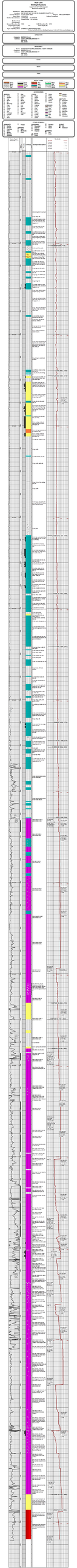

MUD LOG
WellSight Systems

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

Well Name: WELLINGTON KGS 1-32
Location: SW NE NE SEC 32-31S-1W, SUMNER COUNTY, KS
License Number: 15-191-22591-0000 Region: MID-CONTINENT
Spud Date: 12/29/2010 Drilling Completed:
Surface Coordinates: LATITUDE : 37.3154639
LONGITUDE : -97.4423481
Bottom Hole Coordinates:
Ground Elevation (ft): 1259 K.B. Elevation (ft): 1272
Logged Interval (ft): To: Total Depth (ft):
Formation:
Type of Drilling Fluid: CHEMICAL (BENTONITE) MUD

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

OPERATOR

Company: BEREXCO LLC.
Address: 2020 N. BRAMBLEWOOD ST.
WICHITA,
KS, 67208

GEOLOGIST

Name: GANGANATH KORALEGEDARA / KENT CRISLER
Company: BEREXCO LLC.
Address: 2020 N. BRAMBLEWOOD ST
WICHITA
KS, 67208

Cores

DSTs

TOPs

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, Brecfrag, 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: Dst, Core

EVENT: Rft, Sidewall

samples lagged by the geologist

Sh, gy, drk gy, frm

LS, tan-buff, f-crypto xln, hard, dns, few pcs of drk frsh, chrt, LS, tan, fxln, scrtd foss, scrtd vuggy por, ns

Sh, grn, gy drk gy, grn, silty, pyritic, gy silty, scrtd foss

LS, buff, fxln, hrd dns, with LS, wht-tan, fxln, chlky-sub chalky, dns

Sh, grn, lt gn, gy, lt grn, soft, sticky, strngers of gy siltstone

LS, tan, f-med xln, scrtd foss, sub chalky, hrd with LS, buff, fxln, hrd, dns

HEEBNER 2406 (-1134)

Sh, blk, carb, firm, pyritic

LS, buff, f-med xln, foss, hrd, dns, ns

SS, wht-clr, f grn, rndd-sub rndd, calc cement, tight, some clr ss with int xln, & vuggy poro, ns, sringers of Siltstone, gy, with LS, wht, fxln, soft, chalky

LS, wht-tan, fxln, foss, pp & vuggy poro, ns, LS, wht, fxln, hrd, dns, stylolite, stringers of pyrite

Sh, grn, gy, grn, silty, pyritic

LS, tan, fxln, hrd, sctrd vuggy poro, ns

Sh, grn, gy, with Siltstone grn

LS, buff, f-crypt xln, hrd, dns

Sh, gy-drk gy, frm

LS, wht-tan, f-med xln, v foss, partly oolit, int xln, omoldic and vuggy poro, ns

Sh, gy, drk gy, sctrd red, some stringers of grn-gy siltstone

Sh, gy, grn, and lt grn, intrbdd with Ls, tan, f-med xln, foss, pp & vuggy poro, ns

Sh, gy - drk gy, frm, stringers of lt grn-clr, v f grn SS with calc cement, tight

LS, tan-buff, fxln, foss, hrd, dns,some drk fresh, chrt

Sh, drk gy, gy, intr bdd with some grn, siltstone

Sh, grn, gy sctrd red, with clr-lt grn siltstone, pyritic

Sh, gy, scrtd grn with some intrbdd siltstone

Sh, gy, drk gy and sortd grn and red, some pcs of blk sh, gy Sh, with thin lyrs of blk sh, pyritis, few pcs of LS, wht, f-med xln, foss, chalky, ns

