APPENDIX C

WELL DEVELOPMENT LOG

Groundwater Well Development Log

Fort McClellan , Alabama

ɔject Number: 796887
rm Completed by: Nick Muloski
ell Developed by (person/firm): Nick Muloski

Parcel No.: 99Q
Well No.: HR-99Q-MW02
Date started: 02/20/02

Monitoring Well Information

ıvelopment Method: Surge & Purge
ıvelopment Equipment: Red-Flow Control box, Grundfos Pump, ner Back electric generator, Horiba U-22, Water-level indicator, Poly tank
ısing Diameter: 2"

Beginning Measurments
Depth to Water (ft): 68.75' BTOC
Total depth of Well (ft): 72.20' BTOC

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.)
12:45	Ø	68.75	6.03	0.418	>999	0.240	17.01	Light Brown muddy	bailing well
13:00	3	69.65	6.43	0.385	>999	0.214	16.93	Light Brown muddy	bailing well
13:05	3	69.65	Checking Recharge						bailing well / well recharges completely in less than 20 min
13:20	5	68.87	6.68	0.356	>999	0.00	16.90	Light Brown muddy	bailing well - continued at a faster rate
13:35	7	70.12	6.72	0.312	>999	0.00	16.88	Light Brown muddy	bailing well
13:50	9	70.18	6.76	0.323	>999	0.00	16.57	Light Brown muddy	bailing well
—	—	started using a Grundfos		pump	to	develop	well.	—	switch to Grundfos pump

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

72.20 - 68.75 = 3.45 x 0.163 = 0.562 x 5 = 2.810 + 145 = 147.81 gallons

* DO probe not working.

QC'd [illegible] 2/22/02

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14 :45	9	68.90	6.80	0.334	>999	0.212	17.54	light-brown muddy	Grundfos - pump rate = 0.2gpm
15 :00	10.8	68.98	6.98	0.338	>999	0.198	17.36	light-brown muddy	pump rate = 0.12 gpm
15 :15	12.6	68.76	7.12	0.340	>999	0.199	17.12	light-brown muddy	pump rate = 0.12 gpm
15 :30	14.4	68.76	7.08	0.351	>999	0.200	16.97	light-brown muddy	pump rate = 0.12 gpm
15 :45	16.2	68.76	7.10	0.352	>999	0.200	16.54	light-brown muddy	pump rate = 0.12 gpm
16 :00	18.0	68.76	7.10	0.356	>999	0.197	16.59	light-brown muddy	pump rate = 0.12 gpm stopped developing
—	Resume developing on 02/21/02				Using	Grundfos	pump		
09 :00	18.000	68.80	6.64	0.346	>999	—	19.62	light-brown muddy	pump rate = 0.125 gpm
09 :15	18.975	69.81	6.68	0.304	>999	—	19.54	light-brown muddy	pump rate = 0.125 gpm
09 :30	21.950	69.79	6.66	0.294	>999	—	19.49	light-brown muddy	pump rate = 0.15 gpm
09 :45	~~24.20~~ NC	Pump stopped @ ≈ 0935.			Resume	purging			
10 :00	24.20	69.86	6.72	0.287	809	—	19.46	light-brown muddy	pump rate = 0.15 gpm

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10 : 15	26.45	69.92	6.75	0.284	609	—	19.44	light-brown muddy	pump rate = 0.15 gpm
10 : 30	28.70	69.90	7.55	0.264	258	—	23.82	clear light-brown	pump rate = 0.15 gpm
10 : 45	30.95	69.91	7.54	0.267	168	—	23.92	clear light-brown	pump rate = 0.15 gpm
11 : 00	33.20	69.90	7.51	0.268	102	—	23.64	clear milky	pump rate = 0.15 gpm
11 : 15	35.45	69.91	7.52	0.267	115	—	23.38	clear milky	pump rate = 0.15 gpm
11 : 30	37.70	69.91	7.53	0.266	179	—	23.59	clear milky	surged well with pump. pump rate = 0.15 gpm
11 : 45	39.95	69.91	7.52	0.260	150	—	23.86	light-brown muddy	pump rate = 0.15 gpm
12 : 00	42.20	69.92	7.51	0.259	146	—	24.12	clear milky	pump rate = 0.15 gpm
12 : 15	44.45	69.92	7.54	0.258	130	—	23.91	milky	Surged well with pump
12 : 30	46.70	69.93	7.56	0.260	192	—	23.48	light brown muddy.	pump rate = 0.15 gpm
12 : 45	48.95	69.93	7.60	0.263	168	—	22.92	light-brown	pump rate = 0.15 gpm
13 : 00	51.20	69.95	7.62	0.265	135	—	22.33	milky	pump rate = 0.15 gpm

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13:15	53.45	69.95	7.62	0.263	121	—	22.69	milky	Pump rate = 0.15 gpm
13:30	55.70	69.96	7.61	0.264	112	—	22.84	milky	pump rate = 0.15 gpm
13:45	57.95	69.96	7.61	0.265	98	—	23.02	milky	pump rate = 0.15 gpm
14:00	60.20 ~~57.95~~ NC	69.97	7.60	0.265	92	—	23.16	milky	pump rate = 0.15 gpm
14:15	62.45 ~~60.20~~ NC	69.99	7.61	0.263	92	—	23.30	Milky	pump rate = 0.15 gpm
14:30	64.70 ~~62.45~~ NC	70.00	7.61	0.260	90	—	23.41	Milky	pump rate = 0.15 gpm
14:45	66.95 ~~64.70~~ NC	69.66	7.60	0.259	88	—	23.40	Milky	pump rate = 0.15 gpm
15:00	69.20	69.67	7.61	0.260	87	—	23.42	milky	pump rate = 0.15 gpm
15:15	71.42	69.67	7.69	0.258	84	—	23.43	milky	pump rate = 0.15 gpm
15:30	73.70	69.68	7.88	0.252	82	—	23.46	milky	pump rate = 0.15 gpm
15:45	75.95	69.67	7.95	0.250	80	—	23.50	slightly milky	pump rate = 0.15 gpm
16:00	78.20	69.68	8.19	0.246	80	—	23.54	slightly milky	pump rate = 0.15 gpm

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16:15	80.45	69.68	8.20	0.244	80	—	23.56	slightly milky	Pump rate = 0.15 gpm
16:30	82.70	69.68	8.21	0.245	79	—	23.54	slightly milky	pump rate = 0.15 gpm
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02/21/02

* DO probe not working.