

AP -

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**STAGE 1
WORKPLANS**

DATE:

1-6-11



TETRA TECH

CERTIFIED MAIL
RETURN RECEIPT NO. 7008 3230 0001 9311 0297

January 6, 2010 *EQ*

Mr. Ed Hansen
New Mexico Energy, Minerals, & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

RECEIVED OGD
2011 JAN 11 P 2:28

Re: Workplan for Installation of Temporary/Permanent Monitor Wells at the, Rice Operating Company, E-15 Release, BD SWD System, Unit D&E, Section 15, T-22-S, R-37-E, Lea County, New Mexico, NMOCD CASE #AP-027

Mr. Hansen:

Tetra Tech Inc. (Tetra Tech) submits the following workplan for additional drilling and installation of temporary/permanent monitor wells at the Rice Operating Company (ROC), E-15 Release, located in the BD Salt Water Disposal System. ROC is the service provider (agent) for the BD Salt Water Disposal System and has no ownership of any portion of the pipeline, well or facility. The BD SWD system is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis. The site is shown on Figures 1 and 2.

Background

On March 29, 2000, an accidental discharge was discovered on the pipeline adjacent to the E-15 junction box. According to the form C-141 (Initial) filed with the NMOCD, the spill was due to a rupture in a steel dresser sleeve. An unknown volume of produced water was discharged with 300 barrels of fluid recovered. Regional groundwater information indicates that the depth to groundwater is approximately 75 feet below ground surface (bgs).

During March 2000, approximately 2,000 cubic yards of soil were excavated and transported offsite for disposal. The site was backfilled with clean soil and brought up to grade. Initial soil sampling indicated the site was impacted with chlorides. In order to delineate the site, between January 22, 2001 and February 11, 2005, six monitor wells, two recovery wells and six borings were installed at the site. Initial testing indicated the groundwater was impacted

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with chlorides. Several of the monitor/recovery wells (MW-5, MW-6, and RW-2) were dry. As such, these wells were permanently abandoned.

On January 26, 2001, a Notice of Groundwater Impact was submitted to Mr. Wayne Price of the NMOCD in Santa Fe, New Mexico. A Stage 1/Stage 2 Abatement Plan was requested by the NMOCD and was submitted to the state on June 5, 2001. The abatement plan requested additional soil borings and monitor wells at the site to complete vertical and horizontal delineation. In September 2006, the NMOCD requested further expansion of the abatement plan to address chloride impacts under Mr. Boyd's property. The amended Stage 1/Stage 2 plan was resubmitted in November 2006.

In 2005, a groundwater remediation system was installed at the site to address the chloride impacts to the groundwater. Due to low volumes, silting and equipment problems, the system was discontinued in 2007. Several of the monitor/recovery wells (MW-5, MW-6, and RW-2) were dry. Since 2005, the four active monitor wells (MW-1 through MW-4) have been sampled on a quarterly basis.

Proposed Temporary/Permanent Monitor Well Installation

In order to delineate the chloride impact to the groundwater, ROC proposes to install three additional monitor wells at the site. The proposed monitor well locations are presented on Figure 3. Two of the three proposed monitor wells will be installed adjacent to wells which were originally dry. These two wells (located adjacent to RW-2 and MW-6) will be installed as temporary monitor wells and allowed to remain open for 48 hours in order to determine if measurable groundwater is available. If groundwater is found in these two wells, they will be converted to permanent monitor wells. If no groundwater is found in these wells, the casing will be removed and the borehole grouted to the surface with a bentonite concrete slurry. In addition, the third well will be installed permanently to the southwest of MW-3 and MW-4, in order to better define the lateral extent of chloride impact in the vicinity of the wells.

The proposed 2" diameter monitor wells will be drilled to approximate depths of 88 to 100 feet below ground surface (bgs) and installed with 0.01" well screen extending 15 feet below the water table and 5 feet of screen above. The well will be installed to EPA and industry standards.

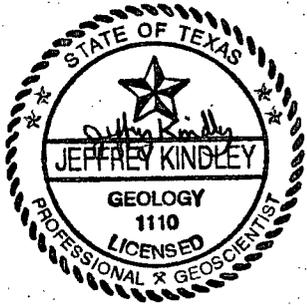
Upon permanent completion, the wells will be developed and sampled for chlorides, TDS and sulfates. Groundwater samples will be collected using a clean disposable polyethylene bailer and disposable line. The samples will be transferred into labeled and preserved containers provided by the laboratory and delivered under proper chain-of-custody control to Cardinal Lab of Hobbs, New Mexico.



