

August 17, 2015

Ms. Susan von Gonten New Mexico Environment Department Petroleum Storage Tank Bureau 2905 Rodeo Park Drive East, Building 1 Santa Fe, New Mexico 87505

Re: Bi-Weekly NAPL Recovery Shamrock #63, 3624 Cerrillos Road, Santa Fe, New Mexico Facility #: 29206 Release ID #: 4509 WPID #: 17502

Dear Ms. von Gonten:

Daniel B. Stephens & Associates, Inc. (DBS&A) is pleased to submit this letter report documenting six bi-weekly nonaqueous-phase liquid (NAPL) recovery events conducted at the above-referenced site between May 15, 2015 and July 29, 2015. The activities described herein were conducted in accordance with New Mexico Environment Department (NMED) Underground Storage Tank Bureau Guidelines for Corrective Action (Guidelines), DBS&A standard operating procedures, and work plan identification (WPID) number 17502, approved by the New Mexico Environment Department (NMED) Petroleum Storage Tank Bureau (PSTB) on April 29, 2015. A site map is provided in Figure 1.

#### Introduction

In May 2014, Basin Engineering, Inc. (Basin) installed three new groundwater monitor wells and completed the first semiannual groundwater monitoring event at the site. Results of groundwater monitoring completed after the well installation showed NAPL to be present in newly installed monitor well MW-6 (0.83 foot). Basin recovered 0.5 gallon of NAPL from the well during the monitoring event. DBS&A acquired Basin in June 2014, and in September 2014, DBS&A performed the second semiannual groundwater monitoring event. NAPL was measured at a thickness of 1.40 feet in MW-6 at that time, and DBS&A recovered 0.85 gallon of NAPL from the well during the monitoring event.

Between November 2014 and March 2015, DBS&A conducted six monthly NAPL recovery events at well MW-6. A total of 9.34 gallons of NAPL were recovered during the monthly recovery events, for a cumulative total of 10.69 gallons. Initial NAPL thickness decreased during the monthly recovery period, from 1.52 feet in November to 1.04 feet in March.

In March 2015 DBS&A installed six new monitor wells, designated MW-9 through MW-14, on properties adjacent to the site. NAPL was measured in wells MW-9 and MW-10 at thicknesses of 0.44 foot and 5.47 feet, respectively, immediately following well installation. DBS&A recovered 0.92 and 4.62 gallons of NAPL from wells MW-9 and MW-10, respectively, in April 2015.

#### Daniel B. Stephens & Associates, Inc.

Mail: P.O. Box 59 Durango, CO 81302 907-403-8895 FAX 970-403-8896 Ms. Susan von Gonten August 17, 2015 Page 2

Following the first quarterly monitoring event in March 2015, DBS&A submitted a work plan for one quarter of bi-weekly NAPL recovery events at wells MW-6, MW-9, and MW-10 (Figure 1). The work plan was submitted to the NMED PSTB on April 3, 2015 and received technical approval under WPID #17502 on April 29, 2015. This letter report documents the results of the bi-weekly NAPL recovery conducted during May, June, and July 2015. Second quarterly groundwater monitoring was conducted concurrent with bi-weekly NAPL recovery on June 17-18, 2015, and is documented under separate cover.

#### **Bi-Weekly NAPL Recovery**

The first bi-weekly NAPL recovery event was conducted on May 15, 2015. During each event, all site monitor wells were gauged with an electronic interface probe to check for the presence of NAPL and determine the initial thickness of any NAPL present. Field forms documenting water levels measured in site wells are provided with the field notes in Attachment 1. NAPL was recovered from wells containing a measureable NAPL thickness greater than 0.01 foot. NAPL recovery continued at each well until the NAPL thickness was reduced to 0.01 foot or less, or for one hour, in accordance with the approved work plan. During the six bi-weekly NAPL recovery events, NAPL was observed in wells MW-6, MW-9, and MW-10 (Figure 1). The final NAPL recovery event was conducted on July 29, 2015. Field forms documenting NAPL recovery activities at each well are provided in Attachment 1.

To date, a total of 32 gallons of NAPL have been recovered from site wells. A total of 15.77 gallons of NAPL were removed during the bi-weekly recovery events documented in this report. Historical NAPL recovery volumes and fluid levels for wells MW-6, MW-9, and MW-10 are summarized in Table 1. A graph depicting the cumulative NAPL recovery from wells MW-6, MW-9, and MW-10 is provided in Figure 2. NAPL recovery volumes for each event are presented graphically in Figure 3. Graphs showing the initial NAPL thickness prior to each recovery event, the volume of NAPL recovered during each event, and the corrected depth to groundwater for each well are provided in Figures 4, 5, and 6.

Specific observations at each well from which NAPL was recovered include:

- MW-6: Approximately 7.52 gallons of NAPL were recovered from well MW-6 during the bi-weekly events, bringing the cumulative total to 18.21 gallons since NAPL recovery began at this location in May 2014. NAPL recovery during individual events ranged from 0.91 to 1.47 gallons, with the greatest recovery during the first and last events. Initial NAPL thickness varied from approximately 1.0 foot to 1.48 feet, with the greatest NAPL accumulation observed during the final event. Water levels decreased by approximately 0.16 foot during the period.
- MW-9: A total of approximately 1.71 gallons of NAPL were recovered from well MW-9 during the bi-weekly events. Including the NAPL recovery event conducted in April 2015, a cumulative total of 2.63 gallons of NAPL have been recovered from the well. NAPL recovery during individual bi-weekly events ranged from 0.11 to 0.65 gallon, with the

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greatest recovery during the first event on May 15. Initial NAPL thickness varied from 0.18 foot to 0.77 foot, with the greatest NAPL accumulation observed during the first event on May 15. NAPL thicknesses observed in the well fluctuated during the period but overall decreased only slightly between the first and last bi-weekly events, from 0.77 to 0.68 foot. Water levels decreased during the period by approximately 0.22 foot.

• MW-10: A total of approximately 6.54 gallons of NAPL were recovered from well MW-10 during the bi-weekly events. Including the NAPL recovery event conducted in April 2015, a cumulative total of 11.16 gallons of NAPL have been recovered from the well. NAPL recovery during individual bi-weekly events ranged from 0.36 to 3.60 gallons, with the greatest recovery during the first event on May 15. NAPL recovery volumes decreased during each of the first four events to and remained relatively steady thereafter. Initial NAPL thickness varied from 4.28 foot to 0.65 feet, with the greatest NAPL accumulation observed during the first event on May 15. The initial NAPL thickness decreased sharply between the first and second bi-weekly events, but remained relatively steady between 0.65-foot and 0.69-foot during the last three events. Water levels decreased steadily during the period, overall dropping by approximately 0.46 foot.

#### **Conclusions and Recommendations**

In general, NAPL thickness tends to fluctuate opposite of groundwater elevations when not influenced by a corrective action system. As water levels decline, NAPL trapped within the pore spaces of the capillary fringe is released or "drains." With increasing water levels, the NAPL within the pore spaces is not released, and remains trapped or becomes "submerged."

This trend has been apparent in MW-6, as NAPL thickness increased from May 2014 to November 2014 with decreasing water levels, and then decreased from November 2014 to February 2015 with increasing water levels. Water levels in well MW-6 decreased between May and July, while the initial NAPL thickness in the well fluctuated but overall increased slightly. Field observations indicate that NAPL in the well recharges quickly after cessation of bailing, and it appears that bi-weekly NAPL recovery has not significantly reduced the availability of NAPL in the surrounding formation.

In well MW-9, both water levels and initial NAPL thicknesses decreased between May and July, indicating some reduction in the amount of NAPL in the vicinity of the well. Likewise, NAPL recovery activities have clearly made an impact on NAPL thicknesses observed at well MW-10, which decreased from 5.31 feet to 0.67 foot since the first NAPL recovery event in April 2015; water levels also decreased during this period. The relative stability of the NAPL thicknesses and recovery volumes from wells MW-9 and MW-10 during the final three events suggests that equilibrium between NAPL withdrawal and recharge has been approached at these locations.

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Based on the above observations and conclusions, DBS&A offers the following recommendations with respect to NAPL recovery activities at the site:

- Conduct a NAPL bail-down and recovery test at each of these three wells to determine NAPL transmissivity at each location and develop an optimized NAPL recovery strategy
- Continue NAPL recovery on a monthly basis using hand bailers or pumps, until an optimized recovery strategy is adopted
- Install additional wells to the west of well MW-10, to delineate the extent of the NAPL plume; NAPL should also be recovered from any new wells

With completion of the sixth and final bi-weekly NAPL recovery event, DBS&A plans to invoice an amount of \$15,753.13 for Deliverable ID 17502, reflecting an increase in the NMGRT to 7.1875% effective July 1. Please do not hesitate to call me at (505) 353-9068 or John at (970) 403-8895 if you have any questions or require additional information.

Sincerely,

DANIEL B. STEPHENS & ASSOCIATES, INC.

Jason J. Raucci, P.G. Geologist

John E. Casey

John E. Casey, P.E. Senior Engineer

JJR/JEC/ed Enclosures

cc: Bryan Neal, Polk Oil Company Mack With, Jurgens & With, P.A.

Attachments:

Figure 1 - Site Map

- Figure 2 Cumulative NAPL Recovery from Site Wells
- Figure 3 NAPL Recovery per Event
- Figure 4 NAPL Thickness and Depth to Water in MW-6
- Figure 5 NAPL Thickness and Depth to Water in MW-9
- Figure 6 NAPL Thickness and Depth to Water in MW-10

Table 1 - Summary of NAPL Recovery from Site Wells

Attachment 1 - Field Notes

## Figures



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Figure 2









### Table

| Well ID | Date                  | Initial Depth to<br>Water <sup>a</sup><br>(ft btoc) | Initial Depth<br>to NAPL<br>(ft btoc) | Initial NAPL<br>Thickness<br>(feet) | Corrected<br>Depth to<br>Water <sup>b</sup><br>(ft btoc) | Total Volume<br>of Fluids<br>Removed<br>(gallons) | Volume of NAPL<br>Removed<br>(gallons) | Cumulative<br>Volume of NAPL<br>Removed<br>(gallons) | Final Thickness<br>of NAPL<br>(feet) |
|---------|-----------------------|---|---------------------------------------|-------------------------------------|--|---|--|--|--------------------------------------|
| MW-6    | 05/27/14              | 82.09   | 81.26                                 | 0.83                                | 81.38  | 3.50  | 0.50                                   | 0.50   | <0.01                                |
|         | 09/03/14              | 82.70   | 81.30                                 | 1.40                                | 81.51  | 6.00  | 0.85                                   | 1.35   | <0.01                                |
|         | 11/17/14              | 82.80   | 81.28                                 | 1.52                                | 81.51  | 2.98  | 1.42                                   | 2.77   | 0.20                                 |
|         | 12/12/14              | 82.55   | 81.24                                 | 1.31                                | 81.44  | 3.22  | 1.41                                   | 4.18   | 0.18                                 |
|         | 01/19/15              | 82.45   | 81.20                                 | 1.25                                | 81.39  | 3.10  | 1.47                                   | 5.65   | 0.19                                 |
|         | 02/16/15              | 82.42   | 81.21                                 | 1.21                                | 81.39  | 3.22  | 1.68                                   | 7.33   | 0.21                                 |
|         | 03/08/15              | 82.36   | 81.25                                 | 1.11                                | 81.42  | 3.12  | 1.70                                   | 9.03   | 0.10                                 |
|         | 03/17/15              | 82.37   | 81.33                                 | 1.04                                | 81.53  | 3.38  | 1.66                                   | 10.69  | 0.28                                 |
|         | 05/15/15              | 82.65   | 81.37                                 | 1.28                                | 81.56  | 3.64  | 1.47                                   | 12.16  | 0.33                                 |
|         | 06/01/15              | 82.49   | 81.42                                 | 1.07                                | 81.58  | 1.57  | 0.91                                   | 13.07  | 0.29                                 |
|         | 06/17/15              | 82.81   | 81.43                                 | 1.38                                | 81.64  | 4.76  | 1.06                                   | 14.13  | 0.33                                 |
|         | 07/01/15              | 82.65   | 81.46                                 | 1.19                                | 81.64  | 3.59  | 1.36                                   | 15.49  | 0.22                                 |
|         | 07/15/15              | 82.84   | 81.49                                 | 1.35                                | 81.69  | 4.35  | 1.25                                   | 16.74  | 0.15                                 |
|         | 07/29/15              | 82.98   | 81.50                                 | 1.48                                | 81.72  | 3.88  | 1.47                                   | 18.21  | 0.20                                 |
| MW-9    | 04/10/15              | 80.19   | 79.20                                 | 0.99                                | 79.35  | 2.35  | 0.92                                   | 0.92   | 0.05                                 |
|         | 05/15/15              | 80.02   | 79.25                                 | 0.77                                | 79.37  | 3.78  | 0.65                                   | 1.57   | 0.13                                 |
|         | 06/01/15              | 79.54   | 79.36                                 | 0.18                                | 79.39  | 1.08  | 0.25                                   | 1.82   | 0.00                                 |
|         | 06/17/15 <sup>c</sup> | 79.62   | 79.37                                 | 0.25                                | 79.41  | 1.37  | 0.26                                   | 2.08   | 0.00                                 |
|         | 07/01/15              | 80.04   | 79.38                                 | 0.66                                | 79.48  | 1.54  | 0.21                                   | 2.29   | 0.00                                 |
|         | 07/15/15              | 80.01   | 79.50                                 | 0.51                                | 79.58  | 2.20  | 0.11                                   | 2.40   | <0.01                                |
|         | 07/29/15              | 80.17   | 79.49                                 | 0.68                                | 79.59  | 1.76  | 0.23                                   | 2.63   | 0.00                                 |

# Table 1. Summary of NAPL Recovery from Site WellsShamrock # 63, Santa Fe, New Mexico

| Well ID | Date     | Initial Depth to<br>Water <sup>a</sup><br>(ft btoc) | Initial Depth<br>to NAPL<br>(ft btoc) | Initial NAPL<br>Thickness<br>(feet) | Corrected<br>Depth to<br>Water <sup>b</sup><br>(ft btoc) | Total Volume<br>of Fluids<br>Removed<br>(gallons) | Volume of NAPL<br>Removed<br>(gallons) | Cumulative<br>Volume of NAPL<br>Removed<br>(gallons) | Final Thickness<br>of NAPL<br>(feet) |
|---------|----------|---|---------------------------------------|-------------------------------------|--|---|--|--|--------------------------------------|
| MW-10   | 04/10/15 | 82.35   | 77.04                                 | 5.31                                | 77.84  | 6.01  | 4.62                                   | 4.62   | 0.35                                 |
|         | 05/15/15 | 81.61   | 77.33                                 | 4.28                                | 77.97  | 4.86  | 3.60                                   | 8.22   | 0.34                                 |
|         | 06/01/15 | 78.90   | 78.00                                 | 0.90                                | 78.14  | 2.61  | 1.01                                   | 9.23   | 0.12                                 |
|         | 06/17/15 | 79.29   | 78.14                                 | 1.15                                | 78.31  | 5.79  | 0.81                                   | 10.04  | 0.01                                 |
|         | 07/01/15 | 78.93   | 78.28                                 | 0.65                                | 78.38  | 2.43  | 0.36                                   | 10.40  | 0.00                                 |
|         | 07/15/15 | 78.97   | 78.28                                 | 0.69                                | 78.38  | 3.94  | 0.38                                   | 10.78  | 0.01                                 |
|         | 07/29/15 | 79.00   | 78.33                                 | 0.67                                | 78.43  | 2.86  | 0.38                                   | 11.16  | 0.00                                 |

# Table 1. Summary of NAPL Recovery from Site WellsShamrock # 63, Santa Fe, New Mexico

<sup>a</sup> Depth to water (DTW) before correction for NAPL thickness.

