# ROGER L. MARTIN

INDEPENDENT PETROLEUM GEOLOGIST 316-250-6970

Log File

# GEOLOGIST'S REPORT

## DRILLING TIME AND SAMPLE LOG

COMPANY BEREXCO LLC

LEASE ACHENBACH B#4

FIELD HARDNER

LOCATION 2130' FSL & 660' FEL (S/2-N/2-NE-SE/4)

SECTION 2 TOWNSHIP 35S RANGE 13W

COUNTY BARBER STATE KANSAS

**ELEVATIONS**

KB 1525 GL 1513

Measurements Are All From KB: 1525

API 15-007-24231-00-00

CONTRACTOR FOSSIL DRLG Rig#3

SPUD 9/29/14 COMP 10/07/14

RTD 5100' (-3575) LTD 5104' (-3579)

**ELECTRICAL SURVEYS**

Weatherford: Compact Photo Density/ Compensated Neutron, Microresistivity Log, & Shallow Focused Array Induction E-log.

**CASING**

SURFACE 7jts 13&3/8" 48# set @ 310' KB. Cmt'd w/ 170sx (See CHRONOLOGY).

PRODUCTION 118jts 5&1/2" 15.5# Set @ 5102' KB (See REMARKS).

| FORMATION TOPS | LOG | SAMPLES | CHRONOLOGY |
|---|---|---|---|
| B/HEEBNER | 3916' (-2391) | 3917' (-2392) | 9/29/14; Spud 17" hole @ 3:30pm, 9/29/14. |
| TORONTO | 3939' (-2414) | 3934' (-2409) | TD surf.hole @ 310' KB @ 6:15pm, 9/20/14. |
| DOUGLAS | 3993' (-2468) | 3988' (-2463) | Dev.Survey: 1&3/4 deg @ 310'. |
| LANSING | 4187' (-2662) | 4184' (-2659) | Ran 7 jts 13&3/8" 48# surf.csg. Set @ 310'KB. |
| KANSAS CITY | 4447' (-2922) | 4439' (-2914) | Cmt'd w/ 170sx A Serv Lite w/ 1/4# flakes & 3%CaCl. |
| SWOPE | 4626' (-3101) | 4627' (-3102) | Finished cementing @ 11:30pm, 9/29/14. |
| HERTHA | 4656' (-3131) | 4654' (3129) | Cement did circ to surface. |
| B/ KANSAS CITY | 4697' (-3172) | 4695' (-3170) | 9/30/14; WOC @ 310' KB. |
| MARMATON | 4715' (-3190) | 4714' (-3189) | 10/1/14; Drlg @ 1700'. Dev.Surveys: 1 deg @ 1012'; 1/2 deg @ 1517' |
| ALTAMONT | 4757' (-3232) | 4754' (-3229) | (Bit #2; Varel; HE-21; 7&7/8"; in @ 310') |
| PAWNEE | 4792' (-3267) | 4790' (-3265) | 10/2/14; Drlg @ 2570'. Dev.Surveys: 1/2 deg @ 2023' & 3/4 deg @ 2528' |
| FT. SCOTT | 4816' (-3291) | 4815' (-3290) | 10/3/14; Drlg @ 3350' @ 7:00 am. |
| CHEROKEE | 4830' (-3305) | 4831' (-3306) | Dev.Survey: 3/4 deg @ 3006' |
| CHEROKEE SAND | 4859' (-3334) | 4858' (-3333) | 10/4/14; Drlg @ 4095' @ 7:00 am. |
| EROS. MISS. | 4905' (-3380) | 4899' (-3374) | Dev.Surveys: 1/4 deg @ 3512', & 3/4 deg @ 3989' |
| MISSISSIPPIAN CHERT | 4913' (-3388) | 4907' (-3382) | 10/5/14; Drlg @ 4585' @ 7:00 am. |
| TOTAL DEPTH (LTD/RTD) | 5100' (-3575) | 5104' (-3579) | Dev.Survey: 3/4 deg @ 4242'; & 3/4 deg @ 4495' |
| | | | 10/6/14; Drlg @ 4885' @ 7:00 am. |
| | | | 10/7/14; RTD:5100'; LTD:5104'; Logging @ 7:00am. |
| | | | Dev.Survey: 1 deg @ 5100'. |
| | | | Ran 118 jts 5&1/2" 15.5# csg. Set @ 5102' (2' off btm). |
| | | | (See REMARKS for details). |

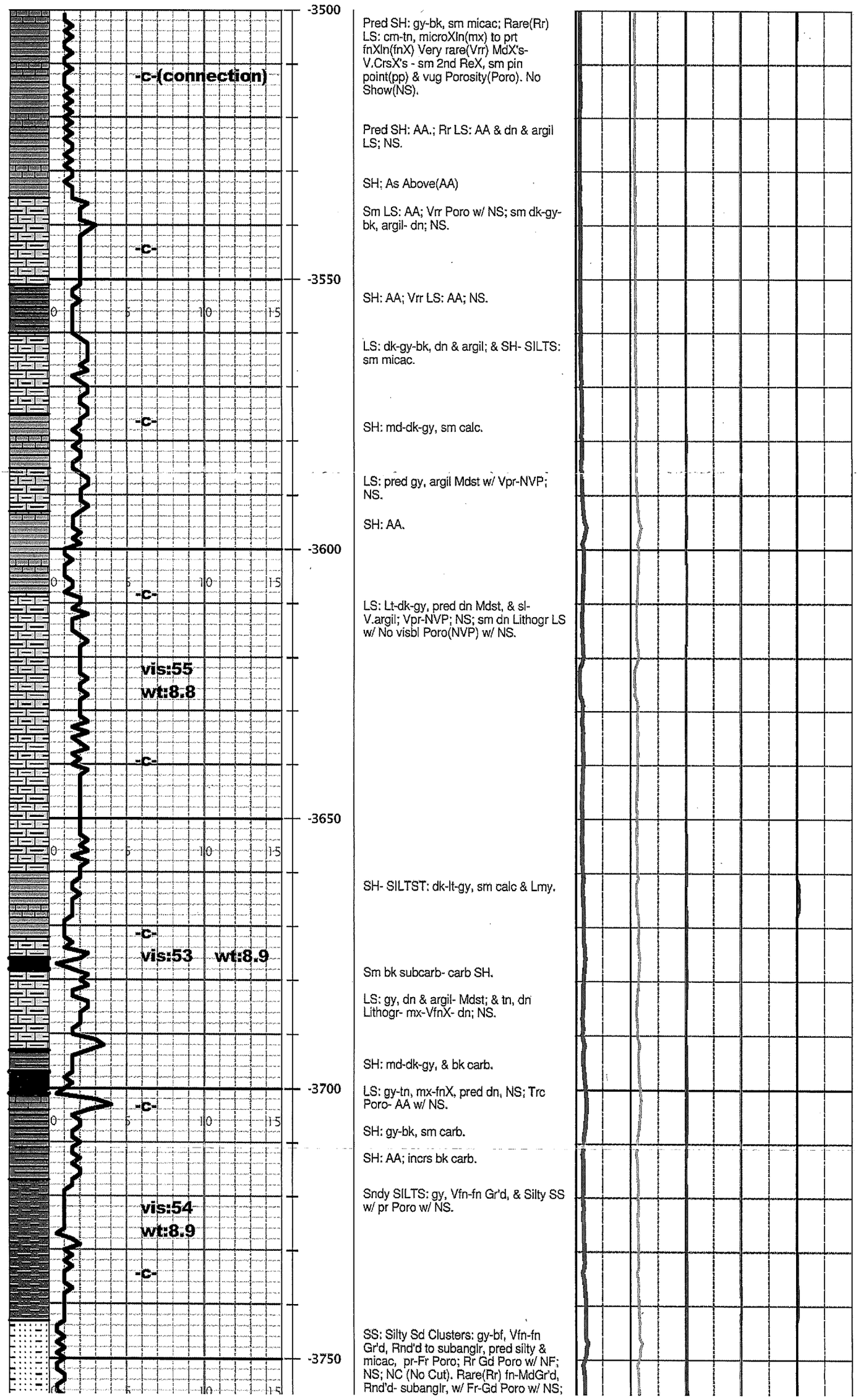
**REMARKS:** 10/7/14; Ran open hole E-logs; LTD @ 5104'. Ran 118 jts 5&1/2" 15.5# casing. Tagged TD @ 5104' KB; Set @ 5102' KB; PBTD @ 5060' KB. Ran baskets @ 5115' & 4799'. 21' marker joint from 4647'-4668'. Cemented w/ 100sx A Serv Lite w/ 0.29# flakes tailed w/ 200sx AA2 0.265# flakes 0.2# C-41P 5.3# salt 0.3# FR, 1# C-44, 05# FL & 3.5# gilsonite. Goo circulation throughout job, but cement did not circulate to surface. Plug landed 9:30 pm, 10/7/14. Had 1500# lift pressure at end, bumped plug to 2000#. Plugged mouse & rat hles w/ 50sx A serv Lite. Rig released.

