Appendix 9

Petrophysical Services (Calgary) Limited
137 Cranleigh Bay SE., Calgary, Alberta T3M 1h5
(403) 271-7930 email wfclow@shaw.ca

Log Analysis Report
Kola Pool, Bakken

Petrophysical Services was requested to analyze 30 wells over the Bakken sand in the Kola pool, TWP 10 R 29W1. As there is potential in the Lodgepole in the area, the Lodgepole was also analysed.

For the Bakken, formation water resistivity (rw) used was 0.05 @ 25C, which corresponds to a salinity of ~160k ppm NaCL. For the Lodgepole, initial rw used was 0.12 @ 25C. Based on some recent work in the Lodgepole in TWP 10 R 28, rw was changed to 0.065 @ 25C, ~118,000 ppm NaCl.

Method:

Log data was generally digitized by Divestco. Core analysis was acquired from Geoscout, resampled to 0.1m, and plotted against the log analysis results. Although log analysis was not adjusted to match core data, there is generally a pretty good comparison between the log analysis results and the core data.

a) Shale Volume was calculated from gamma ray using linear formula over the Lodgepole, and using clavier formula over the Bakken. 0% shale for the Bakken was generally picked high, 60 to 80 api, compared to the Lodgepole pick.

b) Porosity was calculated from shale corrected neutron density crossplot, or from sonic, depending on availability.

c) Water Saturation was calculated using the Archie formula with a = 1, m = 2 and n = 2 over the Lodgepole, and from NQv, a variation of dual water, with a = 1, m = 1.8 and n = 2 over the Bakken.

Irreducible water saturation was estimated using Phi * Sw = 0.08. SWIR is used as a guide to predicting water producing zones.

d) Lithology was calculated from apparent grain density.

e) Net pay was calculated using porosity, saturation, shale volume cutoffs. Pay flag (black) is based on Phi >= 9%, Sw <= 60% and VSH <= 40%. Reservoir flag (red) is based on Phi >= 9% and VSH <= 40%.

Regards

W. F. (Bill) Clow, P. Eng.

Petrophysical Services (Calgary) Limited
137 Cranleigh Bay SE., Calgary, Alberta T3M 1h5
(403) 271-7930 email wfclow@shaw.ca

