

ELEVATIONS
KB 2880'
GL 2870'
COMPANY & WELL Ritchie Explor. #3 Phillips 20C
LOCATION 335' FSL, 700' FWL, SW/4
SEC 20 TWPSP. 13s RGE 31w
COUNTY Gove STATE Kansas

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GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY	Ritchie Exploration, Inc	ELEVATIONS	KB 2880'		
LEASE	# 3 Phillips 20C	DF			
FIELD		GL	2870'		
LOCATION	335' FSL, 700' FWL, SW/4	Measurements Are All From	Kelly Bushing		
SEC	20	TWPSP.	13s	RGE	31w
COUNTY	Gove	STATE	Kansas		
CONTRACTOR	Murfin Drilling Rig #14	CONDUCTOR			
SPUD	1-9-2012	COMP	1-26-2012		
RTD	4670'	LTD	4670'		
MUD UP	3400'	TYPE MUD	Chemical		
SAMPLES SAVED FROM	3500' TO RTD	SURFACE	8-5/8" @ 225'		
DRILLING TIME KEPT FROM	3500' TO RTD	PRODUCTION	5-1/2" @ 4668'		
SAMPLES EXAMINED FROM	3600' TO RTD	ELECTRICAL SURVEYS	Superior, DCPL, DIL (Engr. Jeff Greenewag)		
GEOLOGICAL SUPERVISION FROM	3519' to RTD				
GEOLOGIST ON WELL	Tim J. Lauer				

FORMATION TOPS	ELECTRIC LOG	SAMPLE LOG
Anhydrite	2353 (+527)	2355 (+525)
Heebner	3864 (-984)	3866 (-986)
Lansing	3912 (-1032)	3913 (-1033)
Stark	4142 (-1262)	4142 (-1262)
Marmaton	4242 (-1362)	4242 (-1362)
Fort Scott	4432 (-1552)	4433 (-1553)
Cherokee Shale	4550 (-1670)	4550 (-1670)
Mississippian	4670 (-1790)	4670 (-1790)
Total Depth	4670	4670

API # 15-063-21962

REMARKS
Due to drill stem test results, and log evaluation, operator elected to run production casing to further test the location.
Respectfully submitted,
Tim J. Lauer
1/26/2012

LEGEND
Anhydrite, Drilling Time In Minutes Per Foot, Limestone, Shale, Carb Sh, Cherty LS, Chert, Dolomite

DEPTH	SAMPLE DESCRIPTION	REMARKS
3600'	Sh: med-dk. s. vol. gm-gr. red, scat blk.	SPUD 5:45 PM 1-9-2012 RTD 7:20 AM 1-25-2012
3600'	Ls: crm-bl, some gry, most micro-fngdrxn, mealy txt, fr-scat d. IXLN por, NSFO, n. fl. or, n. stn., n. odor.	"BIT RECORD" 1) HTC DP506F (New) Under Surface to 3519' 2) HTC G3275 (Return) 3519' - 4670' RTD
3600'	Ls: crm-gry, sm tan, most micro-fngdrxn, mealy txt, fr-scat d. IXLN por, NSFO, n. fl. or, n. stn., n. odor.	"VERTICAL SURVEYS" 1/2" @ 2228' 3/4" @ 1299' 1/2" @ 3519' 1/2" @ 3956' 1/2" @ 4670'
3600'	Sh: med-dk. grn-gry, red.	
3600'	Ls: med-dk. gry, micro-fxn, foss, scat mealy txt, most pr IXLN por, NS, n. fl. or, n. stn., n. odor.	
3600'	Sh: med-dk. s. vol. AA.	
3600'	Ls: crm-bl, AA, micro-fxn, deor mealy txt, deor IXLN por, NS, n. fl. or, n. stn., n. odor.	1-8-2012 - MRT, RURT Prep to set Surf Cap.
