



CONSULTING GEOLOGIST

Geologist's Report

Drilling Time and Sample Log

OPERATOR _____ Chieftein Oil Co., Inc.
LEASE _____ Well No. #6
FIELD Roundup South API No. 15-007-2245

LOCATION _____ NW SE NW 3058' SL & 2996' TEL
COUNTY _____ Barber STATE _____ Kansas
SEC. _____ 03 TWP _____ 34S RGE _____ 11W

CONTRACTOR _____ Maverick #106
COWH _____ 10/16/2014
RTD _____ 5165
SAMPLES SAVED FROM _____ 3600' TO _____ 5166'

DRILLING TIME LEFT FROM _____ 3600' TO _____ TD
SAMPLES EXAMINED FROM _____ 3600' TO _____ TD
GEOLOGICAL SUPERVISION FROM _____ 3600' TO _____ TD

MUD UP _____ TYPE MUD _____ GEL/CHEMICAL
FORMATION _____ LOC _____ DPTH _____ SAMPLE _____ STRICK _____
KANSAS CITY _____ 4089 -2727

START SH _____ 4259 -2897
Cherokee SH _____ 4475 -3113
Mississippian _____ 4510 -3149
Kinderhook SH _____ 4771 -3349

Base Viola _____ 4937 -3569
Dolomite SD _____ 5081 -3586
Arbuckle _____ 5121 -3758

TD _____ 5165
REFERENCE WELL FOR STRUCTURAL POSITION _____

ELEVATION _____
KB _____ 1362'
DF _____ 1361'
GL _____ 1352'

CASING RECORD
SURFACE Bore 13.386' @ 347'
W/353X 60/40' ROZ
PRODUCTION Bore 5.127' 12.115'
@ 5162' w/ 200 5X

ELECTRICAL SURVEYS
NDM/DI/COMP/
CAL

FOSSIL _____
Algae _____
Amph _____
Belm _____
Bioclst _____
Brach _____
Bryozoa _____
Cephal _____
Coral _____
Crin _____
Echin _____
Fish _____
Foram _____
Fossil _____
Gastro _____
Oolite _____
Ostra _____
Pelec _____
Pellet _____

MINERAL _____
Anhy _____
Arg _____
Bent _____
Bit _____
Brecfrag _____
Calc _____
Carb _____
Chldk _____
Chlt _____
Dol _____
Feldspar _____

ACCESSORIES
Ferrpel _____
Ferr _____
Glauc _____
Gyp _____
Hvymn _____
Kaol _____
Marl _____
Mintxl _____
Module _____
Phos _____
Pyr _____
Salt _____
Sandy _____
Silt _____
Tuff _____
Sulphur _____
Chlorite _____
Dol _____

STRINGER
Anhy _____
Arg _____
Bent _____
Coal _____
Gyp _____
Ls _____
Mst _____
Siltstrg _____
Sststrg _____
Carbsh _____
Clystn _____
Dol _____
Grysh _____
Gryslt _____

TEXTURE
Boundst _____
Chalky _____
Crnlyn _____
Earthy _____
Finexln _____
Grainst _____
Lithogr _____
Microxln _____
Mudst _____
Packst _____
Wackest _____

ROUNDING
Rounded _____
Subrnd _____
Subang _____
Angular _____

OIL SHOWS
Even _____
Spotted _____
Ques _____
Dead _____
Gas show _____

OTHER SYMBOLS
Fracture _____
Inter _____
Moldic _____
Organic _____
Pinpoint _____
Vuggy _____

LITHOLOGY
Anhy _____
Cht _____
Congl _____
Shale _____
Shgy _____
Ss _____

INTERVALS
Core _____
Dst _____
Dst _____

EVENTS
Rft _____
Sidewall _____
Cfs _____
Conn _____

POROSITY TYPE
Earthy _____
Fenest _____

Name: David A. Barker
Company: _____
Address: 212 N. Market, Suite# 320
Wichita, Kansas 67202
(316) 259-4294, 2Barker@sbcglobal.net

OPERATOR
Company: Chieftein Oil Co., Inc.
Address: 605 S. 6th, P.O. Box 124
Kiowa, Kansas 67070

Remarks
Set pipe to further test the Mississippian formation.