<sup>b</sup> DTW corrected for NAPL thickness using the following equation: DTW = DTW - (NAPL thickness x 0.85).

<sup>c</sup> Initial NAPL thickness and depth to water calculated from thickness observed in first bailer

NAPL = Nonaqueous-phase liquid

ft btoc = Feet below top of casing

Attachment 1

**Field Notes** 

Bitweeky MAPL Recourd 15/15 Ø 1030 J. Randi / A. Laws onste 1530 Selfing par wer Mario 1547 7 Marg. Bailing Product. 1230 Heavy rain, anapop @ Murg PMW 10, off-Jife For Cuch Backarsite. Setting on B30 well mule reasuring site water leves Rain becomes herd, steady 1340 DTP Well D DTW B1.04. Mw-1 81.97 NW2 81.29 MWZ ...... 79.88 Mw-4 80.03 Story of odor -----MW-5 Mrs-6 81.37 82.65 1000 82 40 Story Koold MW-7 MW-8 81.24 79.25 90.02 Mar 9 101319161 77.33 Mi-10 NW-11 77.76 MW-12 7635 MW-13 ·\*\* Mu-H 外石 منتبتين 83.93

5/10 completing MAPE bailing & we reasurements JRIAL off-site



| NAPL RECOVER                                     | RY DATA SHEET                        |
|--|--------------------------------------|
| Project Name: Shanrack 63                        | Sampler: Conts/Rance                 |
| Project #: 3214.0017.00                          | Date:5/15                            |
| Project Manager:Rauce                            | Time: 1350                           |
| Well #:  | Well Diameter: <u> </u>              |
| Initial Depth to NAPL:                           | Bailer Diameter: <u>/- </u> (inches) |
| Initial Depth to Water: <u>82.65</u> (feet btoc) | Start Time: <u>*** 1405</u>          |
| Initial NAPL Thickness: <u>I. 28</u> (feet)      | End Time:                            |
| Note:  |                                      |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 1           | 0.40                                     | Ø   | 1407              |
| 2           | 1.15                                     | 0.70                                      | 1416              |
| 3           | 0.75                                     | 0.40                                      |                   |
| 4           | 0.95                                     | 0.30                                      |                   |
| 5           | 0.75                                     | 0.35                                      |                   |
| 6           | 0.55                                     | 0.55                                      |                   |
| 7           | 0.70                                     | 0.05                                      | (424              |
| 8           | 0.55                                     | 0.65                                      |                   |
| 9           | 0.40                                     | 0.55                                      |                   |
| 10          | 0.45                                     | 0.50                                      |                   |
| 11          | 0.45                                     | 0.45                                      | 1429              |
| 12          | 0.35                                     | 0,50                                      |                   |
| 13          | Û- 45                                    | 0.60                                      |                   |
| 14          | 0.30                                     | 0.30                                      |                   |
| 15          | 0,50                                     | 0.75                                      |                   |

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 16          | 0.35                                     | 0.90                                      |                   |
| 17          | 0.25                                     | 0-65                                      |                   |
| 18          | 0-25                                     | 0.75                                      | 1438              |
| 19          | 0.25                                     | 0.75                                      |                   |
| 20          | 030                                      | 0.YS                                      |                   |
| 21          | 6.30                                     | 0.15                                      |                   |
| 22          | 0-25                                     | 0.35                                      |                   |
| 23          | 0.25                                     | U.SO                                      | 1444              |
| 24          |  |   |                   |
| 25          |  |   |                   |
| 26          |  |   |                   |
| 27          |  | $\checkmark$                              |                   |
| 28          |  | $\frown$                                  |                   |
| 29          |  |   |                   |
| 30          | sec                                      | 2 Page                                    | Z                 |

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#### Totals:

-n \*

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NAPL Thickness: \_\_\_\_\_\_(feet) Water Thickness: \_\_\_\_\_\_

Volume of NAPL: \_\_\_\_\_(gal)

Final Depth to Water: \_\_\_\_\_(feet btoc)

Water Thickness: \_\_\_\_\_\_(feet) Volume of Water: \_\_\_\_\_\_(gal) Final Depth to NAPL: \_\_\_\_\_\_(feet btoc)



| NAPL RECOVERY DATA SHEET           |                                  |  |  |  |  |
|------------------------------------|----------------------------------|--|--|--|--|
| Project Name: Sharwark GB          | Sampler:lewis                    |  |  |  |  |
| Project #:                         | Date: 5/5/5                      |  |  |  |  |
| Project Manager: Raveci            | Time:                            |  |  |  |  |
| Well #:                            | Well Diameter: <u>Z</u> (inches) |  |  |  |  |
| Initial Depth to NAPL:             | Bailer Diameter: 1.5 (inches)    |  |  |  |  |
| Initial Depth to Water:(feet btoc) | Start Time:1405                  |  |  |  |  |
| Initial NAPL Thickness:(£28(feet)  | End Time:530                     |  |  |  |  |
| Note:                              |                                  |  |  |  |  |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

|             |  | · · · · · · · · · · · · · · · · · · ·     |                   |   | <u> </u>       |  |   | <u> </u>          |
|-------------|--|---|-------------------|---|----------------|--|---|-------------------|
| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |   | Bailer<br>#    | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
| 1           | 0.25                                     | 0.25                                      |                   |   | 16             | 0.15                                     | 0.95                                      | 1510              |
| 2           | 0.25                                     | 0,60                                      |                   |   | 17             | 0.15                                     | $0.7\omega$                               |                   |
| 3           | 0.20                                     | 0.85                                      |                   |   | 18             | 0.15                                     | 0.50                                      |                   |
| 4           | 0.20                                     | 6.55                                      | 4454              |   | 19             | 0.10                                     | 0.40                                      |                   |
| 5           | 020                                      | 0.50                                      |                   |   | 20             | 0.15                                     | 0.60                                      |                   |
| 6           | 0.26                                     | 0.56                                      |                   |   | 21             | 0.15                                     | 0.45                                      |                   |
| 7           | 0,20                                     | 0.65                                      |                   |   | 22             | 0,15                                     | 0.10                                      |                   |
| 8           | 0.20                                     | 0.30                                      |                   |   | 23             | 0.15                                     | 0.05                                      |                   |
| 9           | 075                                      | 0.50                                      |                   |   | 24             | 0.15                                     | 0.50                                      |                   |
| 10          | 0.20                                     | 0.70                                      |                   |   | 25             | 6.15                                     | 0.15                                      | 1526              |
| 11          | 6.15                                     | 0.50                                      |                   |   | 26             | 0.10                                     | 0.50                                      |                   |
| 12          | 0.20                                     | 0.55                                      | KOS               |   | 27             | Ē  | na 19                                     | 53                |
| 13          | 0,15                                     | 0.45                                      |                   |   | 28             |  |   |                   |
| 14          | 0.15                                     | 0.15                                      |                   |   | 29             |  |   |                   |
| 15          | 0.20                                     | 0.00                                      |                   |   | 30             |  |   |                   |
| Totals:     |  |   |                   |   |                |  |   |                   |
|             | nickness:                                |   | (feet)            | v | 🤉<br>Vater Thi | ickness:                                 |   | (feet)            |

Volume of NAPL: \_\_\_\_\_\_(gal) Final Depth to Water: \_\_\_\_\_\_(feet btoc)

| Water Thickness:       |       | (feet)      |
|------------------------|-------|-------------|
| Volume of Water:       |       | (gal)       |
| Final Depth to NAPL: _ | 81.55 | (feet btoc) |



#### NAPL RECOVERY DATA SHEET

| Project Name: <u>Chumock 63</u>                  | Sampler:  |
|--|---|
| Project #:                                       | Date: <u>5/15/15</u>                                  |
| Project Manager:                                 | Time:   |
| Well #:Mw- 9                                     | Well Diameter: <u>Z''</u> (inches)                    |
| Initial Depth to NAPL: <u>79.75</u> (feet btoc)  | Bailer Diameter: $/ \cdot \hat{\mathcal{S}}$ (inches) |
| Initial Depth to Water: <u>80,07</u> (feet btoc) | Start Time:115  |
| Initial NAPL Thickness:(feet)                    | End Time:   |
| Note:  |   |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 1           | 0.51                                     | 0.62                                      |                   |
| 2           | 0.48                                     | 2. 44                                     |                   |
| 3           | 028                                      | 1.18                                      |                   |
| 4           | 0.39                                     | 2.42                                      |                   |
| 5           | 0.48                                     | 1,51                                      |                   |
| 6           | 0.34                                     | 1.30                                      |                   |
| 7           | 0.72                                     | 1,29                                      |                   |
| 8           | 0-25                                     | 1.40                                      |                   |
| 9           | 0.19                                     | 0.45                                      |                   |
| 10          | 0.19                                     | Q52                                       | -                 |
| 11          | 0,19                                     | 1.05                                      |                   |
| 12          | 018                                      | 0.46                                      |                   |
| 13 t        | 0.18                                     | 0,62                                      |                   |
| 14          | 0-17                                     | #1.45                                     |                   |
| 15          | 0.17                                     | 1.26                                      | 1150              |

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 16          | 0.16                                     | 0.76                                      |                   |
| 17          | 0.19                                     | 0:97                                      |                   |
| 18          | 0.16                                     | 1.04                                      |                   |
| 19          | 72.74                                    | 0.85                                      |                   |
| 20          | 0.15                                     | ().54                                     |                   |
| 21          | (2.17)                                   | 0.92                                      |                   |
| 22          | 15                                       | 1.10                                      |                   |
| 23          | 0,17                                     | 0.65                                      |                   |
| 24          | 0.13                                     | $D_{e}71$                                 |                   |
| 25          | 0.10                                     | 0.82                                      |                   |
| 26          | 0.11                                     | 0.77                                      |                   |
| 27          | 0.11                                     | 0.97                                      |                   |
| 28          | 0-10 /                                   | 53.0                                      | × _               |
| 29          | 009                                      | 2.01                                      | 1215              |
| 30          | 011                                      | .82                                       | 1230              |

1 of 2

#### Totals:

1:

NAPL Thickness: (feet)

Volume of NAPL: 79.49 (gal)

(feet btoc)

Water Thickness: \_\_\_\_\_ (feet) Volume of Water: (gal) Final Depth to NAPL: 79.36 (feet btoc) [1242

T:\Admin\Field Forms\Att 1.5-2\_NAPL RECOVERY DATA SHEET pdf

Final Depth to Water: \_



#### NAPL RECOVERY DATA SHEET

| Project Name: Shaverk 69                               | Sampler   |
|--|-----------|
| Project #:   | Date:     |
| Project Manager: Raucci                                | Time:     |
| Well #: MW-9   | Well Dia  |
| Initial Depth to NAPL: <u><b>71.25</b></u> (feet btoc) | Bailer Di |
| Initial Depth to Water: <u>9007</u> (feet btoc)        | Start Tin |
| Initial NAPL Thickness: <u>(), 77</u> (feet)           | End Tim   |
|  |           |

| Sampler:         | Rauci   |          |
|------------------|---------|----------|
| Date:            | 5/15/15 |          |
| Time:            | 1230 2  | 3307     |
| Well Diameter:   | 2       | (inches) |
| Bailer Diameter: | 1.5     | (inches) |
| Start Time:      | 1115    |          |
| End Time:        | 1238    |          |

2

Remarks /

Time

Note:

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) |
|-------------|--|---|-------------------|-------------|--|---|
| 1           | 009                                      | 0.72                                      |                   | 16          |  |   |
| 2           | 1009                                     | -   | 152               | 17          |  |   |
| 3           | 0.69                                     | 0.57                                      |                   | 18          |  |   |
| 4           | 0.09                                     | 0,47                                      | 1238              | 19          |  |   |
| 5           | E  | 1 124                                     | Ð                 | 20          |  |   |
| 6           |  |   |                   | 21          |  |   |
| 7           |  |   |                   | 22          |  |   |
| 8           |  |   |                   | 23          |  |   |
| 9           |  |   |                   | 24          |  |   |
| 10          |  |   |                   | 25          |  |   |
| 11          |  |   |                   | 26          |  |   |
| 12          |  |   |                   | 27          |  |   |
| 13          |  |   |                   | 28          |  |   |
| 14          |  | *   |                   | 29          |  |   |
| 15          |  |   |                   | 30          |  |   |