3600'	Ls: crm-gry, sm tan, most micro-fngdrxn, mealy txt, fr-scat d. IXLN por, NSFO, n. fl. or, n. stn., n. odor.	1-10-2012 - 7:00 AM PDT @ 3962' set 8-5/8" @ 225' WOC DST - 11:00 AM
3600'	Ls: gry-tan-bm, molt IP micro-fngdrxn, s. foss, most dns, pr por, 1/3 inc maly-gran tx, fr IXLN por, NSFO, n. fl. or, n. stn., n. odor.	1-11-2012 - 7:00 AM Drg @ 3030'
3600'	Ls: gry-tan-bm, molt IP micro-fngdrxn, s. foss, most dns, pr por, 1/3 inc maly-gran tx, fr IXLN por, NSFO, n. fl. or, n. stn., n. odor.	1-12-2012 - 7:00 AM Drg @ 3705'
3600'	Shaly Ls: crm-gry, dk gry, micro-fxn, argill, IP, scat mealy txt, pr IXLN por, NSFO, n. fl. or, n. stn., n. odor.	1-13-2012 - 7:00 AM PDT @ 3965' Runned DST (1)
3600'	Sh: med-dk. scat blk.	1-14-2012 - 7:00 AM PDT @ 3967' Stuck GIH after DST (2)
3600'	Ls: most crm-gry, some buff, micro-fngdrxn, soft, foss IP, OA mealy-gran txt, 1/3-occ d. IXLN por, scat ppt por, NSFO, n. fl. or, n. stn., n. odor.	1-16-2012 - 7:00 AM PDT @ 3967' Working to free pipe
3600'	Ls: crm-buff, micro-fngdrxn, soft, mealy-gran tx fr-scat d. IXLN por, NSFO, n. fl. or, n. stn., n. odor.	1-16-2012 - 7:00 AM PDT @ 3967' Prepare to free point and shoot
3600'	Ls: crm-bl, molt gry IP micro-fngdrxn, deor mealy-gran tx, scat fr IXLN por, deor chalk, NSFO, n. fl. or, n. stn., n. odor.	1-17-2012 - 7:00 AM PDT @ 3967' Warning in well bit after 10' on FSP
3600'	Ls: incr tan-gry, micro-fxn, deor mealy txt, deor por, OA pr vis por, NSFO, n. fl. or, n. stn., scat chert, crm-mlky, translu-opaq, shrp, NS, n. odor.	1-18-2012 - 7:00 AM PDT @ 3999' Prep to Drill after DST (3)
3600'	Sh: med-dk. sm blk.	1-19-2012 - 7:00 AM PDT @ 4085' Runned DST (5)
3600'	Sh: med-dk. vol, red-bm, sm dirty, argill, limy IP, foss.	1-20-2012 - 7:00 AM PDT @ 4120' Prep to Drill after DST (6)
3600'	Ls: most crm-gry, some buff, micro-fngdrxn, soft, foss IP, OA mealy-gran txt, 1/3-occ d. IXLN por, scat ppt por, NSFO, n. fl. or, n. stn., n. odor.	1-21-2012 - 7:00 AM PDT @ 4174' GIH after DST (8)
3600'	Ls: crm-bl, molt gry IP micro-fngdrxn, deor mealy-gran tx, scat fr IXLN por, deor chalk, NSFO, n. fl. or, n. stn., n. odor.	1-23-2012 - 7:00 AM CFS @ 4335' COTW @ 4454' COOH with DST (9)
3600'	Ls: bf-tan, scat md gry, micro-fngdrxn, sil. foss, 1/3 mealy-gran txt, fr-scat IXLN por, scat ppt por, NSFO, n. fl. or, n. stn., n. odor.	1-24-2012 - 7:00 AM RTD @ 4620' Circ to cond for logging
3600'	Ls: tan, bf-tm, AA, micro-fxn, sil. foss, most dns, scat pr IXLN por, NS, n. fl. or, n. stn., n. odor.	5 1/2" Prod. Csg. set at 4668' w/200 sac cement.
