, sm mrn-rd.

2922' (-891)
TOPEKA

{TOPEKA} LS: cm-tn-gy, Pred dn & mx, & Mdst- Wkst, sm argil, Rr Pkst, Pred VPr- NVP, NS. sm shly- argil.

LS: gy-tn-wh, Pred dn Mdst, sm mx- fnx w/Pr- NVP, NS. Rr chlky LS.

{TOP 30' ZN} LS: cm-gy-tn & Tn-bn STN, mx- fnxln, sm sucro, Sl dolomc, sm grnlr Pkst- Grst, ~10% w/Fr-Trc Gd Por: IX Por, IGr Por, moldc Por, subsat- sat Tn-bn OSTN,Fr- Gd SFO, Fr- Gd Cut, Fr Odor.
LS: gy-tn-cm, Pred dn Mdst & mx-Vfnxln, sm argil. (Rr LS & DLS: AA w/Por, subsat-sat Tn-bn OSTN-SFO-FLR-Cut)
SH: sm blk carb & gy; & LS: lt-dk gy, Pred dn Mdst- Wkst & mx- Vfnxln, sm argil- shly.

{Fr- Gd SFO)

LS: gy-wh, sm chlky & gy-bf, mx- Vfnxln, Trc fn- MdX- 2nd ReX, VPr- Pr visbl Por: mIX Por & pp Por, Trc spt'd FLR & STN, Trc SFO, Trc sat STN AA & Cut; Sl CHERTY: dk gy-blk, opq, shrp, sm argil- shly Mdst- Wkst, Pred VPr- NVP w/ NS.

{Trc SFO)

LS: cm-bf-tn & gy, sm mot Pkst- grnlr & mx- fnx w/trc MdX- 2nd ReX, VRr Pr- Fr Por: IX Por, pp Por, IGr Por, spt'd- sat Tn-bn OSTN, Trc FLR, Trc SFO & Cut, Sl CHERTY: lt-dk gy & blu-gy & tn, sm mot- fos, shrp, opq.

{Trc SFO)

SH: sm blk carb & dk gy, sm calc & lmy.

LS: cm-tn-gy-wh, Pred dn Mdst- Wkst, sm subchlky- chlky, VRr Vfn- fnX- 2nd ReX, Pred VPr visbl Por- NVP w/NS. (Trc DLS AA w/STN) >99% barren.

3085' (-1054)
OREAD

{Trc SFO)

LS: AA, Pred dn Mdst- Wkst, sm semi-chlky; sm argil- shly, Pred VPr- NVP w/NS. CHERTY: cm-gy & dk gy & blu-gy, opq, shrp, sm fos.

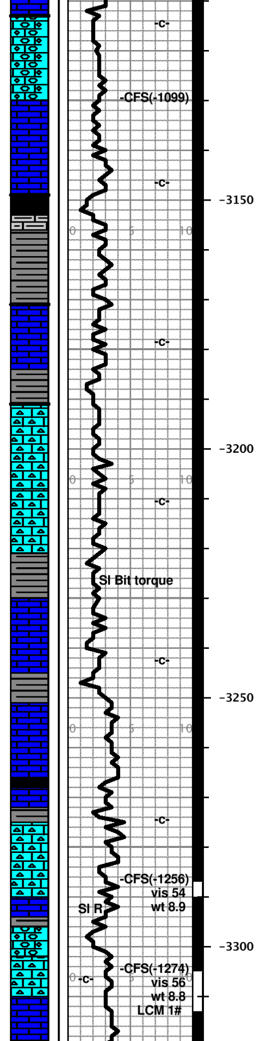
SH: blk carb & gy, sm calc & lmy.

LS: dk-lt gy-tn-cm, Pred dn Mdst- Wkst, VRr Pkst, Pred Pr- NVP, NS.

{OREAD} blk carb SH & LS.

{OREAD POR} LS: cm-bf-gy & sm wh-chlky, sm mxln- fnx- sm 2nd ReX, sm grnlr Pkst w/Fr- Gd Por: IGr Por, IX Por, Trc FLR, Trc SFO- STN, Sl Cherty.

LS: wh-bf-gy, Pred dn mdst- Wkst & chlky LS w/VPr- NVP, NS. sm argil. Sl Cherty: gy, shrp.



{PLATTSMOUTH POROSITY} LS: cm-tn-gy, Rr Tn-bn OSTN, Rr Pkst, Trc Grst- ool & fos w/Pr- Fr Por, Trc Gd Por: lool Por, fos Por, spt'd- sat STN, Sl- Fr SFO, Sl Odor, Sl CHERTY: wh-bf-tn-gy, mot ool & fos Chert. Abndt dn & argil & chlky.