Sh, g, drk gy, AA, some lt grn silt stone

LS, buff-brwn, f-med xln, foss, hrd, dns, ns

IATAN 2680 (-1408)

LS, tan, fxln, hrd, dns with gy, sh

STALNAKER 2691(-1419)

Sh, grn gy, few pcs of blk, hrd, frm, SS, wht, clr, lt grn, f grn, calc cement, tight

SS, wht-clr, f-med gran, sub rndd-ang, poorly srtd, int xln & vuggy poro, partl glauc, some with wht calc cement,tight, ns

SS, wht-clr, f-med grn, ang-sub rndd, int xln and vuggy poro, Sh, grn, lt grn, soft

Mud Data 2738'
Vis 34 Wt 9.4
pH 9.0 cake -
WL 7.6 LCM 0
Cl 4,000

LS, tan, fxln, hrd, dns, sctrd foss, ns

SS, clr-lt grn, f grn, poorly srtd, tight, with some strings of gy sh, SS, clr, med grn, well srtd, sub rndd-ang, int xln & vugy poro, ns

LS, wht, fxln, hrd, dns, sctrd foss, sub chalky

SS, clr, med grn, rndd-sub rndd, well srtd, int xln poro, partly glauc, ns

SS, clr-wht, f grn, prly srtd, with gy sh strngrs, tight

SS, clr, med grn, rndd-sub rndd, well srtd, int xln poro, partly glauc, ns

Sh, lt gy, silty, Siltstone, lt grn

Sh, gy, pyritic

LS, buff, f-med xln, hrd, dns

Sh, gy, pyritic, partly silty

Sh, gy, LS, tan, f xln, scrtd pp poro, ns

Sh, gy, pyritic

Sh, drk gy, gy, argl, pyritic, few pcs of grn and red Sh, Siltstone, lt gy-clr, strngrs of blk sh

Sh, blk, carb

LANSING KC 3041 -1769)

LS, LS, tan, sucro-med xln, foss, pp & vuggy poro, ns, LS, wht, f xln, soft chalky

LS, tan-buff, f xln, hrd, dns, sortd foss, ns, pcs of drk fresh chrt

LS, off wht-tan sucro-med xln, foss, partly oolit, vuggy and pp poro, partly chalky, ns

LS, wht, f-crypto xln, hrd, dns, with fresh lt chrt

LS, tan, mix xln, foss, vuggy, int xln and intra xln poro, ns

LS, wht-tan, crypto xln, hrd, sctrd foss, sctrd vuggy poro, dns, ns

LS, tan, off wht, sucro-f xln, foss, vuggy & pp poro, sub chalky - chalky, ns

LS, tan-wht, f-crypto xln, hrd, dns, mostly fress, wht-lt tan chert

LS, brwn-buff, sucro-f xln,foss, vuggy poro, ns

LS, tan, f-crypto xln, hrd, dns

LS, tan, sucro-f xln, pp & scrtd vuggy poro, ns

Sh, gy, drk gy, pyritic

STARK SH 3168 (-1896)

LS, tan-buff, f-med xln, hrd, dns, sctrd vuggy poro, LS, wht-tan, fxln, sub chalky, ns

LS, tan, f-med xln, foss, oolit, (packstone), tight, no visi poro, ns

LS, tan-buff, f xln, hrd, dns, partly cherty, some fresh, lt, chrt

Sh, blk, carb, pyritic

SS, clr-wht, f grn, sub rndd-angular, prly srtd, calc cement, tight, ns

LS, buff, f-med xln, scrtd foss, hrd, dns

LS, tan, sucro, foss, pp poro, ns

LS, tan,buff, f-med xln, scrtd foss, scrtd vuggy poro, hrd, dns, ns

LS, buff, f-crypto xln, hrd, dns, few fractured, some stylolite, few pcs of wht chalky LS

Sh, grn, gy drk gy, mostly blk carb, pyritic

BKC 3284 (-2012)