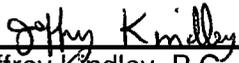
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Conclusions

Upon completion of the installation and sampling of the proposed monitor wells, ROC will submit a report detailing the results of the findings. If you have any questions or comments regarding this workplan, please feel free to contact Hack Conder of ROC at (575) 393-9174.



Respectfully Submitted,
Tetra Tech, Inc.



Jeffrey Kindley, P.G.
Senior Project Manager

cc: Hack Conder – ROC,
Enclosures: Figures

FIGURES

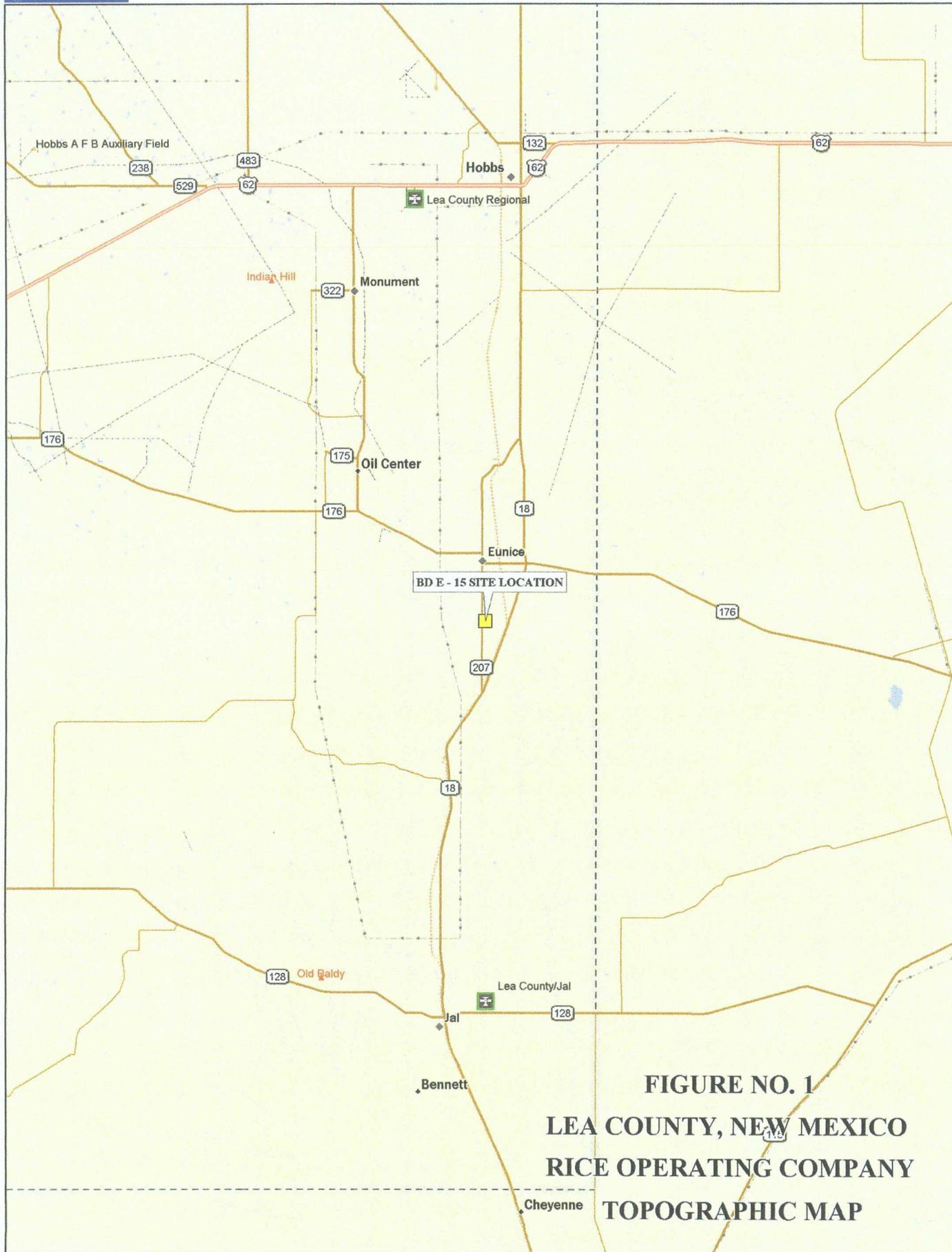
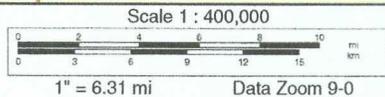


