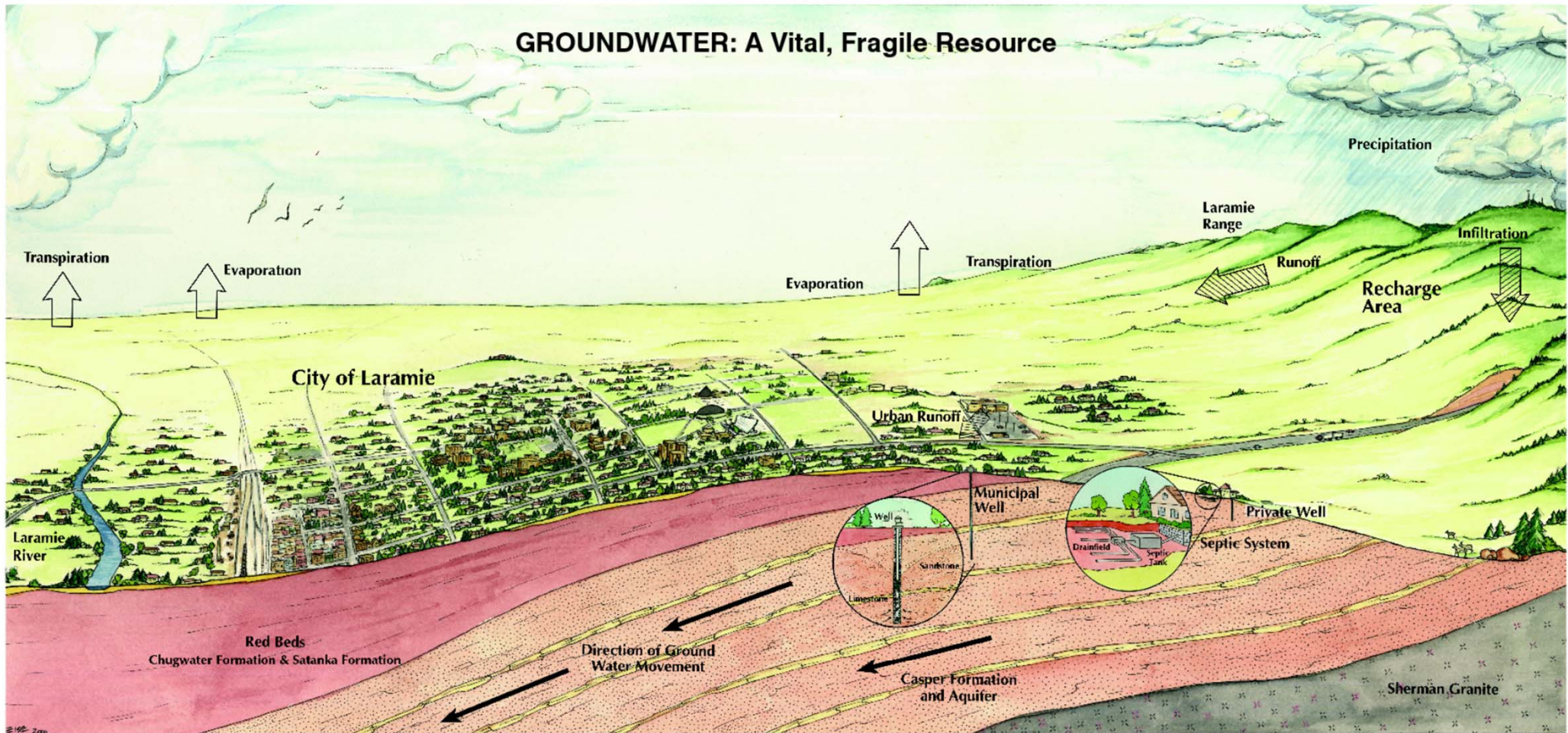


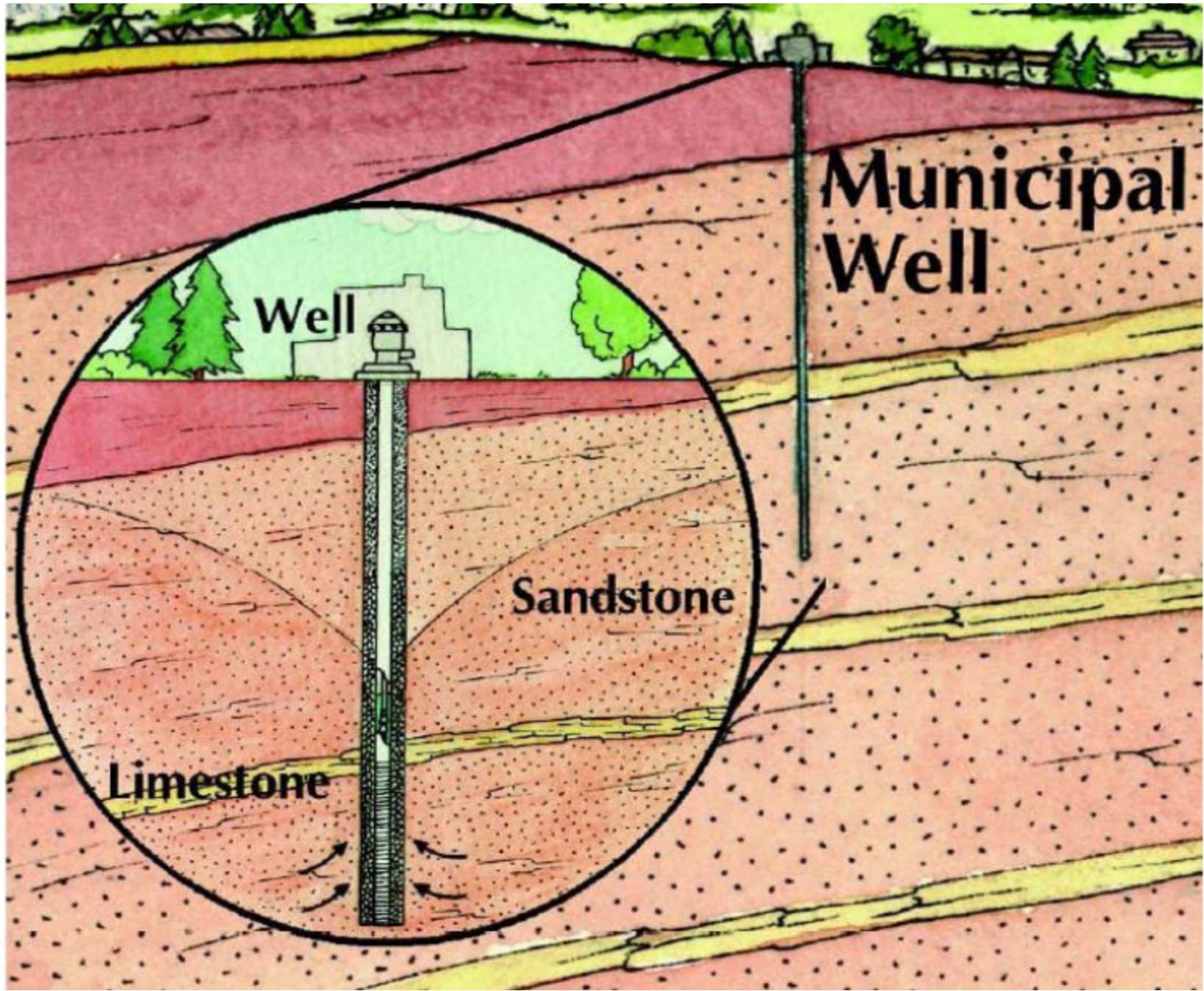
Well, well, well

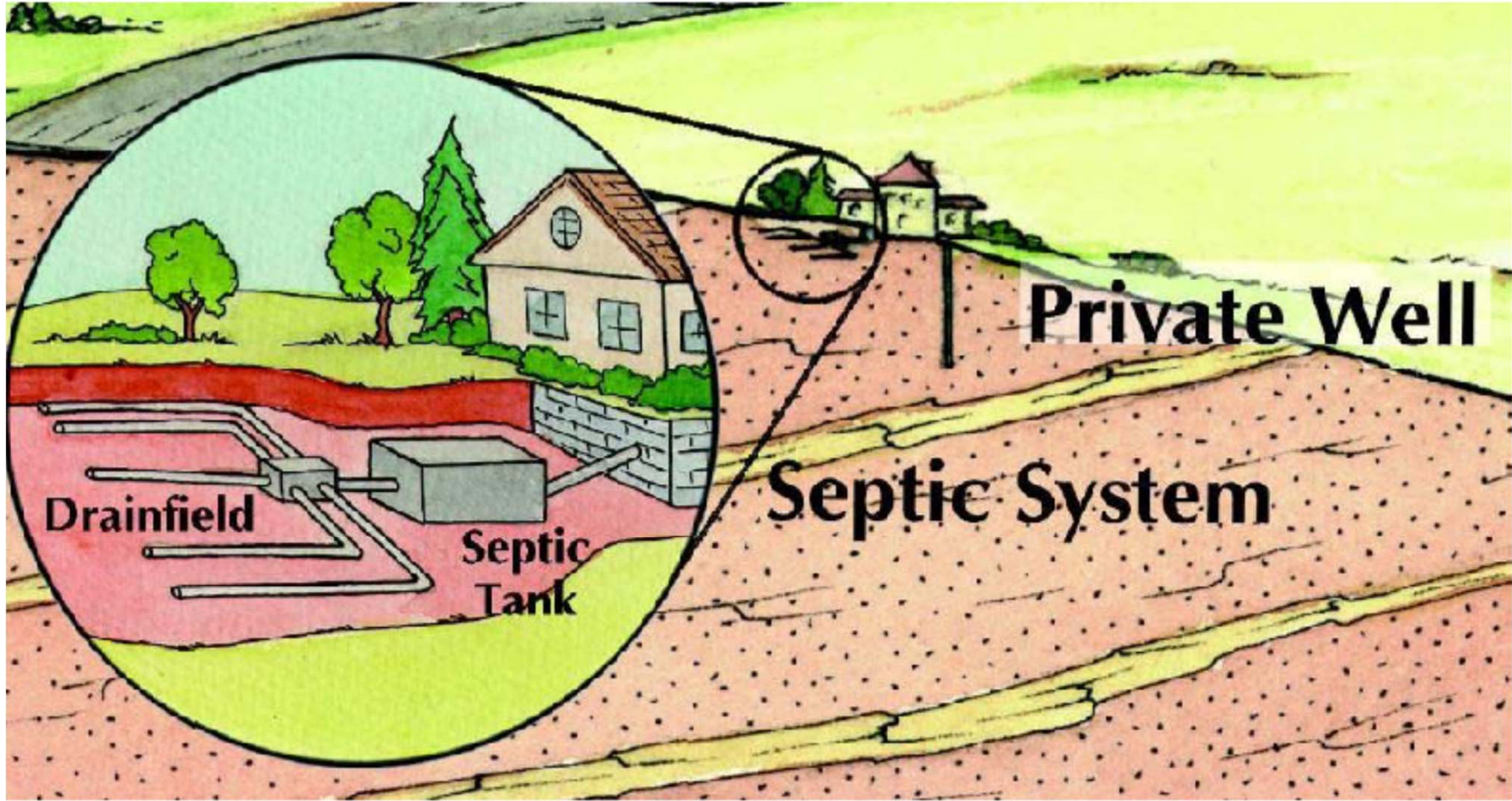
(in the context of the Casper Aquifer)