LS: cm-gy-tn, sm mot Pkst- Wkst, sm prt chlky, Sl Cherty, prt argil, VPr- Pr visbl Por & Mdst & mx- fnx w/Pr- NVP. NSFO

{HEEBNER} SH: blk carb to Vcarb.
LS: gy, dn & shly Mdst- Wkst & Tn dn mx- fnx.

SH: gn-gy, sm calc & lmy, sm pyrtc.

{TORONTO} LS: wh-gy-tn, prt chlky Wkst & Pkst & mx-fnx w/Pr- Fr Por: pp Por, IGr Por, IX Por, ~5% w/spt'd-subsat STN, VSl SFO, VSl Odor.

SH: VC, gy, gn, rd.

{LANSING} LS: tn-gy-wh, sm chlky, Pred dn, sm Pkst-Wkst & mx- fnx w/Pr IX Por, pp Por & Edg w/VSl SFO, <5% w/STN. CHERTY: AA, gy, shrp.

LS: cm-tn-gy, sm mx- fnxln, VRr Fr- Gd IX Por & pp- vug Por, <5% sat Tn-bn SNT, VSl- Sl SFO, Trc blk dd STN, Sl Odor. VCHERTY: Trc Gd Por: lool Por, mldc Por w/subsat STN- SFO & Cut.

Abndt SH: Vgt'd, AA & blk carb.

LS: cm-tn-gy, sm wh-chlky, sm fos Pkst, mx- Vfnxln w/Pr-Fr visbl Por: pp Por, IX Por, IGr Por w/subsat- sat Tn-bn STN in >5%, ~10% w/VSl- Sl SFO & Sl Odor, Trc dd STN.

SH: Vgt'd, AA.

LS: bf-tn, Pred dn Mdst & mx, sm wh-chlky, VRr mx- fnx w/Pr- Fr IX Por w/spt'd- subsat STN, VSl SFO & IGr Por & vug Por, Trc dd STN, VSl Odor.

SH: AA, Incrs blk carb- Vcarb.

LS: gy-tn-wh, sm dn & argil, sm mot Pkst- Trc Grst, fos & ool w/Fr- Gd Por, mxln- fnxln, VCHERTY: Trc Por & STN in Chert, ~5% w/Fr- Gd IGr Por, Ifos Por ool Por & IX Por w/spt'd- sat STN, Sl- Fr SFO.

~75% LS: wh-tn-gy, Pred dn, prt chlky, VRr Por, AA w/STN- SFO AA.
~25% SH: Vgt'd, Pred gy & blk.
LS: wh-bf-gy, , sm Tn-O.STN, ~20% prt oolc & prt oomldc w/Fr- VGd Por: lool & mldc Por, Fr spt'd- sat STN, spt'd FLR, Fr- Gd SFO, Fr Odor. Sl Cherty.

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

3113' (-1082)
PLATTSMOUTH POR
{Sl-Fr SFO)

3149' (-1118)
HEEBNER

{VSl SFO)

3191' (-1160)
LANSING

{VSl SFO)

{VSl- Sl SFO)

{VSl- Sl SFO)

{VSl SFO)

{Sl- Fr SFO)

{Sl- Fr SFO)

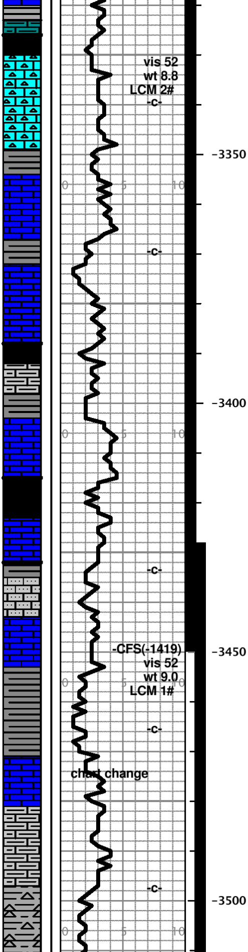
{Fr-Gd SFO)