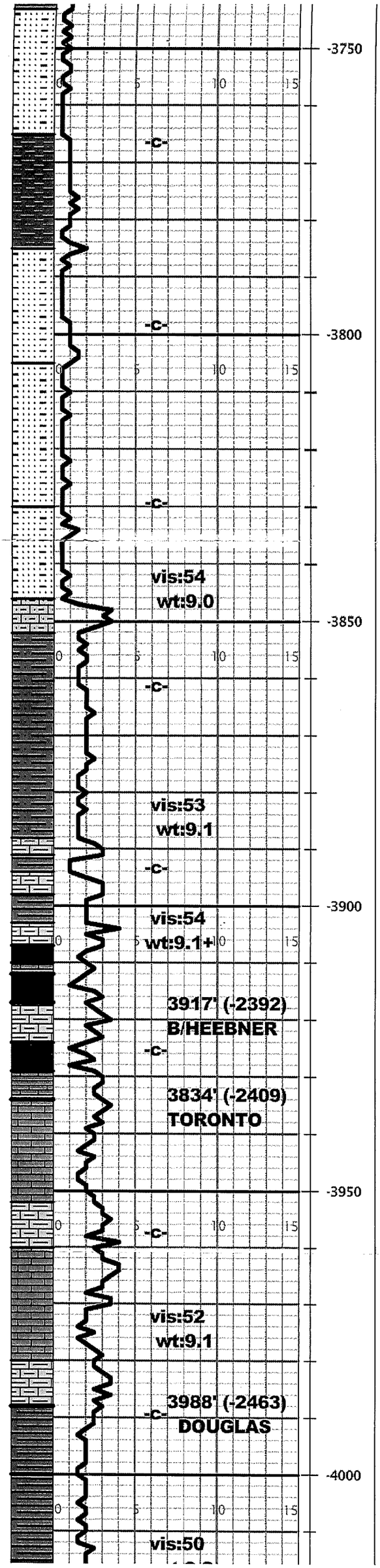
5&1/2" production casing was set for a completion in the MISSISSIPPIAN CHERT.

Respectfully submitted,
Roger L. Martin, Geologist (Well-site)

DRILLING TIME

Gas Units


LITH
0
DRILLING TIME
ROP MIN/FT
Gamma
DST
150
SAMPLE DESCRIPTION
Total Gas 0-100 Units
Methane 0-100 Units
Ethane 0-100 Units
Propane 0-50 Units
Butane 0-50 Units
-3500
-3550
-3600
-3650
-3700
-3750
-c-(connection)
-c-
vis:55
wt:8.8
vis:53
wt:8.9
vis:54
wt:8.9
0
5
10
15
Pred SH: gy-bk, sm micac; Rare(Rr) LS: crn-tn, microXln(mx) to prt fnXln(fnX) Very rare(Vrr) MdX's-V.CrsX's - sm 2nd ReX, sm pin point(pp) & vug Porosity(Poro). No Show(NS).
Pred SH: AA.; Rr LS: AA & dn & argil LS; NS.
SH: As Above(AA)
Sm LS: AA; Vrr Poro w/ NS; sm dk-gy-bk, argil- dn; NS.
SH: AA; Vrr LS: AA; NS.
LS: dk-gy-bk, dn & argil; & SH- SILTS: sm micac.
SH: md-dk-gy, sm calc.
LS: pred gy, argil Mdst w/ Vpr-NVP; NS.
SH: AA.
LS: Lt-dk-gy, pred dn Mdst, & sl-V.argil; Vpr-NVP; NS; sm dn Lithogr LS w/ No visbl Poro(NVP) w/ NS.
SH- SILTST: dk-lt-gy, sm calc & Lmy.
Sm bk subcarb- carb SH.
LS: gy, dn & argil- Mdst; & tn, dn Lithogr- mx-VfnX- dn; NS.
SH: md-dk-gy, & bk carb.
LS: gy-tn, mx-fnX, pred dn, NS; Trc Poro- AA w/ NS.
SH: gy-bk, sm carb.
SH: AA; incrs bk carb.
Sndy SILTS: gy, Vfn-fn Gr'd, & Silty SS w/ pr Poro w/ NS.
SS: Silty Sd Clusters: gy-bf, Vfn-fn Gr'd, Rnd'd to subanglr, pred silty & micac, pr-Fr Poro; Rr Gd Poro w/ NF; NS; NC (No Cut). Rare(Rr) fn-MdGr'd, Rnd'd- subanglr, w/ Fr-Gd Poro w/ NS;




SS: Silty Sd Clusters: gy-bf, Vfn-fn Gr'd, Rnd'd to subanglr, pred silty & micac, pr-Fr Poro; Rr Gd Poro w/ NF; NS; NC (No Cut). Rare(Rr) fn-MdGr'd, Rnd'd- subanglr, w/ Fr-Gd Poro w/ NS; NF; NC.

