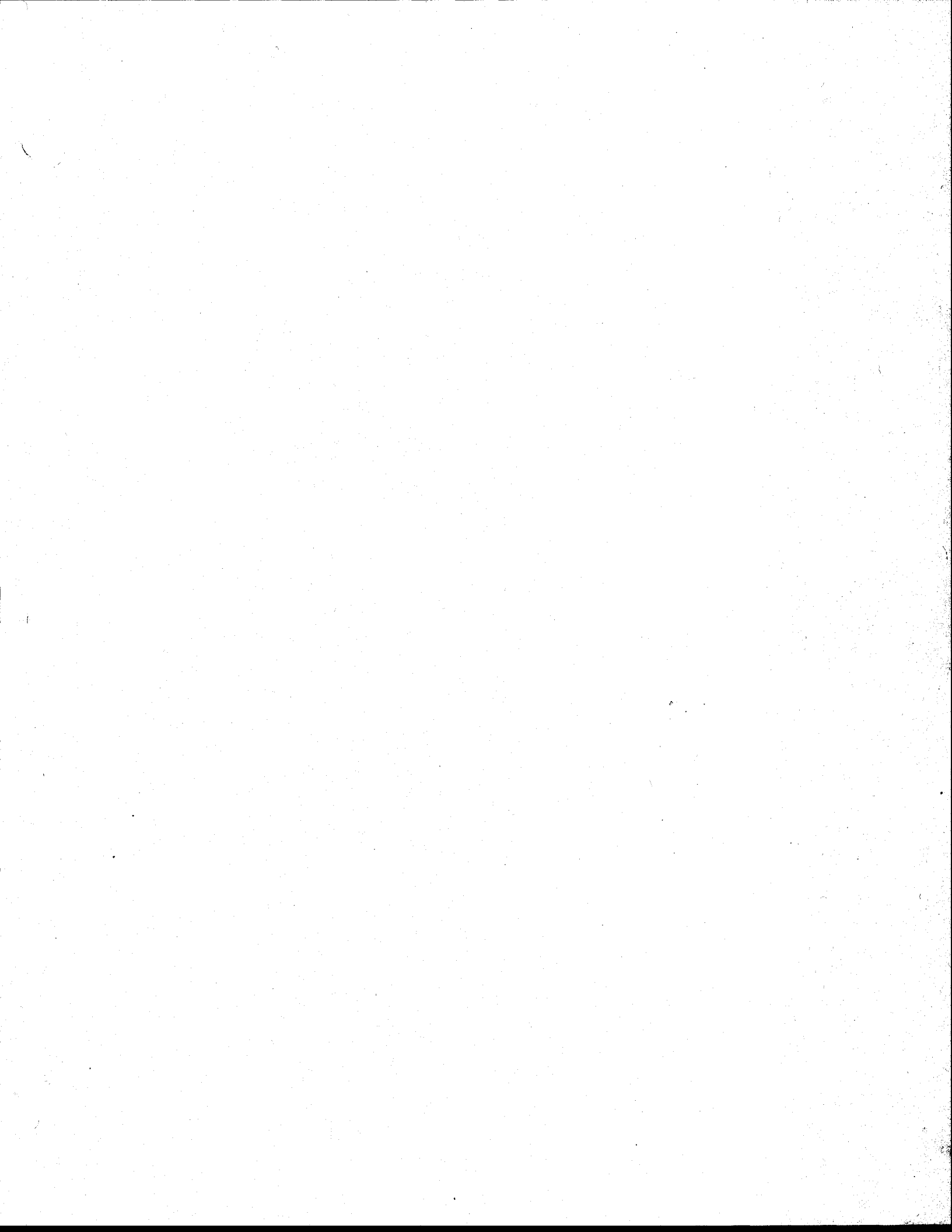
