1R - 0464

REPORTS

DATE:

2006

1R0464
Report
2006

PLAINS
ALL AMERICAN

March 29, 2007

Mr. Ben Stone
New Mexico Oil Conservation Division
Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Plains All American – Annual Monitoring Report
1 Site in Lea County, New Mexico

Dear Mr. Stone:

Plains All American is an operator of crude oil pipelines and terminal facilities in the state of New Mexico. Plains All American actively monitors certain historical release sites exhibiting groundwater impacts, consistent with assessments and work plans developed in consultation with the New Mexico Oil Conservation Division (NMOCD). In accordance with the rules and regulations of the NMOCD, Plains All American hereby submits our Annual Monitoring report for the following site:

Vacuum to Jal Mainline #5 1R-0465 Section 2, Township 22 South, Range 37 East, Lea County

Premier prepared this document and has vouched for its accuracy and completeness, and Plains All American has reviewed the document and interviewed Premier in order to verify the accuracy and completeness of this document. It is based upon these inquiries and reviews that Plains All American submits the enclosed Annual Monitoring Report for the above facility.

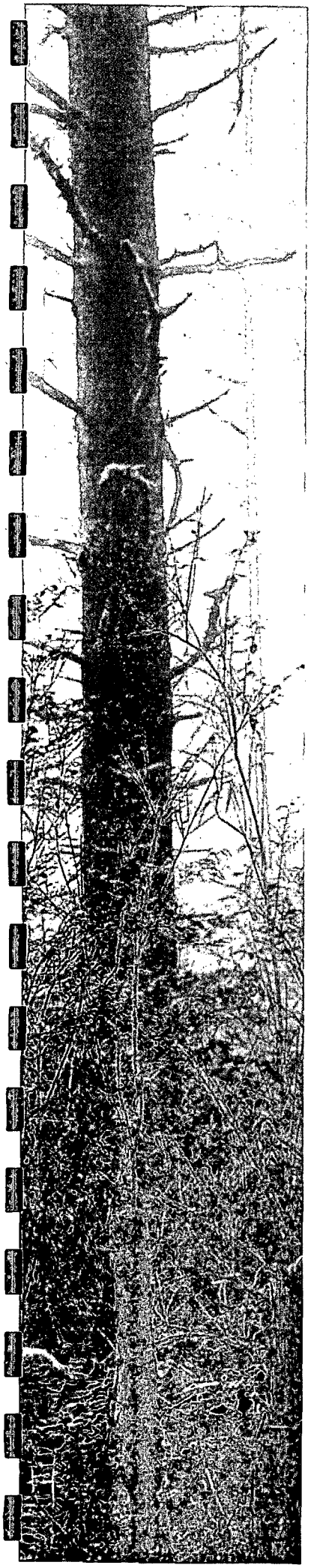
If you have any questions or require further information, please contact me at (432) 557-5865.

Sincerely,

Daniel Bryant
Environmental Specialist
Plains All American

CC: Larry Johnson, NMOCD, Hobbs, NM

Enclosures



SITE INVESTIGATION AND ANNUAL REPORT

VACUUM TO JAL 14" MAINLINE #5

PLAINS SRS NO. 2003-00134

UL-A SECTION 35 T21S R37E

Lea County, New Mexico

NMOCD # 1R - 0464

PREPARED FOR

PLAINS MARKETING, L.P.

333 CLAY STREET, SUITE 1600

HOUSTON, TEXAS 77002

PREPARED BY

PREMIER ENVIRONMENTAL SERVICES, INC
4800 Sugar Grove Blvd., Suite 420
Stafford, Texas 77477
281.240.5200

Project No. 205069.00

March 2007

Chan Patel
Senior Project Manager

TABLE OF CONTENTS

Appendices:

DISCLAIMER

Premier has examined and relied upon the file information provided by Plains and Environmental Plus, Inc. (EPI). Premier has not conducted an independent examination of the information contained in the Plains files; furthermore, we assume the genuineness of the documents reviewed and that the information provided in these documents to be true and accurate. Premier has prepared this report using the level of care and professionalism in the industry for similar projects under similar conditions. Premier will not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time this report was prepared. Premier believes the conclusions stated herein are factual, but no guarantee is made or implied.

Distribution

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EXECUTIVE SUMMARY

Premier Environmental Services, Inc. (Premier) has prepared this Site Investigation and Annual Report (Report) on behalf of Plains Marketing, L.P. (Plains) for the Vacuum to Jal 14" Mainline #5 (Site), located in T22S, R37E, Section 2 of Lea County, New Mexico, approximately 2 miles east of Eunice, New Mexico, more specifically at latitude 32° 25' 39.006" N and longitude 103° 07' 43.155" W (Figure 1, Appendix A). The hydrocarbon impact at the Site is the result of a 20 barrel crude oil release that occurred on May 23, 2003. The pipeline was owned by EOTT Energy, LLC (EOTT) at the time of the release, and is currently owned by Plains.

In addition to presenting the data collected at the Site during four quarterly groundwater sampling events that were carried out during 2006, this report documents the findings of a subsurface soil and groundwater investigation conducted at the site in November and December 2006. The on-going quarterly groundwater sampling program in-place at the site is the result of the discovery of impacted groundwater beneath the Site. Groundwater was found to be impacted during a subsurface investigation conducted at the Site by Premier in March 2006. The March 2006 subsurface investigation included the installation of three monitor wells (MW-1, MW-2 and MW-3) and three potential recovery wells (RW-1, RW-2 and RW-3) to depths between 45 and 60 feet below ground surface (bgs). During the drilling of the borings/wells in the March 2006 investigation, hydrocarbon impacted groundwater was identified, including the presence of phase-separated hydrocarbons (PSH).

A ***Soil Remediation Plan***, dated May 2006, was prepared and submitted to the New Mexico Oil Conservation Division (NMOCD) for approval. The objective of the ***Soil Remediation Plan*** was to excavate the most contaminated soil, isolate and control residual contaminants of concern (COCs) in the soil and to prevent further impact to groundwater by placement of an impermeable liner at the base of the excavation. This plan was approved by the NMOCD in a letter dated June 12, 2006 based on meeting conditions specified in their letter. ***The Soil Remediation Plan*** was implemented in October and November 2006. Details regarding the execution of the remediation plan are presented in a report titled ***Soil Closure Report***, dated March 2007.

The November and December 2006 subsurface investigation included the installation of four monitor wells (MW-4, MW-5, MW-6 and MW-7) and three potential recovery wells (RW-4, RW-5 and RW-6) to depths between 60 and 61 feet bgs. The purpose of the additional subsurface investigation was to define the lateral extent of impacted groundwater beneath the site. Based on analytical results for groundwater samples collected from all the wells at the site on December 6, 2006, the lateral extent of hydrocarbon impacted groundwater has been defined to NMOCD remediation criteria. Since the discovery of PSH in recovery wells RW-1, RW-2 and RW-3 during the March 2006 investigation, Premier has traveled to the Site on a bi-weekly basis (and on a weekly basis since the beginning of December

2006) to gauge and purge PSH from the three recovery wells (see Figure 2 in Appendix A for well locations).

In addition to the subsurface investigations, groundwater sampling and PSH purging exercises conducted by Premier at the Site in 2006, subsurface investigations, soil excavations, soil land farming and backfilling activities have also been conducted at the site to the address the May 2003 release. These activities have been directed by Premier and others and will be briefly discussed in Section 1.0 of this Report.

Quarterly monitoring and sampling, along with PSH removal from the recovery wells will continue on a weekly basis.

1.0 INTRODUCTION AND SITE HISTORY

Early in 2006, Premier was retained by Plains to complete delineation and remediation activities at the Vac to Jal #5 site, SRS No. 2003-00134. According to the initial Response Notification (NMOCD Form no. C-141), Mr. Pat McCasland of Environmental Plus, Inc. (EPI) reported the release on behalf of Mr. Frank Hernandez of EOTT to the NMOCD on May 23, 2003 at about 8:00 pm (a copy of the C-141 release notification form is included in Appendix F). The leak was apparently caused by internal or external corrosion. The line was being pressure tested when the leak occurred. The Site is located in Lea County, New Mexico, approximately 2 miles east of Eunice, New Mexico (Figure 1, Appendix A).

EPI oversaw the initial emergency response activities at the site in May and June of 2003. According to EPI documents, the May 2003 release resulted in surface impacts in two areas that required excavation. The larger of the two areas was an irregularly shaped area measuring approximately 200 feet by 40 feet, and impacted approximately 8,885 square feet (Figure 2, Appendix A). The second area requiring excavation activities, was a smaller L-shaped area located east of the southernmost portion of the larger excavation that measured approximately 2,500 square feet. The EPI data also indicated the presence of a historical spill at the Site. The historical spill was identified by the presence of an asphaltine layer that impacted an area in the central portion of the larger excavation and was under the existing pipelines.

According to Mr. McCasland with EPI, emergency response excavation activities associated with the May 23, 2003 release were completed in May and June 2003 and the soil was stockpiled on-site. File correspondence from EPI to Plains states that, between March 5 and March 11, 2004, approximately 1,466 yd^3 of the more heavily impacted surface soils were transported off-site for treatment at the Lea Station Land Farm. In March 2004, EPI installed four trenches in areas of known hydrocarbon impacts for the purpose of further delineating the 2003 release and to assist with defining the depths of contamination and the need for additional excavation.

Premier's involvement with the project began in January 2006 with the collection of twelve composite soil samples from the stockpiled/land farmed soils. These samples were collected for the purpose of defining the level of hydrocarbons remaining in the land farmed soils. In March 2006, Premier oversaw the installation of six borings and subsequent wells at the Site. Following the installation of the six wells in March, Premier began bi-weekly PSH gauging and purging exercises and quarterly groundwater sampling activities at the Site. Based on the available soil and groundwater data, a ***Soil Remediation Plan*** was prepared and submitted to NMOCD in May 2006. The ***Soil Remediation Plan*** was approved by NMOCD in June 2006. In October and November 2006, with the approval of NMOCD, Premier oversaw additional confirmation soil sampling activities in the open excavations and the completion of over excavation and backfilling activities. The over excavation

(soil remediation) and backfilling activities will be discussed in more detail in Section 2.4.1. Details associated with the comprehensive site investigation conducted at the Site in November and December 2006 will be discussed in more detail in Section 2.4.2.

2.0 SITE INVESTIGATIONS AND RESULTS

Site Cleanup Goals (Groundwater)

Based on standards outlined in the New Mexico Administrative Code (NMAC), Title 20, Chapter 6, Part 2, the remediation criteria for groundwater at the Site are 0.010 mg/L benzene, 0.750 mg/L toluene, 0.750 mg/L ethylbenzene and 0.620 mg/L total xylenes (see Table 1 in Appendix B). In addition to using these concentrations as the targeted cleanup goals in groundwater at the Site, PSH removal will also be an active part of future activities at the Site.

2.1 1st Quarter – March 2006

2.1.1 Soil and Groundwater Investigation and Results

Between March 21 and March 29, 2006, Premier installed and sampled six borings/wells at the Site as part of a subsurface investigation designed to determine impacts to groundwater, and if impacted, to delineate the vertical and lateral extent of hydrocarbons associated with the release at the Site. During drilling activities at three of the boring locations (RW-1, RW-2 and RW-3), PSH were noted on the sample tools and drill rods, therefore, these borings were converted to recovery wells by installing 4-inch diameter PVC well materials in each boring. As part of the investigation, three additional borings were installed around the perimeter of the excavation area. These three borings (MW-1, MW-2 and MW-3) were converted to monitor wells by installing 2-inch diameter PVC well materials in each boring.

One of the six wells (RW-1) was drilled in the base of the excavation to a depth of 45 feet, while the five remaining wells (MW-1, MW-2, MW-3, RW-2 and RW-3) were drilled outside the perimeter of the excavation to a depth of 60 feet bgs. The soils encountered during the drilling of these wells varied mostly between loose sands, lithofied or cemented sandstone and varying degrees of caliche. The depths that the caliches and sandstones were encountered were not exactly the same across the Site. The initial depth where water was encountered was fairly consistent across the Site, as it tended to be present in the lower sandstone unit between 46 and 49 feet bgs.

2.1.2 Groundwater Sampling Results (1st Quarter)

Following the installation of the six wells, on March 29, 2006 Premier conducted the first quarterly groundwater sampling event at the Site. During each quarterly groundwater sampling event, prior to purging the wells, depth to PSH and water level measurements are collected from each well using an electric oil/water interface probe. The oil/water interface probe is decontaminated between each well. Prior to collecting groundwater samples from each of the wells, approximately 3 well volumes of water are purged from each well using dedicated PVC bailers. After purging is completed, groundwater samples are collected using dedicated disposable bailers. All samples are placed in laboratory provided containers and placed in a cooler with ice until being shipped to Accutest, Inc. in Houston, Texas

for analysis. All purge water is placed in labeled 55-gallon drums and contained on-site.

During the March 29, 2006 event, groundwater samples were collected from monitor wells MW-1, MW-2, and MW-3 and submitted to Accutest for laboratory analyses of benzene, toluene, ethylbenzene and total xylenes (BTEX) analysis by EPA Method 8260B. Groundwater samples were not collected from recovery wells RW-1, RW-2 and RW-3 during the March 2006 sampling event due to the presence of PSH in these wells. PSH thicknesses have ranged between 0.01 feet to 1.55 feet since the wells were installed.

Analytical results for the groundwater samples collected at the Site on March 29, 2006 indicated that benzene was the only constituent detected above NMOCD remedial guidelines (Table 1, Appendix B). Benzene was identified at concentrations higher than the 0.01 mg/L standard in two samples (MW-1 and MW-3). The sample collected from monitor well MW-1 showed concentrations of 0.557 mg/L benzene, 0.0032 mg/L toluene, 0.0133 mg/L ethylbenzene, and 0.0092 mg/L total xylenes for a total BTEX concentration of 0.5827 mg/L. Monitor well sample MW-3 indicated concentrations of 0.0129 mg/L benzene, 0.0089 mg/L toluene, 0.0021 mg/L ethylbenzene and 0.0038 mg/L total xylenes for a total BTEX concentration of 0.0277 mg/L. The sample from monitor well MW-2 indicated concentrations of 0.0012 mg/L benzene, 0.0011 mg/L toluene and 0.00042 mg/L ethylbenzene, while total xylene were not detected above the method detection limit (<0.00072 mg/L), for a total BTEX concentration of 0.00272 mg/L (see Table 1 in Appendix B). A copy of the laboratory's analytical data package is included in Appendix C.

The depth to water level measurements collected from all the wells at the Site during the March 2006 sampling exercise indicated that static water levels ranged from approximately 49.5 feet to 50.7 feet below top of casing. The water level data collected on March 29, 2006 indicates a southerly groundwater flow across the site with an approximate gradient of 0.01 feet/foot between wells MW-3 and MW-1 (see Figure 3a in Appendix A). This flow pattern places monitor well MW-1 down gradient from the source area. Based on the March 2006 groundwater investigation and data collected, it was determined that additional subsurface investigation was required to delineate hydrocarbon concentrations in the groundwater at this Site.

In addition to collecting groundwater samples during the first quarter of 2006, Premier performed bi-weekly visits to the Site to gauge and purge PSH from the three recovery wells (RW-1, RW-2 and RW-3). During each site visit, PSH and water level measurements were made on all the wells at the Site prior to purging those with measurable PSH (see Table 2 in Appendix B). Periodically, adsorbent socks were used in the three recovery wells. During PSH recovery activities, typically, 1 to 5 gallons of PSH and water with dissolved phase hydrocarbons are removed from each well. All fluids removed from the recovery wells at the Site are placed in labeled 55-gallon drums and are being stored on-site.

2.2 2nd Quarter – Groundwater Sampling Results – June 2006

In addition to the quarterly groundwater sampling event that was conducted at the Site during the second quarter, Premier submitted a ***Soil Remediation Plan*** to NMOCD in May 2006. The ***Soil Remediation Plan*** was proposed for the purpose of obtaining closure relating to soil issues at the site. The Plan was approved by NMOCD on June 12, 2006 and was implemented in October and November 2006. Details associated with soil closure activities will be discussed later in Section 2.4.1.