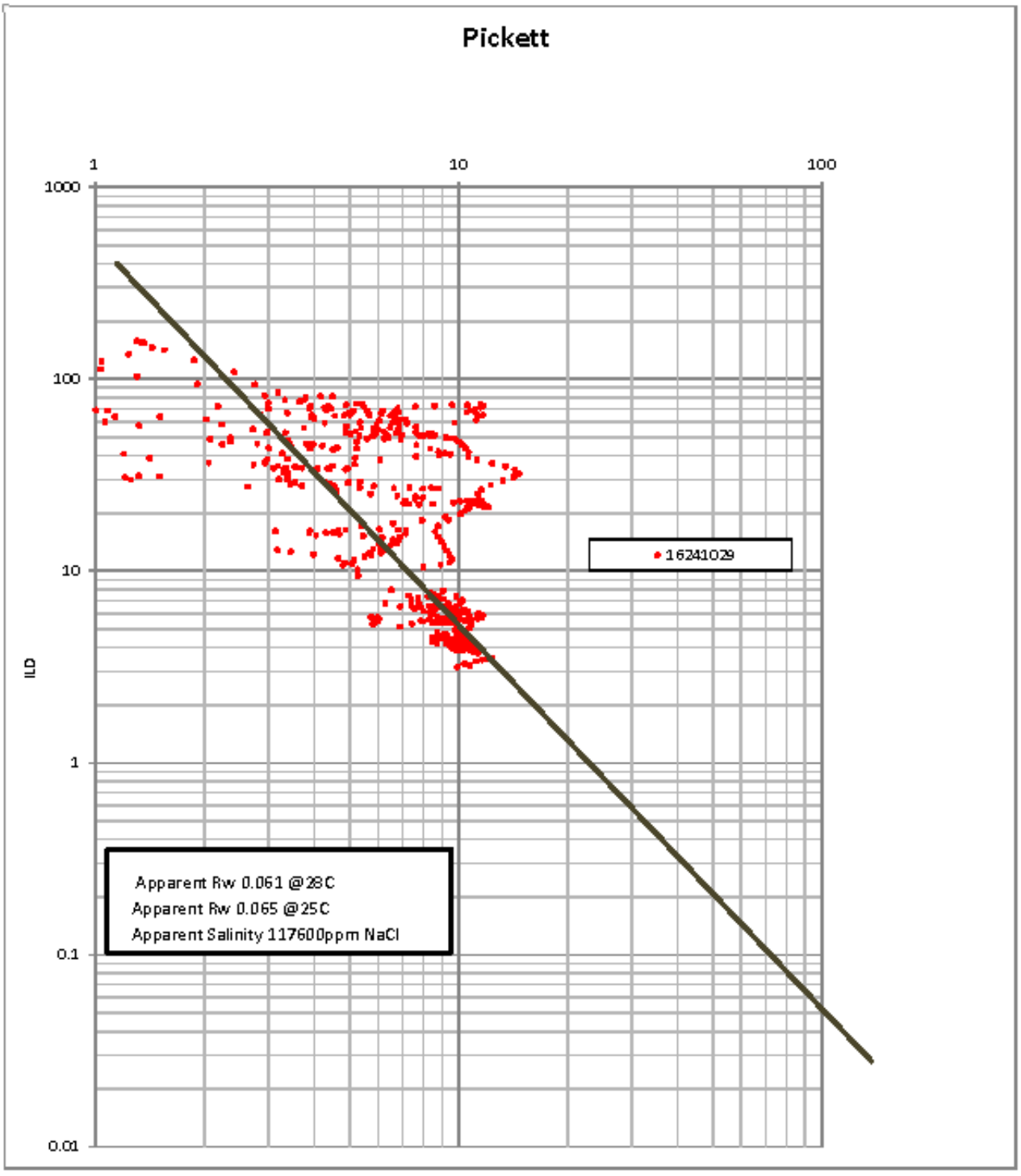

Figure 1 Pickett plot, Lodgepole 16-24-10-29W1

Petrophysical Services (Calgary) Limited
137 Cranleigh Bay SE., Calgary, Alberta T3M 1h5
(403) 271-7930 email wfclow@shaw.ca

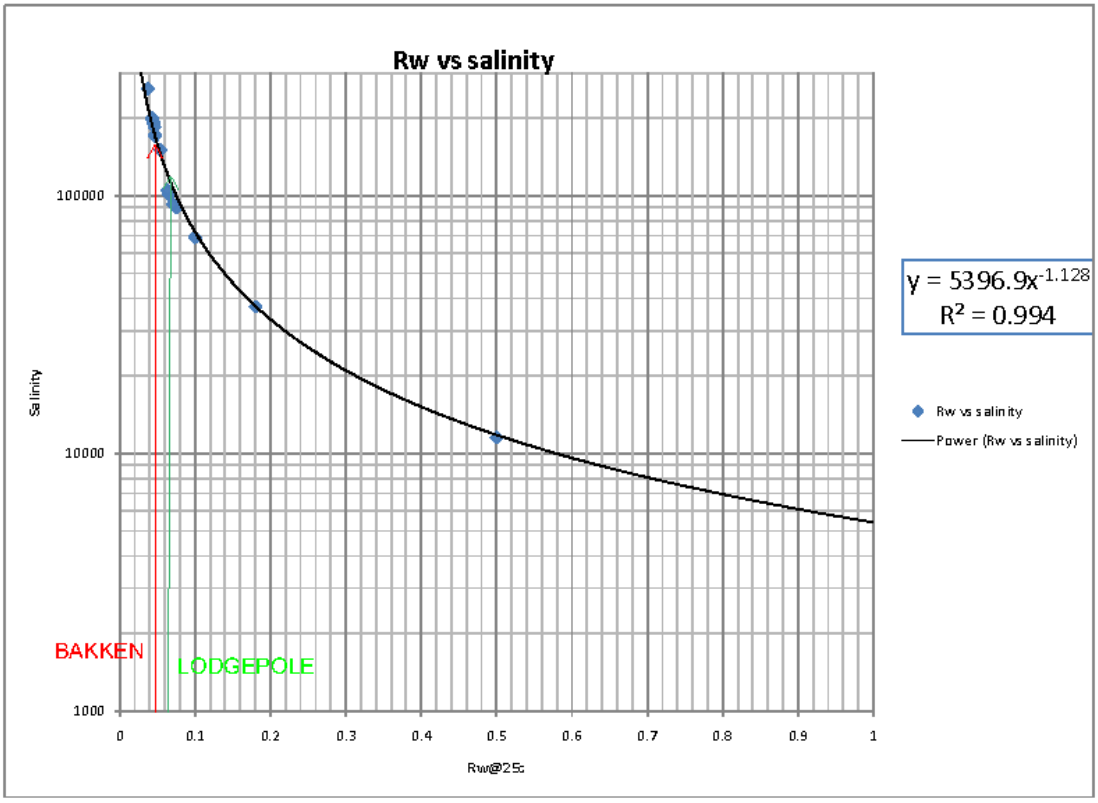

Figure 2 Rw vs salinity

Petrophysical Services (Calgary) Limited
137 Cranleigh Bay SE., Calgary, Alberta T3M 1h5
(403) 271-7930 email wfclow@shaw.ca

