Company DIVERSIFIED DRILLING
Well TPW-1
Field Highland Beach
County Palm Beach
State/Prv Florida

**MV Geophysical**

# FLOWMETER LOG

| | |
|---|---|
| Company | DIVERSIFIED DRILLING CORP. |
| Well | TPW-1 |
| Field | Highland Beach |
| County | Palm Beach |
| State/Prv | Florida |

Location

Town of Highland Beach
Future R.O. WTP

Other Services
FRT,XY/GR
FLOW
VIDEO

| | | | |
|---|---|---|---|
| Permanent Datum | Land Surface | Elevation | na |
| Log Measured From | Land Surface | | |
| Drilling Measured From | Land Surface | | |

Elevation
K.B. na
D.F. na
G.L. na

| | | | |
|---|---|---|---|
| Date | 24-MAY-2001 | | |
| Run Number | FIVE | | |
| Depth Driller | 1462' | | |
| Depth Logger | 1462' | | |
| Bottom Logged Interval | 1462' | | |
| Top Log Interval | 900' | | |
| Open Hole Size | 7.875" | | |
| Type Fluid | WATER | | |
| Density / Viscosity | na/na | | |
| Max. Recorded Temp. | na | | |
| Estimated Cement Top | NA | | |
| Time Well Ready | 08:00 24-MAY-01 | | |
| Time Logger on Bottom | 12:00 24-MAY-01 | | |
| Equipment Number | MVGS-1 | | |
| Location | Ft. Myers | | |
| Recorded By | S Miller/J Vincent | | |
| Witnessed By | M.Schilling (Hill) | D.McNabb (Hill) | F.Bennett (Hill) |

| Borehole Record | | | | Tubing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| ONE | 10.625" | 35' | 275' | FIVE | 7.875" | 1027' | 1462' |
| TWO | 32.5" | 35' | 245' | | | | |
| THREE | 10.625" | 240' | 1100' | | | | |
| FOUR | 24 | 245 | 1035 | | | | |

| Casing Record | Size | Wgt/Ft | Top | Bottom |
|---|---|---|---|---|
| Surface String | 34" | 0.375" WT | SURFACE | 35' |
| Prot. String | 26" | 0.375" WT | SURFACE | 240' |
| Production String | 17.4" PVC | 15.25" ID | SURFACE | 1027' |
| Liner | | | | Logger: 1025' |
| Invoice No. | 2001057 | P.O. #: 10034 | | * FINAL PRINT * |

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule

## Comments

STATIC and DYNAMIC UP and DOWN passes at 50 fpm were made.

Q=770 gpm

Stationary Data was collected.

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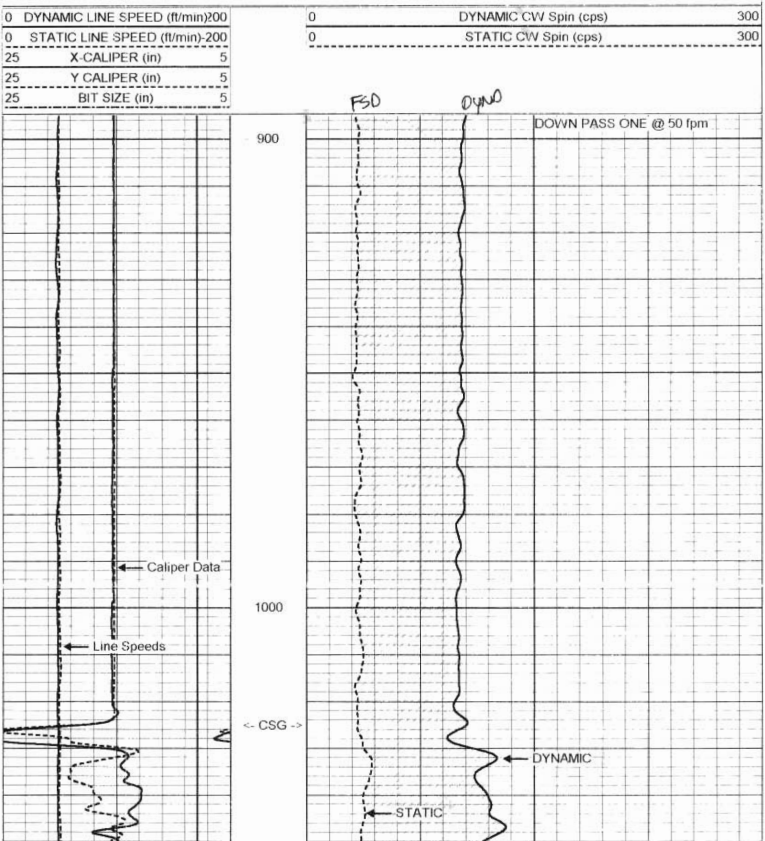
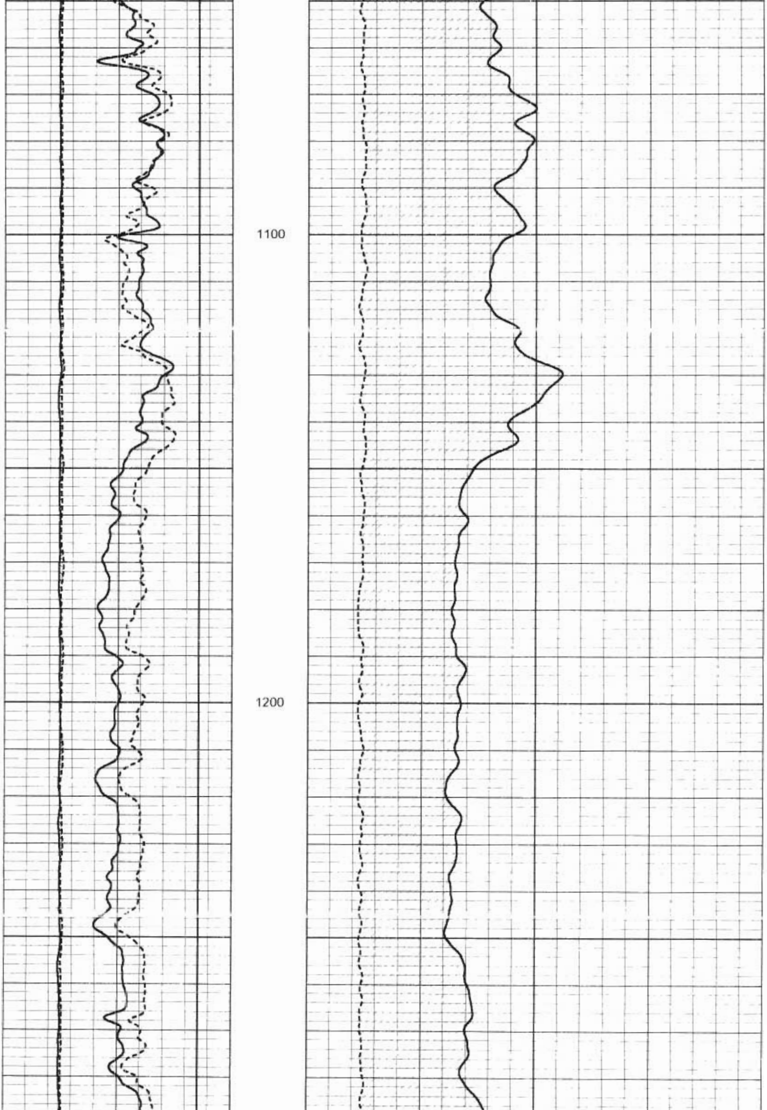
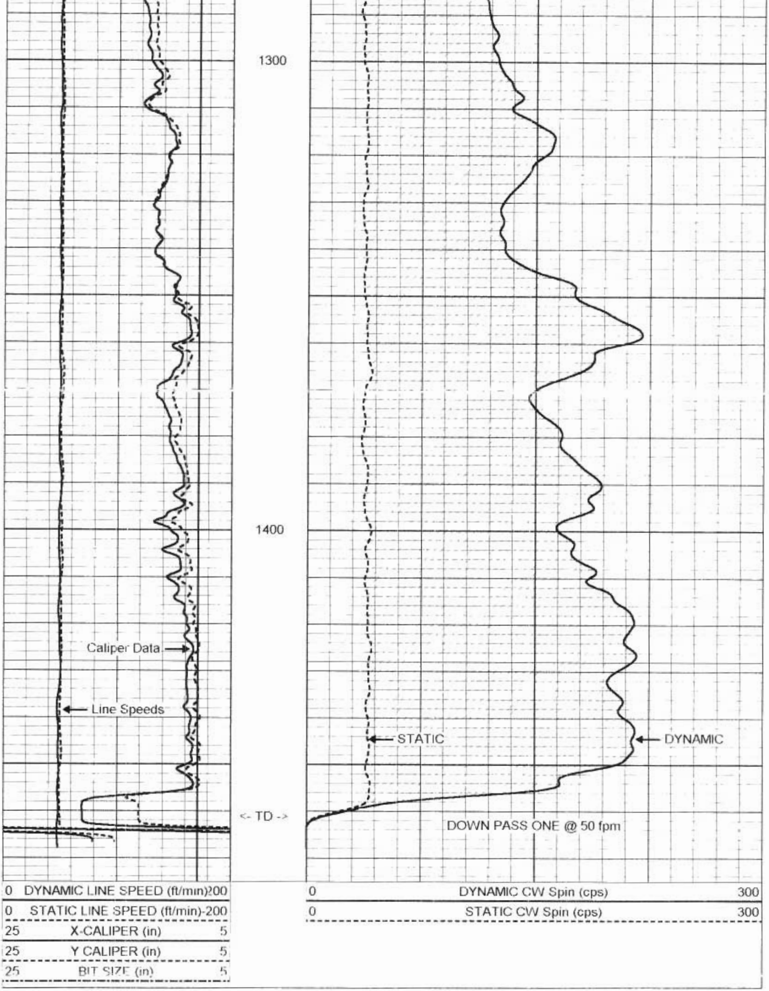
# S/D DOWN @ 50 fpm

Database File: hbch1.db
Dataset Pathname: run5/downsd50
Presentation Format: qsd525hb.prs
Dataset Creation: Thu May 24 12:31:07 2001
Charted by: Depth in Feet scaled 1:240



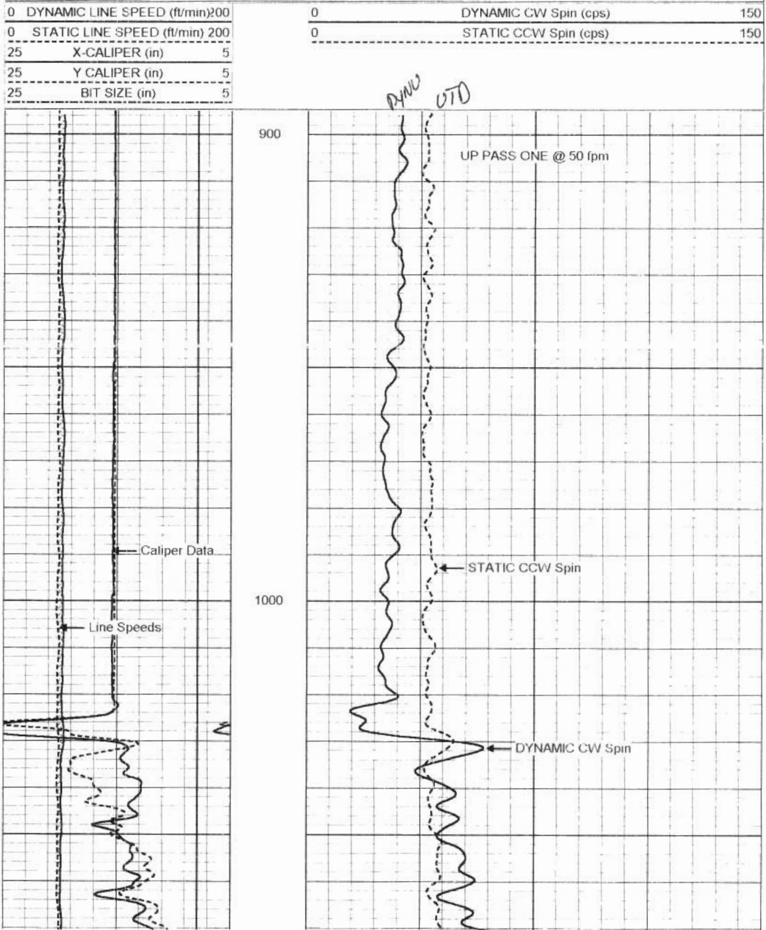


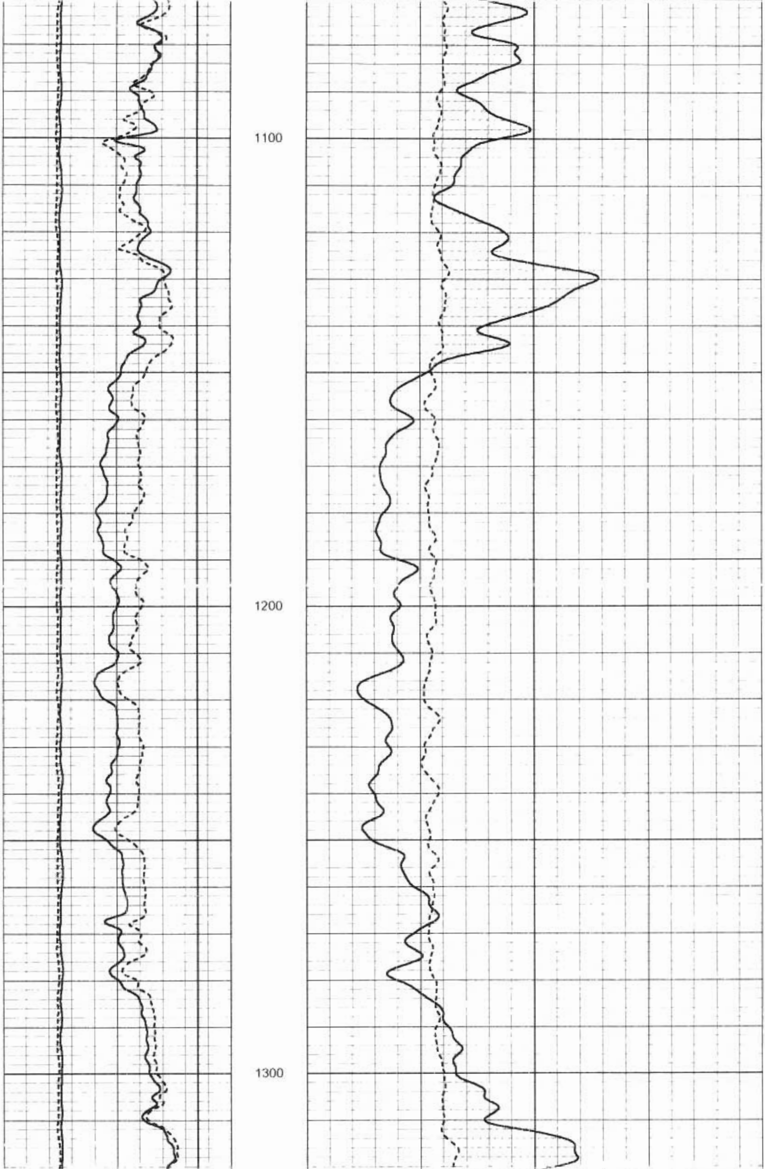


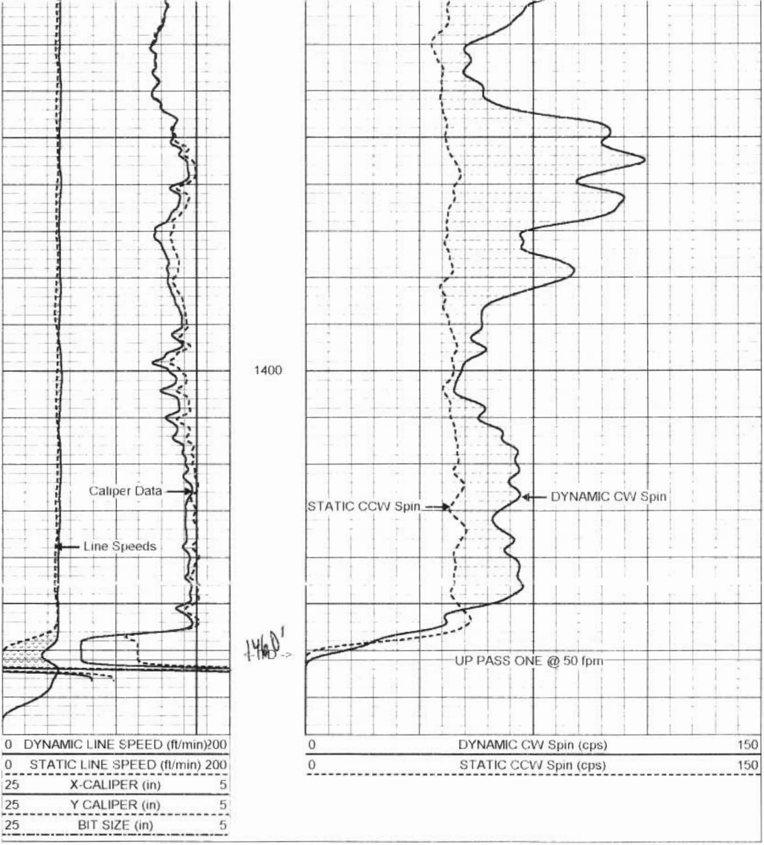
**MV Geophysical**

# S/D UP @ 50 fpm

Database File: hbch1.db
Dataset Pathname: run5/upsd50
Presentation Format: qhbupsd.prs
Dataset Creation: Thu May 24 12:38:28 2001
Charted by: Depth in Feet scaled 1:240







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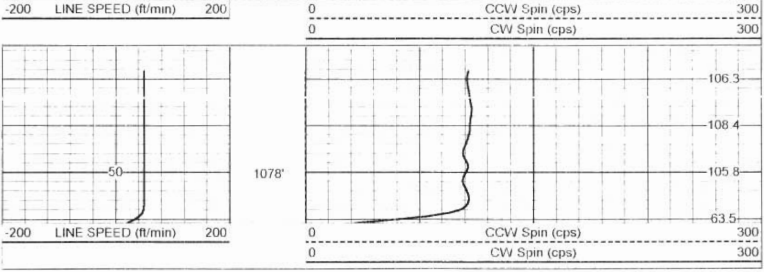
**Geophysical**

# Station #6: 1078'

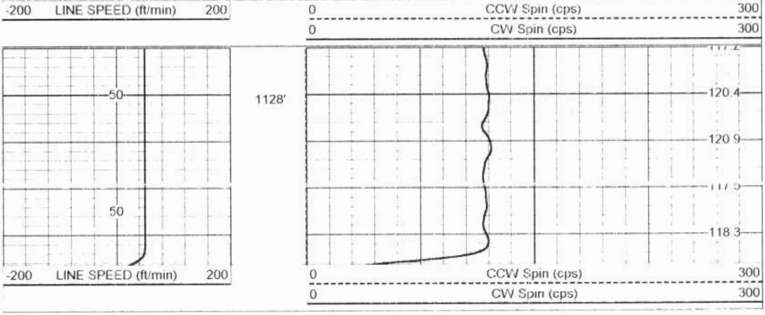
| | |
|---|---|
| Database File: | hbch1.db |
| Dataset Pathname | run5/pass20 |
| Presentation Format: | flowhp.prs |
| Dataset Creation. | Thu May 24 12.59:39 2001 by Log VER_5.3 |
| Charted by: | Depth in Feet scaled 1 240 |



**MV**
**Geophysical**

# Station #5: 1128'

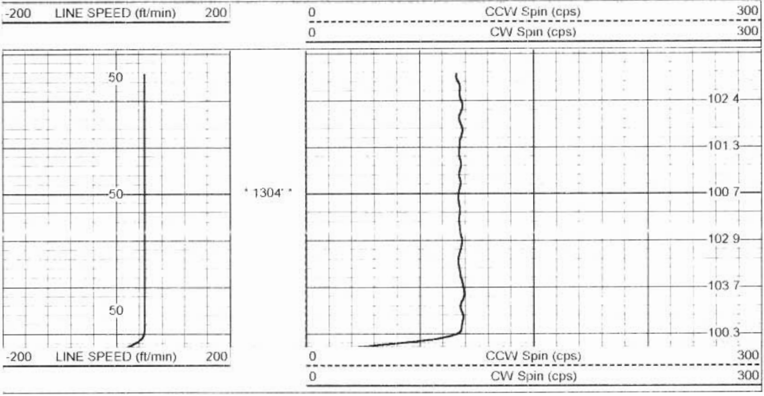
Database File: hbch1.db
Dataset Pathname run5/pass19
Presentation Format flowhp.prs
Dataset Creation: Thu May 24 12:57:06 2001 by Log VER_5.3
Charted by. Depth in Feet scaled 1:240



**MV**
**Geophysical**

# Station #4: 1304'

Database File: hbch1.db
Dataset Pathname run5/pass18
Presentation Format: flowhp.prs
Dataset Creation: Thu May 24 12:54:09 2001 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240



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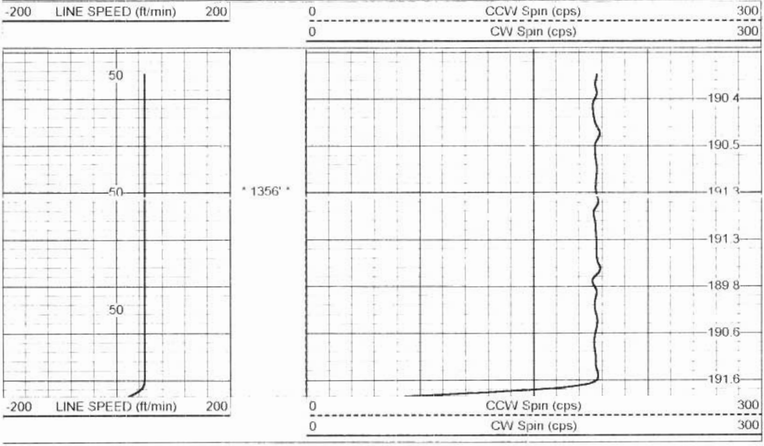
# Station #3: 1356'

Database File: hbch1.db
Dataset Pathname: run5/pass17
Presentation Format: flowhp.prs
Dataset Creation: Thu May 24 12:49:54 2001 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240



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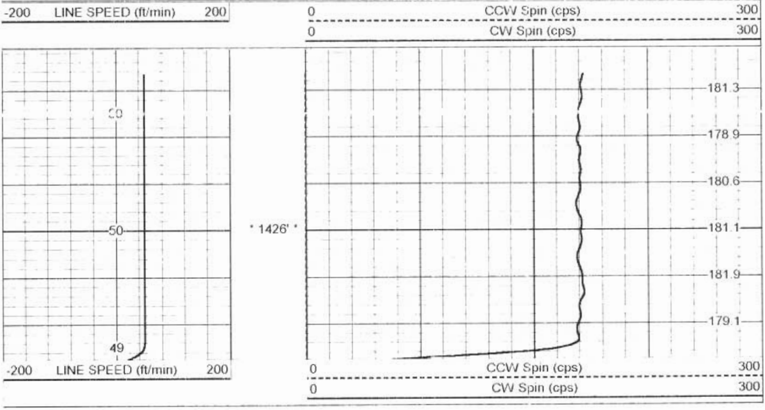
# Station #2: 1426'

Database File: hbch1.db
Dataset Pathname: run5/pass16
Presentation Format: flowhp.prs
Dataset Creation: Thu May 24 12:46:11 2001 by Log VER_5.3
Charted by: Depth in Feet scaled 1:240