3600'	Sh: md-dk. gry, incr gm, red.	Call Point 3400' 11:55 AM 1/11/2012
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	Geologist on location 3519' 9:15 PM 1/11/2012
3600'	Ls: crm-bl, gry, some bf, micro-fngdrxn, foss AA, mly-gran tx, 1/3 wff-grd IXLN por, AA, deor chalk, crm, NSFO, n. fl. or, n. stn., tr. ch: crm-mlky/bf, opaq-translu, sharp, NS, n. odor. opaq white, NS.	Mud Check at 3730: vis: 56 wt, 8.9 Chlor, 2.400 LCM, 2# Ph: 11.0 WL: 6.4 (displace native fluid @ 3400')
3600'	Ls: bf-tan, scat md gry, micro-fngdrxn, sil. foss, 1/3 mealy-gran txt, fr-scat IXLN por, scat ppt por, NSFO, n. fl. or, n. stn., n. odor.	20 Stand Short Trip at 3956' pulled light first 4 stands off bottom
3600'	Sh: med-dk. blk, carb.	Pipe Strap on DST (1) 17' @ 3962.18' Strap: 3962.51' Diff: 0.67' short
3600'	Ls: crm-bl, molt gry IP micro-fngdrxn, deor mealy-gran tx, scat fr IXLN por, deor chalk, NSFO, n. fl. or, n. stn., n. odor.	DST (1) 3930'-3956' Blow: strong, BOB in 22" on IFP weak surf. blowback on FSP; 1" blowback in 18" on FSP
3600'	Ls: buff-crm, micro-fxn, most dns, pr por, NS, 1/4 softer, s. chalky, mealy-occ gran tx, scat fr IXLN por, scat pcs pr vug por, NSFO, scat minrl flr, n. cut, n. stn., n. odor.	30' G.I.P. 234' Gsyo (15% gas, 85% oil, 0% mud, 0% wtr) 88' GCMC (20% gas, 5% oil, 30% mud, 0% wtr) 88' GOCMW (20% gas, 20% oil, 40% mud, 20% wtr) 410' Tot. Fluid IHP: 1905 FFP: 113-176 IFP: 1905 FSP: 1002 ISIP: 2921 FHP: 1897 Temp: 114°F Chlorides MUD: 2,500 PPM DST: 11:00 AM Gravelly: 37' API @ 60' F Rw = 0.175 Chms @ 50' F Both Shut-in curves broken over
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	DST (2) 3956'-3967' Blow: strong, BOB in 22" on IFP no blowback on FSP; no blowback on FSP; 4" blowback on FSP
3600'	Ls: crm-bl, gry, some bf, micro-fngdrxn, foss AA, mly-gran tx, 1/3 wff-grd IXLN por, AA, deor chalk, crm, NSFO, n. fl. or, n. stn., tr. ch: crm-mlky/bf, opaq-translu, sharp, NS, n. odor. opaq white, NS.	20' MW with oil spots (0% gas, trace oil, 50% mud, 25% wtr) IHP: 1916 FFP: 153-235 IFP: 1922 FSP: 1022 ISIP: 2921 FHP: 1898 Temp: 109°F Chlorides MUD: 2,500 PPM DST: 4:00 PM Gravelly: 37' API @ 60' F Rw = 0.23 Chms @ 50' F Both Shut-in curves broken over
3600'	Ls: bf-tan, scat md gry, micro-fngdrxn, sil. foss, 1/3 mealy-gran txt, fr-scat IXLN por, scat ppt por, NSFO, n. fl. or, n. stn., n. odor.	DST (3) 3976'-3999' Blow: strong, BOB in 15" on IFP good to strong BOB in 24" on FFP; 4" blowback on FSP