FIGURE NO. 1
LEA COUNTY, NEW MEXICO
RICE OPERATING COMPANY
TOPOGRAPHIC MAP



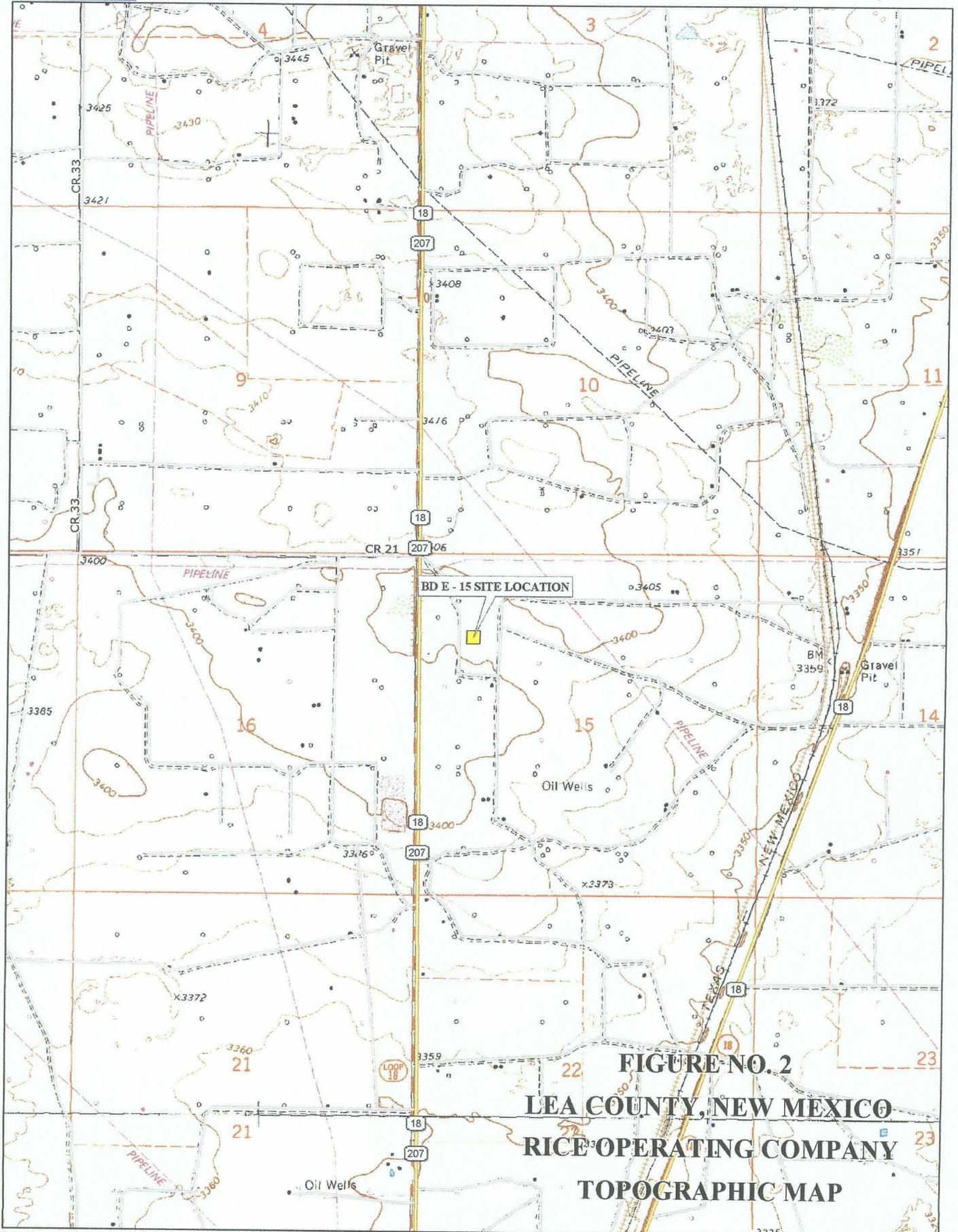
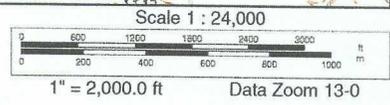