LS, tan, f-med xln, hrd, dns

Sh, gy, drk gy, pyritic

LS, tan, med xln, hrd, dns

Sh, blk, carb, pyritic

LS,tan, f xln, scrtd foss, hrd, dns

Sh, grn-lt grn, with lt grn siltstone

LS, lt grn-lt tan, f-crypto xln, hrd, dns

Sh, grn, gy, and some drk gy, grn, silty

LS, tan, sucro-f xln, pp & scrtd vuggy poro, ns, LS, tan-lt grn, f-crypto xln, hrd, dns

Sh, blk, carb, pyritic, sh, grn, gy, lt grn, silty

LS, tan-buff, f-med xln, scrtd foss, sctrd vuggy poro, ns, LS, tan, f-crypto xln, hrd, dns

Sh, gy, drk gy, pyritic, with gy-grn siltstone

LS, buff-drk gy, f-crypto xln, hrd, dns

1/7/2011 @ 7.00 am 3420' drilling

LS, tan, sucro-med xln, foss, pp & scrtd vuggy poro, ns LS, buff, crypto-f xln hrd, dns, cherty

Sh, gy, drk gy, blk

PAWNEE 3450(-2178)

LS, tan sucro-f xln, foss, vuggy and pp poro, ns

LS, tan-buff, f-crypto xln, hrd, dns, partly cherty, with fresh lt & drk chert

Sh, blk, crb, gy & drk gy, pyritc, some clr- lt grn siltstone

FTSC 3490(-2218)

LS, tan-buff, f-crypto xln, hrd, dns, LS, tan sucro-f xln, scrtd vuggy & pp poro, ns

CHEROKEE 3504(-2232)

Sh, blk, carb

LS, buff, f-med xln, foss, oolit, (packstone) hrd, dns, no visi poro

Sh, grn, gy, drk gy

LS, buff, f-crypto xln, hrd, dns, LS, tan sucro-med xln, foss, vuggy & pp poro, ns

TRIPOUT FOR CORING @3540'

CORE 1 (RECOVERED ENTIRE 60 FEET 3540'-3600')

CORE 1 3540'-3600'

CORE 2 (RECOVERED ENTIRE 60 FEET 3600'-3660.85')

CORE 2 3600'-3660.85'

MSSP 3658(-2386)

1/9/2011 @ 7.00 AM TRIPPING WITH THE CORE

3160.85'-3692.4' CORE 3 (RECOVERED 31.55')

DST #1 MSSP.
4664-4690
Times: 30-60-60-180
Rec 800' MCW
FP 69-239/258-414
SIP 1047/1049#

Mud Data 3659'
Vis 47 Wt 9.1
pH 10.5 cake 1
WL 5.5 LCM 5
Cl 3,000

3692.4'-3752' CORE 4 (RECOVERED 59.6')

Mud Data 3690'
Vis 53 Wt 8.9
pH 10.0 cake 1
WL 3.9 LCM 4
Cl 6,000

3752'-3812' CORE 5 (RECOVERED 60')

3812-3872.55' CORE 6 (RECOVERED 60.55')

Mud Data 3810'
Vis 44 Wt 9.0
pH 10.0 cake 1
WL 4.7 LCM 4
Cl 4,500

Mud Data 3870'
Vis 46 Wt 9.1
pH 10.0 cake 1
WL 5.5 LCM 4
Cl 4,000

3872.55'-3929.75' CORE 7 (RECOVERED 57.2')

3929.75'-3990' CORE 8 (RECOVERED 60.25')

Mud Data 3988'
Vis 34 Wt 8.9
pH 9.0 cake 1
WL 4.1 LCM 3
Cl 4,000

RESET THE GAS CHROMATOGRAPH

3990'-4020' CORE 9 (RECOVERED 30')

Dolo, dark, fxln, with SS inclusions, clr-lt tan, f grn, angular -sub angular, saturated with oil, blk oil stain, good odor, with thin layers of blk carb sh

4020'-4079.6' CORE 10 (RECOVERED 59.6')

SIMPSON SS 4064 (-2792)

