

CONSULTING GEOLOGIST

Geologist's Report
Drilling Time and Sample Log

OPERATOR: Chieftain Oil Co, Inc
LEASE: AHS CATTLE CO. WELL NO. #4
FIELD: Strathairn API No. 15-007-24146

LOCATION: SE NW SW NE 1805' FN. & 2305' FEL
SEC: 12 TWP: 35S RGE: 12W
COUNTY: Barber STATE: Kansas

CONTRACTOR: Fossil Rig #3
COMM: 04/25/2014 COHR: 05/20/2014
RFD: 5610' LOG10: 5605'
SAMPLES SAVED FROM: 4240' TO: TD
DRILLING TIME REPT FROM: 4240' TO: TD
SAMPLES EXAMINED FROM: 4240' TO: TD
GEOLOGICAL SUPERVISION FROM: 4240' TO: TD

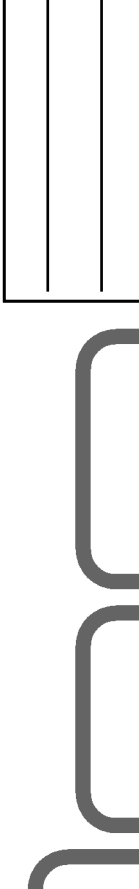
MUD LOG: TYPE MUD: OIL/CEMENT/HEMICAL
ELECTRICAL SURVEYS: GRT/CNT/LDT/XYT/MLT/DT

FORMATION: LOG DATA: SAMPLER: STRUC: CODE:
KANSAS CITY TOP: 2986 4348 2980

SWOPE LS 4706 3138 4502 3134
MISSISSIPPIAN 4783 3415 4285 3417
KINDERHOOK SH 5102 3599 5102 3596
CHATTANOOGA SH 5137 3020 5133 3165
MAQUOKETA SH 5191 3823 5190 3822
Viola 5281 3913 5282 3914
Base of Viola

Upper Simpson SD 5303 3935 5302 3934
Arbuckle 5446 4078 5446 4078
TD 5497 4129 5497 4129
5505 4258 5610 4242

REFERENCES WELL FOR STRUCTURAL POSITION



GEOLOGIST

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OPERATOR

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

Contractor

Fossil Drilling Rig #2
P.O. Box 464
Pratt, KS 67124-0464

ACCESSORIES

Ferrpel Ferr
Glaue Gyp
Hvymn Kaol
Marl Minxl
Nodule Phos
Pyr Salt
Sandy Silt
Silt Sulphur
Tuff Chlorite
Dol

Sand Sity
Anhy Arg
Bent Coal
Dol Gyp
Mrst Siltstrg
Carbstn Clystn
Dol Grshy
Gryslt

Lms Sandylms
Sh Ststn

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

OTHER SYMBOLS

Fracture Inter Moldic Organic Pinpoint Vuggy

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

ROUNDING Rounded
Subrnd Subang
Angular

OIL SHOWS Even Spotted
Quess Dead
Gas show

ROCK TYPES

Carb shale Gray shale
Sandy lmst Shale
Silt stn Shaly slst
Shaly slst

Silty shale Blank
Gray lmst Cream lmst
Red shale Red shale
Blue-green siltstn D. green shale
Green shale

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

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

INTERVALS

Core Dst Dst
EVENTS Rft Sidewall Cfs Conn
POROSITY TYPE Earthy Fenest

LITHOLOGY

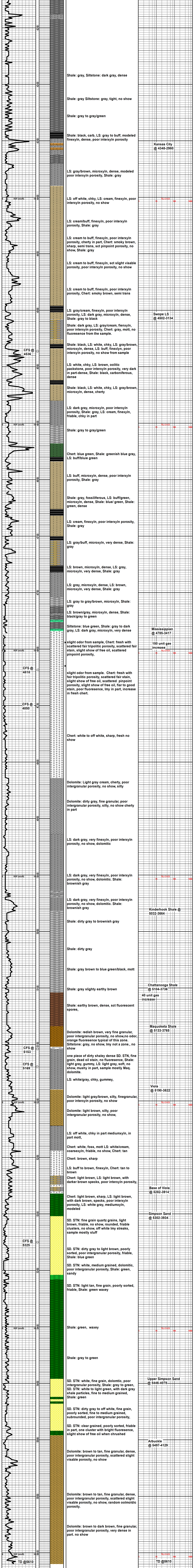
Anhy Cht Congl Shale Shy Ss

MINERAL

Anhy Arggrn Arg Bent Bit Breccfrag Calc Carb Chtk Chttt Dol Feldspar

FOSSIL

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



TD @ 5610