Mud-Co@3305':
Wt 9.0, Vis 50
PV 18, YP 26
pH 10.5, WL 7.4
Cl 5700, LCM 2#

DST #1
PLATTSMOUTH-
LKC 'F'
3105'--3287'
30-45-45-60min.
IF: wk to gd blow
1" to 6.5" blow,
ISI: No Blow Back
FF: surf to 4" blow
FSI: No BB
Rec: 226'TF:
40' OCM
15%O; 85%M
62' HOGCM
5%G;25%O;70%M
124' HOGCM
10%G;30%O;60%M
Tool Spl: 20%G;
25%O; 55%M
IHP: 1592
IFP: 96-148
ISIP: 515
FFP: 161-193
FSIP: 515
FHP: 1533
Temp:99 deg. F

Mud-Co@ 3250':
Wt 8.9, Vis 51
PV 18, YP 25
pH 11.0, WL 6.8
Cl 4200, LCM 2#

DST #2 LKC 'G'
3290'--3305'
30-45-45-60min
IF: wk to strong
blow,
BOB in 16 min.
ISI: No BB
FF: wk to strong
blow,
BOB blow in 10
min.
FSI: 2" Blow Back
Rec: 217' TF:
650' GIP



LS: AA & dk-lt gy mot Wkst- Mdst w/VPr- NVP, argil- shly & SH: gy-blk, sm blk carb.

LS: wh-gy-tn, Pred dn Mdst, mx- Vfnxln, prt chlky, Sl Cherty: gy, opq, shrp.

LS: AA & Wkst- Pkst w/Pr- NVP, NS. Incrs CHERT, AA.

SH: Pred dk gy & blk carb.

LS: wh-bf-gy w/VRr Tn-bn STN, sm prt chlky, sm Wkst- Pkst w/Pr- Fr Por & mx- fnx, Pr- Fr Por: IX Por, pp Por, IGr Por, spt'd- sat STN, dull FLR, <5% w/VSl SFO & Cut. sm argil & sm pyrtc.

LS: cm-gy-tn, sm Wkst- Pkst, fos & mx- fnx, ~10% w/Pr Por- VRr Fr Por: pp Por, IGr Por, IX Por, spt'd- subsat Tn STN, sm wh chlky, VSl SFO, Sl- Fr Cut, dull FLR, ~5%<10% CHERTY. Pred dn Mdst- Wkst.

{STARK} SH: Rr blk Vcarb- carb.

LS: dk gy & gy bn, dn, mx & mdst, sm argil- shly, pyrtc & Vgt'd SH: gn-gy & mrn rd.

LS: cm-tn-gy, sm mot Pkst- Grst, sm fnly grnlr & sm ool & fos, ~ 20% w/Pr- Fr Por & ~5% w/Gd IGr Por w/sat STN w/Gd strmg mlky Cut, ~20% w/Pr- Gd Por w/spt'd- sat OSTN, Sl- Fr SFO- Odor. sm dn & argil, sm pyrtc.

{HUSHPUCKNEY} SH: gy-blk carb- Vcarb.

LS: wh-tn-gy, sm mot Pkst & Rr Grst: Vfnly grnlr w/Fr- Gd IGr Por, sm IX Por w/sat Tn-bn STN, ~20% w/Por, STN, Sl- Fr SFO, Gsy.

{BASE KANSAS CITY} SH: Vgt'd, gy & blk carb & gn & rd.

Sndy LS & Calc SS: gy-Tn-bn-STN, Vfn Gr'd, Pr- Fr Por w/sat- subsat Tn-bn STN, Fr SFO & Odor, Fr- Gd Cut.

LS: cm-tn-gy, Pred dn Mdst- Wkst, VRr Pkst w/VPr- NVP.

SH: Vgt'd, dk-lt gy & gn-gy & mrn-rd, sm calc & lmy, sm pyrtc.

LS: cm-tn & gy-wh, Pred dn Mdst- Wkst & sm chlky, Rr fos Pkst w/VPr- Pr Por, Trc FLR, Trc SFO- STN & Cut. >99% barren.

LS: cm-bf-gy & mrn- sm mot Wkst- Pkst- argil- shly w/VPr- NVP & mrn-rd & gn-gy SH- sm calc & lmy. Sl CHERTY: rd-bn, gn-gy, shrp.

SH: rd-mrn, gy-bn, sm lmy & calc (spls wash rd) Rr CHERT: VC- rd, gn-gy & cm-bf, opq, Sl wthr'd w/VPr- NVP, NS.

