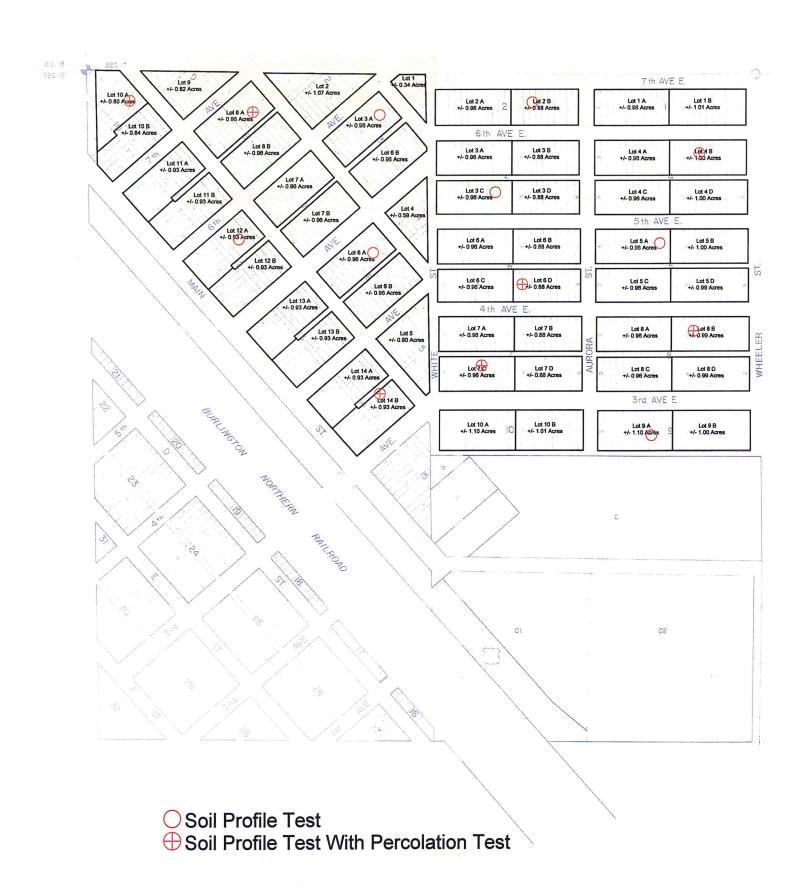
## Commanche

## East Commanche



#### PERCOLATION TEST RESULTS

10/04

Lot	Hole Depth (in.)	Perc. Rate (min./in.)
8A	66	16
10A	66	13
14B	66	10
4B	66	24
6D	66	16
7C	66	13
8B	66	20
	8A 10A 14B 4B 6D 7C	8A 66 10A 66 14B 66 4B 66 6D 66 7C 66

Donald om. Ent

# MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY PERCOLATION TEST FORM

Owner Na	mė				• •	
Project Na	me Co	mman	nche W/2	. NW/4 Se	c, 20 T3 N	R24E
		8,	A	Test Number		The state of the s
Diameter (	of Test Hol	le	/ 11	Depth of Test Ho	de 66"	
Date and ?	lime Soak	Period Begar	10/14/04 St	Bnded 10/15	104 12:2	10 PM
	Began		5/04		+	£
*		F	Test Result	s		. *
Start Time of Day	End Time of Day	Time Interval (minutes)	Initial Distance below reference point	Final Distance below reference point	Drop in water level (inches)	Percolation Rate (minutes/inch)
/2:22	12:32	10	15	155/8	5/8	
12:34	12:44	10	15 .	153/4	3/4	
12:47	12:57	10	15	155/8	5/8	·
1:00	1:10	10	15	155/8	5/8	
1:12	1:22	10	1.5	155/8	5/8	(16 minlin
						16
						1625/10
I certify the	hat this pen	colation test	was done in accord	ance with WQB-6,	Appendix A.	
Dona Name	Donald M. Erb Donald M. Erb 10/18/04 Name (printed) Signature Date					1 <u>0/18</u> /04/ Date
Compa	nv					

# MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY PERCOLATION TEST FORM

Owner Na						
Project Na	Project Name Commanche W/2 NW/4 Sec. 20 T3NR24E					
Lot or Tra	et Number			Test Number		The state of the s
Diameter	of Test Hol	le(	1011	Depth of Test Ho	ole 66"	-
			10/14/04 5:10	Ended 10/15/	104 1:45	PM
Date Test	Began	10/	15/04		n	
		•	Test Result	2		
Start Time of Day	End Time of Day	Time Interval (minutes)	Initial Distance below reference point	Final Distance below reference point	Drop in water level (inches)	Percolation Rate (minutes/inch)
1850	2:00	10	17	173/4	3/4	
2:02	2:12	10	17 .	177/8	7/8	
2:15	2:35	10	17	173/4	. 3/4	
2:27	2:37	10	17	173/4	3/4	
2:40	2:50	10	17	173/4	3/4	(13 min/in)
						13.23
				·		175/10
I certify th	nat this pen	colation test	was done in accorda	ince with WQB-6.	Appendix A.	
I certify that this percolation test was done in accordance with WQB-6, Appendix A.  Donald M. Erb  Name (printed)  Signature  Date						
Compa	ny		•			

## MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY PERCOLATION TEST FORM

Owner Na	ime	-	· ************************************		, ,	001/6
Project Na	ame Co	mman	che w/	2 NW/4 Se	e. 20 T3	N R296
	ict Number	14	B	Test Number		December 2011
	of Test Hol		611.	Depth of Test Ho	ne 66"	
Date and	Time Soak	Period Began	10/14/04 5:1	6 PM 10/15	104 3:10	PM
Date Test	. •	10/15		Market Control	ž.	,
	•	w	Test Result	2		. ,
Start Time of Day	End Time of Day	Time Interval (minutes)	Initial Distance below reference point	Final Distance below reference point	Drop in water level (inches)	Percolation Rate (minutes/inch)
3:15	3:25	10	16	17/4	1/4	
3:27	3:37	10	16 .	17/8	1/8	
3:40	3:50	10	16	17	. /	
3:52	4:02	10	16	17/8	1/8	
4:04	4:14	10	16.	17	1.	
4:16	4:26	10	16	17	1 .	(10min/in
						1/10
I certify that this percolation test was done in accordance with WQB-6, Appendix A.  Donald M. Erb  Name (printed)  Signature  Date						
Company						

Owaer Na	me				•	
Project Na	me Eas	st Com	manche	E/2 NW Y4	Sec. 20 T	3N R24E
	et Number	46	}	Test Number		
Diameter (	of Test Hol	e	,,,,	Depth of Test Ho	ie 66"	•
Date and '	Fime Soak	Period Began	16/14/04 9AM			
Date Test	Began <u> </u>	10/14/0	4	and the same of th		
			Test Result	S		
Start Time of Day	End Time of Day	Time Interval (minutes)	Initial Distance below reference point	Final Distance below reference point	Drop in water level (inches)	Percolation Rate (minutes/inch)
1:00	1:30	30	16	173/8	13/8	
1:33	2103	30	16.	173/8	13/8	
2:06	2:36	30	16	17/4	1/4	·
2:38	3108	30	16	17/4	1/4	
3:11	3:41	30	16.	17/4	174.	·
3:43	4:13	30	16	17/4	11/4	(24 minlin)
				·		24
I certify the	hat this pen	colation test	was done in accord	ance with WQB-6,	Appendix A.	1,25/30
I certify that this percolation test was done in accordance with WQB-6, Appendix A. 1.25 30  Donald M. Erb Donald M. Erb Name (printed)  Signature  Date				10/18/04 Date		
Company						