The second quarter groundwater sampling activities were conducted on June 10, 2006 and included the collection of groundwater samples from monitor wells MW-1, MW-2 and MW-3. Analytical results for groundwater samples collected during the June 2006 sampling event indicated that only benzene was detected in MW-1 sample at a concentration above the NMOCD remediation criteria (Table 1, Appendix B). The sample from monitor well MW-1 indicated concentrations of 0.639[a] mg/L benzene ([a] indicates that the result is from the second run in the laboratory which means that a dilution was undertaken by the laboratory). MW-1 sample also indicated concentrations of 0.0033 mg/L ethylbenzene, while total xylenes were 0.0015 J mg/L ("J flagged means the result is estimated by the laboratory) and toluene was not detected (<0.00036 mg/L). All remaining constituents in samples from monitor wells MW-2 and MW-3 were below NMOCD remediation criteria standards. Due to the presence of PSH in RW-1, RW-2 and RW-3, groundwater samples were not collected from these wells during the second quarter. PSH gauging and purging activities continued at the Site on a bi-weekly basis during the second quarter (Table 2 in Appendix B).

The depth to water level measurements collected from all the wells at the Site during the June 2006 sampling exercise were used to construct the potentiometric surface/gradient map included as Figure 3b (Appendix A). The water level data collected on June 10, 2006 indicates a southerly groundwater flow across the site with an approximate gradient of 0.01 feet/foot as measured between monitor wells MW-3 and MW-1.

2.3 3rd Quarter – Groundwater Sampling Results – September 2006

The third quarter groundwater sampling activities were conducted on September 12, 2006 and included the collection of groundwater samples from monitor wells MW-1, MW-2 and MW-3. Analytical results for groundwater samples collected during the September 2006 sampling event indicated that only benzene was detected in MW-1 sample at a concentration above the NMOCD remediation criteria. The MW-1 sample indicated a concentration of 0.512[a] mg/L benzene. All other constituents in the MW-1 sample were not detected above method detection limits. All remaining constituents in samples from monitor wells MW-2 and MW-3 were below NMOCD remediation criteria standards. Due to the presence of PSH in RW-1, RW-2 and RW-3, groundwater samples were not collected from these wells during the third quarter. PSH gauging and purging activities continued at the Site on a bi-weekly basis during the third quarter.

The depth to water level measurements collected from all the wells at the Site during the September 2006 sampling exercise were used to construct the potentiometric surface/gradient map included as Figure 3c (Appendix A). The water level data collected on September 12, 2006 indicates a southerly groundwater flow across the site with an approximate gradient of 0.011 feet/foot as measured between monitor wells MW-3 and MW-1.

2.4 4th Quarter

2.4.1 Soil Closure Activities – October and November 2006

During October and November 2006, Premier assisted with implementation of the NMOCD approved ***Soil Remediation Plan***. These activities included collecting confirmation soil samples from the sidewalls and the base or bottom of the existing excavation, over excavation activities, impermeable liner installation and backfilling and grading activities (Figure 5, Appendix A). Detailed descriptions of these activities, as well as a request for soil closure at the Site, can be reviewed in the March 2007 ***Soil Closure Report*** prepared by Premier.

2.4.2 Soil and Groundwater Investigation – November 2006

As part of the on-going groundwater investigation activities at the Site, Premier oversaw the installation of seven borings/wells in November 2006. The overall objective of the well installation activities were to define the extent of dissolve-phase hydrocarbons, as well as to define the limit of PSH that has previously been identified in the uppermost groundwater-bearing unit beneath the Site. During the investigation, Straub Corp., of Stanton, Texas provided a truck-mounted drill rig equipped with air-rotary drilling capabilities and a crew to perform the drilling activities at the Site. During the investigation, four 2-inch diameter PVC monitor wells (MW-4 through MW-7) and three 4-inch diameter PVC recovery wells (MW-4, MW-5 and MW-6) were installed to depths between 60 and 61 feet bgs. All the wells were screened in the first groundwater bearing unit encountered beneath the Site.

The soils were logged by viewing the cuttings that were blown to the surface, as well as by pushing a heavy-walled shelby-tube-like sampler at various (typically 5 foot) intervals and examining undisturbed samples. In general, the soils encountered beneath the site varied between loosely consolidated silty sands near the surface to depths between approximately 10 and 20 feet bgs, to various consolidated forms of caliche and calcified sandstones from approximately 10 to 61 feet bgs. The thicknesses of the caliche and calcified sandstone varied between locations, as did the actual compaction and density of the materials. Copies of the boring/well construction logs are included in Appendix D along with a copy of the State of New Mexico water well logs provided by Straub. As the soils were examined during drilling activities, they were also screened with a PID. No elevated PID readings were observed in any of the borings.

During drilling of the borings, once the cuttings became damp in appearance, the boring was extended an additional 10 to 15 feet before terminating the boring.

Once the desired depth was reached, the drill crew allowed water to accumulate in the bottom of the borehole for a few minutes, air pressure from the rig was used to blow the water to the surface. This allowed the geologist and the driller time to estimate the wells production potential. Once it was determined that the formation would produce an adequate amount of water, the drill stem was pulled and well materials were installed into the open borehole. A five-inch borehole was drilled for the 2-inch diameter monitoring wells, while a 7-inch diameter borehole was drilled for the 4-inch diameter recovery wells. Schedule 40 PVC casing and slotted screen was used to construct all the wells. Twenty feet of 0.010-inch slotted screen was installed in the bottom of all seven wells (both monitoring and recovery wells). After the PVC was set in the borehole, 20/40 silica sand was installed as the gravel or filter pack and extended to approximately 2 feet above the top of the screen. Bentonite pellets were installed from the top of the filter pack and brought to within approximately 2 feet bgs. Each of the wells was completed with above ground surface completions including lockable tubular steel well protectors and 4' x 4' concrete pads.

Monitor well installation activities were completed between November 28, and November 30, 2006. Monitor well and recovery well locations were chosen in an effort to define the lateral extent of impacted groundwater beneath the Site. Photographs of the drilling activities are included in Appendix E.

After well installation activities were completed, Straub personnel developed the seven newly installed wells. The wells were developed using a 2-inch diameter electric submersible pump. Each well was developed by removing a minimum of 10 well volumes. During development of each of the wells, the development water was clear of sediment within approximately 3 to 5 well volumes. All the development water was containerized in labeled 55-gallon drums and left on-site.

2.4.3 4th Quarter Groundwater Sampling Results – December 2006

Following the installation of seven additional wells at the Site in November 2006, the fourth quarter groundwater sampling activities were conducted on December 6, 2006 and included the collection of groundwater samples from monitor wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7 and recovery wells RW-4, RW-5 and RW-6. Analytical results for groundwater samples collected during the December 2006 sampling event indicated that only benzene was detected in MW-1 sample at a concentration above the NMOCD remediation criteria (Table 1, Appendix B). The MW-1 sample indicated a concentration of 0.452[a] mg/L benzene. The MW-1 sample also indicated concentrations of 0.0049 mg/L ethylbenzene, while toluene and total xylenes were not detected above method detection limits. All remaining constituents in samples from monitor wells MW-2, MW-3 and MW-7 and recovery wells RW-4, RW-5 and RW-6 were either not detected or were below NMOCD remediation criteria standards (see Table 1 in Appendix B). Due to the presence of PSH in RW-1, RW-2 and RW-3, groundwater samples were not collected from these wells during the fourth quarter (see Figure 4 in Appendix A). On December 6, 2006 RW-1 indicated 0.22 feet PSH, while RW-2 and RW-3 indicated 0.87 feet and 1.17 feet respectively.

The depth to water level measurements collected from all the wells at the Site during the December 2006 sampling exercise were used to construct the potentiometric surface/gradient map included as Figure 3d (Appendix A). The water level data collected on December 6, 2006 indicates a southerly groundwater flow across the site with an approximate gradient of 0.005 feet/foot as measured between monitor wells MW-4 and MW-7.

2.5 PSH Recovered

PSH gauging and removal activities began at the site in March 2006. Between March and early December 2006, PSH gauging and removal was undertaken on a bi-weekly basis. Recovery methods included hand bailing and the use of adsorbent socks. Due to a slight increase in PSH thickness observed in RW-1, RW-2 and RW-3, in December 2006, PSH gauging and removal activities were increased to a weekly frequency. So far, based on PSH gauging and recovery data, summarized in Table 2, approximately 160 gallons of PSH have been recovered from the three wells.

3.0 CONCLUSIONS

In March and November of 2006 subsurface investigations were conducted at the Vac to Jal Mainline # 5 Site and included advancing 13 soil borings and installing 13 monitor and/or recovery wells to delineate groundwater impact at the Site. This report documents both the drilling activities, as wells as presents the results of the quarterly groundwater sampling program that is on-going at the Site. A summary of these activities, including the groundwater data collected at the Site over the past year includes the following:

- Three monitor wells (MW-1, MW-2 and MW-3) and three recovery wells (RW-1, RW-2 and RW-3) were installed at the Site in March 2006 as part of an investigation that was originally designed to evaluate impact to groundwater, and if impacted to define the vertical and lateral extent of hydrocarbon impacts associated with the May 2003 release. PSH was identified in the three recovery wells and dissolved phase benzene was identified in the three monitoring well groundwater samples.
- Based on the results of the initial subsurface investigation, an additional investigation was conducted in November and December 2006 to delineate the extent of impacts to groundwater.
- Analytical results from the most recent quarterly groundwater sampling event conducted in December 2006 indicate that the PSH and dissolved phase hydrocarbon plume appears to be defined. Data from the newly installed outer perimeter monitor wells (MW-4, MW-5, MW-6 and MW-7) indicate that no BTEX constituents were identified at concentrations above the method detection limit. Analytical results and PSH gauging data indicate that dissolved phase impacted groundwater is confined between monitor wells MW-1 to the south and MW-3 to the north.

The results of this groundwater investigation demonstrate that hydrocarbons in groundwater have been delineated at the Site.

Currently, PSH is recovered weekly by manual bailing product from the recovery wells or it is removed with the use of absorbent socks. Wells with no PSH present are sampled on a quarterly basis to evaluate any changes in groundwater at Site.

Premier proposes continuation of recovery operations including weekly gauging and PSH removal (absorbent socks may be used if deemed appropriate), and quarterly groundwater sampling to address the hydrocarbons in groundwater. Since PSH accumulations have been greater than 0.25 feet, hand bailing has been the recovery method used in recent events. Should PSH thickness decrease to less than 0.25 feet, absorbent socks may be used as a recovery option.

Appendix A Figures

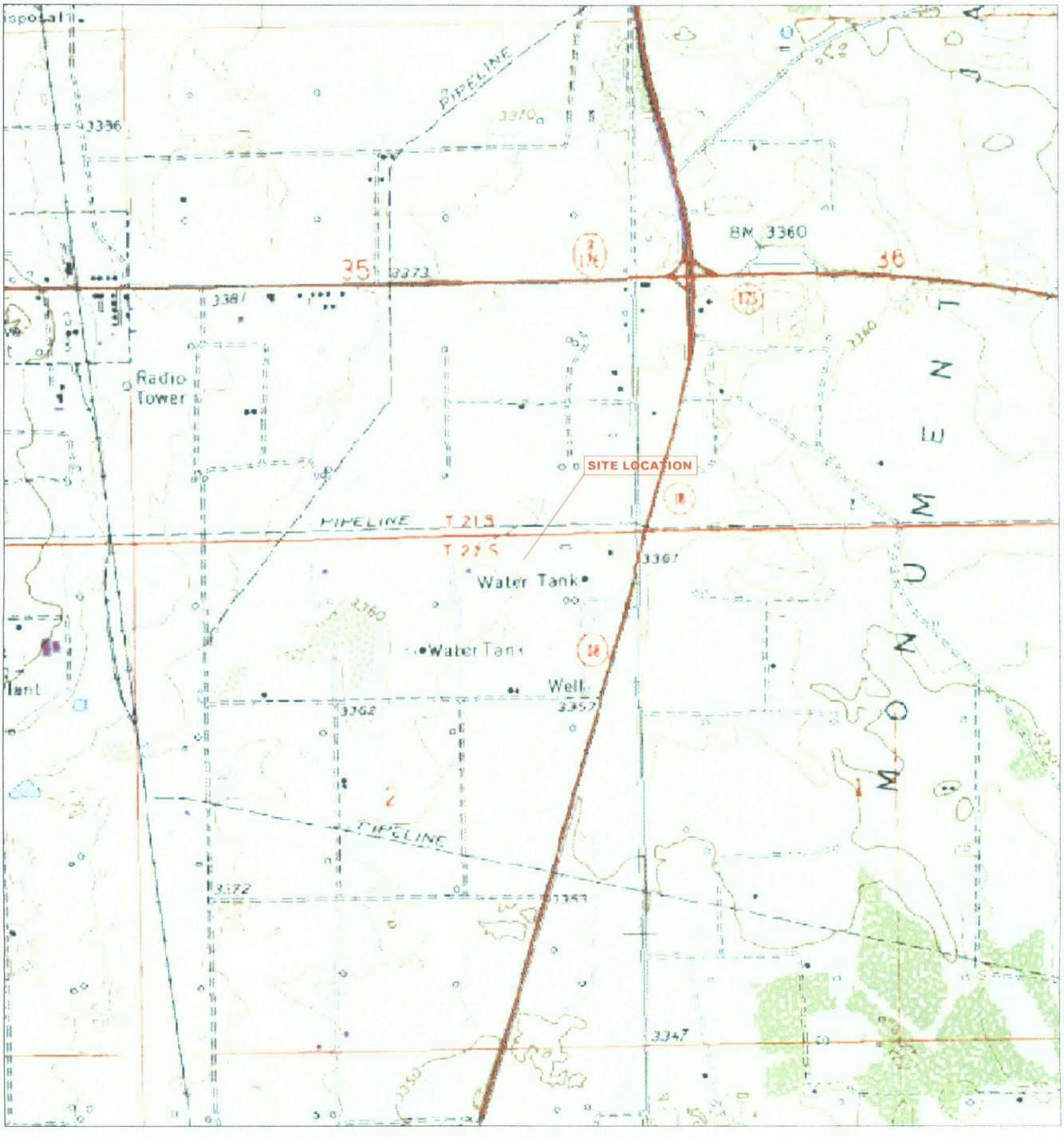
Figure 1 – Site Location Map

Figure 2 – Site Detail and Monitor Well Location Map

Figure 3 a – Groundwater Gradient Map March 29, 2006
Figure 3 b – Groundwater Gradient Map June 10, 2006
Figure 3 c – Groundwater Gradient Map September 12, 2006
Figure 3 d – Groundwater Gradient Map December 6, 2006

Figure 4 – December 2006 - PSH and Benzene in Groundwater

Figure 5 – Excavation Limits November 2006



Eunice Quadrangle
32°25'39"N Latitude & 103°07'43"W Longitude

1/2 1/4 0 1/4 1/2

Distance in Miles

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ENVIRONMENTAL SERVICES, INC.