{VSl SFO)

{VSl SFO)

3388' (-1357)
STARK

{Sl-Fr SFO)

{Sl- Fr SFO)

3432' (-1401)
B/KANSAS CITY

{Fr SFO)

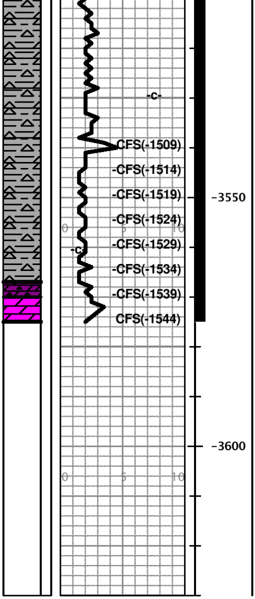
{Trc SFO)

175' Clean Oil
42' VGMO
50%G;40%O;10%M
IHP: 1577
IFP: 21-50
ISIP: 543
FFP: 56-91
FSIP: 542
FHP: 1568
BHT: 100 F

DST #3 LKC 'H'-BKC
3313'--3450'
30-45-45-60min.
IF: wk to gd blow, 1/2" to 6".
ISI: No BB
FF: wk blow thru-out,
surf to 3" blow,
FSI: No BB
Rec 191' WM
w/show of Oil
(<1% Oil,
~20%W;80%M)
Rw:0.36@65deg.F
Cl: 18,000ppm
Tool spl:~1%Oil, 10%W; 89%M
IHP: 1649
IFP: 60-106
ISIP: 934
FFP: 111-158
FSIP: 885
FHP: 1635
Temp: 100 F

Mud-Co@3450':
Wt 9.0, Vis 50
PV 15, YP 21
pH 10.0, WL 6.8
Cl 5600, LCM 2#

DST #4
ARBUCKLE
3428'--3575'



SH: rd-mrn, sm calc & lmy, sm gy-blk, VRr CHERT: AA & sm LS, AA.

SH: AA, Vgt'd, Pred rd-mrn, Rr CHERT: VC, sm wthr'd, VPr- NVP.

SH: AA, Sl Incrs CHERT: bf-gy, gn-gy, yel-gn, Sl wthr'd, Trc dd STN, NSFO
SH: AA, Pred mrn-rd, sm lt-dk gn-gy, sm argil- shly LS.
SH: AA, sm LS, AA w/Pr- NVP, NS.

Pred Vgt'd SH: rd-mrn, gy-blk (LS: AA) sm CHERT: VC, opq, shrp.
{ARBUCKLE} DOLO: (3570' 40 min spl} ~60% Arb Dolo: gy-bf-cm, mxln- Mdxln, Pred dn to Pr visbl Por & barren < 5% fnxln- Mdxln sucro/rhombc w/Fr- Gd Por: IX Por, vug Por, spt'd O.STN & Sl- Fr SFO, Sl Odor. Sl CHERTY: cm-bf, opq, shrp. sm Sl pyrtc Dolo, AA, sm argil- shly Dolo, VRr Cut. (3570' 60 min spl} DOLO: AA, VRr Por w/STN-SFO- dull FLR & Cut. Abndt SH: AA. Sl Odor. (3570' 80 min spl} DOLO: AA, Sl Incrs ARB DOLO: VRr <5% w/Fr-Gd Por: IX Por, vug Por, spt'd STN, Sl- Fr SFO, Sl- Gd Cut, Sl Odor. (3575' 20 min spl} Incrs DOLO: bf-gy-cm, mxln- Mdxln, Pred dn to Pr Por & barren. ~10% w/Fr- Gd IX Por & vug Por w/spt'd- subsat Tn-bn OSTN & Sl- Fr SFO & Sl- Gd Cut, VRr rhmbc, Md- CrsXln w/Gd- VGd Por w/subsat STN, Fr SFO & Gd Cut, Sl Odor. Rr SH: Turq-gn, waxy SH. (3575' 40 min spl} Incrs to ~75% ARB DOLO: gy-bf-cm, sm w/Tn-bn O.STN, mx- Mdxln, VRr prt CrsXln, sm rhmbc MdXln- prt crsXln w/Fr- Gd IX Por & vug Por in >20% w/spt'd to subsat Tn-bn-blk STN, Fr SFO, Sl- Fr Cut, sm prtly barren Por. (3575' 60 min spl} DOLO: AA, gy-bf-cm, Pred mx- mdxln, dn to Pr Por; ~20% w/Fr- Gd Por, Prt rhmbc w/IX Por & vug Por, Trc VGd Por w/2nd ReX, subsat STN, Trc sat STN; ~20% w/Sl-Fr SFO & Sl- Gd Cut, Sl Odor, sm prtly barren Por. Rr SH:AA. Only Trc CHERT: AA. VRr Sl pyrtc Dolo. (3575' 80 min spl} DOLO: AA. VSl Incrs Rhmbc MdXln-prt crsXln w/Gd Por w/spt'd- subsat STN, Fr SFO, Sl- Gd Cut, Sl Odor.