#### Totals:

51

NAPL Thickness: \_\_\_\_ (feet)

Volume of NAPL:

(gal) Final Depth to Water: <u>79,49</u> (feet btoc) Water Thickness: \_\_\_\_\_ (feet) (gal) Volume of Water: \_\_\_\_ 2 (feet btoc) 0

Final Depth to NAPL:  $\frac{79}{71}Me$  : (1/42)



| NAPL RECOVERY DATA SHEET   |                                  |  |  |  |  |  |  |
|--|----------------------------------|--|--|--|--|--|--|
| Project Name: <u>Manock</u> 63   | Sampler: A. Lewis                |  |  |  |  |  |  |
| Project Manager: <u>Rayci</u>  | Time: $\frac{1040}{24}$          |  |  |  |  |  |  |
| - Initial Depth to NAPL:(feet btoc)  | Bailer Diameter:(inches)(inches) |  |  |  |  |  |  |
| - Initial Depth to Water: 81.61 (feet btoc)<br>Initial NAPL Thickness: 4.28 (feet) | Start Time:                      |  |  |  |  |  |  |
| Note   | •                                |  |  |  |  |  |  |

of Z

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| · · · · · | Bailer<br>#   | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |     | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-----------|---------------|--|---|-------------------|-----|-------------|--|---|-------------------|
|           | 1             | 0.09                                     | 2.66                                      | 1052              |     | 16          | 1-40                                     | 1.20                                      |                   |
|           | 2             | 1.2.85                                   | ø   |                   |     | 17          | 1.35                                     | 050                                       |                   |
|           | 3             | 0.6                                      | ø   |                   |     | 18          | 1.35                                     | 0.45                                      |                   |
| <br>      | 4             | 0.25                                     | ø   |                   |     | 19          | (.15)                                    | ĺ.  |                   |
|           | 5             | 1.60                                     | 1.10                                      |                   |     | 20          | 1.10                                     | Ø   |                   |
|           | 6             | 1.80                                     | 0.60                                      |                   |     | 21          | 1.00                                     | 0.20                                      |                   |
|           | 7             | 2.00                                     | 0.0                                       |                   |     | 22          | 6.95                                     | 0.65                                      |                   |
|           | 8             | 1.15                                     | Ø   |                   |     | 23          | 0.75                                     | 0.40                                      |                   |
| (         | 9             | 2.65                                     | Ø   |                   |     | 24          | 0.60                                     | 0.35                                      |                   |
| 2.05/0~   | 10            | 2 os                                     | Б   |                   |     | 25          | 0.60                                     | 6.10                                      |                   |
|           | 11            | 2,50                                     | 0.0                                       |                   |     | 26          | 0.60                                     | 6. (5                                     | 1205              |
|           | 12            | 2,10                                     | O. YS                                     |                   |     | 27          | 6.50                                     | 0. (G                                     |                   |
|           | 13            | 1.75                                     | 0.90                                      |                   |     | 28          | 0.45                                     | 0.30                                      |                   |
|           | 14            | 1.95                                     | 0.65                                      |                   |     | 29          | 0.35                                     | 6.50                                      |                   |
|           | 15            | 1.70                                     | Ø   |                   |     | 30          | 0.35                                     | 6.35                                      | 1213              |
|           | Totals:       |  | <b>C</b> .                                |                   |     |             |  |   |                   |
|           | NAPL Th       | nickness:                                |   | (feet)            | w   | ater Thi    | ckness:                                  |   | (feet)            |
| •         | Volume        | of NAPL:                                 |   | (gal)             | Vo  | olume of    | Water:                                   |   | (gal)             |
|           | Final De      | pth to Water:                            | 78.61                                     | (feet btoc)       | Fi  | nal Dept    | h to NAPL:                               | 78.27 .                                   | (feet btoc)       |
| 1         | :\Admin\Field | Forms\Att 1 5-2 NAPI                     | RECOVERY DATA SP                          | 2 VIII            | λl  | 1           |  |   | a,1242            |
| ,         |               | · · · · · · · · · · · · · · · · · · ·    |   | W.G.              | × ( |             |  |   | $\mathbf{O}$      |

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#### NAPL RECOVERY DATA SHEET

Z

| Project Name: Shanrock 63                       | Sampler: A. Ceurts                            |  |  |  |  |
|---|---|--|--|--|--|
| Project #:                                      | Date: 5(15/15                                 |  |  |  |  |
| Project Manager: <u>Raurci</u>                  | Тіте: <u> </u>                                |  |  |  |  |
| Well #: <u>Mw-lo</u>                            | Well Diameter: <u>2</u> <sup>u</sup> (inches) |  |  |  |  |
| Initial Depth to NAPL: <u>77.33</u> (feet btoc) | Bailer Diameter:( • \$ *(inches)              |  |  |  |  |
| Initial Depth to Water:                         | Start Time:                                   |  |  |  |  |
| Initial NAPL Thickness: <u>4.28</u> (feet)      | End Time: 1230                                |  |  |  |  |
| Note:   |   |  |  |  |  |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|-------------|--|---|-------------------|
| 1           | 6.35                                     | 0.30                                      | 1215              | 16          |  |   |                   |
| 2           | 0.30                                     | 0.30                                      |                   | 17          |  |   |                   |
| 3           | 0.30                                     | 0.30                                      |                   | 18          |  |   |                   |
| 4           | 0.25                                     | 0:35                                      |                   | 19          |  |   |                   |
| 5           | 0.25                                     | 0.30                                      |                   | 20          |  |   |                   |
| 6           | 6.20                                     | 0.35                                      | 1223              | 21          |  |   |                   |
| 7           | 0.20                                     | 0.25                                      |                   | 22          |  |   |                   |
| 8           | 0.15                                     | 0.35                                      |                   | 23          |  |   |                   |
| 9           | 0.20                                     | 6.20                                      | 1228              | 24          |  |   |                   |
| 10          |  |   |                   | 25          |  |   |                   |
| 11          |  |   |                   | 26          |  |   |                   |
| 12          |  |   |                   | 27          |  |   |                   |
| 13          |  |   |                   | 28          |  |   |                   |
| 14          |  |   |                   | 29          |  |   |                   |
| 15          |  |   |                   | 30          |  | · · · · · · · · · · · · · · · · · · ·     |                   |

#### Totals:

NAPL Thickness:

Final Depth to Water:

Volume of NAPL: \_ 61

(feet) Water Thickness: \_\_\_\_ \_(feet) (gal)

\_(feet btoc)

\_(gal) Volume of Water: (feet btoc) Final Depth to NAPL: 78.27

20212

time @1242

| [le/1/15] | MAPL     | Bailing / L | mter Lev  | els E, | Anlepon   |
|-----------|----------|-------------|-----------|--------|-----------|
| * Wen     | ther har | m, Sreez    | 1 5 p/+ L | loudy  |           |
| 20-       |          |             |           |        |           |
| 1:44! 0   | ins,te   |             |           |        |           |
| - h       | ros show | MWS         | by site   | owner  |           |
| 7:30: Ke  | gan gang | ng wells    |           |        |           |
| Well      | Noul     | WL          | Bot       | Time   | Notes     |
| MW-4      |          | 79,94       | 86.67     | 935    |           |
| MW-8      | ,        | 61,31       | 87.84     | 941    |           |
| Mw-13     |          | 81,04       | 93,47     | 946    |           |
| MW-14     | _        | 84,04       | 92,83     | 95     |           |
| MW-6      | 81.42    | -61,49-     |           | 955    | 82.49     |
| Mw-9      | 79,36    | 79,54       | _         | 1004   | <u>JE</u> |
| Mw-10     | 76.00    | 78,90       |           | 1009   |           |
| Mw-11     | <u> </u> | 78,88       | 14,13     | 1013   |           |
| MW-3      | <u> </u> | 81,37       | 88,15     | 1020   |           |
| MW-2      | -        | 82,09       | 89,00     | 1025   |           |
| MW-7      |          | 82,49       | 49,09     | 1030   |           |
| MW-5      | ~        | 81,12       | 47,46     | 1036   |           |
| Mw-1      | -        | 41,20       | 42,72     | 1041   |           |
| MW-R      |          | 74,37       | 92,07     | 1053   |           |
|           |          |             | -         |        |           |
| 1100 - 1  | Beggn bn | ling Dr     | oclust .  | MWG    |           |
|           | 1.00     | fallon 50   | lad       |        |           |
| 1202 - 1  | inished  | @ MW-       | 6         |        |           |

|        |         | 1                                     | 1         | 1       | 1       | I        |
|--------|---------|---------------------------------------|-----------|---------|---------|----------|
| Merson |         | · · · · · · · · · · · · · · · · · · · |           |         |         | ,        |
|        | 12:10:  | Begain E                              | n.ling p  | colnet. | MW-9    |          |
| (      |         | ~ 0,25                                | gal b     | riled   |         |          |
|        |         | bul                                   | ble to he | vel p   | rochuct | <b>h</b> |
| <br>   | 12:40 - | Finisle                               | I Q       | Mhr-9   |         |          |
| Votes  | 12:55 - | Began 5                               | ruling Pl | advet A | 1w-10   |          |
|        |         |                                       | s gal 5   | a,led   |         |          |
|        | 135.4-  | 1-inister                             |           | MW-10   |         |          |
|        | 176     | ·                                     |           |         | •       |          |
| 2,44   |         |                                       |           |         |         |          |
|        |         | A                                     |           | /       |         |          |
|        |         |                                       |           | /       |         |          |
|        |         |                                       |           |         |         |          |
|        |         |                                       |           | 6/1/1   | 5       |          |
|        |         |                                       | /         |         |         |          |
|        |         |                                       |           |         |         |          |
|        |         |                                       |           |         |         |          |
|        |         |                                       |           |         |         |          |
| Ì      |         |                                       |           |         |         |          |
|        |         |                                       |           |         |         |          |
| <br>   |         |                                       |           |         |         |          |



#### **GROUNDWATER ELEVATION DATA SHEET**

Project Name: $\underline{Shamlock}$  $\underline{#G}$ Sampler: $\underline{EJ}$  $\underline{Anlersin}$ Project #: $\underline{BE[4, //01L}$ Sample Date: $\underline{6/1/15}$ Project Manager: $\underline{Jason}$  $\underline{Raucci}$ Sheet # \_\_\_\_ of \_\_\_\_

| Well ID | Depth to NAPL | Depth to Water      | Total Depth | Comments         |    |
|---------|---------------|---------------------|-------------|------------------|----|
| MW-4    | Ń/A           | 79.94 ft.           | 86.074.     | 4:35 Am          |    |
| Mm. 8   | N/A           | 81.31 74            | 87,844,     | 9:41 am          |    |
| MW-13   | N/A           | 81,04 ft.           | 93.47 th    | 9:46am           | 5  |
| MW-14   | N/A           | 84.04 ft.           | az. 83 ft   | 9:51 gm          |    |
| MW-G    | 61.42ft       | - <del>1,49/1</del> | N/A         | 9:55am DTW 82.44 | st |
| MV-9    | 79.36 ft.     | 79.54Ft.            | NIA         | 10:04am          |    |
| MW-10   | 78,00 ft      | 78.90 ft.           | N/A         | 10:09 am         |    |
| MW-11   | N/A           | 78,88t+,            | 94,13ft     | 10:13 am         |    |
| MW-3    | N/A           | 61,371+.            | 88,15tz     | 10:20an          |    |
| MW-2    | NIA           | 82,09 f+ <u>.</u>   | \$9,00++,   | 10:25 am         |    |
| MW-7    | \$7 N/A       | 82,49 +4            | 89,09 th    | 10:30 am         |    |
| MW-5    | NIA           | 41,12 fti           | \$7,46f+    | 10:36am          |    |
| Mw-1    | MIA           | 41,20ft,            | 42,72ft     | 10: 41 am        |    |
| MW-12.  | N/A           | 78,37 14            | 92,07       | 10:53 an         |    |
|         |               | -                   |             |                  |    |

Comments:



#### NAPL RECOVERY DATA SHEET

of

| Project Name: Santa Fe Shamrock                   | Sampler: E.J. Anderson    |
|---|---------------------------|
| Project #:  | Date: <u>May 28, 2015</u> |
| Project Manager: John Bunch Jason Anucci          | Time:                     |
| Well #: <u>Mw- 9</u>                              | Well Diameter: 2 (inches) |
| Initial Depth to NAPL: <u>79,36</u> (feet btoc)   | Bailer Diameter:(inches)  |
| Initial Depth to Water: <u>79, 54</u> (feet btoc) | Start Time:/2 <i>'.10</i> |
| Initial NAPL Thickness:/,/ 5/(feet)               | End Time: 1240            |

Note:

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

|    | -          |  |   |                       | - |             |  |   |                   |
|----|------------|--|---|-----------------------|---|-------------|--|---|-------------------|
| Ва | ailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time     |   | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|    | 1          | 0,25                                     | 0.25                                      | 12:10                 |   | 16          | 0,01                                     | 0.5                                       | 1238              |
|    | 2          | 0.25                                     | 0,25                                      | 1212                  |   | 17          | Ø  | 05  | 1240              |
|    | 3          | 0.25                                     | 0.5                                       | 1214                  |   | 18          | Ø  | 0.5                                       | 12.42             |
|    | 4          | 1,25                                     | 0.5                                       | 1215                  |   | 19          |  |   |                   |
|    | 5          | 0.25                                     | 0.5                                       | 1217                  |   | 20          |  |   |                   |
|    | 6          | 0.25                                     | 0.5                                       | 1218                  |   | 21          |  |   |                   |
|    | 7          | 0.25                                     | Ift.                                      | 1220                  |   | 22          |  |   |                   |
|    | 8          | 0.25                                     | 0,5                                       | 1222                  |   | 23          |  |   |                   |
|    | 9          | 0,25                                     | 0,[                                       | 1225/                 |   | 24          |  |   |                   |
|    | 0          | Oil                                      | 174,                                      | 1228                  |   | 25          |  |   |                   |
| 1  | 1          | 0.1                                      |   | 1230                  |   | 26          |  |   |                   |
| 1  | 2          | Ocl                                      | 0,5                                       | 1232                  |   | 27          |  |   |                   |
| 1  | 3          | 1,05                                     | 0.25                                      | <i>i</i> 2 <i>3</i> 3 |   | 28          |  |   |                   |
| 1  | 4          | 0.05                                     | 0.75                                      | 1235                  |   | 29          |  |   |                   |
| 1  | 5          | 0.0025                                   | 0,5                                       | 1236                  |   | 30          |  |   |                   |

Totals: In Sucket NAPL Thickness: \_\_\_ (feet)  $\partial_{i} \sum \sum$ Volume of NAPL: \_\_\_\_ (gal) 1921,44 ft Final Depth to Water: (feet btoc) 79

| Water Thickness:       | 0,5  | (feet)      |
|------------------------|------|-------------|
| Volume of Water:       | 1,50 | (gal)       |
| Final Depth to NAPL: _ | NIA  | (feet btoc) |



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Daniel B. Stephens & Associates, Inc.