Mud Data 4072'
Vis 36 Wt 8.85
pH 10.0 cake 1
WL 3.7 LCM 4
Cl 6,000

4079.6'-4138.8' CORE 11 (RECOVERED 59.2 ')

SIMPSON SH 4100 (-2828)

1/15/2011 @ 7.00 AM TRIP OUT WITH THE CORE

4138.8'-4185.1' CORE 12 (RECOVERED 46.3')

Mud Data 4146'
Vis 46 Wt 9.0
pH 9.0 cake 2
WL4.2 LCM 6
Cl 13,000

Sh, grn-pale grn

SS, clr, f grn, pr poro, calc cent, ns

ARBUCKLE 4164 (-2892)

Dolo, brwn, f xln, hrd, dns

Dolo, brwn, f-med xln, oolit, vuggy poro, ns

DST #4 Arbuckle
conv stradd
4175-4190
T 30-60-60-180
Rec 270' Dolo C W,
90' Dolo CW, 90'
MCW
Cl 44,000
FP 18-90/ 93-218
SIP 1714/1718#

4185.1'-4243.35' CORE 13 (RECOVERED 58.25')

Dolo, lt brwn, fxln, oolitic, vuggy and oomoldic poro, ns

4243.35'-4264' CORE 14 (RECOVERED 20.65') CORE JAMMED AND LOST 3'

Mud Data 4243'
Vis 40 Wt 8.9
pH 10.0 cake 1
WL4.9 LCM 5
Cl 6,500

4267'-4293' CORE 15 (RECOVERED 14.85') CORE JAMMED AND LOST 11.15' FROM 4281.6'-4292.75' DRILLED 1', CLEAN UP HOLE

Mud Data 4276'
Vis 40 Wt 8.8
pH 11.2 cake 1
WL3.0 LCM 6
Cl 10,000

4294'-4354' CORE 16 (RECOVERED 60')

DST #3 Arbuckle
conv stradd
4280-4390
T 30-60-60-180
Rec 360' WCSulf,
360' Sulf CW, 3286'
Sulf CW
Cl 68,000
FP 1069-1784/
1781-1783
SIP 1782/1783#

Dolo, lt gry, f-med xln, no visi poro, even, trace pyrite,

Mud Data 4346'
Vis 45 Wt 8.9
pH 10.0 cake 1
WL3.9 LCM 5
Cl 7,000

4354'-4414.4' CORE 17 (RECOVERED 60.4')

Dolo, drk gy, f-med xln, pyritic, no visi poro. ns

Dolo, cream, med-corse xln, vuggy & frac poro, gy drk chrt

Dolo, lt gy, no visi poro, thin grn, gy sh, w minor pyrit

Dolo, tan-brwn, f-med xln, dns with blue gy, massive chert nodules

reset TG

Mud Data 4414'
Vis 50 Wt 8.9
pH 10.0 cake 1
WL3.9 LCM 5
Cl 6,000

4414.4'-4463.75' CORE 18 (RECOVERED 49.35')

Dolo, lt gy, vf xln, sm haled frac planes, pr-no poro

Dolo, drk brwn, f xln,hrd, dns, silisic, cherty

4463.75'- 4521' CORE 19 (RECOVERED 56.25')

Dolo, drk brwn, oolit, silic replacement, pr-fr poro, ns

Sh, drk gy, slt pyritic, cors xln, dolo inclu.

Mud Data 4482'
Vis 44 Wt 8.9
pH 9.0 cake 1
WL3.7 LCM 6
Cl 10,000

Dolo, gy, vfxln, sctrd vuggy poro, partly sili repla.

