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# Full-Waveform Sonic

| | |
|---|---|
| **COMPANY** | Excelsior Mining |
| **WELL** | NSH-021C |
| **FIELD** | Gunnison |
| **COUNTY** | Cochise |
| **STATE** | AZ |

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**Well** NSH-021C
**Field** Gunnison
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**LOCATION**
NSH-021C

**QTR** **SEC** **TWP** **RGE**

**OTHER SERVICES**
Acoustic Televiewer
T-Fl. Res
Electric Resistivity

**PERMANENT DATUM** GROUND LEVEL **ELEVATION** NA

**LOG MEAS. FROM** GROUND LEVEL 0.0' **ABOVE PERMINANT DATUM**

**DRILLING MEAS. FROM** GROUND LEVEL

| | | | | |
|---|---|---|---|---|
| **DATE ACQUIRED** | 14 January 2015 | | | |
| **RUN NUMBER** | 2 | | | |
| **LOG TYPE** | Sonic | | | |
| **DEPTH-DRILLER** | 1400' | | | |
| **DEPTH-LOGGER** | 1400' | | | |
| **BTM LOG INTERVAL** | 1396.8' | | | |
| **TOP LOG INTERVAL** | 594.8' | | | |
| **RECORDED BY** | C. ONeil | | | |
| **WITNESSED BY** | P. Kroger | | | |
| **PROBE TYPE, S/N** | TRSS 9209 | | | |
| **LOGGING SPEED** | 12ft/min | | | |
| **A.S.D.E.** | 0.4' | | | |
| **SAMPLE INTERVAL** | 0.1' | | | |

| **BOREHOLE RECORD** | | | | **CASING RECORD** | | | |
|---|---|---|---|---|---|---|---|
| **RUN No.** | **BIT** | **FROM** | **TO** | **SIZE** | **WGT.** | **FROM** | **TO** |
| ONE | 7 7/8" | 620' | TD | 8" | STEEL | GS | 620' |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**NA - Not Available, N/A - Not Applicable**

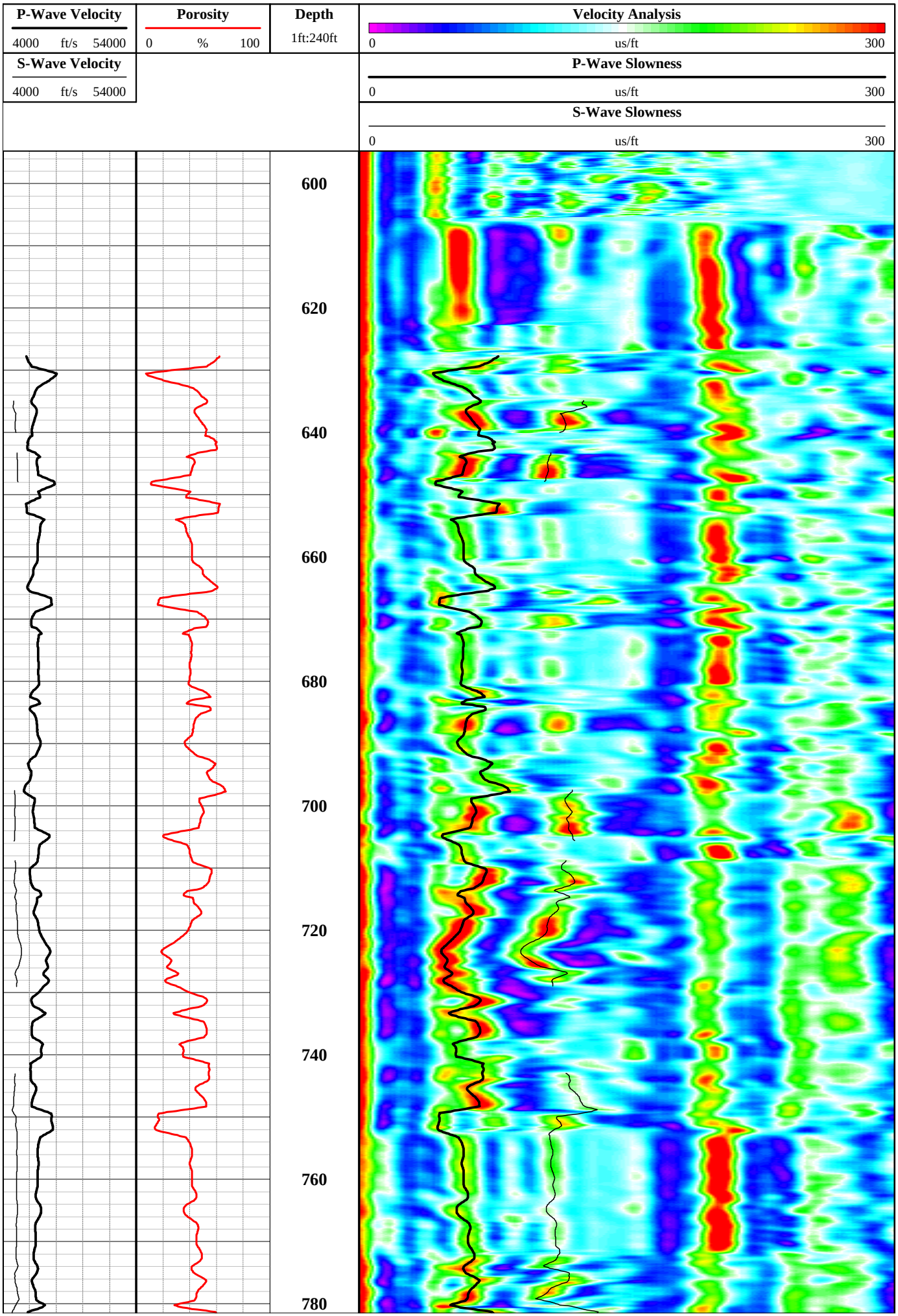
**COMMENTS**
Water-level = 605'

