# APPENDIX C

# WELL DEVELOPMENT LOGS

# Groundwater Well Development Log

Fort McClellan, Alabama

Project Number: 796887
Form Completed by: Lee FLIPPEN
Well Developed by (person/firm): Lee FLIPPEN / The Shaw I+E

Parcel No.: HR95Q
Well No.: MW01
Date started: 7-30-02

## Monitoring Well Information

*FINAL T.D. = 59.00' Ground Level
TOC = +3.3

Development Method: surge + purge
Development Equipment: whale pumps, Heron Water indicator, Horiba U-22, Aquafast II
Casing Diameter: uncut 2" .163 TOC = +4.4'

Beginning Measurments
Depth to Water (ft): 26.50' AT Ground Level TOC = +3.3'
Total depth of Well (ft): 57.42' AT Ground Level

*Measurements are at Ground Surface. 7-30-02 PID 1.0 BZ 0.0 Screen 30'-60'? TOC

| Time 24hr | Purge Volume (gal) | Water Level (ft) (TOC) | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments (Date if different from start date) (Purge Rate, Pump Position, Misc.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | -Surged well screen- |
| 10:25 | Ø | 26.50 | 6.14 | .136 | 999+ | 8.43 | 23.35 | Brown | Depth 57', Purge Rate = .7gpm |
| 10:40 | 10.5 | 39.60 | 5.61 | .052 | 999+ | 8.85 | 20.42 | Brown | Depth 57', PR .6 gpm |
| 10:55 | 19.5 | 46.20 of 7-30-02 46.2 | 5.08 | .037 | 999+ | 4.78 | 21.20 | Brown | Depth 57', PR .3 gpm |
| 11:10 | 24.0 | 53.4 | 4.93 | .035 | 999+ | 3.51 | 23.47 | Brown | Depth 57', PR .25 gpm |
| 11:15 | 24.0 | Dry | well RAN dry - wait 20 min. and check for 80% Recovery = TD 57.42 - (.80 x WC 30.92) = water level of 32.68' GS | | | | | | |
| 11:35 | 24.0 | 51.82 | well did NOT recover 80% = 32.68' GS water level Recharge Rate = 57.42' TD - 51.80' DTW = 5.6'/20 min. = .28 ft/min | | | | | | |
| — | 7-30-02 | — | Stopped parameters for the Day | | | | | — | Lee Flippen 7-30-02 |

TD - DTW = WC x 2'/4' well = One PV x 5 = Min PV + H20 to install well = Minimum H20 to remove
57.42 - 26.50 = 30.92 x .163 = 5.04 x 5 = 25.20 + 270 g = 295.2 g



OCD
8/6/02

Parcel No.: HR95Q
Well ID: MW01
Date: 8-1-02

8-1-02 PID 0.0 Lee FLIPPEN

| Time 24hr | Purge Volume (gal) | Water Level (ft) (TOC) | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments (Date if different from start date) |
|---|---|---|---|---|---|---|---|---|---|
| 8-1-02 09:00 | 24.0 | 32.20 | 7.02 | .039 | 999+ | 9.61 | 20.08 | Brown | Depth 57', Purge Rate .25 gpm |
| 09:15 | 26.25 | 42.16 | 5.28 | .032 | 999+ | 7.66 | 19.35 | Brown | Depth 57', PR .15 gpm |
| 09:30 | 28.50 | 45.41 | 4.84 | .032 | 999+ | 8.54 | 20.57 | Brown | Depth 57', PR .15 gpm |
| 09:45 | 30.25 | 47.74 | 4.80 | .031 | 999+ | 8.38 | 21.17 | Brown | Depth 57', PR .10 gpm |
| 10:00 | 32.50 | 48.11 | 4.91 | .031 | 999+ | 8.46 | 25.15 | Brown | Depth 57', PR .10 gpm |
| 10:15 | 34.00 | 48.77 | 5.38 | .032 | 999+ | 8.31 | 22.08 | Brown | Depth 57', PR .10 gpm |
| 10:30 | 35.50 | 48.81 | 5.26 | .032 | 999+ | 8.78 | 21.46 | Brown | Depth 57', PR .10 gpm |
| 10:45 | 37.00 | 48.85 | 5.25 | .032 | 999+ | 8.80 | 21.33 | Brown | Depth 57', PR .10 gpm |
| 11:00 | 38.50 | 48.91 | 5.30 | .032 | 999+ | 8.49 | 21.47 | Brown | Depth 57', PR .05 gpm |
| 11:15 | 39.25 | 48.08 | 4.98 | .032 | 999+ | 8.46 | 22.17 | Brown | Depth 57', PR .05 gpm |
| 11:30 | 40.00 | 48.63 | 5.18 | .035 | 999+ | 8.24 | 21.15 | Brown | Depth 57', PR .05 gpm |
| 11:45 | 40.75 | 50.29 | 5.17 | .032 | 999+ | 9.19 | 24.90 | Brown | Depth 57', PR .05 gpm |
| 12:00 | 41.50 | 51.22 | 5.43 | .032 | 999+ | 9.26 | 23.15 | Brown | Depth 57', PR .05 gpm |
| 12:15 | 42.25 | 52.71 | 5.59 | .031 | 999+ | 8.01 | 24.69 | Brown | DEPTH 57', PR .05 gpm |