SILTS: gy, Sndy:AA, & micac; & Silty SS: Sd Clust: AA, w/ pred Vpr-pr Poro; NS; NF; NC.

SS: Abndt Sd Clust: gy-bf, Vfn-MdGr'd, & fn-MdGr'd, Rnd'd- subanglr, mod to pr sort'd, sm friabl w/ Fr-Gd IGr Poro w/ NF; NS; NC; sm well cmt'd, silty, micac w/ pr-Fr Poro w/ NS; NF; NC.

SS: V.Abndt Sd Clust: gy-bf, Vfn-MdGr'd, Rnd'd- subanglr, sm silty, micac, sm friabl w/ Fr-Gd Poro w/ NS; NF; NC.

SS: Abndt Sd Clust: AA; sm friabl w/ Fr-Gd Poro w/ NS; NF; NC.

SS: sm silty, & Lmy & calc, well cmt'd Sd Clust w/ Vpr-pr Poro w/ NS; NF; NC.

Incrs SH-SILTS: dk-lt-gy, micac.

Sm Sd Clust: AA; pred silty, micac, Vpr-pr Poro; NS.

Sm LS: gy-bk, dn Mdst, argil;
& SH: gy-bk, sm carb.
(Vrr Sd Clust: AA; NS)

LS: tn-gy-bn, dn & argil; Vrr Xln LS; Vpr-NVP; NS

{HEEBNER} SH: bk carb, sm pyrtc; sm V.carb.

LS: dk-gy-bn, dn hd Mdst, sm argil; Vpr-NVP; NS.

SH: gy-bk sm carb & V.carb.

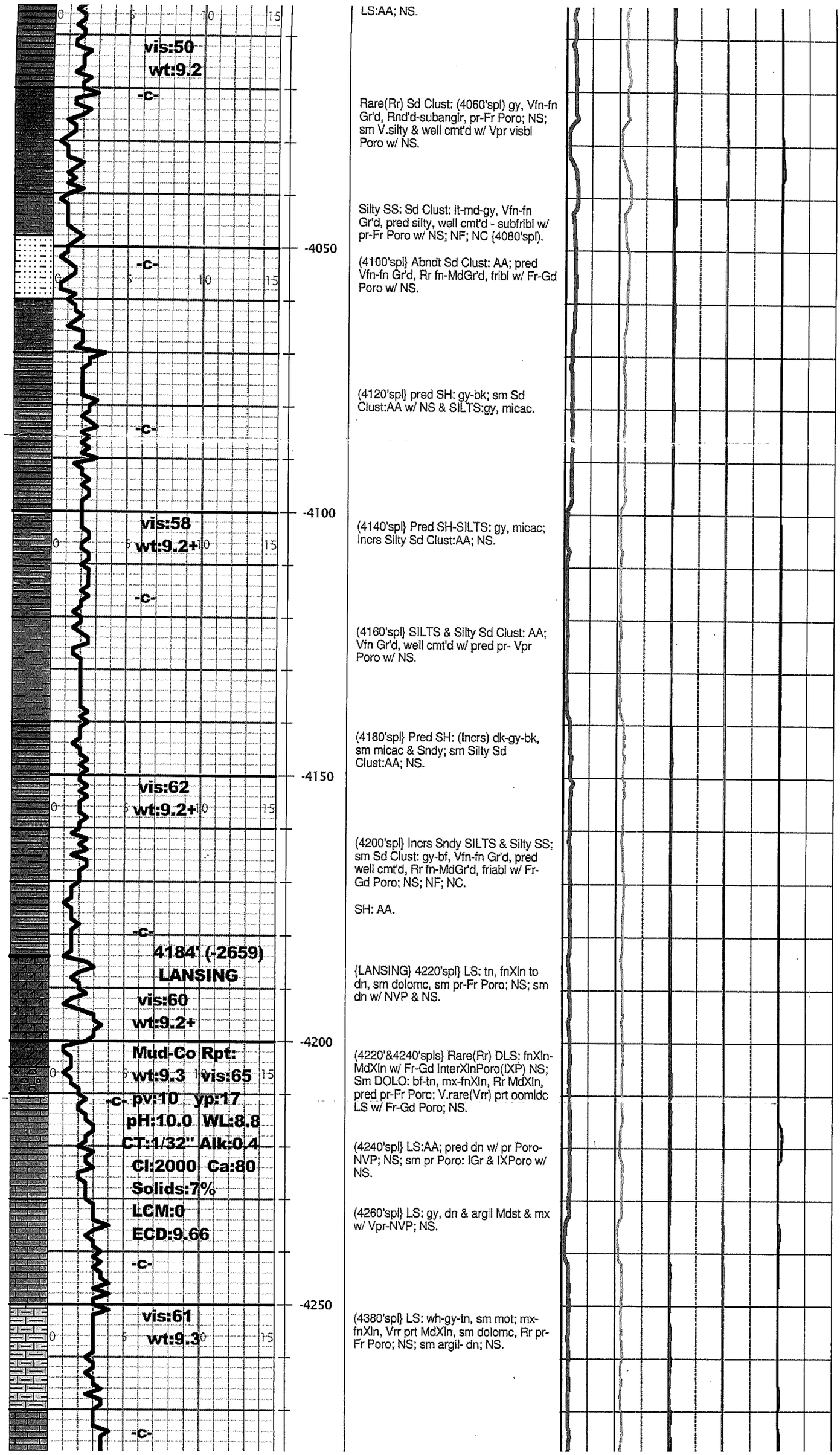
{TORONTO} LS: tn-gy-wh, pred dn Mdst, & mx-VfnX, sm chlky LS; sm argil- shly; pred pr Poro - NVP; NS.

V.Abndt LS: gy-bf-wh, dn & mx-fnX, sm chlky, pred pr Poro -NVP; sm pp Poro & IXP w/ NS.

LS: sm AA, sm argil.

Sl incrs SH (4020'spl) pred dk-gy-bk SH.

Pred SH: (4040'spl) gy-bk & gn-gy, sm LS:AA; NS.




LS:AA; NS.

Rare(Rr) Sd Clust: (4060'spl) gy, Vfn-fn Gr'd, Rnd'd-subanglr, pr-Fr Poro; NS; sm V.silty & well cmt'd w/ Vpr visbl Poro w/ NS.

Silty SS: Sd Clust: lt-md-gy, Vfn-fn Gr'd, pred silty, well cmt'd - subfribl w/ pr-Fr Poro w/ NS; NF; NC {4080'spl).