3567' (-1536)
ARBUCKLE
{Fr SFO)
3575' (-1544)/RTD
3576' (-1545)/LTD

VESS OIL CORP
COMEAU #2
330' FSL & 842' FWL
Sec 7-10S-16W
ROOKS CO., KS
15-163-24323-00-00

30-45-45-60min.
IF: wk to Fr blow
1/2"--5" blow
ISI: No BB
FF: wk blow
thruout,
surf.--2" blow.
FSI: No BB
Rec; 201'TF:
77' WM
25%W; 75%M
124'MW
70%W; 30%M
Rw:0.18@74deg.F.
Cl: 34,000 ppm
Tool spl: <1% Oil
~30%W; ~70%M
IHP: 1690
IFP: 29--69
ISIP: 941
FFP: 82--120
FSIP: 892
FHP: 1640
Temp: 102deg.F.

Mud-Co@3570':
Wt 9.2, Vis 53
PV 14, YP 21
pH 10.0, WL 7.2
Cl 5800, LCM 2#

TRILOBITE
TESTING, INC

DRILL STEM TEST REPORT

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63526 **DST#: 1**

Test Start: 2016.10.27 @ 17:10:27

GENERAL INFORMATION:

Formation: **Plattsmouth - LKC "F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:29:22
Time Test Ended: 00:41:06

Test Type: Conventional Bottom Hole (Initial)
Tester: Ray Schw ager
Unit No: 77

Interval: 3105.00 ft (KB) To 3287.00 ft (KB) (TVD)
Total Depth: 3287.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

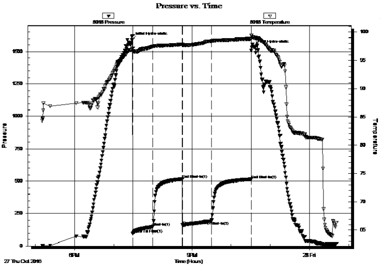
Reference Elevations: 2131.00 ft (KB)
2123.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8018 **Inside**

Press@RunDepth:	192.53 psig @	3108.00 ft (KB)	
Start Date:	2016.10.27	End Date:	2016.10.28
Start Time:	17:10:27	End Time:	00:41:06

Capacity: 8000.00 psig
Last Calib.: 2016.10.27
Time On Btm: 2016.10.27 @ 19:28:22
Time Off Btm: 2016.10.27 @ 22:35:21

TEST COMMENT: 30-IFP-w k to a gd bl 1"to 6 1/2" bl
45-ISIP-no bo bk
45-FFP-surface to 4" blow
60-FSIP-no bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1592.31	97.00	Initial Hydro-static
1	95.94	96.55	Open To Flow (1)
32	148.28	97.44	Shut-In(1)
77	515.05	97.82	End Shut-In(1)
78	161.14	97.70	Open To Flow (2)
122	192.53	98.40	Shut-In(2)
183	514.52	98.81	End Shut-In(2)
187	1533.36	99.01	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	HO&GCM 10%G30%O60%M	0.88
62.00	HO&GCM 5%G25%O70%M	0.44
40.00	OCM 15%O85%M	0.35
0.00	Tool Sample 20%G25%O55%M	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63526 **DST#: 1**

Test Start: 2016.10.27 @ 17:10:27

GENERAL INFORMATION:

Formation: **Plattsmouth - LKC "F**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 19:29:22
Time Test Ended: 00:41:06

Test Type: Conventional Bottom Hole (Initial)
Tester: Ray Schwager
Unit No: 77

Interval: 3105.00 ft (KB) To 3287.00 ft (KB) (TVD)
Total Depth: 3287.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

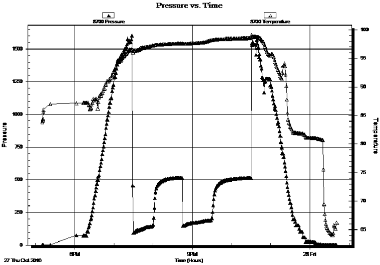
Reference Elevations: 2131.00 ft (KB)
2123.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8700 **Outside**
Press@RunDepth: psig @ 3108.00 ft (KB)
Start Date: 2016.10.27 End Date: 2016.10.28
Start Time: 17:10:23 End Time: 00:41:02