#### NAPL RECOVERY DATA SHEET

| Project Name: Santa Fe Shamrock                  | Sampler: E.J. Anderson             |
|--|------------------------------------|
| Project #:                                       | Date: May 28, 2015 June 1, 2015    |
| Project Manager: dolin Bunch Josen Rause         | Time:                              |
| Well #: <u>Mw-6</u>                              | Well Diameter:2 (inches)           |
| Initial Depth to NAPL: <u>\$1,42</u> (feet btoc) | Bailer Diameter: <u>2</u> (inches) |
| Initial Depth to Water: 49 (feet btoc)           | Start Time:                        |
| Initial NAPL Thickness:                          | End Time: <b>/ ፤</b> / ጊ           |
| Note: OP   |                                    |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

Actual MAPL The hoese

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 1           | f+,                                      | 0,25ft                                    | 1106              |
| 2           | l.ft,                                    | 0,2Fft                                    | 1107              |
| 3           | IFF.                                     | 0.14t                                     | 11/14             |
| 4           | 144                                      | 1 <i>f</i> <sub>f</sub>                   |                   |
| 5           | 14+                                      | j <i>F</i> <sub>4</sub> .                 | 113               |
| 6           | 17F                                      | 17.5f                                     | 1114              |
| 7           | 0.54                                     | 0,254+                                    | 1116              |
| 8           | 0,25++                                   | 0,5ft                                     | 1/18              |
| 9           | 0,257+                                   | 0,25+                                     | 1120              |
| 10          | 0.25 7+                                  | 0,25 f+                                   | 1 23              |
| 11          | 6,25f1                                   | Ott.                                      | 125               |
| 12          | 0,1 f+                                   | 0.25ft                                    | 1127              |
| 13          | 0.25f+                                   | 0,174                                     | 1128              |
| 14          | U125 ft                                  | 0++                                       | 130               |
| 15          | 0.25++                                   | 0.2514                                    | 1131              |

| F******     |  |   |                   |
|-------------|--|---|-------------------|
| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
| 16          | 0,25                                     | 0,25                                      | 1133              |
| 17          | $\left( \right) $                        | 0,25                                      | 1136              |
| 18          | Øil                                      | 0,1                                       | 11.34             |
| 19          | ()]                                      | 0,25                                      | 1141              |
| 20          | 0  | 6.1                                       | 1/43              |
| 21          | Oil                                      | 6.1                                       | 1145              |
| 22          | 0,05                                     | 0.  | 1147              |
| 23          | 01                                       | 0.)                                       | 1148              |
| 24          | 0,1                                      | 0,15                                      | 1149              |
| 25          | 0,05                                     | ዕኒና                                       | 1 5               |
| 26          | 01                                       | 0,0                                       | 1/53              |
| 27          | 0.1                                      | 0,1                                       | 11:55             |
| 28          | Oil                                      | 0   | 11:57             |
| 29          | 0,1                                      | O.L                                       | 11.59             |
| 30          | 0,1                                      | 0.1                                       | 12:07             |

| Totals: In Sucket     |       |                   |
|-----------------------|-------|-------------------|
| NAPL Thickness:       | 0,25  | (feet)            |
| Volume of NAPL:       | 7.725 | , <i>00</i> (gal) |
| Final Depth to Water: | 81.94 | (feet btoc)       |

| Water Thickness:    | 0.25  |      | (feet)      |
|---------------------|-------|------|-------------|
| Volume of Water:    | 7.75  | 0.64 | (gal)       |
| Final Depth to NAPL | 5h.45 |      | (feet btoc) |



#### NAPL RECOVERY DATA SHEET

| Project Name: Santa Fe Shamrock                     | Sampler: E.J. Anderson           |
|---|----------------------------------|
| Project #:  | Date: May 28, 2015               |
| Project Manager: John Bunch Jason Rance             | Time: 1200 1255                  |
| Well #: Mw-10                                       | Well Diameter: <u>2</u> (inches) |
| Initial Depth to NAPL:(feet btoc)                   | Bailer Diameter:(inches)         |
| Initial Depth to Water: <b>7,8</b> , 90 (feet btoc) | Start Time: /255                 |
| Initial NAPL Thickness: <i>0,40</i> (feet)          | End Time:                        |
|   |                                  |

Note:

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|-------------|--|---|-------------------|
| 1           | 1  | 6,25                                      | 1255              | 16          | 0,2                                      | 0.5                                       | 1317              |
| 2           | 0,5                                      | 0   | 1256              | 17          | 0:2                                      | 1   | 1319              |
| 3           | l  | Ú,25                                      | 1258              | 18          | 0.15                                     | 1   | 1321              |
| 4           | 1  | 0,25                                      | 1259              | 19          | 0,15                                     | 0.5                                       | [32]              |
| 5           | 0,5                                      | 0,1                                       | 1301              | 20          | 0,24                                     | 0.25                                      | 1324              |
| 6           | 0,5                                      | l   | 1302              | 21          | 0,20                                     | 0,5                                       | 1327              |
| 7           | 0,5                                      | 0,5 .                                     | 1314              | 22          | 0,20                                     | 0.5                                       | 1329              |
| 8           | 0,5                                      | 1   | 1385              | 23          | 6.20                                     | 0,5                                       | 1331              |
| 9           | 0,5                                      | 0,25                                      | 1307              | 24          | 0,15                                     | 0.5                                       | 1732              |
| 10          | 0,25                                     | 0,25                                      | 1308              | 25          | 0.15                                     | 0,25                                      | 333               |
| 11          | 0,25                                     | 1   | 1310              | 26          | 0,15                                     | 0.5                                       | 1335              |
| 12          | 0.20                                     | 0,25                                      | 13 11             | 27          | 0,10                                     | 0.25                                      | 1336              |
| 13          | 0,15                                     | 1   | 1313              | 28          | 0,10                                     | 0,5                                       | 1337              |
| 14          | 0.2                                      | 0.5                                       | 1315              | 29          | 0.1                                      | 0,1                                       | 339               |
| 15          | 0,1                                      | 1   | 1316              | 30          | 0,2                                      | 0,5                                       | 1340              |

Totals: In SucketNAPL Thickness:0, 25 (feet)Volume of NAPL: $\sim 1, 15$  (gal)Final Depth to Water:76, 53 (feet btoc)

| Water Thickness: _ | 0,5       | (feet)      |
|--------------------|-----------|-------------|
| Volume of Water: _ | 2,5       | (gal)       |
| Final Depth to NAP | PL: 78,45 | (feet btoc) |

2

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#### NAPL RECOVERY DATA SHEET

| Project #: Date: May 28, 2015   |     |
|---|-----|
| Project Manager: John Bunch Jasen Runce Time: 12:55                     |     |
| Well #:         M → 10         Well Diameter:         Z         (inche) | es) |
| Initial Depth to NAPL:(feet btoc) Bailer Diameter:(inche                | es) |
| Initial Depth to Water: 76.1/ (feet btoc) Start Time: 12.55             |     |
| Initial NAPL Thickness:(feet) End Time:1354                             |     |

Note:

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|-------------|--|---|-------------------|
| 31          | 0,2                                      | 0.5                                       | 1343              | 16          |  |   |                   |
| 32          | 0,2                                      | 0.5                                       | 344               | 17          |  |   |                   |
| 33          | 0,15                                     | 0.5                                       | 1346              | 18          |  |   |                   |
| 34          | 0,25                                     |   | 1349              | 19          |  |   |                   |
| }5          | 0,25                                     | 1   | 1351              | 20          |  |   |                   |
| 36          | 0.05                                     | 0,25                                      | 1354              | 21          |  |   |                   |
| 7           |  |   |                   | 22          |  |   |                   |
| 8           |  |   |                   | 23          |  |   |                   |
| 9           |  |   |                   | 24          |  |   |                   |
| 10          |  |   |                   | 25          |  |   |                   |
| 11          |  |   |                   | 26          |  |   |                   |
| 12          |  |   |                   | 27          |  |   |                   |
| 13          |  |   |                   | 28          |  |   |                   |
| 14          |  |   |                   | 29          |  |   |                   |
| 15          |  |   |                   | 30          |  |   |                   |

Totals: In Sucket 0,25 NAPL Thickness: \_ (feet) ,1500 Volume of NAPL: \_(gal) Final Depth to Water: 5 (feet btoc)

| Water Thickness: _ | 0,5       | (feet)      |
|--------------------|-----------|-------------|
| Volume of Water:   | 2,5       | (gal)       |
| Final Depth to NAF | PL: 78,65 | (feet btoc) |

2

2

16/17/15/ - Andrew F. & EJA \* Sunny calm & waren 9:45 - Began gauging wells Well Notes Rot NAPL AT 46,70 MW-4 79.95 MW\_4 87, 79 61,32 MW-6 81,06 *9*],4€ MW-B DTW 92,8074 Mw-14 84.10 9.81 BIBTIN MW-6 24-43-0 81.8T 07P 81.43 MW-9 79 479 37 79.37 7814 Mm-16 71.29 RP/ Mw-11 77.90 94,16 MW-12 76.39 91,20 MW-3 81.40 81,12 88,14 MW-2 88,61 MW-7 82.51 88.90 MW -5 81,17 87.49 MN-1 91,22 91,52 MW-6: ~ 2 gal 11:35 MW-9: ~ 12gal 11:35 MW-10: ~ 12gal 11:30-1130 11:35 - 1235 1130-1204 MW-10: ~ 1 gal 1245-> 1327

\* Both Mur-9 & 10 product went to & in the builders
\* \* Product placed in dorwars & the DBS & A labs 1345 Offsite 6/17/15 1400



| NAPL RECOVERY DATA SHEET                    |                                  |  |  |  |
|---|----------------------------------|--|--|--|
| Project Name: Shamrock #63                  | Sampler: Andrew Feltman          |  |  |  |
| Project #: <u>BE14, 0012,00</u>             | Date:6/17/15                     |  |  |  |
| Project Manager: Juson Raucci               | Time:                            |  |  |  |
| Well #: MW-9 6                              | Well Diameter: <u>2</u> (inches) |  |  |  |
| Initial Depth to NAPL: <u>4</u> (feet btoc) | Bailer Diameter: 2 (inches)      |  |  |  |
| Initial Depth to Water:(feet btoc)          | Start Time://29                  |  |  |  |
| Initial NAPL Thickness:                     | End Time: 123(                   |  |  |  |
| Note: 00                                    |                                  |  |  |  |

Note: Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 1           | 1.25                                     | .25                                       | 1135              |
| 2           | 1.0                                      | D   |                   |
| 3           | L.D                                      | . 25                                      |                   |
| 4           | 0.75                                     | 1.D                                       |                   |
| 5           | -025                                     | ). D                                      | 1146              |
| 6           | 0.5                                      | 1.25                                      |                   |
| 7           | 0.5                                      | 1.0                                       |                   |
| 8           | 0.5                                      | l.0                                       |                   |
| 9           | 0.3                                      | 1.25                                      |                   |
| 10          | 0.3                                      | ١.٥                                       | 1155              |
| 11          | 0.3                                      | 1.5                                       |                   |
| 12          | 0.3                                      | 1.25                                      |                   |
| 13          | 0.25                                     | 1.25                                      |                   |
| 14          | 0.25                                     | 1.0                                       |                   |
| 15          | 0.25                                     | 1.25                                      | 1202              |

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 16          | 0.25                                     | 1.0                                       |                   |
| 17          | 0.2                                      | 1.5                                       |                   |
| 18          | 0.2                                      | 1.5                                       |                   |
| 19          | 0.25                                     | 1.0                                       |                   |
| 20          | 0.75                                     | ۰.۱                                       | 1211              |
| 21          | 0.2                                      | 1.25                                      |                   |
| 22          | D.Z                                      | 1.0                                       |                   |
| 23          | 0.2                                      | 1.5                                       |                   |
| 24          | 0, Z                                     | 1.25                                      |                   |
| 25          | 0.Z                                      | 1.25                                      | 1218              |
| 26          | 0.15                                     | 1,25                                      |                   |
| 27          | 0.15                                     | 1.5                                       |                   |
| 28          | 0.15                                     | 1.25                                      |                   |
| 29          | 0.15                                     | 1.25                                      |                   |
| 30          | 0.15                                     | 1.5                                       | 1225              |

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#### Totals:

NAPL Thickness: \_\_\_\_\_(feet)

Volume of NAPL: \_\_\_\_\_(gal)

