



StrataKan EXPLORATION

Scale 1:240 (5"=100') Imperial
Measured Depth Log

Well Name: **Morrow 2734 SWD**
API: **15-077-21024-0100**
Location: **SW - NE - NE - NW of Section (34) T33S - R8W**
License Number: **34975**
Spud Date: **11/3/2018**
Surface Coordinates: **NA**
Region: **Harper, KS**
Drilling Completed: **11/6/2018**

Bottom Hole Coordinates: **NA**
Ground Elevation (ft): **1384'** K.B. Elevation (ft): **1395'**
Logged Interval (ft): **4750'** To: **5450'** Total Depth (ft): **5450'**
Formation: **Arbuckle Dolomite @ RTD**
Type of Drilling Fluid: **Mud-Co. Chemical Dispac**
Printed by MudLog from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: **StrataKan Exploration, LLC**
Address: **100 S. Main Street
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GEOLOGIST

Name: **Eli J. Felts**
Company: **Gravity Oil, LLC**
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(316) 204-5059**

Pipe Setting

8.625" set @ 266' (Original Surface Pipe circa 1984')

Remarks

OWWO (Texas Energies "Morrow 1-34")

Original TD in Mississippian. This well was washed down for an Arbuckle Disposal prior to commencement of Horizontal Well on this lease. 5.5" 15# Casing was run.