Capacity: 8000.00 psig
Last Calib.: 2016.10.27
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IFP-wk to a gd bl 1"to 6 1/2" bl
45-ISIP-no bo bk
45-FFP-surface to 4" blow
60-FSIP-no bl bk

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
124.00	HO&GCM 10%G30%O60%M	0.88
62.00	HO&GCM 5%G25%O70%M	0.44
40.00	OCM 15%O85%M	0.35
0.00	Tool Sample 20%G25%O55%M	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63526 **DST#: 1**

Test Start: 2016.10.27 @ 17:10:27

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	ppm
Viscosity:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.76 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	4200.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	HO&GCM 10%G30%O60%M	0.878
62.00	HO&GCM 5%G25%O70%M	0.439
40.00	OCM 15%O85%M	0.346
0.00	Tool Sample 20%G25%O55%M	0.000

Total Length: 226.00 ft Total Volume: 1.663 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63527 **DST#: 2**

Test Start: 2016.10.28 @ 09:30:10

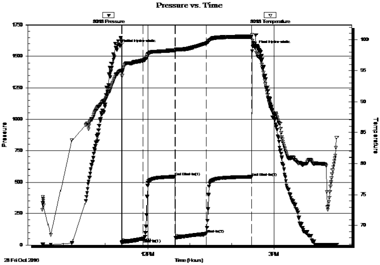
GENERAL INFORMATION:

Formation:	**LKC "G"**		
Deviated:	No Whipstock: ft (KB)	Test Type:	Conventional Bottom Hole (Reset)
Time Tool Opened:	11:23:35	Tester:	Ray Schw ager
Time Test Ended:	16:29:19	Unit No:	77
Interval:	**3290.00 ft (KB) To 3305.00 ft (KB) (TVD)**	Reference Elevations:	2131.00 ft (KB)
Total Depth:	3305.00 ft (KB) (TVD)		2123.00 ft (CF)
Hole Diameter:	7.88 inches Hole Condition: Fair	KB to GR/CF:	8.00 ft

Serial #: 8018 **Inside**

Press@RunDepth:	90.85 psig @ 3291.00 ft (KB)			Capacity:	8000.00 psig
Start Date:	2016.10.28	End Date:	2016.10.28	Last Calib.:	2016.10.28
Start Time:	09:30:10	End Time:	16:29:19	Time On Btm:	2016.10.28 @ 11:21:05
				Time Off Btm:	2016.10.28 @ 14:33:34

TEST COMMENT: 30-IFP-w k to BOB blow in 16 min
45-ISIP-no bl bk
45-FFP-w k to BOB blow in 10 min
60-FSIP-2" bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1577.81	94.93	Initial Hydro-static
3	20.97	94.18	Open To Flow (1)
33	50.16	96.66	Shut-In(1)
78	542.82	98.28	End Shut-In(1)
79	55.68	98.27	Open To Flow (2)
123	90.85	99.41	Shut-In(2)
188	541.84	100.45	End Shut-In(2)
193	1568.42	99.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
42.00	VGMO 50%G10%M40%O	0.30
175.00	CO	1.24
0.00	650' GIP	0.00
0.00	Tool Sample 2%M98%O	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63527 **DST#: 2**

Test Start: 2016.10.28 @ 09:30:10

GENERAL INFORMATION:

Formation: **LKC "G"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:23:35
Time Test Ended: 16:29:19

Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schw ager
Unit No: 77

Interval: 3290.00 ft (KB) To 3305.00 ft (KB) (TVD)
Total Depth: 3305.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

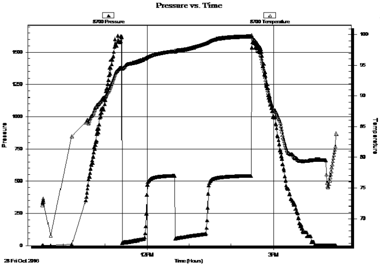
Reference Elevations: 2131.00 ft (KB)
2123.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8700 **Outside**

Press@RunDepth: psig @ 3291.00 ft (KB)
Start Date: 2016.10.28 End Date: 2016.10.28
Start Time: 09:30:12 End Time: 16:29:21

Capacity: 8000.00 psig
Last Calib.: 2016.10.28
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IFP-w k to BOB blow in 16 min
45-ISIP-no bl bk
45-FFP-w k to BOB blow in 10 min
60-FSIP-2" bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
42.00	VGMO 50%G10%M40%O	0.30
175.00	CO	1.24
0.00	650' GIP	0.00
0.00	Tool Sample 2%M98%O	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