Lodgepole parameters (typical)

```
SHALE FROM: GAMMA RAY LINEAR
 15  Gamma Ray clean (api) = 20
 16  Gamma Ray Shale (api) = 100
 17  clay content multiplier = 1
 18  material balance for vshale <Y/N>  = Y
POROSITY FROM: NEUTRON/DENSITY CROSSPLOT
 22  Limestone or Sandstone porosity units = L
 20  Neutron Porosity shale (%) = 30
 21  Density Porosity shale (%) = 12
 32  default matrix density (K/M3) = 2700
 23  default fluid density (K/M3) = 1000
141  limit dens phi to nphi + = .02
111  use sonic to limit porosity = N
 24  material balance for porosity = Y
 25  maximum porosity (%) = 30
COAL LOGIC:
103  coal logic level = 0
104  coal if phin greater than = .4
105  coal if dens less than = 2000
106  coal if delt greater than = 450
BAD HOLE LOGIC:
 99  bad hole logic level = 0
100  caliper limit (mm) = 330
101  density porosity limit = .2
102  neutron porosity limit = .3
LITHOLOGY FROM: Apparent Grain Density
 48  density of SANDSTONE (K/M3) = 2650
 49  density of LIMESTONE (K/M3) = 2710
 50  density of DOLOMITE (K/M3) = 2870
 51  density of ANHYDRITE (K/M3) = 2970
 52  density of SALT (K/M3) = 1500
 53  density of GYPSUM (K/M3) = 2200
 54  minimum volume cutoff = .1
175  fractional anhydrite = Y
WATER SATURATION FROM: ARCHIE
 68  tortuosity constant = 1
 36  cementation exponent = 2
 38  saturation exponent = 2
 69  water resistivity (ohmm) = .12
 70  rw temperature (degC) = 25
  4  surface temperature (deg C) = 4
  5  maximum temperature (deg C) = 30
  6  depth of maximum temperature (m) = 900
 71  material balance for sw <Y/N>  = Y
PERM FROM: Morris/Biggs
 74  hydrocarbon type: Oil or Gas = O
 75  Buckles # for 0*SWirr = .06
PAY FLAG CRITERIA:
173  results by weight? = N
 94  porosity cutoff (frac) = .09
 95  water saturation cutoff (frac) = .6
 96  permeability or weight cutoff (md) = 0
 97  shale volume cutoff (frac) = .4
 98  depth limit (m) = 5000
```

Petrophysical Services (Calgary) Limited
137 Cranleigh Bay SE., Calgary, Alberta T3M 1h5
(403) 271-7930 email wfclow@shaw.ca

Bakken parameters (typical)

```
SHALE FROM: GAMMA RAY CLAVIER
 15  Gamma Ray clean (api) = 50
 16  Gamma Ray Shale (api) = 140
 17  clay content multiplier = 1
 18  material balance for vshale <Y/N>  = Y
POROSITY FROM: NEUTRON/DENSITY CROSSPLOT
 22  Limestone or Sandstone porosity units = L
 20  Neutron Porosity shale (%) = 30
 21  Density Porosity shale (%) = 15
 32  default matrix density (K/M3) = 2700
 23  default fluid density (K/M3) = 1000
141  limit dens phi to nphi + = 0
111  use sonic to limit porosity = N
 24  material balance for porosity = Y
 25  maximum porosity (%) = 30
COAL LOGIC:
103  coal logic level = 0
104  coal if phin greater than = .4
105  coal if dens less than = 2000
106  coal if delt greater than = 450
BAD HOLE LOGIC:
 99  bad hole logic level = 0
100  caliper limit (mm) = 330
101  density porosity limit = .2
102  neutron porosity limit = .3
LITHOLOGY FROM: Apparent Grain Density
 48  density of SANDSTONE (K/M3) = 2650
 49  density of LIMESTONE (K/M3) = 2710
 50  density of DOLOMITE (K/M3) = 2870
 51  density of ANHYDRITE (K/M3) = 2970
 52  density of SALT (K/M3) = 1500
 53  density of GYPSUM (K/M3) = 2200
 54  minimum volume cutoff = .1
175  fractional anhydrite = Y
WATER SATURATION FROM: NORMALIZED QV
 68  tortuosity constant = 1
 36  cementation exponent = 1.8
 38  saturation exponent = 2
 69  water resistivity (ohmm) = .05
 70  rw temperature (degC) = 25
  4  surface temperature (deg C) = 4
  5  maximum temperature (deg C) = 30
  6  depth of maximum temperature (m) = 900
 72  shale resistivity (ohmm) = 2
 73  shale porosity coefficient = 1
142  use ress for resd <Y/N>  = N
 71  material balance for sw <Y/N>  = Y
PERM FROM: Morris/Biggs
 74  hydrocarbon type: Oil or Gas = O
 75  Buckles # for 0*SWirr = .08
PAY FLAG CRITERIA:
173  results by weight? = N
 94  porosity cutoff (frac) = .09
 95  water saturation cutoff (frac) = .6
 96  permeability or weight cutoff (md) = 0
 97  shale volume cutoff (frac) = .4
 98  depth limit (m) = 5000
```