Curve Track 1 ROP (min/ft) Gas (units) Gamma (API)	MD	Lithology	Geological Descriptions	Drilling Fluid, Surveys, Etc.
	4660		Mississippian 4660' (-3268')	Eli J. Felts on location 11/4/2018 @ 7:15 PM
	4750		OLD RTD 4750' (-3358')	Washed Down to 4741', Displaced with Mud-Co Drilling Fluids & took off Drilling.
	4760		Abundant shale cavings; varicolored; trace LS - cream to lt gry/green hue, fine to medium xln, fossiliferous in part; trace pyrite; sl. sandy texture; chalky in part; strong reaction to HCL (warm) As above; few pcs LS - tan, fine to micro-xln; dense; rare Dolomite; tan, fine xln; poor to fair visible porosity; no odor, nsfo Sample remains >90% Shale; Occasional LS - cream to white; fine to medium xln; sl. dolomitic in part; slightly fossiliferous w/ intraxln & intrafossiliferous porosity; no odor, nsfo As above; primarily shale cavings; rare DOL - white, fine xln, sl fossiliferous; chalky in part; wk reaction to HCL (cold) 90% Shale cavings; DOL - white to cream, med xln; sandy appearance; occasional LS - lt tan; micro xln; dense DOL & DOL LS/CH: Dol - white to cream/tan, fine xln, sl foss transitions to Dolomitic LS w/ med-large calcite xln. Occasional Chert, white to tan, sub-vitreous, opaque to sub-translucent in part, foss, sharp in few V. similar as previous; increase chert; occasional pyrite xln dev in dolomitic limestone	Start 10' Wet and Dry Samples @ 4760'
	4800		Dolomitic LS - cream to lt tan, fine xln, occasional fossiliferous, mostly intraxln porosity w/ occasional small vugs, few pcs w/ edge gilsonitic staining (black); no odor or shows of free oil; no fluorescence LS - cream to tan, fine xln, chalky in most, dolomitic in part (strong HCL reaction (cold)); CH - bone white; vitreous w/ abundant fossils; sharp & fresh in most LS & Dolomitic LS w/ transitional CH in most; abundant white, cream & lt tan dolomitic LS, fine to med xln w/ abundant chert formed throughout abundant fossils; most pcs dense; no odor (!) drop free oil in tray with no shows found with sample break or cut; possible caving ? CH - white to grey; largley dolomitized through fractures; dolomite; white to cream, fine xln w/ fair to good interxln porosity, sm vuggular in some; foss in part; no odor, nsfo	Mud-Co Depth: 4753' Wt. 8.5 Vis. 8.8 Filtrate 8.8 Chl 6,000 LCM 5#
	4850		Dolomitic Limestone & CH: Dol - cream to white; tan, fine xln, sucrosic, appears stained (poss weathering) many pcs in direct contact to CH - white to lt gry, vitreous, fossiliferous w/ spicule-like fossils; sharp, fresh; no odor, nsfo Dolomite: cream to lt tan; cottony, fine to med xln; decrease chert; several pcs dolomite w/ edge shaley/sandy contacts; SH - varicolored; greys, black, green DOL - cream to lt grey, fine to med xln, foss in part, some chalk, abundant chert throughout, cream/grey, translucent, foss DOL & CH - v. similar as above; creams to tans, fine xln dolomite; cottony, transitions to vitreous CH - translucent to dolomitized; poor visible porosity, dense & tight DOL - cream to grey, fine xln, less chert CH & DOL - white, cream, tan & lt grey; vitreous to dolomitized chert, some translucent w/ foss; Dol - white to cream/grey, fine xln, cottony, fair visible porosity; overall dense; no odor, nsfo DOL & DOLO CH - cream to lt grey, fine xln, transition to med xln (lighter pcs) w/ foss, cherty throughout	Switch to 20' wet & dry samples @ 4840'
	4900		Kinderhook Shale 4911' (-3516')	Switched back to 10' Samples through RTD
	5000		SH - mostly greys, lt to dark; occasional maroon, greens, dense, slippery, some CH like appearance when broken SH - greys, reds & greens; some mottled, firm to soft, some waxy, dense; overall sub silty-smooth SH - greys to green, dark green; silty, few pcs dense w/ cherty appearance; occasional scattered CH - tan, opaque blocks SH - greys & greens, some mottled, silty as above, few blocky/dense SH - dark brown to black, organic appearance; vss gas in few pcs	
	5050		Viola 5075' (-3680')	
	5100		CH - cream to lt tan, vitreous in some; dolomitized in most; dense; few pcs LS - lt grey, fine xln; emerald green mineralization; pyritic fossil replacement DOL - as above; v. rare cluster SS - white cluster, fine grained, well sorted, sub rounded, glauc & claybound matrix DOL - cream to lt grey, fine xln; sandy appearance in some; dense (v. fine cuttings) few pcs SS - tan to lt gry, fine grained, well sorted & rounded; no odor, nsfo DOL & DOLO CH - cream to tan, fine xln as above; few clusters SS (rare) gry to brown; fine grained; well sorted; soft; nsfo No significant changes	
	5150		Simpson (Sand) 5130' (-3735')	
	5200		Mostly SH - grey to lt brown, silty, laminated; some greenish hue w/ black specks SS - white clusters w/ green shale contact; white frosted grains, fine to med grained, sub rounded; claybound matrix; v. friable; no odor, nsfo Mostly SH (cavings ?) - grey to dark grey, brown & greens; few SS clusters as above; sub angular to sub rounded, fairly sorted med grains; shaley SH & SS, as above; sl increase in SS sample presence; v. friable (few loose sand grains in edges of tray) SS - clear to frosted grains, med grains, fairly sorted sub rounded to sub angular grains; v. friable; picking up cluster w/ tweezers crushes into individual grains SS, as above w/ some interbedded shales SS - clear to frosted grains, medium to coarse xln, sub rounded to sub angular, good friability; abundant CH - white/opaque; dolomitized SS - as above, transition to finer grained, dolomitic SS, slightly dense Flood SS - white to tan, clear, frosted grains, sub rounded; fair friability, good porosity; barren, no odor, no shows	7 AM Depth
	5250		Simpson Shale 5217' (-3822')	
	5300		SS - as above & flood SH - grey to dark grey, green, some mottled to speckled in part, blocky & firm SH - grey/dark grey, green, mottled as above, blocky & firm, silty SH - grey to lt grey, brown, green, carries fair amount of SS, as prior samples SH - green, grey, mottled, pyritic in man, few lenses dolomitic SS interbedded, tan to brown, dense, scattered green CH SH - gry, lt to dark green, speckled, blocky to stringy, some pcs maroon colored, ~30% SS; clear, frosted grains, sub rounded, fairly well sorted, pyritic in part no odor, nsfo SS & sandy SH as above SH - grey to green, sm mottled, pyritic in part, flood SS - clear, frosted; fine to medium grained, sub rounded, dense to partly friable	Mud-Co Depth: 5249' Wt. 8.9 Vis. 4.9 Filtrate 7.2 Chl 9,000 LCM 8#
	5350		ARBUCKLE 5296' (-3901')	Built LCM up to 10#/gal prior to Arbuckle penetration
	5400		DOL - cream to buff, fine xln - sucrosic, fair visible porosity DOL - cream to buff, lt grey, fine to med xln, sucrosic ip, fair to poor visible porosity; traces chert *abundant Simpson type shales remain in tray ~70% *VERY poor quality sample: Dolomite, cream to buff, fine xln (10') most sample ground into powdery bits Abundant Shales & sandy shale (simpson type) few traces Dolomite; cream to buff, fine xln Dol - cream to buff, fine to medium xln, sucrosic in part, few pieces cherty, mostly shales; green *cuttings in sample pulverized: Dol - grey, fine xln, abundant shales & pyrite Dol - cream to grey, fine to medium xln, "very finely ground cuttings" poor quality sample Dol - cream to light grey, fine xln, sub-sucrosic, cherty in most; flood shale, greens and black, some speckled Dol - cream, fine to v. fine xln, few pcs w/ large crystalline growth; few pcs w/ red/iron oxide mineral staining Dol, as above; flood of loose sand grains in tray (70%), much of the dolomite has sandy texture & inclusions Dol - cream to brown, very fine xln, dense; abundant chert - cream to brown, sandy, medium to large grains Dol - cream to brown, fine to medium xl, cherty in part, dense; no shows, slight light brown mineral staining in part Dol - cream to brown, some light grey, fine to med xln, dense, sample remains >50% shales (cavings ?)	RTD @ 10:30 PM 11/6/2018 LTD matched RTD