FLUID SUMMARY

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63527 **DST#: 2**

Test Start: 2016.10.28 @ 09:30:10

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 50.00 sec/qt
Water Loss: 7.35 in^3
Resistivity: ohm.m
Salinity: 5700.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 39 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
42.00	VGMO 50%G10%M40%O	0.297
175.00	CO	1.239
0.00	650' GIP	0.000
0.00	Tool Sample 2%M98%O	0.000

Total Length: 217.00 ft
Total Volume: 1.536 bbl

Num Fluid Samples: 0
Num Gas Bombs: 0
Serial #:
Laboratory Name:
Laboratory Location:
Recovery Comments:

DRILL STEM TEST REPORT

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63528 **DST#: 3**

Test Start: 2016.10.29 @ 09:10:19

GENERAL INFORMATION:

Formation: **LKC base**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:13:59
Time Test Ended: 16:13:58

Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schwager
Unit No: 77

Interval: 3313.00 ft (KB) To 3450.00 ft (KB) (TVD)
Total Depth: 3450.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

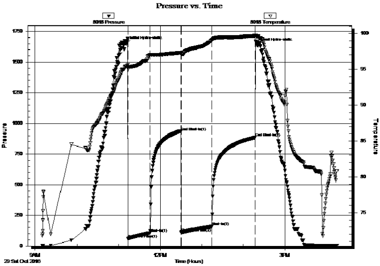
Reference Elevations: 2131.00 ft (KB)
2123.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8018 **Inside**

Press@RunDepth: 158.38 psig @ 3318.00 ft (KB)
Start Date: 2016.10.29 End Date: 2016.10.29
Start Time: 09:10:19 End Time: 16:13:58

Capacity: 8000.00 psig
Last Calib.: 2016.10.29
Time On Btm: 2016.10.29 @ 11:11:29
Time Off Btm: 2016.10.29 @ 14:20:13

TEST COMMENT: 30-IFP-wk to a gd bl , 1/2" to 6' bl
45-ISIP-no bl bk
45-FFP-wk bl thru-out surface to 3" blow
60-FSIP-no bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1649.37	95.44	Initial Hydro-static
3	59.51	95.02	Open To Flow (1)
34	105.95	96.98	Shut-In(1)
79	934.09	97.32	End Shut-In(1)
79	110.71	97.05	Open To Flow (2)
123	158.38	99.04	Shut-In(2)
186	884.77	99.66	End Shut-In(2)
189	1634.74	99.58	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
191.00	WM 20%W80%M w /show of oil ~1%oil	1.35
0.00	Tool Sample 1%O10%W89%M	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

Trilobite Testing, Inc   Ref. No: 63528   Printed: 2016.10.31 @ 11:01:25

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63528   **DST#: 3**

Test Start: 2016.10.29 @ 09:10:19

GENERAL INFORMATION:

Formation: **LKC base**
Deviated: No   Whipstock: ft (KB)
Time Tool Opened: 11:13:59
Time Test Ended: 16:13:58

Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schw ager
Unit No: 77

Interval: 3313.00 ft (KB) To 3450.00 ft (KB) (TVD)
Total Depth: 3450.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

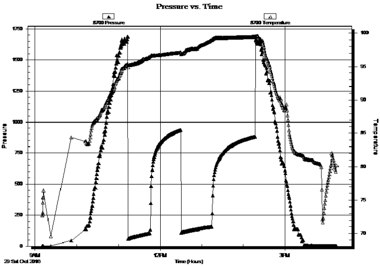
Reference Elevations: 2131.00 ft (KB)
2123.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8700   Outside

Press@RunDepth: psig @ 3318.00 ft (KB)
Start Date: 2016.10.29   End Date: 2016.10.29
Start Time: 09:10:24   End Time: 16:14:03

Capacity: 8000.00 psig
Last Calib.: 2016.10.29
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IFP-w k to a gd bl , 1/2" to 6' bl
45-ISIP-no bl bk
45-FFP-w k bl thru-out surface to 3" blow
60-FSIP-no bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
191.00	WM 20%W80%M w/show of oil ~1%oil	1.35
0.00	Tool Sample 1%O10%W89%M	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63528 **DST#: 3**

Test Start: 2016.10.29 @ 09:10:19

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	18000 ppm
Viscosity:	53.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.37 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5700.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
191.00	WM 20%W80%M w/show of oil ~1%oil	1.353
0.00	Tool Sample 1%O10%W89%M	0.000