Final Depth to Water: \_\_\_\_\_(feet btoc)

| Water Thickness:     | (feet)      |
|----------------------|-------------|
| Volume of Water:     | (gal)       |
| Final Depth to NAPL: | (feet btoc) |



#### NAPL RECOVERY DATA SHEET

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| Project Name: SHAMROCK 63                       | Sampler: APF                       |  |  |  |
|---|------------------------------------|--|--|--|
| Project #:BE 14. 0012.00                        | Date: c/17/15                      |  |  |  |
| Project Manager: <u>JASON RAUCCI</u>            | Time:                              |  |  |  |
| Well #:Kw-6                                     | Well Diameter: <u>2</u> (inches)   |  |  |  |
| Initial Depth to NAPL: <u>81.43</u> (feet btoc) | Bailer Diameter: <u>2</u> (inches) |  |  |  |
| Initial Depth to Water:(feet btoc)              | Start Time: <u>12 q</u>            |  |  |  |
| Initial NAPL Thickness:(feet)                   | End Time: 1231                     |  |  |  |
| Note:   |                                    |  |  |  |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|-------------|--|---|-------------------|
| 31          | 0.15                                     | 1.75                                      |                   | 16          |  |   |                   |
| 32          | 0,15                                     | 1.5                                       |                   | 17          |  |   |                   |
| 33          | 0.15                                     | 1.25                                      |                   | 18          |  |   |                   |
| 34          | 2.250.15                                 | - 1.5                                     |                   | 19          |  |   |                   |
| 35          | 0.15                                     | 1.0                                       | 1231              | 20          |  |   |                   |
| 6           |  |   |                   | 21          |  |   |                   |
| 7           |  |   |                   | 22          |  |   |                   |
| 8           |  |   |                   | 23          |  |   |                   |
| 9           |  |   |                   | 24          |  |   |                   |
| 10          |  |   |                   | 25          |  |   |                   |
| 11          |  |   |                   | 26          |  |   |                   |
| 12          |  |   | •                 | 27          |  |   |                   |
| 13          |  |   |                   | 28          |  |   |                   |
| 14          |  |   |                   | 29          |  |   |                   |
| 15          |  |   |                   | 30          |  |   |                   |

#### Totals:

NAPL Thickness: \_\_\_\_\_\_(feet) Water Thickness: \_\_\_\_\_

| Volume of NAPL:       |       | (gal)        | Volume of Water:     |       | (gal)       |
|-----------------------|-------|--------------|----------------------|-------|-------------|
| Final Depth to Water: | 82.12 | _(feet btoc) | Final Depth to NAPL: | 81.79 | (feet btoc) |

\_(feet)

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#### NAPL RECOVERY DATA SHEET

| Project Name: / /                               | Sampler: EJA              |
|---|---------------------------|
| Project #:                                      | Date: 6//7//5             |
| Project Manager: Jasm Runce!                    | Time://:30                |
| Well #:   | Well Diameter: <u> </u>   |
| Initial Depth to NAPL: <u>79,37</u> (feet btoc) | Bailer Diameter: (inches) |
| Initial Depth to Water: 79,39 (feet btoc)       | Start Time:               |
| Initial NAPL Thickness: (feet)                  | End Time: DUH             |
| Note:   | (                         |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| The  |
|------|
| TAIT |
| (SP) |

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 1           | 0,05                                     | 2   | 1130              |
| 2           | 0.25                                     | $\mathcal{D}_{d}$                         |                   |
| 3           | 0.25                                     | 0,5                                       |                   |
| 4           | 0,25                                     | 0,25                                      |                   |
| 5           | 11,25                                    | 0,25                                      | 1137              |
| 6           | 1/12                                     | 0,5                                       |                   |
| 7           | 0,25                                     | 1 <i>f</i> t,                             |                   |
| 8           | 0.25                                     | Ifi                                       |                   |
| 9           | 0.2                                      | 0.75 fr                                   |                   |
| 10          | 0.2                                      | 0.5'                                      | 1147              |
| 11          | 0.2                                      | 0.5                                       |                   |
| 12          | 0,15                                     | 1,25                                      |                   |
| 13          | 0,1                                      | 0,75                                      |                   |
| 14          | 01                                       |   |                   |
| 15          | 0.05                                     | Ì   | 1156              |

| Bailer<br># | NÁPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 16          | 0,02                                     | 0.75                                      |                   |
| 17          | 0,02                                     | 0,5                                       |                   |
| 18          | 0,01                                     | 0,5                                       |                   |
| 19          | 0.0                                      | 0,5                                       |                   |
| 20          | 0.0                                      | 0.5                                       | 1204              |
| 21          | •  |   |                   |
| 22          |  |   |                   |
| 23          |  |   |                   |
| 24          |  |   |                   |
| 25          |  |   |                   |
| 26          |  |   |                   |
| 27          |  |   |                   |
| 28          |  |   |                   |
| 29          |  |   |                   |
| 30          |  |   |                   |

#### Totals:

NAPL Thickness: \_\_\_\_\_\_(feet) Water Thickness: \_\_\_\_\_\_(feet) Volume of NAPL: \_\_\_\_ \_(gal)

Final Depth to Water: \_\_\_\_\_\_ \_(feet btoc)

Volume of Water: \_\_\_\_\_(gal) Final Depth to NAPL: \_\_\_\_\_(feet btoc)



#### NAPL RECOVERY DATA SHEET

| Project Name: Shamrack 63                       | Sampler: EJA & Andrew F        |
|---|--------------------------------|
| Project #: <u></u>                              | Date:6/17/15                   |
| Project Manager: Jasan Runce                    | Time:/2 <i>40</i>              |
| Well #:   | Well Diameter: <u>2</u>        |
| Initial Depth to NAPL: <u>74,14</u> (feet btoc) | Bailer Diameter:2              |
| Initial Depth to Water: 79,29 (feet btoc)       | Start Time: <u>/2<i>40</i></u> |
| Initial NAPL Thickness: 1, 15 (feet)            | End Time:                      |
| Note:   |                                |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

|             |  |   |                   | <br>        |  |   |            |
|-------------|--|---|-------------------|-------------|--|---|------------|
| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Rem<br>Tii |
| 1           |  | 2   | 1240              | 16          | 0,2                                      | 1,5                                       |            |
| 2           |  | 1,5                                       |                   | 17          | 0,2                                      | 1.5                                       |            |
| 3           | 0,75                                     | 2   |                   | 18          | 0.2                                      | 1,5                                       |            |
| 4           | 0,5                                      | 1,5                                       |                   | 19          | 0.2                                      | ŀ   |            |
| 5           | 0,5                                      |   | 12.46             | 20          | 0,7                                      | 1,5                                       |            |
| 6           | 1,33                                     | 1,5                                       |                   | 21          | 0,2                                      | 1.5                                       | 130        |
| 7           | 0,33                                     | 1,5                                       |                   | 22          | 0.15                                     | 2   |            |
| 8           | 0,33                                     | 2   |                   | 23          | 0.15                                     | 15  |            |
| 9           | 6.25                                     | 1,5                                       |                   | 24          | 0,5                                      | 1   |            |
| 10          | 0,28                                     | . /                                       |                   | 25          | 0,15                                     | 2   |            |
| 11          | 0,25                                     | 1,5                                       | 1252              | 26          | 0,1                                      | 1,5                                       |            |
| 12          | 0,25                                     | 1,5                                       |                   | 27          | 0.1                                      | 1,5                                       | 1311       |
| 13          | 0.25                                     |   |                   | 28          | 0,1                                      | 1.5                                       |            |
| 14          | 0,2                                      | 1.5                                       |                   | 29          | 0,075                                    | )   |            |
| 15          | ר.0 👘                                    | 7.  | 1256              | 30          | 11.1575                                  | 15  | 1214       |

#### Totals:

NAPL Thickness: \_\_\_\_\_\_(feet) Water Thickness: \_\_\_\_\_

Volume of NAPL: \_\_\_\_ \_(gal)

\_\_\_\_(feet btoc) Final Depth to Water: \_\_\_\_\_79,30

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11.15

of

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(inches)

(inches)

Remarks / Time

1303

1311



| Project Name: Shanrock (67                  | Sampler: F) A & Atres F |
|---|-------------------------|
| Project #:                                  | Date: 6/17/15           |
| Project Manager:                            | Time: <u>(240</u>       |
| Well #:                                     | Well Diameter: 7        |
| Initial Depth to NAPL:78, 14(feet btoc)     | Bailer Diameter:2_      |
| Initial Depth to Water: $79.29$ (feet btoc) | Start Time: <u>1240</u> |
| Initial NAPL Thickness: 115 (feet)          | End Time: 1342          |

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Note:

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|-------------|--|---|-------------------|
| 1           | 0.05                                     | 2.5                                       |                   | 16          |  |   |                   |
| 2           | 6.05                                     | 1,25                                      |                   | 17          |  |   |                   |
| 3           | 0,62                                     | ار چ                                      |                   | 18          |  |   |                   |
| 4           | 0.02                                     | 1   |                   | 19          |  |   |                   |
| 5           | 6.01                                     | 1.5                                       |                   | 20          |  |   |                   |
| 6           | 0.02                                     | 1.5                                       |                   | 21          |  |   |                   |
| 7           | 0.01                                     | (, 5                                      |                   | 22          |  |   |                   |
| 8           | 0.01                                     | 1,5                                       |                   | 23          |  |   |                   |
| 9           | Ð  | 1.5                                       |                   | 24          |  |   |                   |
| 10          | Ð  | 1.5                                       |                   | 25          |  |   |                   |
| 11          |  |   |                   | 26          |  |   |                   |
| 12          |  |   |                   | 27          |  |   |                   |
| 13          |  |   |                   | 28          |  |   |                   |
| 14          |  |   |                   | 29          |  |   |                   |
| 15          |  |   |                   | 30          |  |   |                   |

#### Totals:

NAPL Thickness: \_\_\_\_\_ (feet)

Volume of NAPL: \_\_\_\_ \_(gal) Volume of Water: \_(gal)

Final Depth to Water: 79.30 \_(feet btoc)

Water Thickness: (feet)

Final Depth to NAPL: <u>79.24</u> (feet btoc)



(inches)

(inches)



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Daniel B. Stephens & Associates, Inc.

# GROUNDWATER ELEVATION DATA SHEET Project Name: \_\_\_\_\_\_K #63 Sampler: \_\_\_\_\_\_K Project #: \_\_\_\_\_\_BEI4, 0012,00 Sample Date: \_\_\_\_\_\_/17/15 Project Manager: \_\_\_\_\_\_Juson Rancci Sheet # \_\_\_\_\_\_of \_\_\_\_

| Well ID | Depth to NAPL | Depth to Water | Total Depth  | Comments        |
|---------|---------------|----------------|--------------|-----------------|
| Mw-4    |               | 79.95          | \$6,70       |                 |
| MW-8    | 1             | 81,32          | 87,79        |                 |
| MW-13   | 1             | 61,06          | 93,46        |                 |
| MW-14   |               | 84,10 ft.      | 92,80ft      |                 |
| MW-6    | 81.43         | 82.81          | _            | DTW= 82.81      |
| Mw-9    | 79,37         | (19,39)        |              | see bailer data |
| Mm-10   | 78,14         | 79, 29         | ~            |                 |
| Mw-11   | _             | 78,90          | 94.16        |                 |
| M~-12   | -             | 76,39          | 91.20        |                 |
| MW-3    |               | 61,40          | 88,14        |                 |
| Mw-2    |               | -\$1,12-       | 18,61        | 82.12 DTW       |
| MW-7    |               | 42.51          | 88,90        |                 |
| MW-5    | -             | 81,17          | <i>47.49</i> |                 |
| MW-1    |               | 81,22          | 91,52        |                 |
|         |               |                |              |                 |

Comments:

151 NAPL Recovery londy ,74", caln 1054 HOR - 1157 Baleel Product @ MW-6 Volume NAPL= 1.4 gallons : Unsite - Manny's Auto Wosed for the Vulouare H20 = 22 gallons I was wrong, they open ~945 today 1206-1226 Bailed Product @ MW-9 Volume NADL ~ 1/4 gallon Volume Hi ~ 1.3 gallon, egan junging wells \* dul not gst a 1242 - BIHM Bailed Product @ MW-W pŢp DTW 40,02 Volume NAPL ~ 1/3 gallon bottom reading since 41,41 I wasn't collecting Volume H20 ~ 2 gallons \$4,33 samples 82,14 1330: Offsite 45,55 \* Pelivered ~ 7 gallons of product { 81,17 water to the lab ~ 1500 41,31 44,09 42,65 41,46 79,34 2004 -79,34 7/1/15 78,28 74,93 1600 77,91 76,43 81,24



#### **GROUNDWATER ELEVATION DATA SHEET**

| Project Name: <u>Sham rock</u> 63 | Sampler: E, J, Anderson |
|-----------------------------------|-------------------------|
| Project #: <u></u>                | Sample Date: 7/1/15     |
| Project Manager: Jason Runci;     | Sheet # of              |

| <u>Well ID</u> | Depth to NAPL | Depth to Water | Total Depth | Comments |
|----------------|---------------|----------------|-------------|----------|
| MW-4V          | ~             | 5U.M           |             |          |
| Mm-31          | -             | 81,41          |             |          |
| MW-8V          | _             | 8/.33          | /           |          |
| MW-21          | <del>~</del>  | 82,14          |             |          |
| MW-71          | ~             | \$2,55         | -           |          |
| MW-5           |               | 81.17          | -           |          |
| MW-13          |               | 61,31          |             |          |
| MW-14          | _             | 84,09          |             |          |
| MW-6           | 81,46         | 82.65          |             |          |
| MW-9           | 79,36         | \$0.04         | -           |          |
| MW-10          | 78.28         | 78,93          |             |          |
| MW-11          |               | 77,91          | ,           |          |
| MW-12          |               | 76,43          |             |          |
| Mw-11          |               | \$1,24         |             |          |
|                |               |                |             |          |