Parcel No.: HR95Q
Well ID: MW01
Date: 8-1-02

8-5-02 PID 0.0 DTW 37.42' Lee FLIPPEN

| Time 24hr | Purge Volume (gal) | Water Level (ft) (TOC) | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments (Date if different from start date) |
|---|---|---|---|---|---|---|---|---|---|
| 12:30 | 43.00 | 53.43 | 5.54 | .035 | 999+ | 8.16 | 21.91 | Brown | Depth 57', Purge Rate .05 gpm |
| 12:45 | 43.75 | 55.08 | 5.62 | .034 | 999+ | 8.34 | 23.63 | Brown | Depth 57', PR .05 gpm |
| 13:00 | 44.50 | 55.53 | 5.50 | .034 | 999+ | 8.41 | 22.12 | Brown | Depth 57', PR .05 gpm |
| 5 hrs 13:15 | 45.25 | 56.72 | 5.56 | .033 | 999+ | 8.23 | 25.40 | Brown | Depth 57, PR .05 gpm |
| 13:30 | 46.00 | Below Pumps | 5.49 | .033 | 999+ | 8.83 | 23.34 | Brown | Depth 57, PR .05 gpm |
| 5.5 hrs 13:45 | 46.75 | " | 5.68 | .031 | 999+ | 6.82 | 22.27 | Brown | Depth 57, PR .05 gpm |
| 13:50 | — | Dry — | wait | 20 min. | TD 57.42' − (.80X WC 25.22') = 37.24' water level 80% = 37.24' water level And check for 80% Recovery = 37.24' At Ground Surface | | | | |
| 14:10 | 46.75 | Below Pumps | — well | did not | recover 80% - stopped parameters - [illegible] 8-1-02 | | | | |
| 8-1-02 | — | ~~10.~~ 8-1-02 | Stopped parameters For the Day | | | | | | — — — — — — |
| 8-5-02 15:00 | 46.75 | 37.43 | 6.83 | .039 | 776 | 10.37 | 21.05 | Brown | 8-5-02 Depth 38', 37', 39', 41' PR .15 gpm |
| 15:15 | 49.0 | 40.01 | 5.82 | .034 | 289 | 10.02 | 22.11 | cloudy | Depth 43', 45', 47' PR .15 gpm |
| 6 hrs 15:30 | 51.25 | 41.52 ~~41~~.57 | 5.71 | .032 | 148 | 10.79 | 21.34 | cloudy | Depth 49', 51', 53' PR .15 gpm |
| 15:45 | 53.5 | 42.25 | 5.66 | .032 | 208 | 10.09 | 22.05 | cloudy | Depth 55', 57' PR .15 gpm |
| 16:00 | 55.75 | 43.81 | 5.60 | .033 | 684 | 10.27 | 21.65 | cloudy | Depth 57', PR .6 gpm |