Total Length: 191.00 ft Total Volume: 1.353 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: RW .36@65F

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63529 **DST#: 4**

Test Start: 2016.10.30 @ 13:20:07

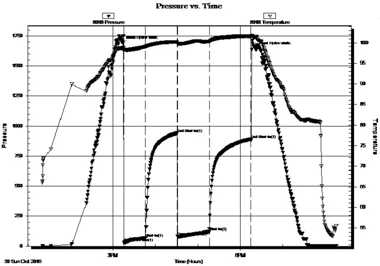
GENERAL INFORMATION:

Formation:	**Arbuckle**		
Deviated:	No Whipstock: ft (KB)	Test Type:	Conventional Bottom Hole (Reset)
Time Tool Opened:	15:15:17	Tester:	Ray Schw ager
Time Test Ended:	20:16:01	Unit No:	77
Interval:	**3428.00 ft (KB) To 3575.00 ft (KB) (TVD)**	Reference Elevations:	2131.00 ft (KB)
Total Depth:	3575.00 ft (KB) (TVD)		2123.00 ft (CF)
Hole Diameter:	7.88 inches Hole Condition: Fair	KB to GR/CF:	8.00 ft

Serial #: 8018 **Inside**

Press@RunDepth:	119.88 psig @	3430.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2016.10.30	End Date:	2016.10.30	Last Calib.:	2016.10.30
Start Time:	13:20:07	End Time:	20:16:01	Time On Btm:	2016.10.30 @ 15:13:47
				Time Off Btm:	2016.10.30 @ 18:22:01

TEST COMMENT: 30-IFP-w k to a fr bl 1/2" to 5" bl
45-ISIP-no bl bk
45-FFP-w k bl thru-out surface to 2" bl
60-FSIP-no bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1689.63	98.72	Initial Hydro-static
2	29.00	98.06	Open To Flow (1)
33	69.27	99.00	Shut-In(1)
77	941.05	100.21	End Shut-In(1)
78	82.54	99.67	Open To Flow (2)
123	119.88	100.35	Shut-In(2)
182	892.07	101.52	End Shut-In(2)
189	1639.62	101.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW 30%M70%W	0.88
77.00	WM 25%W75%M	0.55
0.00	Tool sample 30%W70%M ~>1%oil	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63529 **DST#: 4**

Test Start: 2016.10.30 @ 13:20:07

GENERAL INFORMATION:

Formation: **Arbuckle**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:15:17
Time Test Ended: 20:16:01

Test Type: Conventional Bottom Hole (Reset)
Tester: Ray Schwager
Unit No: 77

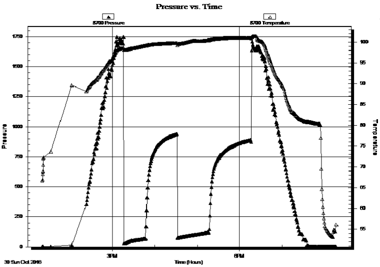
Interval: 3428.00 ft (KB) To 3575.00 ft (KB) (TVD)
Total Depth: 3575.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2131.00 ft (KB)
2123.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 8700 **Outside**
Press@RunDepth: psig @ 3430.00 ft (KB)
Start Date: 2016.10.30 End Date: 2016.10.30
Start Time: 13:21:01 End Time: 20:16:55

Capacity: 8000.00 psig
Last Calib.: 2016.10.30
Time On Btm:
Time Off Btm:

TEST COMMENT: 30-IFP-wk to a fr bl 1/2" to 5" bl
45-ISIP-no bl bk
45-FFP-wk bl thru-out surface to 2" bl
60-FSIP-no bl bk



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
124.00	MW 30%M70%W	0.88
77.00	WM 25%W75%M	0.55
0.00	Tool sample 30%W70%M ~>1%oil	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

FLUID SUMMARY

Vess Oil Corporation

1700 Waterfront PKWY
Bldg 500
Wichita KS 67206-6619
ATTN: Dylan Klaus, Roger M

7-10s-16w Rooks,KS

Comeau #2

Job Ticket: 63529 **DST#: 4**

Test Start: 2016.10.30 @ 13:20:07

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	34000 ppm
Viscosity:	53.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	7.39 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5700.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
124.00	MW 30%M70%W	0.878
77.00	WM 25%W75%M	0.545
0.00	Tool sample 30%W70%M ~>1%oil	0.000

Total Length: 201.00 ft Total Volume: 1.423 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: .18@74F