(4100'spl} Abndt Sd Clust: AA; pred Vfn-fn Gr'd, Rr fn-MdGr'd, fribl w/ Fr-Gd Poro w/ NS.

(4120'spl} pred SH: gy-bk; sm Sd Clust:AA w/ NS & SILTS:gy, micac.

(4140'spl} Pred SH-SILTS: gy, micac; Incrs Silty Sd Clust:AA; NS.

(4160'spl} SILTS & Silty Sd Clust: AA; Vfn Gr'd, well cmt'd w/ pred pr- Vpr Poro w/ NS.

(4180'spl} Pred SH: (Incrs) dk-gy-bk, sm micac & Sndy; sm Silty Sd Clust:AA; NS.

(4200'spl} Incrs Sndy SILTS & Silty SS; sm Sd Clust: gy-bf, Vfn-fn Gr'd, pred well cmt'd, Rr fn-MdGr'd, friabl w/ Fr-Gd Poro; NS; NF; NC.

SH: AA.

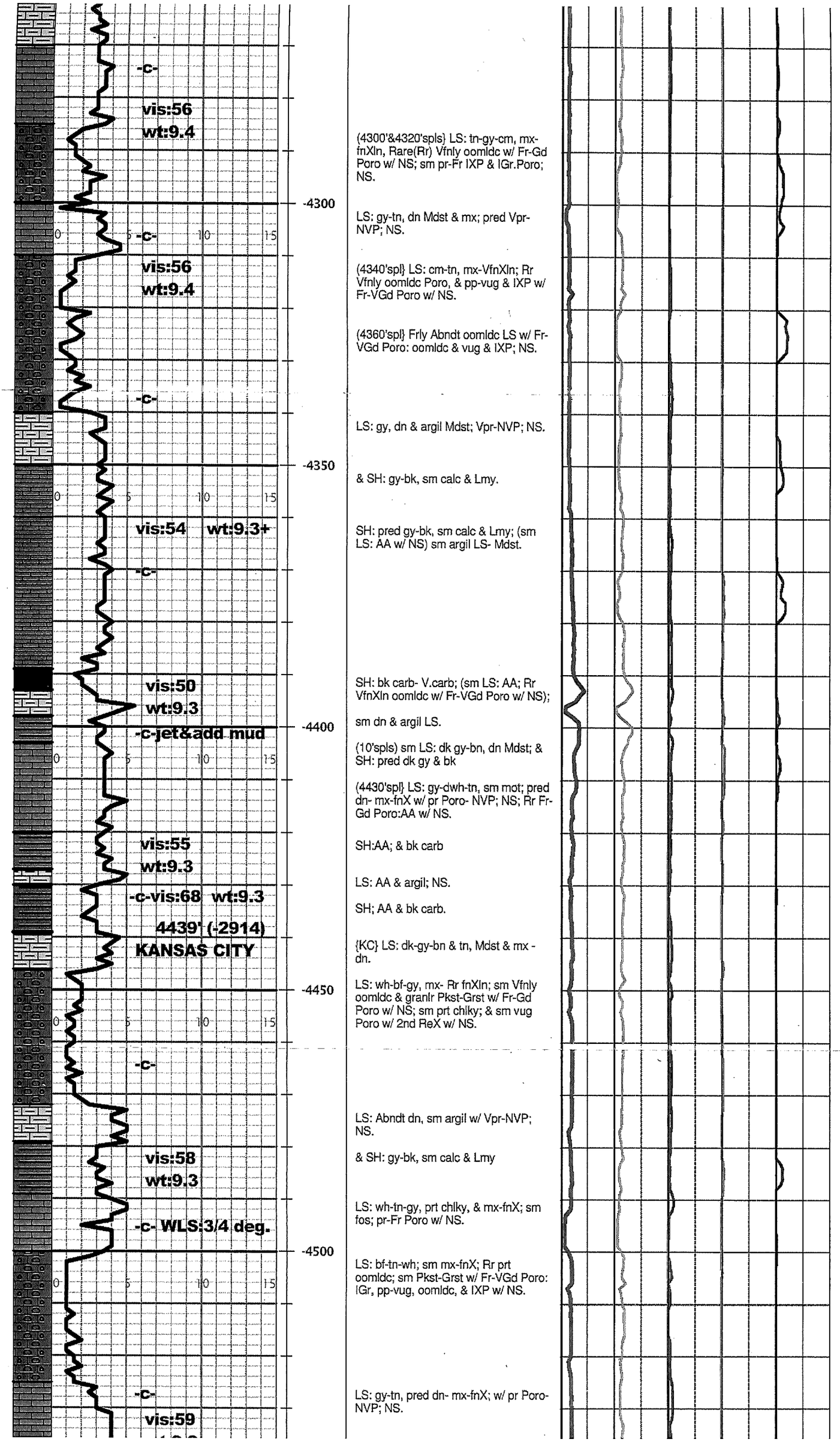
{LANSING} 4220'spl} LS: tn, fnXln to dn, sm dolomc, sm pr-Fr Poro; NS; sm dn w/ NVP & NS.