Comments:

Bruse usone commont lot opened ~945am

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|   | RY DATA SHEET   |
|---|---|
| Project Name: <u>Shamrack (a)</u><br>Project #: <u>BEI4, COIL</u><br>Project Manager: <u>Jason Rucci</u><br>Well #: Mm-6                            | Sampler: $E_{1}J_{1}$ And $e_{150h}$<br>Date: $7/1/15$<br>Time: $1055$<br>Well Diameter: $2$ (inches) |
| Initial Depth to NAPL: <u>\$1,46</u> (feet btoc)<br>Initial Depth to Water: <u>\$2,55</u> (feet btoc)<br>Initial NAPL Thickness: <u>1,19</u> (feet) | Bailer Diameter:  |

of

Note: Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

|             |  |   |                   | - |             |  |   |                   |
|-------------|--|---|-------------------|---|-------------|--|---|-------------------|
| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |   | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
| 1           | 1  | Ø   | 1058              |   | 16          | 0.5                                      | 1   |                   |
| 2           | $l_{1}5$                                 | 0,25                                      |                   |   | 17          | 0,25                                     | 1   |                   |
| 3           | 1,5                                      | 0,25                                      |                   |   | 18          | 0.25                                     | 0.75                                      |                   |
| 4           | 1.0                                      | 0,25                                      |                   |   | 19          | 0.25                                     | 0,25                                      |                   |
| 5           | 1,5                                      | 1,0                                       | 103               |   | 20          | 0.25                                     | 0,75                                      | 1136              |
| 6           | 1.0                                      | 1,5                                       | •                 |   | 21          | 0.25                                     | 1.5                                       |                   |
| 7           | 1,0                                      | 0,25                                      |                   |   | 22          | 0,15                                     | 1.5                                       |                   |
| 8           | 0,5                                      | 0.5                                       |                   |   | 23          | 0.25                                     | l   |                   |
| 9           | 0.5                                      | 0,75                                      |                   |   | 24          | $O_{il}$                                 | /   |                   |
| 10          | 0.25                                     | 1 <i>ft</i>                               | 1117              |   | 25          | Oil                                      | 0,25                                      | 1142              |
| 11          | 0,25                                     | 115                                       |                   |   | 26          | 0.1                                      | 0.3                                       | -                 |
| 12          | 0.25                                     | 0,25                                      |                   |   | 27          | 0.15                                     | 1   |                   |
| 13          | 0,25                                     | 0.5                                       |                   |   | 28          | 0.15                                     | Ø   |                   |
| 14          | 0,25                                     | 2   |                   |   | 29          | 0.15                                     | 0.25                                      |                   |
| 15          | 0,25                                     | 0.75                                      | 1129              |   | 30          | 0.25                                     | 0,5                                       | 1147              |
| Totals:     |  |   |                   | - |             |  |   |                   |

#### l otais:

ł

NAPL Thickness: \_\_\_\_\_ \_(gal)

Volume of NAPL: \_\_\_\_ 81,46

| (feet)      | Water Thickness:       |       | (feet)      |
|-------------|------------------------|-------|-------------|
| (gal)       | Volume of Water:       |       | (gal)       |
| (feet btoc) | Final Depth to NAPL: _ | 81,73 | (feet btoc) |

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Final Depth to Water: \_

1.50 1.50



| NAPL RECOVER   | RY DATA SHEET   |          |
|--|---|----------|
| Project Name: $\underline{Shamralk(b)}$<br>Project #: $\underline{BE/4(0)}$<br>Project Manager: Jasen Bank | Sampler: <u>E.J. Anderson</u><br>Date: <u>7/1//5</u><br>Time: |          |
| Well #: <u>MW-6</u>  | Well Diameter:  | (inches) |
| Initial Depth to NAPL:(feet btoc)  | Bailer Diameter:(   | inches)  |
| Initial Depth to Water:(feet btoc)   | Start Time:   |          |
| Initial NAPL Thickness:(feet)  | End Time: 112597  |          |
| Note:  |   |          |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Bailer<br># | T<br>i |
|-------------|--|---|-------------------|-------------|--------|
| 31          | 0.25                                     |   |                   | 16          |        |
| 32          | $\mathcal{O}_{i}$                        | 0,5                                       |                   | 17          |        |
| 33          | 0.15                                     | 0.75                                      |                   | 18          |        |
| 34          | 0,15                                     | 0,1                                       |                   | 19          |        |
| 35          | 0.09                                     | $\mathcal{O}_{i1}$                        | 1157              | 20          |        |
| 6           |  |   |                   | 21          |        |
| 7           |  |   |                   | 22          |        |
| 8           |  |   |                   | 23          |        |
| 9           |  |   |                   | 24          |        |
| 10          |  |   |                   | 25          |        |
| 11          |  |   |                   | 26          |        |
| 12          |  |   |                   | 27          |        |
| 13          |  |   |                   | 28          |        |
| 14          |  |   |                   | 29          |        |
| 15          |  |   |                   | 30          |        |

| y           | · · · · · · · · · · · · · · · · · · ·    |   | 1                 |
|-------------|--|---|-------------------|
| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
| 16          |  |   |                   |
| 17          |  |   |                   |
| 18          |  |   |                   |
| 19          |  |   |                   |
| 20          |  |   |                   |
| 21          |  |   |                   |
| 22          |  |   |                   |
| 23          |  |   |                   |
| 24          |  |   |                   |
| 25          |  |   |                   |
| 26          |  |   |                   |
| 27          |  |   |                   |
| 28          |  |   |                   |
| 29          |  |   |                   |
| 30          |  |   |                   |

2

#### Totals:

(feet) Water Thickness: NAPL Thickness: \_\_\_\_\_

\_(gal) Volume of NAPL: \_\_\_\_ ĪZ/ Final Depth to Water: \_ (feet btoc) T:\Admin\Field Forms\Att 1.5-2\_NAPL RECOVERY DATA SHEET.pdf

| Water Thickness:     |        | (feet)      |
|----------------------|--------|-------------|
| Volume of Water:     |        | (gal)       |
| Final Depth to NAPL: | \$1.73 | (feet btoc) |



NAPL RECOVERY DATA SHEET

| Project Name: Shamrouk 63                        | Sampler: E, J. Anderson            |
|--|------------------------------------|
| Project #:                                       | Date: 7/1/15                       |
| Project Manager: Jasan Rauce                     | Time: 1235                         |
| Well #:MW~-10                                    | Well Diameter: <u>2</u> (inches)   |
| Initial Depth to NAPL: 74,26 (feet btoc)         | Bailer Diameter: <u>2</u> (inches) |
| Initial Depth to Water: <u>76.93</u> (feet btoc) | Start Time:                        |
| Initial NAPL Thickness: 0,65 (feet)              | End Time:                          |
| Note:  |                                    |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |   | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|---|-------------|--|---|-------------------|
| 1           | 0,25                                     | 1,5                                       | 1242              |   | 16          | 0,1                                      | 1   |                   |
| 2           | 0,25                                     | 0,5                                       |                   |   | 17          | 0,05                                     | 0,5                                       |                   |
| 3           | 0,25                                     | 0,75                                      |                   |   | 18          | 0,05                                     | 0,5                                       |                   |
| 4           | 0,25                                     | 0,75                                      |                   |   | 19          | 0,1                                      | 0,5                                       |                   |
| 5           | 0,25                                     | 1   | 1246              |   | 20          | 0,05                                     | 0,5                                       | 1304              |
| 6           | 0.5                                      | 0,5                                       |                   |   | 21          | 0,05                                     | 0,75                                      |                   |
| 7           | 0,25                                     | 0.75                                      |                   |   | 22          | 0,05                                     | 0,5                                       |                   |
| 8           | 0,25                                     | 0,5                                       |                   |   | 23          | 0,05                                     | 0.5                                       |                   |
| 9           | 0,2                                      | 1   |                   |   | 24          | 0.05                                     | 0,75                                      |                   |
| 10          | 0,15                                     | 0;75                                      | 125-2             |   | 25          | 6.025                                    | 1,5                                       | 1310              |
| 11          | 0,2                                      | 0,75                                      |                   |   | 26          | 0.01                                     | 1   |                   |
| 12          | 0.15                                     | 1   |                   |   | 27          | Ø  | [   |                   |
| 13          | 0.15                                     | 0.5                                       |                   |   | 28          | Ø  | 0.75                                      |                   |
| 14          | 0,15                                     | 0,5                                       |                   | ĺ | 29          | Ø  | 05  | 1314              |
| 15          | 0,1                                      | 1.5                                       | 1258              |   | 30          | -/                                       |   | L                 |
| Totals:     |  |   |                   | - |             |  |   |                   |
| NAPL T      | nickness:                                | BANY 3                                    | <b>14</b> (feet)  | v | Vater Thi   | ickness:                                 | 22,5                                      | (feet)            |
| Volume      | of NAPL:                                 | 0,36                                      | (gal)             | V | 'olume o    | f Water:                                 | 2,07                                      | (gal)             |

\_(feet btoc) Final Depth to NAPL: \_

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\_(feet btoc)

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Final Depth to Water:

78.65



NAPL RECOVERY DATA SHEET

| Project Name: <u>Shamrock 63</u>    | Sampler: E.J. Andenun              |
|-------------------------------------|------------------------------------|
| Project #:                          | Date:                              |
| Project Manager: Jusin Runci        | Time: <u>1203</u>                  |
| Well #:                             | Well Diameter: <u>2</u> (inches)   |
| Initial Depth to NAPL:(feet btoc)   | Bailer Diameter: <u>2</u> (inches) |
| Initial Depth to Water:(feet btoc)  | Start Time:                        |
| Initial NAPL Thickness: 0,62 (feet) | End Time:                          |
| Note:                               |                                    |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

|                    | -  |   |                   |   |             |  |   |                   |
|--------------------|--|---|-------------------|---|-------------|--|---|-------------------|
| Bailer<br>#        | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |   | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
| 1                  | 0,25                                     | 2   | 1206              |   | 16          | 0.02                                     | 0.5                                       |                   |
| 2                  | 0,25                                     | 0,5                                       |                   |   | 17          | 0.01                                     | 0,5                                       |                   |
| 3                  | 0,2                                      | 1   |                   |   | 18          | 0.01                                     | ]   |                   |
| 4                  | 0,2                                      | 0,75                                      |                   |   | 19          | Ø  | 0.5                                       |                   |
| 5                  | 0,2                                      | 15  | 1213              |   | 20          | Ø  | 0.5                                       | 1226              |
| 6                  | 012                                      | 1,5                                       |                   |   | 21          | Ø  | 15  |                   |
| 7                  | 0.2                                      | 0.5                                       |                   |   | 22          | •  |   |                   |
| 8                  | 0.15                                     | 0,5                                       |                   |   | 23          |  |   |                   |
| 9                  | 0.15                                     | 1   |                   |   | 24          |  |   |                   |
| 10                 | $O_{il}$                                 | 0,5                                       | /2/7              |   | 25          |  |   |                   |
| 11                 | 0,1                                      | 0,75                                      |                   | [ | 26          |  |   |                   |
| 12                 | 0,05                                     | 0,5                                       |                   | [ | 27          |  |   |                   |
| 13                 | 0,05                                     | 0,5                                       |                   |   | 28          |  |   |                   |
| 14                 | $O_{i}$                                  | 0,5                                       |                   |   | 29          |  |   |                   |
| 15                 | 0.05                                     | 0.5                                       | 1222              |   | 30          |  |   |                   |
| Totals:<br>NAPL Th | ickness:                                 | 2,29                                      | (feet)            | W | /ater Thi   | ickness:                                 | 17,00                                     | (feet)            |

| NAPL Thickness:       | 2,]9  | (feet)      |
|-----------------------|-------|-------------|
| Volume of NAPL:       | 0.21  | (gal)       |
| Final Depth to Water: | 79,50 | (feet btoc) |

| Water Thickness: _ | 17,00 | (feet)      |
|--------------------|-------|-------------|
| Volume of Water:   | 1,33  | (gal)       |
| Final Depth to NAF | PL:   | (feet btoc) |

| 7/15/15   |        |         |          | Α.   | FELTMAN |                                       |
|-----------|--------|---------|----------|------|---------|---------------------------------------|
| 1030      | ONSZ   | र ह     |          |      |         | 1                                     |
|           | CLEAR  | SKY, LI | - CHT BR | ೯೯೭೯ |         |                                       |
| ·         | BELIN  | DTW     | TEASURE  | MENT | AND     |                                       |
|           | NAPL   | BAILS   | LNG :    |      |         |                                       |
|           |        | 1       |          |      |         |                                       |
| <u>بر</u> | WELL   | PTW     | DTP      |      |         |                                       |
|           | MW-1   |         | ~        |      |         | -                                     |
|           | 14 W-2 |         | -        |      |         |                                       |
|           | MW-3   |         | <b>-</b> |      |         |                                       |
|           | MW-4   |         | -        |      |         |                                       |
|           | MW-5   |         |          |      |         | _                                     |
|           | MW-6   | 82.84   | 81.49    |      |         |                                       |
|           | MW-7   |         | -        |      |         | -                                     |
|           | NW-8   |         | -        |      |         |                                       |
|           | MW-9   | 79.50   | 80.01    |      | ×.      | , , , , , , , , , , , , , , , , , , , |
|           | MW-10  | 78.97   | 78.28    |      |         | _                                     |
|           | MW-11  |         |          |      |         | _                                     |
|           | MW-12  |         | -        |      |         |                                       |
|           | MW-13  |         | -        |      |         |                                       |
|           | MW-14  |         |          |      |         |                                       |
|           |        |         |          |      |         |                                       |
| 1135-121  | 7 BALL | D NAPL  | c nw-    | 1    |         |                                       |
|           | VOL NI | PL:     |          |      |         | _ {                                   |
|           | VOL W  | ATER >  |          |      |         | _                                     |
|           |        |         |          |      |         | _                                     |

| 7/15/15   | CONTD. |           |                                       | т А.                 | FELTA       |
|-----------|--------|-----------|---------------------------------------|----------------------|-------------|
| 1757-135  | 8 RAT  | LED N     | APL C M                               | ····                 |             |
| 103 1 130 |        |           |                                       | 4.                   |             |
|           | VOC.   | Nul       |                                       |                      | 3           |
|           | Vou    | . WATER   | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |                      | [ <u></u>   |
|           |        |           |                                       |                      | *•          |
| 1425 -    | BAI    | LED NA    | PLCM                                  | 107,-70 <sup>1</sup> |             |
|           | VOL    | . NAPL    |                                       |                      |             |
|           | · Vou  | WATER     | 1                                     | · · · ·              |             |
|           |        |           | -                                     | · · · · · ·          |             |
| 1448-15   | 03 120 | 47 27 226 | 10470                                 | SHUT DO              | بمعباد      |
| 100       |        |           |                                       |                      |             |
| 1500      |        |           |                                       |                      | /           |
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|           |        | I MA      | 115                                   |                      |             |
|           |        | 11/21     | <b>LI</b>                             |                      |             |
|           |        |           |                                       |                      |             |
|           |        | /1        |                                       |                      |             |
| - <u></u> |        |           |                                       |                      |             |
|           |        |           |                                       |                      |             |
|           |        |           |                                       |                      |             |
| /         | /      |           | 49<br>                                |                      |             |
|           |        |           |                                       |                      | 1           |
|           |        |           |                                       |                      |             |
|           |        |           |                                       |                      |             |
|           |        |           |                                       |                      | 1 and PECCO |



