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Powered by Weatherford tools, acquisition systems, and software

| Bit Size inches |  | Depth From feet |  | Depth To feet |
| :---: | :---: | :---: | :---: | :---: |
| 8.500 |  | 1130.00 |  | 5500.00 |
| CASING RECORD |  |  |  |  |
| Type | Size <br> inches | Depth From <br> feet | Shoe Depth feet | Weight pounds/ft |
| SURFACE | 9.625 | 0.00 | 1130.00 | 40.00 |

HARDWARE: MAI: INLINE CENTRALIZER FITTED AT BOTTOM MISD CENTRALIZER AT TOP
MSS: MISD CENTRALIZER BELOW AND MTC WITH BASKET ABOVE
MTC: OVERBODY CENTRALIZER ON THE TOOL
MPD: 8" PROFILE PLATE FITTED
MDN: DUAL BOWSPRING ECCENTRALIZER FITTED
MATRIX FOR POROSITY CALCULATION: 2.65 G/CC
ANNULAR VOLUME BASED ON 5.5" PRODUCTION CASING
FOR HVOL AND AVOL PLEASE SEE LOG
CREW: ARVELO, GARCIA, TODD, MUIR

## 1 INCH MAIN PASS

Depth Based Data - Maximum Sampling Increment 10.0 cm Filename: C:ILOGSISNAKE RIVERVIRVIN \#1-19IMP.dta
System Versions: Logged with 22.11.1632 Plotted with 22.11.1632






















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| 1 1 |  |  |  | i. |  |  |  |  |  |  | \% |  |  |  |  |  |  |  |  | , | S |  |  |  | 3: |  |  |
| 1 |  |  |  |  |  |  |  |  |  |  | \% |  |  |  |  |  |  |  |  | , | $\cdots$ |  |  | $\bigcirc$ | - |  |  |
| $\underline{1}$ |  |  |  | : |  |  |  |  |  |  | : |  |  |  |  |  |  |  |  | ì | \} |  |  |  | $\square$ |  |  |
| 6 |  |  |  | - | 7 |  |  | , |  |  | i |  |  |  |  |  |  |  |  | 7) | $\bigcirc$ |  |  |  | - | T |  |
| 2 |  |  |  | E | , |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ci |  |  |  |  |  |  |  |
| 3 |  |  |  | $\cdots$ | R |  |  |  |  |  |  |  |  |  |  |  |  |  |  | , - | \} |  |  | < |  |  |  |
| + |  |  |  | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - |  |  |  |  |  |  |  |
| 1 |  |  |  | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - | < |  |  |  |  |  |  |
| - ${ }^{-1}$ |  |  |  |  |  |  | - |  |  |  |  |  |  |  |  |  |  |  |  | 5 | , |  |  | $\}$ | , |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $i$ |  |  |  |  | 3 ; |  |  |  |  |  | $1$ |  |  |  |  |  |  |  |  | - |  |  |  |  |  |  |  |
| $\frac{-1}{2}$ |  |  |  | $\therefore$; |  |  | - |  |  |  |  |  |  |  |  |  |  |  |  | ? |  |  |  | ) |  |  |  |
|  |  |  |  |  |  |  |  | 1400 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | < |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | , is |  |  |  |  |  |  |  |
| - 7 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $=:$ |  |  |  | , |  |  |  |
| 4 |  |  |  | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - -2 |  |  |  | , |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ¢il |  |  |  |  |  |  |  |
| S1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | i! |  |  |  | < |  |  |  |
| $-1$ |  |  |  | ? |  |  |  |  |  |  | 3 |  |  |  |  |  |  |  |  | i |  |  |  | ? | - |  |  |
| ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - |  |  |  |  |  |  |  |
| - |  |  |  | $\vdots 3$ |  |  |  |  |  |  | \% |  |  |  |  |  |  |  |  | $\stackrel{+}{4}$ |  |  |  |  | , |  |  |
| i |  |  |  | --2. |  |  |  |  |  | $\rightarrow$ |  |  |  |  |  |  |  |  |  | $\leq$ |  |  |  |  |  |  |  |
| $!$ |  |  |  | $\therefore<$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | , 3 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |


























Accelerometer Calibrator Number
000
Accelerometer Temperature Characterisation X Accelerometer

| Serial Number | 1385 |
| :--- | ---: |
| Calibration Date | $25-$ Feb-2013 |


|  | BO |
| :--- | ---: |
| Bias $(\mathrm{g})$ | B0 |
|  | $0.00000 \mathrm{e}+00$ |
| SFO |  |
| Scale Factor $(\mathrm{mA} / \mathrm{g})$ | $3.00000 \mathrm{e}+00$ |