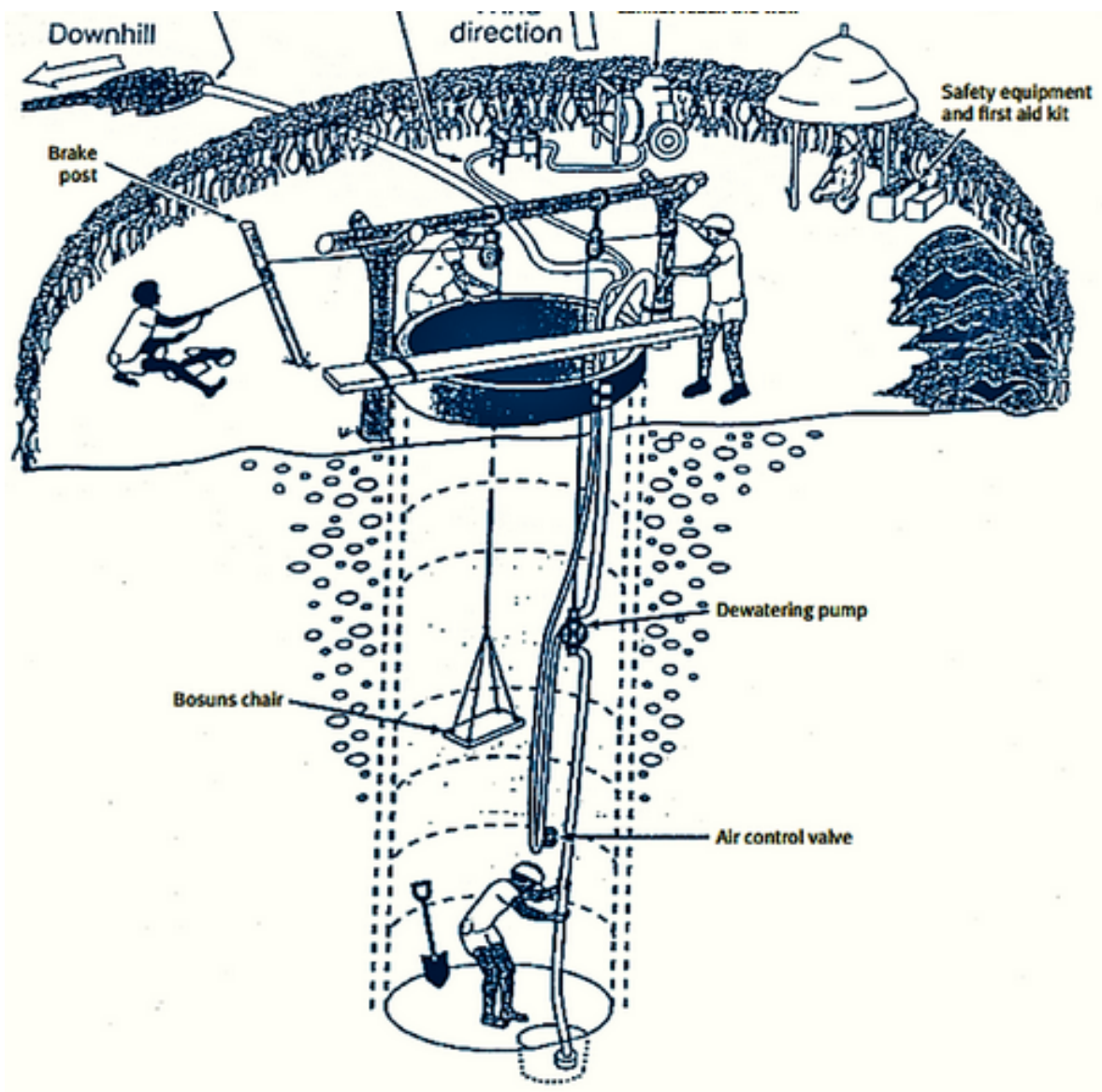
ACCWA - June 17, 2020

GROUNDWATER: A Vital, Fragile Resource

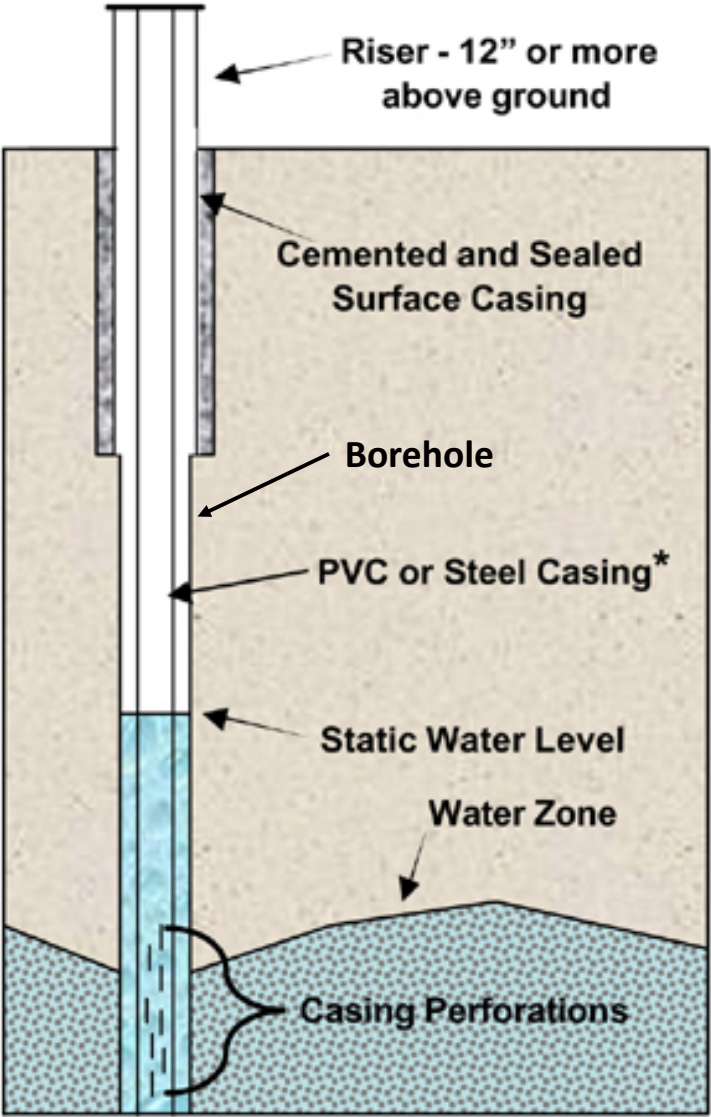




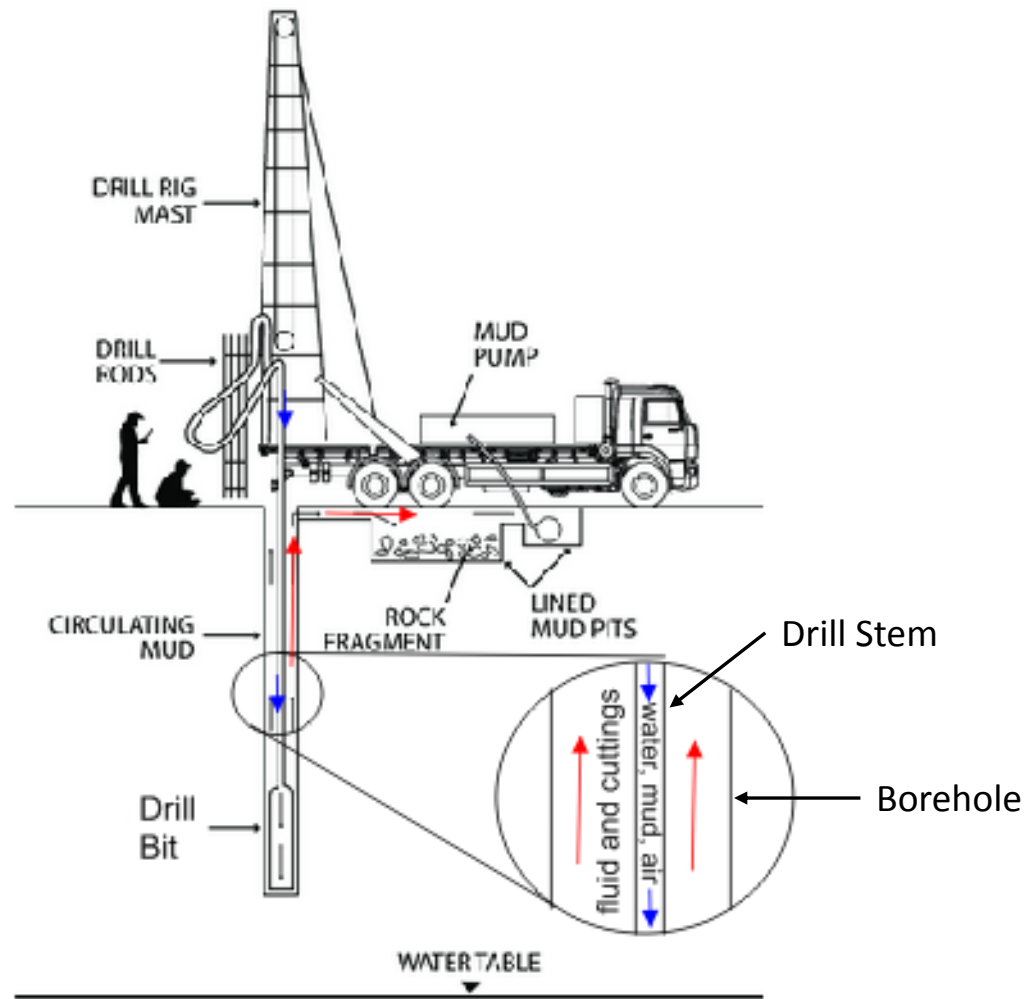








ROTARY DRILLING











U.W. 92077

11. If spring, how was it constructed? (Some method of artificial diversion, i.e., spring box, capping, etc., is necessary to quality for a water right.)

12. PUMP TEST: Was a pump test made? Yes No
If so, by whom _____ Address _____
Yield: _____ gal./min. with _____ foot drawdown after _____ hours.
Yield: _____ gal./min. with _____ foot drawdown after _____ hours.