#### **GROUNDWATER ELEVATION DATA SHEET**

Project Name: SHAMROCK 63 Sampler: A. FELTMAN

Project Manager: <u>JADON RAUCCI</u> Sheet # 1 of 1

NOT MEASURED (NOT SAMPLING)  $\sqrt{}$ 

| Well ID     | Depth to NAPL  | Depth to Water | Total Depth | <u>Comments</u> |
|-------------|----------------|----------------|-------------|-----------------|
| MW-1        | -              | 81.21          | -           |                 |
| MW-2        | -              | 82.14          | -           |                 |
| MW-3        | -              | 81.42          | -           |                 |
| MW -4       | -              | 80.02          | -           |                 |
| MW-5        | -              | BI · 18        | -           |                 |
| <u>mw-6</u> | <b>٤</b> ١. 49 | % Z- 84        | -           |                 |
| MM-7        | -              | 82,54          | -           |                 |
| MW - 8      | -              | 81 32          | -           |                 |
| MW-9        | 79.50          | 80.01          | -           |                 |
| MW-10       | 78.28          | 78.97          | _           |                 |
| mw-li       | -              | 19.77          |             |                 |
| MW-12       | -              | न ७.५५         | -           |                 |
| MW-13       | -              | 80.11          | -           |                 |
| MW - 14     | -              | 84.10          | -           |                 |
|             |                |                |             |                 |

#### Comments:



#### NAPL RECOVERY DATA SHEET

1

2

of

| Project Name: SHAMROCK 63                               | Sampler: A. EELTMAN                   |
|---|---------------------------------------|
| Project #:  | Date: <u></u>                         |
| Project Manager: <u>JASON RAUCCI</u>                    | Time: 1485 1475                       |
| Well #:Kw-6   | Well Diameter: <u>2</u> (inches)      |
| Initial Depth to NAPL: <u>ธเ.ฯๆ</u> (feet btoc)         | Bailer Diameter: <u>21.5</u> (inches) |
| Initial Depth to Water: <u><b>82.84</b></u> (feet btoc) | Start Time:435 / 425                  |
| Initial NAPL Thickness: <u>1.35</u> (feet)              | End Time: 15ୱ୦                        |
| Note:   |                                       |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |   | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|---|-------------|--|---|-------------------|
| 1           | 1.0                                      | ø   | 1435 1425         |   | 16          | 0.25                                     | 0.75                                      | 1448              |
| 2           | 0.75                                     | 1.5                                       |                   |   | 17          | 0125                                     | 1.5                                       | 1503              |
| 3           | 1.25                                     | 0.5                                       |                   |   | 18          | 0.25                                     | 0.75                                      |                   |
| 4           | 1- 0                                     | 1.0                                       | H131              |   | 19          | 0.25                                     | 10. 1.0                                   |                   |
| 5           | 10                                       | 1.0                                       | 1431              |   | 20          | 0.25                                     | 0.75                                      | . 1512            |
| 6           | 0.75                                     | 0.75                                      |                   |   | 21          | 0.25                                     | 1.25                                      |                   |
| 7           | 0.5                                      | 1.25                                      |                   |   | 22          | 0.2                                      | 1.0                                       |                   |
| 8           | 0.5                                      | 0.75                                      |                   |   | 23          | 0.Z                                      | 1.25                                      |                   |
| 9           | 0.5                                      | 1.0                                       | 1437              |   | 24          | 0.2                                      | 0.5                                       |                   |
| 10          | 0.4                                      | 1.25                                      | 1457              |   | 25          | 0.2                                      | 0.75                                      | 1522              |
| 11          | 0.4                                      | 0.75                                      |                   |   | 26          | 0.2                                      | 1.25                                      | ï                 |
| 12          | 0.3                                      | 1.0                                       |                   |   | 27          | 5.5                                      | 1.0                                       |                   |
| 13          | 0.3                                      | 1.0                                       |                   |   | 28          | 0.2                                      | 1.0                                       |                   |
| 14          | 0.25                                     | 0.75                                      |                   |   | 29          | 0.2                                      | 1.0                                       |                   |
| 15          | 0.25                                     | 0.50                                      | 1445              |   | 30          | 0.Z                                      | 1.0                                       | 1529              |
| Totals:     |  |   |                   |   |             |  |   |                   |
| NAPL Th     | ickness:                                 | 11.8                                      | (feet)            | v | Vater Thi   | ckness:                                  | 27.25                                     | (feet)            |
|             |  |   |                   |   |             |  |   |                   |

Volume of NAPL: \_\_\_\_\_(gal)
Final Depth to Water: \_\_\_\_\_(feet btoc)

| Water Thickness:     | 27.25 | (feet)      |
|----------------------|-------|-------------|
| Volume of Water:     | 2-45  | (gal)       |
| Final Depth to NAPL: |       | (feet btoc) |



#### NAPL RECOVERY DATA SHEET

Ζ

of

Z

| Project Name: <u>SHAMBOCK 63</u>                 | Sampler: <u>A. FELTMAN</u>       |
|--|----------------------------------|
| Project #:                                       | Date:                            |
| Project Manager: <u> </u>                        | Time: 1425                       |
| Well #: M W- 6                                   | Well Diameter: <u>2</u> (inches) |
| Initial Depth to NAPL: <u>ชเ.ษุจ</u> (feet btoc) | Bailer Diameter: Krs (inches)    |
| Initial Depth to Water:87.34(feet btoc)          | Start Time: เร                   |
| Initial NAPL Thickness:(feet)                    | End Time: 15 ५०                  |

Note:

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |    | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|----|-------------|--|---|-------------------|
| <b>3</b> 1  | ٥.2                                      | 0.5                                       |                   |    | 16          |  |   |                   |
| 32          | 0.2                                      | 0.75                                      |                   |    | 17          |  |   |                   |
| <b>3</b> 3  | 0.15                                     | 1.25                                      |                   |    | 18          |  |   |                   |
| 34          | 0.15                                     | 1.0                                       |                   |    | 19          |  |   |                   |
| 35          | 0.15                                     | 0.75                                      | . 1536            |    | 20          |  |   |                   |
| <b>3</b> 6  | 0.15                                     | 1.0                                       |                   |    | 21          |  |   |                   |
| 37          | 0.15                                     | 0,75                                      | 1540              |    | 22          |  |   |                   |
| 8           |  |   |                   |    | 23          |  |   |                   |
| 9           |  |   |                   |    | 24          |  |   |                   |
| 10          |  |   |                   | Γ  | 25          |  |   |                   |
| 11          |  |   |                   | Γ  | 26          |  |   |                   |
| 12          |  |   |                   |    | 27          |  |   |                   |
| 13          |  |   |                   | ſ  | 28          |  |   |                   |
| 14          |  |   |                   |    | 29          |  |   |                   |
| 15          |  |   |                   |    | 30          |  |   |                   |
| Totals:     |  |   |                   |    |             |  |   |                   |
| NAPL Th     | ickness:                                 | 11. %                                     | (feet)            | W  | /ater Thi   | ckness:                                  | 27.25                                     | (feet)            |
| Volume o    | of NAPL:                                 | 1.06                                      | (gal)             | V  | olume of    | f Water:                                 | 2.45                                      | (gal)             |
| Final De    | oth to Water:                            |   | (feet btoc)       | Fi | nal Dep     | th to NAPL: _                            |   | (feet btoc)       |



#### NAPL RECOVERY DATA SHEET

| Project Name: <u>SHAMROCK 63</u>                        | Sampler: A FELTMAN               |
|---|----------------------------------|
| Project #:  | Date: 7/15/15                    |
| Project Manager: JASON ZAUCCI                           | Time: <u>1135</u>                |
| Well #: <u>Mw-9</u>                                     | Well Diameter: <u>2</u> (inches) |
| Initial Depth to NAPL: <u>79.50</u> (feet btoc)         | Bailer Diameter: <u> </u>        |
| Initial Depth to Water: <u><b>%0.01</b></u> (feet btoc) | Start Time: 1135                 |
| Initial NAPL Thickness:(feet)                           | End Time: 1217                   |

Note: Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Bailer<br># | NAPL<br>Thicknes<br>in Bailer<br>(feet) |
|-------------|--|---|-------------------|-------------|---|
| 1           | 0.3                                      | 0.75                                      | 1135              | 16          | 0.01                                    |
| 2           | 0.Z                                      | 1.00                                      |                   | 17          | 0.01                                    |
| 3           | 0.1                                      | 1.5                                       |                   | 18          | 0.01                                    |
| 4           | 0.1                                      | 0.75                                      | LUTY              | 19          | 0.01                                    |
| 5           | 0,1                                      | 1.00                                      | 1144              | 20          | 0.01                                    |
| 6           | 0.08                                     | 125                                       |                   | 21          | 0.01                                    |
| 7           | 0.05                                     | 1.25                                      |                   | 22          | 0.01                                    |
| 8           | 0.03                                     | 1.25                                      |                   | 23          | <0.01                                   |
| 9           | ٥.٥٢                                     | 1.50                                      |                   | 24          | 40.01                                   |
| 10          | 0.02                                     | 1.50                                      | (152              | 25          | 40.01                                   |
| 11          | 0.02                                     | 0.75                                      |                   | 26          | 40.01                                   |
| 12          | 210.0                                    | 1.25                                      |                   | 27          |   |
| 13          | 0015                                     | 0.75                                      |                   | 28          |   |
| 14          | 0.015                                    | 0.75                                      |                   | 29          |   |
| 15          | 0.01                                     | 0.75                                      | 1202              | 30          | /                                       |

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 16          | 0.01                                     | 0.5                                       |                   |
| 17          | 0.01                                     | 0.75                                      |                   |
| 18          | <b>0.0</b> 1                             | ٥.5                                       |                   |
| 19          | 0.01                                     | 0.5                                       |                   |
| 20          | 0.01                                     | 0.75                                      | 1209              |
| 21          | 0.01                                     | 0.75                                      |                   |
| 22          | 0.01                                     | 0.00.5                                    |                   |
| 23          | <0.01                                    | 0.5                                       |                   |
| 24          | 40.01                                    | 0.5                                       | 1215              |
| 25          | 40.01                                    | 1.0                                       | 1215              |
| 26          | 40.01                                    | 0.5                                       | 1217              |
| 27          |  |   |                   |
| 28          |  |   |                   |
| 29          |  |   |                   |
| 30          |  |   |                   |

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#### Totals:

| NAPL Thickness: _  | 1.145 | (feet)      |
|--------------------|-------|-------------|
| Volume of NAPL: _  | 0.1   | (gal)       |
| Final Depth to Wat | er:   | (feet btoc) |

| Water Thickness: _ | 22.75 | (feet)      |
|--------------------|-------|-------------|
| Volume of Water: _ | 2.05  | (gal)       |
| Final Depth to NAP | °L:   | (feet btoc) |



#### NAPL RECOVERY DATA SHEET

| Sampler: <u>A·Feltman</u>              |
|--|
| Date: 7/15/15                          |
| Time: 1257                             |
| Well Diameter: <u>2</u> (inches)       |
| Bailer Diameter: <u>X 1.5</u> (inches) |
| Start Time:ヽてち구                        |
| End Time: 135 8                        |
|  |

Note:

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 1           | 0.50                                     | 0.25                                      | 1257              |
| 2           | 0.25                                     | 1.5                                       |                   |
| 3           | 0.25                                     | ۱.0                                       |                   |
| 4           | 0.25                                     | 1.0                                       | 1309              |
| 5           | 0.25                                     | 1.0                                       |                   |
| 6           | 0.20                                     | 1.5                                       |                   |
| 7           | 0.20                                     | 0.5                                       |                   |
| 8           | 0.20                                     | ۱. ٥                                      |                   |
| 9           | 0.20                                     | 1.0                                       |                   |
| 10          | 0.15                                     | 1.25                                      | 1316              |
| 11          | 0.15                                     | 1-5                                       |                   |
| 12          | 0.15                                     | 1.75                                      |                   |
| 13          | 5 ا ړن                                   | 1.5                                       |                   |
| 14          | 0.10                                     | 1.0                                       | 1324              |
| 15          | 0.10                                     | 0.75                                      | 1324              |