Figure 1
Site Location Map
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #5
SRS. No.: 2003-00134
Lea County, New Mexico

PROJ. NO: 205069.00	CK:	DATE: 2/07

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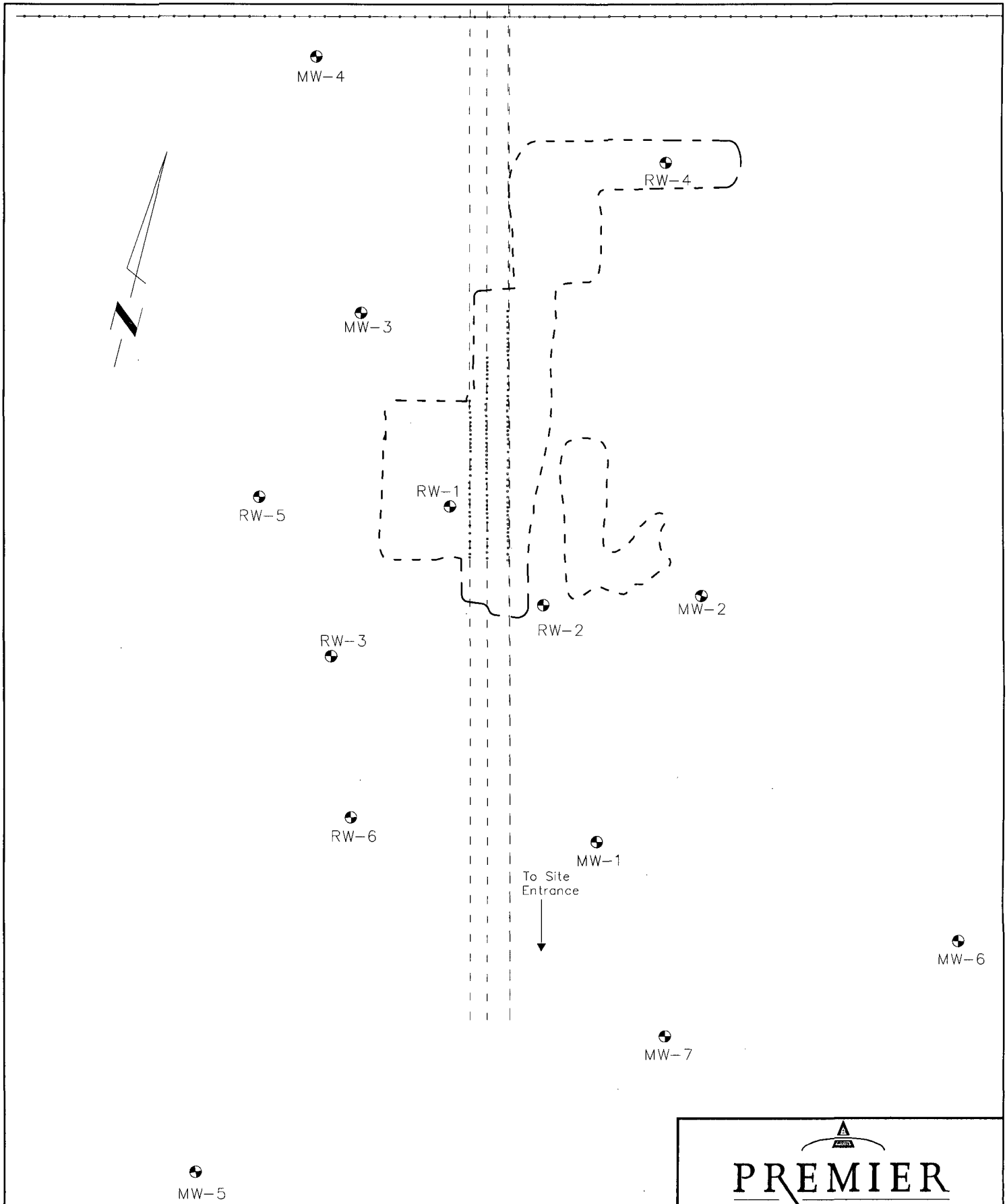

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ENVIRONMENTAL SERVICES, INC.

Figure 2
Site Detail and Monitoring Well Lcoation Map
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #5
EMS. No.: 2003-00134
Lea County, New Mexico

PROJ. NO: 205069.00	CK:	DATE: 2/07

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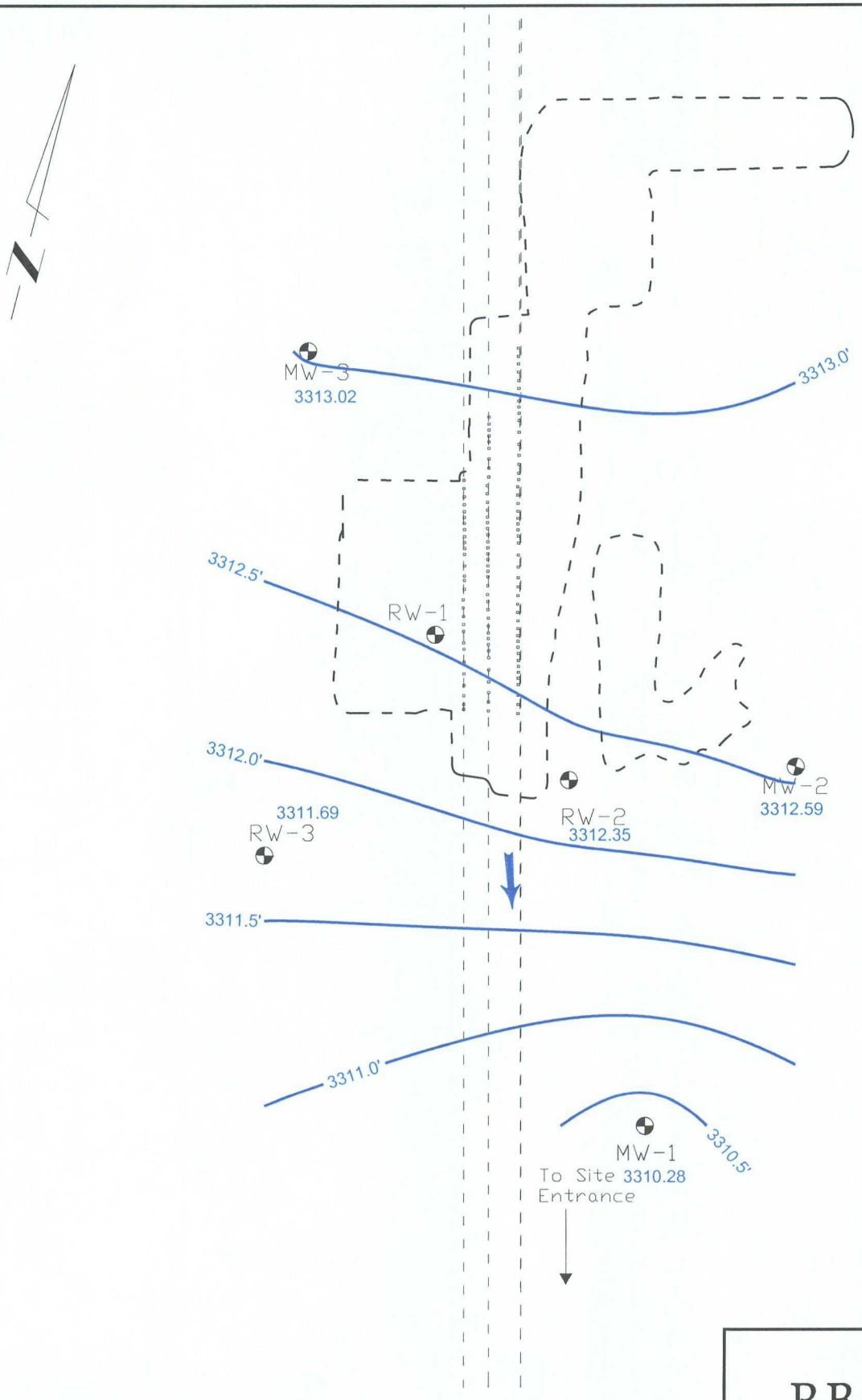

LEGEND:

- **MW - Monitoring or Recovery Well Location**
- **Excavation Extent**
- **Burried Pipeline**
- **Exposed Pipeline**
- 3310.28 - Corrected Ground Water Elevation, ft.
- 3313.0' - Ground Water Elevation Contour, ft. Contour Interval=0.5 ft.
- Apparent Ground Water Flow Direction

0 50
FEET

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ENVIRONMENTAL SERVICES, INC.

Figure 3a
Groundwater Gradient Map
March 29, 2006
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #5
SRS. No.: 2003-00134
Lea County, New Mexico

PROJ. NO: 205069.00	CK:	DATE: 2/07

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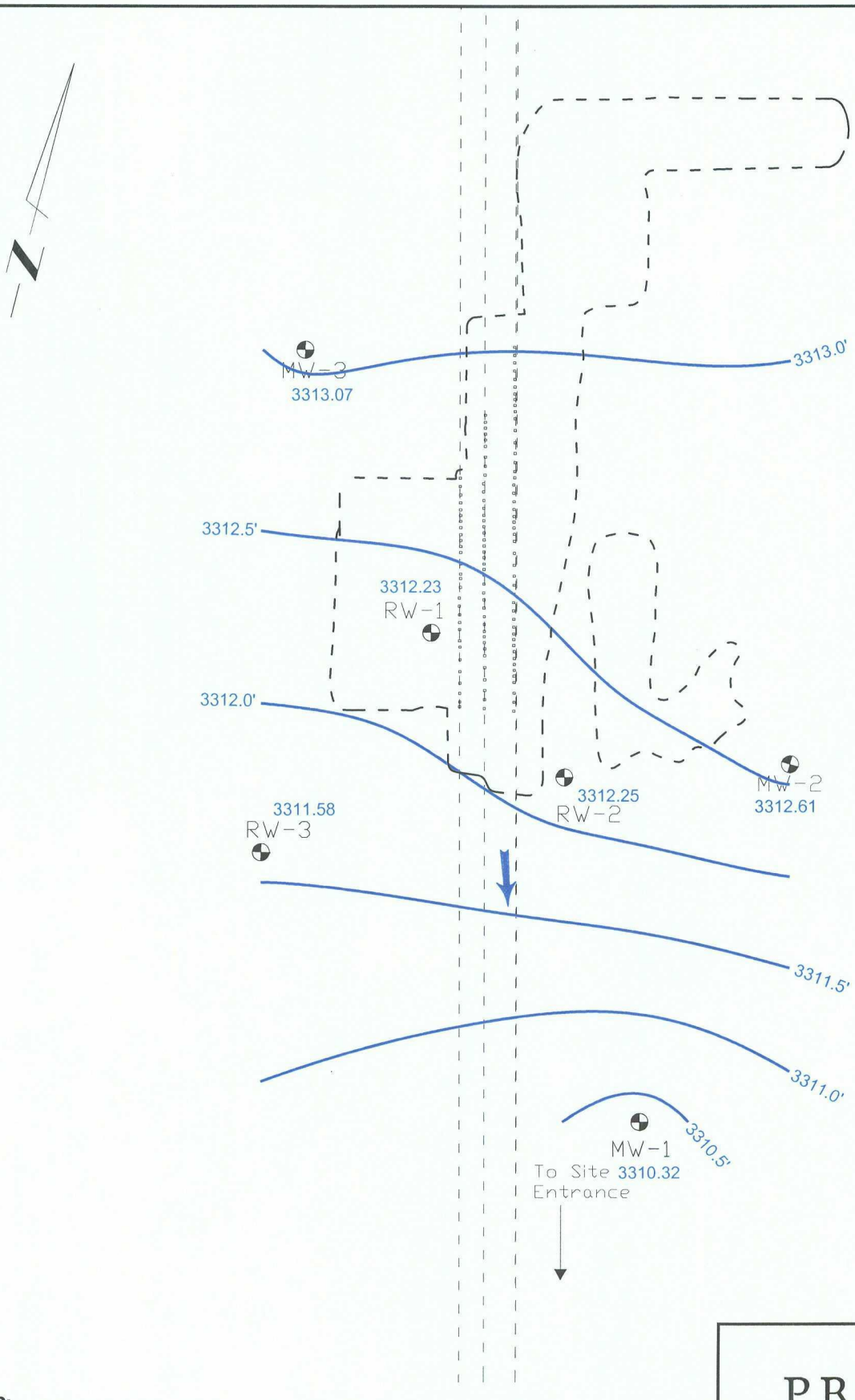

LEGEND:

- MW - Monitoring or Recovery Well Location
- - - - - - Excavation Extent
- - - - - Burried Pipeline
- -⊟-⊟- Exposed Pipeline
- 3310.32 - Corrected Ground Water Elevation, ft.
- 3313.0' - Ground Water Elevation Contour, ft. Contour Interval=0.5 ft.
- → - Apparent Ground Water Flow Direction

0 50
FEET

PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 3b
Groundwater Gradient Map
June 7, 2006
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #5
SRS. No.: 2003-00134
Lea County, New Mexico

PROJ. NO: 205069.00	CK:	DATE: 2/07

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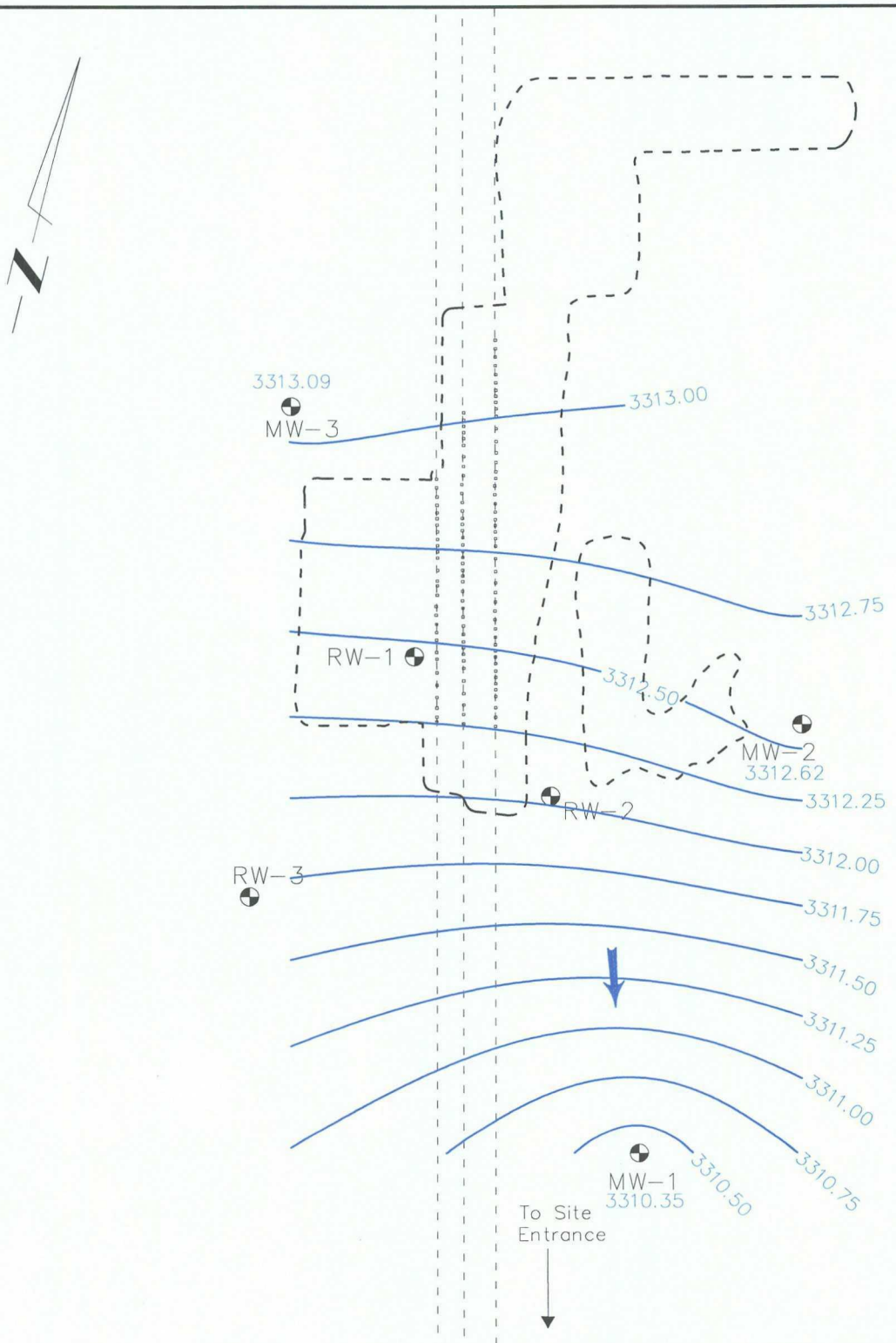

LEGEND:

- **MW - Monitoring or Recovery Well Location**
- **Excavation Extent**
- **Buried Pipeline**
- **Exposed Pipeline**
- (3313.09) - Corrected Ground Water Elevation, ft.
- 3343.0 - Ground Water Elevation Contour, ft. Contour Interval=0.25 ft.
- Apparent Ground Water Flow Direction

Note: RW1, RW2, and RW3 not used to contour due to PSH.