Owner Na	me				• •	2100115
Project Na	me Eas	it Cam	manche	E/2 NW/4.	Sec. 20 T.	3 N R 24 E
	ict Number	. 6	Λ	Test Number		Trisline and a UP a revening war.
	of Test Hol		6"	Depth of Test Ho	de 66"	
Date and	Time Soak	Period Begar	10/14/04 4:4	15 PM 10/15/	04 9:30 A	M
Date Test			5/04		•	
			Test Result	S		
Start Time of Day	End Time of Day	Time Interval (minutes)	Initial Distance below reference point	Final Distance below reference point	Drop in water level (inches)	Percolation Rate (minutes/inch)
9:35	9:45	10	19	197/8	7/8	
9:47	9:57	10	19.	193/4	3/4	
10:00	10:10	10	19	19 7/8	5/8	·
10:12	10:22	10	19	193/4	3/4	
10:24	10:34	10	19	195/8	5/8	
10:36	10:46	10	19	195/8	5/8	(16 minslin)
·			<u>.</u>			ط ا
I certify t	hat this pen	colation test	was done in accord	ance with WQB-6,	Appendix A.	,625/10
I certify that this percolation test was done in accordance with WQB-6, Appendix A. ,615 10  Donald M. Erb Name (printed)  Signature  101 100  Date				10/18/04 Date		
Company						

Owner Na					• .	
Project Na	me Eas	st com	manche 1	E/2 NW/4 S	es, 20 T3	N RZ4E
Lot or Tra	ct Number		<u>'</u>	Test Number		
Diameter (	of Test Hol		6"	Depth of Test Ho	le 66"	
Date and	Fime Soak	Period Began	10/14/04 4:5	Baded	5/04 11 A	<u>m</u>
Date Test	Began	10/15/	04		×	
		,	Test Result	3		*
Start Time of Day	End Time of Day	Time Interval (minutes)	Initial Distance below reference point	Final Distance below reference point	Drop in water level (inches)	Percolation Rate (minutes/inch)
11:00	11:10	10	18	187/8	7/8	
11:12	11:22	10	18.	183/4	3/4	
11:24	11:34	10	18	1878	. 7/8	·
11:36	11:46	10	18	183/4	3/4	
11:48	11:58	10	1.8	183/4	3/4	
12:00	.12:10	10	18	183/4	3/4	(13 min/in)
				•		13.33
I certify t	hat this per	colation test	was done in accord	ance with WQB-6,	Appendix A.	75/10
I certify that this percolation test was done in accordance with WQB-6, Appendix A.  Danald M. Erb  Signature  Date			10)18/04 Date			
Compa	ıny		·			y.

Owner Na					• •	•
Project Na	unc Eas	st com	manche	E/2 NW/4	Sec. 20 T	3N R 24E
		86	3	Test Number		
Diameter (	of Test Hol	le(	, "	Depth of Test Ho	ie 66"	
Date and	Time Soak	Period Bega	10/14/04 9:1-	Ended 10/14/	04 1:15	
		10/14/04				
å e			Test Result	3		
Start Time of Day	End Time of Day	Time Interval (minutes)	Initial Distance below reference point	Final Distance below reference point	Drop in water level (inches)	Percolation Rate (minutes/inch)
1:15	1:45	30	18	191/2	1/2	
1:48	2:18	30	18 .	195/8	15/8	
2:20	2:50	30	18	19/2	1/2	
2:53	3:23	30	18	195/8	15/8	
3:25	3:55	30	18	19/2	11/2	
3:58	4:28	30	18	191/2	11/2	20 min/in
· [		<u>L</u>	<u>l.                                    </u>	<u> </u>		1 20
I certify t	hat this pen	colation test	was done in accord	ance with WQB-6,	Appendix A.	1.5   30
I certify that this percolation test was done in accordance with WQB-6, Appendix A. 1.5 30  Donald M. Erb Donald M. Etb 10/18/04  Name (printed) Signature Date				Date Date		
Compa	Company					