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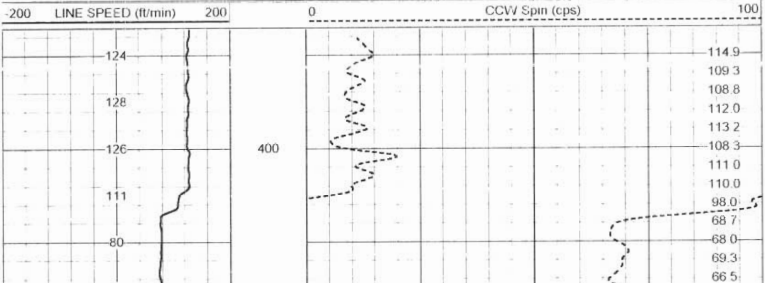
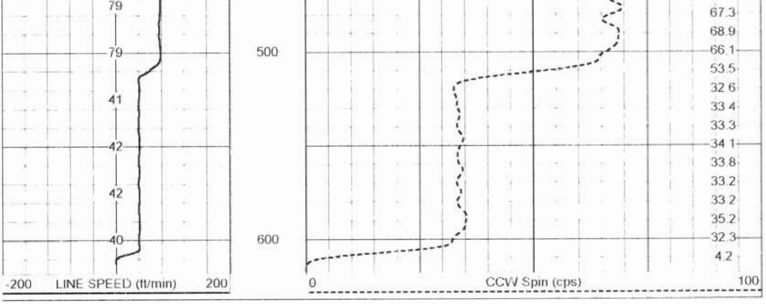
Geophysical

# Q UP CALIBRATION

Database File: hbch1.db
Dataset Pathname: run5/qUPCAL
Presentation Format: flowp.prs
Dataset Creation: Thu May 24 11:25:21 2001
Charted by: Depth in Feet scaled 1:600





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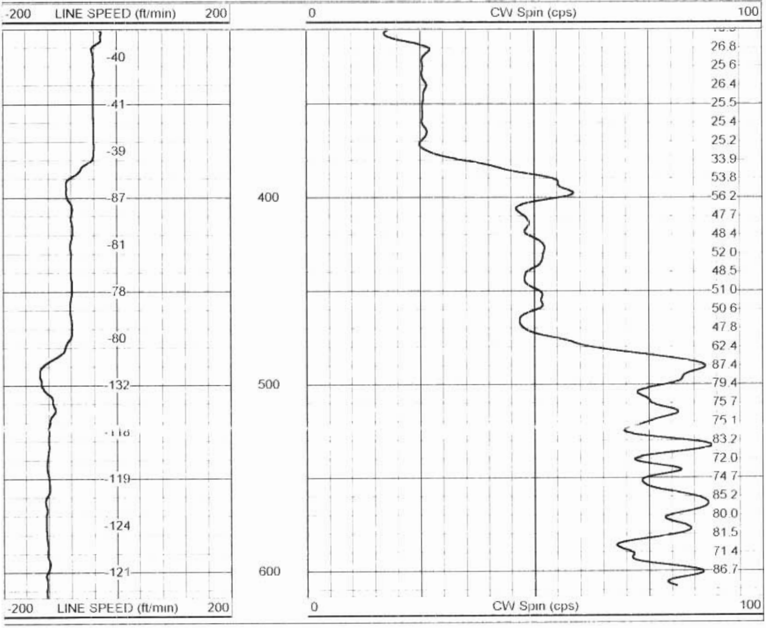
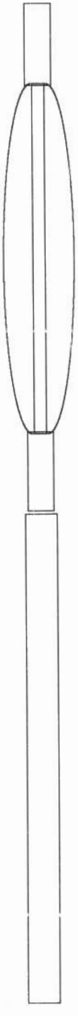
# Q DOWN CALIBRATION

Database File: hbch1.db
Dataset Pathname: run5/qDOWNCAL
Presentation Format: flow.prs
Dataset Creation: Thu May 24 11:18:40 2001
Charted by: Depth in Feet scaled 1:600




CENT-5FOOTSB (5FTSB) 50.00 lb 1.69 in OD 5.00 ft
FLOW-LARGE (65) 35.00 lb 3.75 in OD 4.80 ft
FLOWP 0.00 ft
FLOWN 0.00 ft

| | |
|---|---|
| Dataset | run5/pass20 |
| Total Length | 9.80 ft |
| Total Weight | 85.00 lb |
| O.D. | 3.75 in |

**MV Geophysical**

# DUAL INDUCTION
# LL3 / SP
# LOG

HB-TPW1

Company DIVERSIFIED DRILLING
Well TPW-1
Field Highland Beach
County Palm Beach
State/Prv Florida

| | |
|---|---|
| Company | DIVERSIFIED DRILLING CORP. |
| Well | TPW-1 |
| Field | Highland Beach |
| County | Palm Beach State/Prv Florida |

Location
Town of Highland Beach
Future R.O. WTP

Other Services
FRT,XY/GR
FLOW
VIDEO

| | | | |
|---|---|---|---|
| Permanent Datum | Land Surface | Elevation | na |
| Log Measured From | Land Surface | | |
| Drilling Measured From | Land Surface | | |

Elevation
K.B. na
D.F. na
G.L. na

| | | | |
|---|---|---|---|
| Date | 24-MAY-2001 | | |
| Run Number | FIVE | | |
| Depth Driller | 1462' | | |
| Depth Logger | 1462' | | |
| Bottom Logged Interval | 1462' | | |
| Top Log Interval | 1025' | | |
| Open Hole Size | 7.875" | | |
| Type Fluid | WATER | | |
| Density / Viscosity | na/na | | |
| Max. Recorded Temp. | na | | |
| Estimated Cement Top | NA | | |
| Time Well Ready | 08:00 24-MAY-01 | | |
| Time Logger on Bottom | 10:30 24-MAY-01 | | |
| Equipment Number | MVGS-1 | | |
| Location | Ft. Myers | | |
| Recorded By | S.Miller/J.Vincent | | |
| Witnessed By | M.Schilling (Hill) | D.McNabb (Hill) | F.Bennett (Hill) |

| Borehole Record | | | | Tubing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| ONE | 10.625" | 35' | 275' | FIVE | 7.875" | 1027' | 1462' |
| TWO | 32.5" | 35' | 245' | | | | |
| THREE | 10.625" | 240' | 1100' | | | | |
| FOUR | 24 | 245 | 1035 | | | | |

| Casing Record | Size | Wgt/Ft | Top | Bottom |
|---|---|---|---|---|
| Surface String | 34" | 0.375" WT | SURFACE | 35' |
| Prot. String | 26" | 0.375" WT | SURFACE | 240' |
| Production String | 17.4" PVC | 15.25" ID | SURFACE | 1027' |
| Liner | | | | Logger: 1025' |
| Invoice No.: | 2001057 | P.O. #: 10034 | | * FINAL PRINT * |

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## Comments

Rw=0.725 ohm-m @ 73.7 degF (STATIC)

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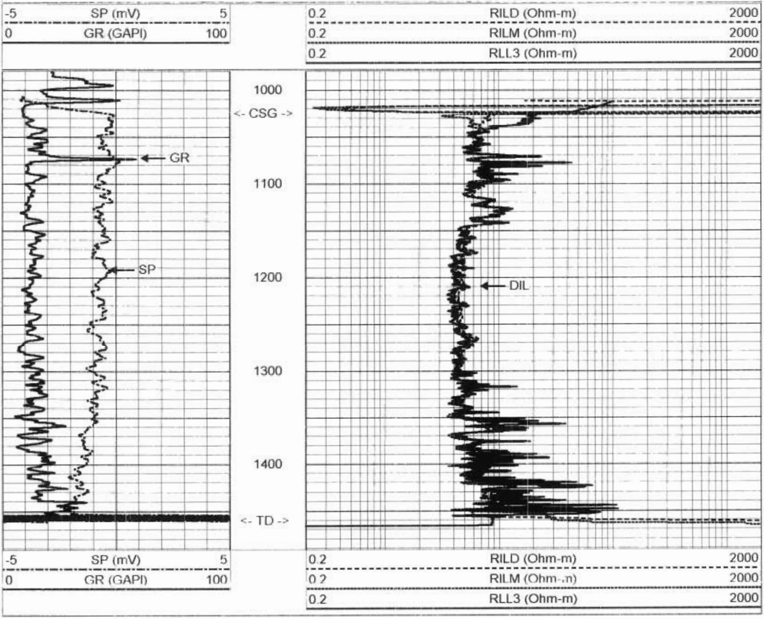
# MAIN PASS

Database File: hbch1.db
Dataset Pathname: run5/MAIN
Presentation Format: dil-1.prs
Dataset Creation: Thu May 24 10:06:30 2001
Charted by: Depth in Feet scaled 1:1200



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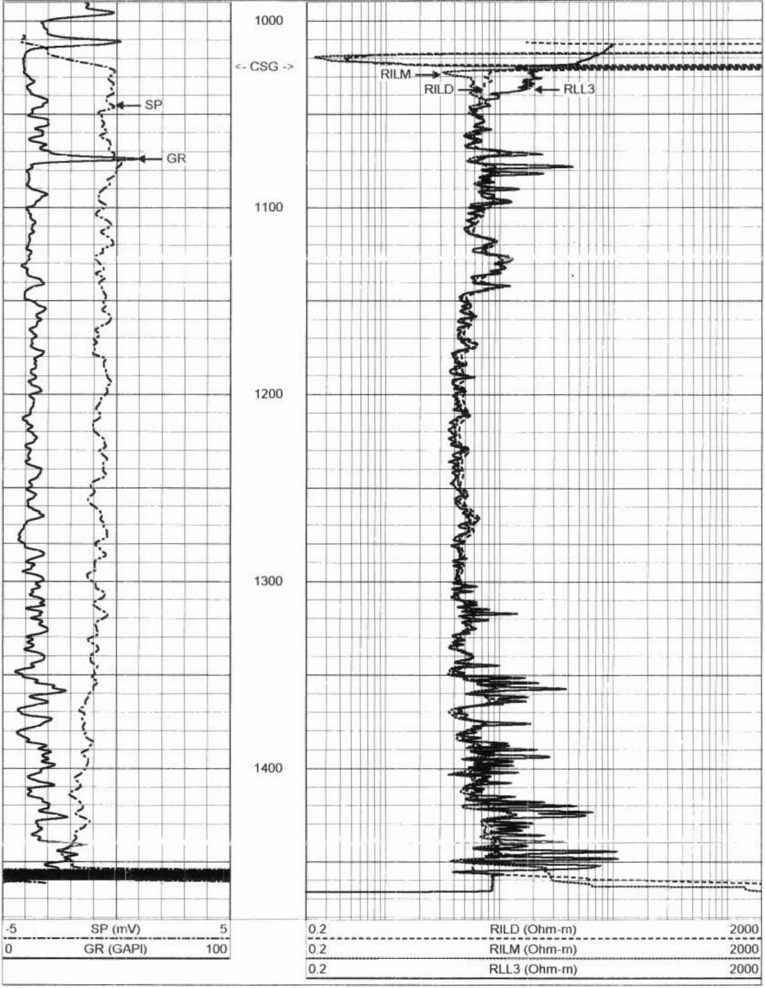
**MV Geophysical**

# MAIN PASS

Database File: hbch1.db
Dataset Pathname: run5/MAIN
Presentation Format: dil.prs
Dataset Creation: Thu May 24 10:06:30 2001
Charted by: Depth in Feet scaled 1:600

-5 SP (mV) 5
0 GR (GAPI) 100

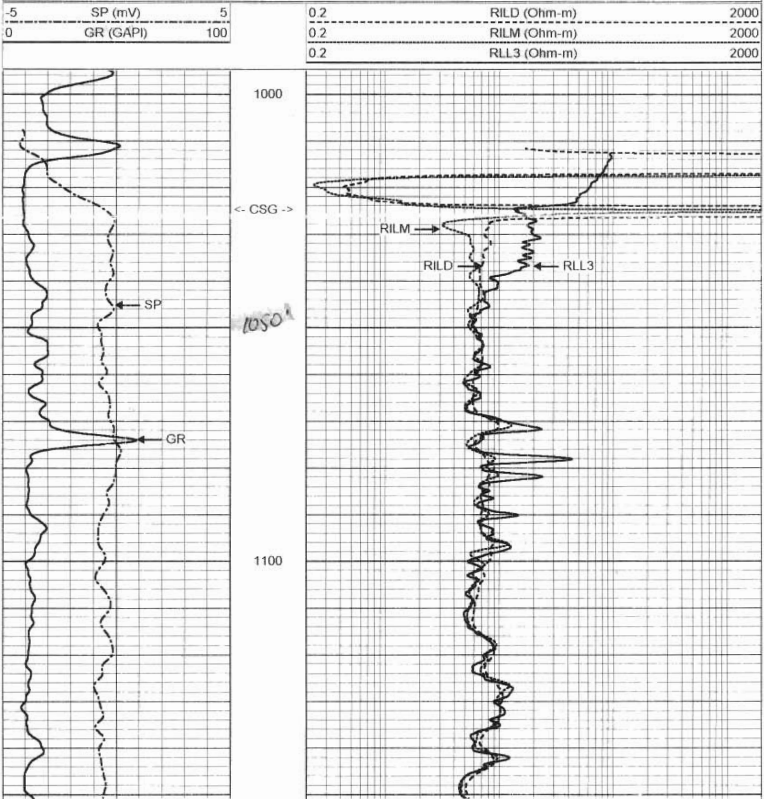
0.2 RILD (Ohm-m) 2000
0.2 RILM (Ohm-m) 2000
0.2 RLL3 (Ohm-m) 2000

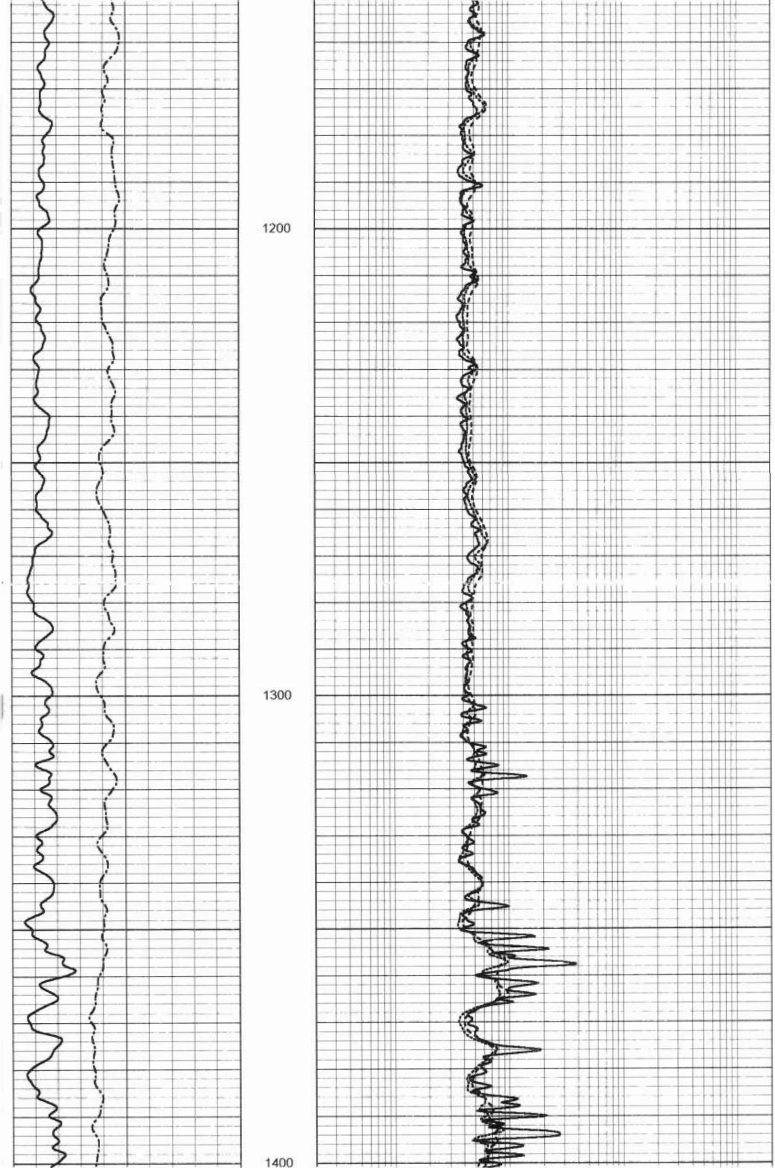


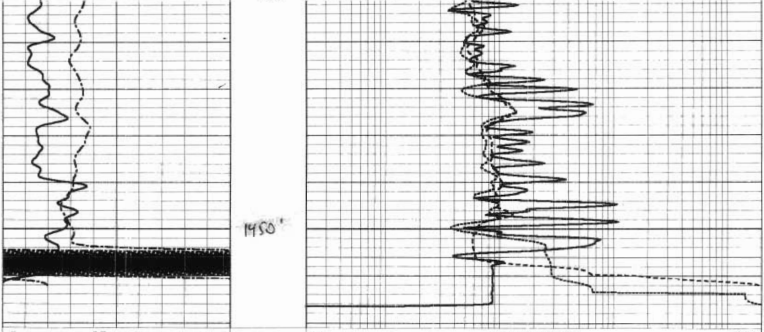
**MV Geophysical**

# MAIN PASS

Database File: hbch1.db
Dataset Pathname: run5/MAIN
Presentation Format: dil.prs
Dataset Creation: Thu May 24 10:06:30 2001
Charted by: Depth in Feet scaled 1:240







|  |  |  |  |  |  |
|---|---|---|---|---|---|
| -5 | SP (mV) | 5 | 0.2 | RILD (Ohm-m) | 2000 |
| 0 | GR (GAPI) | 100 | 0.2 | RILM (Ohm-m) | 2000 |
|  |  |  | 0.2 | RLL3 (Ohm-m) | 2000 |

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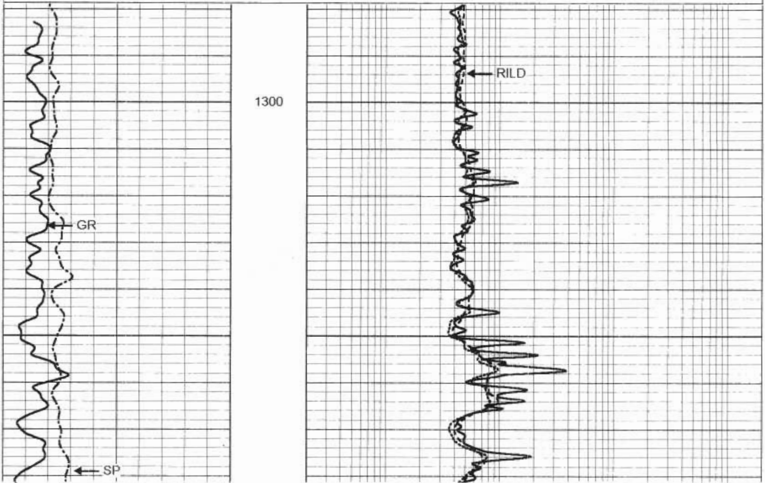
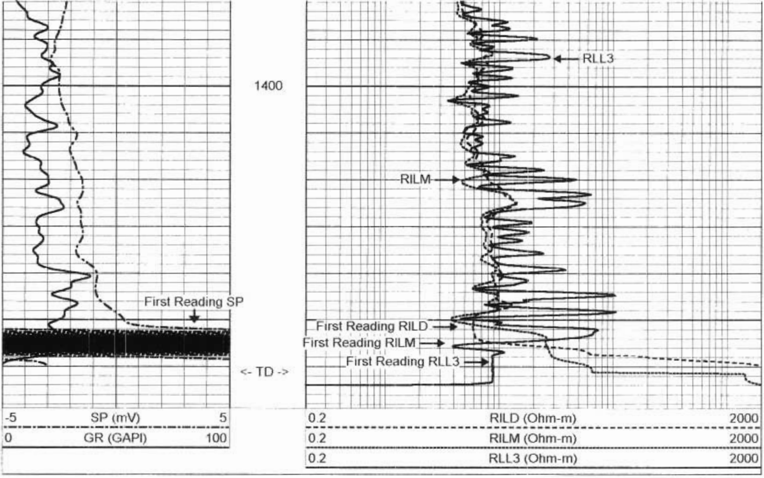
# REPEAT SECTION

|  |  |
|---|---|
| Database File: | hbch1.db |
| Dataset Pathname: | run5/REPEAT |
| Presentation Format: | dil.prs |
| Dataset Creation: | Thu May 24 09:19:24 2001 |
| Charted by: | Depth in Feet scaled 1:240 |

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| -5 | SP (mV) | 5 | 0.2 | RILD (Ohm-m) | 2000 |
| 0 | GR (GAPI) | 100 | 0.2 | RILM (Ohm-m) | 2000 |
|  |  |  | 0.2 | RLL3 (Ohm-m) | 2000 |





## Dual Induction Calibration Report

| | |
|---|---|
| Serial-Model: | 5390-R |
| Surface Cal Performed: | Mon Dec 11 17:13:33 2000 |
| Downhole Cal Performed: | Thu May 24 10:25:06 2001 |
| After Survey Verification Performed: | Thu May 24 10:52:29 2001 |

### Surface Calibration

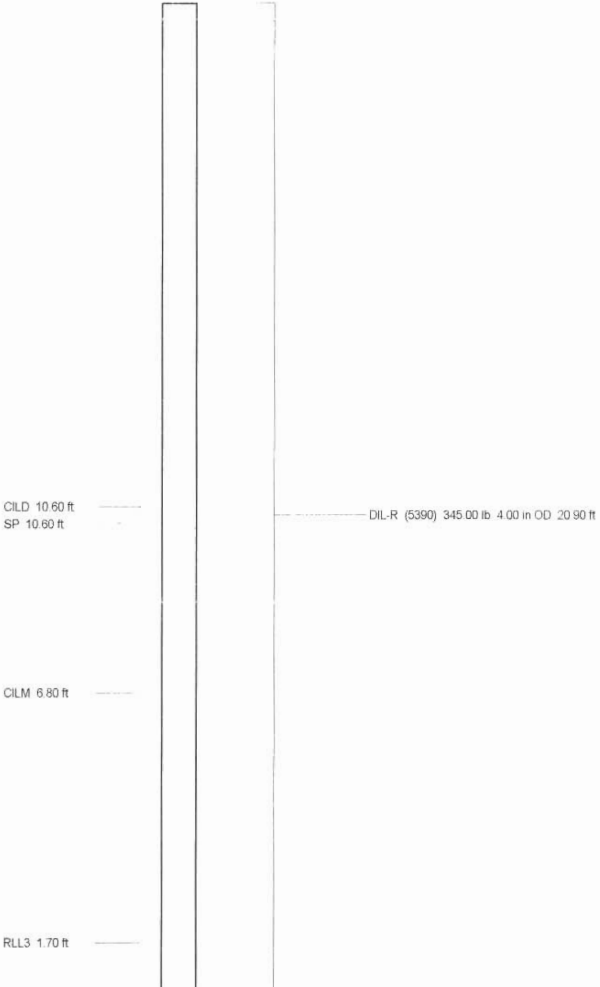
| | Readings | | | References | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Loop: | Air | Loop | | Air | Loop | | m | b |
| Deep | 0.050 | 0.668 | V | 0.000 | 400.000 | mmho-m | 646.752 | -32.330 |
| Medium | -0.011 | 0.704 | V | 0.000 | 464.000 | mmho-m | 648.628 | 7.249 |
| Internal: | Zero | Cal | | Zero | Cal | | m | b |
| Deep | 0.012 | 0.641 | V | 0.000 | 400.000 | mmho-m | 635.150 | -7.331 |
| Medium | -0.014 | 0.745 | V | 0.000 | 464.000 | mmho-m | 611.717 | 8.345 |