3600'	Ls: most wht-crm, some gry, AA, micro-fxn, dns, crinkl'd mly txt, pr por, NS, scat minrl flr, n. oil flr, n. stn., n. odor. scat ChT; crm-ly gry, translu-opaq, fresh, shrp, NS.	150' G.I.P. 213' Gsyo (20% gas, 80% oil, 20% mud, 0% wtr) 178' OSWM (10% gas, 40% oil, 50% mud, 0% wtr) 565' Tot. Fluid IHP: 1859 FFP: 153-235 IFP: 23-143 FSP: 1002 ISIP: 2921 FHP: 1870 Temp: 117°F Chlorides MUD: 4,200 PPM DST: 24:00 PPM Rw = 0.105 Chms @ 50' F Both Shut-in curves broken over
3600'	Ls: wht-gry, AA, micro-fxn, dns, scat mealy text, pr por, NS, incr crm-md-gry, crypto-fxn, comp, dns, scat mealy txt, pr por, NS, scat minrl flr, n. cut, n. stn., n. odor.	DST (4) 4002'-4015' Blow: strong, BOB in 15" on IFP Blow: strong, BOB in 2 1/2" on FFP; 4" blowback on FSP
3600'	Sh: med-dk. gry, vol red, blk, carb.	30' OSWM (0% gas, 0% oil, 50% mud, 50% wtr) 190' OSWM (0% gas, 0% oil, 20% mud, 80% wtr) 138' MW (0% gas, 2% oil, 5% mud, 93% wtr) 1,608' Tot. Fluid IHP: 1927 FFP: 574-766 IFP: 240-536 FSP: 1022 ISIP: 1133 FHP: 1821 Temp: 122°F Chlorides MUD: 3,400 PPM DST: 24:00 PPM Rw = 0.105 Chms @ 50' F Both Shut-in curves broken over
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	DST (5) 4050'-4085' Blow: strong, BOB in 4" on IFP Blow: strong, BOB in 15" on FFP; strong BOB in 5 1/2" on FFP
3600'	Ls: crm-bl, gry, some bf, micro-fngdrxn, foss AA, mly-gran tx, 1/3 wff-grd IXLN por, AA, deor chalk, crm, NSFO, n. fl. or, n. stn., tr. ch: crm-mlky/bf, opaq-translu, sharp, NS, n. odor. opaq white, NS.	310' G.I.P. 130' GOCM (5% gas, 20% oil, 5% mud, 40% wtr) 130' GOCM (10% gas, 4% oil, 14% mud, 80% wtr) 440' MW (0% gas, 0% oil, 10% mud, 90% wtr) 1,608' Tot. Fluid IHP: 1859 FFP: 153-235 IFP: 23-143 FSP: 1002 ISIP: 2921 FHP: 1870 Temp: 117°F Chlorides MUD: 4,200 PPM DST: 24:00 PPM Rw = 0.105 Chms @ 50' F Both Shut-in curves broken over
3600'	Ls: wht-gry, AA, micro-fxn, dns, scat mealy text, pr por, NS, incr crm-md-gry, crypto-fxn, comp, dns, scat mealy txt, pr por, NS, scat minrl flr, n. cut, n. stn., n. odor.	DST (6) 4085'-4120' Blow: strong, BOB in 15" on IFP Blow: strong, BOB in 15" on FFP; strong BOB in 20" blowback on FSP
3600'	Sh: med-dk. gry, hood blk, carb.	855' G.I.P. 180' Gsyo (30% gas, 70% oil, 0% mud, 0% wtr) 280' GOCMW (5% gas, 5% oil, 80% mud, 10% wtr) 440' MW (0% gas, 0% oil, 10% mud, 90% wtr) 1,919' Tot. Fluid IHP: 1989 FFP: 281-397 IFP: 66-300 FSP: 1002 ISIP: 679 FHP: 1942 Temp: 112°F Chlorides MUD: 3,500 PPM DST: 6:00 PM Gravelly: 37' API @ 60' F Rw = NA *Shut-in curves indicate 2 pass zones ISIP curve still log.
