

GEOLOGICAL REPORT

WellSight Systems

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

Well Name: WERNER #4-31 OWWO
Location: SECTION 31-T32S-6E
License Number: 15-035-19420-0001
Spud Date: 5/7/2018
Surface Coordinates: 1650'FWL 2310'FNL

Region: COWLEY CO, KS
Drilling Completed: 5/10/2018

Bottom Hole
Coordinates:
Ground Elevation (ft): 1294 K.B. Elevation (ft): 1303
Logged Interval (ft): 3140 To: RTD Total Depth (ft): 3500
Formation: KINDERHOOK
Type of Drilling Fluid: CHEM

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: VAL ENERGY, INC
Address: 125 N. Market Ste. 1110
Wichita, Kansas 67202

GEOLOGIST

Name: JOE M.BAKER
Company: Mako Operating Co., LLC
Address: P.O BOX 931
ANDOVER KANSAS 67002
316-253-9696



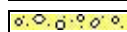

E-Log Tops


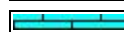
IATAN	1855(-552)		
STALNAKER	1882(-579)	KANSAS CITY LIME	2420(-1117)
MARMATON /ALTAMONT	2690(-1387)		
CHEROKEE SH	2818(-1515)		
MISS CHERT	3080(-1777)		
MISS LIME	3090(-1787)		
KINDERHOOK	3476(-2173)		
ARBUCKLE	Not Penetrated		
RTD	3500 (-2197)		
LTD	3455 (-2139)		

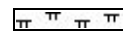

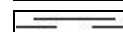

Comments

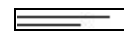

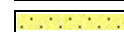

ROCK TYPES

 Anhy
 Bent
 Brec
 Cht

 Clyst
 Coal
 Congl
 Dol

 Gyp
 Igne
 Lmst
 Meta

 Mrlst
 Salt
 Shale
 Shcol

 Shgy
 Sltst
 Ss
 Till

ACCESSORIES

MINERAL

- Anhy
- Arggrn
- Arg
- Bent
- Bit
- Breclfrag
- Calc
- Carb
- Chtdk
- Chtlt
- Dol
- Feldspar
- Ferrpel
- Ferr
- Glau

- Gyp
- Hvymin
- Kaol
- Marl
- Minxl
- Nodule
- Phos
- Pyr
- Salt
- Sandy
- Silt
- Sil
- Sulphur
- Tuff

FOSSIL

- Algae
- Amph
- Belm
- Bioclst
- Brach
- Bryozoa
- Cephal
- Coral
- Crin
- Echin
- Fish
- Foram
- Fossil
- Gastro
- Oolite

- Ostra
- Pelec
- Pellet
- Pisolite
- Plant
- Strom

STRINGER

- Anhy
- Arg
- Bent
- Coal
- Dol
- Gyp
- Ls
- Mrst

- Sltstrg
- Ssstrg

TEXTURE

- Boundst
- Chalky
- Cryxln
- Earthy
- Finexln
- Grainst
- Lithogr
- Microxln
- Mudst
- Packst
- Wackest

OTHER SYMBOLS

POROSITY

- Earthy
- Fenest
- Fracture
- Inter
- Moldic
- Organic
- Pinpoint

- Vuggy

SORTING

- Well
- Moderate
- Poor

ROUNDING

- Rounded
- Subrnd
- Subang
- Angular

OIL SHOW

- Even

- Spotted
- Ques
- Dead

INTERVAL

- Core
- Dst

EVENT

- Rft
- Sidewall

New Track	Lithology	Depth	Curve Track 1 ROP (min/ft)	Geological Descriptions	Oil Shows	MIS
		2850	ROP (min/ft) 0 15	<p style="margin: 0;">Old Well Information</p> <p style="margin: 0;">McNab & Lindsay 9/1960</p> <p style="margin: 0;">#1 Werner B KB 1299</p> <p style="margin: 0;">RTD 3140' ~ 74' into the Miss</p> <p style="margin: 0;">8" surface set @ 130'</p> <p style="margin: 0;">Dst's</p>	2	

2900



2950

Cattleman Sand

Dst #1 Cattleman Sand
2935-53/90"
Rec: 120' Mud 1040# BHP

3000

ROP (min/ft) 0 15

3050



Miss Cht
3084(-1781)

Miss Lm
3090(-1787)

3100



Dst #2 Miss Lime
3095-3120/60"
Rec: 10' Mud 265# BHP

Microlog
porosity

OLD RTD
3140'

NEW HOLE SAMPLE DESCRIPTIONS

3150

Ls wh/crm fn-medxln sl foss p-f interxln
por SSFO @ brk no odor no fluor

Ls crm/wh f-medxln por, fos SSFO @ brk
no odor no fluor

Ls aa crm/wh f-medxln-foss por SSFO &
Gas Bubbs @ brk, lt odor no fluor

Ls crm medxln foss cherty blue/wh dns
fresh ool ns

3200

Ls dk brn dns sl dolo no por ns

Ls dk dns microxln no por ns

Ls dk brn aa dns/microxln aa chty wh/blue
dns fresh argill /shly in pt

Ls dk brn dns argill sl glau

3250

Ls wh/crm, f-medxln w p-interxln
por,chalky,scum oil show @ brk,SS Gas
Bubbs @ brk no odor,no fluor

Ls crm wh f-medxln sl por, scum oil show
sl gas bubbs @ brk chty wh ool

Ls dk brn dns microxln, cherty white
ool,fresh no por ns

Ls as dk brn dns microxln no por aa

3300

Ls crm/tan f-medxln, sl chalky sl interxln
por, no vis show

Ls dk tan vfinexln

Ls dk tan dns smooth sl dolo no por ns

ROP (min/ft)

0

15

3350

Ls dk brn dns aa microIn sl dolo ns

Ls aa dk brn dns micronIn no por ns

Ls dk brn dns aa

Ls tan/wh mott subool fnxln,p-interxln por ns chty

3400

ROP (min/ft) 0 15

Shales gry grn

Ls tan brn sl dolo glauconite incl no shows

Northview SH
3446(-2143)

3450

Shale dkgy grn

Ls white dns fnxln

Kind
3476(-2173)

Shale blk petrolif w/odor

3500

RTD 3500(-2197)
LTD 3502(-2199)