13. LOG OF WELL: Total depth drilled 300 feet.
Depth of completed well 300 feet. Diameter of well 7 7/8 inches.
Depth to first water bearing formation 80 feet.
Depth to principal water bearing formation. Top 80 feet to Bottom 300 feet.
Ground Elevation, if known _____

DRILL CUTTINGS DESCRIPTION:

From Feet	To Feet	Material Type, Texture Color	Remarks (Cementing, Shutoff)	Indicate Water Bearing Formation & Name	Indicate Perforated Casing Location
0	5	Top Soil			
5	80	Satanka Shale Red			
80	300	Casper Formation - Producing several hundred gallons per minute			

14. QUALITY OF WATER INFORMATION:
Does a chemical and/or bacteriological water quality analysis accompany this form? Yes No
It is recommended that chemical and bacteriologic water quality analyses be performed and that the report(s) be filed with the records of this well. (Contact Department of Agriculture, Analytical Lab Services, Laramie, 742-2984.)
If not, do you consider the water as: Good Acceptable Poor Unusable

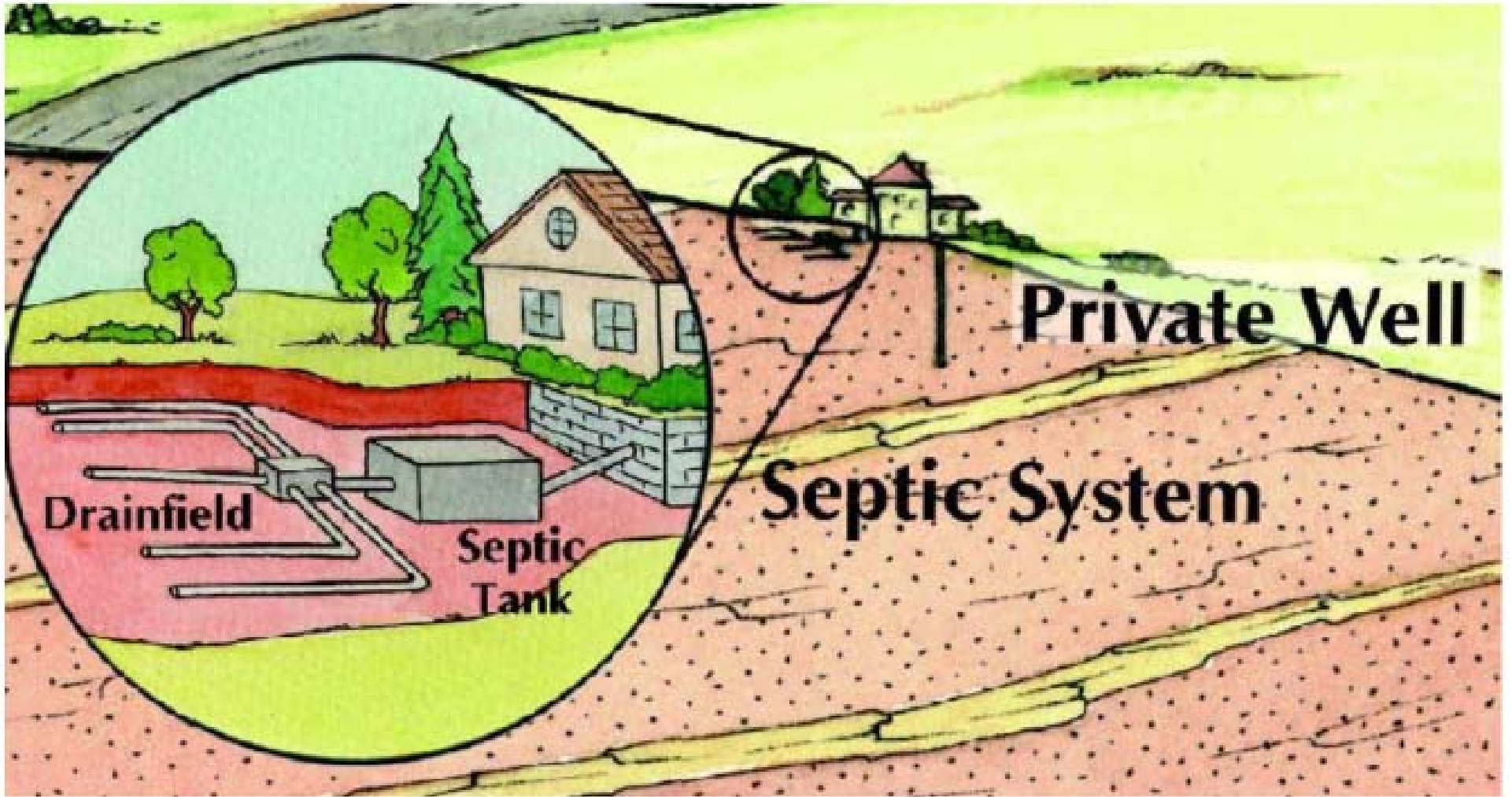
REMARKS: _____

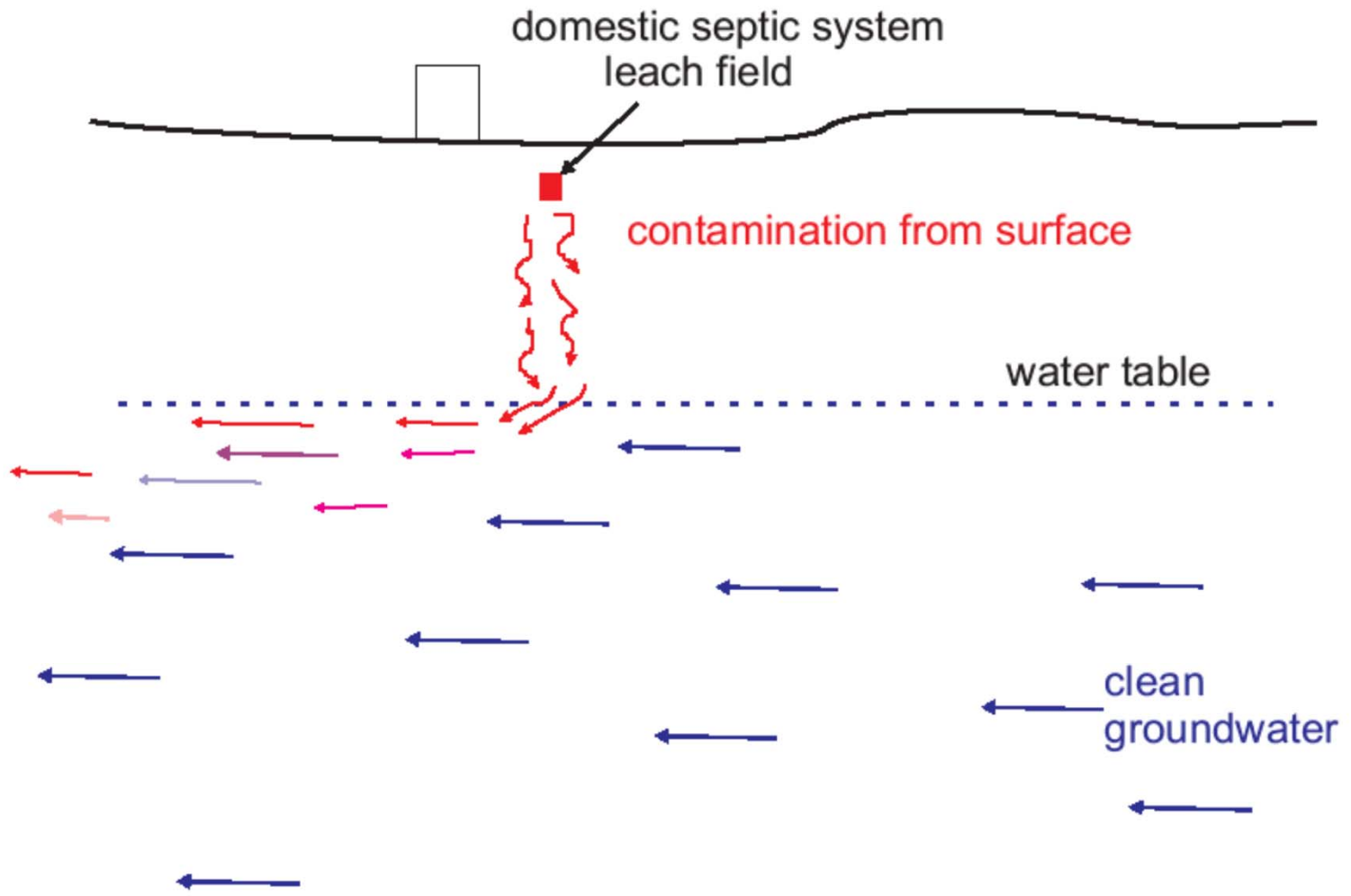
Under penalties of perjury, I declare that I have examined this form and to the best of my knowledge and belief it is true, correct and complete.

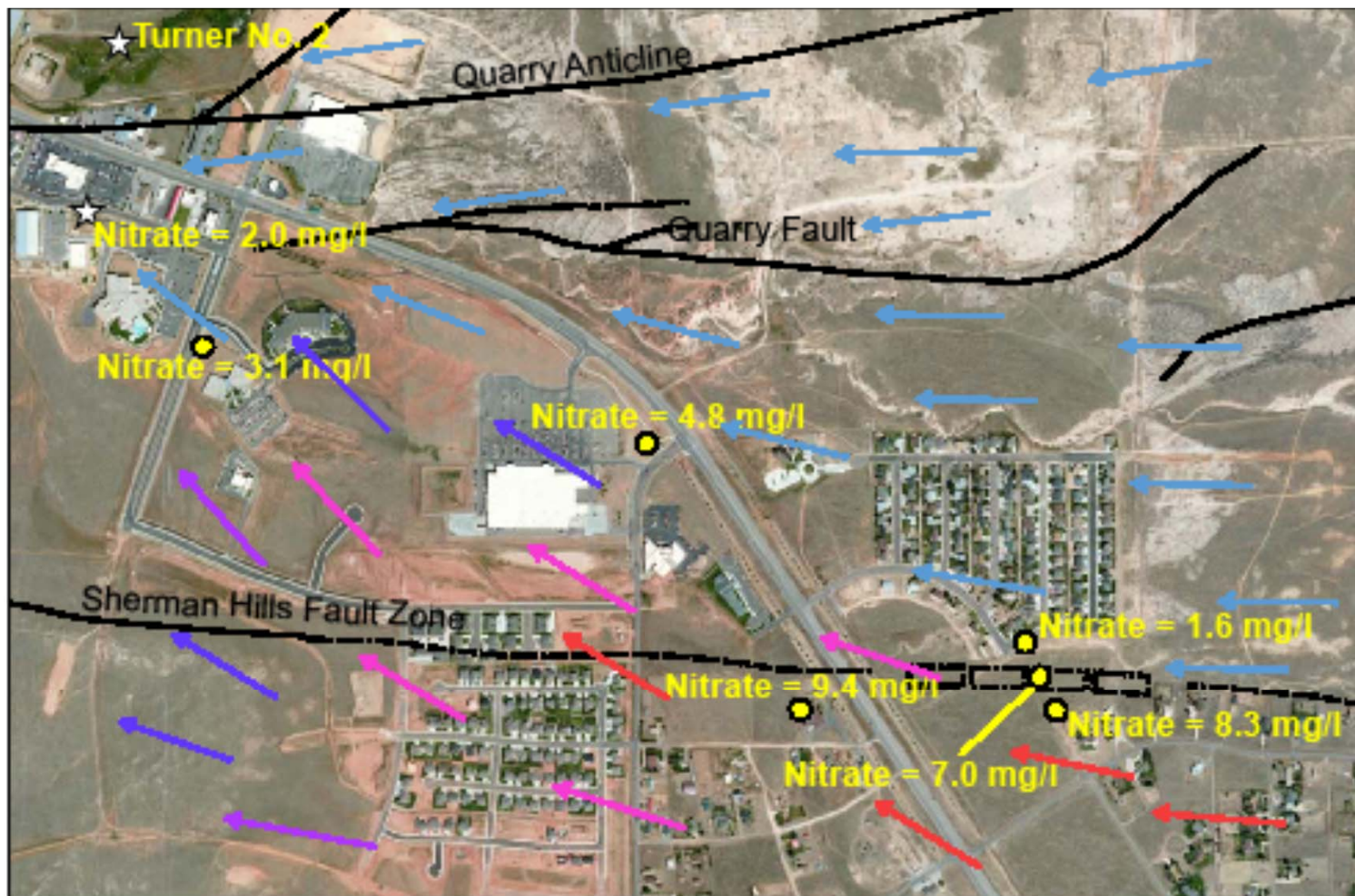
Paul A. Williams _____ 11-14 1993
Signature of Owner or Authorized Agent Date

