



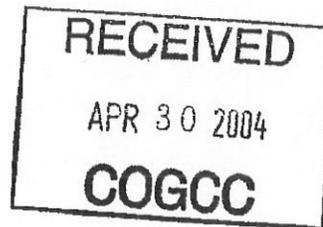
STATE OF COLORADO

OFFICE OF THE STATE ENGINEER

Division of Water Resources
Department of Natural Resources

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April 29, 2004



Bill Owens
Governor

Greg E. Walcher
Executive Director

Hal D. Simpson, P.E.
State Engineer

MEMORANDUM

TO: Ed DiMatteo
FROM: Glenn Graham 
SUBJECT: Water Injection Project, Wildwood Field, Weld County

Your memo of April 13, 2004 (copy enclosed), describes a proposal to inject water into the Triassic – Permian Lyons Sandstone in the interval between 8,667 and 8,700 feet in the Croissant #1, located in the NE ¼ of the NW ¼ of Section 26, Twp. 9 North, Rng. 62 West. Surface casing was installed to depth of 932 feet; production casing was set to a depth of 8,745 feet.

There are no water wells of record within ½ mile of the proposed injection well.

The Laramie Formation is exposed on the surface in the area surrounding the proposed injection site. The Laramie Formation is underlain by the Fox Hills Sandstone. The lowermost Laramie sands are combined with the Fox Hills Sandstone to form the Laramie-Fox Hills Aquifer. The Fox Hills sandstone is underlain by the Pierre Shale, which extends to a depth of about 6,540 feet in the proposed injection well. The sandy transition zone in the upper part of the Pierre Shale does yield water to wells where that zone is closer to the surface. There are no water wells of record taking water from the sandy transition zone in the Upper Pierre Shale in this part of the state. Depth to the base of the Laramie-Fox Hills Aquifer is about 600 feet in the area of the proposed injection well. All of the known or potential aquifers in this part of the state are behind surface casing in the Croissant #1.

The only formation between the base of the Pierre Shale and the proposed injection zone that is a known or potential aquifer in eastern Colorado is the Dakota Sandstone, the stratigraphic equivalent the "J" Sandstone. The nearest Dakota aquifer water wells are more than 40 miles to the west, and the closest outcrop of the Lyons Sandstone, the proposed injection interval is about 47 miles to the west.

There are no ditches in the immediate area, and the only stream in the area is the intermittent Crow Creek, which flows from west to east (when it flows) and is located about 1 ¼ miles to the south of the proposed injection well.

Based on the information you provided, it does not appear that there is any potential for injury to known or potential sources of fresh water in the area from a properly constructed injection well.

If you have any questions or require additional information, please feel free to contact me.



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MEMO

WATER RESOURCES
STATE ENGINEER
DWR

April 13, 2004

To: ~~Mr. George VanSlyke~~ *Glen Graham*
Division of Water Resources

From: Mr. Ed DiMatteo, Underground Injection Control Program

Subject: Need for Hydrologic Information

PLEASE RETURN LOGS WITH AQUIFER TOPS MARKED

The Oil and Gas Conservation Commission has received an application for a water injection project to be located;

LOCATION	COUNTY
NE NW 26 9N 62W 6 th P.M.	WELD

1	WELL NAME	CROISSANT 1	FIELD	WILDWOOD
2	INJECTION ZONE(S)	LYONS		
3	DEPTH OF INJECTION INTERVAL	8,667	TO	8,700
4	PROPOSED INJECTION PRESSURE	0	TO	50
5	FRAC GRADIENT OR PRESSURE (BHP)	.6 ESTIMATED		PSI/FT
6	VOLUMES OF FLUID TO BE INJECTED	100	TO	200
7	TDS OF INJECTION ZONE FLUID	116,000		MG/L
8	TDS OF FLUID TO BE INJECTED	116,000		MG/L

9	Well Construction Data					
	CASING SIZE	HOLE SIZE	DEPTH	AMOUNT CEMENT	TOC	
	SURFACE CASING	8 5/8 "	12 1/4"	932'	605 sks	surface
	PRODUCTION CASING	5 1/2 "	7 7/8"	8,745'	365 sks	6910'

Please furnish the Commission the name and depth of any aquifer in the area that is a known or potential fresh water strata. We would also like a list of the water wells within one half mile of this location. Any other information with regard to distance to streams, ditches or outcrops would be very helpful. Thank you