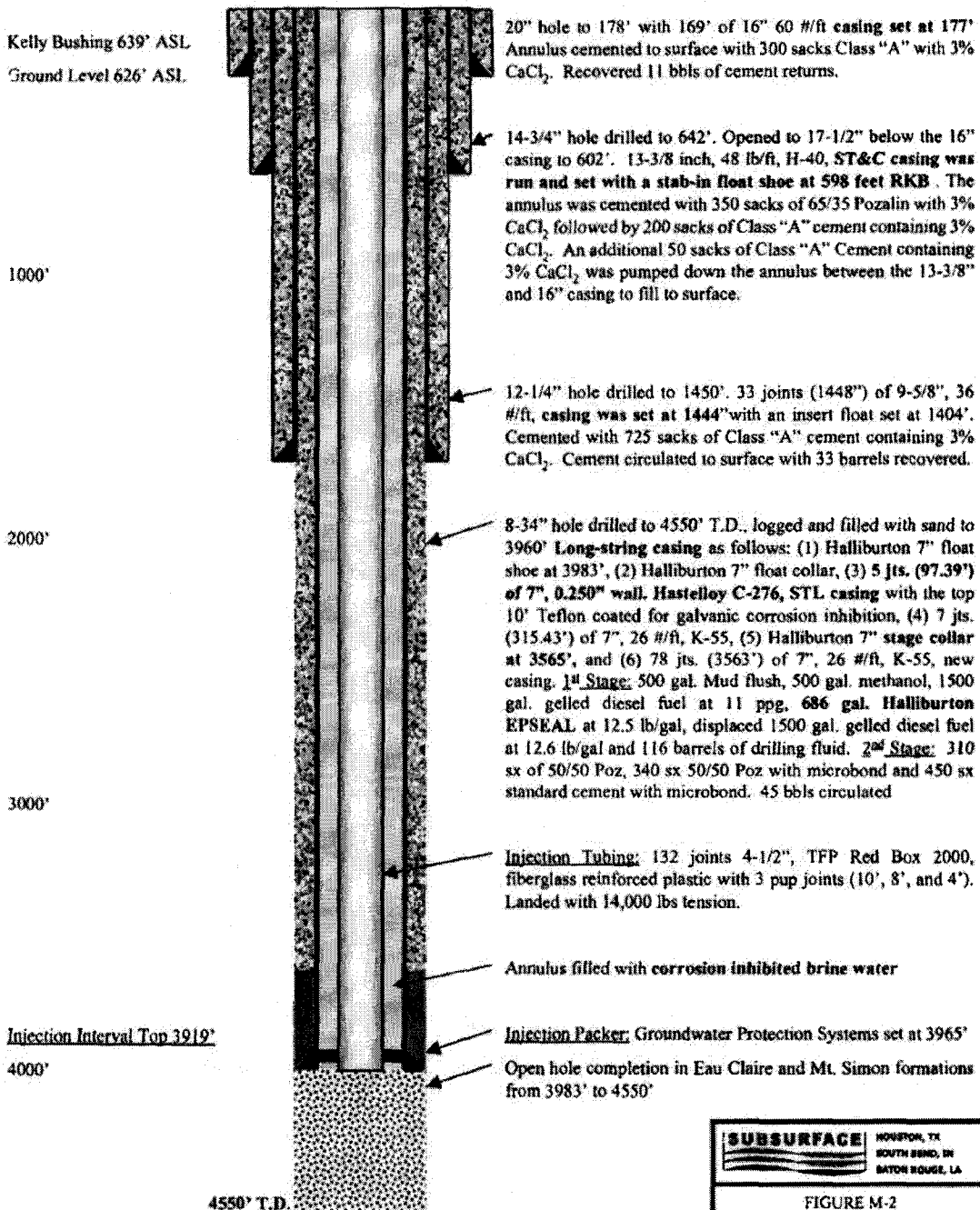