FOR STATE ENGINEER'S USE ONLY

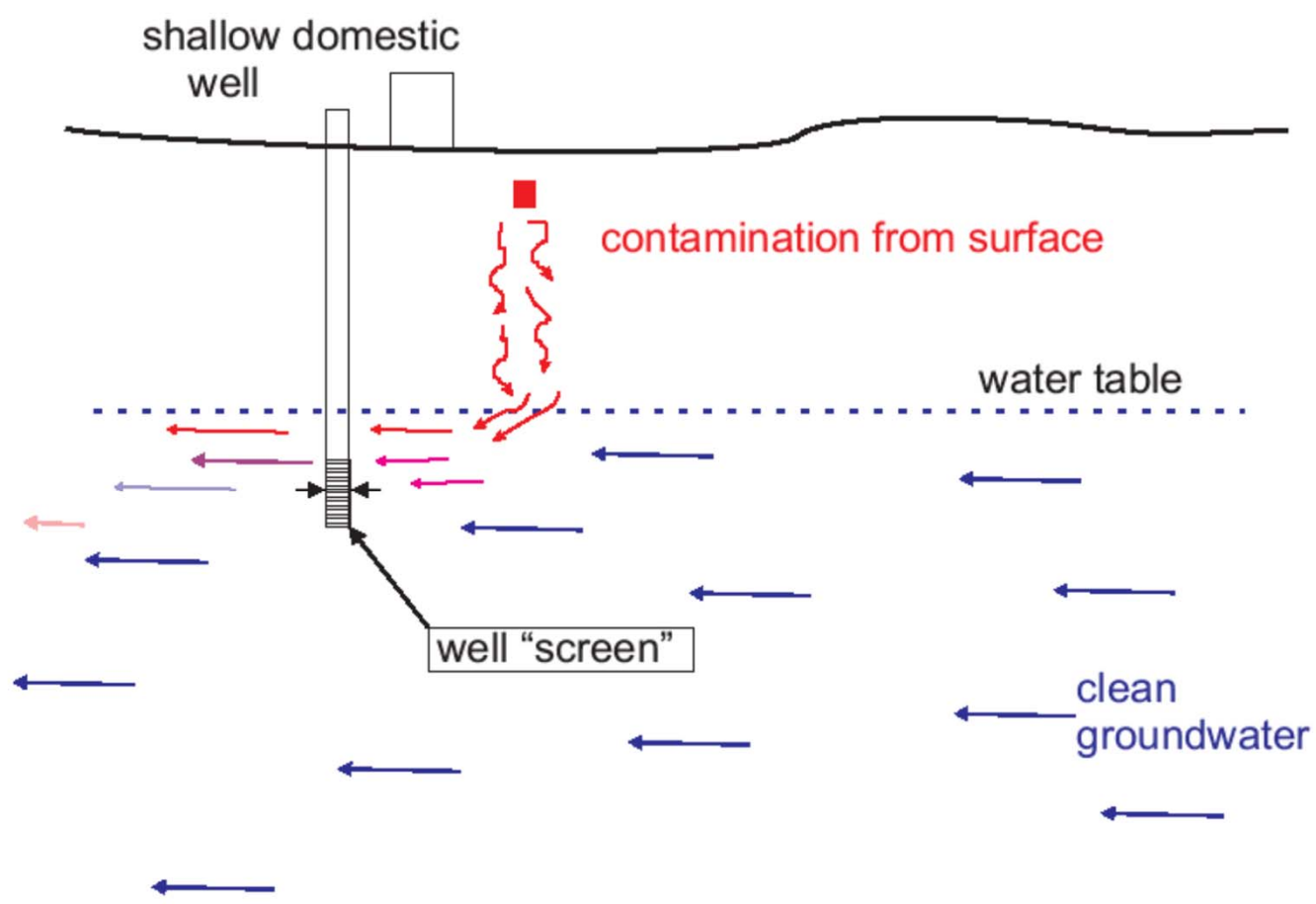
Date of Receipt DEC 10 1993, 19 _____ Date of Approval Mar 9 19 94
Date of Discharge June 17 19 93







Nitrate Concentrations Laramie Monitor Well Project





Filtered Straw Yerba Mate Tea
Gourd Drinking

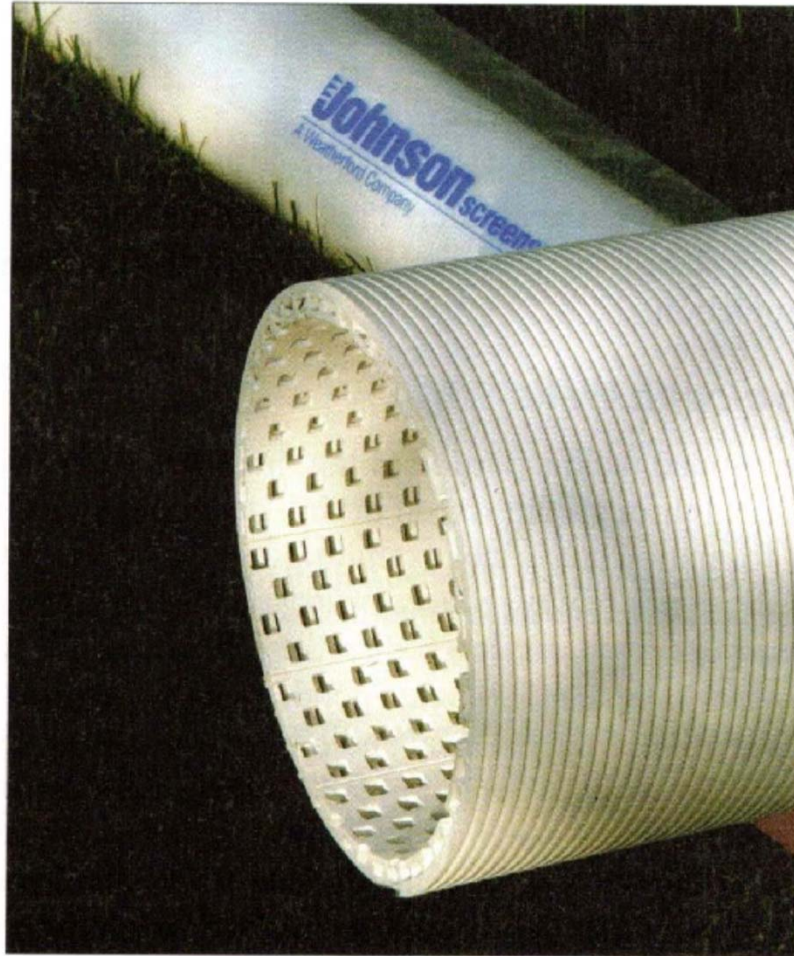


Figure 9.20. Slotted wire-wrapped PVC screen.

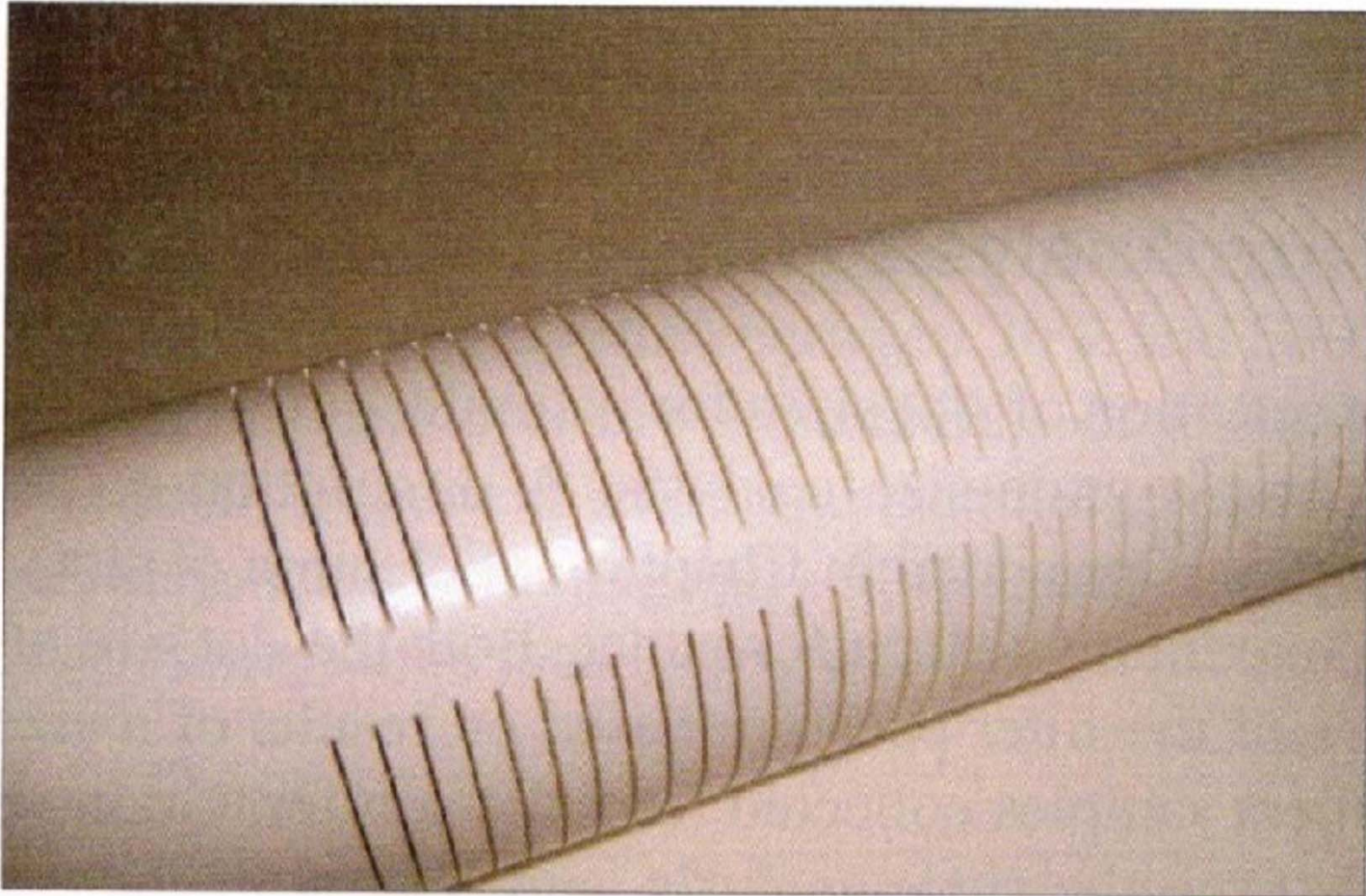
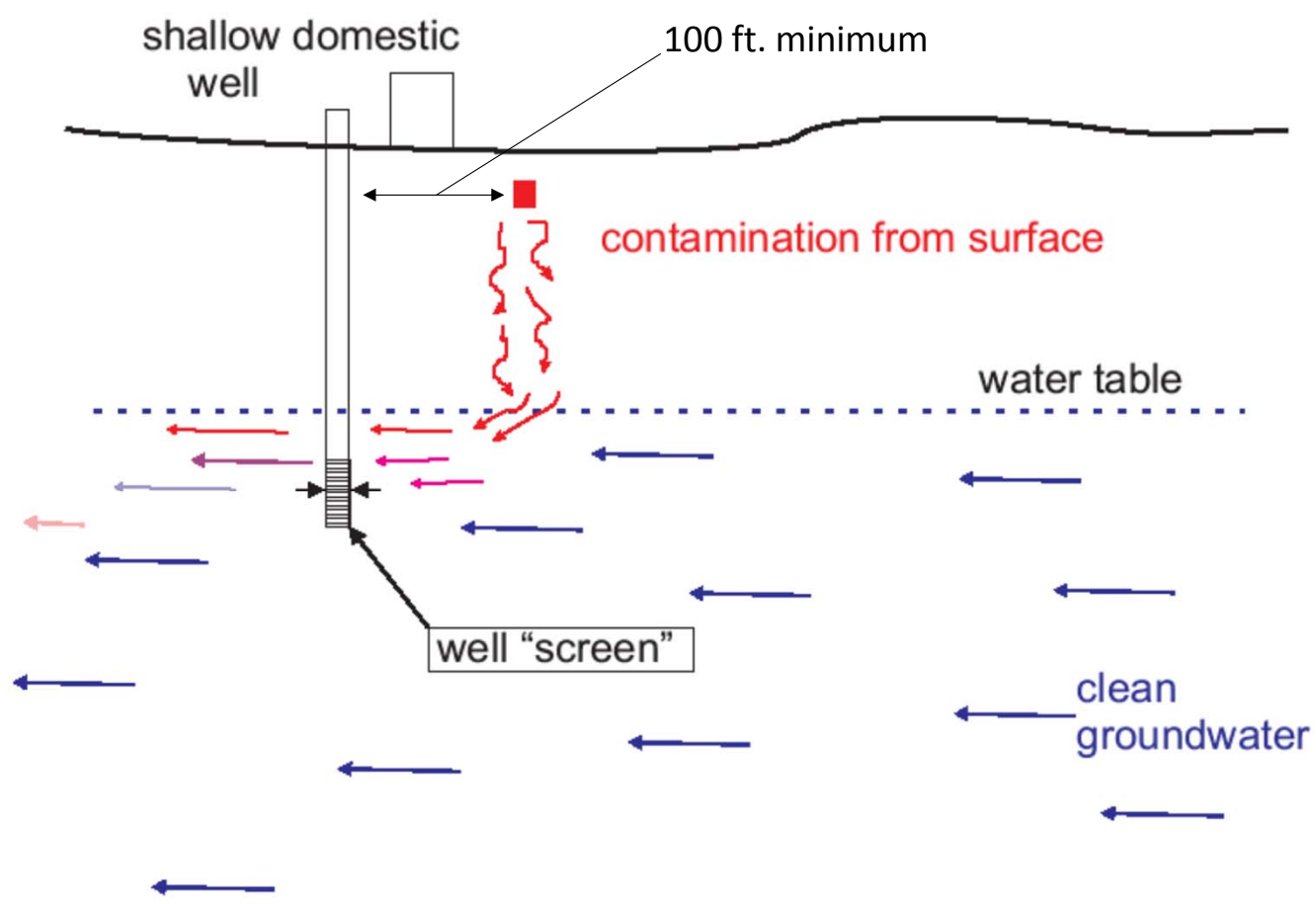