Parcel No.: HR95Q
Well ID: MW01
Date: 8-6-02

8-6-02 PID 0.0

Lee FLIPPEN

| Time 24hr | Purge Volume (gal) | Water Level (ft) (TOC) | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments (Date if different from start date) |
|---|---|---|---|---|---|---|---|---|---|
| 16:10 | 61.75 | Dry — Stopped parameters For the Day — | | | | | | | 8-5-02 ~~Lee Flippen~~ |
| 8-6-02 09:10 | 61.75 | 46.64 | 5.59 | .038 | 999+ | 9.47 | 20.7 | Brown | Depth 55', P.Rate .15 gpm |
| 09:25 | 64.0 | 49.01 | 5.50 | .034 | 368 | 9.02 | 21.1 | cloudy | Depth 55', PR .15 gpm |
| 7hrs 09:40 | 66.25 | 52.22 | 5.51 | .032 | 394 | 9.01 | 24.8 | Cloudy | Depth 55', PR .10 gpm |
| 09:55 | 67.75 | 53.02 | 5.54 | .032 | 197 | 8.88 | 24.6 | cloudy | Depth 55', PR .10 gpm |
| 10:10 | 69.25 | 52.81 | 5.49 | .032 | 297 | 9.42 | 26.5 | cloudy | Depth 55', PR .10 gpm |
| 10:25 | 70.75 | 53.17 | 5.46 | .032 | 357 | 9.41 | 25.0 | cloudy | Depth 55', PR .10 gpm |
| 8hrs 10:40 | 72.25 | 53.91 | 5.55 | .033 | 224 | 9.70 | 25.1 | cloudy | -collected 1 L $H_2O$ Photo Sample- ~~Lee Flippen~~ 8-6-02 |
| : | | | | | | | | | —well Developed— |
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~~Lee Flippen~~ 8-6-02

# Groundwater Well Development Log

Fort McClellan, Alabama

Project Number: 796887
Form Completed by: Lee FLIPPEN
Well Developed by (person/firm): Lee FLIPPEN / Shaw I+E

Parcel No.: HR 95Q
Well No.: MW02
Date started: 7-18-02

## Monitoring Well Information

FINAL TD = 37.77' TOC

Development Method: Surge + Purge
Development Equipment: whale pumps, Horiba U-22, AquafASTII, Heron water indicator
Casing Diameter: 2" .163

Beginning Measurments
Depth to Water (ft): 14.45' AT Ground level
Total depth of Well (ft): 35.10' AT Ground Level, FINAL 37.77

PID 0.5 BZ 0.0, screen 25'-35'

| Time 24hr | Purge Volume (gal) | Water Level (ft) (TOC) | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments (Date if different from start date) (Purge Rate, Pump Position, Misc.) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | - Surged well screen - |
| 09:55 | Ø | 14.45 | 6.04 | .144 | 999+ | 4.69 | 21.98 | Reddish Brown | Depth 35', PR .8 gpm (Purge Rate) |
| 10:10 | 12.0 | 33.50 | 5.97 | .084 | 999+ | 5.25 | 21.92 | Brown | Depth 35', PR .13 gpm |
| 10:25 | 13.95 | 32.22 | 5.92 | .056 | 486 | 7.41 | 22.27 | Brown | Depth 35', PR .13 gpm |
| 10:40 | 15.9 | 32.62 | 5.68 | .051 | 999+ | 7.34 | 22.58 | Brown | Depth 35', PR .13 gpm |
| 10:55 | 17.85 | 33.16 | 5.69 | .051 | 608 | 7.54 | 21.62 | Brown | Depth 35', PR .13 gpm |
| 11:10 | 19.8 | 33.68 | 5.50 | .050 | 999+ | 7.45 | 23.45 | Brown | Depth 35', PR .13 gpm |
| 11:25 | 21.75 | 33.82 | 5.68 | .046 | 524 | 7.68 | 23.31 | Brown | Depth 35', PR .13 gpm |

TD - DTW = WC x 2'/4' well = One PV x 5 = Min PV + H20 to install well = Minimum H20 to remove