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	DST (7) 4127'-4140' Blow: strong, BOB in 15" on IFP Blow: strong, BOB in 15" on FFP; Blow: strong, BOB in 25" on FFP; 4" blowback on FSP
3600'	Ls: crm-bl, gry, some bf, micro-fngdrxn, foss AA, mly-gran tx, 1/3 wff-grd IXLN por, AA, deor chalk, crm, NSFO, n. fl. or, n. stn., tr. ch: crm-mlky/bf, opaq-translu, sharp, NS, n. odor. opaq white, NS.	520' G.I.P. 224' Gsyo (50% gas, 50% oil, 0% mud, 0% wtr) 190' GOCMW (25% gas, 25% oil, 50% mud, 0% wtr) 1,408' Tot. Fluid IHP: 1907 FFP: 192-252 IFP: 240-536 FSP: 1022 ISIP: 1133 FHP: 1821 Temp: 122°F Chlorides MUD: 3,400 PPM DST: 24:00 PPM Rw = 0.105 Chms @ 50' F Both Shut-in curves broken over
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	DST (8) 4140'-4174' Blow: strong, BOB in 4" on IFP Blow: strong, BOB in 15" on FFP; strong BOB in 5 1/2" on FFP
3600'	Sh: drk gry, blk, carb, opaq, fresh, shrp, NS.	314' G.I.P. 63' Gsyo (40% gas, 60% oil, 0% mud, 0% wtr) 85' GOCMW (10% gas, 10% oil, 50% mud, 50% wtr) 344' GOSMWW (5% gas, 1% oil, 15% mud, 80% wtr) 1,221' Tot. Fluid IHP: 1989 FFP: 281-397 IFP: 66-300 FSP: 1002 ISIP: 679 FHP: 1942 Temp: 123°F Chlorides MUD: 5,500 PPM DST: 6:00 PM Gravelly: 37' API @ 60' F Rw = 0.175 Chms @ 34' F Both Shut-in curves broken over
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	DST (9) 4174'-4210' Blow: strong, BOB in 15" on IFP Blow: strong, BOB in 15" on FFP; strong BOB in 15" on FFP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	668' G.I.P. 84' Gsyo (25% gas, 65% oil, 0% mud, 0% wtr) 84' Gsyo (15% gas, 60% oil, 20% mud, 0% wtr) 170' GOCMW (5% gas, 20% oil, 60% mud, 0% wtr) 90' GOCMW (30% gas, 15% oil, 15% mud, 50% wtr) 628' Tot. Fluid IHP: 2180 FFP: 160-252 IFP: 32-154 FSP: 1069 ISIP: 1124 FHP: 1972 Temp: 116°F Chlorides MUD: 5,800 PPM DST: 9:00 PM Gravelly: 37' API @ 60' F Rw = 0.175 Chms @ 34' F Both Shut-in curves broken over
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	DST (10) 4425'-4485' Blow: strong, BOB in 15" on IFP Blow: strong, BOB in 15" on FFP; strong BOB in 20" blowback on FSP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	85' G.I.P. 213' Gsyo (50% gas, 50% oil, 0% mud, 0% wtr) 190' GOCMW (25% gas, 25% oil, 50% mud, 0% wtr) 1,408' Tot. Fluid IHP: 1907 FFP: 192-252 IFP: 240-536 FSP: 1022 ISIP: 1133 FHP: 1821 Temp: 122°F Chlorides MUD: 3,400 PPM DST: 24:00 PPM Rw = 0.105 Chms @ 50' F Both Shut-in curves broken over
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	DST (11) 4486'-4515' Blow: strong, BOB in 4" on IFP Blow: strong, BOB in 15" on FFP; strong BOB in 5 1/2" on FFP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	30-45-45-60 Blow: strong, BOB in 25" on IFP weak surf. blowback 8" into ISIP; Blow: strong, BOB in 15" on FFP; 4" blowback on FSP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	175' G.I.P. 15' Gsyo (50% gas, 85% oil, 0% mud, 0% wtr) 180' GOCMW (10% gas, 4% oil, 14% mud, 80% wtr) 440' MW (0% gas, 0% oil, 10% mud, 90% wtr) 1,608' Tot. Fluid IHP: 1927 FFP: 574-766 IFP: 240-536 FSP: 1022 ISIP: 1133 FHP: 1821 Temp: 122°F Chlorides MUD: 3,400 PPM DST: 24:00 PPM Rw = 0.105 Chms @ 50' F Both Shut-in curves broken over