### Downhole Calibration

| | Readings | | | References | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Internal: | Zero | Cal | | Zero | Cal | | m | b |
| Deep | -25.197 | 382.327 | mmho-m | -24.865 | 382.442 | mmho-m | 0.999 | 0.318 |
| Medium | -0.808 | 491.218 | mmho-m | -1.599 | 490.398 | mmho-m | 1.000 | -0.792 |
| Shallow | 2.508 | 0.021 | V | 494.500 | 2.000 | Ohm-m | 198.002 | -2.111 |

### After Survey Verification

| | Readings | | | Targets | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Internal: | Zero | Cal | | Zero | Cal | | m' | b' |
| Deep | -25.137 | 382.217 | mmho-m | -25.197 | 382.327 | mmho-m | 0.999 | 0.318 |
| Medium | -1.097 | 490.834 | mmho-m | -0.808 | 491.218 | mmho-m | 1.000 | -0.792 |
| Shallow | 494.174 | 1.972 | Ohm-m | 494.500 | 2.000 | Ohm-m | 1.001 | 0.027 |



| | |
|---|---|
| Dataset | run5/pass6 |
| Total Length: | 20.90 ft |
| Total Weight: | 345.00 lb |
| O.D. | 4.00 in |

**MV Geophysical**

# DUAL INDUCTION
# LL3 / SP
# LOG

HB-TPW1

Company DIVERSIFIED DRILLING
Well TPW-1
Field Highland Beach
County Palm Beach
State/Prv Florida

| | |
|---|---|
| Company | DIVERSIFIED DRILLING CORP. |
| Well | TPW-1 |
| Field | Highland Beach |
| County | Palm Beach |
| State/Prv | Florida |

Location
Town of Highland Beach
Future R.O. WTP

Other Services
XY Cal/GR

| | | | |
|---|---|---|---|
| Permanent Datum | Land Surface | Elevation | na |
| Log Measured From | Land Surface | | |
| Drilling Measured From | Land Surface | | |

Elevation
K.B. na
D.F. na
G.L. na

| | |
|---|---|
| Date | 20-APR-2001 |
| Run Number | THREE |
| Depth Driller | 1100' |
| Depth Logger | 1096' |
| Bottom Logged Interval | 1094' |
| Top Log Interval | 240' |
| Open Hole Size | 10.625" |
| Type Fluid | MUD |
| Density / Viscosity | na/na |
| Max. Recorded Temp | na |
| Estimated Cement Top | NA |
| Time Well Ready | 10.00 20-APR-01 |
| Time Logger on Bottom | 11:30 20-APR-01 |
| Equipment Number | MVGS-1 |
| Location | Ft. Myers |
| Recorded By | Miller/Vincent |
| Witnessed By | M.Schilling |

| Borehole Record | | | | Tubing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| ONE | 10.625" | 35' | 275' | | | | |
| TWO | 32.5" | 35' | 245' | | | | |
| THREE | 10.625" | 240' | 1100' | | | | |

| Casing Record | Size | Wgt/Ft | Top | Bottom |
|---|---|---|---|---|
| Surface String | 34" | 0.375" WT | SURFACE | 35' |
| Prot. String | 26" | 0.375" WT | SURFACE | 240' |
| Production String | | | | |
| Liner | | | | |
| Invoice No | 2001043 | P.O.#. 9335 | | * FINAL PRINT * |

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## Comments

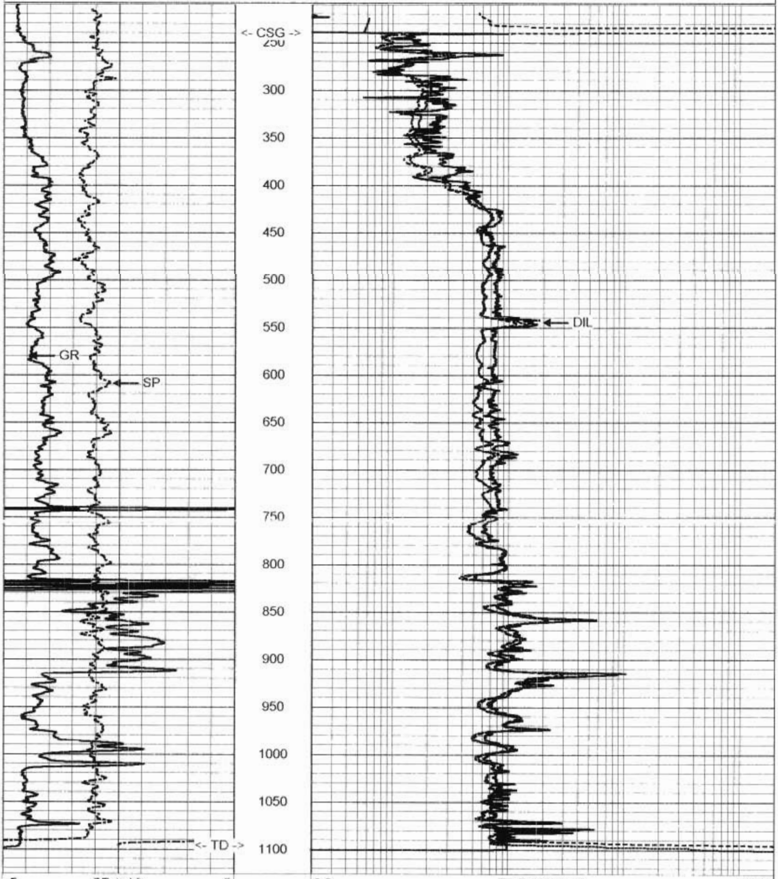
Rm=7.86 ohm-m @ 70.2 degF

**MV Geophysical**

# MAIN PASS

Database File: hbch1.db
Dataset Pathname: run3/MAIN
Presentation Format: dil1200.prs
Dataset Creation: Fri Apr 20 11:57:37 2001
Charted by: Depth in Feet scaled 1:1200

| | | | | | |
|---|---|---|---|---|---|
| -5 | SP (mV) | 5 | 0.2 | RILD (Ohm-m) | 2000 |
| 0 | GR (GAPI) | 200 | 0.2 | RILM (Ohm-m) | 2000 |
| | | | 0.2 | RLL3 (Ohm-m) | 2000 |



| | | | | | |
|---|---|---|---|---|---|
| -5 | SP (mV) | 5 | 0.2 | RILD (Ohm-m) | 2000 |
| 0 | GR (GAPI) | 200 | 0.2 | RILM (Ohm-m) | 2000 |
| | | | 0.2 | RLL3 (Ohm-m) | 2000 |

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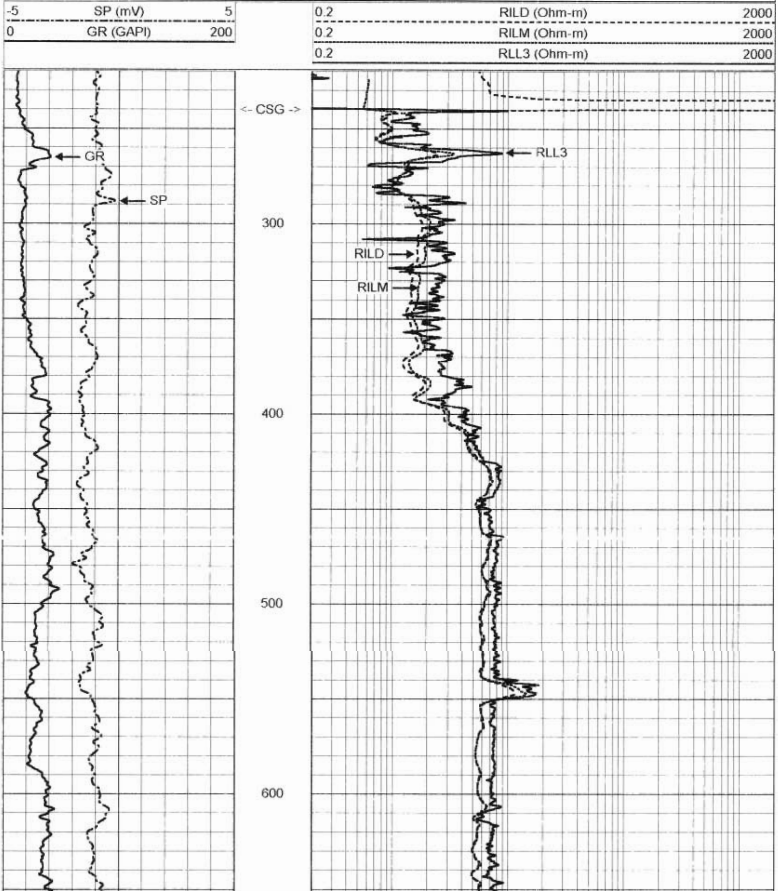
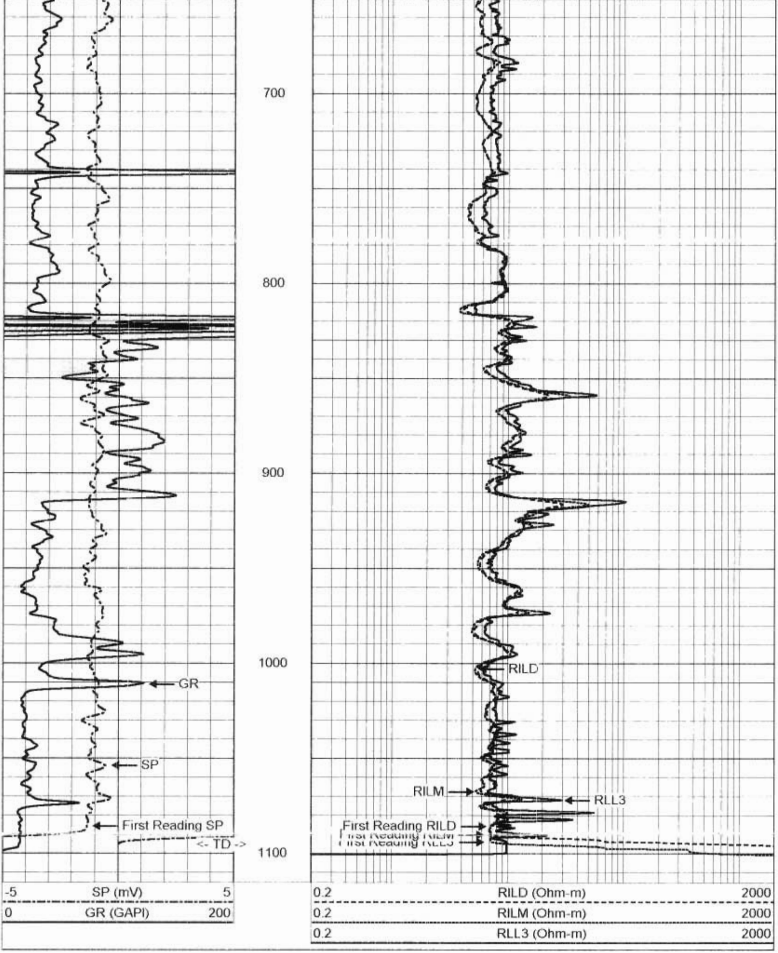
Geophysical

# MAIN PASS

Database File: hbch1.db
Dataset Pathname: run3/MAIN
Presentation Format: dil200.prs
Dataset Creation: Fri Apr 20 11:57:37 2001
Charted by: Depth in Feet scaled 1:600

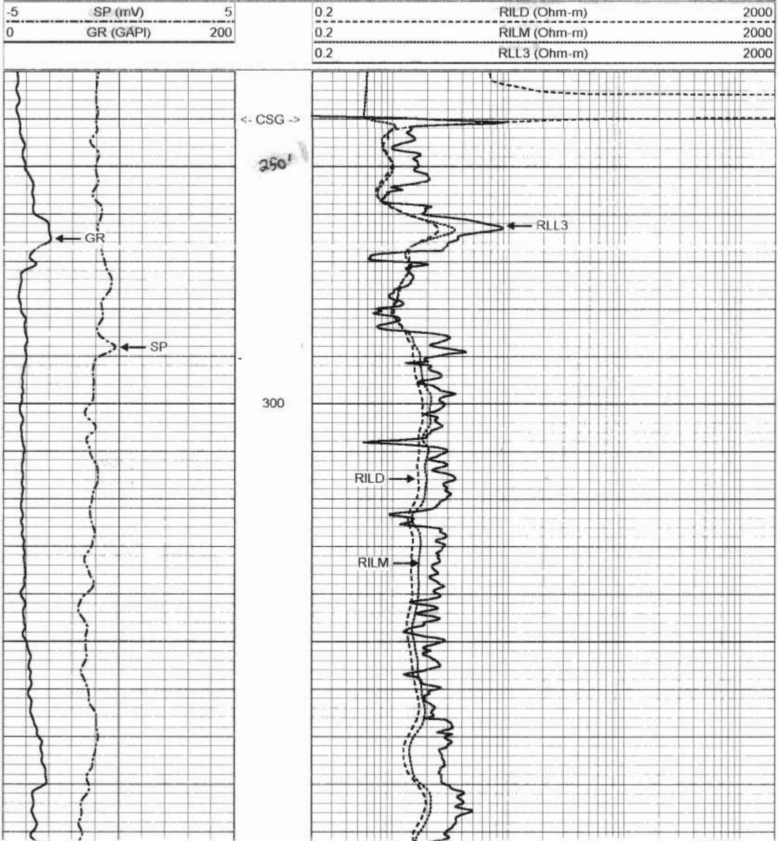


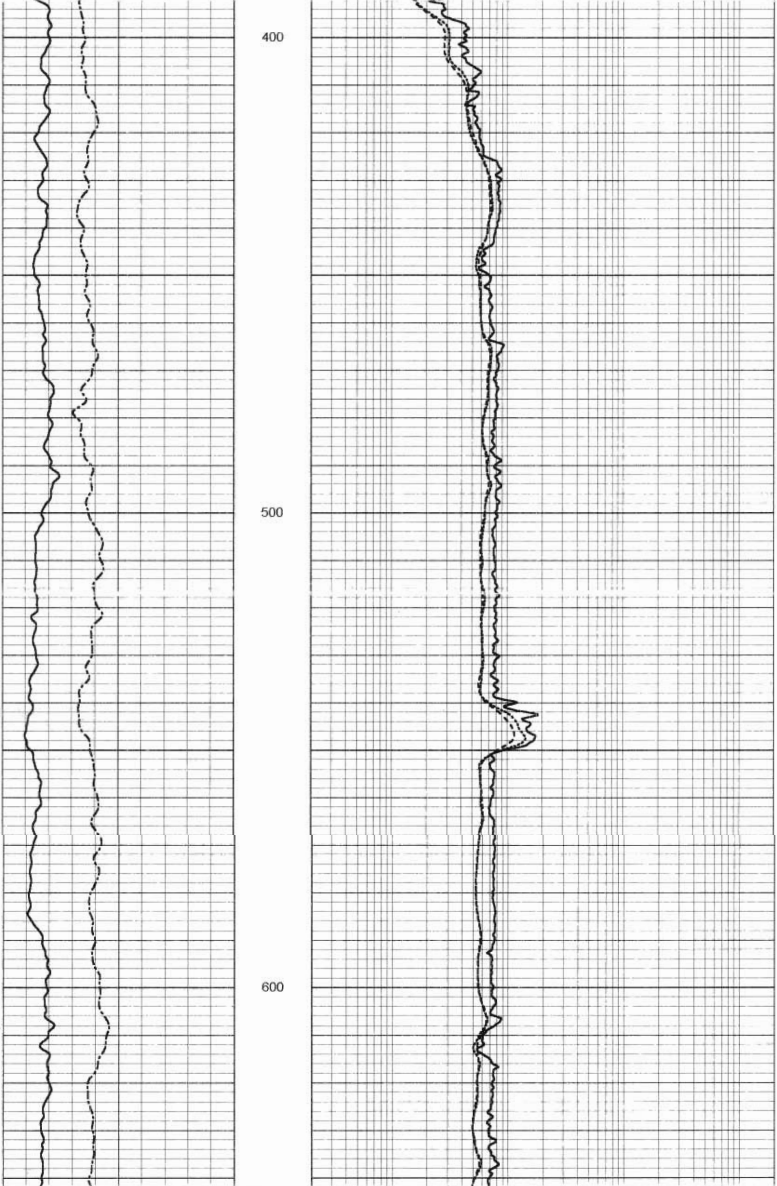


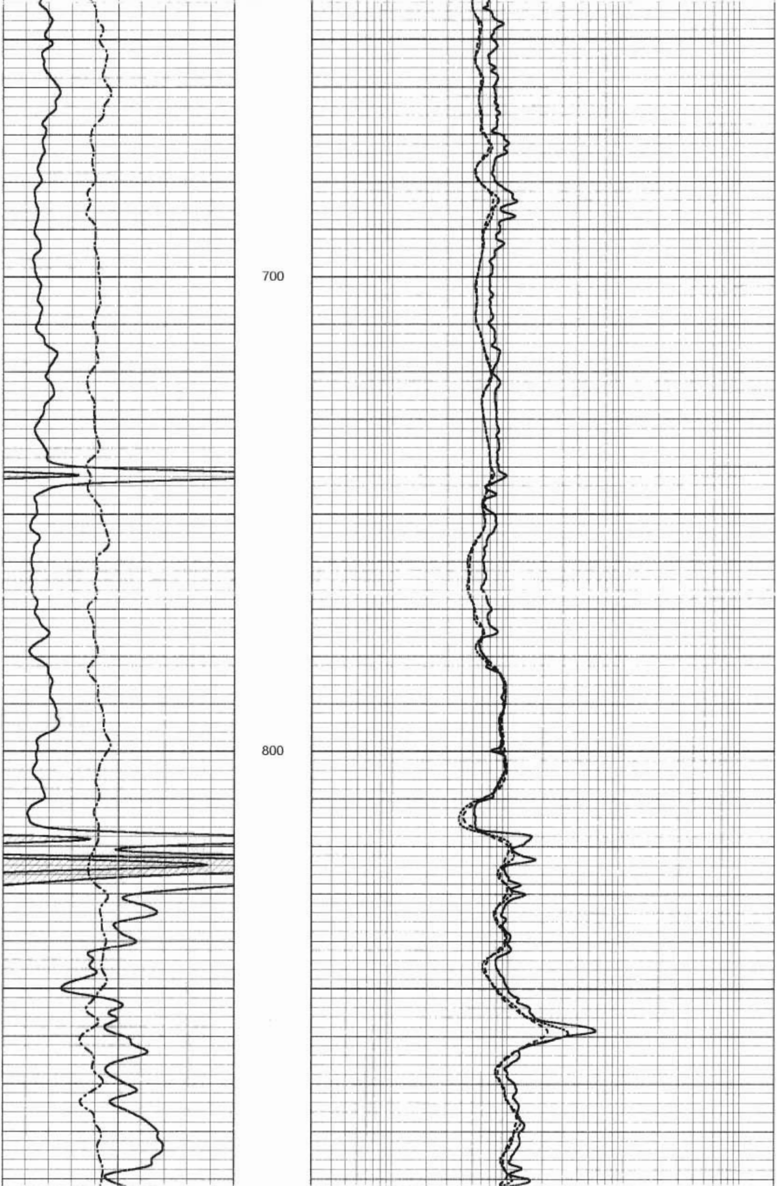
**MV**
**Geophysical**

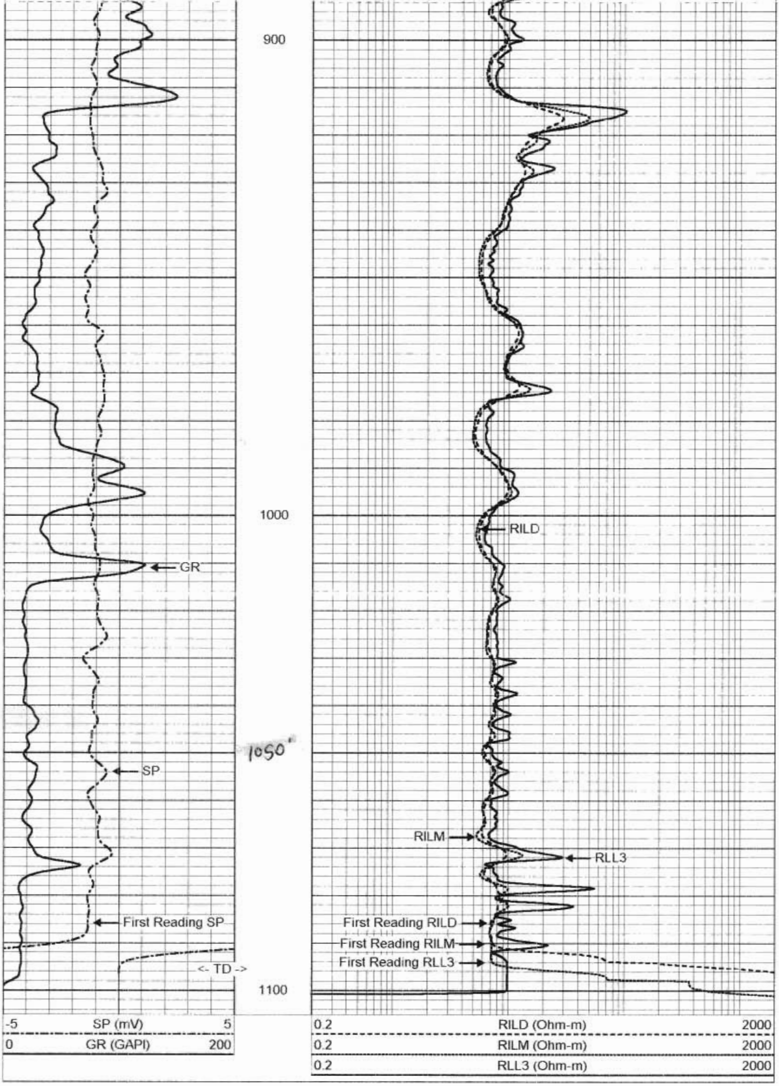
# MAIN PASS

Database File: hbch1.db
Dataset Pathname: run3/MAIN
Presentation Format: dil200.prs
Dataset Creation: Fri Apr 20 11:57:37 2001
Charted by: Depth in Feet scaled 1:240