M. CONSTRUCTION DETAILS

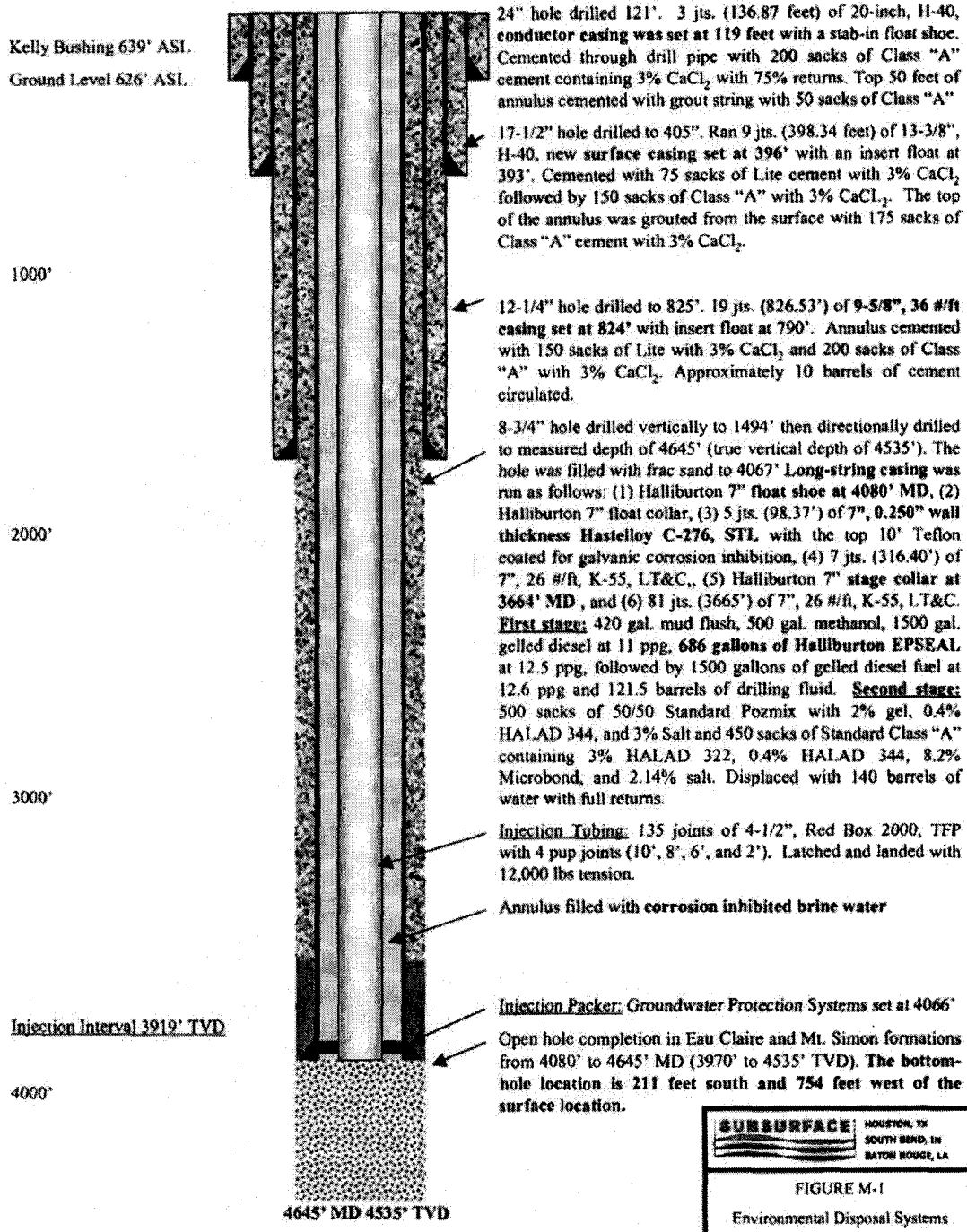
Submit schematic of surface and subsurface construction details of the well.