0 50
FEET

PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 3c
Groundwater Gradient Map
September 12, 2006
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #5
SRS. No.: 2003-00134
Lea County, New Mexico

PROJ. NO: 205069.00	CK:	DATE: 2/07

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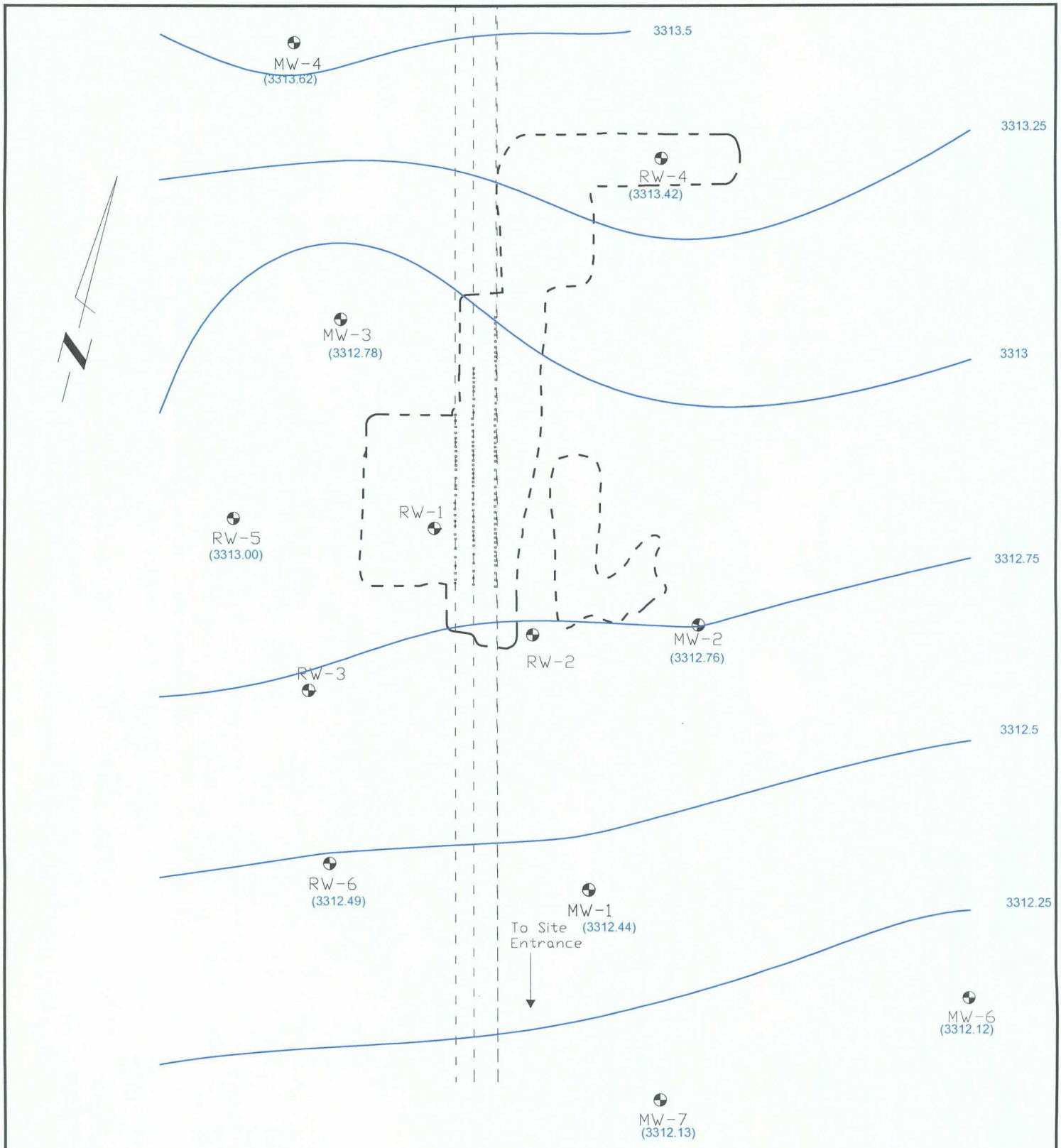

Contour Interval 0.25 feet
Note:RW-1, RW-2, and RW-3 not used in contouring

LEGEND:

- **MW - Monitoring or Recovery Well Location**
- **---- - Excavation Extent**
- **- - - - Burried Pipeline**
- **-#-#- - Exposed Pipeline**
- **(3313.12) - Groundwater Elevation in Relative Feet**

0 60
FEET

PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 3d
Groundwater Gradient Map
December 6, 2006
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #5
SRS. No.: 2003-00134
Lea County, New Mexico

PROJ. NO: 205069.00	CK:	DATE: 2/07

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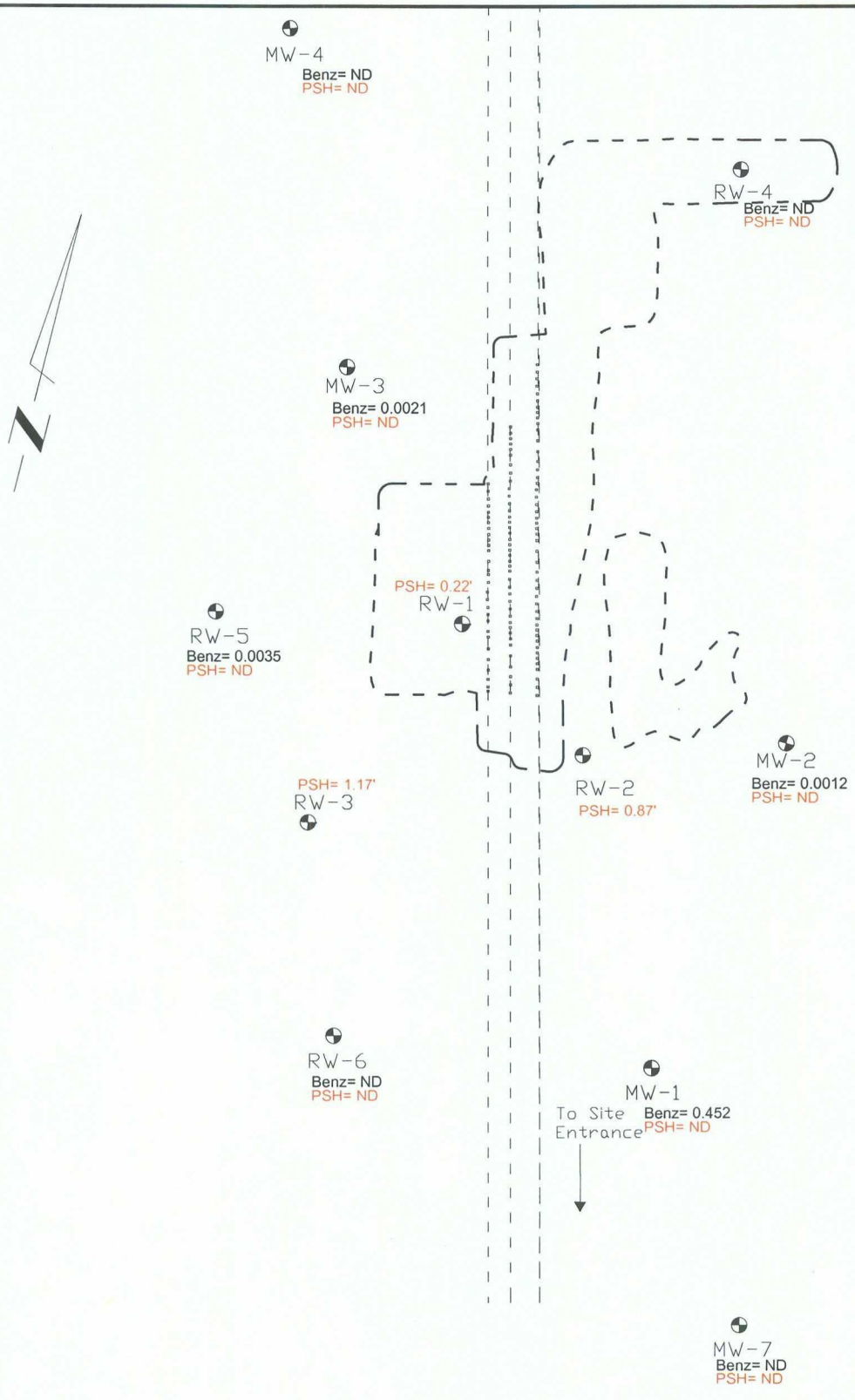

LEGEND:

- MW - ***Monitoring or Recovery Well Location***
- **Excavation Extent**
- **Buried Pipeline**
- **Exposed Pipeline**
- 1.0' - PSH Thickness in feet
- 3.5 - Beznene Concentrations in mg/L

0 60
FEET

PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 4
December 2006 - PSH and Benzene in Groundwater
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #5
SRS. No.: 2003-00134
Lea County, New Mexico

PROJ. NO: 205069.00	CK:	DATE: 2/07

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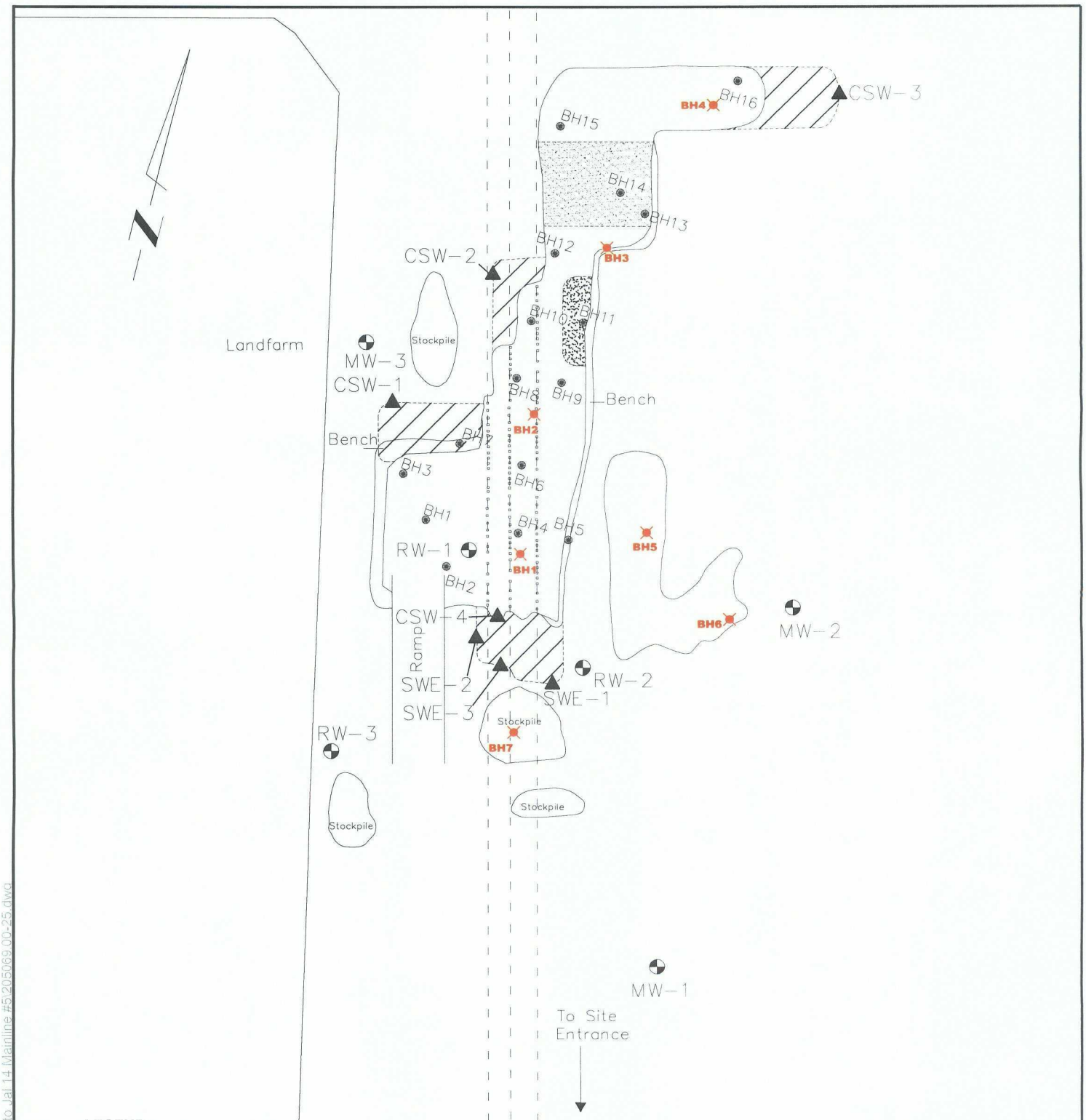


LEGEND:

- MW - Monitoring or Recovery Well Location
- —— - Excavation Limits (EPI 2003 & 2004)
- – – – - Buried Pipeline
- -⊟-⊟- - Exposed Pipeline
- ● BH - Bottom Hole Excavation Sample Locations (Collected in Oct. 2006 by Premier)
- BH - Boring Location (Installed by EPI in March 2004)
- ▨ - Sidewall Over Excavation
- ▩ - Bottom Hole Excavation
- ▲ CSW - Sidewall Sample (grab)

0 50

FEET

PREMIER
ENVIRONMENTAL SERVICES, INC.

Figure 5
Excavation Limits November 2006
Plains Marketing L.P.
Vacuum to Jal 14" Mainline #5
SRS. No.: 2003-00134
Lea County, New Mexico

PROJ. NO: 205069.00	CK:	DATE: 2/07

P:\PROJECT FILES\CAD Files\Vacuum to Jal 14 Mainline #5\205069.00-25.dwg

Appendix B Tables

Table 1 – Groundwater Sample Analytical Results

Table 2 – Groundwater Gauging Data

PREMIER

TABLE 1
Groundwater Sample Analytical Results
Plains Marketing L.P.
EMS # 2003--00134
Vacuum to Jal #5
Lea County, New Mexico

Well	Lab ID	Date Collected	BTEX 8260b mg/L	Benzene mg/L	Toluene mg/L	Ethylbenzene mg/L	Total Xylenes mg/L
			NMOCD Remediation Criteria				
				0.010	0.750	0.750	0.620
MW-1	T 13036-1	3/29/2006	0.5827	**0.557**	0.0032	0.0133	0.0092
MW-1	T13862-1	6/10/2006	0.6438	**0.639** [a]	<0.00036	0.0033	0.0015 J
MW-1	T14676-1	9/12/2006	0.512	**0.512** [a]	<0.00020	<0.00033	<0.00036
MW-1	T15618-1	12/6/2006	0.4569	**0.452** [a]	<0.00020	0.0049	<0.00036
MW-2	T 13036-2	3/29/2006	0.00272	0.0012	0.0011	0.00042	<0.00072
MW-2	T13862-2	6/10/2006	0.00038	0.00038 J	<0.00036	<0.00035	<0.00072
MW-2	T14676-2	9/12/2006	<0.00036	<0.00035	<0.00020	<0.00033	<0.00036
MW-2	T15618-1	12/6/2006	0.0012	0.0012	0.00087 J	<0.00033	<0.00036
MW-3	T 13036-3	3/29/2006	0.0277	**0.0129**	0.0089	0.0021	0.0038
MW-3	T13862-3	6/10/2006	0.01451	0.0075	0.0043	0.00071 J	0.002
MW-3	T14676-3	9/12/2006	0.0023	0.0023	<0.00020	<0.00033	<0.00036
MW-3	T15618-1	12/6/2006	0.0021	0.0021	0.00077 J	<0.00033	<0.00036
MW-4	T15618-1	12/6/2006	<0.0036	<0.00035	<0.00020	<0.00033	<0.00036
MW-5	T15618-1	12/6/2006	0.0055 J	0.00055 J	<0.00020	<0.00033	<0.00036
MW-6	T15618-1	12/6/2006	<0.0036	<0.00035	<0.00020	<0.00033	<0.00036
MW-7	T15618-1	12/6/2006	<0.0036	<0.00035	<0.00020	<0.00033	<0.00036
RW-4	T15618-1	12/6/2006	0.0099 J	0.00099 J	0.00035 J	<0.00033	<0.00036
RW-5	T15618-1	12/6/2006	0.0055	0.0035	0.00095 J	0.00043 J	<0.00036
RW-6	T15618-1	12/6/2006	<0.0036	<0.00035	<0.00020	<0.00033	<0.00036

Note: RW-1, RW-2 and RW-3 not sampled due to presence of Phase Separated Hydrocarbons
[a] Result is from Run #2.
J Indicates an estimated value
Concentration in **Bold** = above NMOCD Criteria

TABLE 2
Groundwater Gauging Data
Plains Marketing L.P.
EMS #2003-00134
Vacuum to Jal #5
Lea County, New Mexico