Y Accelerometer
Serial Number 1287
Calibration Date 31-Jan-2013

| Bias $(\mathrm{g})$ | B0 |
| :--- | ---: |
|  | $0.00000 \mathrm{e}+00$  <br> Scale Factor $(\mathrm{mA} / \mathrm{g})$ SFO |
| $3.00000 \mathrm{e}+00$ |  |

Z Accelerometer
Serial Number $\quad 1261$
Calibration Date 31-Jan-2013
$\begin{array}{rr}\quad B i a s(g) & 0.00000+00 \\ \text { SFO }\end{array}$
Scale Factor (mA/g) $\quad 3.00000 \mathrm{e}+00$

B1
$1.64598 \mathrm{e}-05$
SF1
$2.66357 \mathrm{e}-04$

B1
$1.52213 \mathrm{e}-05$
SF1
$2.77451 \mathrm{e}-04$

B2
$3.28954 \mathrm{e}-08$
SF2
$3.96431 \mathrm{e}-07$

B3
-1.30747e-10
SF3
$3.62405 \mathrm{e}-10$

B3
$3.43698 \mathrm{e}-10$
SF3
$2.72571 \mathrm{e}-10$

| $-4.98732 \mathrm{e}-08$ | $3.43698 \mathrm{e}-10$ |
| ---: | ---: |
| SF2 | SF3 |
| $3.32682 \mathrm{e}-07$ | $2.72571 \mathrm{e}-10$ |

B3
$1.76340 \mathrm{e}-10$
SF3
9.98453e-10

Neutron Calibration MDN-C.A 501
Base Calibration

|  | Measured |  | Calibrated (cps) |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Near | Far | Near | Far |
|  | 3166 | 97 | 3714 | 110 |
| Ratio | 32.802 |  | 33.764 |  |

Field Calibrator at Base
Calibrated (cps)
19662935
Ratio

| Field Check | Calibrated (cps) |
| :---: | :---: |
| Ratio | 20032977 |

Neutron Calibration Tolerances MDN-C.A 501

|  | 32.802 |
| :--- | :--- |
| Ratio |  |
| Base Check | 0.670 |

Neutron Constants MDN-C.A 501

| Neutron Source Id | N-1057 |  |
| :--- | ---: | :--- |
| Neutron Jig Number | NJ5736 |  |
| Air Hole Processing | Modified Ratio |  |
| Caliper Source for Processing | Density Caliper |  |
| Stand-off | 0.00 | inches |
| Mud Density | 1.00 | gm/cc |
| Limestone Sigma | 7.10 | cu |
| Sandstone Sigma | 7.00 | cu |
| Dolomite Sigma | 4.70 | cu |
| Formation Pressure Source | None |  |
| Formation Pressure | N/A | kpsi |
| Temperature Source | None |  |
| Temperature | N/A | degrees F |
| Mud Salinity | 0.00 | kppm |
| Salinity Correction | Not Applied |  |

Base Calibration on 15-SEP-2022,09:55
Field Check on 15-SEP-2022,09:55

| Maximum Boundary Contrast | 70.00 | micro-sec/ft |
| :--- | ---: | :--- |
| Fluid Transit Time | 189.00 | micro-sec/ft |
| Limestone Transit Time | 47.50 | micro-sec/ft |
| Sandstone Transit Time | 55.50 | micro-sec/ft |
| Dolomite Transit Time | 43.50 | micro-sec/ft |
| Sonic used for Porosities | 3-5' Compensated Sonic |  |
| Correction for Sonde Skew | Applied |  |
| Cycle Stretch Algorithm | Applied |  |
| MN3FT | N/A | micro-sec |
| MX3FT | N/A | micro-sec |
| Hunt-Raymer Constant | 83.13 | micro-sec/ft |
| Sonde Mode |  |  |
| Hole Type | Compensated |  |
|  | Open Hole |  |

Sonde Parameters

|  | Measured | Calibrated |
| :--- | ---: | ---: |
| Offset | N/A | 0.0000 |
| Free Pipe | N/A |  |
| Peak Amplitude Source |  | N/A |



Full Waveform Parameters

| Use 3' Waveform to derive TR | N/A |  |
| :--- | :--- | :--- |
| Use 4' Waveform to derive TR | N/A |  |
| Use 5' Waveform to derive TR | N/A |  |
| Use 6' Waveform to derive TR | N/A |  |
| 3' Waveform Discriminator Level | N/A | mV |
| 4' Waveform Discriminator Level | N/A | mV |
| 5' Waveform Discriminator Level | N/A | mV |
| 6' Waveform Discriminator Level | N/A | mV |
|  |  |  |
| Waveform Discriminator Filter | N/A |  |
| Semblance Window Width | N/A | micro-sec |
| Semblance Processing Enabled | N/A |  |
| Tracking Boxes Enabled In Processing | N/A |  |