35.10 - 14.45 = 20.65' x .163 = 3.37g x 5 = 16.83g + 75.0 g = 91.83 g

acid Kentucky

7/25/02

Parcel No.: HR95Q
Well ID: MW02
Date: 7-18-02

7-24-02 PID 0.0, TD = 37.77' TOC, DTW 17.52' TOC Lee FLIPPEN

| Time 24hr | Purge Volume (gal) | Water Level (ft) (TOC) | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments (Date if different from start date) |
|---|---|---|---|---|---|---|---|---|---|
| 11:40 | 23.7 | 33.88 | 5.60 | .042 | 999+ | 7.75 | 24.07 | Brown | Depth 35', Purge Rate .13 gpm |
| 11:55 | 25.65 | 33.68 | 5.59 | .042 | 896 | 7.16 | 24.18 | Brown | " " |
| 12:10 | 27.6 | 33.81 LF 7-18-02 33.81 | 5.59 | .042 | 999+ | 7.41 | 24.61 | Brown | " " |
| 2½hrs 12:15 | 27.6 | Dry - well Ran dry - wait 20 min. and check for 80% Recovery = | | | | | | | |
| - : - - | - - TD | 35.10' - (W.C. 20.65' x .80) = W.L. (80%) = | | | | | 18.58' water level | | 80% Recovery = 18.58' water level |
| 12:35 | 27.6 | 31.50' - well did NOT Recover 80%. Recharge Rate = TD 35.10' - 31.50' DTW = 3.6'/20 min = .18 ft./min. ~~[illegible]~~ 7-18-02 | | | | | | | |
| 7-24-02 09:50 | 27.6 | 17.52 | 6.06 | .036 | 622 | 9.18 | 20.54 | Brown | 7-24-02 Depth 25', 27', PR .10 gpm |
| 10:05 | 29.1 | 23.27 | 5.05 | .030 | 822 | 8.11 | 22.32 | Brown | Depth 29', 31', PR .10 gpm |
| 10:20 | 30.6 | 25.01 | 4.94 | .029 | 550 | 7.40 | 22.70 | Brown | Depth 33', 35', PR .06 gpm |
| 3hrs 10:35 | 31.5 | 25.55 | 4.92 | .028 | 779 | 8.15 | 23.89 | Brown | Depth 35', PR .06 gpm |
| 10:50 | 32.4 | 25.78 | 4.96 | .027 | 286 | 7.50 | 24.40 | cloudy | Depth 35', PR .06 gpm |
| 11:05 | 33.3 | 25.90 | 5.13 | .026 | 404 | 8.67 | 24.82 | Brown | Depth 35', PR .06 gpm |
| 11:20 | 34.2 | 25.95 | 5.18 | .026 | 281 | 8.08 | 25.12 | cloudy | Depth 35', PR .06 gpm |
| 4hrs 11:35 | 35.1 | 25.98 | 5.44 | .026 | 393 | 7.95 | 27.07 | cloudy | Depth 35', PR .05 gpm |

