

1R - 427-87

# Annual GW Mon. REPORTS

DATE:

2007

**L. Peter Galusky, Jr. Ph.D., P.G.**

*Texerra*

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**March 7th, 2008**

**Mr. Edward Hansen**

New Mexico Energy, Minerals, & Natural Resources  
Oil Conservation Division, Environmental Bureau  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87504

**RE: Annual Report: OCD Case Number: 1R427-87  
Rice Operating Company – EME SWD System  
H-20 SWD Facilities (UL H Sec 20 T 20S R 37E)  
OCD Case Number: 1R427-87**

Sent via E-mail and U.S. Certified Mail (with Corrective Action Plan)  
Return Receipt No. 7007 0710 0003 0305 3712

**Dear Mr. Hansen:**

This letter summarizes the results of an Investigation and Characterization Plan<sup>1</sup> which was completed by Texerra in November of 2007. This work evaluated the potential for groundwater contamination stemming from the operation of two below-grade redwood tanks and an emergency overflow pit, both of which were removed and closed in 2007.

Elevated chloride levels (1,420 ppm) were found in a monitor well (MW-1) approximately 25 ft down-gradient from the former excavation. Groundwater chloride concentrations were similarly elevated (also 1,420 ppm) in a down-gradient well (MW-3) and 980 ppm in an up-gradient well (MW-2). Low levels of BTEX (0.052 ppm) were found in the near-source well, and near-trace concentrations (0.002 ppm) were found in the down-gradient well; (see Figure 3 and Table 1). A hydrocarbon sheen has also been noted in the near-source well. These results indicate that groundwater is not pristine as it flows onto the subject site, but suggests some impact from the former facilities.

The results summarized here will be presented in more detail in a proposed "Corrective Action Plan" for this site. This Plan will propose further and more detailed, groundwater monitoring, as well as a remedy to attenuate dissolved phase hydrocarbons.