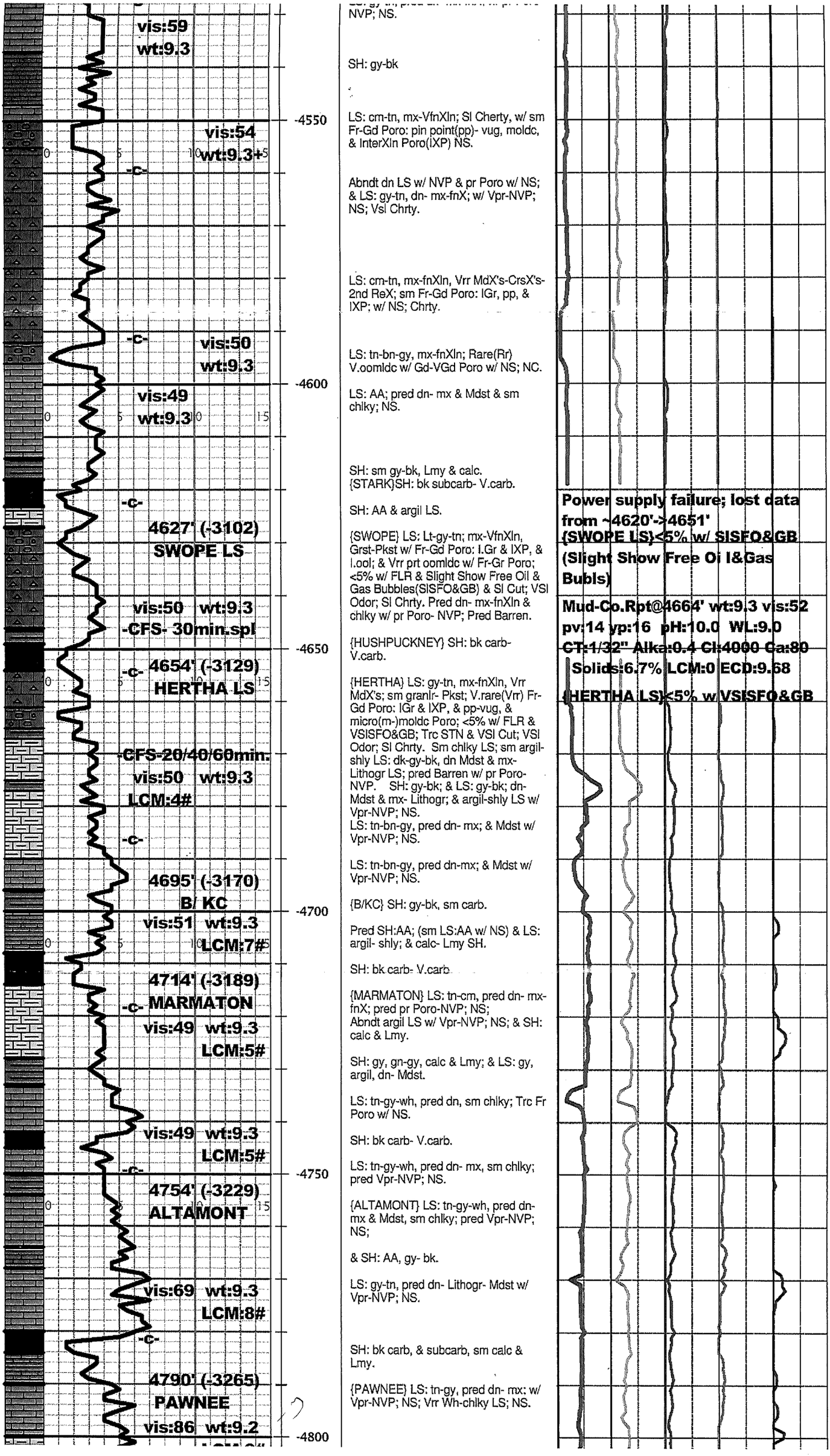
(4220'&4240'spls} Rare(Rr) DLS: fnXln-MdXln w/ Fr-Gd InterXlnPoro(IXP) NS; Sm DOLO: bf-tn, mx-fnXln, Rr MdXln, pred pr-Fr Poro; V.rare(Vrr) prt oomldc LS w/ Fr-Gd Poro; NS.

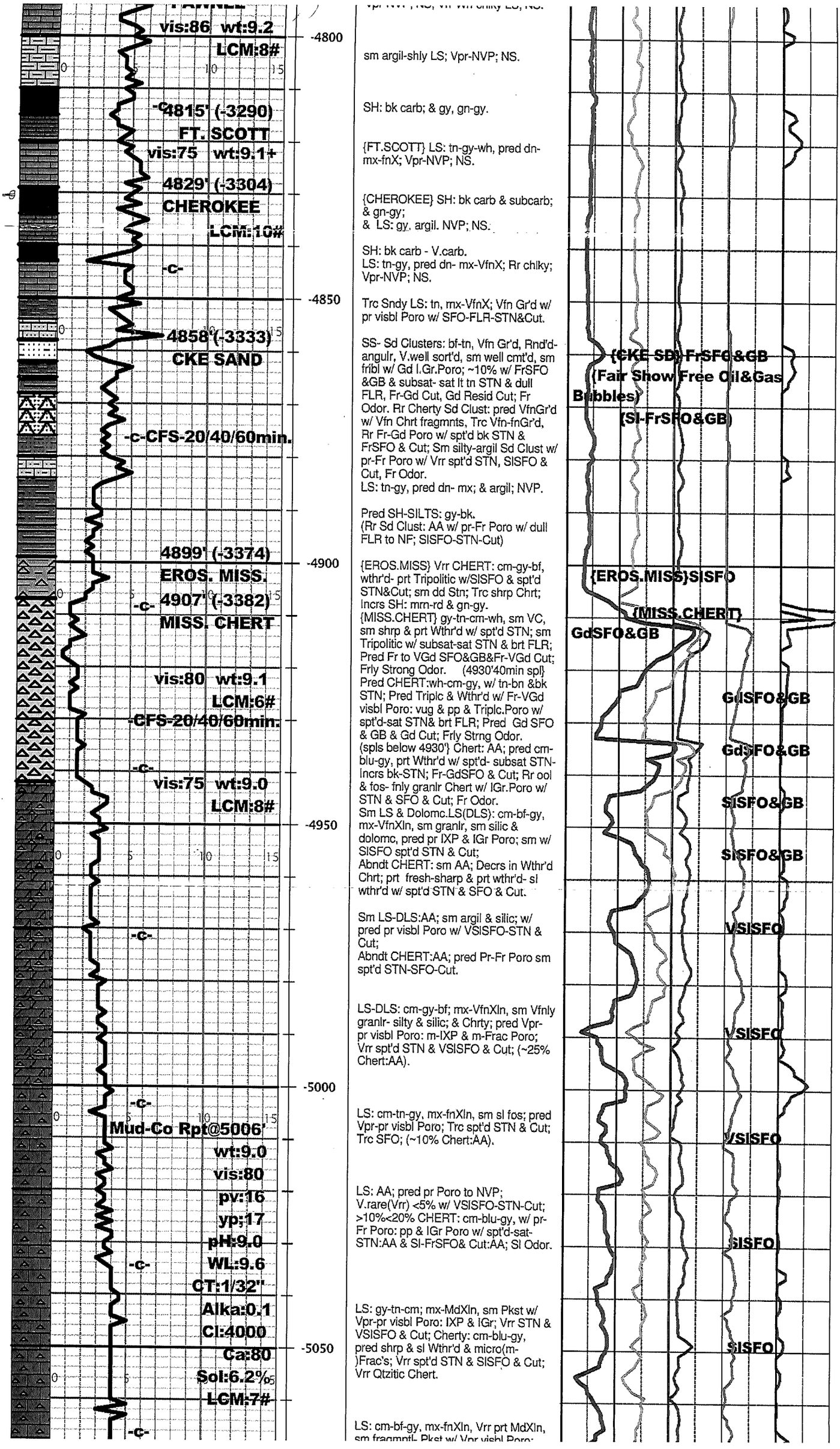
(4240'spl} LS:AA; pred dn w/ pr Poro-NVP; NS; sm pr Poro: IGr & IXPoro w/ NS.