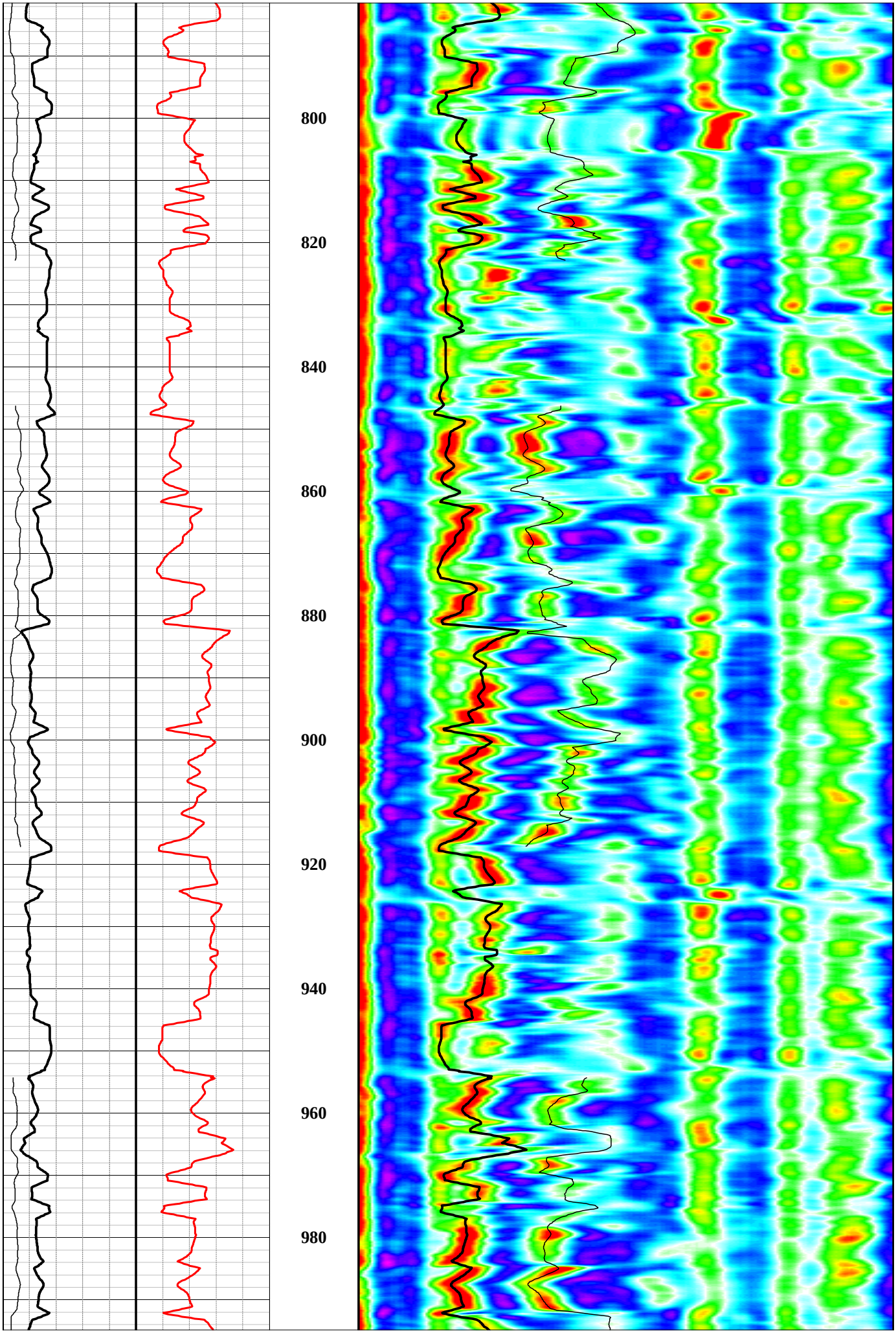
Porosity Calculation

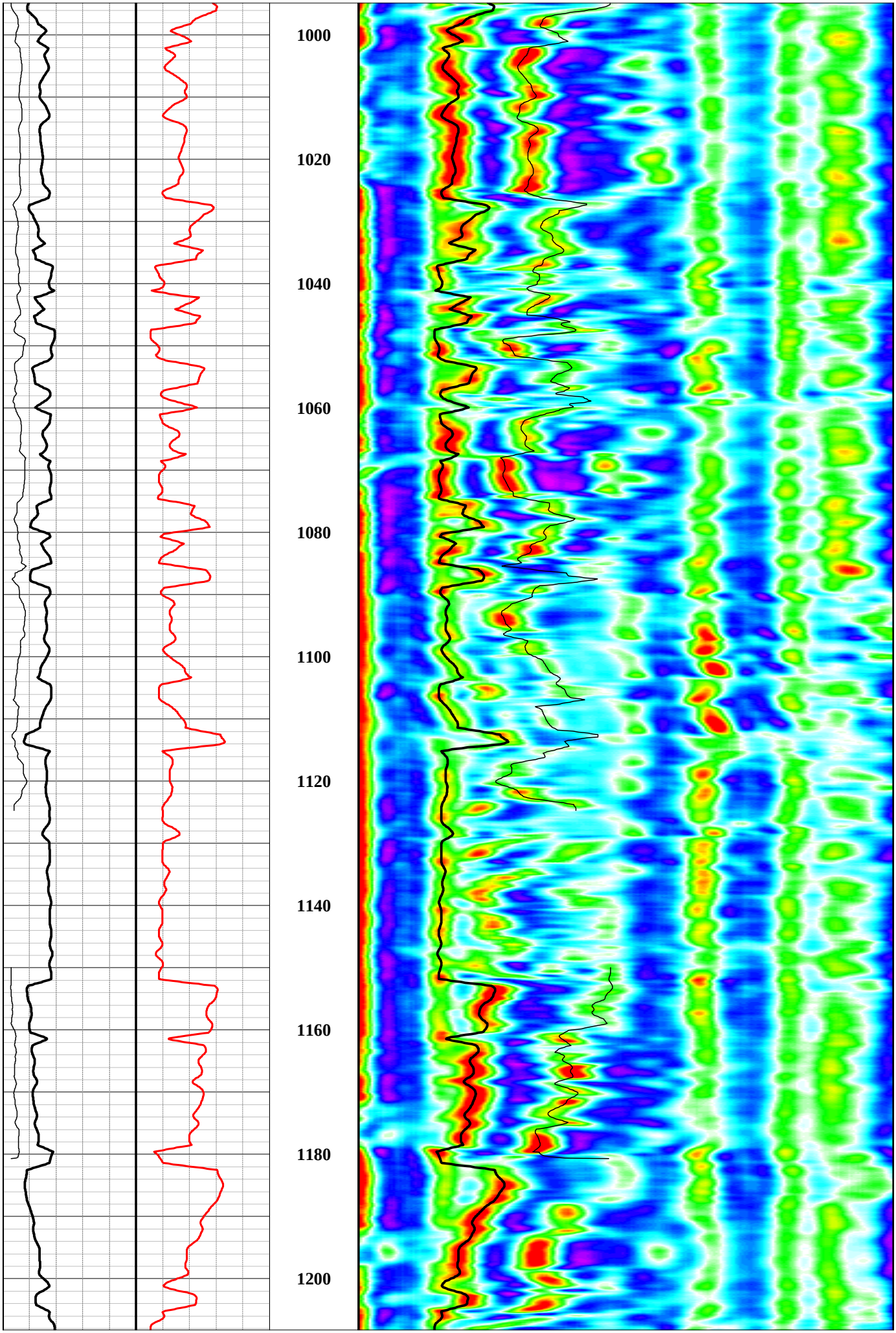
Porosity = (delta t log - delta t matrix) / (delta t fluid - delta t matrix)