4521'- 4575.5' CORE 20 (RECOVERED 54.5')

Mud Data 4535'
Vis 45 Wt 9.0
pH 10.0 cake 1
WL 4.5 LCM 4
Cl 8,000

Dolo, gy, f xln, hrd, dns, sili rplced,

DST #2 Arbuckle
4465-4575
T 30-60-60-180
Rec 180' M, 450'
SW+Sulf 3270' SW
Cl 115,000
FP 1504-1867/
1767-1867
SIP 1867/1867#

Dolo, gy, fxln, hrd, dns, with frac, frac plane w euhedral xl growth

Dolo, tan, f xln, hrd, dns, good vuggy poro

Dolo. drk brwn, f xln, massive, hrd, dns, no visi poro

4575.5'-4585.4' CORE 21 (RECOVERED 9.9') CORE JAMED

Dolo, tan, f-med xln, hrd, pp & vuggy poro, ns

Mud Data 4575'
Vis 49 Wt 8.9
pH 9.0 cake 2
WL 3.3 LCM 4
Cl 15,000

4585.4'-4594.4' CORE 22 (RECOVERED 9') CORE JAMED

Dolo, tan, sucro-coars xln, int xln & vuggy poro, fractured, fresh euhed dolo., thin lys of gm sh, fresh wht chrt nodules at the bottom

Mud Data 4588'
Vis 44 Wt 8.7
pH 10.0 cake 1
WL 2.5 LCM 5
Cl 6,500

4595.4'-4603.6' CORE 23 (RECOVERED 9.2') CORE JAMMED

Mud Data 4605'
Vis 47 Wt 8.8
pH 11.0 cake 1
WL 3.2 LCM 4
Cl 6,500

Dolo, tan, F-coars xln, vuggy poro, fractured, fresh euhed dolo., thin lys of grn & blk sh

reset TG

4603.6'-4625.3' CORE 24 (RECOVERED 21.7') CORE JAMMED

4625.3'-4657' CORE 25 (RECOVERED 31.7') lost circ drilled 4659'-4680'

Dolo, tan, f-med xln, hrd, vuggy poro, fractrured, fresh euhedral dolo cryst in frac planes and vuggs, stylolites & thin lays of gy sh

LOST CIRC @ 4659' 1/28/2011

Mud Data 4659'
Vis 61 Wt 8.85
pH 11.0 cake 1
WL 6.0 LCM 4
Cl 6,000

Dolo, tan, f-med xln, AA, some fresh wht chert

Dolo, wht-tan, f-med xln,hrd, dns, oolitic, (packstone), no visi poro, pcs of fresh, wht & drk chert

strap out 4684' (geolograph 4680')4' short

4680'-4688' CORE 26 (RECOVERED 8') CORE JAMMED Drilled 4680'-4724'

Mud Data 4692'
Vis 47 Wt 8.7
pH 9.0 cake 2
WL 21.6 LCM 12
Cl 13,000

Dolo, wht-tan, f-med xln,hrd, dns, oolitic, (packstone), no visi poro, abnd fresh, wht & drk chert , sm opaq oolt, sm transl, sharp vit

Dol, wht-tan, sucro-med xln, unif, int xln poro, scrtd vuggy poro, ns

reset TG

4727'-4748.9' CORE 27 (RECOVERED 21.9') CORE JAMMED

Mud Data 4730'
Vis 44 Wt 8.8
pH 9.0 cake 2
WL 26.0 LCM 10
Cl 14,000

Dol, wht-tan, sucro-med xln, unif, int xln poro, scrtd vuggy poro,partly cherty, ns

4749'-4799.75' CORE 28 (RECOVERED 50.85') CORE JAMMED

Dol, wht-tan, sucro-med xln, unif, int xln poro, scrtd vuggy poro,bands of white fresh chert, ns

Mud Data 4776'
Vis 42 Wt 8.8
pH 9.5 cake 1
WL 8.0 LCM 10
Cl 8,500

Dol, wht-tan, sucro-med xln, vuggy poro, recrys of dolo and qrts in vuggs, fresh white and dark chert, ns

4799.75'-4818.9' CORE 29 (RECOVERED 19.15') CORE JAMMED Drilled ahead to 4900'