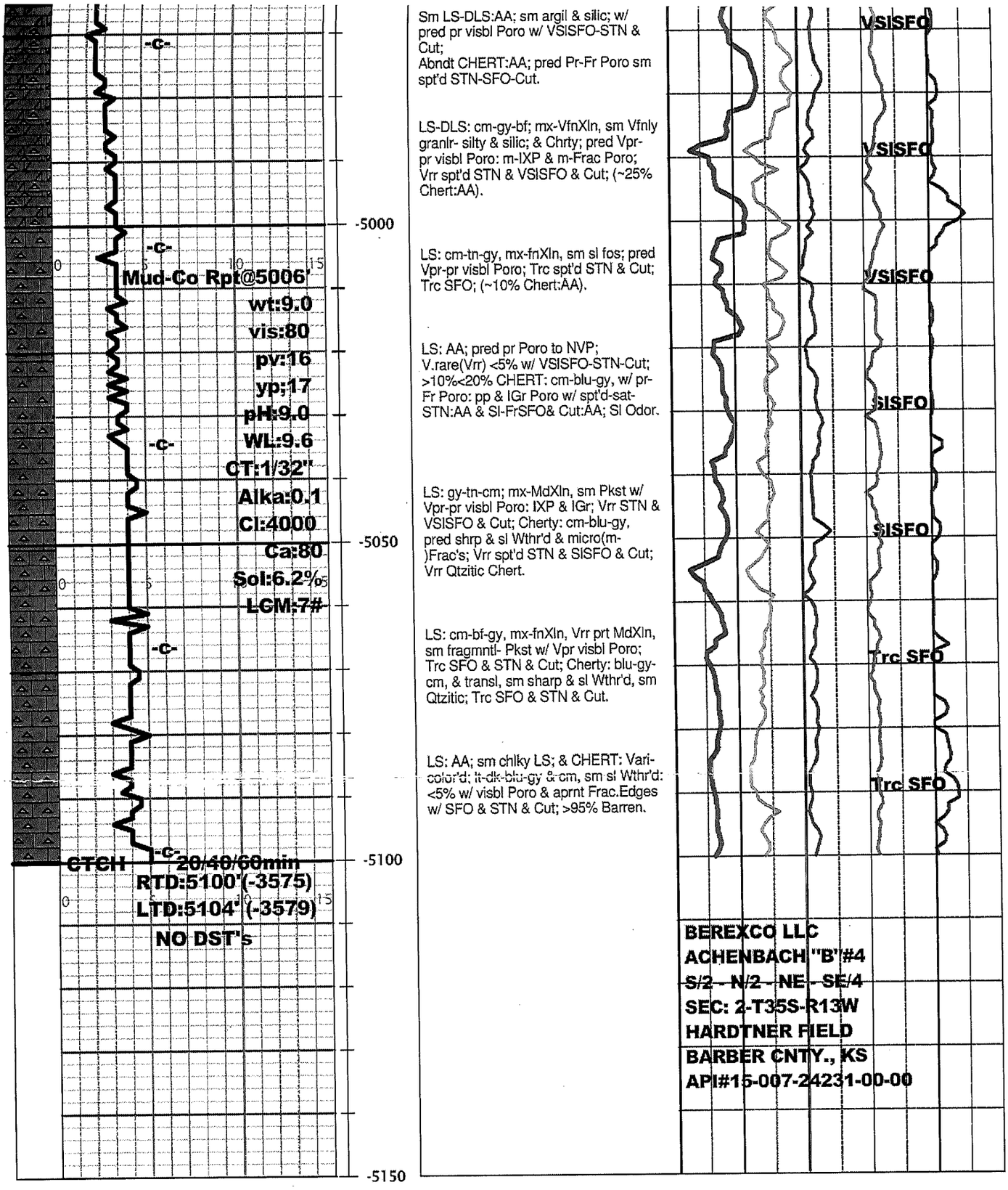
(4260'spl} LS: gy, dn & argil Mdst & mx w/ Vpr-NVP; NS.

(4380'spl} LS: wh-gy-tn, sm mot; mx-fnXln, Vrr prt MdXln, sm dolomc, Rr pr-Fr Poro; NS; sm argil- dn; NS.


-c-
vis:56
wt:9.4
(4300'&4320'spls} LS: tn-gy-cm, mx-fnXln, Rare(Rr) Vfnly oomldc w/ Fr-Gd Poro w/ NS; sm pr-Fr IXP & lGr.Poro; NS.
-4300
LS: gy-tn, dn Mdst & mx; pred Vpr-NVP; NS.
0 5 10 15
-c-
vis:56
wt:9.4
(4340'spl} LS: cm-tn, mx-VfnXln; Rr Vfnly oomldc Poro, & pp-vug & IXP w/ Fr-VGd Poro w/ NS.
(4360'spl} Frly Abndt oomldc LS w/ Fr-VGd Poro: oomldc & vug & IXP; NS.
-c-
LS: gy, dn & argil Mdst; Vpr-NVP; NS.
-4350
& SH: gy-bk, sm calc & Lmy.
0 5 10 15
vis:54 wt:9.3+
SH: pred gy-bk, sm calc & Lmy; (sm LS: AA w/ NS) sm argil LS- Mdst.
-c-
vis:50
wt:9.3
SH: bk carb- V.carb; (sm LS: AA; Rr VfnXln oomldc w/ Fr-VGd Poro w/ NS);
-4400
-c-jet&add mud
sm dn & argil LS.
(10'spls) sm LS: dk gy-bn, dn Mdst; & SH: pred dk gy & bk
0 5 10 15
(4430'spl} LS: gy-dwh-tn, sm mot; pred dn- mx-fnX w/ pr Poro- NVP; NS; Rr Fr-Gd Poro:AA w/ NS.
vis:55
wt:9.3
SH:AA; & bk carb
LS: AA & argil; NS.
-c-vis:68 wt:9.3
SH; AA & bk carb.
4439' (-2914)
KANSAS CITY
{KC} LS: dk-gy-bn & tn, Mdst & mx - dn.
-4450
LS: wh-bf-gy, mx- Rr fnXln; sm Vfnly oomldc & granlr Pkst-Grst w/ Fr-Gd Poro w/ NS; sm prt chlky; & sm vug Poro w/ 2nd ReX w/ NS.
0 5 10 15
-c-
LS: Abndt dn, sm argil w/ Vpr-NVP; NS.
vis:58
wt:9.3
& SH: gy-bk, sm calc & Lmy
LS: wh-tn-gy, prt chlky, & mx-fnX; sm fos; pr-Fr Poro w/ NS.
-c- WLS:3/4 deg.
-4500
LS: bf-tn-wh; sm mx-fnX; Rr prt oomldc; sm Pkst-Grst w/ Fr-VGd Poro: lGr, pp-vug, oomldc, & IXP w/ NS.
0 5 10 15
-c-
LS: gy-tn, pred dn- mx-fnX; w/ pr Poro-NVP; NS.
vis:59