Induction Calibration MAI-C.A 482
Factory Loop Calibration
High Conductivity Reference Resistor Low Conductivity Reference Resistor

Factory Loop Calibration 25-SEP-2012,17:44
Field Check on 15-SEP-2022,11:41

|  | Measured Signal (unitless) | Reference Conductivity (mmho/m) |  | Calibration |  |  |
| :---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Array | Low | High | Low | High | Gain | Offset |
| 1 (near) | 16.2 | 461.2 | 9.3 | 966.2 | 2.150 | -25.6 |
| 2 | 5.6 | 374.0 | 7.6 | 821.4 | 2.209 | -4.8 |
| 3 | 3.1 | 250.7 | 5.2 | 566.0 | 2.265 | -1.7 |
| 4 (far) | 1.0 | 132.3 |  |  | 2.6 | 279.2 |

Tool Checks
Factory Reference ( $\mathrm{mmho} / \mathrm{m}$ )

| Array | Low | High |
| :--- | ---: | ---: |
| 1 (near) | -4.1 | 2086.8 |
| 2 | 14.7 | 1918.4 |
| 3 | 15.4 | 1680.9 |
| 4 (far) | 11.6 | 1107.9 |

Before Survey (mmho/m)

| Low | High |
| ---: | ---: |
| -4.1 | 2086.8 |
| 14.8 | 1918.3 |
| 15.4 | 1680.9 |
| 11.6 | 1107.8 |

82.2

Deg F
Tool Zero Corrections
Array

| 1 (near) | 0.0 | $\mathrm{mmho} / \mathrm{m}$ |
| :--- | :--- | :--- |
| 2 | 0.0 | $\mathrm{mmho} / \mathrm{m}$ |
| 3 | 0.0 | $\mathrm{mmho} / \mathrm{m}$ |
| 4 (far) | 0.0 | $\mathrm{mmho} / \mathrm{m}$ |

Induction Check Tolerances MAI-C.A 482

| Low Array 1 | $-4.1$ | mmho/m | High Array 1 |
| :---: | :---: | :---: | :---: |
| Low Array 2 |  | mmho/m | High Array 2 |
| Low Array 3 |  | mho/m | High Array 3 |
| ow Array 4 | 11.6 | mmho/m | High Array |



Induction Constants MAI-C.A 482
Induction Model RtAP-NC

| Borehole Correction Constants |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Tool Centred |  | Yes |  |  |
| Hole Size Source |  | Density Caliper |  |  |
| Hole Size Constant Value |  | N/A | inches |  |
| Stand-off Type |  | N/A |  |  |
| Stand-off |  | N/A | inches |  |
| Number of Fins on Stand-off |  | N/A |  |  |
| Stand-off Fin Angle |  | N/A | degrees |  |
| Stand-off Fin Width |  | N/A | inches |  |
| Rm Source $\quad$ Global Value: Constant Temperature |  |  |  |  |
| Temp. for Rm Corr. |  | N/A |  |  |
| Borehole Correction Method |  | Centred |  |  |
| Squasher Start |  | 0.0020 | mhos/metre |  |
| Squasher Offset |  | N/A | mhos/metre |  |
| Borehole Normalisation |  |  |  |  |
| DRM1 | 0.0000 | DRC1 |  | 0.0000 |
| DRM2 | 0.0000 | DRC2 |  | 0.0000 |
| MRM1 | 0.0000 | MRC1 |  | 0.0000 |
| MRM2 | 0.0000 | MRC2 |  | 0.0000 |
| SRM1 | 0.0000 | SRC1 |  | 0.0000 |
| SRM2 | 0.0000 | SRC2 |  | 0.0000 |

Calibration Site Corrections

Channel 1 0.00
Channel 2
Channel 3

Symmetrised Receiver Gains
Receiver 1 1.00
Receiver $2 \quad 1.00$
Receiver 3 1.00
Receiver $4 \quad 1.00$
mmhos/metre mmhos/metre mmhos/metre mmhos/metre

Apparent Porosity and Water Saturation Constants

```
Saturation Exponent (N)
2.00
Saturation of Water for Apor 100.00
Resistivity of Water for Apor and Sw 0.05
0.05 ohm-m
Resistivity of Mud Filtrate for Sw 0.00
Source for Rt 0.00
Source for Rxo
0.00
```

Photo Density Calibration MPD-D.A 478

| Density Calibration |  | Calibrated (sdu) |  |  |
| ---: | ---: | ---: | ---: | ---: |
| Base Calibration | Near | Far | Near | Far |
|  | 1041 | 1182 |  |  |
| Background | 47431 | 23381 | 59898 | 31131 |
| Reference 1 | 19558 | 2264 | 25116 | 2544 |
| Reference 2 |  |  |  |  |