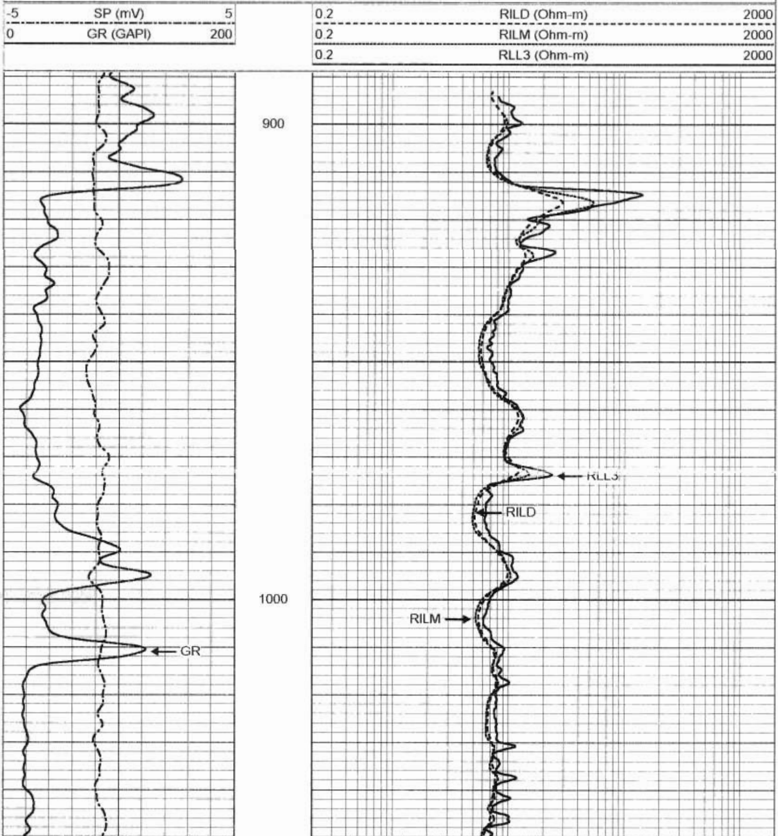


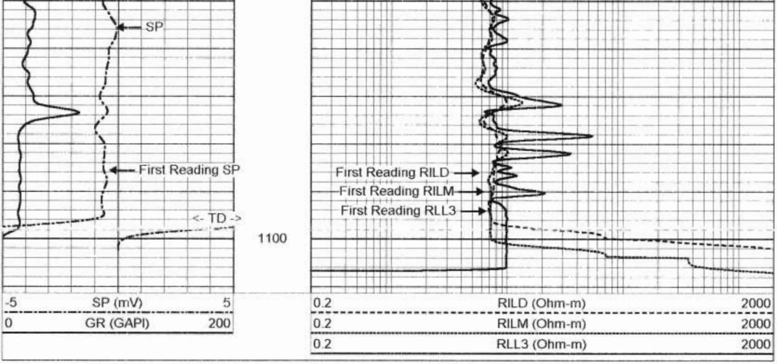


**MV**
**Geophysical**

# REPEAT SECTION

| | |
|---|---|
| Database File: | hbch1.db |
| Dataset Pathname: | run3/repeat |
| Presentation Format: | dil200.prs |
| Dataset Creation: | Fri Apr 20 11:05:01 2001 |
| Charted by: | Depth in Feet scaled 1:240 |





## Dual Induction Calibration Report

| | |
|---|---|
| Serial-Model: | 5390-R |
| Surface Cal Performed: | Mon Dec 11 17:13:33 2000 |
| Downhole Cal Performed: | Fri Apr 20 12:00:42 2001 |
| After Survey Verification Performed: | Fri Apr 20 12:44:26 2001 |

### Surface Calibration

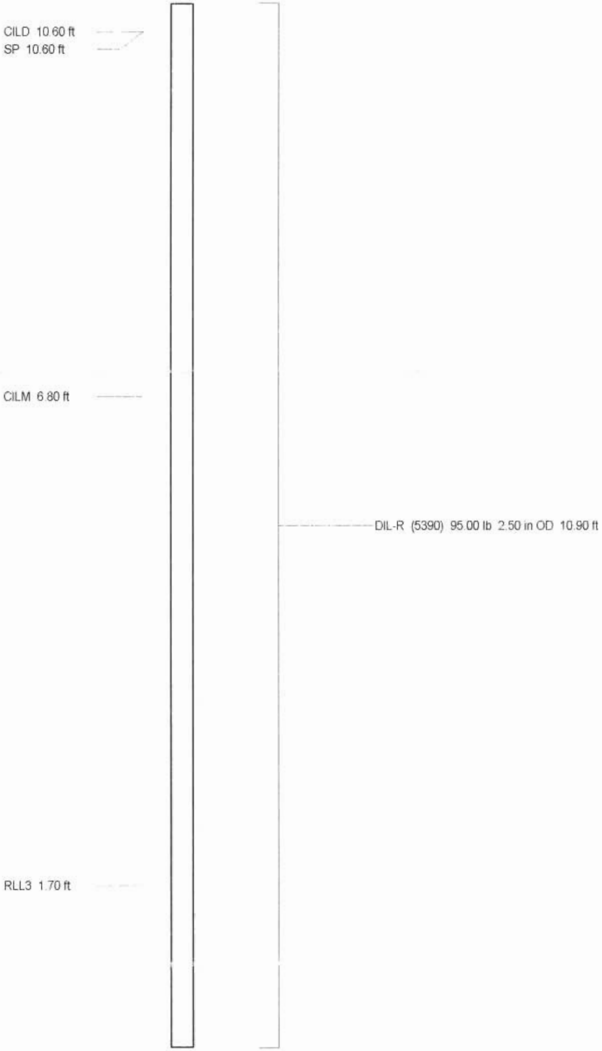
| | Readings | | | References | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Loop: | Air | Loop | | Air | Loop | | m | b |
| Deep | 0.050 | 0.668 | V | 0.000 | 400.000 | mmho-m | 646.752 | -32.330 |
| Medium | -0.011 | 0.704 | V | 0.000 | 464.000 | mmho-m | 648.628 | 7.249 |
| Internal: | Zero | Cal | | Zero | Cal | | m | b |
| Deep | 0.012 | 0.641 | V | 0.000 | 400.000 | mmho-m | 635.150 | -7.331 |
| Medium | -0.014 | 0.745 | V | 0.000 | 464.000 | mmho-m | 611.717 | 8.345 |

### Downhole Calibration

| | Readings | | | References | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Internal: | Zero | Cal | | Zero | Cal | | m | b |
| Deep | -24.711 | 382.675 | mmho-m | -24.865 | 382.442 | mmho-m | 1.000 | -0.159 |
| Medium | -0.511 | 491.428 | mmho-m | -1.599 | 490.398 | mmho-m | 1.000 | -1.089 |
| Shallow | 2.509 | 0.021 | V | 494.500 | 2.000 | Ohm-m | 197.925 | -2.189 |

### After Survey Verification

| | Readings | | | Targets | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Internal: | Zero | Cal | | Zero | Cal | | m' | b' |
| Deep | -24.577 | 383.077 | mmho-m | -24.711 | 382.675 | mmho-m | 1.000 | -0.159 |
| Medium | -0.360 | 491.962 | mmho-m | -0.511 | 491.428 | mmho-m | 1.000 | -1.089 |
| Shallow | 494.447 | 2.099 | Ohm-m | 494.500 | 2.000 | Ohm-m | 1.000 | -0.100 |



Dataset: run3/pass4
Total Length: 10.90 ft
Total Weight: 95.00 lb
O.D. 2.50 in

Company DIVERSIFIED DRILLING
Well TPW-1
Field Highland Beach
County Palm Beach
State/Prv Florida

# MV Geophysical

# DUAL INDUCTION
# LL3 / SP
# LOG

HB-TPW1

Company DIVERSIFIED DRILLING CORP.
Well TPW-1
Field Highland Beach
County Palm Beach State/Prv Florida

Location

Town of Highland Beach
Future R.O. WTP

Other Services
XY Cal/GR

| | | | |
|---|---|---|---|
| Permanent Datum | Land Surface | Elevation | na |
| Log Measured From | Land Surface | | |
| Drilling Measured From | Land Surface | | |

Elevation
K.B na
D.F. na
G.L. na

| | |
|---|---|
| Date | 4-APR-2001 |
| Run Number | ONE |
| Depth Driller | 275' |
| Depth Logger | 273' |
| Bottom Logged Interval | 271' |
| Top Log Interval | 35' |
| Open Hole Size | 10.625" |
| Type Fluid | MUD |
| Density / Viscosity | na/60 |
| Max. Recorded Temp. | 78 degF |
| Estimated Cement Top | NA |
| Time Well Ready | 08:00 4-APR-01 |
| Time Logger on Bottom | 09:15 4-APR-01 |
| Equipment Number | MVGS-1 |
| Location | Ft. Myers |
| Recorded By | Miller/Vincent |
| Witnessed By | M Schilling |

| | Borehole Record | | | Tubing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| ONE | 10.625" | 35' | 275' | | | | |

| Casing Record | Size | Wgt/Ft | Top | Bottom |
|---|---|---|---|---|
| Surface String | 34" | 0.375" WT | SURFACE | 35' |
| Prot. String | | | | |
| Production String | | | | |
| Liner | | | | |
| Invoice No. | 2001029 | P.O. # 9335 | | * FINAL PRINT * |

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

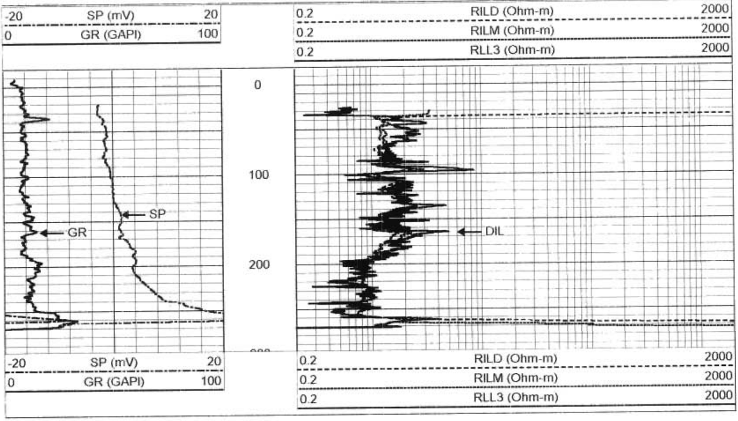
Rm=4.08 ohm-m @ 77.9 degF

Sat on Ledge @ 136' during Repeat Section

**MV Geophysical**

# MAIN PASS

Database File: hbch1.db
Dataset Pathname: MAIN
Presentation Format: dilhbch1.prs
Dataset Creation: Wed Apr 04 10:18:34 2001
Charted by: Depth in Feet scaled 1:1200

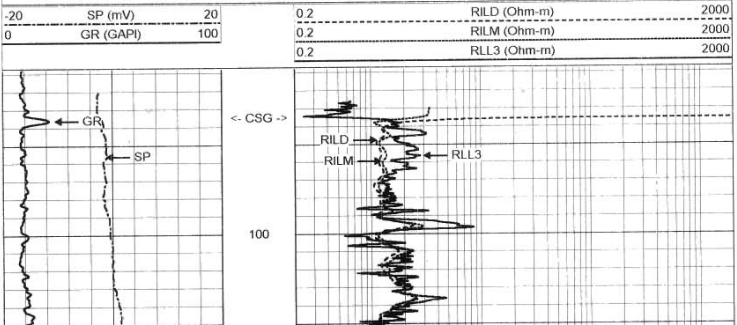


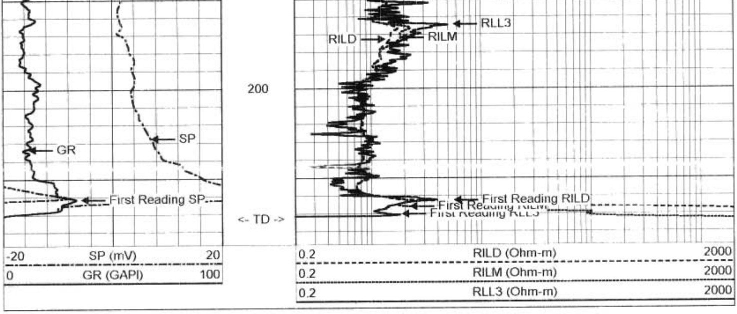
---

**MV Geophysical**

# MAIN PASS

Database File: nbch1.db
Dataset Pathname: MAIN
Presentation Format: dilhbch.prs
Dataset Creation: Wed Apr 04 10:18:34 2001
Charted by: Depth in Feet scaled 1:600

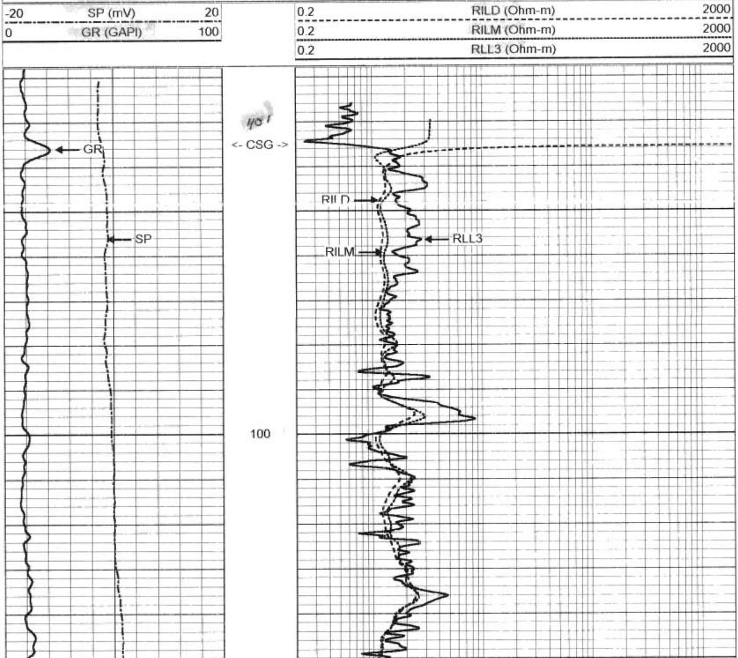


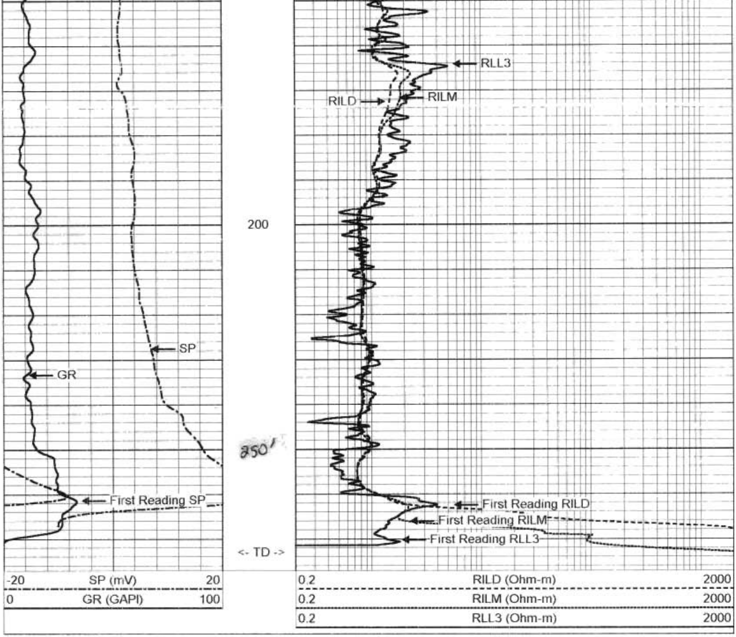


**MV Geophysical**

# MAIN PASS

Database File: hbch1.db
Dataset Pathname: MAIN
Presentation Format: dilhbch.prs
Dataset Creation: Wed Apr 04 10:18:34 2001
Charted by: Depth in Feet scaled 1:240

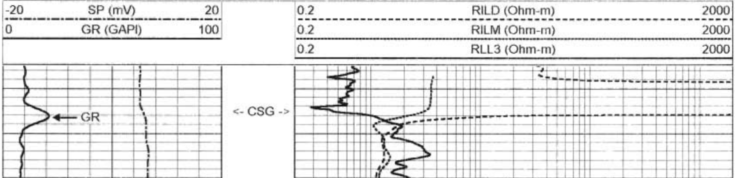


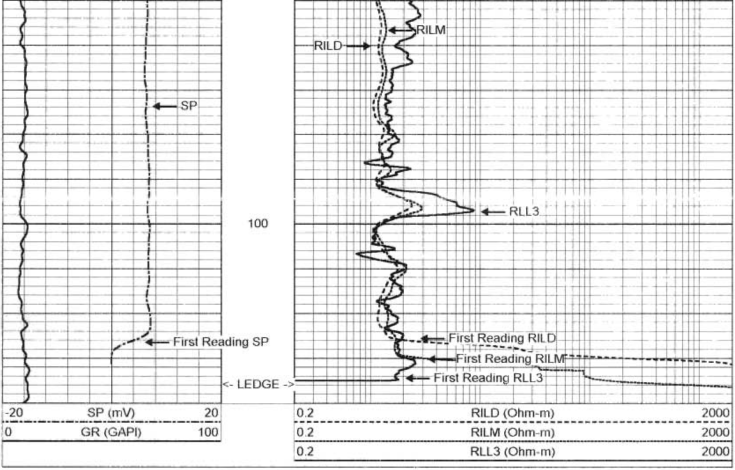


**MV**
**Geophysical**

# REPEAT SECTION

Database File: hbch1.db
Dataset Pathname: REPEAT
Presentation Format: dilhbch.prs
Dataset Creation: Wed Apr 04 10:15:55 2001
Charted by: Depth in Feet scaled 1:240





## Dual Induction Calibration Report

| | |
|---|---|
| Serial-Model: | 5390-R |
| Surface Cal Performed: | Mon Dec 11 17:13:33 2000 |
| Downhole Cal Performed: | Wed Apr 04 09:39:44 2001 |
| After Survey Verification Performed: | Wed Apr 04 09:56:11 2001 |

### Surface Calibration

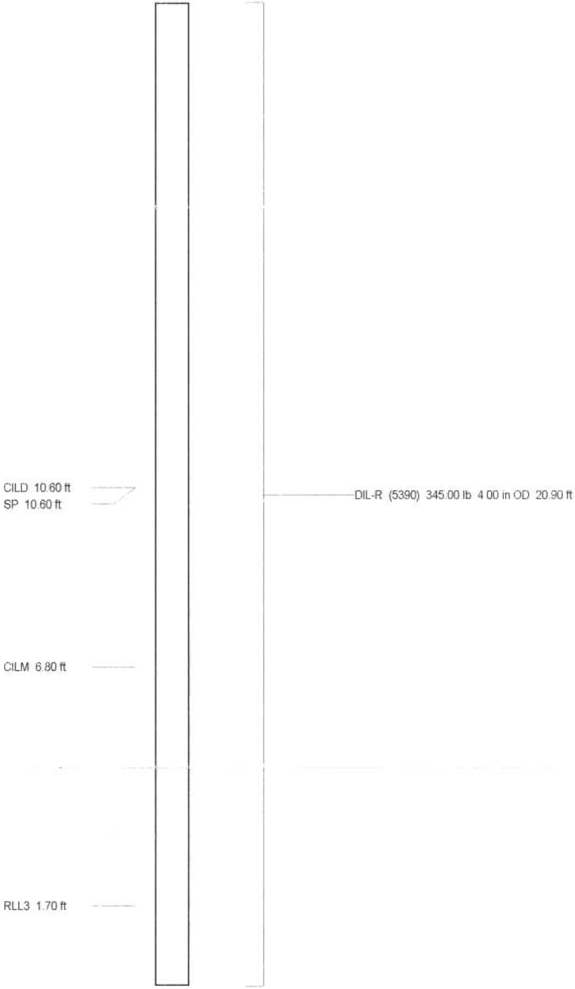
| | Readings | | | References | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Loop: | Air | Loop | | Air | Loop | | m | b |
| Deep | 0.050 | 0.668 | V | 0.000 | 400.000 | mmho-m | 646.752 | -32.330 |
| Medium | -0.011 | 0.704 | V | 0.000 | 464.000 | mmho-m | 648.628 | 7.249 |
| Internal: | Zero | Cal | | Zero | Cal | | m | b |
| Deep | 0.012 | 0.641 | V | 0.000 | 400.000 | mmho-m | 635.150 | -7.331 |
| Medium | -0.014 | 0.745 | V | 0.000 | 464.000 | mmho-m | 611.717 | 8.345 |

### Downhole Calibration

| | Readings | | | References | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Internal: | Zero | Cal | | Zero | Cal | | m | b |
| Deep | -25.216 | 382.339 | mmho-m | -24.865 | 382.442 | mmho-m | 0.999 | 0.336 |
| Medium | -1.394 | 490.557 | mmho-m | -1.599 | 490.398 | mmho-m | 1.000 | -0.206 |
| Shallow | 2.506 | 0.021 | V | 494.500 | 2.000 | Ohm-m | 198.129 | -2.064 |

### After Survey Verification

| | Readings | | | Targets | | | Results | |
|---|---|---|---|---|---|---|---|---|
| Internal: | Zero | Cal | | Zero | Cal | | m' | b' |
| Deep | -25.272 | 382.493 | mmho-m | -25.216 | 382.339 | mmho-m | 0.999 | 0.336 |
| Medium | -1.192 | 491.139 | mmho-m | -1.394 | 490.557 | mmho-m | 1.000 | -0.206 |
| Shallow | 494.683 | 2.006 | Ohm-m | 494.500 | 2.000 | Ohm-m | 1.000 | -0.005 |



Dataset: run1/pass5
Total Length: 20.90 ft
Total Weight: 345.00 lb
O.D. 4.00 in

**MV Geophysical**

# X-Y CALIPER
# GAMMA RAY
# LOG

HB - TPW1

Company DIVERSIFIED DRILLING
Well TPW-1
Field Highland Beach
County Palm Beach
State/Prv Florida

| | |
|---|---|
| Company | DIVERSIFIED DRILLING CORP. |
| Well | TPW-1 |
| Field | Highland Beach |
| County | Palm Beach |
| State/Prv | Florida |

Location

Town of Highland Beach
Future R.O. WTP

Other Services
FRT,DIL
FLOW
VIDEO

| | | | |
|---|---|---|---|
| Permanent Datum | Land Surface | Elevation | na |
| Log Measured From | Land Surface | | |
| Drilling Measured From | Land Surface | | |

Elevation
K.B. na
D.F. na
G.L. na

| | | | |
|---|---|---|---|
| Date | 24-MAY-2001 | | |
| Run Number | FIVE | | |
| Depth Driller | 1462' | | |
| Depth Logger | 1462' | | |
| Bottom Logged Interval | 1462' | | |
| Top Log Interval | SURFACE | | |
| Open Hole Size | 7.875" | | |
| Type Fluid | WATER | | |
| Density / Viscosity | na/na | | |
| Max. Recorded Temp. | na | | |
| Estimated Cement Top | NA | | |
| Time Well Ready | 08:00 24-MAY-01 | | |
| Time Logger on Bottom | 09:00 24-MAY-01 | | |
| Equipment Number | MVGS-1 | | |
| Location | Ft. Myers | | |
| Recorded By | S.Miller/J.Vincent | | |
| Witnessed By | M.Schilling (Hill) | D.McNabb (Hill) | F.Bennett (Hill) |

| | Borehole Record | | | Tubing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| ONE | 10.625" | 35' | 275' | FIVE | 7.875" | 1027' | 1462' |
| TWO | 32.5" | 35' | 245' | | | | |
| THREE | 10.625" | 240' | 1100' | | | | |
| FOUR | 24 | 245 | 1035 | | | | |

| Casing Record | Size | Wgt/Ft | Top | Bottom |
|---|---|---|---|---|
| Surface String | 34" | 0.375" WT | SURFACE | 35' |
| Prot. String | 26" | 0.375" WT | SURFACE | 240' |
| Production String | 17.4" PVC | 15.25" ID | SURFACE | 1027' |
| Liner | | | | Logger: 1025' |
| Invoice No.: | 2001057 | P.O. #: 10034 | | * FINAL PRINT * |