vis:59
wt:9.3
-4550
vis:54
wt:9.3+
-c-
-c-
vis:50
wt:9.3
-4600
vis:49
wt:9.3
-c-
4627' (-3102)
SWOPE LS
vis:50 wt:9.3
-CFS- 30min.spl
-4650
-c- 4654' (-3129)
HERTHA LS
-CFS-20/40/60min.
vis:50 wt:9.3
LCM:4#
-c-
4695' (-3170)
B/ KC
-4700
vis:51 wt:9.3
LCM:7#
4714' (-3189)
-c- MARMATON
vis:49 wt:9.3
LCM:5#
vis:49 wt:9.3
LCM:5#
-c-
-4750
4754' (-3229)
ALTAMONT
vis:69 wt:9.3
LCM:8#
-c-
4790' (-3265)
PAWNEE
vis:86 wt:9.2
-4800
NVP; NS.
SH: gy-bk
LS: cm-tn, mx-VfnXln; Sl Cherty, w/ sm Fr-Gd Poro: pin point(pp)- vug, moldc, & InterXln Poro(IXP) NS.
Abndt dn LS w/ NVP & pr Poro w/ NS; & LS: gy-tn, dn- mx-fnX; w/ Vpr-NVP; NS; Vsl Chrty.
LS: cm-tn, mx-fnXln, Vrr MdX's-CrsX's-2nd ReX; sm Fr-Gd Poro: IGr, pp, & IXP; w/ NS; Chrty.
LS: tn-bn-gy, mx-fnXln; Rare(Rr) V.oomldc w/ Gd-VGd Poro w/ NS; NC.
LS: AA; pred dn- mx & Mdst & sm chlky; NS.
SH: sm gy-bk, Lmy & calc.
{STARK}SH: bk subcarb- V.carb.
SH: AA & argil LS.
{SWOPE} LS: Lt-gy-tn; mx-VfnXln, Grst-Pkst w/ Fr-Gd Poro: I.Gr & IXP, & I.ool; & Vrr prt oomldc w/ Fr-Gr Poro; <5% w/ FLR & Slight Show Free Oil & Gas Bubbles(SISFO&GB) & Sl Cut; VSl Odor; Sl Chrty. Pred dn- mx-fnXln & chlky w/ pr Poro- NVP; Pred Barren.
{HUSHPUCKNEY} SH: bk carb- V.carb.
{HERTHA} LS: gy-tn, mx-fnXln, Vrr MdX's; sm granlr- Pkst; V.rare(Vrr) Fr-Gd Poro: IGr & IXP, & pp-vug, & micro(m-)moldc Poro; <5% w/ FLR & VSISFO&GB; Trc STN & VSl Cut; VSl Odor; Sl Chrty. Sm chlky LS; sm argil-shly LS: dk-gy-bk, dn Mdst & mx-Lithogr LS; pred Barren w/ pr Poro-NVP. SH: gy-bk; & LS: gy-bk; dn-Mdst & mx- Lithogr; & argil-shly LS w/ Vpr-NVP; NS.
LS: tn-bn-gy, pred dn- mx; & Mdst w/ Vpr-NVP; NS.
LS: tn-bn-gy, pred dn-mx; & Mdst w/ Vpr-NVP; NS.
{B/KC} SH: gy-bk, sm carb.
Pred SH:AA; (sm LS:AA w/ NS) & LS: argil- shly; & calc- Lmy SH.
SH: bk carb- V.carb.
{MARMATON} LS: tn-cm, pred dn- mx-fnX; pred pr Poro-NVP; NS;
Abndt argil LS w/ Vpr-NVP; NS; & SH: calc & Lmy.
SH: gy, gn-gy, calc & Lmy; & LS: gy, argil, dn- Mdst.
LS: tn-gy-wh, pred dn, sm chlky; Trc Fr Poro w/ NS.
SH: bk carb- V.carb.
LS: tn-gy-wh, pred dn- mx, sm chlky; pred Vpr-NVP; NS.
{ALTAMONT} LS: tn-gy-wh, pred dn-mx & Mdst, sm chlky; pred Vpr-NVP; NS;
& SH: AA, gy- bk.
LS: gy-tn, pred dn- Lithogr- Mdst w/ Vpr-NVP; NS.
SH: bk carb, & subcarb, sm calc & Lmy.
{PAWNEE} LS: tn-gy, pred dn- mx; w/ Vpr-NVP; NS; Vrr Wh-chlky LS; NS.
Power supply failure; lost data from ~4620'->4651'
{SWOPE LS}<5% w/ SISFO&GB (Slight Show Free Oi l&Gas Bubls)
Mud-Co.Rpt@4664' wt:9.3 vis:52 pv:14 yp:16 pH:10.0 WL:9.0 CT:1/32" Alka:0.4 Cl:4000 Ca:80 Solids:6.7% LCM:0 ECD:9.68
{HERTHA LS}<5% w/ VSISFO&GB


