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 / IT Corp.

Parcel No.: HR81QMW01
Well No.: MW01
Date started: 7-13-01

Monitoring Well Information

* 11:50 AM PID 24.5 BKGrd 0.0
12:10 PM PID 0.0 BKGrd 0.0
Screen 3.5 - 13.5

Development Method: Surge + Purge
Development Equipment: whale pump, Horiba U-10 #8019
Heron water Finder, Aquafast II 2026
Casing Diameter: 2" (.163)

Beginning Measurments
Depth to Water (ft): 8.58
Total depth of Well (ft): 16.02

WC = water column

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.)
12:30	0	8.58	6.03	.137	912	.79	21.9	TAN	Hand Bailed Well Dry
13:15	6.0								Removed 6.0 g. WC=7.44 ft 7-13-01 Water Yellow/TAN + Foamy [signature]
1-16-01 14:40	6.0	8.11	5.66	.103	41	1.40	22.7	clear	PID 5.0 BKGrd 0.0 WC=7.91 ft. Hand Bailed Well Dry
15:20	10.25								Removed 4.25 g [signature] 7-16-01
7-17-01 13:55	10.25	6.66	5.52	.049	39	.93	23.3	clear	PID 4.9 BKGrd 0.0 Hand Bailed Well Dry.
14:45	16.75			- 3rd Visit - 3X Bailed Dry -					Removed 6.5 g. TOTAL 16.75 g WC= 9.31 Well Development Completed. [signature] 7-17-01
:									

TD - DTW = WC x 2'/4' well = One PV x 5 = Min PV + H20 to install well = Minimum H20 to remove
16.02 - 8.58 = 7.44 x .163 = 1.21 x 5 = 6.05 + 0 = 6.05 g

D:\FTMC\DEVELOPMENTLOG.DOC
11/17/00

QC'd by [signature] 07/25/01

Groundwater Well Development Log

Fort McClellan , Alabama

Project Number: 796887
Form Completed by: Lee FLIPPEN
Well Developed by (person/firm): Lee FLIPPEN / IT Corp.

Parcel No.: HR81 Q
Well No.: MW02
Date started: 7-13-01

Screen 18.5 - 33.5 ft.

Monitoring Well Information

PID 0.0 BKGrd 0.0

Development Method: Surge + Purge
Development Equipment: whale pump, Horiba U-10 #8019
AquaFAST II, Heron water Finder
Casing Diameter: 2" .163

Beginning Measurments
Depth to Water (ft): 13.73
Total depth of Well (ft): 35.13

PR = Purge Rate PD = Pump Depth WC = water column

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.)
15:00	Ø	13.73	6.14	.104	999+	4.53	20.8	TAN	Surged ~~Entire well~~ WC=21.4 PR .7 gpm PD 30.5 ft
15:15	10.5	18.63	5.48	.065	999+	5.20	19.1	TAN	PR .65 PD 33.5 ft.
15:30	20.25	23.30	5.45	.097	999+	4.66	18.5	TAN	PR .65 PD 28.5 ft.
15:45	30.0	24.03	5.44	.100	999+	4.12	18.8	TAN	PR .65 PD 28.5 ft.
16:00	39.75	25.83	5.42	.089	999+	4.02	18.9	TAN	Stopped ~~Parameter~~ readings ~~Lee Flippen~~ 7-13-01
7-19-01 13:00	39.75	20.02	5.78	.076	999+	5.38	19.1	TAN	PR .65 PD 33.5 ft.
13:15	49.5	29.02	5.58	.082	999+	4.29	18.0	TAN	PR .085 PD 33.5 ft Target PV reached