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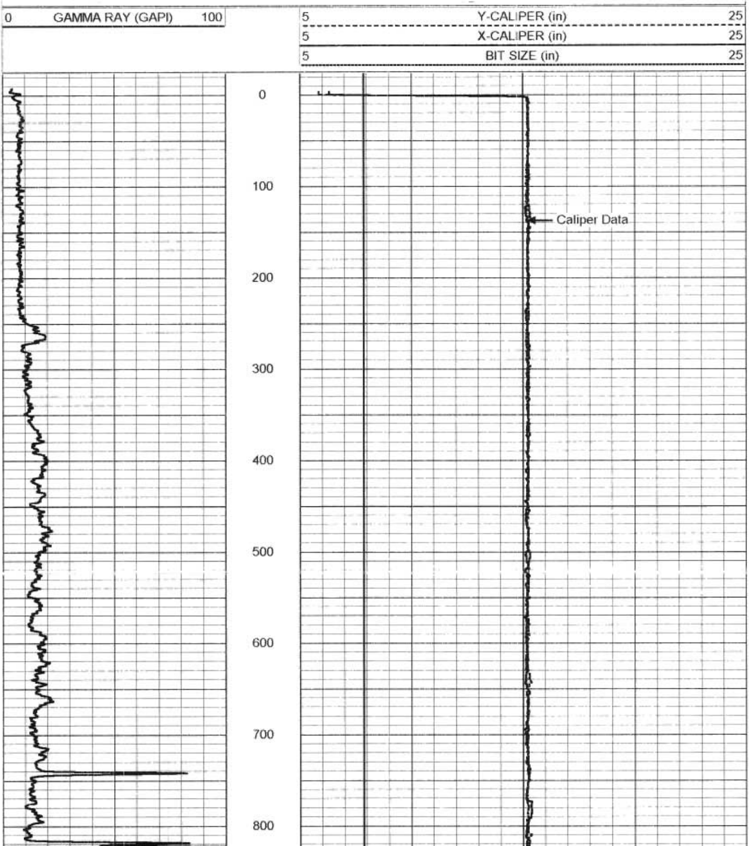
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

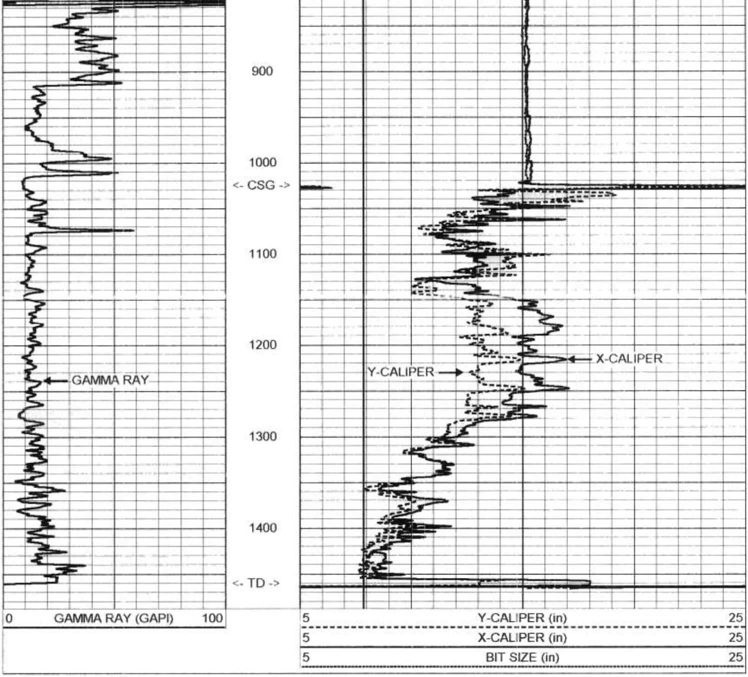
Comments

**MV**
**Geophysical**

# MAIN PASS

| | |
|---|---|
| Database File: | hbch1.db |
| Dataset Pathname: | run5/MAIN |
| Presentation Format: | xy525-1.prs |
| Dataset Creation: | Thu May 24 10:06:30 2001 |
| Charted by: | Depth in Feet scaled 1:1200 |





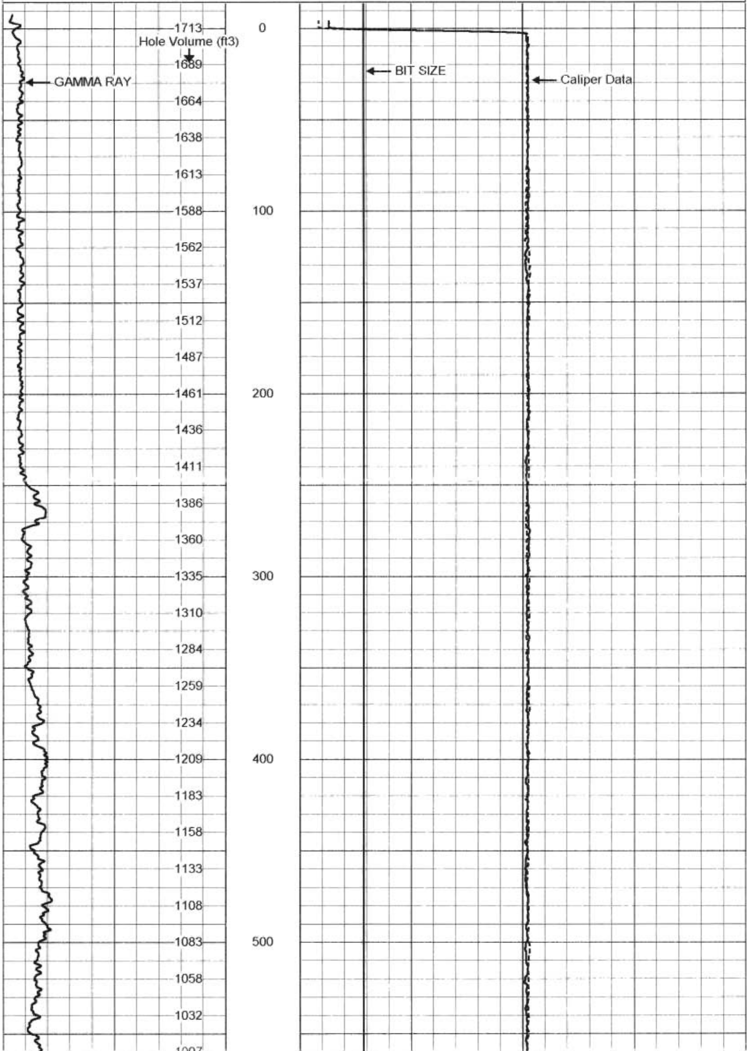
**MV**
**Geophysical**

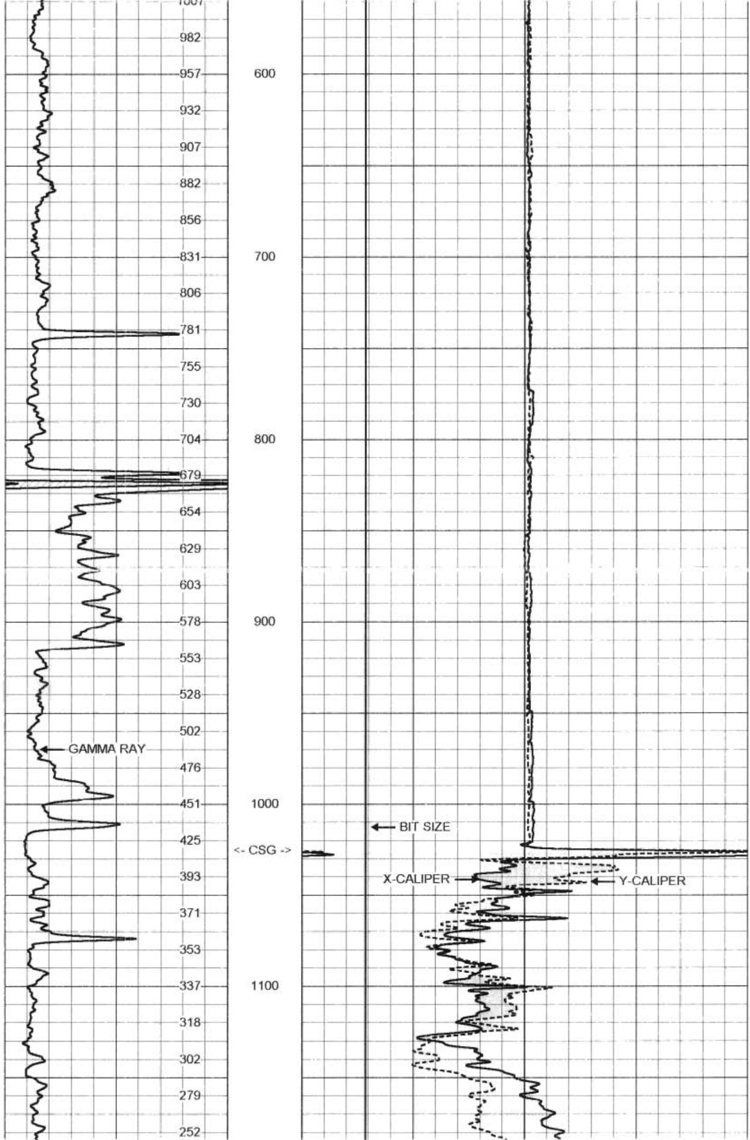
# MAIN PASS

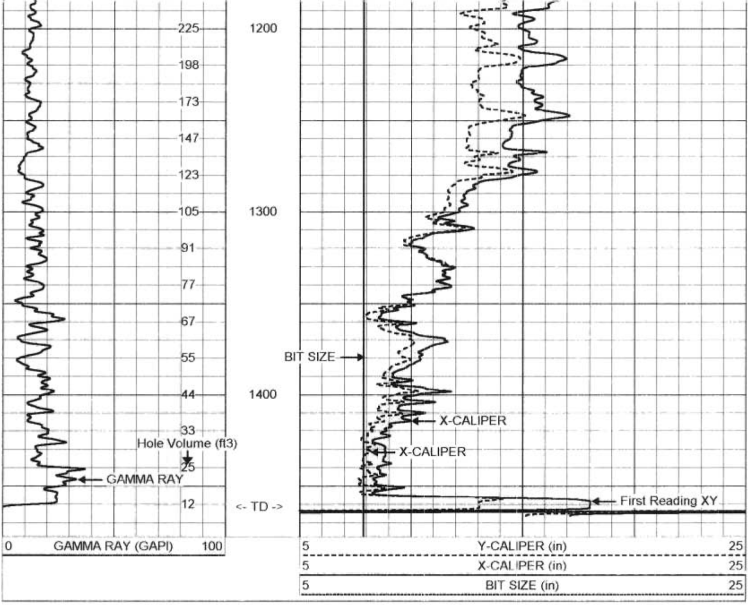
Database File: hbch1.db
Dataset Pathname: run5/MAIN
Presentation Format: xy525hb.prs
Dataset Creation: Thu May 24 10:06:30 2001
Charted by: Depth in Feet scaled 1:600

0 GAMMA RAY (GAPI) 100

5 Y-CALIPER (in) 25
5 X-CALIPER (in) 25
5 BIT SIZE (in) 25



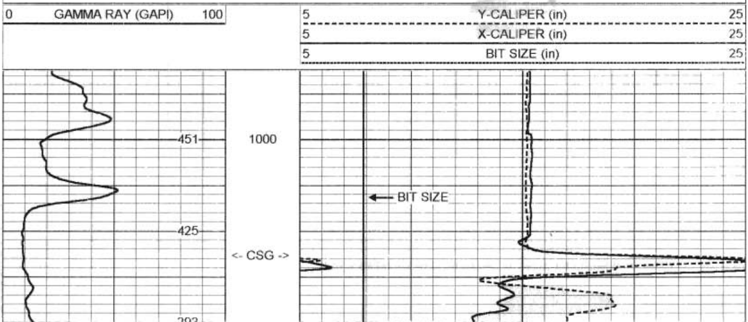


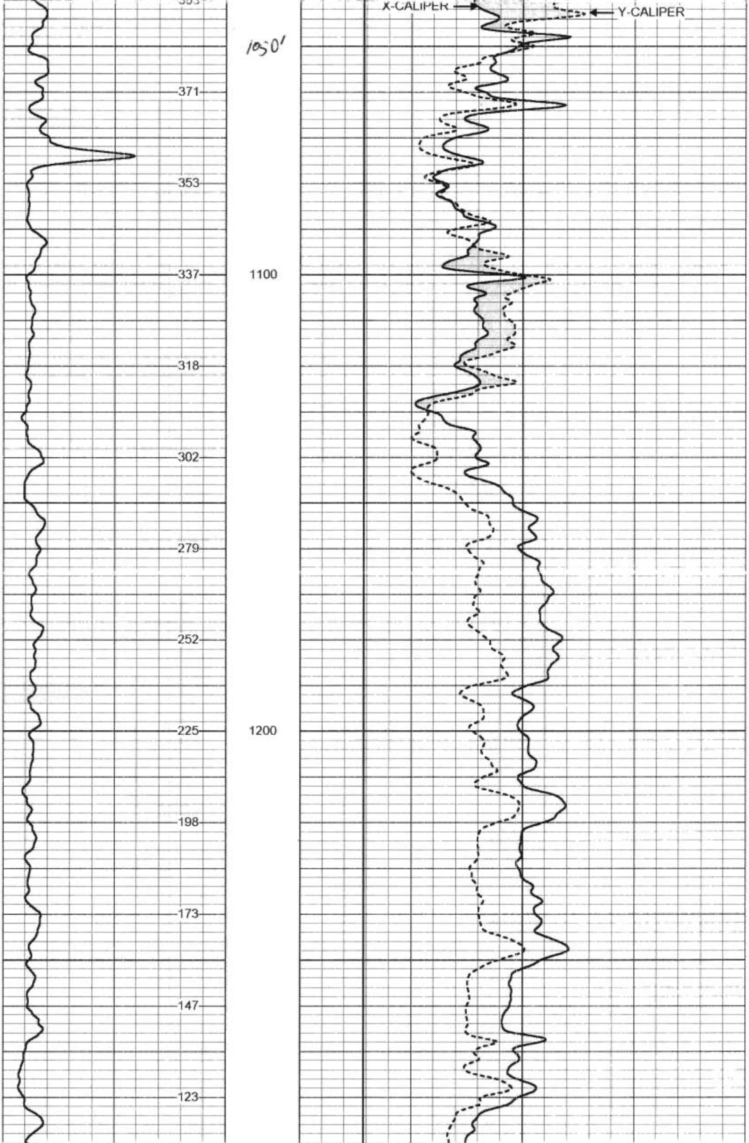


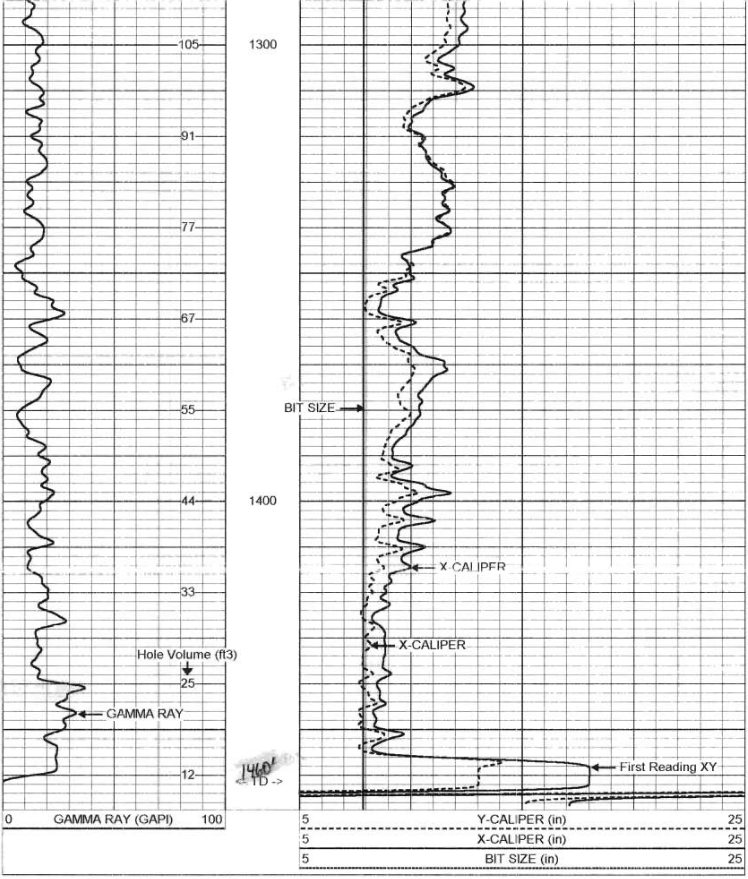
**MV**
**Geophysical**

# MAIN PASS

Database File: hbch1.db
Dataset Pathname: run5/MAIN
Presentation Format: xy525hb.prs
Dataset Creation: Thu May 24 10:06:30 2001
Charted by: Depth in Feet scaled 1:240





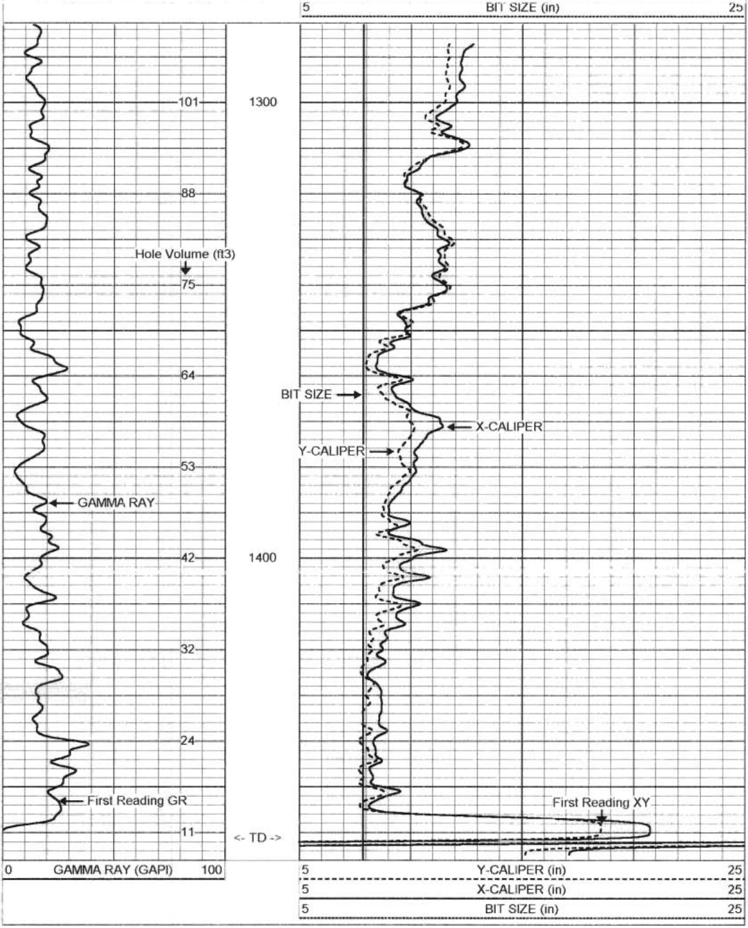


**MV Geophysical**

# REPEAT SECTION

Database File: hbch1.db
Dataset Pathname: run5/REPEAT
Presentation Format: xy525hb.prs
Dataset Creation: Thu May 24 09:19:24 2001
Charted by: Depth in Feet scaled 1:240

0 GAMMA RAY (GAPI) 100
5 Y-CALIPER (in) 25
5 X-CALIPER (in) 25

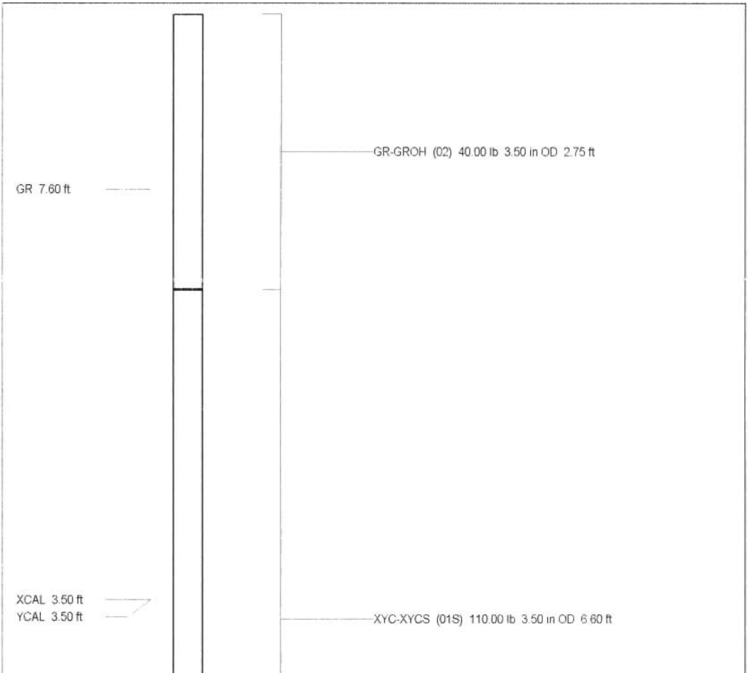


## XY Caliper Calibration Report

| | | | |
|---|---|---|---|
| Serial Number: | 01S | | |
| Tool Model: | XYCS | | |
| Performed: | Thu May 24 08:59:44 2001 | | |
| Small Ring: | 6 | in | |
| Large Ring: | 15.25 | in | |
| | X Caliper | Y Caliper | |
| Reading with Small Ring: | 537.5 | 568.948 | cps |
| Reading with Large Ring: | 709.623 | 739.484 | cps |
| Gain: | 0.0537406 | 0.0542408 | |
| Offset: | -22.8856 | -24.8602 | |

## Gamma Ray Calibration Report

| | | |
|---|---|---|
| Serial Number: | 02 | |
| Tool Model: | GROH | |
| Performed: | Thu May 24 08:56:38 2001 | |
| Calibrator Value: | 120 | GAPI |
| Background Reading: | 13.3091 | cps |
| Calibrator Reading: | 217.014 | cps |
| Sensitivity: | 0.589087 | GAPI/cps |


GR-GROH (02) 40.00 lb 3.50 in OD 2.75 ft
GR 7.60 ft
XCAL 3.50 ft
YCAL 3.50 ft
XYC-XYCS (01S) 110.00 lb 3.50 in OD 6.60 ft

| | |
|---|---|
| Dataset: | run5/pass3 |
| Total Length: | 9.35 ft |
| Total Weight: | 150.00 lb |
| O.D | 3.50 in |

Company DIVERSIFIED DRILLING
Well TPW-1
Field Highland Beach
County Palm Beach
State/Prv Florida

**MV Geophysical**

# X-Y CALIPER GAMMA RAY LOG

HB-TPW1

| | |
|---|---|
| Company | DIVERSIFIED DRILLING CORP. |
| Well | TPW-1 |
| Field | Highland Beach |
| County | Palm Beach |
| State/Prv | Florida |

Location
Town of Highland Beach
Future R.O. WTP

Other Services
DIL/LL3/SP

| | | | |
|---|---|---|---|
| Permanent Datum | Land Surface | Elevation | na |
| Log Measured From | Land Surface | | |
| Drilling Measured From | Land Surface | | |

