ERICKSON WELLSITE GEOLOGY

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

Well Name: Diasis #1-11
Location: W2 E/2 W2 E/2 Sec 11 T1S R35W
License Number:
Spud Date: 3/12/2014
Surface Coordinates: 2640' FNL & 1800' FEL
Region: Rawlins County, KS
Drilling Completed: 3/21/2014

Bottom Hole Coordinates:

Ground Elevation (ft): 3157
Logged Interval (ft): 3440 To: TD
Formation:
Type of Drilling Fluid: Chemical Mud
K.B. Elevation (ft): 3167
Total Depth (ft): 4656

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

OPERATOR

Company: Murfin Drilling Co., Inc.
Address: 250 N Water, Suite 300
Wichita, KS 67202

GEOLOGIST

Name: Clayton Erickson
Company: Erickson Wellsite Geology
Address: 402 Palmer Street
P.O. Box 294
Loomis, NE 68958

DSTs

DST #1 3615-3673; 30-60-30-60; Hydro: 1782-1726 IFP: 38-48 ISIP: 1109 FFP: 49-57 FSIP: 1065; Rec: 5' 5%o 95%m; BHT: 119 F; IF: 1 1/2" ISI: dead FF: dead FSI: dead

DST #2 3692-3820; 30-60-60-90; Hydro: 1862-1743 IFP: 69-118 ISIP: 1221 FFP: 129-212 FSIP: 1206; Rec: 5' oil 186' 15%o 85%m 93' 10%o 60%w 30%m; BHT: 118 F Grav: 26.8; RW: .16@ 42F Chl: 95,000ppm; IF: 2 1/2" ISI: dead FF: 5 1/2" FSI: dead

DST #3 4005-4160; 30-60-60-90; Hydro: 2036-1966 IFP: 90-187 ISIP: 1327 FFP: 194-339 FSIP: 1319; Rec: 505' oil spotted mud; BHT: 124 F; IF: 5 1/2" ISI: dead FF: 5 1/2" FSI: dead

DST #4 4150-4254; 30-60-30-60; Hydro: 2020-1982 IFP: 20-27 ISIP: 1072 FFP: 30-33 FSIP: 933; Rec: 5' mud; BHT: 118; IF: 1/2" ISI: dead FF: dead FSI: dead

DST #5 4245-4295; 30-60-60-90; Hydro: 2110-2013 IFP: 60-339 ISIP: 811 FFP: 332-477 FSIP: 813; Rec: 42' oil 186' 35%o 10%w 55%m 372' 25%o 25%w 50%m 372' 80%w 20%m; BHT: 134 F Grav: 27.8; RW: .17@ 41.1 F Chl: 78,000ppm; IF: BOB 7min ISI: dead FF: BOB 14min FSI: dead

COMMENTS

The loggers hit a bridge/fill @ 4618'.

FORMATION TOPS

	Log Tops	Sample tops
Anhydrite	3037(+130)	3037(+130)
Base Anhy	3068(+99)	3072(+95)
NEVA	3538(-371)	3542(-375)
RED EAGLE	3601(-434)	3606(-439)
FORAKER	3652(-485)	3655(-488)
TOPEKA	3876(-709)	3866(-699)
OREAD	3964(-797)	3965(-798)
LANSING	4085(-918)	4085(-918)
BKC	4346(-1179)	4350(-1183)
MARMATON	4388(-1221)	4390(-1221)
PAWNEE	4466(-1299)	4471(-1304)
FT SCOTT	4536(-1369)	4538(-1371)
CHEROKEE	4546(-1379)	4548(-1381)
TD	4618(-1451)	4656(-1489)

ROCK TYPES

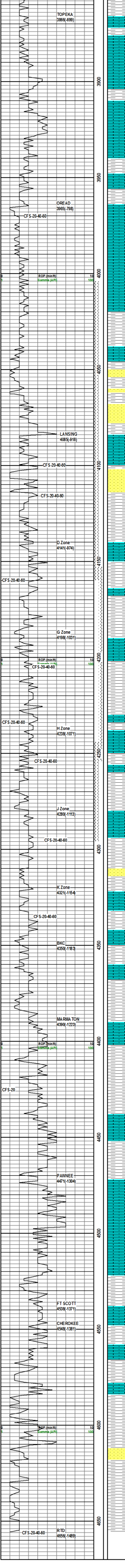
Anhy, Bent, Brec, Cht, Clyst, Carb. shale, Arkose, Dol, Gyp, Igne, Lmst, Meta, Mrlst, Salt, Shale, Shcol, Shgy, Sltst, Ss, Till