FIGURE NO. 2
LEA COUNTY, NEW MEXICO
RICE OPERATING COMPANY
TOPOGRAPHIC MAP

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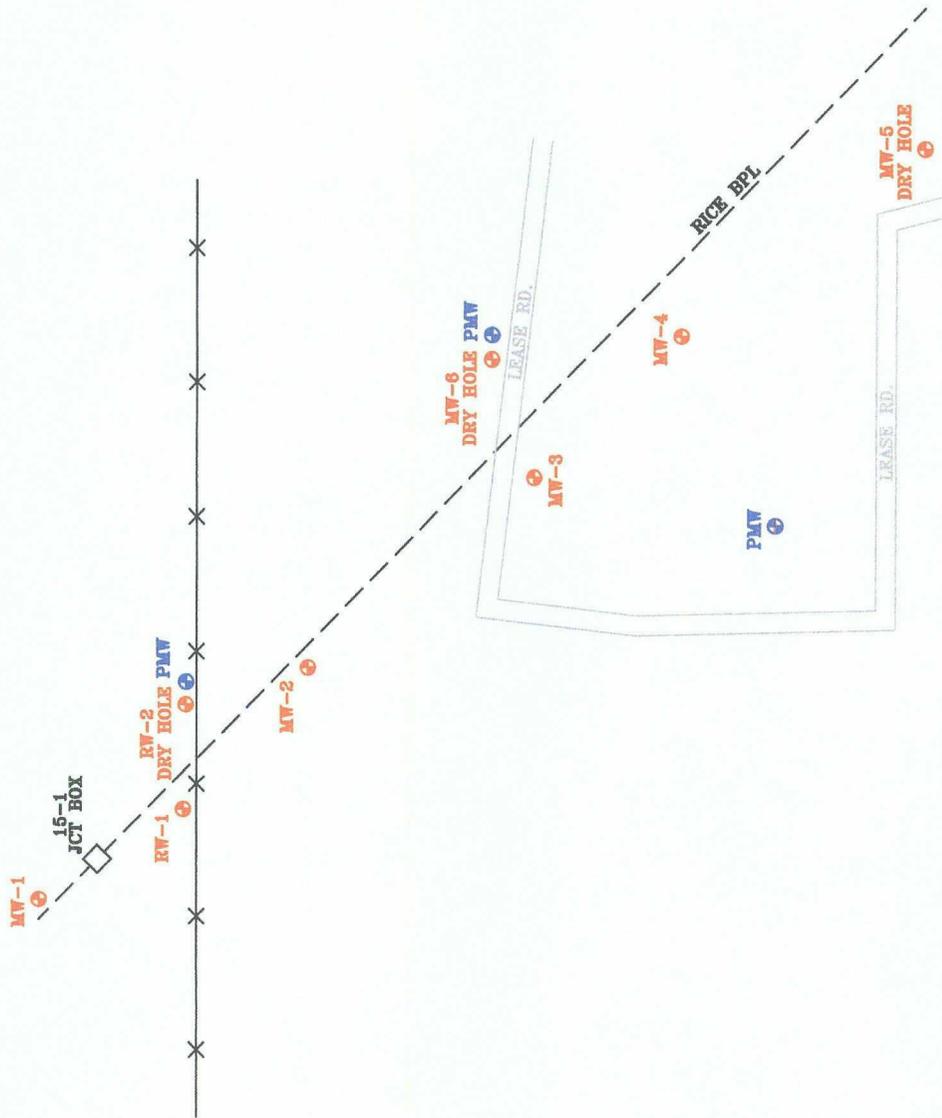


FIGURE NO. 3

LEA COUNTY, NEW MEXICO
RICE OPERATING COMPANY
BD E-15 LEAK
PROPOSED TEMPORARY/PERMANENT
MONITOR WELLS
TETRA TECH, INC.
MIDLAND, TEXAS

DATE: 2/8/10
DWN BY: JJ
FILE: HAWKES\3030
SITE: MP

SCALE: 1" = 300'
0 300'

- ⊕ MONITOR WELL LOCATIONS
- ⊕ PROPOSED TEMPORARY/PERMANENT MONITOR WELL LOCATIONS