Well No.	Date Measured	TOC Elevation	Total Depth	Depth to PSH	Depth to Water	PSH Thickness	Recovery Method	PSH Recovered (gallons)	Corrected Groundwater Elevation	Well Volume Removed
MW-1	03/28/06	3361	64.19		50.72	50.72			3310.28	
	03/29/06	3361			50.72	50.72			3310.28	
	04/13/06	3361			50.75	0.00			3310.25	
	04/25/06	3361			50.73	0.00			3310.27	
	05/03/06	3361			50.66	0.00			3310.34	
	05/11/06	3361			50.77	0.00			3310.23	
	05/24/06	3361			50.1	0.00			3310.90	
	06/07/06	3361			50.68	0.00			3310.32	
	06/15/06	3361			50.68	0.00			3310.32	
	06/29/06	3361			50.71	0.00			3310.29	
	07/11/06	3361			50.67	0.00			3310.33	
	07/25/06	3361			50.68	0.00			3310.32	
	08/09/06	3361			50.65	0.00			3310.35	
	08/22/06	3361			50.7	0.00			3310.30	
	09/12/06	3361	64.16		50.65	0.00			3310.35	
	09/19/06	3361			50.67	0.00			3310.33	
	10/03/06	3361			50.65	0.00			3310.35	
	10/17/06	3361			50.65	0.00			3310.35	
	10/31/06	3361			50.67	0.00			3310.33	
	11/15/06	3361			50.66	0.00			3310.34	
	12/06/06	3363.04	64.1		50.6	0.00			3312.44	
	12/13/06	3363.04			50.65	0.00			3312.39	
	12/27/06	3363.04			50.49	0.00			3312.55	
MW-2	03/28/06	3362.05	64.09		49.5	0.00			3312.55	
	03/29/06	3362.05			49.46	0.00			3312.59	
	4/13/106	3362.05			49.47	0.00			3312.58	
	04/25/06	3362.05			49.45	0.00			3312.60	
	05/03/06	3362.05			49.37	0.00			3312.68	
	05/11/06	3362.05			49.5	0.00			3312.55	
	05/24/06	3362.05			49.43	0.00			3312.62	
	06/07/06	3362.05			49.44	0.00			3312.61	
	06/15/06	3362.05			49.44	0.00			3312.61	
	06/29/06	3362.05			49.43	0.00			3312.62	
	07/11/06	3362.05			49.38	0.00			3312.67	
	07/25/06	3362.05			49.42	0.00			3312.63	
	08/09/06	3362.05	64.19		49.35	0.00			3312.70	
	08/22/06	3362.05			49.46	0.00			3312.59	
	09/12/06	3362.05	64.06		49.43	0.00			3312.62	
	09/19/06	3362.05			49.38	0.00			3312.67	
	10/03/06	3362.05			49.35	0.00			3312.70	
	10/17/06	3362.05			49.38	0.00			3312.67	
	10/31/06	3362.05			49.43	0.00			3312.62	
	11/15/06	3362.05			49.37	0.00			3312.68	
	12/06/06	3362.11	64.05		49.35	0.00			3312.76	
	12/13/06	3362.11			49.38	0.00			3312.73	
	12/27/06	3362.11			49.2	0.00			3312.91	
MW-3	03/28/06	3362.02	64.76		49.05	0.00			3312.97	
	03/29/06	3362.02			49.00	0.00			3313.02	
	04/13/06	3362.02			49.03	0.00			3312.99	
	04/25/06	3362.02			49.10	0.00			3312.92	
	05/03/06	3362.02			48.92	0.00			3313.10	
	05/11/06	3362.02			49.07	0.00			3312.95	
	05/23/06	3362.02			48.90	0.00			3313.12	
	06/07/06	3362.02			48.95	0.00			3313.07	
	06/15/06	3362.02			48.95	0.00			3313.07	
	06/29/06	3362.02			48.98	0.00			3313.04	
	07/11/06	3362.02			48.92	0.00			3313.10	
	07/25/06	3362.02			48.97	0.00			3313.05	
	08/09/06	3362.02	64.83		48.90	0.00			3313.12	
	08/22/06	3362.02			49.02	0.00			3313.00	
	09/12/06	3362.02	64.67		48.93	0.00			3313.09	

TABLE 2
Groundwater Gauging Data
Plains Marketing L.P.
EMS #2003-00134
Vacuum to Jal #5
Lea County, New Mexico

Well No.	Date Measured	TOC Elevation	Total Depth	Depth to PSH	Depth to Water	PSH Thickness	Recovery Method	PSH Recovered (gallons)	Corrected Groundwater Elevation	Well Volume Removed
	09/19/06	3362.02			48.93	0.00			3313.09	
	10/03/06	3362.02			48.91	0.00			3313.11	
	10/17/06	3362.02			48.92	0.00			3313.10	
	10/31/06	3362.02			48.96	0.00			3313.06	
	11/15/06	3362.02			48.88	0.00			3313.14	
	12/06/06	3362.13	64.05		49.35	0.00			3312.78	
	12/13/06	3362.13			49.40	0.00			3312.73	
	12/27/06	3362.13			48.73	0.00			3313.40	
MW-4	12/06/06	3362.49	63.56		48.87	0.00			3313.62	
	12/13/06	3362.49			48.9	0.00			3313.59	
	12/27/06	3362.49			48.72	0.00			3313.77	
MW-5	12/06/06	3363.67	63.72		51.65	0.00			3312.02	
	12/13/06	3363.67			51.66	0.00			3312.01	
	12/27/06	3363.67			51.50	0.00			3312.17	
MW-6	12/06/06	3362.60	63.44		50.48	0.00			3312.12	
	12/13/06	3362.60			50.5	0.00			3312.10	
	12/27/06	3362.60			50.33	0.00			3312.27	
MW-7	12/06/06	3362.75	63.88		50.62	0.00			3312.13	
	12/13/06	3362.75			50.64	0.00			3312.11	
	12/27/06	3362.75			50.54	0.00			3312.21	
RW-1	03/28/06	3348.04		35.61	35.78	0.17			3312.39	
	03/29/06	3348.04		35.58	35.62	0.04			3312.45	
	04/13/06	3348.04		35.62	35.65	0.03	after bailing		3312.41	
	04/25/06	3348.04		35.68	36.01	0.33	Hand Bailed	0.5	3312.28	Purged 5 gal
	04/25/06	3348.04		36.15	36.19	0.04	after bailing		3311.88	
	05/03/06	3348.04		35.56	35.59	0.03	Hand Bailed	0.25	3312.47	Purged 5 gal
	05/03/06	3348.04		35.51	35.53	0.02	after bailing		3312.53	
	05/11/06	3348.04		35.64	35.64	0.00	Hand Bailed	0	3312.40	Purged 5 gal
	05/11/06	3348.04		35.78	35.78	0.00	after bailing		3312.26	
	05/24/06	3348.04		35.8	35.84	0.04	Hand Bailed	0.05	3312.23	Purged 5 gal
	05/24/06	3348.04		36.81	36.81	0.00	after bailing		3311.23	
	06/07/06	3348.04		35.81	35.82	0.01	Hand Bailed	0.01	3312.23	Purged 5 gal
	06/07/06	3348.04		36.9	36.9	0.00	after bailing		3311.14	
	06/15/06	3348.04		35.68	35.68	0.00			3312.36	
	06/29/06	3348.04		35.7	36	0.30	Hand Bailed	0.25	3312.27	Purged 5 gal
	06/29/06	3348.04		36.25	36.25	0.00	after bailing		3311.79	
	07/11/06	3348.04		35.84	35.89	0.05			3312.19	
	07/25/06	3348.04		35.89	36.02	0.13			3312.12	
	08/09/06	3348.04	47.40	35.9	36.1	0.20			3312.09	
	08/22/06	3348.04		35.6	36	0.40	PSH .75 / H2O 9.25		3312.34	
	08/22/06	3348.04		36.7	36.74	0.04			3311.33	
	09/12/06	3348.04	47.62	35.7	36.33	0.63			3312.18	
	09/19/06	3348.04		35.64	36.18	0.54	PSH .25 / H2O 4.75		3312.27	
	09/19/06	3348.04		36.15	36.2	0.05			3311.88	
	10/03/06	3348.04		35.48	35.49	0.01	PSH Sheen / H2O 10	Installed Sock	3312.56	
	10/03/06	3348.04		35.59	35.59	0.00			3312.45	
	10/17/06	3348.04		35.66	35.7	0.04	PSH .10 / H2O 4.90	Sock	3312.37	
	10/17/06	3348.04		35.83	35.83	0.00			3312.21	
	10/31/06	3348.04		35.6	35.64	0.04	PSH .10 / H2O 4.90	Sock	3312.43	
	10/31/06	3348.04		35.72	35.72	0.00			3312.32	
	11/15/06	3363.31		50.56	50.68	0.12			3312.72	
	11/15/06	3363.31		50.65	50.65	0.00	PSH .1 / H2O 9.9		3312.66	
	12/06/06	3360.67		50.52	50.74	0.22	PSH .1 / H2O 9.9	Installed Sock	3310.10	
	12/13/06	3360.67		50.48	50.79	0.31	PSH .25 / H2O 4.75		3310.11	
	12/13/06	3360.67		51.9	51.9	0.00			3308.77	
	12/20/06	3360.67		50.76	50.76	0.00		Removed sock	3309.91	
	12/27/06	3360.67		50.44	50.48	0.04	PSH .1 / H2O 4.75	no sock	3310.22	
	12/27/06	3360.67		51.62	51.62	0.00		no sock	3309.05	

TABLE 2
Groundwater Gauging Data
Plains Marketing L.P.
EMS #2003-00134
Vacuum to Jal #5
Lea County, New Mexico

Well No.	Date Measured	TOC Elevation	Total Depth	Depth to PSH	Depth to Water	PSH Thickness	Recovery Method	PSH Recovered (gallons)	Corrected Groundwater Elevation	Well Volume Removed
RW-2	03/28/06	3362		49.67	49.68	0.01			3312.33	
	03/29/06	3362		49.65	49.65	0.00			3312.35	
	04/13/06	3362		49.58	50.08	0.50	Hand Bailed	0.5	3312.30	Purged 5 gal
	04/13/06	3362		49.58	50.08	0.50	after bailing		3312.30	
	04/25/06	3362		49.65	49.99	0.34	Hand Bailed	0.6	3312.27	Purged 5 gal
	04/25/06	3362		50	50.01	0.01	after bailing		3312.00	
	05/03/06	3362		49.55	49.91	0.36	Hand Bailed	0.5	3312.36	Purged 5 gal
	05/03/06	3362		49.56	49.68	0.12	after bailing		3312.41	
	05/11/06	3362		49.65	49.81	0.16	Hand Bailed	0.25	3312.31	Purged 5 gal
	05/11/06	3362		50.32	50.32	0.00	after bailing		3311.68	
	05/24/06	3362		49.62	50.08	0.46	Hand Bailed	0.5	3312.27	Purged 5 gal
	05/24/06	3362		51.22	51.23	0.01	after bailing		3310.78	
	06/07/06	3362		49.68	49.95	0.27	Hand Bailed	0.3	3312.25	Purged 5 gal
	06/07/06	3362		49.75	49.77	0.02	after bailing		3312.25	
	06/15/06	3362		49.58	49.8	0.22			3312.37	
	06/29/06	3362		49.51	50.3	0.79	Hand Bailed	0.85	3312.29	Purged 5 gal
	06/29/06	3362		49.73	49.73	0.00	after bailing		3312.27	
	07/11/06	3362		49.58	49.8	0.22			3312.37	
	07/25/06	3362		49.88	49.97	0.09			3312.10	
	08/09/06	3362	63.95	49.65	50.1	0.45	Bail 10 Gal		3312.24	
	08/22/06	3362		49.57	50.34	0.77	PSH .75 / H2O 9.25		3312.24	
	08/22/06	3362		49.93	49.97	0.04			3312.06	
	09/12/06	3362	63.86	50.3	50.7	0.40			3311.60	
	09/19/06	3362		49.54	50.01	0.47	PSH .5 / H2O 9.5		3312.34	
	09/19/06	3362		49.93	50	0.07			3312.05	
	10/03/06	3362		49.5	49.99	0.49	PSH .5 / H2O 9.5	Installed Sock	3312.38	
	10/03/06	3362		50.02	50.03	0.01			3311.98	
	10/17/06	3362		49.5	50.1	0.60	PSH .75 / H2O 4.25	Removed sock	3312.35	
	10/17/06	3362		50.18	50.19	0.01			3311.82	
	10/31/06	3362		49.5	50.75	1.25	PSH 1.5 / H2O 3.5	Installed Sock	3312.19	
	10/31/06	3362		50.78	50.84	0.06			3311.21	
	11/15/06	3362		49.44	50.3	0.86			3312.35	
	11/15/06	3362		49.8	49.9	0.10	PSH .5 H2O 9.5		3312.18	
	12/06/06	3362	49.39	50.23	51.1	0.87		Removed sock	3311.55	
	12/13/06	3362		49.28	50.27	0.99	PSH 1.25 / H2O 3.75		3312.47	
	12/13/06	3362		51.1	51.13	0.03			3310.89	
	12/20/06	3362		49.21	50.76	1.55	PSH .75 / H2O 9.25		3312.40	
	12/20/06	3362		49.66	49.68	0.02			3312.34	
	12/27/06	3362		49.27	50.2	0.93	PSH 1 / H2O 4	no sock	3312.50	
	12/27/06	3362		50.18	50.18	0.00			3311.82	
RW-3	03/28/06	3361.93	63.85	50.22	50.41	0.19			3311.66	
	03/29/06	3361.93		50.2	50.37	0.17			3311.69	
	04/13/06	3361.93		50.02	51.04	1.02	Hand Bailed	2	3311.66	Purged 5 gal
	04/13/06	3361.93		50.32	50.37	0.05	after bailing		3311.60	
	04/25/06	3361.93		50.15	51	0.85	Hand Bailed	2	3311.57	Purged 5 gal
	04/25/06	3361.93		51.25	51.3	0.05	after bailing		3310.67	
	05/03/06	3361.93		50.1	50.81	0.71	Hand Bailed	3	3311.65	Purged 5 gal
	05/03/06	3361.93		50.15	50.31	0.16	after bailing		3311.74	
	05/11/06	3361.93		50.18	50.91	0.73	Hand Bailed	0.75	3311.57	Purged 5 gal
	05/11/06	3361.93		51.01	51.08	0.07	after bailing		3310.90	
	05/24/06	3361.93		50.13	50.81	0.68	Hand Bailed	0.75	3311.63	Purged 5 gal
	05/24/06	3361.93		51.96	52	0.04	after bailing		3309.96	
	06/07/06	3361.93		50.17	50.9	0.73	Hand Bailed	1	3311.58	Purged 5 gal
	06/07/06	3361.93		50.5	50.65	0.15	after bailing		3311.39	
	06/15/06	3361.93		50.13	50.63	0.50			3311.68	
	06/29/06	3361.93		50.14	50.96	0.82	Hand Bailed	1	3311.59	Purged 5 gal
	06/29/06	3361.93		50.53	50.58	0.05	after bailing		3311.39	
	07/11/06	3361.93		50.12	50.61	0.49	Hand Bailed		3311.69	
	07/11/06	3361.93		50.12	50.5	50.50	after bailing		3349.31	
	07/25/06	3361.93		50.22	50.54	0.32	Hand Bailed	0.5	3311.63	Purged 5 gal
	07/25/06	3361.93		50.55	50.6	0.05	after bailing		3311.37	

TABLE 2
Groundwater Gauging Data
Plains Marketing L.P.
EMS #2003-00134
Vacuum to Jal #5
Lea County, New Mexico

Well No.	Date Measured	TOC Elevation	Total Depth	Depth to PSH	Depth to Water	PSH Thickness	Recovery Method	PSH Recovered (gallons)	Corrected Groundwater Elevation	Well Volume Removed
	08/09/06	3361.93	64	50.38	50.55	0.17			3311.51	
	08/22/06	3361.93		50.22	50.77	0.55	PSH .75 / H2O 9.25		3311.57	
	08/22/06	3361.93		50.79	50.84	0.05			3311.13	
	09/12/06	3361.93	64.42	49.55	50.12	0.57			3312.24	
	09/19/06	3361.93		50.3	50.65	0.35	PSH .5 / H2O 9.5		3311.54	
	09/19/06	3361.93		51.08	51.1	0.02			3310.85	
	10/03/06	3361.93		50.16	50.56	0.40	PSH .5 / H2O 9.5	Installed Sock	3311.67	
	10/03/06	3361.93		51.13	51.16	0.03			3310.79	
	10/17/06	3361.93		50.12	50.48	0.36	PSH 50 / H2O 4.5	Removed sock	3311.72	
	10/17/06	3361.93		50.16	50.18	0.02			3311.77	
	10/31/06	3361.93		50.07	51.13	1.06	PSH 1.5 / H2O 3.5	Installed Sock	3311.60	
	10/31/06	3361.93		50.08	50.15	0.07			3311.83	
	11/15/06	3361.93		50.24	50.62	0.38			3311.60	
	11/15/06	3361.93		50.42	50.46	0.04	PSH .5 H2O 9.5		3311.50	
	12/06/06	3361.42		49.93	51.1	1.17		no sock	3311.20	
	12/13/06	3361.42		49.91	51.13	1.22	PSH 1.5 / H2O 3.5		3311.21	
	12/13/06	3361.42		52.51	52.56	0.05			3308.90	
	12/20/06	3361.42		49.85	51.28	1.43	PSH .5 H2O 9.5		3311.21	
	12/20/06	3361.42		50.15	50.2	0.05			3311.26	
	12/27/06	3361.42		49.87	50.98	1.11	PSH 1.5 / H2O 3.5		3311.27	
	12/27/06	3361.42		52.9	52.9	0.00			3308.52	
RW-4	12/06/06	3363.23	64.23		49.8	0.00			3313.43	
	12/13/06	3363.23			49.83	0.00			3313.40	
	12/27/06	3363.23			49.63	0.00			3313.60	
RW-5	12/06/06	3362.38	64		49.38	0.00			3313.00	
	12/13/06	3362.38			49.41	0.00			3312.97	
	12/27/06	3362.38			49.25	0.00			3313.13	
RW-6	12/06/06	3363.11	64.19		50.62	0.00			3312.49	
	12/13/06	3363.11			50.68	0.00			3312.43	
	12/27/06	3363.11			50.52	0.00			3312.59	