Contractor
Maverick Drilling
100 S. Main, Ste 440
Wichita, KS 67202

ACCESSORIES
Sand _____
Silty _____

ROUNDING
Rounded _____
Subrnd _____
Subang _____
Angular _____

OIL SHOWS
Even _____
Spotted _____
Ques _____
Dead _____
Gas show _____

OTHER SYMBOLS
Fracture _____
Inter _____
Moldic _____
Organic _____
Pinpoint _____
Vuggy _____

LITHOLOGY
Anhy _____
Cht _____
Congl _____
Shale _____
Shgy _____
Ss _____

INTERVALS
Core _____
Dst _____
Dst _____

EVENTS
Rft _____
Sidewall _____
Cfs _____
Conn _____

POROSITY TYPE
Earthy _____
Fenest _____

ROCK TYPES
Carb shale _____
Gray shale _____
Sandy lmst _____
Blank _____
Silt stn _____
Shaly slst _____
Cream lmst _____
Red shale _____
Blue-green siltstn _____
Green shale _____

D. green shale _____
Brown lmst _____
Brown shale _____
Brown cream _____
D. green lmst _____
Light cream lmst _____
Gray cream lmst _____
Green dol _____
Gray dol _____

Sorting
Well _____
Moderate _____
Poor _____

D. green lmst _____
Light cream lm _____
Gray cream lm _____
Green dol _____
Gray dol _____

Curve Track 1
ROP (min/ft)

Depth

Porosity

Lithology

Geological Descriptions

TG (units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
C5 (units)

TG, C1-C5

Shale: micaceous, friable, Shale: gray

Shale: black, dense, LS: buff, fnxlyn, oomoldic porosity, LS: buff, fnxlyn, poor interxlyn porosity

Dirty gry siltstone, Shale: gry, LS: brown to buff

LS: Crm, fnxlyn, Shale: gray, massive, LS: brown, microxlyn, dense

LS: Crm, fnxlyn, friable, scat random oocastic porosity

Shale: gray

Shale: gray

Shale: gray, Siltstone layers

Shale: gray with dirty siltstone

Shale: silty gray

Shale: gray

Shale: gray with tight siltstone

LS: Brown, microxlyn, very dense, Shale: gray with dirty gray siltstone

Shale: gray, Siltstone dirty gray

Shale: gray, LS: dark brown, microxlyn, dense

Shale: gray, dense, LS: buff, finexlyn, dense

Shale: gray, LS: brown, microxlyn, very dense

LS: dark gray, microxlyn, dense, LS: crm, microxlyn, very dense, Shale: gray

LS: dark brown/gray, microxlyn, very dense, lighter gray in part, Shale: gray

LS: Dark brown, microxlyn, very dense, LS: buff, fnxlyn, poor interxlyn porosity, streaks of cryptoclyn in part

Increase in LS: dark brown, microxlyn, very dense, poor interxlyn porosity, crm in part, chky pieces

LS: gray/brown, microxlyn, very dense, no vis porosity, Shale: gry

LS: dark brown, microxlyn, very dense

LS: dark brown, microxlyn, dense

Shale: dark brown to black, LS: crm, fnxlyn, friable, LS: buff, fnxlyn, silt fossil moldic porosity

LS: crm, friable, Shale: black, LS: dark brown, microxlyn, very dense

LS: crm, fnxlyn, firm, fair interxlyn porosity, chky in part, Shale: black

LS: Buff/crm, microxlyn, poor interxlyn porosity, LS: white, chky, Shale: black

LS: Crm/buff, fnxlyn, poor interxlyn porosity, chky in part

LS: buff, microxlyn, very dense, poor interxlyn porosity, LS: crm, fnxlyn, friable to sub chky, chert: white