Parcel No.: HR95Q
Well ID: MW02
Date: 7-24-02

Lee FLIPPEN

| Time 24hr | Purge Volume (gal) | Water Level (ft) (TOC) | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments (Date if different from start date) |
|---|---|---|---|---|---|---|---|---|---|
| 11:50 | 35.85 | 24.52 | 5.12 | .026 | 273 | 8.27 | 25.18 | cloudy | —Heavey RAIN— Depth 35', Purge Rate .05 gpm RAIN |
| 12:05 | 36.60 | 24.98 | 5.08 | .026 | 411 | 7.91 | 24.93 | cloudy | Depth 35', P.R. .05 gpm |
| 12:20 | 37.35 | 24.82 | 5.20 | .026 | 455 | 7.48 | 23.41 | cloudy | Depth 35', PR .05 gpm |
| 5hrs 12:35 | 38.10 | 25.11 | 4.89 | .025 | 241 | 7.18 | 23.66 | cloudy | Depth 35', PR .05 gpm |
| 12:50 | 38.85 | 25.08 | 4.91 | .025 | 196 | 7.60 | 23.47 | cloudy | Depth 35', PR .05 gpm RAIN Stopped |
| 13:05 | 39.60 | 27.67 | 4.99 | .024 | 194 | 7.31 | 22.99 | cloudy | Depth 35', PR .05 gpm |
| 13:20 | 40.35 | 27.94 | 5.02 | .024 | 100 | 7.28 | 22.91 | cloudy | Depth 35', PR .05 gpm Lightening |
| 13:35 | 41.10 | ——— | Lightening in Area — NO Parameters — | | | | | | —Lightening in Area— |
| 6hrs 13:45 | 41.60 | 26.90 | 5.51 | .024 | 310 | 7.86 | 25.43 | cloudy | Depth 35', PR .05 gpm |
| 14:00 | 42.35 | 26.86 | 5.52 | .024 | 351 | 7.38 | 24.80 | cloudy | Depth 35', PR .05 gpm |
| 14:15 | 43.10 | 25.2 | 5.49 | .023 | 496 | 7.24 | 24.88 | cloudy | Depth 35', PR .05 gpm |
| 7hrs 14:30 | 43.85 | 25.86 | 5.51 | .023 | 392 | 7.44 | 23.38 | cloudy | Depth 35', PR .05 gpm |
| 14:45 | 44.60 | 23.20 | 5.24 | .023 | 340 | 7.29 | 24.07 | cloudy | Depth 35', PR .10 gpm |
| 15:00 | 46.10 | 25.18 | 5.23 | .023 | 197 | 8.11 | 23.32 | cloudy | Depth 35', PR .10 gpm |

Parcel No.: HR95Q
Well ID: MW02
Date: 7-24-02

Lee FLIPPEN

| Time 24hr | Purge Volume (gal) | Water Level (ft) (TOC) | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments (Date if different from start date) |
|---|---|---|---|---|---|---|---|---|---|
| 15:15 | 47.60 | 26.11 | 5.29 | .023 | 159 | 7.69 | 23.25 | cloudy | Depth 35', Purge Rate .10 gpm |
| 15:30 | 49.10 | 26.55 | 5.24 | .023 | 46 | 6.90 | 22.97 | cloudy | - Collected 1 L. H20 Photo Sample - Purge Rate 1.0 gpm |
| 8 hrs 15:35 | 54.10 | Dry | Purged well Dry | | | | | | 8 hrs Dev. Time Ran well Dry Lee Flippen 7-24-02 |
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Lee Flippen 7-24-02

# Groundwater Well Development Log

Fort McClellan, Alabama

Project Number: 796887
Form Completed by: ADAM DAY
Well Developed by (person/firm): SHAW E&I

Parcel No.: 95Q
Well No.: HR-95Q-MW03
Date started: 7/30/02

## Monitoring Well Information

Development Method: SURGE & PURGE
Development Equipment: WHALE PUMP, PID#70375
U-10# 004014, HERON# LVE002044
Casing Diameter: 2"

Beginning Measurments
Depth to Water (ft): 19.55' BGS
Total depth of Well (ft): 43.71' BGS

| Time 24hr | Purge Volume (gal) | Water Level (ft) (TOC) (BGS) | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments (Date if different from start date) (Purge Rate, Pump Position, Misc.) |
|---|---|---|---|---|---|---|---|---|---|
| 10:30 | 0 | 19.55 | 5.34 | 0.055 | >999 | 4.19 | 24.6 | reddish brown | ~42' BGS, 0.5 gpm |
| 10:45 | 7.5 | 27.40 | 5.01 | 0.053 | >999 | 4.71 | 19.8 | reddish orange | ~42' BGS, 0.25 gpm |
| 11:00 | 11.25 | 28.45 | 4.90 | 0.048 | >999 | 11.14 | 19.6 | orange | ~33' BGS, 0.25 gpm |
| 11:15 | 15 | 30.55 | 4.79 | 0.051 | >999 | 5.34 | 20.4 | orange | ~33' BGS, 0.25 gpm |
| 11:30 | 18.75 | 31.48 | 4.81 | 0.048 | >999 | 10.21 | 20.5 | orange | ~33' BGS, 0.25 gpm |
| 11:45 | 22.5 | 32.51 | 4.99 | 0.044 | 557 | 10.33 | 20.7 | orange | ~42' BGS, 0.25 gpm |
| 12:00 | 26.25 | 36.52 | 5.02 | 0.040 | 114 | 10.60 | 20.6 | orange | ~42' BGS, 0.125 gpm |