Elevation
K.B. na
D.F. na
G.L. na

| | | | |
|---|---|---|---|
| Date | 20-APR-2001 | | |
| Run Number | THREE | | |
| Depth Driller | 1100' | | |
| Depth Logger | 1096' | | |
| Bottom Logged Interval | 1093' | | |
| Top Log Interval | 190' | | |
| Open Hole Size | 10.625" | | |
| Type Fluid | MUD | | |
| Density / Viscosity | na/na | | |
| Max. Recorded Temp. | na | | |
| Estimated Cement Top | NA | | |
| Time Well Ready | 10:00 20-APR-01 | | |
| Time Logger on Bottom | 10:00 20-APR-01 | | |
| Equipment Number | MVGS-1 | | |
| Location | Ft. Myers | | |
| Recorded By | Miller/Vincent | | |
| Witnessed By | M.Schilling | | |

| | Borehole Record | | | Tubing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| ONE | 10.625" | 35' | 275' | | | | |
| TWO | 32.5" | 35' | 245' | | | | |
| THREE | 10.625" | 240' | 1100' | | | | |

| Casing Record | Size | Wgt/Ft | Top | Bottom |
|---|---|---|---|---|
| Surface String | 34" | 0.375" WT | SURFACE | 35' |
| Prot. String | 26" | 0.375" WT | SURFACE | 240' |
| Production String | | | | |
| Liner | | | | |
| Invoice No.: | 2001043 | P.O. #: 9335 | | * FINAL PRINT * |

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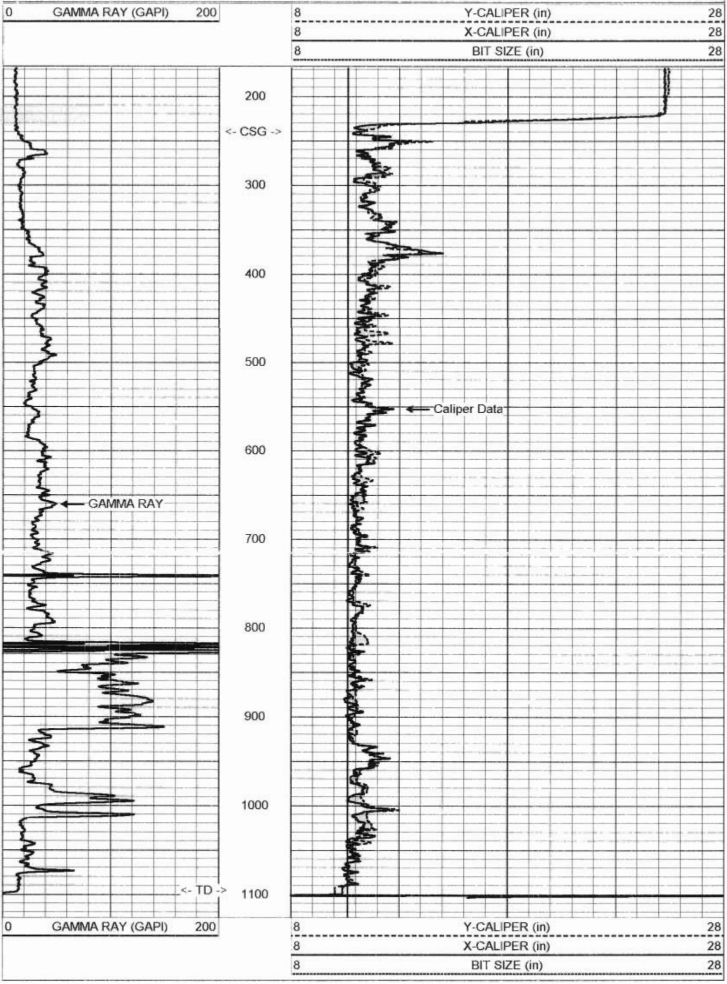
Comments

Rm=7.86 ohm-m @ 70.2 degF

**MV Geophysical**

# MAIN PASS

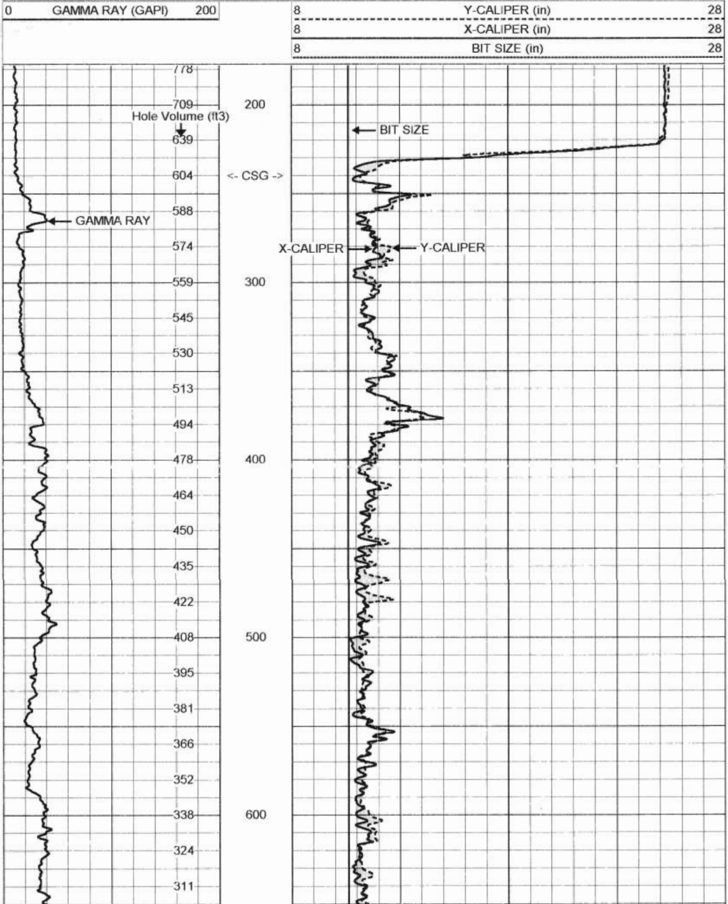
| | |
|---|---|
| Database File: | hbch1.db |
| Dataset Pathname: | run3/MAIN |
| Presentation Format: | xy828-21.prs |
| Dataset Creation: | Fri Apr 20 11:57:37 2001 |
| Charted by: | Depth in Feet scaled 1:1200 |

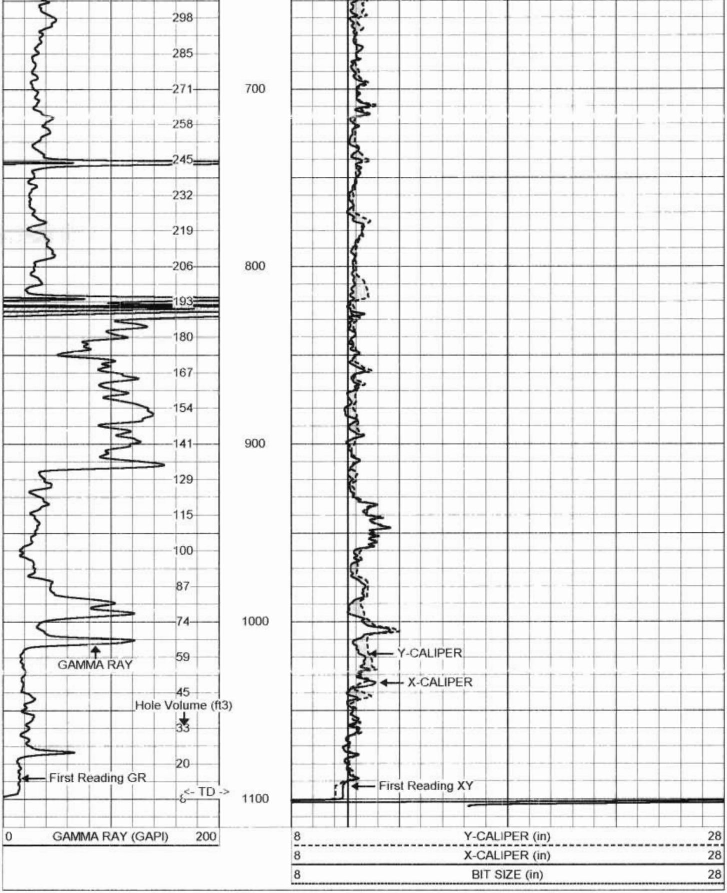


**MV Geophysical**

# MAIN PASS

Database File: hbch1.db
Dataset Pathname: run3/MAIN
Presentation Format: xy828-25.prs
Dataset Creation: Fri Apr 20 11:57:37 2001
Charted by: Depth in Feet scaled 1:600

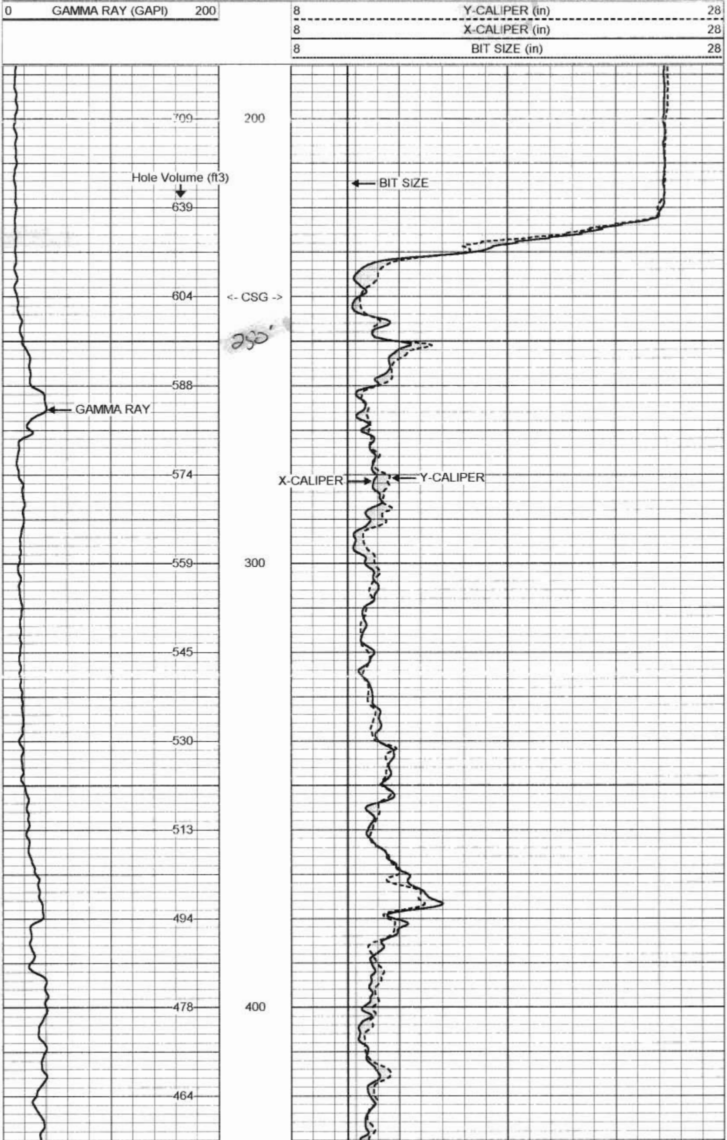


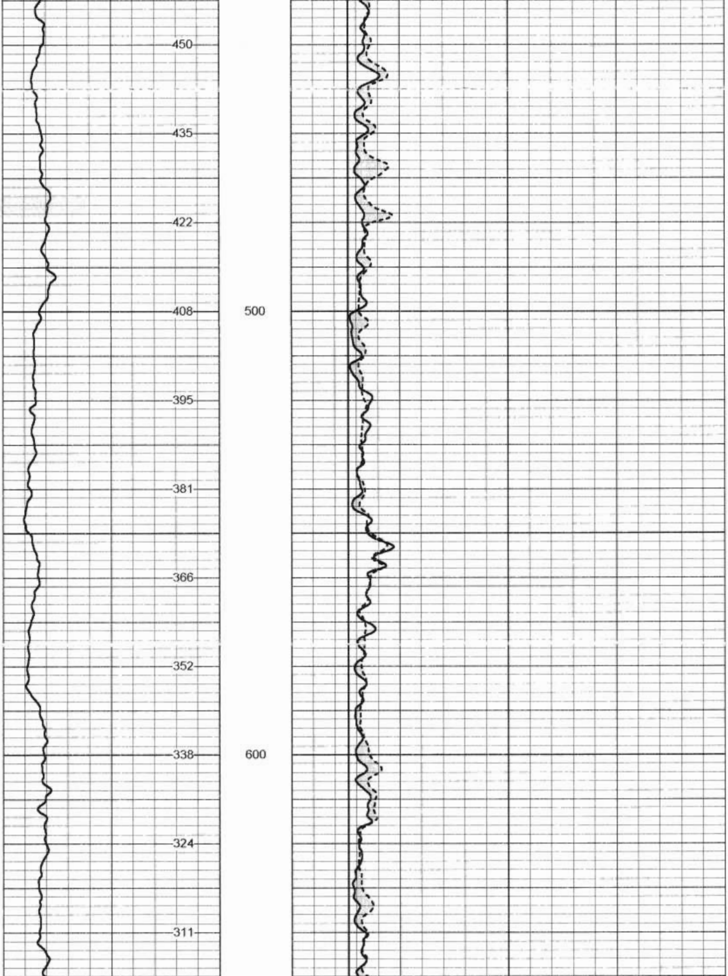


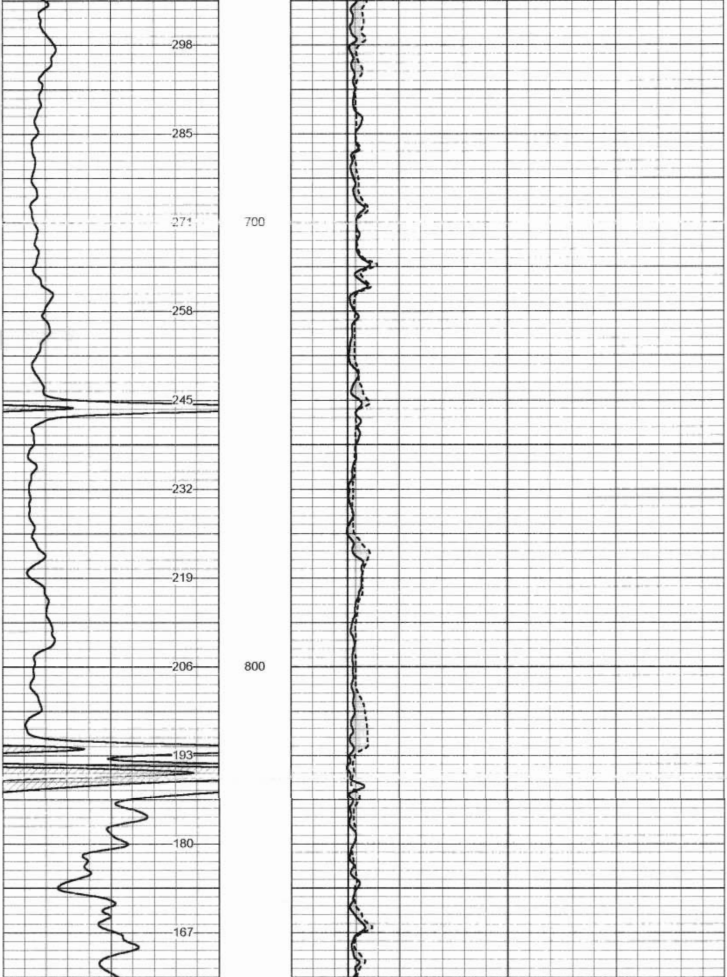
**MV**
**Geophysical**

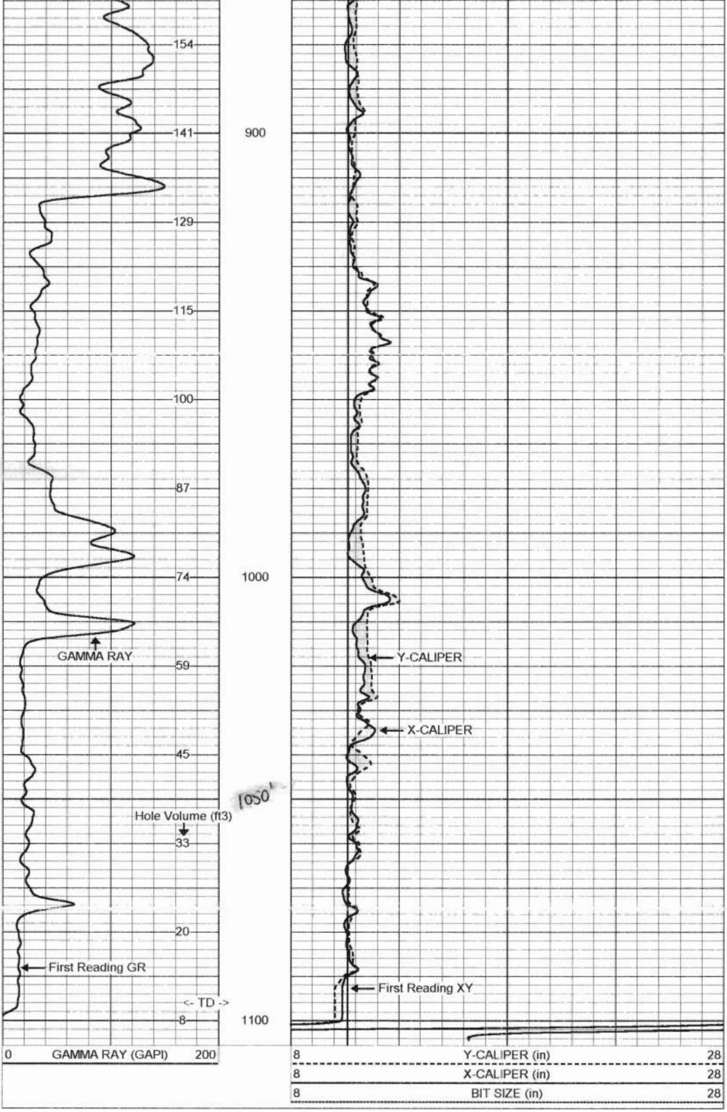
# MAIN PASS

Database File: hbch1.db
Dataset Pathname: run3/MAIN
Presentation Format: xy828-25.prs
Dataset Creation: Fri Apr 20 11:57:37 2001
Charted by: Depth in Feet scaled 1:240





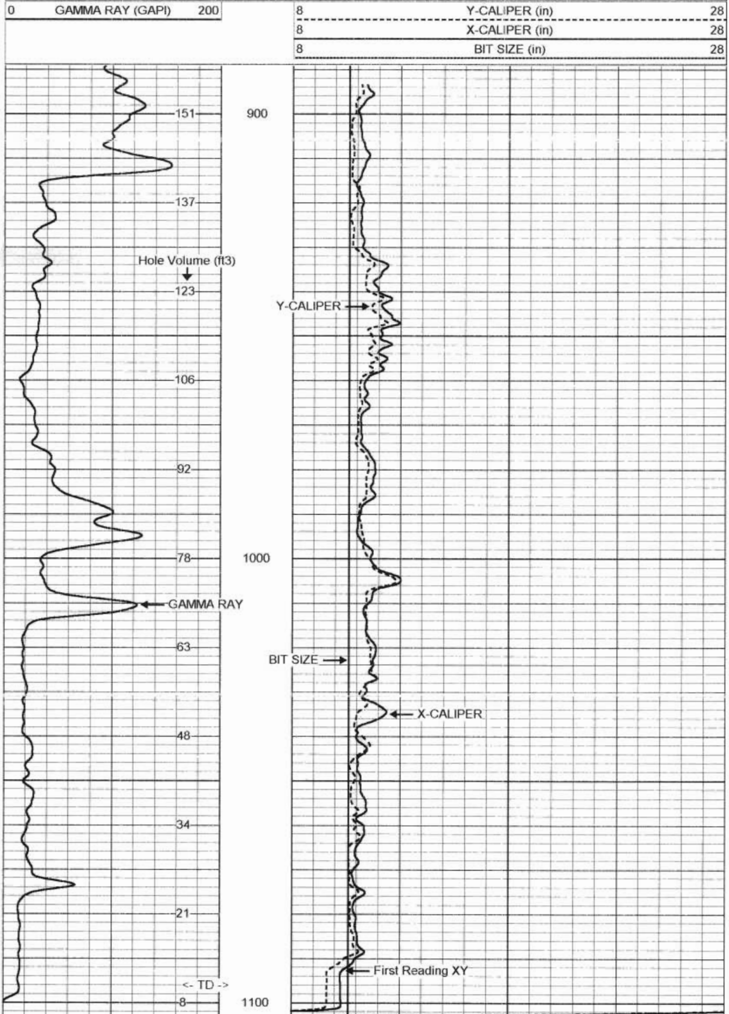


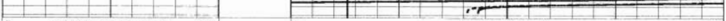


**MV Geophysical**

# REPEAT SECTION

Database File: hbch1.db
Dataset Pathname: run3/repeat
Presentation Format: xy828-25.prs
Dataset Creation: Fri Apr 20 11:05:01 2001
Charted by: Depth in Feet scaled 1:240





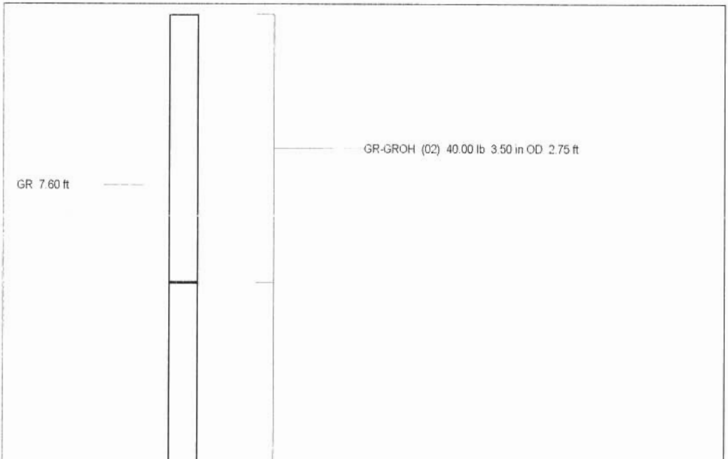
| | | | |
|---|---|---|---|
| 0 | GAMMA RAY (GAPI) | 200 | |
| 8 | Y-CALIPER (in) | 28 | |
| 8 | X-CALIPER (in) | 28 | |
| 8 | BIT SIZE (in) | 28 | |

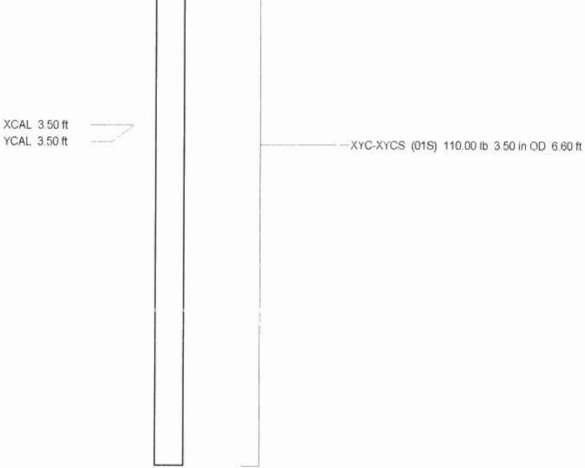
## XY Caliper Calibration Report

| | | | |
|---|---|---|---|
| Serial Number: | 01S | | |
| Tool Model: | XYCS | | |
| Performed: | Fri Apr 20 10:37:22 2001 | | |
| Small Ring: | 6 | in | |
| Large Ring: | 15.25 | in | |
| | X Caliper | Y Caliper | |
| Reading with Small Ring: | 588.557 | 551.94 | cps |
| Reading with Large Ring: | 769.444 | 723.016 | cps |
| Gain: | 0.0511368 | 0.0540697 | |
| Offset: | -24.0969 | -23.8432 | |