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	DST (12) 4515'-4550' Blow: strong, BOB in 4" on IFP Blow: strong, BOB in 15" on FFP; strong BOB in 5 1/2" on FFP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	30-45-45-60 Blow: strong, BOB in 25" on IFP weak surf. blowback 8" into ISIP; Blow: strong, BOB in 15" on FFP; 4" blowback on FSP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	175' G.I.P. 15' Gsyo (50% gas, 85% oil, 0% mud, 0% wtr) 180' GOCMW (10% gas, 4% oil, 14% mud, 80% wtr) 440' MW (0% gas, 0% oil, 10% mud, 90% wtr) 1,608' Tot. Fluid IHP: 1927 FFP: 574-766 IFP: 240-536 FSP: 1022 ISIP: 1133 FHP: 1821 Temp: 122°F Chlorides MUD: 3,400 PPM DST: 24:00 PPM Rw = 0.105 Chms @ 50' F Both Shut-in curves broken over
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	DST (13) 4550'-4585' Blow: strong, BOB in 4" on IFP Blow: strong, BOB in 15" on FFP; strong BOB in 5 1/2" on FFP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	30-45-45-60 Blow: strong, BOB in 25" on IFP weak surf. blowback 8" into ISIP; Blow: strong, BOB in 15" on FFP; 4" blowback on FSP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	175' G.I.P. 15' Gsyo (50% gas, 85% oil, 0% mud, 0% wtr) 180' GOCMW (10% gas, 4% oil, 14% mud, 80% wtr) 440' MW (0% gas, 0% oil, 10% mud, 90% wtr) 1,608' Tot. Fluid IHP: 1927 FFP: 574-766 IFP: 240-536 FSP: 1022 ISIP: 1133 FHP: 1821 Temp: 122°F Chlorides MUD: 3,400 PPM DST: 24:00 PPM Rw = 0.105 Chms @ 50' F Both Shut-in curves broken over
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	DST (14) 4585'-4620' Blow: strong, BOB in 4" on IFP Blow: strong, BOB in 15" on FFP; strong BOB in 5 1/2" on FFP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	30-45-45-60 Blow: strong, BOB in 25" on IFP weak surf. blowback 8" into ISIP; Blow: strong, BOB in 15" on FFP; 4" blowback on FSP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	175' G.I.P. 15' Gsyo (50% gas, 85% oil, 0% mud, 0% wtr) 180' GOCMW (10% gas, 4% oil, 14% mud, 80% wtr) 440' MW (0% gas, 0% oil, 10% mud, 90% wtr) 1,608' Tot. Fluid IHP: 1927 FFP: 574-766 IFP: 240-536 FSP: 1022 ISIP: 1133 FHP: 1821 Temp: 122°F Chlorides MUD: 3,400 PPM DST: 24:00 PPM Rw = 0.105 Chms @ 50' F Both Shut-in curves broken over
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	DST (15) 4620'-4670' Blow: strong, BOB in 4" on IFP Blow: strong, BOB in 15" on FFP; strong BOB in 5 1/2" on FFP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	30-45-45-60 Blow: strong, BOB in 25" on IFP weak surf. blowback 8" into ISIP; Blow: strong, BOB in 15" on FFP; 4" blowback on FSP
3600'	Ls: crm-bl, gry-whl, micro-fngdrxn, foss IP, most maly-gran, 1/2 fr IXLN por, scat vug por, d. IXLN por, NSFO, n. fl. or, n. stn., n. odor. incr crm, whl, chalk, soft, NS.	175' G.I.P. 15' Gsyo (50% gas, 85% oil, 0% mud, 0% wtr) 180' GOCMW (10% gas, 4% oil, 14% mud, 80% wtr) 440' MW (0% gas, 0% oil, 10% mud, 90% wtr) 1,608' Tot. Fluid IHP: 1927 FFP: 574-766 IFP: 240-536 FSP: 1022 ISIP: 1133 FHP: 1821 Temp: 122°F Chlorides MUD: 3,400 PPM DST: 24:00 PPM Rw = 0.105 Chms @ 50' F Both Shut-in curves broken over

COMPANY & WELL Ritchie Expl., Inc. #3 Phillips 20C
LOCATION 335' FSL, 700' FWL, SW/4
SEC 20 TWPSP. 13s RGE 31w
COUNTY Gove STATE Kansas