Figure 9.19. Slotted PVC screen.





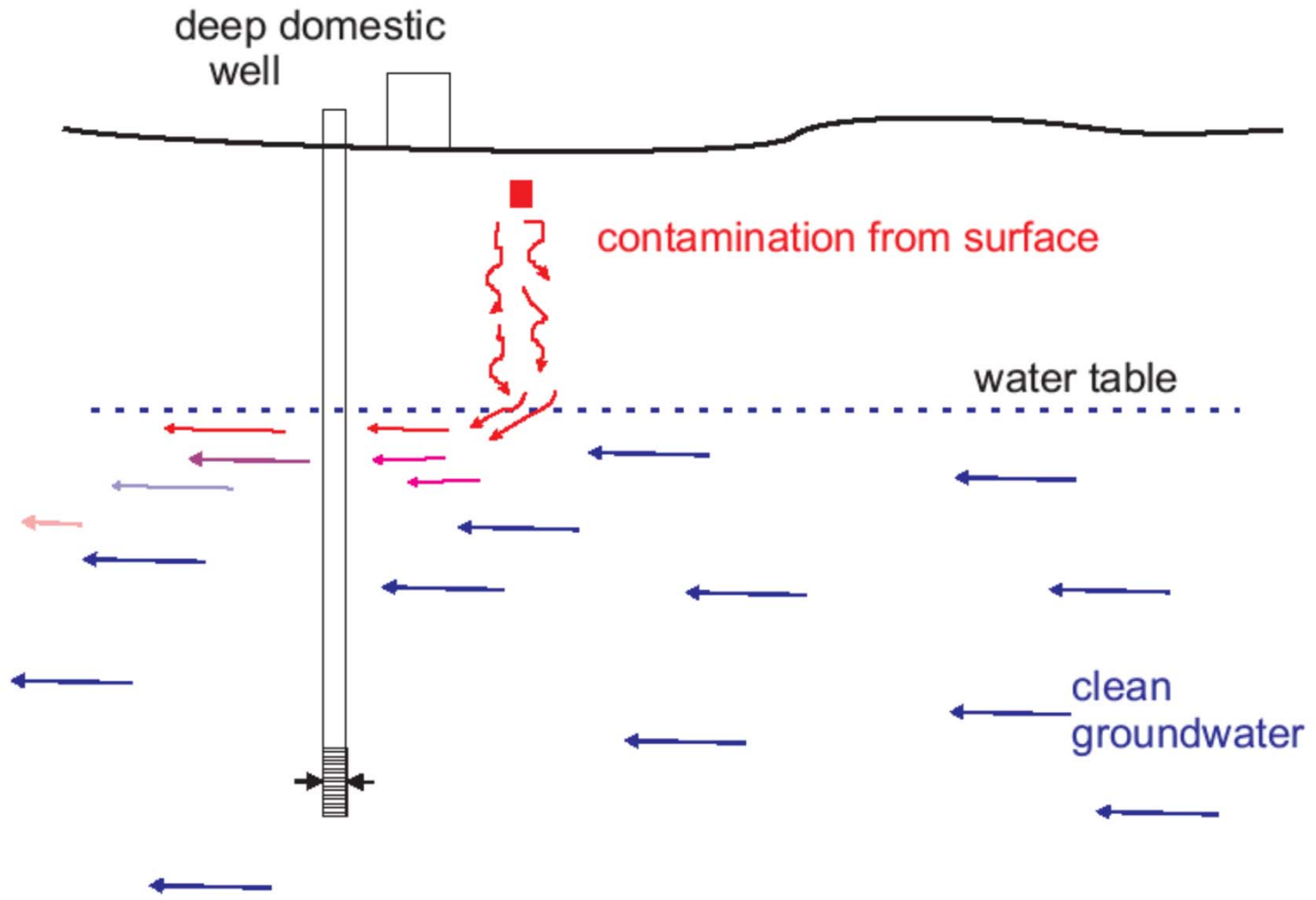
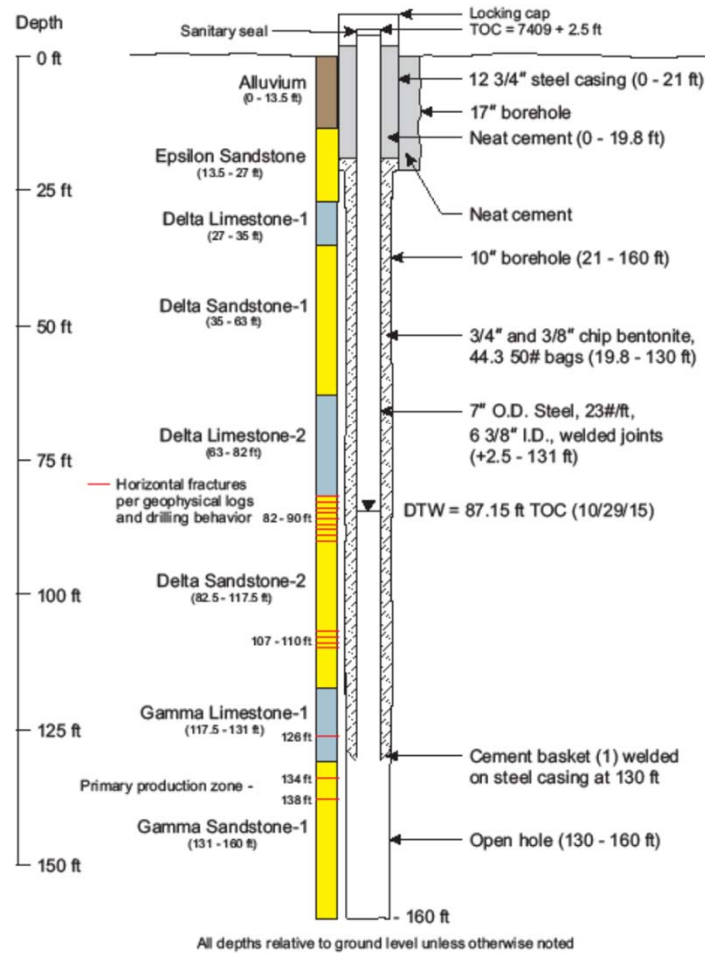


Figure 4 - Imperial Heights Park North Production Well
 U.W. 203338; Ground Elevation: 7409 ft AMSL