Sincerely,

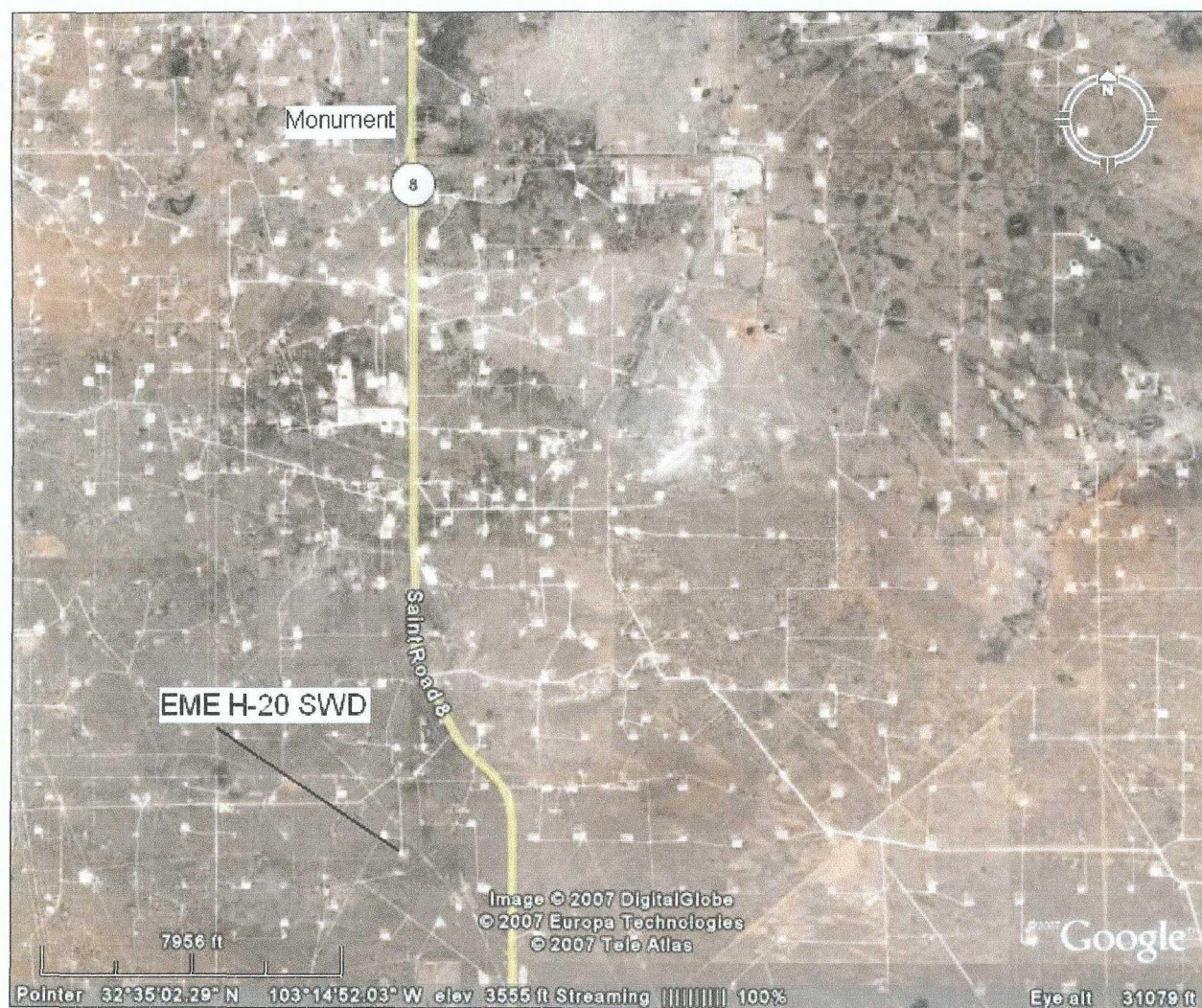


**L. Peter Galusky, Jr. Ph.D.**  
Principal

Encl: Site maps and data  
Copy: Kristin Pope, Rice Operating Company

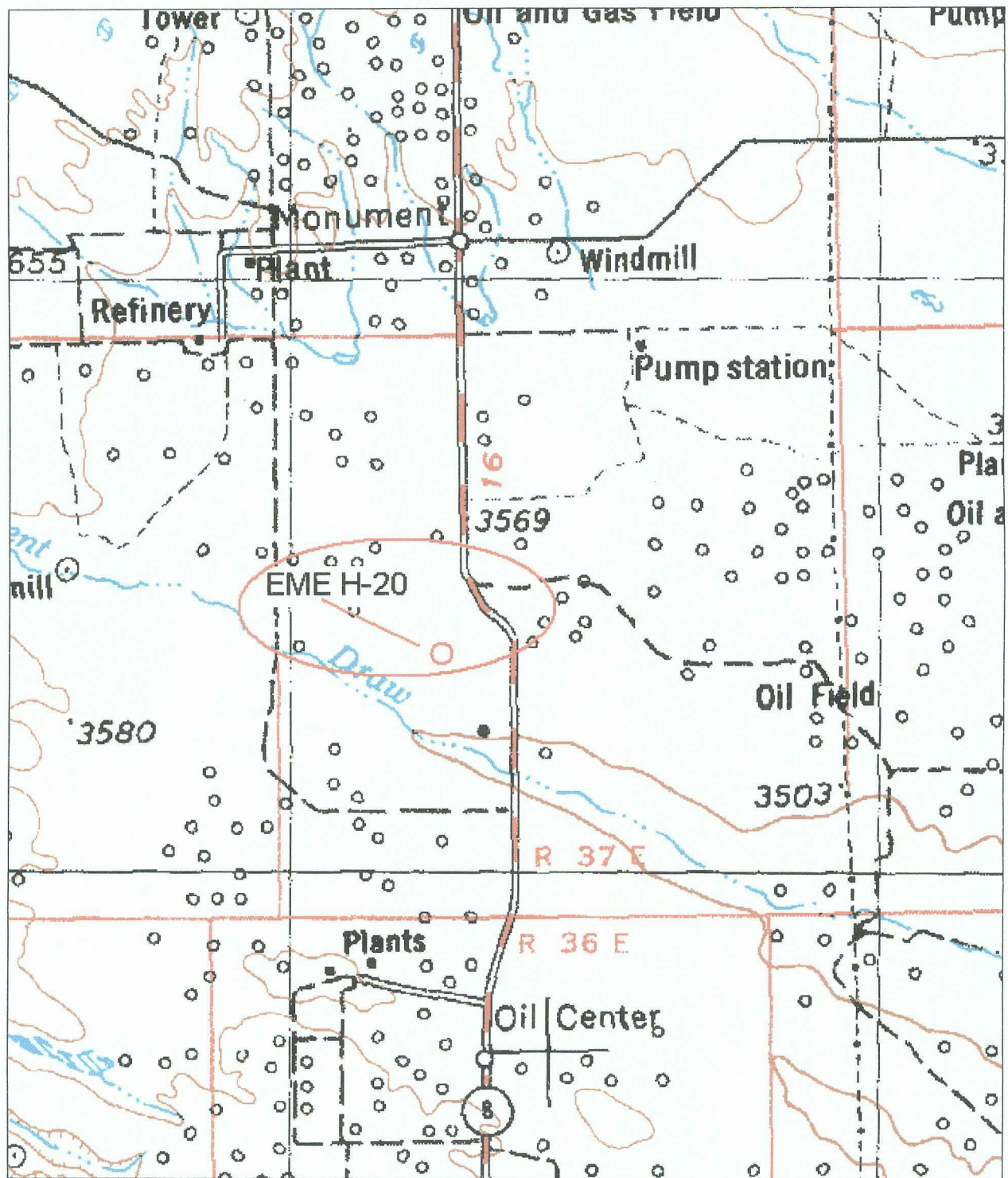
<sup>1</sup> A project history and further details can be found in the Investigation and Characterization Plan.