#### Commanche Town Site W/2 NW/4 Sec. 20 T3N R24E Yellowstone County, Montana

#### 10/04

Lot 3 A	Soil Profile	
Depth (ins.)	Texture	Structure
0 - 21	Clay	Moderate, Medium, Prismatic
21 – 55	Clay	Massive
55 – 132	Loams and fine sandy loams	Weak, Fine, Granular
Lot 6 A		
0 - 20	Clay	Moderate, Medium, Prismatic
20 – 50	Clay	Massive
50 – 132	Loams and fine sandy loams	Weak, Fine, Granular
Lot 8 A		
0 - 18	Clay	Moderate, Medium, Prismatic
18 – 52	Clay	Massive
52 – 132	Loams and fine sandy loams	Weak, Fine, Granular
<u>Lot 10 A</u>		
0 - 23	Clay	Moderate, Medium, Prismatic
23 – 51	Clay	Massive
51 – 132	Loams and fine sandy loams	Weak, Fine, Granular

Donald m. Erb

#### Commanche Town Site W/2 NW/4 Sec. 20 T3N R24E Yellowstone County, Montana

#### 10/04

<u>Lot 12 A</u>	Soil profile	
Depth (ins.)	Texture	Structure
0 - 22	Clay	Moderate, Medium, Prismatic
22 - 53	Clay	Massive
53 – 132	Loams and fine sandy loams	Weak, Fine, Granular
<u>Lot 14 B</u>		
0 - 18	Clay	Moderate, Medium, Prismatic
18 - 48	Clay	Massive
48 – 132	Loams and fine sandy loams	Weak, Fine, Granular

Donald m. Erb

#### East Commanche Sub E/2 NW/4 Sec. 20 T3N Yellowstone County, Montana

r ellowstone County, Montana		
Soil Profile	10/04	
Texture	Structure	
Clay	Moderate, Medium, Prismatic	
Clay	Massive	
Loams and fine sandy loams	Weak, Fine, Granular	
Clay	Moderate, Medium, Prismatic	
Clay	Massive	
Loams and fine sandy loams	Weak, Fine, Granular	
Clay	Moderate, Medium, Prismatic	
Clay	Massive	
Loams and fine sandy loams	Weak, Fine, Granular	
Clay	Moderate, Medium, Prismatic	
Clay	Massive	
Loams and fine sandy loams	Weak, Fine, Granular	
	Soil Profile Texture Clay Clay Loams and fine sandy loams  Clay Loams and fine sandy loams  Clay Clay Clay Clay Clay Clay Clay Cla	

Donaldom. Erb

#### East Commanche Sub. E/2 NW/4 Sec. 20 T3N R24E Yellowstone County, Montana

Tenowstone County, Wontain	10/04	
Lot 6 D	Soil Profile	10/04
Depth (ins.)	Texture	Structure
0 - 24	Clay	Moderate, Medium, Prismatic
24 – 55	Clay	Massive
55 – 132	Loams and fine sandy loams	Weak, Fine, Granular
Lot 7 C		
0 – 19	Clay	Moderate, Medium, Prismatic
19 – 52	Clay	Massive
52 – 132	Loams and fine sandy loams	Weak Fine, Granular
Lot 8 B		
0 - 25	Clay	Moderate, Medium, Prismatic
25 – 53	Clay	Massive
53 – 132	Loams and fine sandy loams	Weak, Fine, Granular
Lot 9 A		
0 - 24	Clay	Moderate, Medium, Prismatic
24 – 54	Clay	Massive
54 – 132.	Loams and fine sandy loams	Weak, Fine, Granular

Donald gm. Ert

#### WATER TABLE NOTES

- 1. Depth to water table exceeded 11 feet at the time of testing.
- 2. The first significant signs of mottling occurred at a depth of 10 feet to 10 feet 6 inches.
- 3. Vegetation in the area does not indicate water table problems.
- 4. There is no irrigation in the area.