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

35.13 - 13.73 = 21.4 x .163 = 3.49 x 5 = 17.45 + 25.0 = 42.45 g

Reviewed by 08/01/01

Parcel No.: HR81Q
Well ID: MW02
Date: 7-19-01
PID 0.0 BKGrd 0.0

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
13:30	50.78	27.10	5.35	.076	999+	3.97	23.2	TAN	PR .085 Depth 31.5 ft.
13:45	52.06	24.58	5.90	.062	661	4.28	20.7	clearing TAN	PR .13 Depth 31.5
2hr 14:00	54.01	23.32	5.74	.054	494	4.16	25.2	clearing TAN	PR .15 Depth 29.5
14:15	56.26	22.25	5.75	.050	881	4.91	23.8	TAN	PR .20 Depth 29.5
14:30	59.26	21.57	5.73	.048	105	4.22	24.4	clear	PR .15 Depth 27.5
14:45	61.51	21.13	5.75	.049	320	4.93	22.9	cloudy clearing	PR .15 Depth 27.5
3hr 15:00	63.76	Above 2nd Pump-N/A	5.74	.047	326	4.94	22.7	cloudy	PR .15 Depth 27.5
15:15	66.0	UNKNOWN	5.71	.047	162	5.25	23.0	cloudy	PR .65 Depth 33.5 ft.
15:30	75.75	29.40	5.95	.070	775	5.35	18.3	TAN	PR .65 Depth 33.5 ft.
15:32	Pumps stopped - WL too Low								7-19-01 [signature]
7-25 9:45	75.75	14.49	5.36	.071	290	5.14	19.1	cloudy	PID 0.4 BKGrd 0.0 7-25-01 PR .2 gpm Depth 19ft./21ft.
10:00	78.75	20.33	5.65	.048	514	4.86	19.9	cloudy	PR .2 gpm Depth 21 ft.
4hr 10:15	81.75	21.53	5.72	.049	426	4.72	20.1	cloudy	PR .2 gpm Depth 23 ft.

21.53

Parcel No.: HR 81Q
Well ID: MW02
Date: 7-25-01

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
10:30	84.75	22.98	5.71	.048	292	5.09	20.2	cloudy	PR. 2gpm Depth 25 ft.
10:45	87.75	23.13	5.65	.044	262	4.47	20.3	cloudy	PR. 2gpm Depth 25.5 ft.
11:00	90.75	23.48	5.64	.042	252	4.39	20.1	cloudy	— .7gpm For 30 sec. — PR .2 Depth 25.5 ft.
5hrs 11:15	93.75	23.57	5.57	.038	45	4.62	21.0	clear	PR .2 Depth 25.5
11:30	96.75	23.23	5.60	.040	77	3.99	21.6	clear	PR .2 Depth 25.5
11:45	99.75	22.98	5.61	.040	39	3.97	21.8	clear	PR .2 Depth 25.5
12:00	102.75	22.43	5.59	.038	32	4.46	21.7	clear	Stopped parameters. [signature]
13:10	102.75	16.22	5.61	.041	39	4.65	20.9	clear	PR .2 Depth 25.5 ft.
Chrs 13:25	105.75	20.82	5.59	.039	42	4.60	22.4	clear	PR .2 Depth 25.5
13:40	108.75	21.48	5.64	.042	74	4.96	20.1	clear	PR .2 Depth 25.5
13:55	111.0	21.57	5.57	.038	104	4.53	22.2	clear	PR .15 Depth 25.5
14:10	113.25	21.53	5.54	.037	75	4.33	21.3	clear	PR .15 Depth 25.5
7hrs 14:25	115.5	21.28	5.57	.036	54	4.26	21.6	clear	PR .15 Depth 25.5

Light rain ↓
Med. rain ↓
Light rain ↓

Parcel No.: HR81Q
Well ID: MW02
Date: 7-25-01

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
14:40	117.75	21.08	5.58	.036	46	3.94	21.9	clear	PR .15 Depth 25.5
14:55	120.0	20.98	5.56	.036	39	3.99	22.0	clear	PR .15 Depth 25.5
15:10	122.25	19.98	5.52	.035	9.9*	4.05	23.5	clear	*- Sample I.D. Taken — PR .15 Depth 25.5
15:25	124.5	18.97	5.55	.035	14.1	3.98	23.1	clear	8hrs well Development Time Well Developed - 7-25-01
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rain

Not Used