Figure M-1 is a schematic of the subsurface construction of Well #1-12. Figure M-2 is a schematic of the subsurface construction of Well #2-12. Figures M-3 is schematics of the wellheads of Well #1-12 and Well #2-12, respectively.





SUBSURFACE		HOUSTON, TX
		SOUTH BEND, IN
		BATON ROUGE, LA
FIGURE M-2		
Environmental Disposal Systems		
Well No. 2-12		
DATED: 10/22/02	APPROVED BY: JB	JOB NO. 4406295
DRAWN BY: JB	CHECKED BY: JH	SCALE: N/A



24" hole drilled 121'. 3 jts. (136.87 feet) of 20-inch, H-40, conductor casing was set at 119 feet with a stab-in float shoe. Cemented through drill pipe with 200 sacks of Class "A" cement containing 3% CaCl₂ with 75% returns. Top 50 feet of annulus cemented with grout string with 50 sacks of Class "A"

17-1/2" hole drilled to 405'. Ran 9 jts. (398.34 feet) of 13-3/8", H-40, new surface casing set at 396' with an insert float at 393'. Cemented with 75 sacks of Lite cement with 3% CaCl₂, followed by 150 sacks of Class "A" with 3% CaCl₂. The top of the annulus was grouted from the surface with 175 sacks of Class "A" cement with 3% CaCl₂.

12-1/4" hole drilled to 825'. 19 jts. (826.53') of 9-5/8", 36 #/ft casing set at 824' with insert float at 790'. Annulus cemented with 150 sacks of Lite with 3% CaCl₂ and 200 sacks of Class "A" with 3% CaCl₂. Approximately 10 barrels of cement circulated.

8-3/4" hole drilled vertically to 1494' then directionally drilled to measured depth of 4645' (true vertical depth of 4535'). The hole was filled with frac sand to 4067'. Long-string casing was run as follows: (1) Halliburton 7" float shoe at 4080' MD, (2) Halliburton 7" float collar, (3) 5 jts. (98.37') of 7", 0.250" wall thickness Hastelloy C-276, STL with the top 10' Teflon coated for galvanic corrosion inhibition, (4) 7 jts. (316.40') of 7", 26 #/ft, K-55, LT&C., (5) Halliburton 7" stage collar at 3664' MD, and (6) 81 jts. (3665') of 7", 26 #/ft, K-55, LT&C. **First stage:** 420 gal. mud flush, 500 gal. methanol, 1500 gal. gelled diesel at 11 ppg, 686 gallons of Halliburton EPSEAL at 12.5 ppg, followed by 1500 gallons of gelled diesel fuel at 12.6 ppg and 121.5 barrels of drilling fluid. **Second stage:** 500 sacks of 50/50 Standard Pozmix with 2% gel, 0.4% HALAD 344, and 3% Salt and 450 sacks of Standard Class "A" containing 3% HALAD 322, 0.4% HALAD 344, 8.2% Microbond, and 2.14% salt. Displaced with 140 barrels of water with full returns.

Injection Tubing: 135 joints of 4-1/2", Red Box 2000, TFP with 4 pup joints (10', 8', 6', and 2'). Latched and landed with 12,000 lbs tension.

Annulus filled with corrosion inhibited brine water

Injection Packer: Groundwater Protection Systems set at 4066' Open hole completion in Eau Claire and Mt. Simon formations from 4080' to 4645' MD (3970' to 4535' TVD). The bottom-hole location is 211 feet south and 754 feet west of the surface location.

4645' MD 4535' TVD

SUBSURFACE		HOUSTON, TX
		SOUTH BEND, IN
		BATON ROUGE, LA
FIGURE M-1		
Environmental Disposal Systems		
Well No. 1-12		
DATE: 04/24/02	APPROVED BY: JB	JOB NO. 0000290
DRAWN BY: JB	CHECKED BY: JH	SCALE: N/A

FIGURE M-3

Wellhead