## Texerra

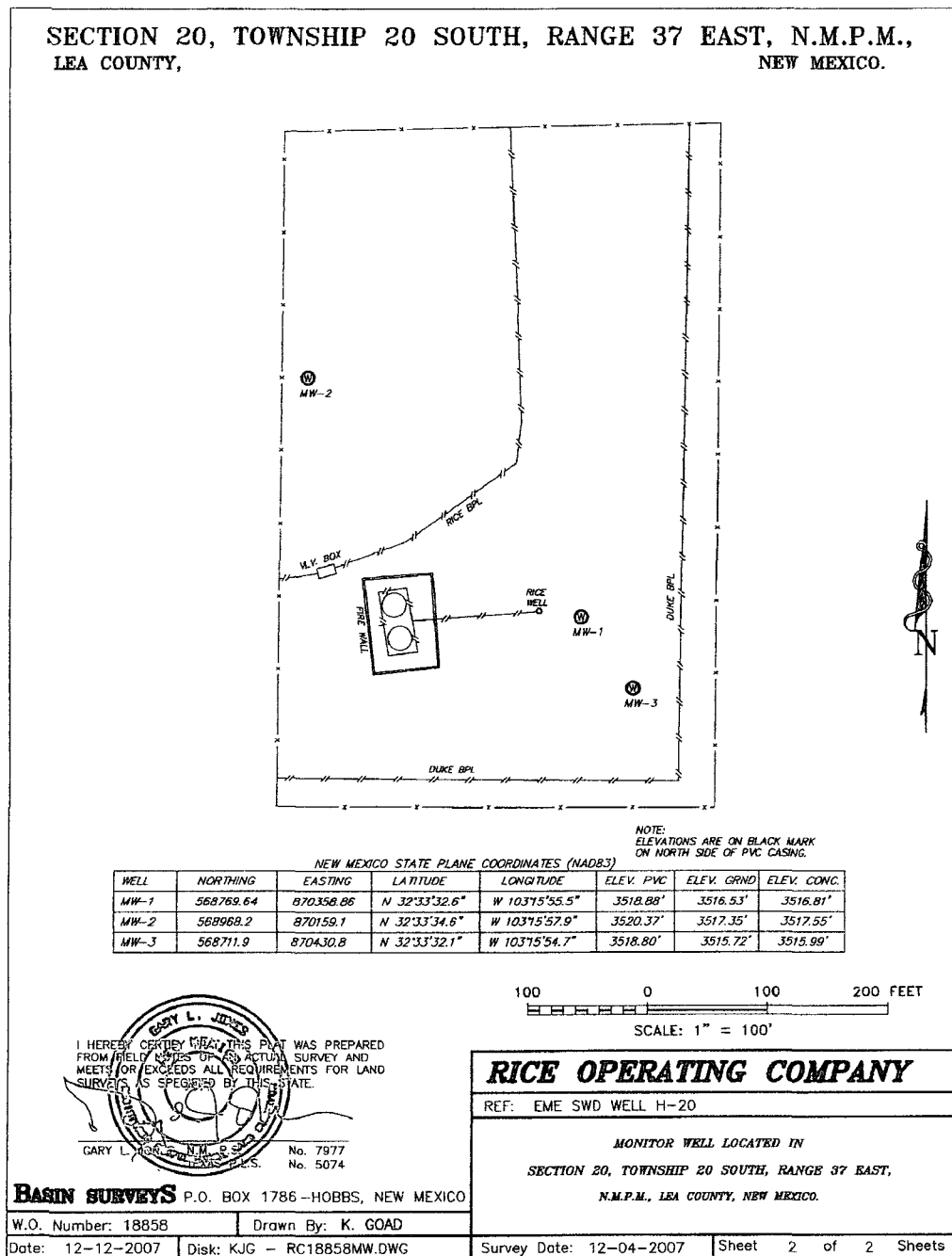


**Figure 1** – EME H-20 SWD location.





**Figure 2 - EME H-20 SWD location on a USGS topographic base map. The direction of groundwater flow is from northwest to southeast, parallel to the ground surface.**



**Figure 3 – Site survey map showing approximate locations of facilities and monitor wells.**

**Texerra**

**Table 1** – Groundwater chloride and BTEX concentrations.

<b>EME H-20 SWD</b>			
<b>Chloride concentrations (mg/l or ppm)</b>			
	Well ID		
	MW-1	MW-2	MW-3
	approx dist (ft) from ctr of excavation		
	25	100	-300
4/23/2007	1,939	<i>not yet installed</i>	
7/12/2007	1,230	"	
11/1/2007	1,260	1,100	1,710
1/18/2008	1,420	980	1,420
<b>BTEX concentrations (mg/l or ppm)</b>			
	Well ID		
	MW-1	MW-2	MW-3
	approx dist (ft) from ctr of excavation		
	25	100	-300
4/23/2007	0.062	<i>not yet installed</i>	
7/12/2007	0.084	"	
11/1/2007	0.065	<0.006	<0.006
1/18/2008	0.052	<0.003	0.002