## Gamma Ray Calibration Report

| | | |
|---|---|---|
| Serial Number: | 02 | |
| Tool Model: | GROH | |
| Performed: | Fri Apr 20 10:34:03 2001 | |
| Calibrator Value: | 120 | GAPI |
| Background Reading: | 12.4862 | cps |
| Calibrator Reading: | 199.283 | cps |
| Sensitivity: | 0.642408 | GAPI/cps |





| | |
|---|---|
| Dataset: | run3/pass1 |
| Total Length: | 9.35 ft |
| Total Weight: | 150.00 lb |
| O.D. | 3.50 in |

**MV Geophysical**

# X-Y CALIPER
# GAMMA RAY
# LOG

HB-TPW1

Company DIVERSIFIED DRILLING
Well TPW-1
Field Highland Beach
County Palm Beach
State/Prv Florida

| | |
|---|---|
| Company | DIVERSIFIED DRILLING CORP. |
| Well | TPW-1 |
| Field | Highland Beach |
| County | Palm Beach |
| State/Prv | Florida |

Location
Town of Highland Beach
Future R.O. WTP

Other Services
DIL/LL3/SP

| | | | |
|---|---|---|---|
| Permanent Datum | Land Surface | Elevation | na |
| Log Measured From | Land Surface | | |
| Drilling Measured From | Land Surface | | |

Elevation
K.B. na
D.F. na
G.L. na

| | | | |
|---|---|---|---|
| Date | 4-APR-2001 | | |
| Run Number | ONE | | |
| Depth Driller | 275' | | |
| Depth Logger | 273' | | |
| Bottom Logged Interval | 270' | | |
| Top Log Interval | SURFACE | | |
| Open Hole Size | 10.625" | | |
| Type Fluid | MUD | | |
| Density / Viscosity | na/60 | | |
| Max. Recorded Temp. | 78 degF | | |
| Estimated Cement Top | NA | | |
| Time Well Ready | 08:00 4-APR-01 | | |
| Time Logger on Bottom | 08:15 4-APR-01 | | |
| Equipment Number | MVGS-1 | | |
| Location | Ft. Myers | | |
| Recorded By | Miller/Vincent | | |
| Witnessed By | M.Schilling | | |

| | Borehole Record | | | Tubing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| ONE | 10.625" | 35' | 275' | | | | |
| | | | | | | | |
| | | | | | | | |

| Casing Record | Size | Wgt/Ft | Top | Bottom |
|---|---|---|---|---|
| Surface String | 34" | 0.375" WT | SURFACE | 35' |
| Prot. String | | | | |
| Production String | | | | |
| Liner | | | | |
| Invoice No. | 2001029 | P.O.#: 9335 | | * FINAL PRINT * |

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule

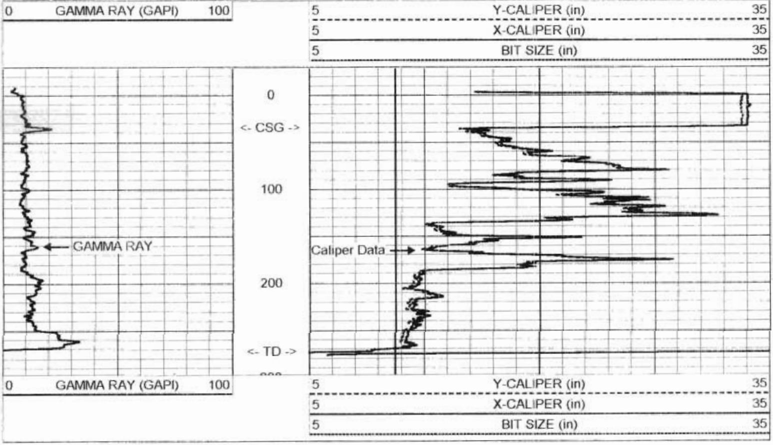
Comments

Rm=4.08 ohm-m @ 77.9 degF

**MV**
**Geophysical**

# MAIN PASS

Database File: hbch1.db
Dataset Pathname: MAIN
Presentation Format: xy535-1.prs
Dataset Creation: Wed Apr 04 10:18:34 2001
Charted by: Depth in Feet scaled 1:1200



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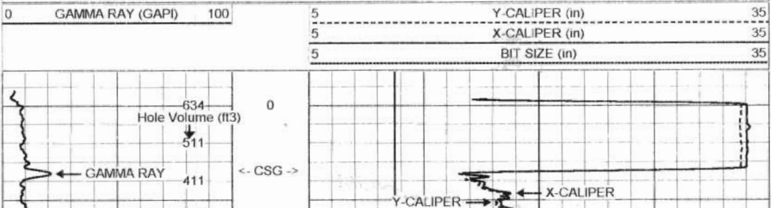
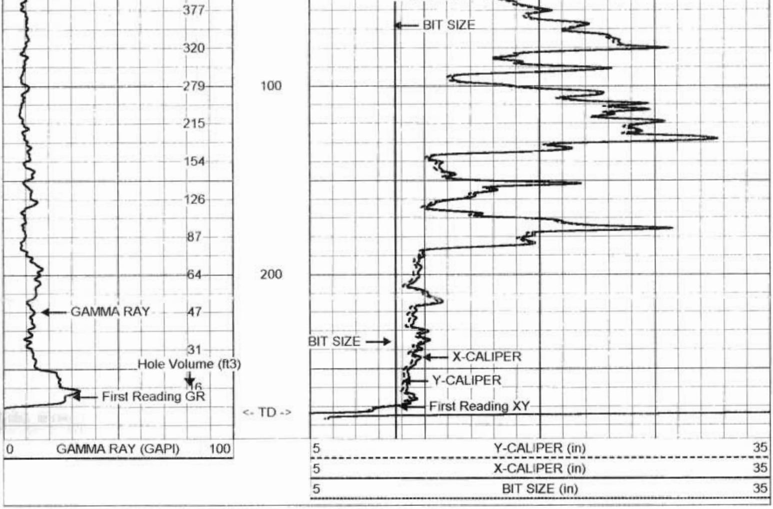
**MV**
**Geophysical**

# MAIN PASS

Database File: hbch1.db
Dataset Pathname: MAIN
Presentation Format: xy535-5.prs
Dataset Creation: Wed Apr 04 10:18:34 2001
Charted by: Depth in Feet scaled 1:600

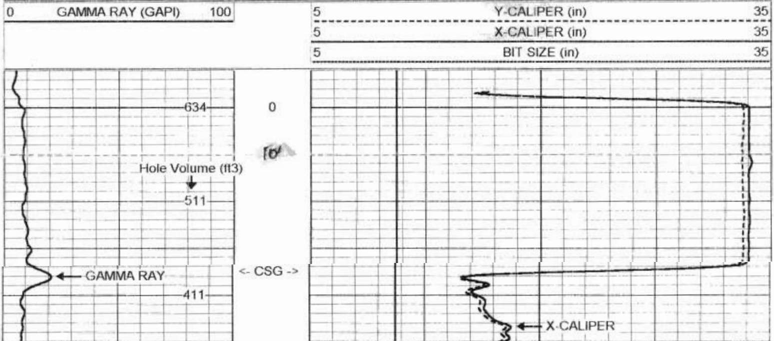


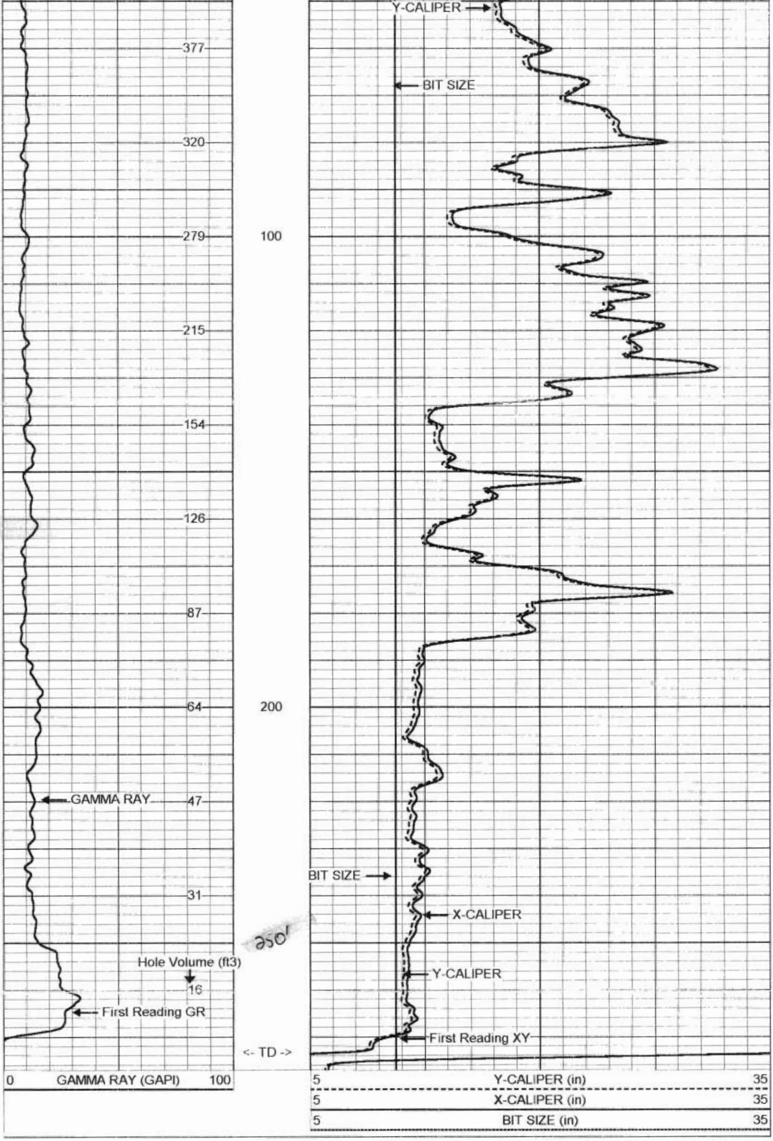


**MV Geophysical**

# MAIN PASS

| | |
|---|---|
| Database File: | hbch1.db |
| Dataset Pathname: | MAIN |
| Presentation Format: | xy535-5.prs |
| Dataset Creation: | Wed Apr 04 10:18:34 2001 |
| Charted by: | Depth in Feet scaled 1:240 |

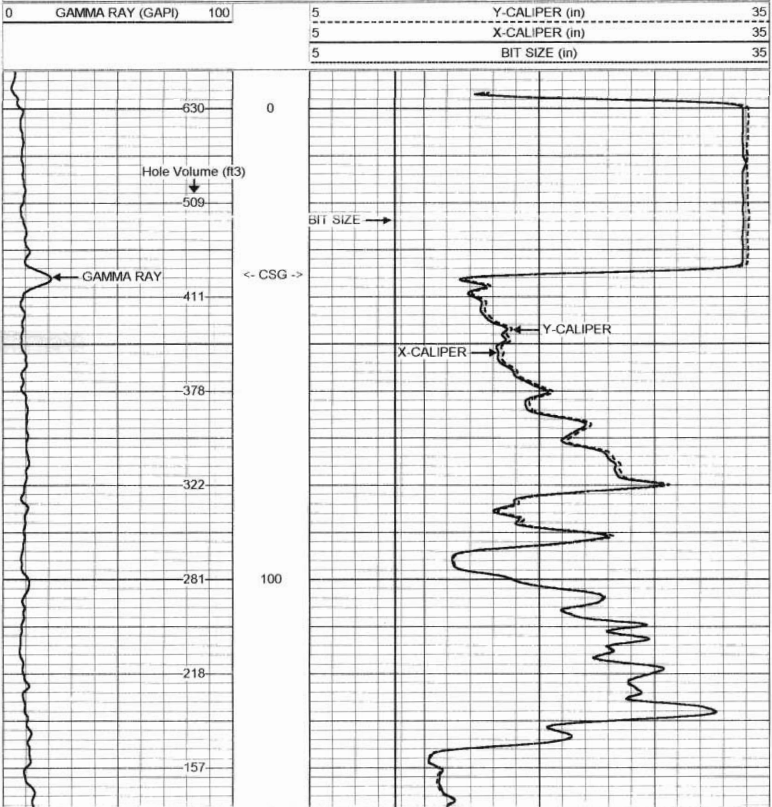


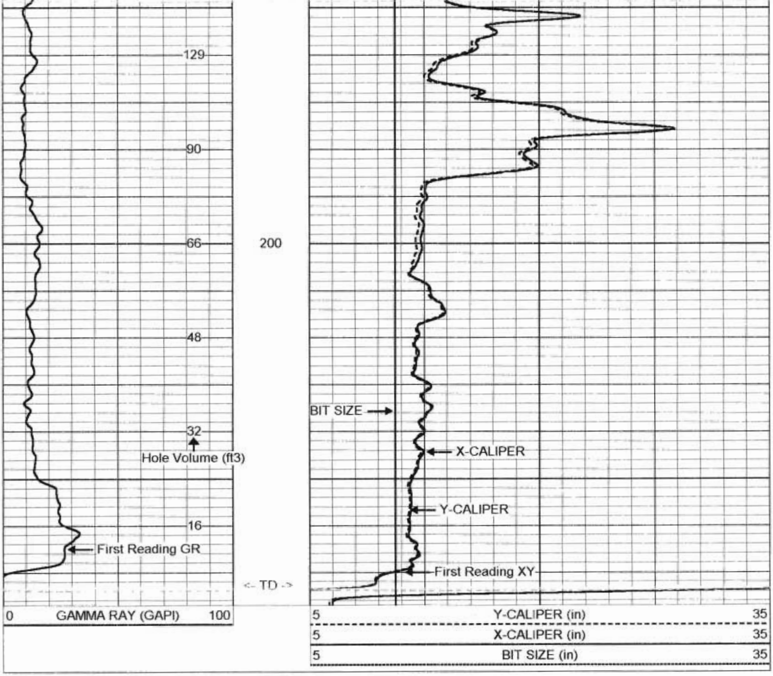


**MV Geophysical**

# REPEAT SECTION

Database File: hbch1.db
Dataset Pathname: REPEAT
Presentation Format: xy535-5.prs
Dataset Creation: Wed Apr 04 10:15:55 2001
Charted by: Depth in Feet scaled 1:240



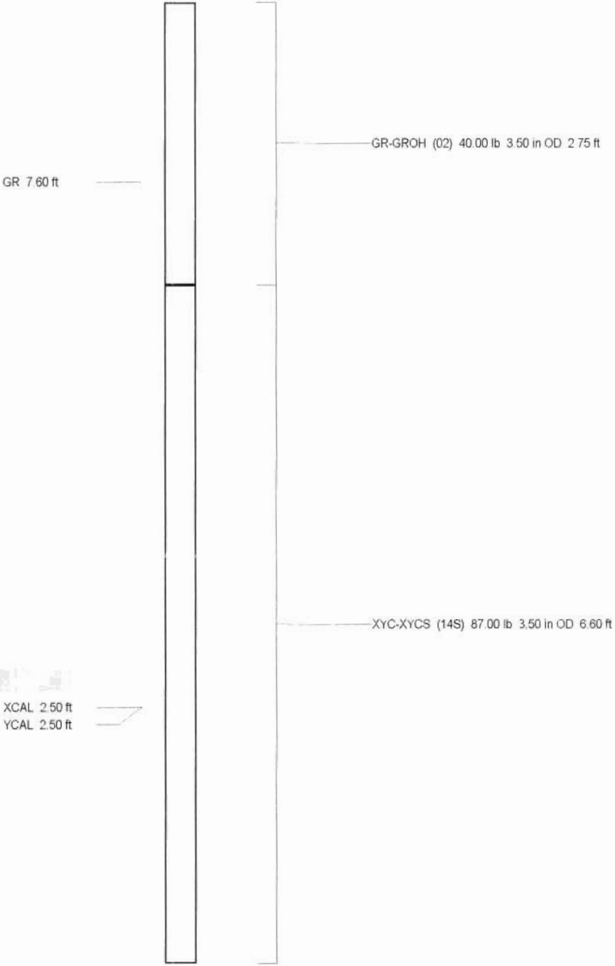


## XY Caliper Calibration Report

| | | | |
|---|---|---|---|
| Serial Number: | 14S | | |
| Tool Model: | XYCS | | |
| Performed: | Wed Apr 04 09:22:38 2001 | | |
| Small Ring: | 6 | in | |
| *Large Ring:* | *15.25* | in | |
| | X Caliper | Y Caliper | |
| Reading with Small Ring: | 415.675 | 415.575 | cps |
| Reading with Large Ring: | 544.147 | 544.048 | cps |
| Gain: | 0.0721 | 0.0719 | |
| Offset: | -23.8286 | -24.0214 | |

## Gamma Ray Calibration Report

| | | |
|---|---|---|
| Serial Number: | 02 | |
| Tool Model: | GROH | |
| Performed: | Wed Apr 04 08:39:31 2001 | |
| Calibrator Value: | 120 | GAPI |
| Background Reading: | 13.4855 | cps |
| Calibrator Reading: | 217.461 | cps |
| Sensitivity: | 0.588306 | GAPI/cps |


GR-GROH (02) 40.00 lb 3.50 in OD 2.75 ft
GR 7.60 ft
XYC-XYCS (14S) 87.00 lb 3.50 in OD 6.60 ft
XCAL 2.50 ft
YCAL 2.50 ft

| | |
|---|---|
| Dataset: | run1/pass2 |
| Total Length: | 9.35 ft |
| Total Weight: | 127.00 lb |
| O.D. | 3.50 in |

**MV Geophysical**

# FLUID RESISTIVITY TEMPERATURE LOG

HB-TPW1

Company DIVERSIFIED DRILLING
Well TPW-1
Field Highland Beach
County Palm Beach
State/Prv Florida

| | |
|---|---|
| Company | DIVERSIFIED DRILLING CORP. |
| Well | TPW-1 |
| Field | Highland Beach |
| County | Palm Beach |
| State/Prv | Florida |

Location
Town of Highland Beach
Future R.O. WTP

Other Services
XY/GR,DIL
FLOW
VIDEO

| | | | |
|---|---|---|---|
| Permanent Datum | Land Surface | Elevation | na |
| Log Measured From | Land Surface | | |
| Drilling Measured From | Land Surface | | |

Elevation
K.B. na
D.F. na
G.L. na

| | | | |
|---|---|---|---|
| Date | 24-MAY-2001 | | |
| Run Number | FIVE | | |
| Depth Driller | 1462' | | |
| Depth Logger | 1462' | | |
| Bottom Logged Interval | 1462' | | |
| Top Log Interval | SURFACE | | |
| Open Hole Size | 7.875" | | |
| Type Fluid | WATER | | |
| Density / Viscosity | na/na | | |
| Max. Recorded Temp. | na | | |
| Estimated Cement Top | NA | | |
| Time Well Ready | 08:00 24-MAY-01 | | |
| Time Logger on Bottom | 08:00 24-MAY-01 | | |
| Equipment Number | MVGS-1 | | |
| Location | Ft. Myers | | |
| Recorded By | S.Miller/J.Vincent | | |
| Witnessed By | M.Schilling (Hill) | D.McNabb (Hill) | F.Bennett (Hill) |

| | Borehole Record | | | Tubing Record | | | |
|---|---|---|---|---|---|---|---|
| Run Number | Bit | From | To | Size | Weight | From | To |
| ONE | 10.625" | 35' | 275' | FIVE | 7.875" | 1027' | 1462' |
| TWO | 32.5" | 35' | 245' | | | | |
| THREE | 10.625" | 240' | 1100' | | | | |
| FOUR | 24 | 245 | 1035 | | | | |

| Casing Record | Size | Wgt/Ft | Top | Bottom |
|---|---|---|---|---|
| Surface String | 34" | 0.375" WT | SURFACE | 35' |
| Prot. String | 26" | 0.375" WT | SURFACE | 240' |
| Production String | 17.4" PVC | 15.25" ID | SURFACE | 1027' |
| Liner | | | | Logger: 1025' |
| Invoice No. | 2001057 | P.O. #: 10034 | | * FINAL PRINT * |

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule

## Comments

STATICand DYNAMIC down passes were made. Rm=0.725 ohm-m @ 73.7 degF (Static).

FLUID RESISTIVITY CALIBRATION REPORT (Performed: 20-APR-01 10:15)

| OHM-M | CPS |
|---|---|
| 0.552 | 1545.62 |
| 0.785 | 1670.05 |
| 0.862 | 1727.69 |

TEMPERATURE CALIBRATION REPORT (performed: 22-MAY-01 10:45)

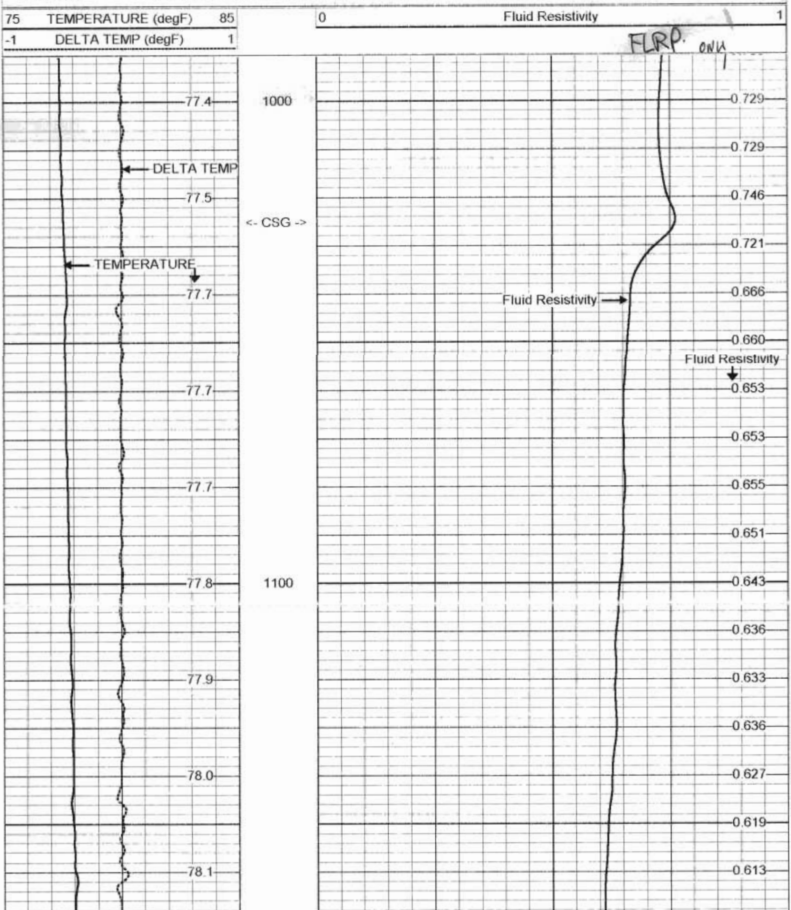
| DEG-F | CPS |
|---|---|
| 40.0 | 2116.52 |
| 149.1 | 5877.18 |