Field Check at Base $1041.2 \quad 1181.9$

Field Check
$1059.8 \quad 1216.3$

| PE Calibration |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Base Calibration | Measured |  |  | Calibrated |
|  | WS | WH | Ratio | Ratio |
| Background | 200 | 931 |  |  |
| Reference 1 | 20971 | 47268 | 0.448 | 0.369 |
| Reference 2 | 6098 | 19441 | 0.319 | 0.273 |

Field Check at Base
$200.4 \quad 931.0$
Field Check

### 202.2948 .2

Photo Density Calibration Tolerances MPD-D.A 478


Density Constants MPD-D.A 478

Density Source Id
Nylon Calibrator Number
Aluminium Calibrator Number
Density Shoe Profile
Caliper Source for Processing
PE Correction to Density
Mud Density
Mud Density Type
Mud Filtrate Density
Dry Hole Mud Filtrate Density
DNCT
CRCT
Density ZIA Correction
Precision Enhanced Density Processing
Compensated Density
Density Detector Type
Matrix Density (gm/cc)
2.68
0.00 五
0.00
0.00
0.00
0.00 0.00 0.00
0.00
0.00
0.00

## Caliper Calibration MPD-D.A 478

Base Calibration

| Reading No | Measured | Calibrator Size (in) |
| :---: | ---: | ---: |
| 1 | 9834 | 4.00 |
| 2 | 18404 | 5.76 |
| 3 | 27244 | 7.97 |
| 4 | 35409 | 9.84 |
| 5 | 44527 | 11.88 |
| 6 | N/A | N/A |

Field Calibration

| Measured Caliper (in) | Actual Caliper (in) |
| ---: | ---: |
| 7.92 | 7.98 |

7.92
7.98

## Caliper Calibration Tolerances MPD-D.A 478

Long Arm Field Cal.
7.92
 in

## DOWNHOLE EQUIPMENT

Cablehead, 11 pin
CBH-DB 233 LG: 2.40 ft WT: 24.3 lb OD: 2.240 in

Compact Swivel Head Adaptor
SHA-J.B 581 LG: 2.30 ft WT: 22.0 lb OD: 2.244 in

Compact Comms Gamma
MCG-D.K 486 LG: 8.70 ft WT: 63.9 lb OD: 2.244 in

Compact Vee Arm Caliper
MVC-A.A 130 LG: 8.06 ft WT: 61.7 lb OD: 2.244 in

MCL CA126
MLK-C.A 126 LG: 3.17 ft WT: 26.5 lb OD: 2.240 in

Compact Navigation
MBN-D.A 176 LG: 11.81 ft WT: 70.5 lb OD: 2.244 in

Compact Neutron
MDN-C.A 501 LG: 5.04 ft WT: 50.7 lb OD: 2.244 in

Compact Density/Caliper
MPD-D.A 478 LG: 9.59 ft WT: 90.4 lb OD: 2.449 in

Compact Knuckle Joint
SKJ-E.B 469 LG: 2.17 ft WT: 24.3 lb OD: 2.244 in

AVOL - Annular Volume
HVOL - Hole Volume
CLDC - Density Caliper
DPRS - Sandstone Density Por.
DCOR - Density Correction
PDPE - PE

Compact Knuckle Joint
SKJ-E.B 581 LG: 2.17 ft WT: $24.3 \mathrm{lb} \quad$ OD: 2.244 in
Compact Two Arm Caliper
MTC-B.J 216 LG: 7.11 ft WT: 61.7 lb OD: 2.240 in
Compact Sonic

| MSS-C.A 164 LG: 12.52 ft |
| :--- |
| WT: 72.8 lb |
| OD: 2.240 in |




All measurements relative to tool zero.

|  |  | SNAKE RIVER OIL AND GAS, LLC |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| COMPANY <br> WELL |  | IRVIN \#1-19 |  |  |  |
| FIELD |  | WILDCAT |  |  |  |
| PROVINCE/COUNTY |  | PAYETTE |  |  |  |
| COUNTRY/STATE |  | U.S.A. / IDAHO |  |  |  |
| Elevation Kelly Bushing | 2204.50 | feet | Last Reading | 0.00 | feet |
| Elevation Drill Floor | 2204.50 | feet | First Reading | 5499.68 | feet |
| Elevation Ground Level | 2192.00 | feet | Depth Driller Depth Logger | $\begin{aligned} & 5500.00 \\ & 5504.00 \end{aligned}$ | feet feet |

MEASURED DEPTH
COMPACT QUAD COMBO