OTHER SYMBOLS

OIL SHOW: Even, Spotted, Ques, Dead
INTERVAL: Dst

Curve Track 1
ROP (min/ft)
Gamma (API)

Depth	Porosity Type	Lithology	Oil Shows	Geological Descriptions	Remarks



Geological Descriptions

S.S.- v fl grey-red/brwn, arg, v fn grn, poss int gran por, no odor, no SFO

SH- grey

S.S.- red/brwn-wht, v fn grn, arg-v arg, poss int gran por, no odor, no SFO w/ SH- red/brwn, v sndy

SH- red/brwn, sndy

as above

S.S.- red/brwn, v fn grn, arg, poss int gran por, no odor, no SFO w/ as above

as above

SH- red/brwn, v sndy, scat gypsum

as above

L.S.- wht-crm, fn-micro xtln, grn stn, no vis por, no odor, no SFO, sli chlky

SH- red/brwn, sndy

as above w/ S.S.- red/brwn-lt gred/brwn, arg, v fn grn, pos int gran por, no odor, no SFO

SH- red/brwn, sndy

as above w/ S.S.- lt grey-wht, v fn grn, poss int gran por, no odor, no SFO

S.S.- as above

L.S.- wht, fn-micro xtln, grn stn, pr PP por, no odor, no SFO, com tran-wht-orng chrt w/ Dolo- wht, v fn xtln, poss int xtln por, no odor, no SFO

L.S.- wht-grey, fn-micro xtln, grn-wk stn, no vis por, no odor, no SFO, freq chrt

SH- red/brwn, v sndy w/ S.S.- red/brwn, arg, v fn grn, poss int gran por, no odor, no SFO

SH- red/brwn, sndy w/ S.S.- trans-red/brwn, v fn grn, poss int gran por, no odor, no SFO

SH- red/brwn, sndy

L.S.- wht-crm, fn xtln, grn stn, fr int gran por, fnt odor, fr SFO, sli chlky

L.S.- grey-wht, fn xtln, wk-grn stn, no vis por, fnt odor, no SFO w/ SH- grey

L.S.- wht-tan, fn xtln, grn stn, pr PP por, no odor, rare SFO, scat tarry res, sli chlky

L.S.- grey-wht, fn xtln, pk-wk stn, no vis por, no odor, no SFO

as above w/ scat Dolo- tan, fn xtln, poss int xtln por, no odor, no SFO

SH- red, grey w/ Dolo as above

SH- red-red/brwn, grey

L.S.- wht-v lt grey, fn xtln, grn-pk stn, no vis por, no odor, no SFO, scat trans-orng chrt

SH- red/brwn-grey-ylw, freq sndy w/ L.S.- grey, fn xtln, md stn, no vis por, no odor, no SFO

SH- red-red/brwn, sndy

as above w/ L.S.- lav, arg, fn xtln, md stn, no vis por, no odor, no SFO

SH- red-red/brwn, sndy w/ L.S.- wht, fn xtln, grn stn, no vis por, no odor, no SFO

L.S.- wht-lt grey, fn xtln, grn-wk stn, no vis por, no odor, no SFO w/ SH- red/brwn

SH- red/brwn, grey

L.S.- wht-tan, fn xtln, grn stn, pr int gran por, no odor, pr SFO, sply tarry res w/ SH- as above

as above, no odor, pr SFO

SH- red/brwn w/ L.S.- wht-crm, fn xtln, grn stn, no vis por, no odor, no SFO

L.S.- wht, fn xtln, grn stn, no vis por, no odor, no SFO

SH- red/brwn, grey

L.S.- wht, fn xtln, grn stn, pr int gran por, no odor, no SFO, abnd asph-tarry res

L.S.- crm-red/brwn, fn xtln, pk-wk stn, no vis por, no odor, no SFO w/ SH- red-red/brwn

