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**Record Documents:**

Start Pg	Doc Type	Doc Date	Title	Box	Package
1	Letter	5/29/1996	Water Sampling for Wells 54-1015 and 54-1016, located in Canada del Buey N/A N/A N/A		





Science &  
Engineering  
Associates, Inc.

Environmental Technologies Division  
1570 Parkero, Suite D 1  
Santa Fe, NM 87505  
(505) 983-6693  
FAX: (505) 983-5868

(2)

\* 81612

May 29, 1996

Mr. Robert Gilkeson  
ERM/Golder Los Alamos Project Team  
2237 Trinity Drive, Bldg. 2  
Los Alamos, NM 87544

Dear Bob,

On April 26 John Marin and I attempted to sample water from the Solinst multipoint sampling wells identified as 54-1015 and 54-1016, located in Canada del Bury. We used the sample pump controller purchased from Solinst, which controlled the drive gas and allowed both pressurization of the drive line and controlled release of gas pressure. The drive gas was provided by a compressed dry nitrogen bottle.

For each sample pump we applied a 40 psi drive gas pressure and observed the return of gas and any water which was driven up by the gas. The water was directed into a Nalgene bottle. Gas flow was turned off after at least a minute of no water return flow was noted. The observations for each port are summarized below:

Well 54-1015

525' sample pump: Gas pressure was applied for about 12 minutes. Gas return flow was noted after 2 minutes. About 1/2cc of water splattered into the sample bottle.

350' sample pump: Gas pressure was applied for 4 minutes. Gas return flow was noted after 20 seconds. About 1cc was collected in the sample bottle.

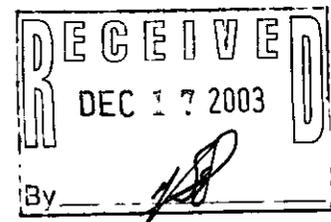
Well 54-1016

188' sample pump: Gas pressure was applied for 2 minutes. Gas return flow was noted immediately. Immeasurable water was observed.

318' sample pump: Gas pressure was applied for 2 minutes. Gas return flow was noted immediately. No water was observed.

481' sample pump: Gas pressure was applied for 3 minutes. Gas return flow was noted immediately. No water was observed.

601' sample pump: Gas pressure was applied for 2.5 minutes, until the gas bottle emptied. We acquired another bottle and ran the flow for 5.5 minutes. No return air was noted in either case. Suspecting that the lines may have been mislabeled, we reversed the pressurization and sampling fittings and retried the pump. After about 45 seconds the flow stopped completely. Flow was clearly blocked in this direction. These results indicate that the sample line for this pump was probably configured correctly, but that the pressurization line was either mislabeled (at another indicated sample pump or port depth) or failed (not continuous).



The quantities of water obtained were so small that it is uncertain whether it was water accumulated in the pump body or water condensed on the walls of the Teflon (5/16" OD, 3/16" ID) tubing. The results from the 601' pump warrant field checks in the future to determine whether the lines are mislabeled or failed. The soil gas pressure data will help delineate the problem.

If you need additional information please call me.

Sincerely,



William E. Lowry

Science and Engineering Associates, Inc.