

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY BOP West LLC

LEASE M. Karber #28-1

FIELD Gypsum Creek

LOCATION 1595' FNL & 550' FWL

SEC 28 TWPSP 16s RGE LW

COUNTY Saline STATE KS

CONTRACTOR C & G Drilling Co

SPUD 10-24-12 COMP 10-29-12

RTD 2637' LTD NA

MUD UP 1745' TYPE MUD Chem

ELEVATIONS

KB 1285'

DF _____

GL 1276'

Measurements Are All From KB

CASING SURFACE 8 5/8" @ 219'
PRODUCTION None

ELECTRICAL SURVEYS

None

SAMPLES SAVED FROM 1800' TO RTD

DRILLING TIME KEPT FROM 1800' TO RTD

SAMPLES EXAMINED FROM 1800' TO RTD

GEOLOGICAL SUPERVISION FROM 1800' TO RTD

GEOLOGIST ON WELL Ken Wallace

FORMATION TOPS LOG SAMPLES

Brown ls 1964 (-679)

Lansing 2011 (-726)

Stark sh 2272 (-987)

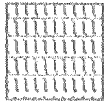

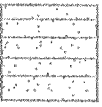
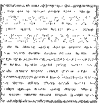
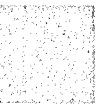
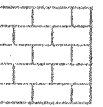
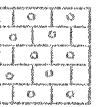
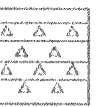

BKc 2344 (-1059)

Cherokee sh 2526 (-1241)

Miss Dol 2624 (-1339)

REMARKS M. Karber #28-1 run low to reference wells with negative DST results.
plugged & abandoned 10/29/12
Ken Wallace

LEGEND

								
Anhydrite	Salt	Sandstone	Shale	Carb sh	Limestone	Ool.Lime	Chert	Dolomite

SCALE " = 100'

DRILLING TIME - Minutes Per Foot
Rate of Penetration Decreases

SAMPLE DESCRIPTIONS

REMARKS

DEPTH

DSTs

Units

5077

20

Toronto
1823 (-538)

- Bit
Trip

Ls, wh, sm lt gy, foss, sl ool,
N.S.

40

Douglas
1840 (-555)

Sh, gy, sm red
SS, gy, fn grnd, well sort,
p. f intrgrn ϕ , pyrite, abd
gilsonite, ns, no

60

SS, AA but more fn grnd,
NS

AA with grn sh

80

vc sh, and SS AA, tr
gilsonite, N.S.

AA

1900

AA, pyrite

20

Sh, gy, sm red, grn, slt
silty - sandy

40

AA

60

Brown Ls
1964 (-679)

sh, gy, red

Ls, brn- gy, cky- dse,
cxln, sl foss, abd red
sh, ns

80

sh, gy, red, pea grn,
pyrite, silty

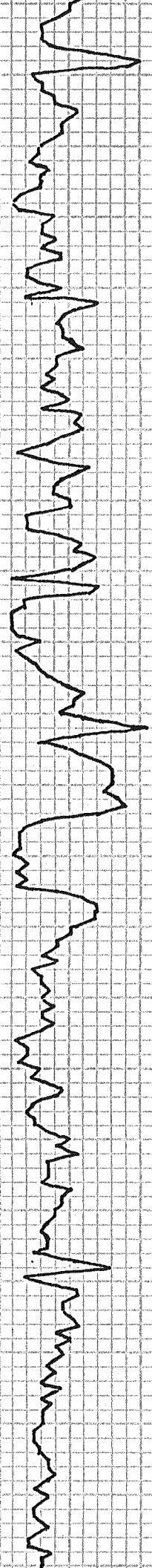
2000

AA, much pyrite

Lansing
2011 (-726)