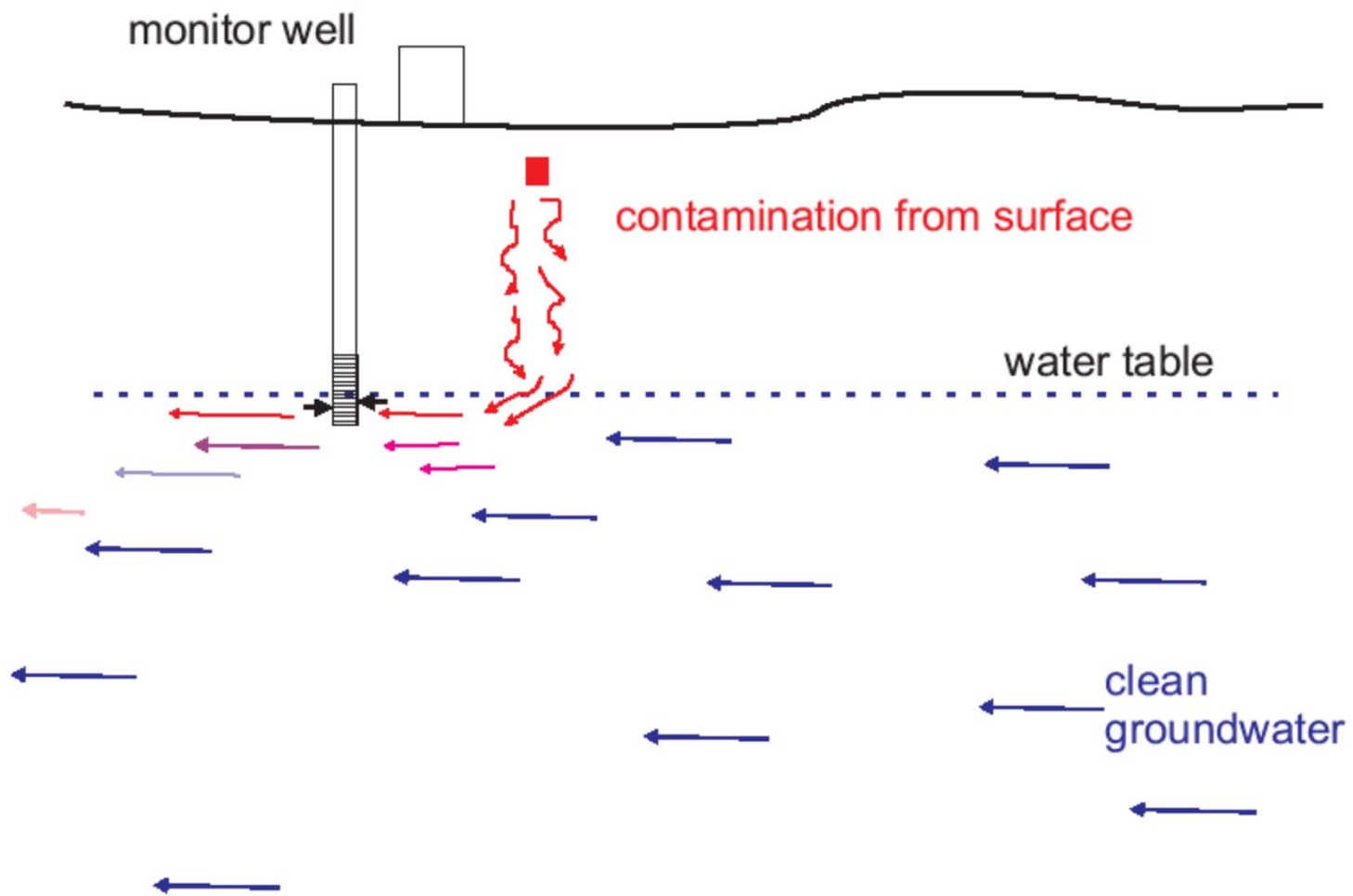
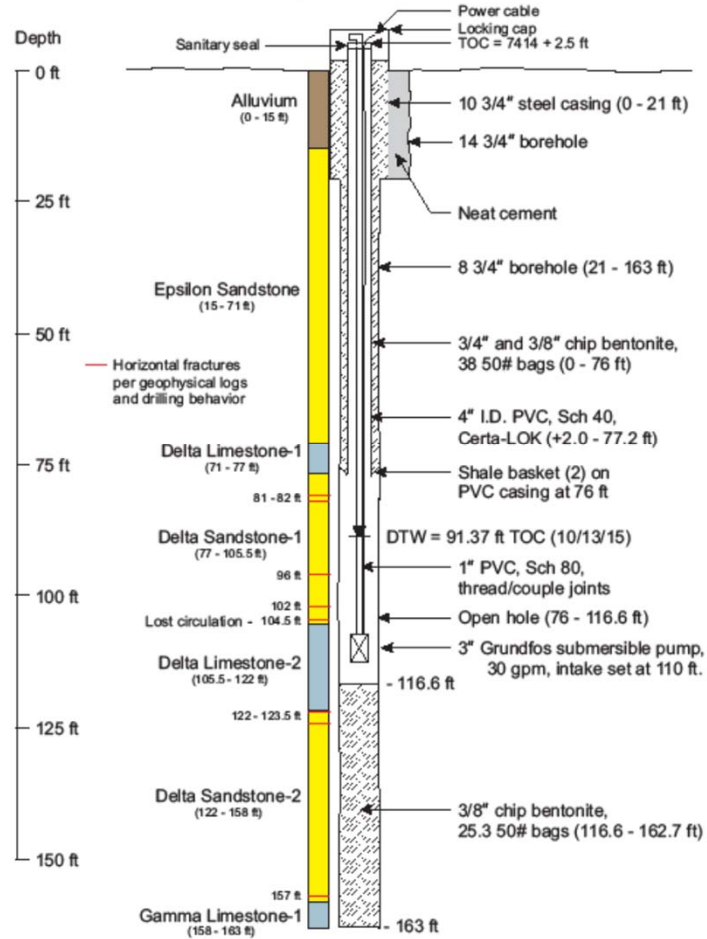
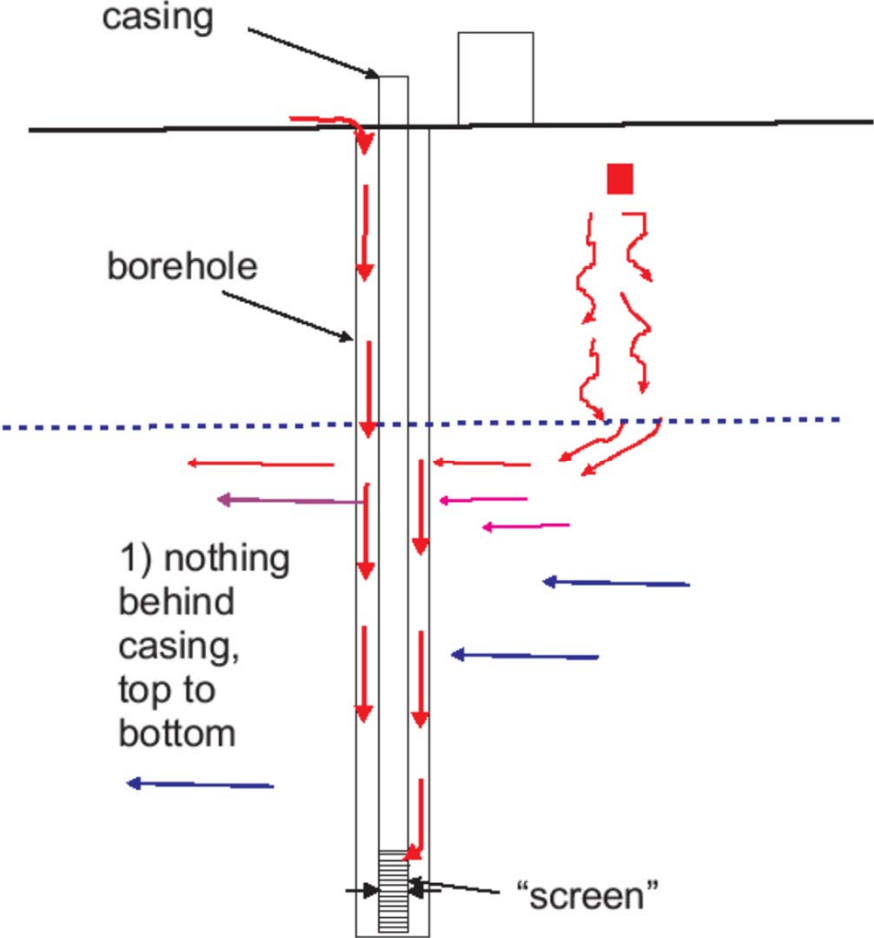


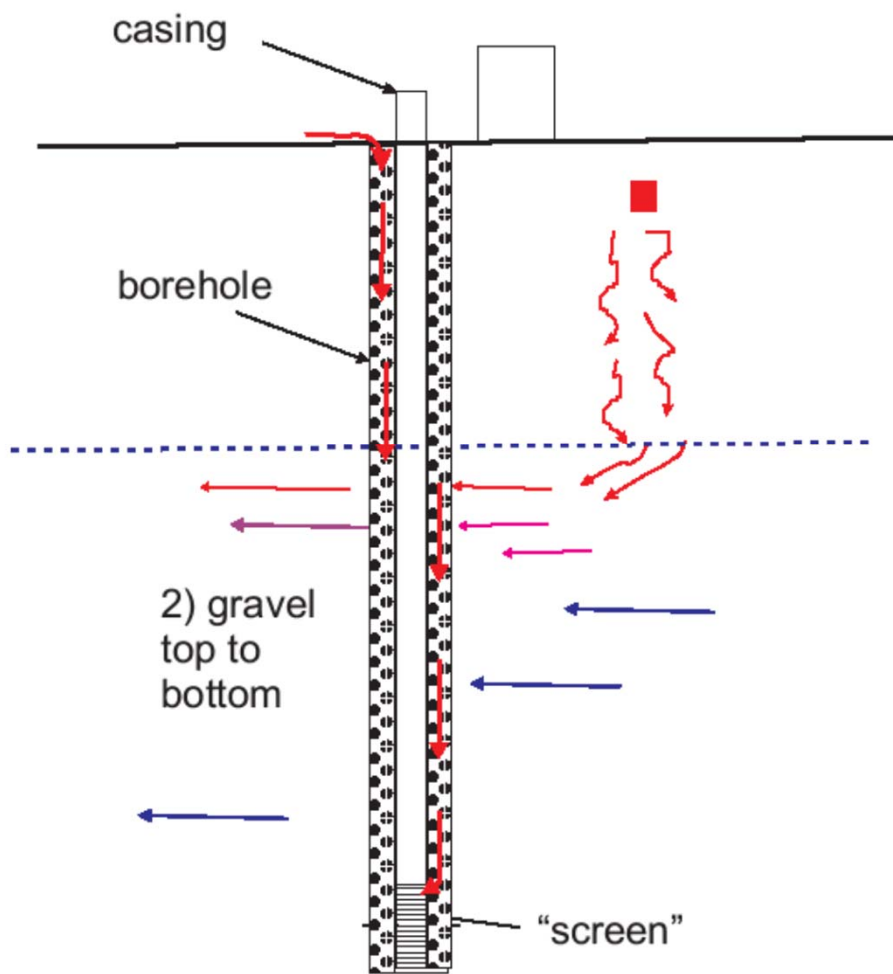
Figure 3 - Imperial Heights Park South Monitor Well
 U.W. 203339; Ground Elevation: 7414 ft AMSL