Appendix C Analytical Reports

March 2006 – Groundwater Samples – Analytical Results – T13036
June 2006 – Groundwater Samples – Analytical Results – T13862
September 2006 – Groundwater Samples – Analytical Results – T14676
December 2006 – Groundwater Samples – Analytical Results – T15618

(CD Enclosed)

PREMIER

Vac to Jal #5 MW- 4
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Plains Marketing LP Work Phone: _____
Contact: _____ Home Phone: _____
Address: 333 Clay Street, Suite 1600
City: Houston, State: TX Zip 77078

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section: ____ Township: ____ Range: ____ N.M.P.M.
in _____ County.
B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____
C. Latitude: 32 d 25 m 41 N Longitude: 103 d 07 m 43 w
D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)
E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey
F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.
G. Other: _____
H. Give State Engineer File Number if existing well: _____
I. On land owned by (required): _____

3. DRILLING CONTRACTOR

License Number: WD1478
Name: Straub Corporation Work Phone: 432-756-3489
Agent: Raymond Straub Jr Home Phone: _____
Mailing Address: P.O. Box 192
City: Stanton State: TX Zip: 79782

4. DRILLING RECORD

Drilling began 11-28-06 Completed: 12-1-06 ; Type tools: Air Rotary Drilling Rig
Size of hole 5 in.; Total depth of well 60ft
Completed well is: _____ (shallow, artesian);
Depth to water upon completion of well: ___ft.
File Number: _____ Trn Number: _____

Vac to Jal #5 MW- 4
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2			35	60		.010 screen		
2			+4	35		sch 40 riser		

7. RECORD OF MUDDING AND CEMENTING

Depth in feet From	To	Diameter of hole	Sack of Mud & Cement	Method of placement
0	2	5	1 bag of cement	topload
2	33	5	5 bags of 3/8 holeplug	topload
33	60	5	6 bags of 20/40 sand	topload

8. PLUGGING RECORD

Plugging Contractor:_____
Address:_____
Plugging Method:_____
Date Well Plugged : _____
Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feet of Cement

File Number: _____ Trn Number: _____

Vac to Jal #5 MW- 4
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To in feet	Thickness	Color and Type of Material Encountered
0	4.5	4.5	light brown sand with slight clay
4.5	10	5.5	tan calcified sand
10	13	3	tan calcified soft sandstone
13	14	1	tan calcified – slightly silicated sandstone
14	18	4	tan calcified sand (dense)
18	25	7	light brown calcified sand (dense)
25	30	5	light brown calcified sand with silicated nodule
30	35	5	tan caliche
35	40	5	tan caliche
40	41	1	light brown sand
41	44	3	caliche
44	50	6	light brown sand with clay
50	58	8	light brown sand with thin sandstone layers
58	60	2	light brown sand
TD	60		

File Number: _____ Trn Number: _____

Vac to Jal #5 MW- 4
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Raymond Straub Jr _____ 12-1-06
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY
Quad _____; FWL _____; FSL _____; Use _____; Location No. _____
File Number: _____ Trn Number: _____

Vac to Jal #5 MW- 5
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Plains Marketing LP Work Phone: _____
Contact: _____ Home Phone: _____
Address: 333 Clay Street, Suite 1600
City: Houston, State: TX Zip 77078

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ___1/4 ___1/4 ___1/4 Section:___ Township:___ Range:___ N.M.P.M.
in _____ County.
B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____
C. Latitude: 32 d 25 m 41 N Longitude: 103 d 07 m 43 w
D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)
E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey
F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.
G. Other: _____
H. Give State Engineer File Number if existing well: _____
I. On land owned by (required): _____

3. DRILLING CONTRACTOR

License Number: WD1478
Name: Straub Corporation Work Phone: 432-756-3489
Agent: Raymond Straub Jr Home Phone: _____
Mailing Address: P.O. Box 192
City: Stanton State: TX Zip: 79782

4. DRILLING RECORD

Drilling began 11-28-06 Completed: 12-1-06 ; Type tools: Air Rotary Drilling Rig
Size of hole 5 in.; Total depth of well 60ft
Completed well is: _____ (shallow, artesian);
Depth to water upon completion of well: ___ ft.
File Number: _____ Trn Number: _____

Vac to Jal #5 MW- 5
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet Thickness Description of Estimated Yield
From To in feet water-bearing formation (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From To
2			40	60		.010 screen	
2			+43	40		sch 40 riser	

7. RECORD OF MUDDING AND CEMENTING

Depth in feet From	To	Diameter of hole	Sack of Mud & Cement	Method of placement
0	2	5	1 bag of cement	topload
2	38	5	5 bags of 3/8 holeplug	topload
38	60	5	6 bags of 20/40 sand	topload

8. PLUGGING RECORD

Plugging Contractor:_____
Address:_____
Plugging Method:_____
Date Well Plugged : _____
Plugging approved by: _____
State Engineer Representative

No. Depth in Feet Top Bottom — Cubic Feet of Cement

File Number: _____ Trn Number: _____

Vac to Jal #5 MW- 5
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To in feet	Thickness	Color and Type of Material Encountered
0	8	8	brown sand
8	9	1	brown clayey sand
9	15	6	tan caliche sand
15	18	3	tan caliche sand (dense)
18	20	2	light red brown calcified sand (dense)
20	30	10	tan calcified sand (dense)
30	38	8	caliche
38	40	2	tan calcified sand (dense)
40	45	5	caliche
45	50	5	red brown clayey sand
50	52	2	brown sand w silicated sandstone nodules
52	52.5	.5	brown silicated sandstone layers
TD	52		

File Number: _____ Trn Number: _____

Vac to Jal #5 MW- 5
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Raymond Straub Jr _____ 12-1-06
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY
Quad _____; FWL _____; FSL _____; Use _____; Location No. _____
File Number: _____ Trn Number: _____

Vac to Jal #5 MW- 6
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Plains Marketing LP Work Phone: _____
Contact: _____ Home Phone: _____
Address: 333 Clay Street, Suite 1600
City: Houston, State: TX Zip 77078

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ___ 1/4 ___ 1/4 ___ 1/4 Section: ___ Township: ___ Range: ___ N.M.P.M.
in _____ County.
B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____
C. Latitude: 32 d 25 m 41 N Longitude: 103 d 07 m 43 w
D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)
E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey
F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.
G. Other: _____
H. Give State Engineer File Number if existing well: _____
I. On land owned by (required): _____

3. DRILLING CONTRACTOR

License Number: WD1478
Name: Straub Corporation Work Phone: 432-756-3489
Agent: Raymond Straub Jr Home Phone: _____
Mailing Address: P.O. Box 192
City: Stanton State: TX Zip: 79782

4. DRILLING RECORD

Drilling began 11-29-06 Completed: 12-1-06 ; Type tools: Air Rotary Drilling Rig
Size of hole 5 in.; Total depth of well 60ft
Completed well is: _____ (shallow, artesian);
Depth to water upon completion of well: ___ ft.
File Number: _____ Trn Number: _____

Vac to Jal #5 MW- 6
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth Top	in Feet Bottom	Length (feet)	Type of Shoe	Perforations From To
2			40	60		.010 screen	
2			+43	40		sch 40 riser	

7. RECORD OF MUDDING AND CEMENTING

Depth in feet From	To	Diameter of hole	Sack of Mud & Cement	Method of placement
0	2	5	1 bag of cement	topload
2	38	5	6 bags of 3/8 holeplug	topload
38	60	5	5 bags of 20/40 sand	topload

8. PLUGGING RECORD

Plugging Contractor:_____
Address:_____
Plugging Method:_____
Date Well Plugged : _____
Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feet of Cement

File Number: _____ Trn Number: _____

Vac to Jal #5 MW- 6
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To in feet	Thickness	Color and Type of Material Encountered
0	3	3	brown sand
3	7	4	brown clayey sand
7	14	7	tan calcified sand
14	24	10	tan calcified sand with caliche nodules (dense)
24	31	7	red tan calcified sand- caliche nodule
31	46	15	caliche
46	47	1	tan gray caliche
47	49	2	caliche
49	60	11	red brown sand (calcified) nodules (dense)
TD	60		

File Number: _____ Trn Number: _____

Vac to Jal #5 MW- 6
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Raymond Straub Jr _____ 12-1-06
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY
Quad _____; FWL _____; FSL _____; Use _____; Location No. _____
File Number: _____ Trn Number: _____

Vac to Jal #5 MW-7
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Plains Marketing LP Work Phone: _____
Contact: _____ Home Phone: _____
Address: 333 Clay Street, Suite 1600
City: Houston, State: TX Zip 77078

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.
B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____
C. Latitude: 32 d 25 m 41 N Longitude: 103 d 07 m 43 w
D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)
E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey
F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.
G. Other: _____
H. Give State Engineer File Number if existing well: _____
I. On land owned by (required): _____

3. DRILLING CONTRACTOR

License Number: WD1478
Name: Straub Corporation Work Phone: 432-756-3489
Agent: Raymond Straub Jr Home Phone: _____
Mailing Address: P.O. Box 192
City: Stanton State: TX Zip: 79782

4. DRILLING RECORD

Drilling began 11-29-06 Completed: 12-1-06 ; Type tools: Air Rotary Drilling Rig
Size of hole 5 in.; Total depth of well 60ft
Completed well is: _____ (shallow, artesian);
Depth to water upon completion of well: ___ ft.
File Number: _____ Trn Number: _____

Vac to Jal #5 MW-7
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
2			40	60		.010 screen		
2			+43	40		sch 40 riser		

7. RECORD OF MUDDING AND CEMENTING

Depth in feet From	To	Diameter of hole	Sack of Mud & Cement	Method of placement
0	2	5	1 bag of cement	topload
2	38	5	6 bags of 3/8 holeplug	topload
38	60	5	5 bags of 20/40 sand	topload

8. PLUGGING RECORD

Plugging Contractor:_____
Address:_____
Plugging Method:_____
Date Well Plugged : _____
Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feet of Cement

File Number: _____ Trn Number: _____

Vac to Jal #5 MW-7
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To in feet	Thickness	Color and Type of Material Encountered
0	7	7	brown sand
7	9	2	brown clayey sand
9	18	9	tan calcified sand
18	19	1	red brown sand
19	30	11	tan calcified sand (dense)
30	42	12	caliche
42	45	3	light tan caliche (damp)
45	46	1	light brown calcified sand
46	47	1	tan calcified sand dense
47	48	1	light brown calcified sand
48	54	6	tan calcified sand
54	60	6	red tan calcified sand
TD	60		

File Number: _____ Trn Number: _____

Vac to Jal #5 MW-7
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Raymond Straub Jr 12-1-06
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY
Quad _____; FWL _____; FSL _____; Use _____; Location No. _____
File Number: _____ Trn Number: _____

Vac to Jal #5 RW-4
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Plains Marketing LP Work Phone: _____
Contact: _____ Home Phone: _____
Address: 333 Clay Street, Suite 1600
City: Houston, State: TX Zip 77078

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.
B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____
C. Latitude: 32 d 25 m 41N Longitude: 103 d 07 m 43 w
D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)
E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey
F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.
G. Other: _____
H. Give State Engineer File Number if existing well: _____
I. On land owned by (required): _____

3. DRILLING CONTRACTOR

License Number: WD1478
Name: Straub Corporation Work Phone: 432-756-3489
Agent: Raymond Straub Jr Home Phone:_____
Mailing Address: P.O. Box 192
City: Stanton State: TX Zip: 79782

4. DRILLING RECORD

Drilling began 11-29-06 Completed: 12-1-06 ; Type tools: Air Rotary Drilling Rig
Size of hole 7 in.; Total depth of well 60 ft
Completed well is: _____ (shallow, artesian);
Depth to water upon completion of well: 50 ft.
File Number: _____ Trn Number: _____

Vac to Jal #5 RW-4
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth Top	in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	To
4			40	60		.010 screen		
4			+43	40		sch 40 riser		

7. RECORD OF MUDDING AND CEMENTING

Depth in feet From	To	Diameter of hole	Sack of Mud & Cement	Method of placement
0	2	7	1 bag of cement	topload
2	37	7	8 bags of 3/8 holeplug	topload
37	60	7	8 bags of 20/40 sand	topload

8. PLUGGING RECORD

Plugging Contractor:_____
Address:_____
Plugging Method:_____
Date Well Plugged : _____
Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feet of Cement

File Number: _____ Trn Number: _____

Vac to Jal #5 RW-4
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To in feet	Thickness	Color and Type of Material Encountered
0	3	3	brown sand
3	5	2	brown clayey sand
5	24	19	tan calcified sand
24	44	20	hard caliche layers
44	47	3	red brown sand
47	55	8	red brown sandstone (soft)
55	56	1	red brown sand (dense)
56	60		red brown clayey sand (dense)
TD	60		

File Number: _____ Trn Number: _____

Vac to Jal #5 RW-4
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Raymond Straub Jr _____ 12-1-06
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY
Quad _____; FWL _____; FSL _____; Use _____; Location No. _____
File Number: _____ Trn Number: _____

Vac to Jal #5 RW-5
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Plains Marketing LP Work Phone: _____
Contact: _____ Home Phone: _____
Address: 333 Clay Street, Suite 1600
City: Houston, State: TX Zip 77078

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.
B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____
C. Latitude: 32 d 25 m 41 N Longitude: 103 d 07 m 43 w
D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)
E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey
F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.
G. Other: _____
H. Give State Engineer File Number if existing well: _____
I. On land owned by (required): _____

3. DRILLING CONTRACTOR

License Number: WD1478
Name: Straub Corporation Work Phone: 432-756-3489
Agent: Raymond Straub Jr Home Phone:_____
Mailing Address: P.O. Box 192
City: Stanton State: TX Zip: 79782

4. DRILLING RECORD

Drilling began 11-30-06 Completed: 12-1-06 ; Type tools: Air Rotary Drilling Rig
Size of hole 7 in.; Total depth of well 60 ft
Completed well is: _____ (shallow, artesian);
Depth to water upon completion of well: ___ft.
File Number: _____ Trn Number: _____

Vac to Jal #5 RW-5
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4			40	60		.010 screen		
4			+43	40		sch 40 riser		

7. RECORD OF MUDDING AND CEMENTING

Depth in feet From	To	Diameter of hole	Sack of Mud & Cement	Method of placement
0	2	7	1 bag of cement	topload
2	38	7	7.5 bags of 3/8 holeplug	topload
38	60	7	8 bags of 20/40 sand	topload

8. PLUGGING RECORD

Plugging Contractor:_____
Address:_____
Plugging Method:_____
Date Well Plugged : _____
Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feet of Cement

File Number: _____ Trn Number: _____

Vac to Jal #5 RW-5
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To in feet	Thickness	Color and Type of Material Encountered
0	5	5	brown clay sand
5	20	15	tan clay – sand
20	24	4	light brown sand
24	28	4	(clay) caliche
28	33	5	caliche
33	41	8	hard caliche layers
41	41.5	.5	brown sand
41.5	45	3.5	tan calcified sandstone
45	46.5	1.5	brown sand
46.5	52	5.5	5.5 tan calcified sandstone
52	58	6	red brown calcified sandstone
58	60	2	red brown clay sand (dense) (sandstone)
TD	60		

File Number: _____ Trn Number: _____

Vac to Jal #5 RW-5
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Raymond Straub Jr _____ 12-1-06
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY
Quad _____; FWL _____; FSL _____; Use _____; Location No. _____
File Number: _____ Trn Number: _____

Vac to Jal #5 RW-6
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Plains Marketing LP Work Phone: _____
Contact: _____ Home Phone: _____
Address: 333 Clay Street, Suite 1600
City: Houston, State: TX Zip 77078