Shale: black, LS: crm to dark brown, fnxlyn to microxlyn, poor interxlyn porosity, chky in part

LS: crm to buff, fnxlyn to microxlyn, poor interxlyn porosity, Shale: black

LS: Crm chky, LS: gry/crm, fnxlyn, poor interxlyn porosity, Shale: black

Shale: Black, LS: crm to dark brown, microxlyn to fnxlyn, poor interxlyn porosity

Chert: gray, LS: dark gray, microxlyn, very dense, Shale: black

LS: White, chky, Chert: gray, translucent, Shale: black, LS: crm/brown, fnxlyn, dense

Shale: Black, Shale: gray, LS: gray, microxlyn, very dense

Shale: Black, LS: gray to brown, crm, microxlyn, very dense

Shale: green, LS: crm/buff in fnxlyn, poor interxlyn porosity

Shale: black, LS: gray to brown, microxlyn, poor interxlyn porosity

Shale: Green, LS: green, microxlyn, poor interxlyn porosity, Chert: white, semi trans, LS: dark brown, dense, Shale: black

LS: crm, fnxlyn, poor interxlyn porosity, Shale: black

Shale: Green, LS: crm/ brown, microxlyn, very dense, Shale: black, Chert: gray and brown

Shale: green, waxey, LS: crm/ brown, microxlyn, poor interxlyn porosity

LS: brown, microxlyn, dense, poor interxlyn porosity, Shale: dark green

Chert: sharp, sct spotted brown stain

SS: fine grain, light brown, friable, even stain, fair fluor, Chert: white with brown/black stain, tripolitic, slight odor, poor fluor

Chert: white with brown stain, sharp, brown stn spotted

Chert: dark brown, slight vis porosity, Chert: white in part

Chert: brown to white, fair stain, slight vis trip porosity

Shale: Brown, Chert: gray, decrease in s

LS: med gray, fnxlyn, poor interxlyn porosity, cherty

Dolomite: gray, cherty, fn grain, dense

Dolomite: gray, dense

Dolomite: gray to grn/gry, poor intergranular porosity

Shale: gray

Shale: gray to dark brown

Shale: gray to dark brown

Shale: gray to dark brown

Shale: gray to dark brown

Dark brown, dense, fluor, spotted shale, typical chatt, Dolomite: gray, brown, very fine granular porosity, intergranular porosity, no show

30 min: Dolomite: light brown, poor intergranular porosity, fnxlyn, LS: chky

60 min: Dolomite: light brown, fnxlyn, LS: crm, coarsexlyn, fair interxlyn porosity, no show

LS: light brown mottled salt and pepper dark brown flecks

Typical Viola, Chert: Translucent, brown, LS: brown

Chert: brown, semi trans, LS: light brown, fnxlyn, salt and pepper brown in spots

LS: chky, white, Shale: green, waxey, LS: coarsexlyn, off white

SS: fine grained, gray/white, friable, no show, Shale: blue/ grn, waxey

SS: clean grained, rounded, friable, well sorted, no show

Shaley, green, SS: poor intergranular porosity

Shale: green, waxey SS: fn grained layers

SS: White, fine grained clusters, poorly sorted, fine to ultra fine, poor intergranular porosity, no show

SS: White, fine grained, poorly sorted, poor intergranular porosity

SS: White, very fn grained, sugar sand w/set pieces of chlorite

SS: fn grained, poorly sorted, no show

SS: fn grained, off white, no show, Shale: green

SS: off white, fn grained, poorly sorted, no show

Dolomite: dark brown, very fine, granular, Dolomite: buff, fn granular, silt vis por

Lower Simpson @ 5080 -3718

Arbuckle @ 5114 -3752

Base Viola @ 4930 -3569

Simpson SD @ 4948 -3586

Cherokee SH @ 4476 -3113

Stark SH @ 4259 -2897

Swope @ 4269 -2907

Kansas City @ 4089 -2726

Mississippian @ 4511 -3149

CFS @ 4550

CFS @ 4865

CFS @ 4961

T.D. 5165