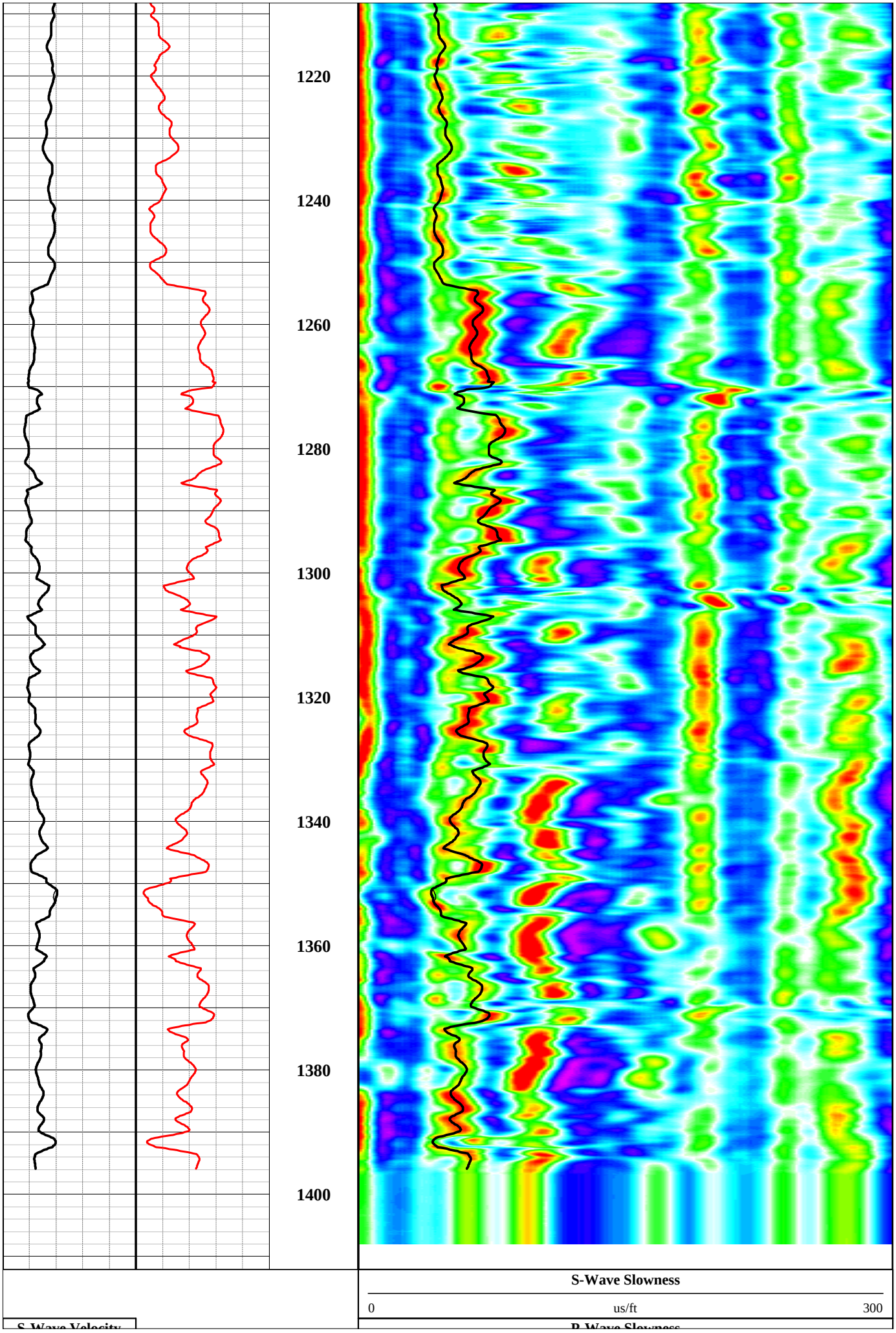
Where: delta t log = P-Wave Velocity
delta t matrix = Maximum Value of P-Wave Velocity (25700 ft/s)
delta t fluid = Fluid velocity of borehole (assumption of clear water ~ 5000 ft/s)

INPUT FILES:
NSH-021C-Sonic-u.hed
NSH-021C-Sonic-u.LGX


P-Wave Velocity
4000 ft/s 54000
S-Wave Velocity
4000 ft/s 54000
Porosity
0 % 100
Depth
1ft:240ft
Velocity Analysis
0 us/ft 300
P-Wave Slowness
0 us/ft 300
S-Wave Slowness
0 us/ft 300
600
620
640
660
680
700
720
740
760
780


800
820
840
860
880
900
920
940
960
980


1000
1020
1040
1060
1080
1100
1120
1140
1160
1180
1200


1220
1240
1260
1280
1300
1320
1340
1360
1380
1400
S-Wave Slowness
0
us/ft
300
S-Wave Velocity
P-Wave Slowness

| S-Wave Velocity | | | P-Wave Slowness |
|---|---|---|---|
| 4000 ft/s 54000 | | | 0 us/ft 300 |
| **P-Wave Velocity** | **Porosity** | **Depth** | **Velocity Analysis** |
| 4000 ft/s 54000 | 0 % 100 | 1ft:240ft | 0 us/ft 300 |