Mud Data 4801'
Vis 46 Wt 8.9
pH - cake -
WL - LCM -
Cl -

Mud Data 4814'
Vis 42 Wt 8.7
pH 10.0 cake 1
WL 8.0 LCM 12
Cl 8,500

Dolo, tan, f-med xln, with lots of up hole sh from tripping in-out

Dolo, tan, f-med xln, hrd, dns, scrtd vuggy poro, fract, lots of uphole, blk & grn sh

Dolo, lt crm, f xln, oolitic, fractured, qrtz filling, re xln, qrtz & euhedral dolo, (fracture filling), ns

Dolo, wht-crm, vf xln, hrd, fractured, scrtd qrts grains, med-corse grain, clr, fractured, ns

Dolo, tan-lt tan, f-med xln, soft, sctrd vuggy poro., few well rndd qrtz grains, fair-gd poro, ns

Mud Data 4900'
Vis 44 Wt 8.8
pH 9.5 cake 1
WL 8.4 LCM 10
Cl 9,000

4900'-4959' CORE 30 (RECOVERED 59')

reset TG

Dolo, wht- lt gy, med-crs xln, fair int xln, & vuggy poro, some apperent wht chert , ns

Dolo, wht-lt tan, mix xln, hrd, dns, fracrured, fracture filled, euhedral dolo. and some qrts xls, hrd, dns, ns

4959'-4986.5' CORE 31 (RECOVERED 27.5') CORE JAMMED

Mud Data 4960'
Vis 43 Wt 8.9
pH 9.5 cake 1
WL 8.8 LCM 10
Cl 5,500

Dolo, tan-lt gy, f-med xln, hrd, dns, fractured, fracture filled, euhedral & f xln, dolo., at the bottom of the core, nodules of fresh, wht chert

4986.5'-4998' CORE 32 (RECOVERED 11.5') CORE JAMMED drilled to 5050'

reset TG

Mud Data 4999'
Vis 44 Wt 9.0
pH 9.5 cake 1
WL 10.0 LCM 10
Cl 10,000

Dolo. f-crs xln, hrd, dns, fractured, intervals of 1" thick fresh wht chert, fracure filled f grain qrtz xls and thin lyrs of qrtz, & euhedral dolo, ns

Dolo, of wht- lt tan, f-crs xln, hrd, dns, fresh, euhedrel dolo xls & some clr well rndd qrtz grains, vuggy poro, fractured, thin lyrs of lt grn sh

5050'-5083.25' CORE 33 (RECOVERED 33.25') CORE JAMMED

Dolo, wht, crs xln, soft, minor frac, few chert, lt gy sh & minor calc

Dolo, tan, med xln, fract, brocken calcite, few chert

5084'-5144' CORE 34 (RECOVERED 61.25')

Dolo, wht, crs xln, soft, minor frac, few chert, lt gy sh & minor calc, Dolo, tan, f-med xln, hrd, fract, fresh qrtz xls

Mud Data 5126'
Vis 47 Wt 9.0
pH 10.0 cake 1
WL - LCM 9
Cl 12,000

Dolo, tan, f-med xln, hrd, fract, fresh qrtz xls

5140'-5179' CORE 35 (RECOVERED 34.4') CORE JAMMED after cut 4' in to Granite

REAGAN SS 5140 (-3868)

SS, clr-lt tan, f-med grain, fair sorted, well rndd - sub rndd, some grains slightly elongated faceted, dolo cement, lt stain in more dolomitic sand, no fluo.

GRANITE 5174 (-3902)

Mud Data 5178'
Vis 48 Wt 9.0
pH 9.2 cake 1
WL 10.0 LCM 10
Cl 11,000

Granite, pinc, feld, med-crs xln, wht, plagio feld, med-crs xln, hrd, dns, mica, biotite, some, miscovite,

Granite, pinc, feld, med-crs xln, wht, plagio feld, med-crs xln, hrd, dns, mica, biotite, some, miscovite,

Mud Data 5240'
Vis 49 Wt 9.0
pH 10.0 cake 1
WL 8.8 LCM 10
Cl 11,000

TD 2/8/2011