TD - DTW = WC x (2")/4' well = One PV x 5 = Min PV + H20 to install well = Minimum H20 to remove

43.71' - 19.55' = 24.16' x 0.163 = 3.93808 gal x 5 = 19.6904 gal + 200 gal = 219.6904 gal

Coy Kauffman

8/2/02

Parcel No.: HR-95Q-~~GPO~~ MW03 7/30/02
Well ID: HR-95Q-MW03
Date: 7/30/02

| Time 24hr | Purge Volume (gal) | Water Level (ft) (~~TOC~~) BGS | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 12:15 | 28.125 | 36.84 | 5.01 | 0.037 | 111 | 10.17 | 21.9 | orangeish | ~42' BGS, 0.125 gpm |
| 12:30 | 30 | 36.28 | 5.06 | 0.034 | 211 | 4.61 | 22.8 | orangeish ~~clear~~ | ~42' BGS, 0.125 gpm |
| 12:45 | 31.875 | 37.22 | 5.06 | 0.034 | 197 | 4.75 | 23.1 | orangeish | ~42' BGS, 0.125 gpm |
| 13:00 | 33.75 | 37.01 | 5.02 | 0.033 | 201 | 4.93 | 23.6 | orangeish | ~42' BGS, 0.125 gpm |
| 13:15 | 35.625 | 36.60 | 5.09 | 0.032 | 61 | 8.77 | 28.5 | orangeish ~~clear~~ ~~cloudy~~ | ~42' BGS, 0.125 gpm |
| 13:30 | 37.5 | 36.85 | 5.12 | 0.030 | 41.7 | 4.81 | 29.0 | cloudy ~~clear~~ | ~42' BGS, 0.125 gpm |
| 13:45 | 39.375 | 36.75 | 5.09 | 0.031 | 22.9 | 9.48 | 28.9 | cloudy | ~42' BGS, 0.125 gpm |
| 14:00 | 41.25 | 36.38 | 5.14 | 0.029 | 29.0 | 8.62 | 29.4 | cloudy | ~42' BGS, 0.125 gpm |
| 14:15 | 43.125 | 36.38 | 5.06 | 0.028 | 24.6 | 6.33 | 28.6 | cloudy | ~42' BGS, 0.125 gpm |
| 14:30 | 45 | 36.38 | 5.06 | 0.028 | 25.8 | 9.38 | 27.9 | cloudy | ~42' BGS, 0.125 gpm |
| 14:45 | 46.875 | 36.33 | 4.99 | 0.028 | 35.2 | 6.11 | 26.9 | cloudy | ~42' BGS, 0.125 gpm |
| 15:00 | 48.75 | 36.92 | 4.81 | 0.027 | 17.50 | 6.60 | 24.7 | cloudy | ~42' BGS, 0.5 gpm |
| 15:07 | 52.25 | DRY - STOPPED PUMPING. | | | | | | | |