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ____1/4 ____1/4 ____1/4 Section:____ Township:____ Range:____ N.M.P.M.
in _____ County.
B. X =_____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____
C. Latitude: 32 d 25 m 41N Longitude: 103 d 07 m 43 w
D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)
E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey
F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.
G. Other: _____
H. Give State Engineer File Number if existing well: _____
I. On land owned by (required): _____

3. DRILLING CONTRACTOR

License Number: WD1478
Name: Straub Corporation Work Phone: 432-756-3489
Agent: Raymond Straub Jr Home Phone:_____
Mailing Address: P.O. Box 192
City: Stanton State: TX Zip: 79782

4. DRILLING RECORD

Drilling began 11-30-06 Completed: 12-1-06 ; Type tools: Air Rotary Drilling Rig
Size of hole 7 in.; Total depth of well 60 ft
Completed well is: _____ (shallow, artesian);
Depth to water upon completion of well: ___ft.
File Number: _____ Trn Number: _____

Vac to Jal #5 RW-6
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From	To
4			40	60		.010 screen		
4			+43	40		sch 40 riser		

7. RECORD OF MUDDING AND CEMENTING

Depth in feet From	To	Diameter of hole	Sack of Mud & Cement	Method of placement
0	1	7	1 bag of cement	topload
1	38	7	7 bags of 3/8 holeplug	topload
38	60	7	7 bags of 20/40 sand	topload

8. PLUGGING RECORD

Plugging Contractor:_____
Address:_____
Plugging Method:_____
Date Well Plugged : _____
Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feet of Cement

File Number: _____ Trn Number: _____

Vac to Jal #5 RW-6
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To in feet	Thickness	Color and Type of Material Encountered
0	7	7	brown clayey sand
7	9	2	tan calcified sand
9	14	5	tan calcified sand (soft sandstone)
14	19	5	light brown calcified sand (soft sandstone)
19	24	5	tan caliche sandstone
24	31	7	caliche
31	34	3	soft dense caliche
34	45	11	dense caliche
45	46	1	light brown sand
46	48.5	2.5	tan calcified sandstone
48.5	53	4.5	light brown calcified sandstone (dense) (damp)
53	58	5	red brown sandstone
58	60	2	red brown clay sandstone
TD	60		

File Number: _____ Trn Number: _____

Vac to Jal #5 RW-6
NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Raymond Straub Jr _____ 12-1-06
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY
Quad _____; FWL _____; FSL _____; Use _____; Location No. _____
File Number: _____ Trn Number: _____

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-4

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5" STICKUP (ft) 3.58

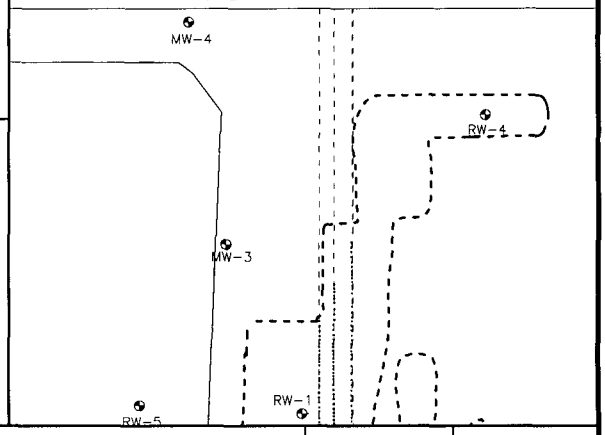
CASING DIA (in) 2" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/28/06

TOP OF CASING ELEV. (ft) 3362.49 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0					ML	Sandy Silt, red, fine, dry.		
4					SM	Contact at 4'. Silty Sandy, light gray, very fine, trace red staining, trace caliche.	MW4-5'	
6		100		0				
10		100		0	CAL	Caliche, light gray to white, firm to hard, trace fines, very dry, friable in places. Layers of cherty sandstone, hard.	MW4-10'	
14								
16		100		0		Same as above, light gray with red nodules common.	MW4-15'	
20		50		0	SM	Calcified Sand, brownish red with light gray calcification, very hard in places (solidified).	MW4-20'	
24								
26		50		0		Sandstone, reddish brown, dense, abundant fines in cuttings.	MW4-25'	
30		75		0	CAL	Caliche, light reddish gray, hard in layers, dry.	MW4-30'	
34								
36		75		0		Same as above, increased sand content (loose), trace clayey silt, light red.	MW4-35'	
40		50		0		Same as above.	MW4-40'	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-4

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5" STICKUP (ft) 3.58

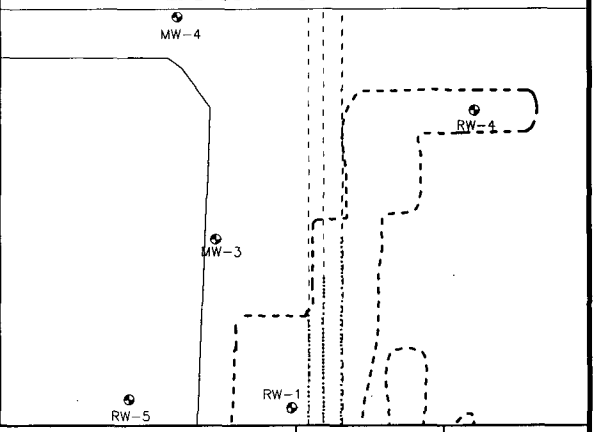
CASING DIA (in) 2" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/28/06

TOP OF CASING ELEV. (ft) 3362.49 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40		50		0	CAL	Same as above.		
42								
44								
46	X	50		0	SM	Silty Sand, brownish red, very fine grained, damp to moist.	MW4-45'	
48								
50	X	75		0		Silty Sand with sandstone lenses, light reddish gray, dense sandstone lenses common, trace wet seams.	MW4-50'	
52								
54								
56								
58								
60								
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

T.D. 60'

▼ – STATIC WATER LEVEL
▽ – INITIAL WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-5

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 61 BOREHOLE DIA (in) 5" STICKUP (ft) 3.58

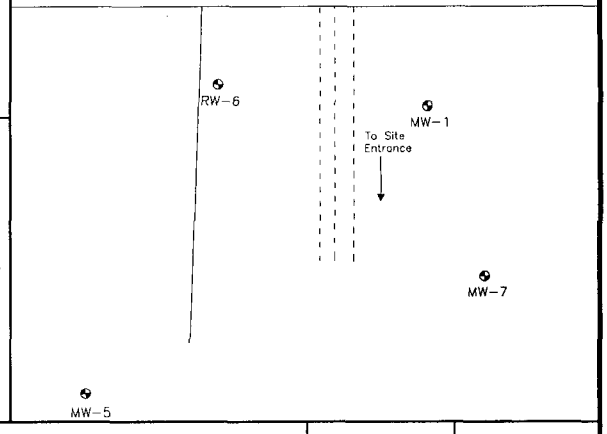
CASING DIA (in) 2" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/28/06

TOP OF CASING ELEV. (ft) 3363.67 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0								
2					ML			
4								
6	X			0		Sandy Silt, orangish red, very fine, dry.	MW5-5'	
8								
10	X			0		Silty Sand to sandy silt, light gray to white, very dry.	MW5-10'	
12								
14								
16	X			0	SM	Same as above.	MW5-15	
18								
20	X			0		Silty Sand, light reddish gray, trace caliche nodules, very dry, possible calcified sand.	MW5-20	
22								
24								
26	X			0	ML	Sandy Silt, light gray, very dry.	MW5-25	
28								
30	X			0	CAL	Caliche, light reddish gray, very dry.	MW5-30'	
32								
34								
36	X				ML	Sandy Silt, light gray, trace red, very dry, powdery.	MW5-35'	
38								
40	X				CAL	Caliche	MW5-40'	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-5

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 61 BOREHOLE DIA (in) 5" STICKUP (ft) 3.58

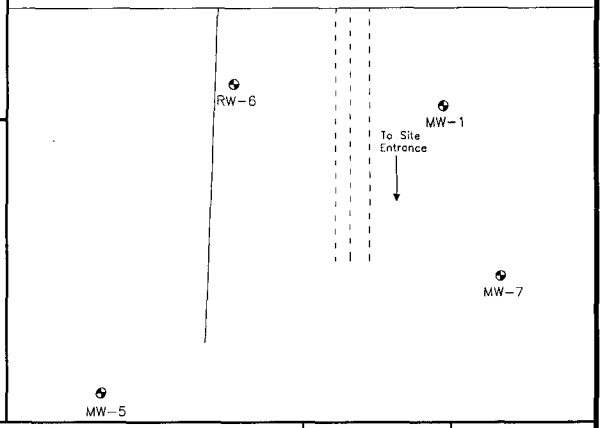
CASING DIA (in) 2" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/28/06

TOP OF CASING ELEV. (ft) 3363.67 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40						Caliche		
42								
44								
46	X				CAL	Same as above, slightly damp.	MW5-45'	
48								
50	X					Silty Sand, light reddish gray nodules common, slightly damp, silicated sandstone layers.	MW5-50'	▼ ▽
52								
54								
56	X				SM	Same as above, darker red.		
58								
60	X					Same as above.		
62						T.D. 61'		
64								
66								
68								
70								
72								
74								
76								
78								
80								

▼ – STATIC WATER LEVEL
▽ – INITIAL WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-6

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5" STICKUP (ft) 3.58

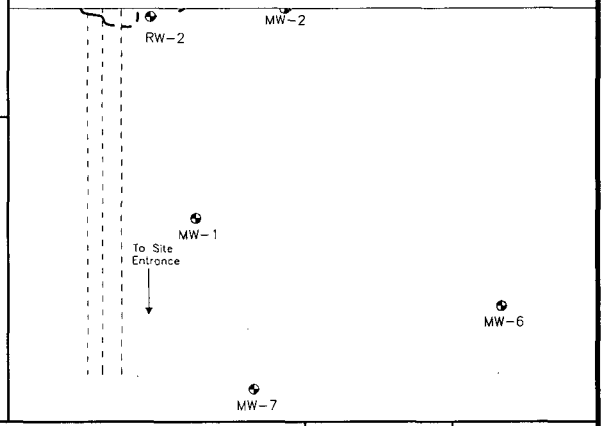
CASING DIA (in) 2" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/29/06

TOP OF CASING ELEV. (ft) 3362.60 GROUND SURFACE ELV. (ft) _____

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0								
2					SM			
4								
6	X			0		Silty Sand to sandy silt, orangish red, very fined grained, dry, trace dense sand.	MW6-5'	
8								
10	X			0		Sandy Silt, light gray, very fined grained, trace calcareous nodules, dry.	MW6-10'	
12					ML			
14								
16	X			0		Same as above, calcareous nodules common, trace cherty nodules, dry.	MW6-15'	
18								
20	X			0		Silty Sand, increased calcareous nodules, caliche nodules.	MW6-20'	
22								
24								
26	X			0	SM	Same as above, calcified sand, light reddish gray, fine.	MW6-25'	
28								
30	X			0		Caliche, light gray.	MW6-30'	
32					CAL			
34								
36	X			0		Sandy Silt with caliche, light gray to white, trace calcareous nodules, floury texture.	MW6-35'	
38								
40	X			0	ML	Same as above, (caliche) less nodules.	MW6-40'	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-6

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5" STICKUP (ft) 3.58

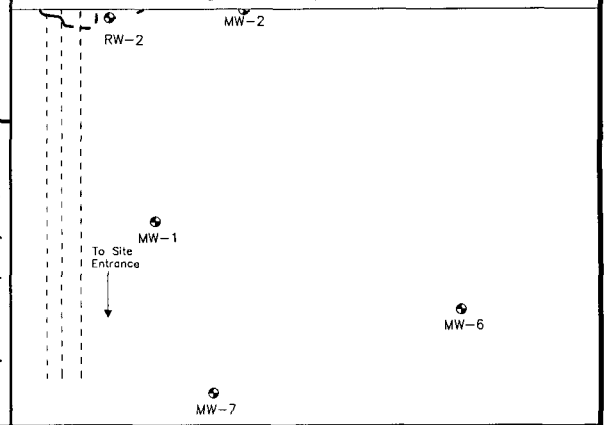
CASING DIA (in) 2" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/29/06

TOP OF CASING ELEV. (ft) 3362.60 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40						Same as above, (caliche) less nodules.		
42								
44								
46	X			0	CAL	Same as above, (caliche).	MW6-45'	
48								
50	X			0		Silty Sand, light reddish gray, very fine grained, floury, calcified sand, slightly damp, (less dust).	MW6-50'	▼ ▽
52								
54								
56	X			0	SM	Same as above, trace calcified nodules.		
58								
60				0		Silty Sand, light orangish red, trace damp nodules, calcified sand.		
						T.D. 60'		
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

▼ – STATIC WATER LEVEL
▽ – INITIAL WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-7

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5" STICKUP (ft) 3.58

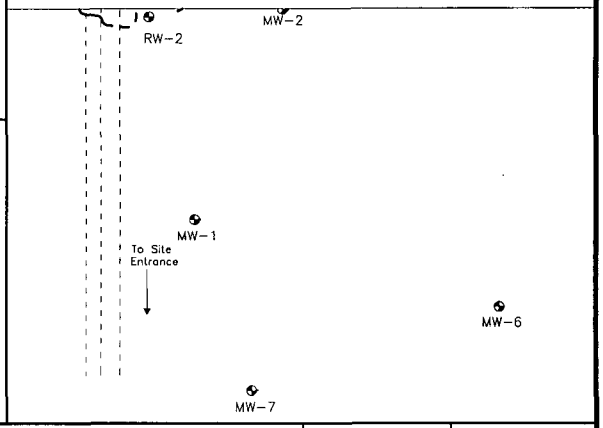
CASING DIA (in) 2" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/29/06

TOP OF CASING ELEV. (ft) 3362.75 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0								
2								
4								
6	X			0	SM	Silty Sand, orangish red, very fine grained, trace hard nodules, dry.	MW7-5'	
8								
10	X			0		Silty Sand, reddish gray, very fine grained, trace hard nodules, dry.	MW7-10'	
12								
14								
16	X			0	ML	Sandy Silt, light reddish gray, trace calcareous nodules, very dry, floury.	MW7-15'	
18								
20	X			0		Same as above.	MW7-20'	
22								
24								
26	X			0		Same as above, light gray, slight increase in sand content.	MW7-25'	
28								
30	X			0	CAL	Caliche, light gray to white, trace sand, trace calcareous nodules.	MW7-30'	
32								
34								
36	X			0		Same as above.	MW7-35'	
38								
40	X			0		Same as above, caliche.	MW7-40'	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER MW-7

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 60 BOREHOLE DIA (in) 5" STICKUP (ft) 3.58

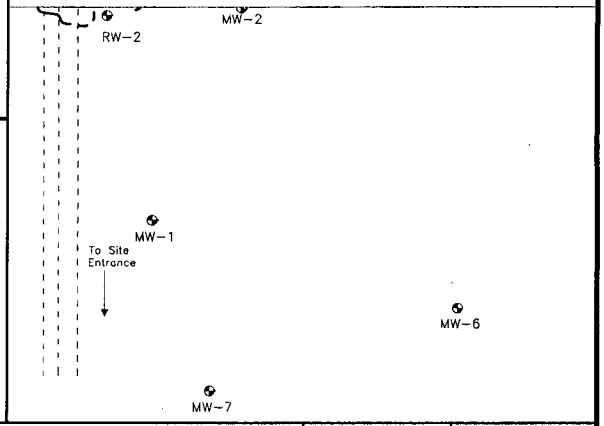
CASING DIA (in) 2" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/29/06

TOP OF CASING ELEV. (ft) 3362.75 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40					CAL	Same as above, caliche.		
42								
44								
46	X			0	SM	Silty Sand, light reddish gray, very fine grained, calcified sand, trace hard nodules, slightly damp.	MW7-45'	▽
48								
50	X			0		Same as above, very silty.	MW7-50'	▼
52								
54								
56	X			0		Same as above, more dense calcified, trace dense nodules.		
58								
60				0		Same as above, more orangish red, trace damp nodules.		
						T.D. 60'		
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

▼ – STATIC WATER LEVEL
▽ – INITIAL WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-4

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 61 BOREHOLE DIA (in) 7" STICKUP (ft) 3.58