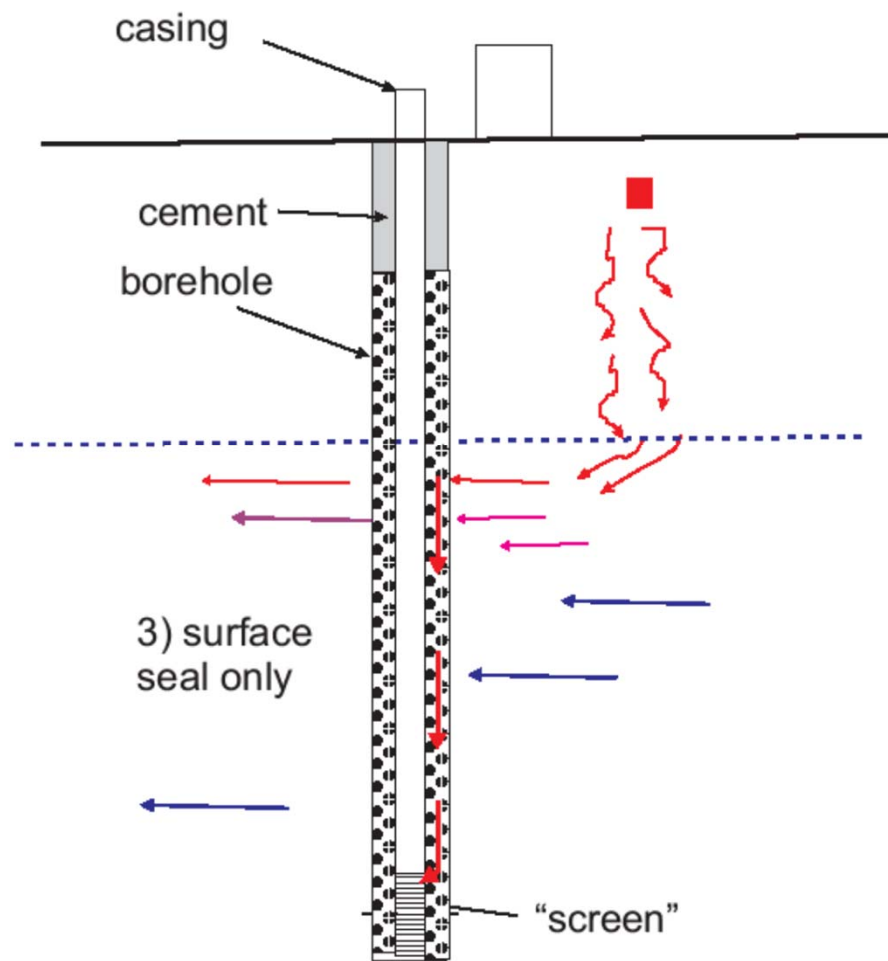


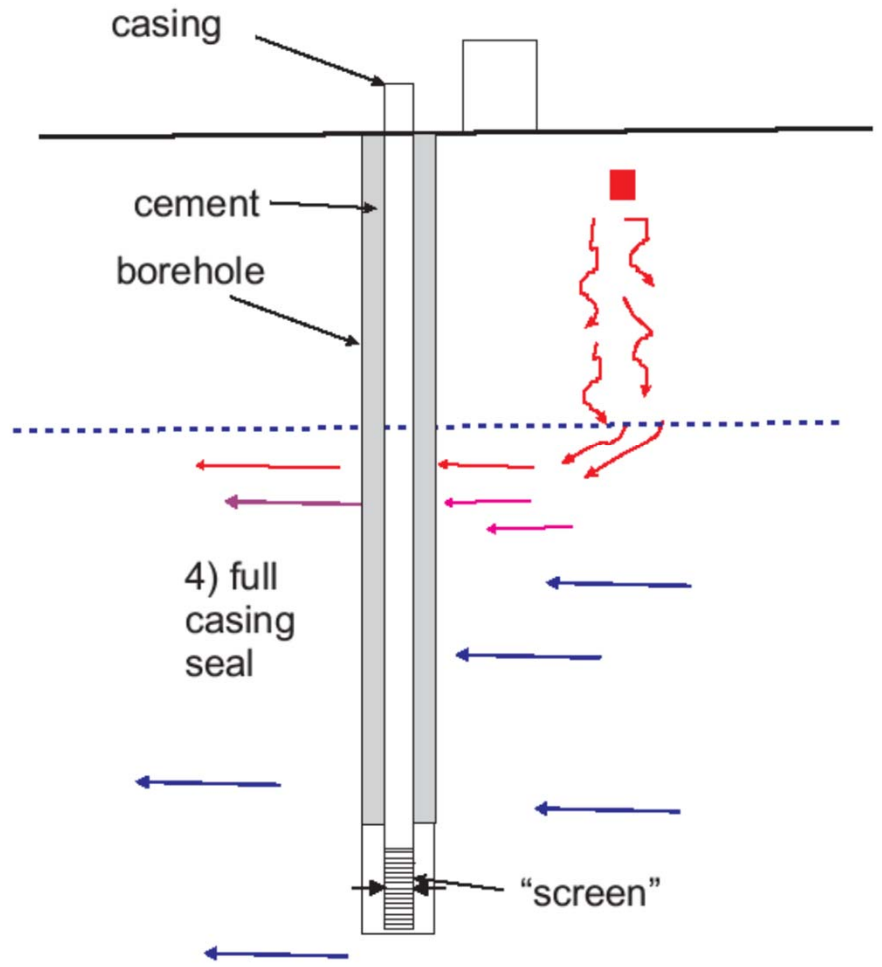
All depths relative to ground level unless otherwise noted

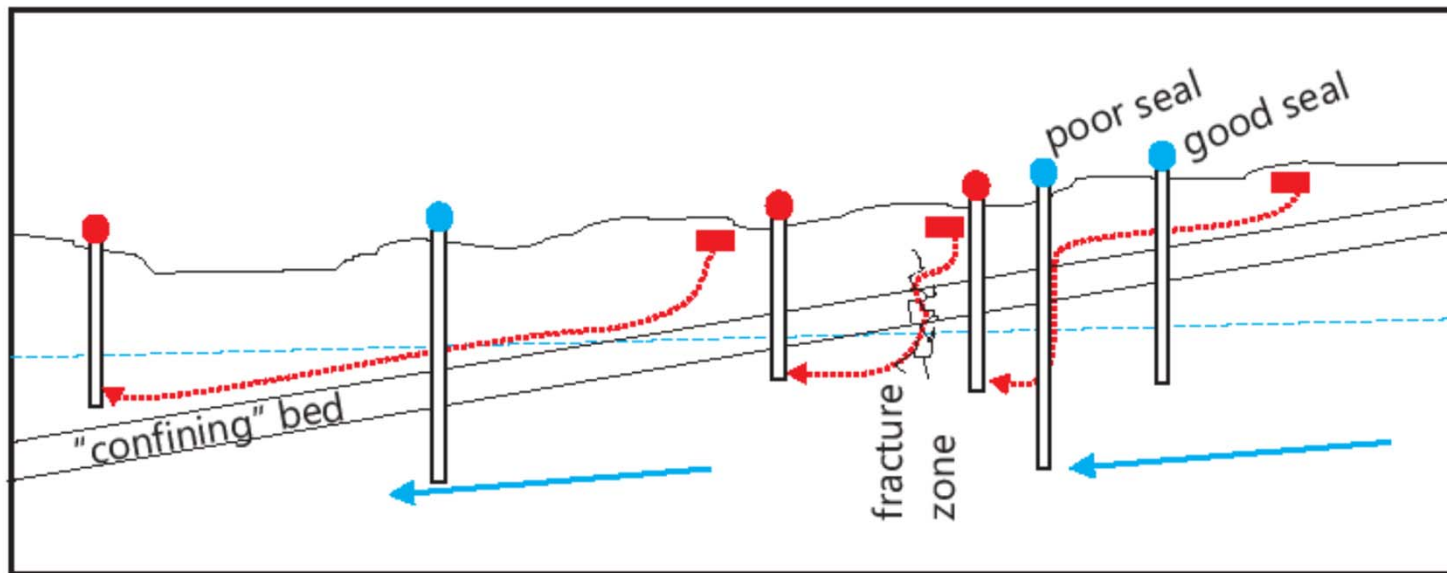
well "seal"











- contaminant source
- ← contaminant flow
- impacted well
- ← groundwater flow
- unimpacted well