Ls, wh - lt gy, dol, poor
sorted ool, dk gy inclusions,

20
40
60
80
2100
20
40
60
80
2200
20
40



slt pyrite, NØ, NS

Ls, gy-tan, ool, dse, slty
cky, cxln, foss, NS

Ls, wh-ltgy, ool, p ooc ϕ ,
cky, NS

sh, bl

Ls, tan-ltgy, slty ool/foss,
cky, fxln, NS

Ls, gy, sm brn, sl ool/foss,
cky-dse, cxln, NS

sh, gy

Ls, tan, dse, foss, fxln,
slty, NS

X Ls, gy, foss, fngrdool, cky,
vp vg ϕ , vssfo on break,
NO

X Ls, gy, ool, sl foss, dse,
vp ooc ϕ , 2 pcs vssfo
on break, NO

Ls, gy, ool, cky, pyrite, NS

X Ls, wh-ltgy, ool, p ooc ϕ ,
1 pc vssfo on break, NO

Ls, AA, NS

AA

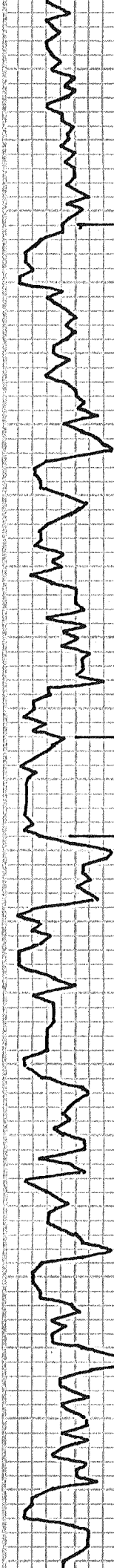
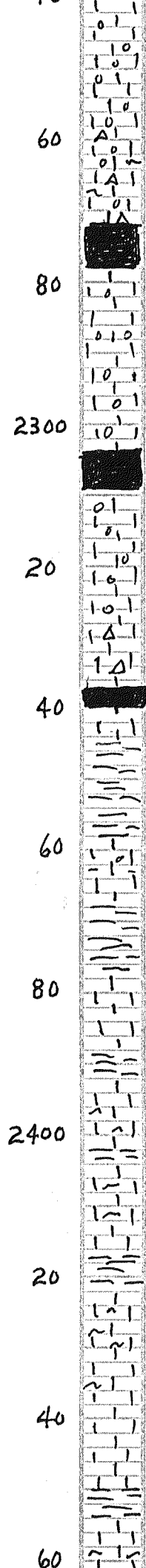
sh, gy, pyrite

Ls, med-dkgy, sl ool, sl
foss, cky-dse, cxln, glauc,
NS

Ls, wh, tr lt tan, ool,
vcky, sl foss, NS

Ls, lt tan, sm ltgy, ool,
foss, cky-dse, md xln,
NS

Ls, ltgy, sl cky, vfxln,
NS



Stark sh
2272(-987)

BKC
2344(-1059)

Marmaton
2358(-1073)