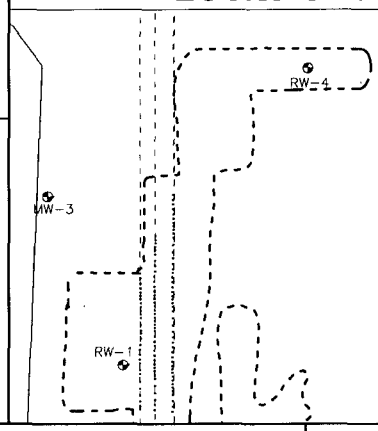
CASING DIA (in) 4" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/29/06

TOP OF CASING ELEV. (ft) 3363.23 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS
0							
6	X			0	SM	Silty Sand, orangish red, very fine grained, trace organic roots, trace hard nodules, dry, friable powdery.	RW4-5'
10	X			0		Silty Sand, light reddish gray, very fine grained, calcareous nodules common, very dry, powdery.	RW4-10'
15	X			0	ML	Sandy Silt, light reddish gray, calcified to siltstone in places (lenses), trace calcareous nodules.	RW4-15
20	X			0	SM	Silty Sand, light reddish gray, calcified/dense/hard in places (lenses), calcareous nodules common.	RW4-20
25	X			0	CAL	Caliche, white, very light gray, calcified (cherty) nodules common (some large).	RW4-25
30	X			0		Caliche, light gray to white, traces of sand, traces of calcareous nodules.	RW4-30'
35	X			0		Same as above to sandy silt, large calcified nodules common.	RW4-35'
40	X			0		Same as above, more sandy silt.	RW4-40'
42							

WELL CONSTRUCTION

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-4

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 61 BOREHOLE DIA (in) 7" STICKUP (ft) 3.58

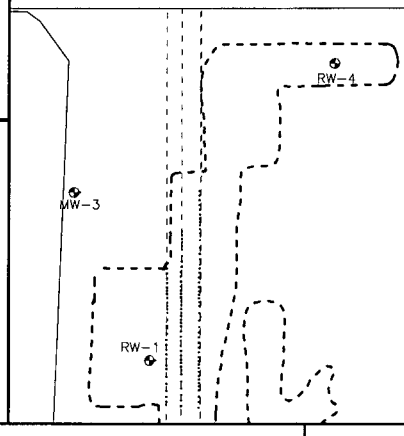
CASING DIA (in) 4" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/29/06

TOP OF CASING ELEV. (ft) 3363.23 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40					CAL	Same as above, more sandy silt.		
42								
44								
46				0		Silty Sand, reddish gray, fine grained, large hard nodules present, damp to moist.	RW4-45'	
48								
50				0	SM	Same as above, light reddish gray, fine grained, trace small gravel.	RW4-50'	
52								
54								
56				0		Same as above, trace clayey nodules (wet).		
58								
60				0				
62						T.D. 61'		
64								
66								
68								
70								
72								
74								
76								
78								
80								

▼ – STATIC WATER LEVEL
▽ – INITIAL WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-5

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 61 BOREHOLE DIA (in) 7" STICKUP (ft) 3.58

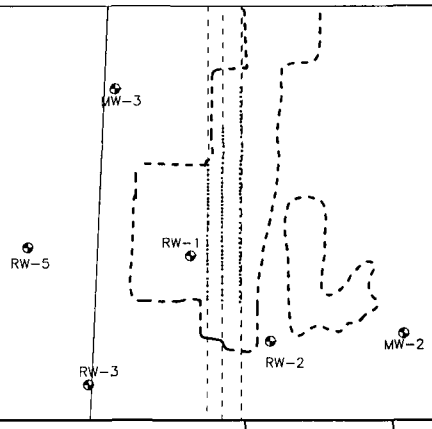
CASING DIA (in) 4" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/30/06

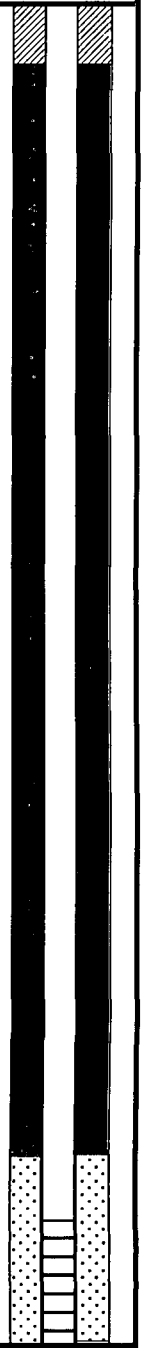
TOP OF CASING ELEV. (ft) 3362.38 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS
0							
2							
4							
6	X			0		Silty Sand, orangish red, fine grained, trace clay, trace light gray nodules.	RW5-5'
8							
10	X			0		Silty Sand, light reddish gray, gray calcareous nodules common, fine grained.	RW5-10'
12							
14							
16	X			0	SM	Same as above, trace lithofied sandstone lenses.	RW5-15
18							
20	X			0		Same as above, reddish gray.	RW5-20
22							
24							
26	X			0		Same as above, light reddish gray, increased silt content, trace black staining on hard calcareous nodules.	RW5-25
28							
30	X			0		Caliche, light reddish gray, large calcified to cherty nodules common.	RW5-30'
32							
34							
36	X			0	CAL	Caliche, light gray to white, large caliche nodules common, flowery/powdery texture, dry.	RW5-35'
38							
40	X			0		Silty Sand, light gray with trace light reddish color mixed, dense calcified nodules common.	RW5-40'
42					SM	Light reddish calcified sandstone to 45'.	

WELL CONSTRUCTION



PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-5

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 61 BOREHOLE DIA (in) 7" STICKUP (ft) 3.58

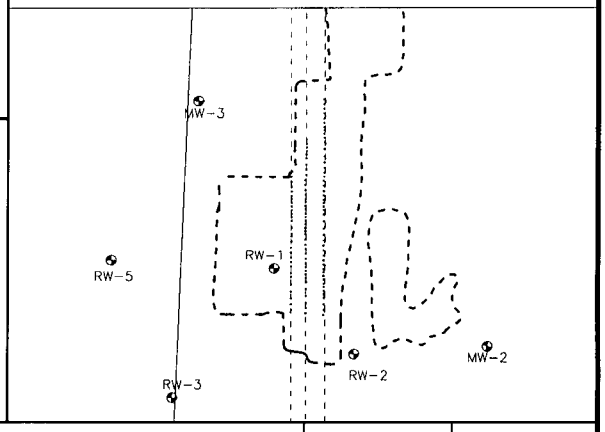
CASING DIA (in) 4" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/30/06

TOP OF CASING ELEV. (ft) 3362.38 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40						Silty Sand, light gray with trace light reddish color mixed, dense calcified nodules common. Light reddish calcified sandstone to 45'.		
42								
44								
46	X			0		Silty Sand, orangish red, fine grained, trace clay, trace sandstone nodules, damp to moist.	RW5-45'	
48					SM			
50	X			0		Same as above, light reddish gray, increasing silt content, small gravel common, calcified sandstone, dense.	RW5-50'	
52								
54								
56	X			0		Same as above.		
58						Increased moisture content at 58'.		
60				0		Same as above, trace clay.		
						T.D. 61'		
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

▼ – STATIC WATER LEVEL
▽ – INITIAL WATER LEVEL

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-6

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 61 BOREHOLE DIA (in) 7" STICKUP (ft) 3.58

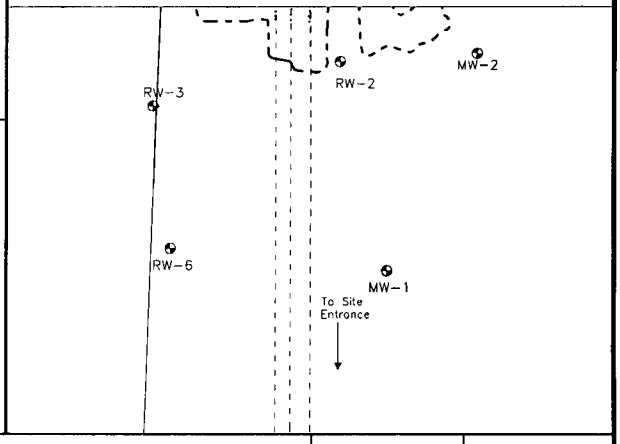
CASING DIA (in) 4" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/30/06

TOP OF CASING ELEV. (ft) 3363.11 GROUND SURFACE ELV. (ft)

LOCATION MAP



DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
0								
2								
4								
6	X			0	SM	Silty Sand, orangish red, trace red hard nodules, fine grained.	RW6-5'	
8								
10	X			0		Silty Sand, calcified sandstone, dense, light gray, very fine grained, very dry/powdery.	RW6-10'	
12								
14								
16	X			0		Sandy Silt calcified sandstone, light reddish gray, trace small calcareous nodules, very dry/powdery.	RW6-15'	
18								
20	X			0	ML	Same as above.	RW6-20'	
22								
24								
26	X			0		Caliche, light reddish gray, very fine grained, calcareous nodules common, very dry/powdery.	RW6-25'	
28								
30	X			0		Same as above to sandy silt, light gray, trace calcareous nodules, very dry. More dense at 31'.	RW6-30'	
32								
34						Even more dense at 34'.		
36	X			0	CAL	Same as above, Caliche dense.	RW6-35'	
38								
40	X			0		Same as above, dense caliche, calcareous nodules, (caliche fragments) common.	RW6-40'	
42								

PREMIER
ENVIRONMENTAL SERVICES, INC.

WELL NUMBER RW-6

PROJECT Vac to Jal #5 205069.00 LOCATION Lea County, New Mexico

TOTAL WELL DEPTH 61 BOREHOLE DIA (in) 7" STICKUP (ft) 3.58

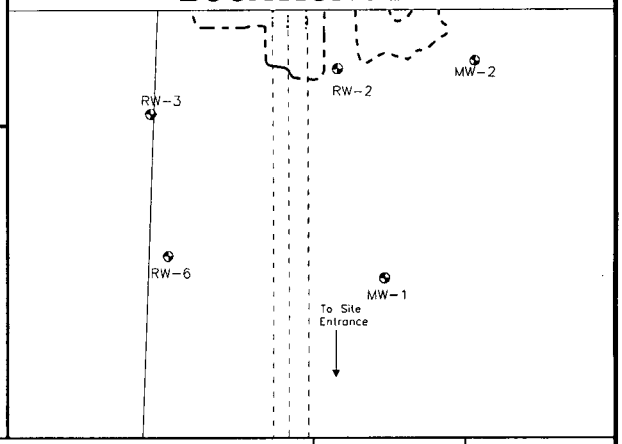
CASING DIA (in) 4" TYPE PVC SCREEN LENGTH 20 SLOT SIZE (in) 0.010

DRILLING CO. Straub Corp. DRILLING METHOD Air Rotary

GEOLOGIST Eddie Stanaland DATE DRILLED 11/30/06

TOP OF CASING ELEV. (ft) 3363.11 GROUND SURFACE ELV. (ft)

LOCATION MAP

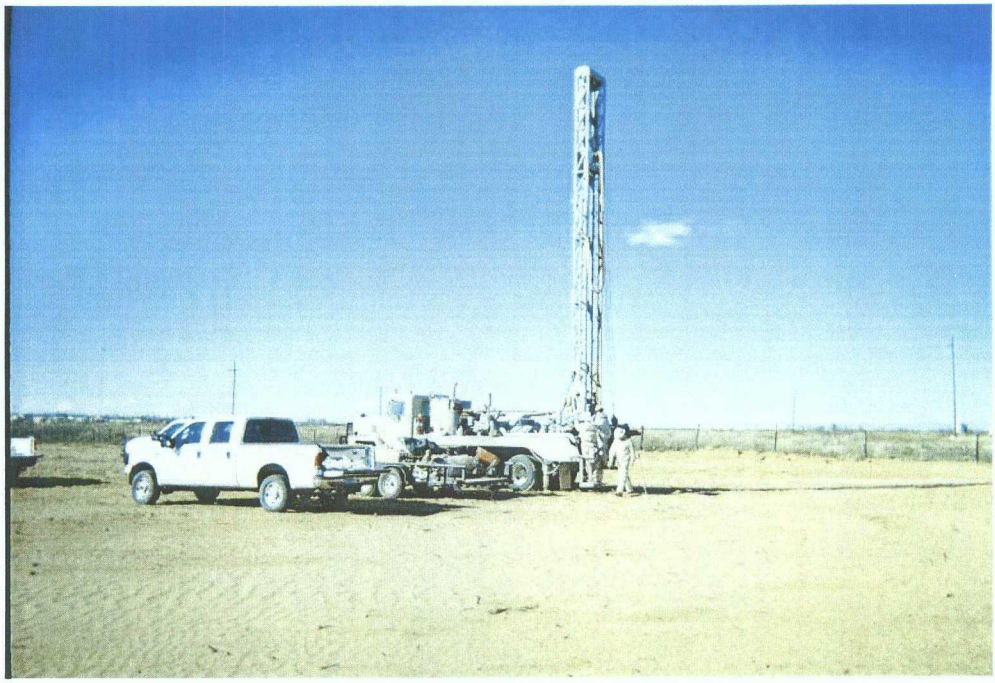


DEPTH	INTERVAL	RECOVERY %	LOG	PID (ppm)	USCS	LITHOLOGIC DESCRIPTION/COMMENTS	REMARKS	WELL CONSTRUCTION
40								
42					CAL	Same as above, dense caliche, calcareous nodules, (caliche fragments) common.		
44						Same as above.		
46	X			0			RW6-45'	
48						Silty Sand, light reddish gray, very fine grained, trace hard nodules, damp, dense sandstone.		
50	X			0		Less dust, moist 48.5'.	RW6-50'	
52								
54								
56	X			0	SM	Same as above, dense sandstone, less dust.		
58								
60				0		Silty Sand, grayish red, trace clay, damp.		
						T.D. 61'		
62								
64								
66								
68								
70								
72								
74								
76								
78								
80								

▼ – STATIC WATER LEVEL
▽ – INITIAL WATER LEVEL

Appendix E Site Photographs

PREMIER



Photograph 1: Photograph shows Straub's drill rig and crew working on the Installation of RW-4 (viewing north). Photograph taken on November 29, 2006.

Photograph 2: Photograph of MW-5 after installation and completion. Photograph taken on November 29, 2006, viewing southwest.

Photograph 3: Photograph shows drill crew working on MW-7. Photo taken November 29, 2006, viewing northwest

Photograph 4: Photograph shows drill rig on RW-4 location, viewing northwest.

Photograph 5: Photograph shows a close up of the drill crew and rig, working on RW-4

Photograph 6: Photograph shows crew set up on RW-5 location. Photo taken on November 30, 2006, viewing northwest.

Appendix F C-141 NMOCD Release Notification Form

PREMIER

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised March 17, 1999

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Contact
EOTT Energy LLC	**Frank Hernandez**
Address	Telephone No.
PO Box 1660 5805 East Highway 80 Midland, Texas 79702	**713.253.7006**
Facility Name	Facility Type
Vacuum to Jal 14" Mainline #5	**14" Steel Pipeline**

Surface Owner **Greg Holt**	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County: Lea
2	**2**	**T22S**	**R37E**					**Lat. 32 25' 39.006"N** **Lon. 103 07' 43.155"W**

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Crude Oil	**20 bbls barrels**	**5 bbls barrels**
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
14" Steel Pipeline	**5-23-03 @ 3:00 PM**	**4:00 PM @ 5-23-03**
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? **Buddy Hill**	
By Whom? **Pat McCasland, EPI**	Date and Hour **5-23-03 @ 8:00 PM**	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. **NA**	

If a Watercourse was Impacted, Describe Fully.*
NA

Describe Cause of Problem and Remedial Action Taken.*
14" Steel Pipeline. The cause was either internal or external corrosion. The line was being pressure tested at the time of the occurrence. The line was depressured and a line repair clamp installed. Contaminated soil placed on a plastic barrier.

Describe Area Affected and Cleanup Action Taken.*
~200' x 100' 8,730 sqft ***Site will be delineated to determine the vertical and horizontal extents of contamination. Contaminated soil will be disposed of or remediated on site. Remedial Goals: TPH 8015m = 1000 mg/Kg, Benzene = 10 mg/Kg, and BTEX, i.e., the mass sum of Benzene, Ethyl Benzene, Toluene, and Xylenes = 50 mg/Kg.***

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Frank Hernandez	**OIL CONSERVATION DIVISION** Approved by District Supervisor:	
Printed Name: Frank Hernandez		
Title: District Environmental Supervisor	Approval Date:	Expiration Date:
Date: May 27, 2003 Phone: 713.253.7006	Conditions of Approval:	Attached ☐

* Attach Additional Sheets If Necessary