Casper Aquifer Flow Schematic

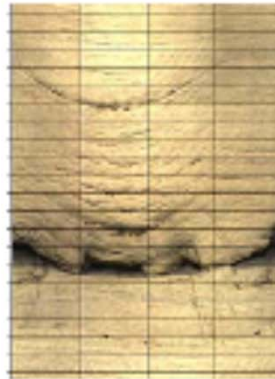






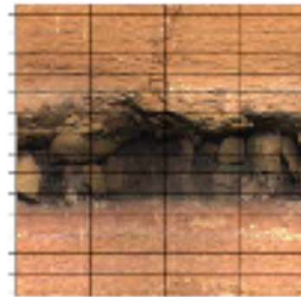


99.6
99.8
100.0
100.2
100.4
100.6
100.8
101.0
101.2
101.4
101.6

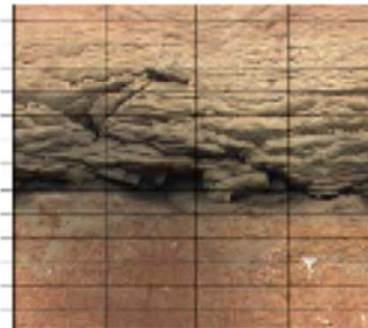


Bedding-plane openings in Triangle Well

99.0
99.2
99.4
99.6
99.8
100.0
100.2
100.4

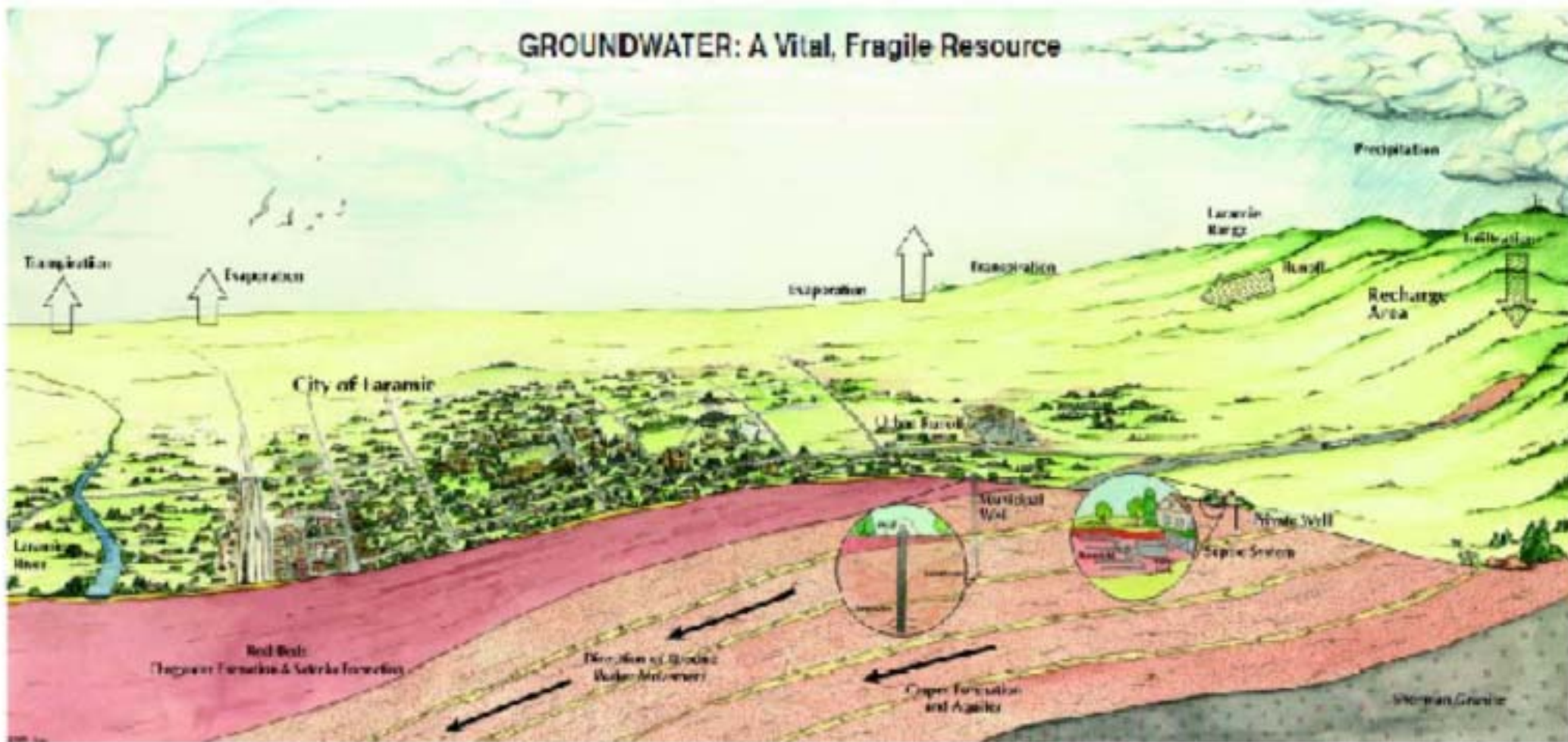


123.8
124.0
124.2
124.4
124.6
124.8
125.0

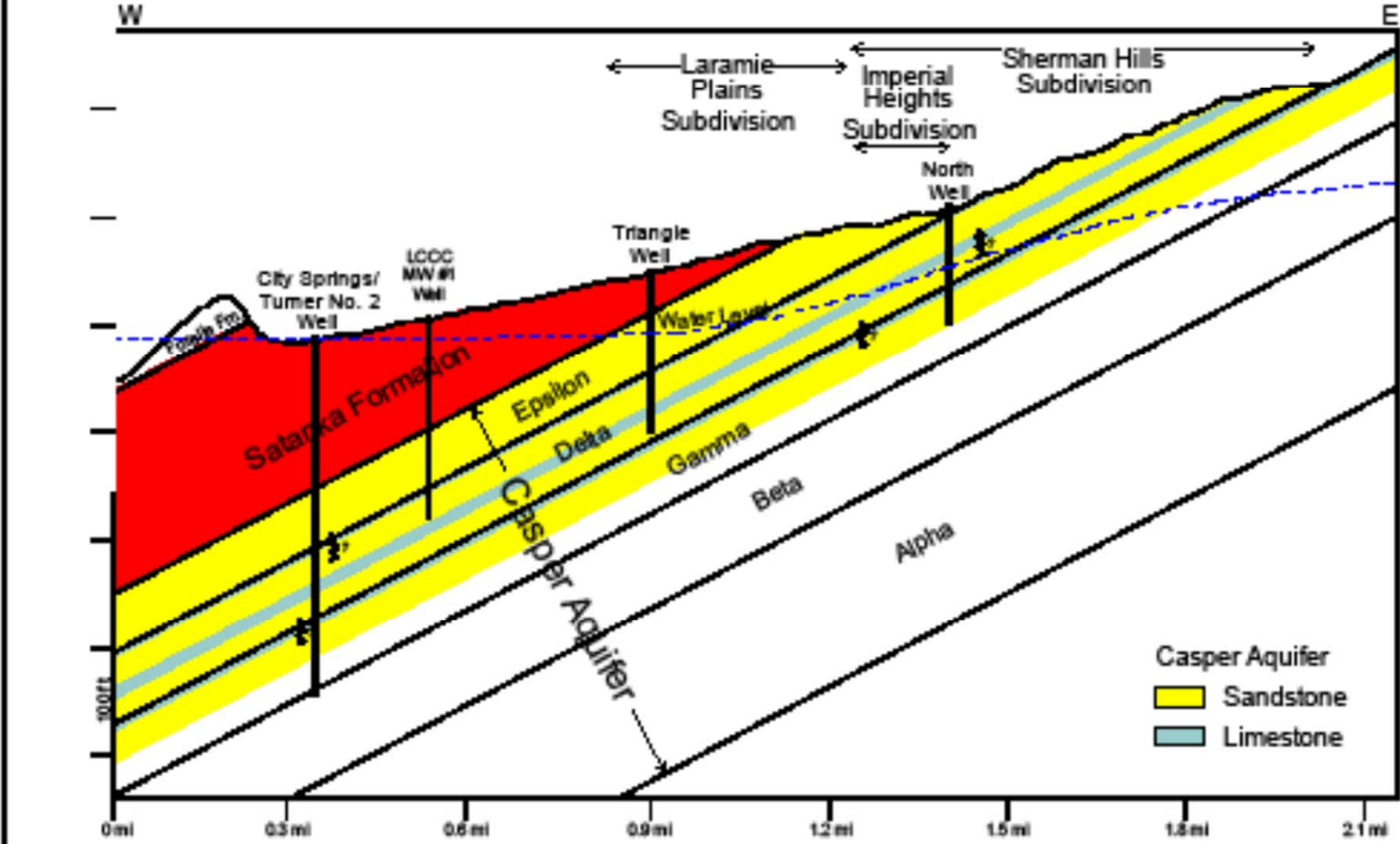


Down-hole Images from Laramie Monitor
Well Project - June, 2015 (vertical scale in feet)

GROUNDWATER: A Vital, Fragile Resource



Casper Aquifer Schematic Cross-Section



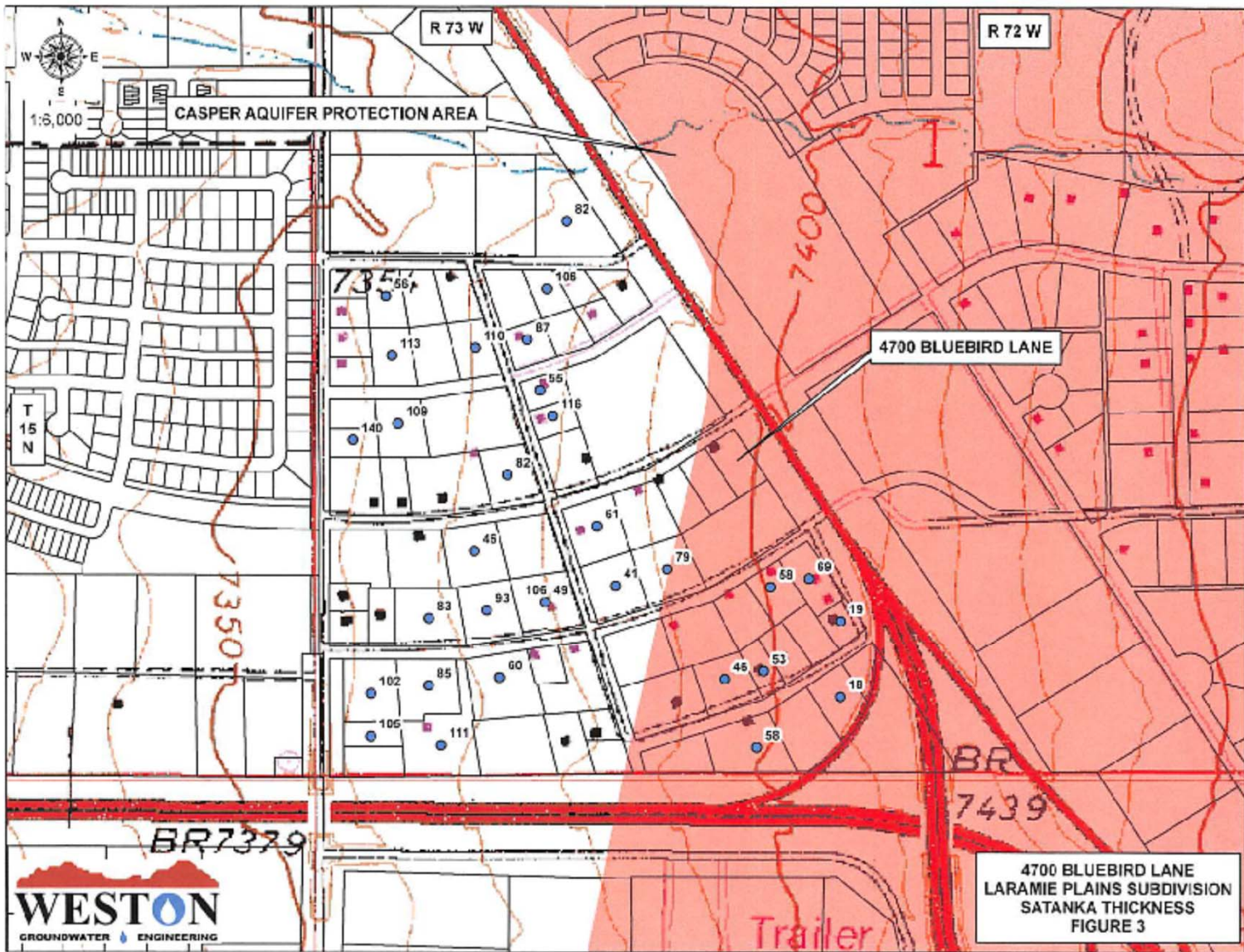


TABLE 1
LARAMIE PLAINS SUBDIVISION
SW 1/4, Section 1, Township 15, North, Range 73 West
Summary of Stratigraphic Depths and Thickness from Statements of Completion

Permit Number	Facility Name	Qtr-Qtr	Block, Lot	Yield (gpm)	TD (ft)	SWL (ft)	Top of Casper (ft)	Top of Satanka (ft)	Satanka Thickness (ft)	Main WBZ (ft)
P37271W	DUNLAY #1	SWSW	B8, L7	12	131	51	110	17	93	90-120
P115628W	GIL #1	SWSW	B10, L8	25	160	57	120	10	110	120-160
P1186W	BREAULT #2	SESW	B5, L1	20	100	70	88	19	69	88-100
P120109W	Embury 1	SWSW	B8, L8	25	160	56	120	14	106	120-160
P134178W	ROMERO # 1	SWSW	B7, L2	0	180	45	123	12	111	120-180
P134626W	FRISON-1	SESW	B5, L8	10	160	77	73	20	53	123-160
P149430W	ONE WELL	SESW	B5, L7	13	140	74	62	16	46	100-140
P1683W	MCMICHAEL #1	SESW	B5, L2	18	132	72	73	15	58	105-132
P168760W	ORIOLE LANE #2	SESW	B8, L7	18	160	71	70	12	58	100-160
P170191W	CORNERSTONE #1	SESW	B6, L4	18	160	87	40	22	18	120-160
P1827W	SANDELS #1	NWSW	B3, L4 (N)	10	104	59	75	20	55	75-104
P3039P	RECTOR #1	NWSW	B2, L5	25	135	62	106	18	87	100-135
P31961W	BOCK #1	SWSW	B4, L5	12	115	60	76	15	61	75-100
P35807W	STAHL #1	NWSW	B10, L3	10	136	44	75	19	56	80-120
P36663W	SHEAFFER #1	SWSW	B7, L4	12	140	39	118	16	102	118-140
P36820W	WOOLF #1	SWSW	B8, L2	12	120	50	65	19	46	78-110
P371G	Dot #1	SESW	B6, L10	40	112	77	47	28	19	98-112
P46354W	ENDICOTT #1	SWSW	B7, L5	12	145	45	125	20	105	125-145
P48790W	YLINDT 1	NWSW	B8, L6	12	140	47	83	0	83	100-140
P50744W	VOGEL #2	NWSW	B9, L3	10	145	51	125	18	109	125-145
P51053W	SMITHSON #1	SWSW	B9, L4	25	165	47	150	10	140	85-165
P63127W	VAVRA #1	NWSW	B8, L1	12	145	81	100	18	82	100-145
P60347W	MIKE FLUTY #1	NWSW	B10, L6	15	145	48	125	12	113	125-145
P64934W	SUTHERLAND #2	SESW	B4, L8	13	140	61	62	21	41	100-140
P68776W	HEPWORTH #1	SWSW	B7, L2	12	115	49	85	25	60	80-100
P8855W	NEELY #1	SWSW	B8, L8	10	142	56	65	16	49	81-119
P75083W	JFH #1	SWSW	B7, L3	13	140	44	100	15	85	115-135
P83018W	MISENHELTER #2	NESW	B3, L4 (S)	10	180	65	122	6	116	120-160
P83491W	JIM #1	NWSW	B2, L3	8	140	63	112	6	106	100-120
P97404W	WHITCOMB #1	SESW	B4, L7	10	140	71	100	21	79	100-140
P99001W	ANIMAL CENTER #1	NWSW	B1, L2	20	150	54	102	20	82	100-150