vis:86 wt:9.2
LCM:8#
-4800
sm argil-shly LS; Vpr-NVP; NS.
-c-
4815' (-3290)
FT. SCOTT
vis:75 wt:9.1+
SH: bk carb; & gy, gn-gy.
{FT.SCOTT} LS: tn-gy-wh, pred dn- mx-fnX; Vpr-NVP; NS.
4829' (-3304)
CHEROKEE
LCM:10#
{CHEROKEE} SH: bk carb & subcarb; & gn-gy;
& LS: gy, argil. NVP; NS.
SH: bk carb - V.carb.
LS: tn-gy, pred dn- mx-VfnX; Rr chlky; Vpr-NVP; NS.
-c-
-4850
Trc Sndy LS: tn, mx-VfnX; Vfn Gr'd w/ pr visbl Poro w/ SFO-FLR-STN&Cut.
4858'(-3333)
CKE SAND
SS- Sd Clusters: bf-tn, Vfn Gr'd, Rnd'd-angulr, V.well sort'd, sm well cmt'd, sm frlbl w/ Gd l.Gr.Poro; ~10% w/ FrSFO &GB & subsat- sat lt tn STN & dull FLR, Fr-Gd Cut, Gd Resid Cut; Fr Odor. Rr Cherty Sd Clust: pred VfnGr'd w/ Vfn Chrt fragmnts, Trc Vfn-fnGr'd, Rr Fr-Gd Poro w/ spt'd bk STN & FrSFO & Cut; Sm silty-argil Sd Clust w/ pr-Fr Poro w/ Vrr spt'd STN, SlSFO & Cut, Fr Odor.
LS: tn-gy, pred dn- mx; & argil; NVP.
{CKE SD} FrSFO&GB
(Fair Show Free Oil&Gas Bubbles)
{SI-FrSFO&GB}
-c-CFS-20/40/60min.
Pred SH-SILTS: gy-bk.
(Rr Sd Clust: AA w/ pr-Fr Poro w/ dull FLR to NF; SISFO-STN-Cut)
4899' (-3374)
EROS. MISS.
-4900
{EROS.MISS} Vrr CHERT: cm-gy-bf, wthr'd- prt Tripolitic w/SISFO & spt'd STN&Cut; sm dd Stn; Trc shrp Chrt; Incrs SH: mm-rd & gn-gy.
{EROS.MISS}SISFO
-c-
4907' (-3382)
MISS. CHERT
{MISS.CHERT} gy-tn-cm-wh, sm VC, sm shrp & prt Wthr'd w/ spt'd STN; sm Tripolitic w/ subsat-sat STN & brt FLR; Pred Fr to VGd SFO&GB&Fr-VGd Cut; Frly Strong Odor. (4930'40min spl}
{MISS.CHERT}
GdSFO&GB
vis:80 wt:9.1
LCM:6#
-CFS-20/40/60min.
Pred CHERT:wh-cm-gy, w/ tn-bn &bk STN; Pred Triplc & Wthr'd w/ Fr-VGd visbl Poro: vug & pp & Triplc.Poro w/ spt'd-sat STN& brt FLR; Pred Gd SFO & GB & Gd Cut; Frly Strng Odor.
GdSFO&GB
-c-
vis:75 wt:9.0
LCM:8#
(spls below 4930'} Chert: AA; pred cm-blu-gy, prt Wthr'd w/ spt'd- subsat STN- Incrs bk-STN; Fr-GdSFO & Cut; Rr ool & fos- fnly granlr Chert w/ lGr.Poro w/ STN & SFO & Cut; Fr Odor.
GdSFO&GB
-4950
Sm LS & Dolomc.LS(DLS): cm-bf-gy, mx-VfnXln, sm granlr, sm silic & dolomc, pred pr IXP & lGr Poro; sm w/ SlSFO spt'd STN & Cut;
SISFO&GB
Abndt CHERT: sm AA; Decrs in Wthr'd Chrt; prt fresh-sharp & prt wthr'd- sl wthr'd w/ spt'd STN & SFO & Cut.
-c-
Sm LS-DLS:AA; sm argil & silic; w/ pred pr visbl Poro w/ VSlSFO-STN & Cut;
VSISFO
Abndt CHERT:AA; pred Pr-Fr Poro sm spt'd STN-SFO-Cut.
LS-DLS: cm-gy-bf; mx-VfnXln, sm Vfnly granlr- silty & silic; & Chrty; pred Vpr-pr visbl Poro: m-IXP & m-Frac Poro; Vrr spt'd STN & VSlSFO & Cut; (~25% Chert:AA).
VSISFO
-5000
-c-
LS: cm-tn-gy, mx-fnXln, sm sl fos; pred Vpr-pr visbl Poro; Trc spt'd STN & Cut; Trc SFO; (~10% Chert:AA).
Mud-Co Rpt@5006'
wt:9.0
vis:80
pv:16
yp;17
pH:9.0
WL:9.6
CT:1/32"
Alka:0.1
Cl:4000
Ca:80
Sol:6.2%
LCM:7#
LS: AA; pred pr Poro to NVP; V.rare(Vrr) <5% w/ VSlSFO-STN-Cut; >10%<20% CHERT: cm-blu-gy, w/ pr-Fr Poro: pp & lGr Poro w/ spt'd-sat-STN:AA & Sl-FrSFO& Cut:AA; Sl Odor.
SISFO
LS: gy-tn-cm; mx-MdXln, sm Pkst w/ Vpr-pr visbl Poro: IXP & lGr; Vrr STN & VSlSFO & Cut; Cherty: cm-blu-gy, pred shrp & sl Wthr'd & micro(m-)Frac's; Vrr spt'd STN & SlSFO & Cut; Vrr Qtzitic Chert.
SISFO
-5050
LS: cm-bf-gy, mx-fnXln, Vrr prt MdXln,
-c-


-c-
-5000
-c-
0 5 10 15
Mud-Co Rpt@5006'
wt:9.0
vis:80
pv:16
yp;17
pH:9.0
WL:9.6
CT:1/32"
Alka:0.1
Cl:4000
Ca:80
Sol:6.2%
LCM:7#
-5050
0 5
-c-
-c-
CTCH 20/40/60min
-5100
RTD:5100' (-3575)
LTD:5104' (-3579)
NO DST's
0 15
-5150
Sm LS-DLS:AA; sm argil & silic; w/ pred pr visbl Poro w/ VSISFO-STN & Cut;
Abndt CHERT:AA; pred Pr-Fr Poro sm spt'd STN-SFO-Cut.
LS-DLS: cm-gy-bf; mx-VfnXln, sm Vfnly granlr- silty & silic; & Chrty; pred Vpr-pr visbl Poro: m-IXP & m-Frac Poro; Vrr spt'd STN & VSISFO & Cut; (~25% Chert:AA).
LS: cm-tn-gy, mx-fnXln, sm sl fos; pred Vpr-pr visbl Poro; Trc spt'd STN & Cut; Trc SFO; (~10% Chert:AA).
LS: AA; pred pr Poro to NVP; V.rare(Vrr) <5% w/ VSISFO-STN-Cut; >10%<20% CHERT: cm-blu-gy, w/ pr-Fr Poro: pp & IGr Poro w/ spt'd-sat-STN:AA & Sl-FrSFO& Cut:AA; Sl Odor.
LS: gy-tn-cm; mx-MdXln, sm Pkst w/ Vpr-pr visbl Poro: IXP & IGr; Vrr STN & VSISFO & Cut; Cherty: cm-blu-gy, pred shrp & sl Wthr'd & micro(m-)Frac's; Vrr spt'd STN & SISFO & Cut; Vrr Qtzitic Chert.
LS: cm-bf-gy, mx-fnXln, Vrr prt MdXln, sm fragmntl- Pkst w/ Vpr visbl Poro; Trc SFO & STN & Cut; Cherty: blu-gy-cm, & transl, sm sharp & sl Wthr'd, sm Qtzitic; Trc SFO & STN & Cut.
LS: AA; sm chlky LS; & CHERT: Vari-color'd; lt-dk-blu-gy &-cm, sm sl Wthr'd: <5% w/ visbl Poro & aprnt Frac.Edges w/ SFO & STN & Cut; >95% Barren.
VSISFO
VSISFO
VSISFO
SISFO
SISFO
Trc SFO
Trc SFO
BEREXCO LLC
ACHENBACH "B" #4
S/2 - N/2 - NE - SE/4
SEC: 2-T35S-R13W
HARDTNER FIELD
BARBER CNTY., KS
API#15-007-24231-00-00