Parcel No.: 95Q
Well ID: HR-95Q-MW03
Date: 7/31/02

| Time 24hr | Purge Volume (gal) | Water Level (ft) (~~TOC~~) BGS | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 15 :00 | 52.25 | 21.19' | 5.34 | .027 | 999+ | 8.78 | 20.66 | orangish | PUMP @ 33', 0.25gpm |
| 15 :15 | 56 | 26.45 | 4.87 | 0.025 | 359 | 9.77 | 22.08 | orangish | PUMP @ ~~36~~ 33' 7/31/02, 0.125gpm |
| 15 :30 | 57.875 | 26.61 | 4.72 | .026 | 249 | 9.08 | 19.82 | cloudy | " " |
| 15 :45 | 59.75 | 26.55 | 4.66 | 0.026 | 131 | 8.08 | 25.35 | cloudy | " " |
| 16 :00 | 61.625 | 27.40 | 4.87 | .026 | 325 | 9.28 | 21.29 | cloudy | " " |
| 16 :15 | 63.5 | 27.79 | 4.75 | .025 | 439 | 8.94 | 22.76 | orangish | PUMP @ 40', 0.25gpm |
| 16 :30 | 67.25 ~~69.375~~ | 30.10 | 4.79 | .025 | 999+ | 9.36 | 18.80 | orangish | PUMP @ 42', 0.5gpm |
| 16 :45 | 74.75 | DRY — STOPPED PUMPING | | | | | | | |
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7/31/02

Parcel No.: 95Q
Well ID: HR-95Q-MW03
Date: 8/1/02

| Time 24hr | Purge Volume (gal) | Water Level (ft) (~~TOC~~) BGS | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments 8/1/02 |
|---|---|---|---|---|---|---|---|---|---|
| 9:00 | 74.75 | 22.43 | 5.25 | 0.056 | 70.4 | 6.45 | 19.4 | cloudy | PUMP@ 42'BGS 0.25gpm |
| 9:15 | 78.5 | 28.61 | 5.13 | 0.032 | 153.6 | 6.70 | 19.2 | cloudy | " " |
| 9:30 | 82.25 | 31.66 | 5.06 | 0.027 | 331 | 6.64 | 19.7 | orangish | " " |
| 9:45 | 86 | 32.23 | 5.04 | 0.024 | 191 | 6.34 | 19.7 | orangish | " " |
| 10:00 | 89.75 | 37.05 | 4.99 | 0.025 | 402 | 6.45 | 20.0 | orangish | " " |
| 10:15 | 93.5 | 37.95 | 5.02 | 0.026 | 38.3 | 5.78 | 21.9 | cloudy | " " |
| 10:30 | 97.25 | 38.78 | 5.00 | 0.024 | 36.2 | 5.88 | 22.2 | cloudy | " " |
| 10:45 | 101 | 40.50 | 5.01 | 0.025 | 157.4 | 5.90 | 20.8 | cloudy | " " |
| ~~11:00~~ 10:48 | 101.75 | DRY — DEVELOPMENT COMPLETE. PHOTO SAMPLE TAKEN @ 1845 | | | | | | | |
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8/1/02

# Groundwater Well Development Log

Fort McClellan, Alabama

Project Number: 796887
Form Completed by: Lee FLIPPEN
Well Developed by (person/firm): Lee Flippen / The Shaw E&I

Parcel No.: HR131Q
Well No.: MW01
Date started: 7-30-02

## Monitoring Well Information

Development Method: Surge + purge
Development Equipment: Whale pumps, Horiba U-22, Aquafast II, Heron water indicator
Casing Diameter: Uncut 2" .163 TOC = 3.2'

Beginning Measurments
Depth to Water (ft): Dry
Total depth of Well (ft): 55.00' TOC (GS = -3.2')

PID 0.0 screen 32'-52'

| Time 24hr | Purge Volume (gal) | Water Level (ft) (TOC) | pH (std units) | Conductivity (mS/cm) | Turbidity (NTU) | Dissolved oxygen (mg/L) | Temperature (°C) | Clarity (color) | Comments (Date if different from start date) (Purge Rate, Pump Position, Misc.) |
|---|---|---|---|---|---|---|---|---|---|
| 12:50 | Ø | Dry | | | | PID 0.0 | | | Blowing Air through pipe - Lee Flippen 7-30-02 |
| 7-31-02 16:10 | Ø | Dry | | | | PID 0.0 | | | Blowing Air through Pipe - Lee Flippen 7-31-02 |
| 11:30 | Ø | Dry | | | | PID 0.0 | | | Blowing Air through Pipe well Dry - [illegible] 8/1/02 |
| : | | | | | | | | | |
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TD - DTW = WC x 2'/4' well = One PV x 5 = Min PV + H20 to install well = Minimum H20 to remove

55 g

oc'd Knights 8/6/02