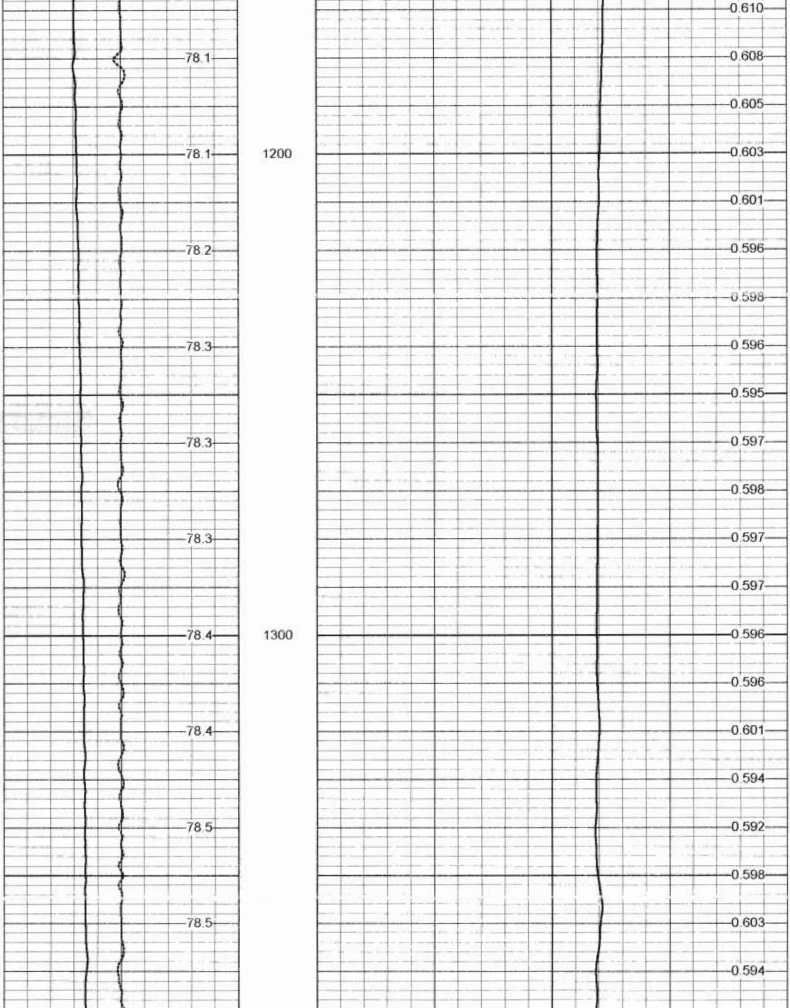
**MV Geophysical**

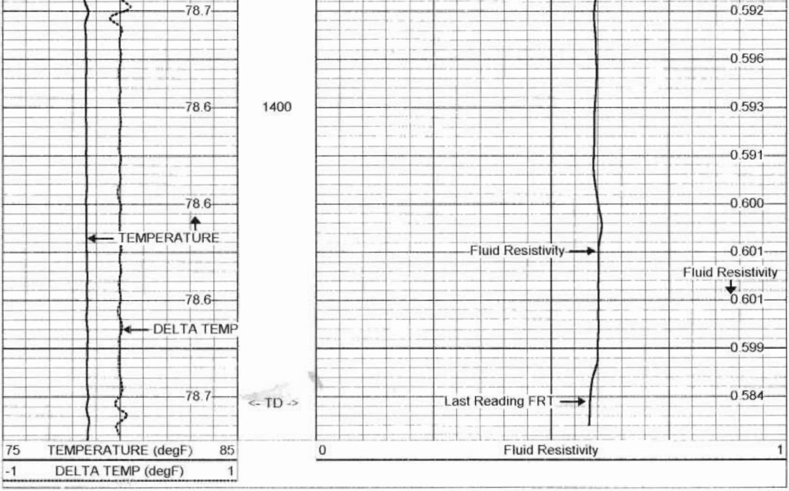
# DYNAMIC FRT

| | |
|---|---|
| Database File: | hbch1.db |
| Dataset Pathname: | run5/frtd |
| Presentation Format: | frthbch.prs |
| Dataset Creation: | Thu May 24 13:57:41 2001 |
| Charted by: | Depth in Feet scaled 1:240 |

FLRP. ONLY



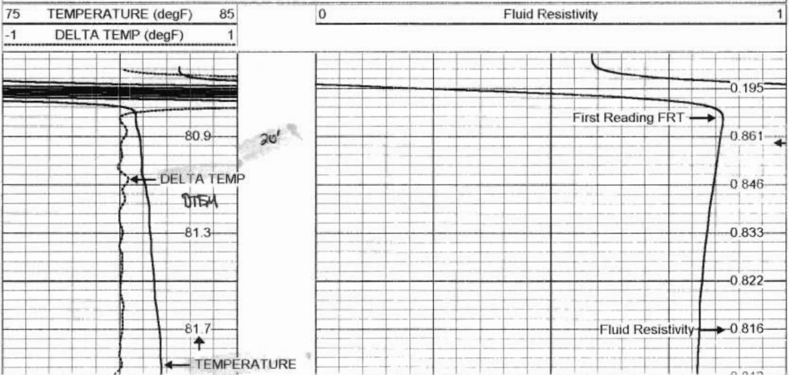


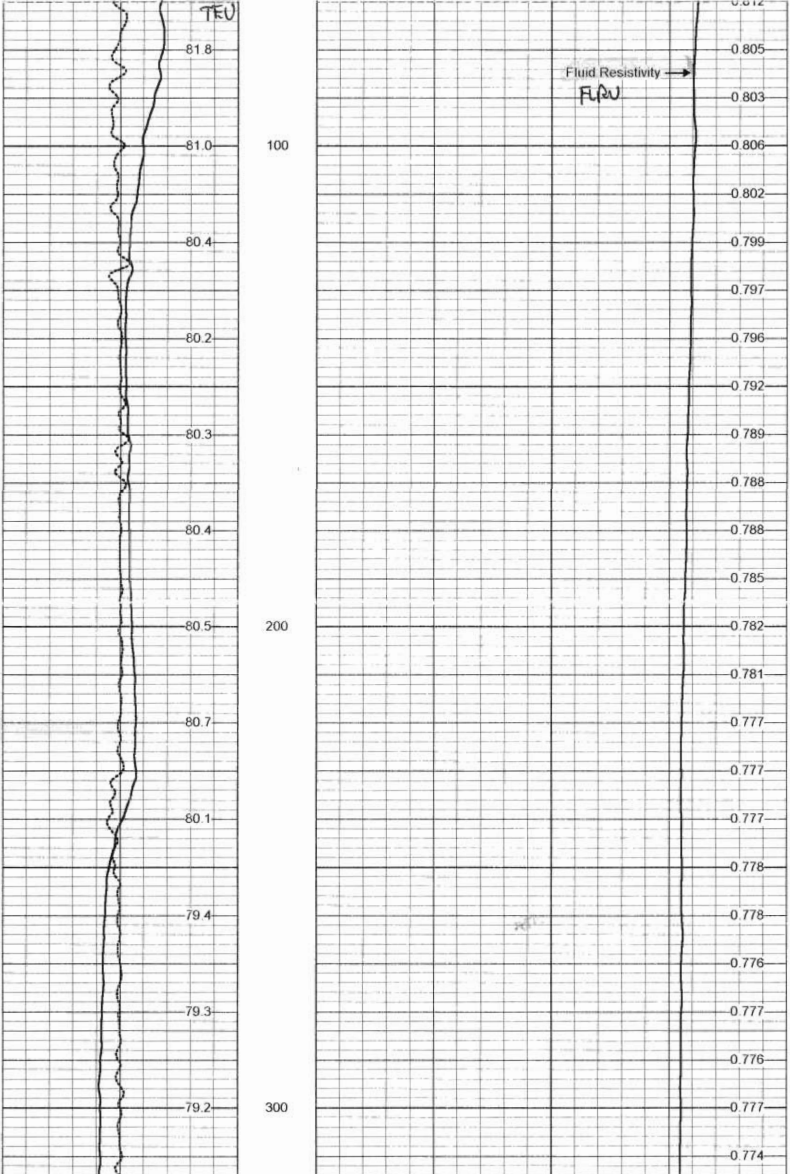


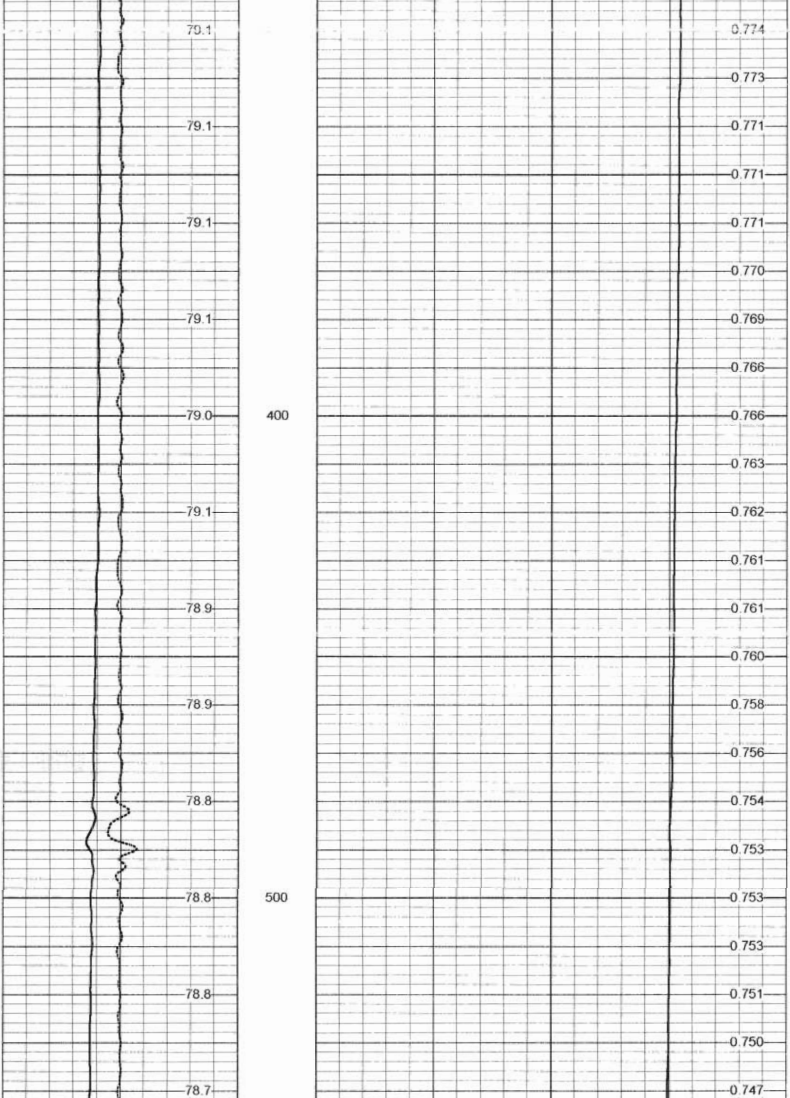
**MV Geophysical**

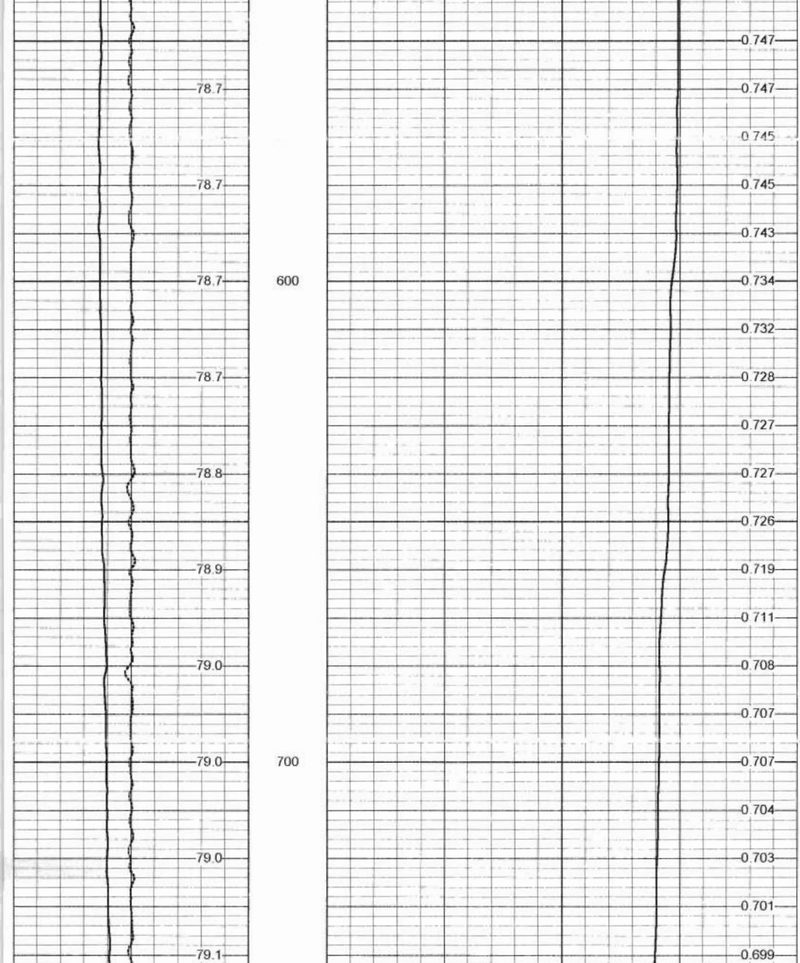
# STATIC FRT

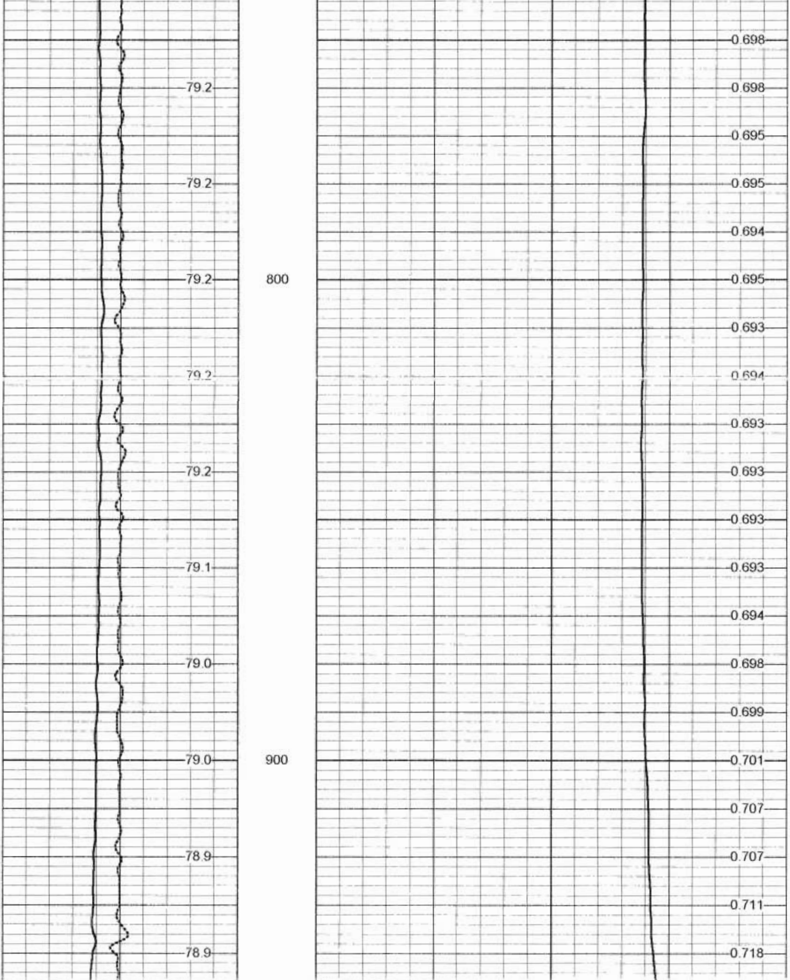
| | |
|---|---|
| Database File: | hbch1.db |
| Dataset Pathname: | run5/FRTS |
| Presentation Format: | frthbch.prs |
| Dataset Creation: | Thu May 24 08:39:34 2001 |
| Charted by: | Depth in Feet scaled 1:240 |

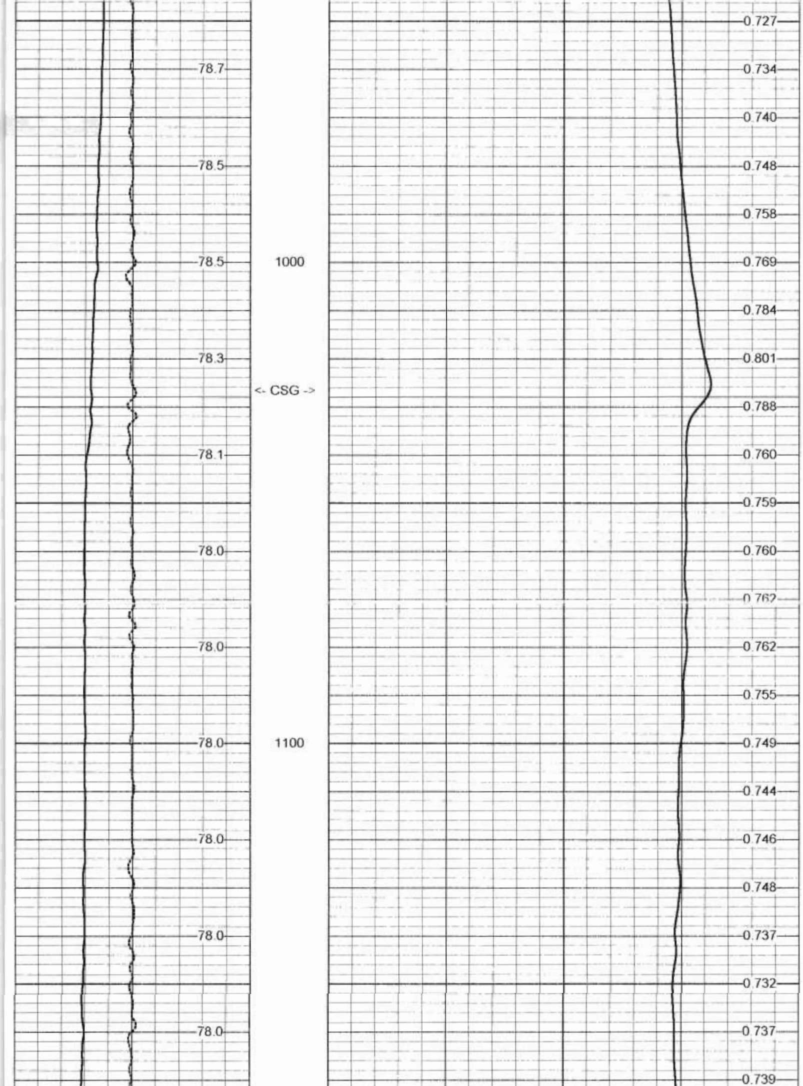


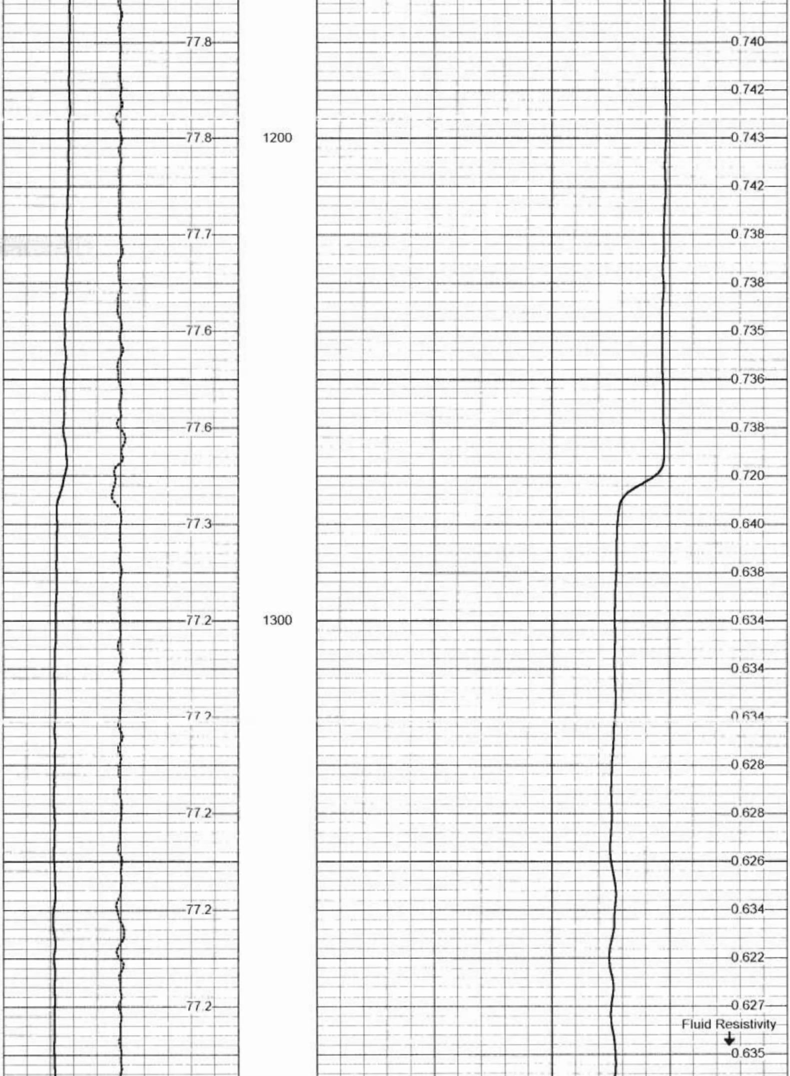


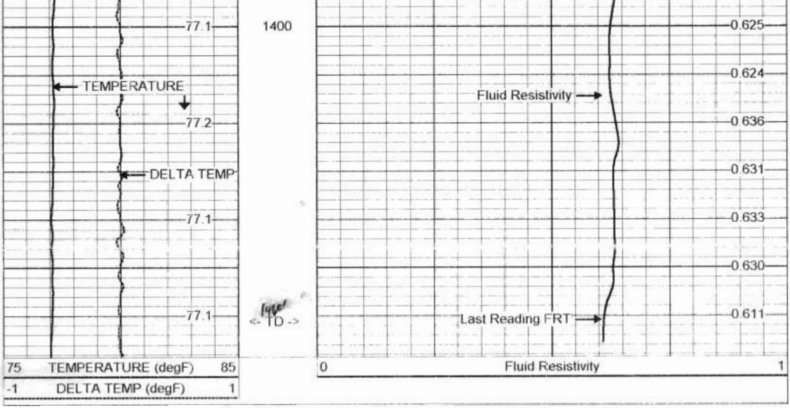


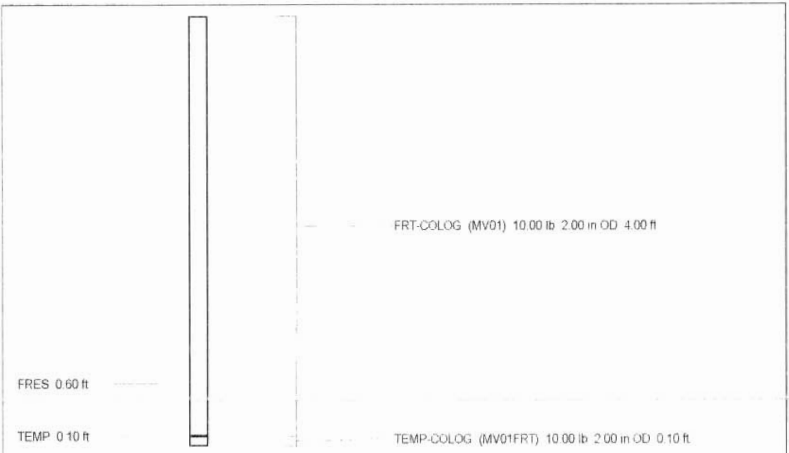











FRT-COLOG (MV01) 10.00 lb 2.00 in OD 4.00 ft
FRES 0.60 ft
TEMP 0.10 ft
TEMP-COLOG (MV01FRT) 10.00 lb 2.00 in OD 0.10 ft

| | |
|---|---|
| Dataset | run5/pass1 |
| Total Length | 4.10 ft |
| Total Weight | 20.00 lb |
| O.D. | 2.00 in |