Ls, wh, ool, foss, cky,
NS

Ls, tan, sl ool, foss, sl
cky, dse, fxln, Δty, NS

sh, bl

Ls, mdgy, sm tan, dse-
sl cky, sl foss/ool, cxln,
NS

X Ls, lt gy, ool (fgnd ool),
sl foss, 1 pc sledge stn/
VSSFO, ND
sh, bl

Ls, brn, ool, foss, dse, cxln,
pyrite, NS

Ls, wh, cky - dse, cxln, NS

AA, slt Δty

sh, bl
Ls, dk gy, cxln, foss, NS

sh, gy sm red, pyrite

Ls, dk gy, argl, sl ool,
foss, NS

sh, gy sm lt grn, red, brn,
pyrite

Ls, tan, dse, fxln, NS

sh, gy, lt grn
Ls, lt gy - tan, sl foss,
dse, fxln - cxln, pyrite
NS

Ls, tan, dse, foss, cxln
NS

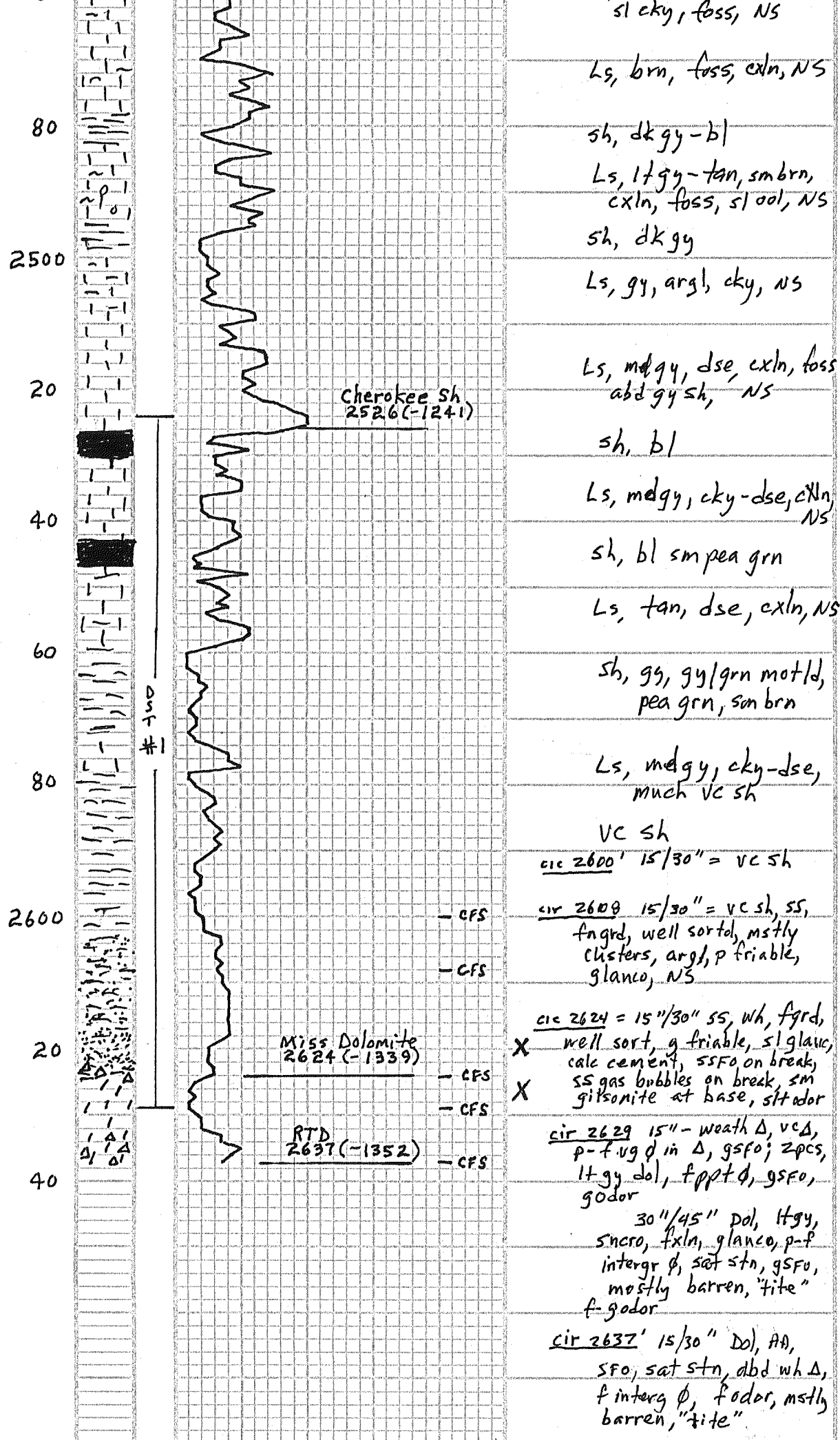
sh, gy, brn, red, pyrite

Ls, tan, foss, dse, cxln,
NS

Ls, gy - tan, dse, fxln,
NS

Ls, aa, cky, abd vch,
pyrite, NS
sh, gy sm red

Ls, tan - brn, dse, cxln,



sl cky, foss, NS
 Ls, brn, foss, exln, NS
 sh, dk gy-bl
 Ls, lt gy-tan, sm brn, exln, foss, sl ool, NS
 sh, dk gy
 Ls, gy, argl, cky, NS

Ls, md gy, dse, exln, foss
 abd gy sh, NS
 Cherokee Sh
 252.6(-1241)
 sh, bl
 Ls, md gy, cky-dse, exln, NS
 sh, bl sm pea grn
 Ls, tan, dse, exln, NS

sh, gy, gy/grn motld, pea grn, sm brn
 Ls, md gy, cky-dse, much vc sh
 VC sh
 cir 2600' 15"/30" = VC sh

- CFS
 cir 2600 15"/30" = VC sh, SS, frgrd, well sortd, mstly clusters, argl, p friable, glanco, NS
 - CFS

Miss Dolomite
 262.4(-1339)
 X well sort, g friable, sl glanc, calc cement, SSfo on break, SS gas bubbles on break, sm gitsonite at base, sl odor
 - CFS
 - CFS

RTD
 263.7(-1352)
 - CFS
 cir 2629 15" - weath Δ, vc Δ, p-f. v.g. Δ in Δ, gsfo; 2pcc, lt gy dol, f.ppt Δ, gsfo, g odor

30"/45" dol, lt gy, snoro, fxln, glanco, p-f intergr Δ, sat stn, gsfo, mostly barren, "tite" f-g odor

cir 2637' 15"/30" Dol, AA, sfo, sat stn, abd wh Δ, f intergr Δ, f odor, mstly barren, "tite"

DSI #1 2524 - 2629

30/45/45/60

IF - stdy 1/4" Blow throat

FS - surface Blow throat

Rec: 20' mud w/ spotty oil
on top tool

IP 9/17# FFP 18/27#

ISP 181# FSIP 177#

(X = oil show)