SH- red/brwn

SH- red/brwn, grey w/ minor L.S.- wht-crm, fn xtln, grn-wk stn, no vis por, no odor, no SFO

as above w/ L.S.- crm-red/brwn, fn xtln, md-pk stn, no vis por, no odor, no SFO

L.S.- wht-crm, fn-micro xtln, grn-pk stn, no vis por, no odor, no SFO, sli chlky

L.S.- wht-v lt grey, fn xtln, wk stn, no vis por, no odor, no SFO, sli chlky

L.S.- wht, fn xtln, grn stn, pr PP por, no odor, sply tarry-asph res, no SFO

L.S.- lav-wht, md-wk stn, no vis por, no odor, no SFO

as above

SH- red/brwn-lav, calc

L.S.- wht-tan, fn xtln, grn stn, v pr int gran por, no odor, sply asph-tarry res

SH- red/brwn

L.S.- wht-crm, fn-micro xtln, ool grn stn, fr int gran por, fnt odor, even tarry res, rare SFO, v chlky

as above

L.S.- wht, fn xtln, md-wk stn, no vis por, no odor, no SFO, chlky, com crm-orng chrt

L.S.- wht-v lt grey, fn xtln, md stn, no vis por, no odor, no SFO

L.S.- lt grey, fn xtln, md stn, no vis por, no odor, no SFO

L.S.- grey-lt grey, fn xtln, md stn, no vis por, no odor, no SFO w/ minor SH- grey

SH- grey-dk grey, calc, fnt odor, no SFO

as above w/ L.S.- wht-grey, fn xtln, md-wk stn, no vis por, fnt odor, no SFO

L.S.- tan-grey, fn xtln, wk-pk stn, v pr PP por, no odor, sply SFO w/ SH- grey

S.S.- v pale bl/grey, v fn grn, arg, poss int gran por, prly cem, no odor, no SFO

S.S.- grey-wht, v fn grn, calc, pr int gran por, no odor, sply SFO

SH- red/brwn, sndy w/ rare L.S.- crm, fn xtln, grn stn, fr int gran por, no odor, fr SFO(one piece)

L.S.- tan-crm, fn xtln, grn stn, pr-fr int gran por, scat vugs, v fnt odor, uneven fr SFO

L.S.- tan-wht, fn xtln, md stn, no vis por, no odor, no SFO

SH- grey w/ S.S.- wht, v fn grn, calc, mod cem, pr int gran por, no odor, sply SFO

S.S.- wht-v lt grey, v fn grn, pr-fr int gran por, no odor, pr SFO, mod-prly cem

SH- red/brwn, sndy

SH- red/brwn

L.S.- crm, fn xtln, grn stn, pr int gran por, no odor, pr SFO

L.S.- wht-lt grey, fn-med xtln, grn stn, pr int xtln por, no odor, pr SFO, uneven lt brwn oil stain, com small pyrite xtls

SH- grey, red/brwn

L.S.- wht-tan, fn xtln, grn stn, v rp int gran-int xtln por, no odor, no SFO, com asph-tarry res w/ SH- as above

SH- red/brwn, grey

L.S.- wht-crm, fn-med xtln, grn stn, pr int xtln por, fnt odor, pr SFO

L.S.- lt grey, fn xtln, md-wk stn, no vis por, no odor, no SFO

SH- lt grey

SH- grey

L.S.- wht-grey, fn xtln, grn-pk stn, no vis por, no odor, no SFO

L.S.- wht, fn-med xtln, grn stn, pr int gran-fr int xtln por, fnt odor, pr SFO w/ SH- red/brwn

L.S.- wht-crm, fn-med xtln, grn stn, pr-fr int xtln por, fnt odor, pr SFO

L.S.- wht-crm, fn xtln, grn stn, no vis por, no odor, no SFO w/ SH- lt grey

L.S.- wht-tan, fn xtln, grn stn, pr-fr int gran por, no odor, fr SFO w/ SH- red/brwn, grey

SH- red/brwn

SH- red/brwn, grey w/ trace L.S.- wht, fn xtln, grn stn, fr int gran por, no odor, fr-gd SFO, low rep

L.S.- wht, micro-med xtln, grn stn, pr int gran-fr int xtln por, com vugs, fnt odor, fr SFO

L.S.- wht-lt tan, fn xtln, grn stn, no vis por, v fnt odor, no SFO

SH- red/brwn, grey

as above

SH- red/brwn, sndy

L.S.- wht-crm, fn-micro xtln, grn stn, poss int xtln por, no odor, no SFO, chlky

as above

SH- red/brwn-grey

L.S.- crm-tan, freq mtld red/brwn arg, grn-pk stn, no vis por, no odor, no SFO

L.S.- wht-crm, fn-micro xtln, grn stn, no vis por, no odor, no SFO w/ SH- red/brwn-grey

as above

SH- red/brwn, grey

as above, sndy w/ minor L.S.- wht-grey, red/brwn arg, fn xtln, sli sndy, wk stn, no vis por, no odor, free oil drops in smpl wtr, no show in or on any rocks

L.S.- grey-wht, sli sndy, v sli arg, md-wk stn, no vis por, no odor, no SFO, com orng-tan chrt, w/ SH- red/brwn, grey

SH- red/brwn-grey

as above, sndy

SH- red/brwn, sndy

SH- red/brwn w/ L.S.- v lt grey-wht, fn xtln, wk-pk stn, no vis por, no odor, no SFO

L.S.- as above w/ SH- grey-red/brwn

SH- grey-red/brwn

L.S.- crm-wht, fn xtln, grn stn, pr PP por, no odor, no SFO

as above w/ L.S.- lt grey, fn xtln, md-wk stn, no vis por, no odor, no SFO, scat orng chrt

as above, freq orng-wht, chrt

L.S.- lt grey-grey, fn xtln, md stn, no vis por, no odor, no SFO, freq orng-tan chrt

L.S.- lt grey-tan, fn xtln, md stn, no vis por, no odor, no SFO, freq tan-orng chrt

as above

SH- blk-grey, red/brwn

L.S.- wht-tan, fn-micro xtln, grn-pk stn, no vis por, no odor, no SFO, sli chlky w/ SH- v lt grey-grey

as above w/ minor SH- grey-bl/grey

SH- grey-green/grey, red/brwn, lav w/ L.S.- wht-tan, fn xtln, wk-pk stn, no vis por, no odor, no SFO, scat tan chrt, chlky

SH- grey-green/grey, red/brwn, ylw, lav, sli sndy

as above w/ L.S.- tan-crm, fn xtln, md stn, no vis por, no odor no SFO

SH- re/brwn, grey-green/grey, lav, ylw

SH- red/brwn, grey-green/grey

S.S.- wht-trans, v fn-med grn, sub ang-sub rnd, poss int gran por, no odor, no SFO

SH- red/brwn

SH- red/brwn, grey, sli sndy

as above

Remarks

DST #1 3615-3673 30-60-30-60
Hydro: 1782-1726
IFP: 38-48 ISIP: 1109
FFP: 49-57 FSIP: 1065
Rec: 5' 5%o 95%m
BHT: 119 F
IF: 1 1/2" ISI: dead
FF: dead FSI: dead

Vis: 59 Wt: 8.9
LCM: 4# WL: 6.0

Strap: 1.23' long
Dev: 3/4 deg

Vis: 51 Wt: 9.2
LCM: 4# WL: 6.0

DST #2 3692-3820 30-60-60-90
Hydro: 1862-1743
IFP: 69-118 ISIP: 1221
FFP: 129-212 FSIP: 1206
Rec: 5' oil
186' 15%o 85%m
93' 10%o 60%w 30%m
BHT: 118 F Grav: 26.8
RW: .16@ 42F Chl: 95,000ppm
IF: 2 1/2" ISI: dead
FF: 5 1/2" FSI: dead

Vis: 49 Wt: 9.2
LCM: 4# WL: 6.0

DST #3 4005-4160 30-60-60-90
Hydro: 2036-1966
IFP: 90-187 ISIP: 1327
FFP: 194-339 FSIP: 1319
Rec: 505' oil spotted mud
BHT: 124 F
IF: 5 1/2" ISI: dead
FF: 5 1/2" FSI: dead

Vis: 53 Wt: 9.2
LCM: 4# WL: 5.2
Dev: 1/2 deg

DST #4 4150-4254 30-60-30-60
Hydro: 2020-1982
IFP: 20-27 ISIP: 1072
FFP: 30-33 FSIP: 933
Rec: 5' mud
BHT: 118
IF: 1/2" ISI: dead
FF: dead FSI: dead

Vis: 57 Wt: 9.1
LCM: 4# WL: 4.8

DST #5 4245-4295 30-60-60-90
Hydro: 2110-2013
IFP: 60-339 ISIP: 811
FFP: 332-477 FSIP: 813
Rec: 42' oil
186' 35%o 10%w 55%m
372' 25%o 25%w 50%m
372' 80%w 20%m
BHT: 134 F Grav: 27.8
RW: .17@ 41.1 F Chl: 78,000ppm
IF: BOB 7min ISI: dead
FF: BOB 14min FSI: dead

Vis: 69 Wt: 9.1
LCM: 6# WL: 4.8

Vis: 89 Wt: 8.9
LCM: 4# WL: 5.6

Dev: 1/2 deg