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 16          | 0.10                                     | 1-0                                       |                   |
| 17          | 0.08                                     | 1.25                                      |                   |
| 18          | ୦.୦୫                                     | 1-0                                       |                   |
| 19          | 0.08                                     | 1.0                                       |                   |
| 20          | 0.08                                     | 1-25                                      | 1330              |
| 21          | 0.06                                     | 1.0                                       |                   |
| 22          | 0.05                                     | 0.75                                      |                   |
| 23          | 0.05                                     | 0.5                                       |                   |
| 24          | 0.05                                     | 0.75                                      | 1338              |
| 25          | 0.05                                     | 1.0                                       | 1338              |
| 26          | 0.05                                     | 0.75                                      |                   |
| 27          | 0.05                                     | 1.0                                       |                   |
| 28          | 0.05                                     | 1.5                                       |                   |
| 29          | 0.04                                     | 1-0                                       | 13-67             |
| 30          | 0.04                                     | 0.75                                      | 1347              |

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#### Totals:

| NAPL Thickness:       | 3.67 | (feet)      |
|-----------------------|------|-------------|
| Volume of NAPL:       | 0.33 | (gal)       |
| Final Depth to Water: |      | (feet btoc) |

| Water Thickness:     | 32.0 | (feet)      |
|----------------------|------|-------------|
| Volume of Water:     | 2-88 | (gal)       |
| Final Depth to NAPL: |      | (feet btoc) |



#### NAPL RECOVERY DATA SHEET

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of

| Project Name: SHAMPOCK 63                  | Sampler: A. FELTMAN              |  |  |  |
|--|----------------------------------|--|--|--|
| Project #:                                 | Date: 7/15/15                    |  |  |  |
| Project Manager: <u> </u>                  | Time: 1757                       |  |  |  |
| Well #:MW-10                               | Well Diameter: <u>Z</u> (inches) |  |  |  |
| Initial Depth to NAPL: 78.28 (feet btoc)   | Bailer Diameter:/ 5(inches)      |  |  |  |
| Initial Depth to Water: 78.93 (feet btoc)  | Start Time: 1257                 |  |  |  |
| Initial NAPL Thickness: <b>0.69</b> (feet) | End Time:ររទ្វ                   |  |  |  |
| Note:                                      |                                  |  |  |  |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|-------------|--|---|-------------------|
| 31          | 0.04                                     | 1.5                                       |                   | 16          |  |   |                   |
| 32          | 0.03                                     | 0.5                                       |                   | 17          |  |   |                   |
| 33          | 0.03                                     | 1.5                                       |                   | 18          |  |   |                   |
| 34          | 0.02                                     | ١.٥                                       |                   | 19          |  |   |                   |
| <b>3</b> 5  | 0.01                                     | (. 0                                      | 1356              | 20          |  |   |                   |
| 36          | 0.01                                     | 1.25                                      |                   | 21          |  |   |                   |
| 37          | 0.01                                     | 1.5                                       | 1358              | 22          |  |   |                   |
| 8           |  |   | /                 | 23          |  |   |                   |
| 9           |  |   |                   | 24          |  |   |                   |
| 10          |  |   |                   | 25          |  |   |                   |
| 11          |  |   |                   | 26          |  |   |                   |
| 12          |  |   |                   | 27          |  |   |                   |
| 13          |  |   |                   | 28          |  |   |                   |
| 14          |  |   |                   | 29          |  |   |                   |
| 15          |  |   |                   | .30         |  |   |                   |
| Totals      |  |   |                   | <u>L</u>    |  |   |                   |
| NAPL Th     | nickness:                                | 3.67                                      | (feet)            | Water Th    | ickness:                                 | 32.0                                      | (feet)            |
| Volume o    | of NAPL:                                 | 0.33                                      | (gal)             | Volume o    | of Water:                                | 5-88                                      | (gal)             |

Final Depth to Water: \_\_\_\_\_(feet btoc) Final Depth to NAPL: \_\_\_\_\_(feet btoc)

7/29/15

EJA

\* Cardy, Cool, & Calm - rain in the forecast

Ons. te 900

905 Set up to bon product a MW-6 \* Balled for the full hour w/ ~ 0.1 ft still being removal in each bailer なん

1020 Brited producto & MW-9 \* Brilled For ~30mm & no product in boyler ## ~

1100 Bried product & MN-10 \* Bailed for ~ 40min & no product In Saler XX

Began goinging wells 1150 NAPL DTh well 41.38 mm-1 62,25 Mw-2 84,41 MW-3\_\_\_\_ 40.10 ML-4 42,24 MW-5 42,98 461.50 MW-6 62,62 MW-Q 81,40 MW-8 79,49 80,17 M~-9 79,00 MW-10 76,33 MW-11 76,03 MW-122 71,44 ----81,03 MW-13 84,19 MW-14 Offsite 1300 7/29/15 1310



#### **GROUNDWATER ELEVATION DATA SHEET**

\_\_\_\_

| Project Name: Shamrock 63 | _ Sampler: EJA             |
|---------------------------|----------------------------|
| Project #: BE14.0012.00   | Sample Date: July 29, 2015 |

Project Manager: Jason Raucci\_\_\_\_\_Sheet # \_\_\_\_ of \_\_\_\_

| <u>Well ID</u> | Depth to NAPL | Depth to Water | Total Depth                           | Comments |
|----------------|---------------|----------------|---------------------------------------|----------|
| MW-1           |               | 8/,38          | · · · · · · · · · · · · · · · · · · · |          |
| MW-2           | _             | 42,25          | -                                     |          |
| MW-3           | -             | 84,41          | ~                                     |          |
| MW-4           | /             | \$1,10         | -                                     |          |
| MW-5           | _             | 82,26          | /                                     |          |
| MW-6           | 41,50         | 82,98          | /                                     |          |
| MW-7           | _             | 82,62          | -                                     |          |
| MW-8           | -             | 81.40          | -                                     |          |
| MW-9 10        | 78.33         | 71.00          |                                       |          |
| MW-10 9        | 79,49         | 80.17          |                                       |          |
| MW-11          | The The       | 78,03          |                                       |          |
| MW-12          | 76.49 12      | 76,44          | _                                     |          |
| MW-13          | /             | 81,03          | ~                                     |          |
| MW-14          | _             | 84,19          |                                       |          |
|                |               | •              |                                       |          |

Comments:



#### NAPL RECOVERY DATA SHEET

| Project Name: Shamrock 63                | Sampler: EJA                       |
|--|------------------------------------|
| Project #: BE14.0012.00                  | Date: July 29, 2015                |
| Project Manager: Jason Raucci            | Time: [ ] (00                      |
| Well #:                                  | Well Diameter: 2 (inches)          |
| Initial Depth to NAPL: 74,37 (feet btoc) | Bailer Diameter: <u>2</u> (inches) |
| Initial Depth to Water:(feet btoc)       | Start Time:/105                    |
| Initial NAPL Thickness: 0,66 (feet)      | End Time:                          |
| Note.                                    |                                    |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| <b></b>     |  | ·····                                     | ·                 | • | -           |  |   |                   |
|-------------|--|---|-------------------|---|-------------|--|---|-------------------|
| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |   | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
| 1           | 0,4                                      | 0,75                                      |                   |   | 16          | 0.1                                      | 0.5                                       |                   |
| 2           | 0.4                                      | 0,5                                       |                   |   | 17          | 0.05                                     | 0.5                                       |                   |
| 3           | 0,4                                      | 0,4                                       |                   |   | 18          | 0,05                                     | 0.75                                      |                   |
| 4           | <i>0</i> ,4                              | 0.5                                       |                   |   | 19          | 0,05                                     | 0.75                                      |                   |
| 5           | 0.3                                      | 0,4                                       |                   |   | 20          | 0,05                                     | 1   | 1129              |
| 6           | 0.25                                     |   |                   |   | 21          | 0.05                                     | 1,5                                       | •                 |
| 7           | 0,25                                     | 15  | 1115              |   | 22          | 0,02                                     | 1   |                   |
| 8           | 0.25                                     | 0.75                                      |                   |   | 23          | 0,01                                     | 1,5                                       |                   |
| 9           | 0.2                                      | 0.75                                      |                   |   | 24          | 0.01                                     | 1   |                   |
| 10          | 0,2                                      | 1   | 1118              |   | 25          | 0.01                                     | 1   | 1135              |
| 11          | 0,15                                     | 0,75                                      |                   |   | 26          | 0,01                                     | 0.75                                      |                   |
| 12          | 0.15                                     |   |                   |   | 27          | 0,01                                     | 1   |                   |
| 13          | 0.15                                     | 1   |                   |   | 28          | 0,01                                     | 0,75                                      |                   |
| 14          | 0,1                                      | 1   |                   |   | 29          | 0.01                                     | 0.75                                      |                   |
| 15          | 0,1                                      | 0.5                                       | 1/24              |   | 30          | 0.0                                      |   |                   |
| Totals:     |  |   |                   | - |             |  | v   |                   |

| Water Thickness:     | (feet)      |
|----------------------|-------------|
| Volume of Water:     | (gal)       |
| Final Depth to NAPL: | (feet btoc) |



#### NAPL RECOVERY DATA SHEET

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| Project Name: Shamrock 63     |             | Sampler: EJA              |          |
|-------------------------------|-------------|---------------------------|----------|
| Project #: BE14.0012.00       |             | Date: July 29, 2015       |          |
| Project Manager: Jason Raucci |             | Time:                     |          |
| Well #: M~-10                 |             | Well Diameter: 2          | (inches) |
| Initial Depth to NAPL:        | (feet btoc) | Bailer Diameter: <u>2</u> | (inches) |
| Initial Depth to Water:       | (feet btoc) | Start Time:               |          |
| Initial NAPL Thickness:       | (feet)      | End Time:                 |          |
| Note.                         |             |                           |          |

Bailer volume (SCH 40 PVC)<sup>.</sup> 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|-------------|--|---|-------------------|
| 1           | 0,0                                      | 0.75                                      |                   | 16          |  |   |                   |
| 2           |  |   |                   | 17          |  |   |                   |
| 3           |  |   |                   | 18          |  |   |                   |
| 4           |  |   |                   | 19          |  |   |                   |
| 5           |  |   |                   | 20          |  |   |                   |
| 6           |  |   |                   | 21          |  |   |                   |
| 7           |  |   |                   | 22          |  |   |                   |
| 8           |  |   |                   | 23          |  |   |                   |
| 9           |  |   |                   | 24          |  |   |                   |
| 10          |  |   |                   | 25          |  |   |                   |
| 11          |  |   |                   | 26          |  |   |                   |
| 12          |  |   |                   | 27          |  |   |                   |
| 13          |  |   |                   | 28          |  |   |                   |
| 14          |  |   |                   | 29          |  |   |                   |
| 15          |  |   |                   | 30          |  |   |                   |

#### Totals:

NAPL Thickness: \_\_\_\_\_(feet) Water Thickness:

Volume of NAPL: \_\_\_\_\_(gal) Final Depth to Water: \_\_\_\_\_(feet btoc)

| Water Thickness:     | <br>(feet)  |
|----------------------|-------------|
| Volume of Water:     | <br>(gal)   |
| Final Depth to NAPL: | (feet btoc) |



#### NAPL RECOVERY DATA SHEET

| Project Name: Shamroo     | sk 63                         | Sampler: <u>EJA</u> |          |
|---------------------------|-------------------------------|---------------------|----------|
| Project #: BE14.0012.0    | 0                             | Date: July 29, 2015 |          |
| Project Manager: Jason    | Raucci                        | Time: 1020          |          |
| Well #:                   | 9                             | Well Diameter: 2    | (inches) |
| Initial Depth to NAPL:    | 79,49 (feet btoc)             | Bailer Diameter: 2  | (inches) |
| Initial Depth to Water:   | <i>\varphi.17</i> (feet btoc) | Start Time: 1025    |          |
| Initial NAPL Thickness: _ | <u>ტ</u> . დმ (feet)          | End Time: 452       |          |
| Note:                     |                               |                     |          |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |   | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|---|-------------|--|---|-------------------|
| 1           | 0,3                                      | 1   |                   |   | 16          | 0,01                                     | 4.75                                      |                   |
| 2           | 03                                       | 1   |                   |   | 17          | 0,01                                     | 0,5                                       |                   |
| 3           | 0.25                                     | /   |                   |   | 18          | 0,0                                      | /   |                   |
| 4           | 0,3                                      | 9,75                                      |                   |   | 19          | 0.0                                      | Î.  | 1052              |
| 5           | 0,25                                     | 0,75                                      | 1035              |   | 20          |  |   |                   |
| 6           | 0.25                                     | 0,5                                       |                   |   | 21          |  |   |                   |
| 7           | 0,15                                     | 0.75                                      |                   |   | 22          |  |   |                   |
| 8           | 0,15                                     | 1   |                   |   | 23          |  |   |                   |
| 9           | $\mathcal{O}_{i}$                        | 1   |                   |   | 24          |  |   |                   |
| 10          | $\mathcal{O}_{i}$                        | 0,75                                      | 1042              |   | 25          |  |   |                   |
| 11          | 0.1                                      | 1.5                                       |                   |   | 26          |  |   |                   |
| 12          | 0.05                                     | 15  |                   |   | 27          |  |   |                   |
| 13          | 0,05                                     | Ì   |                   |   | 28          |  |   |                   |
| 14          | 0,02                                     | 1   |                   |   | 29          |  |   |                   |
| 15          | 0.02                                     | 0175                                      | 1048              |   | 30          |  |   |                   |
| Totals:     |  |   |                   | - |             |  |   |                   |

# NAPL Thickness: \_\_\_\_\_(feet) Volume of NAPL: \_\_\_\_\_(gal) Final Depth to Water: 7964 (feet btoc)

| Water Thickness: | (feet) |
|------------------|--------|
| Volume of Water: | (gal)  |

\_(feet btoc) Final Depth to NAPL: \_\_\_\_\_(feet btoc)



#### NAPL RECOVERY DATA SHEET

| Project Name: Shamrock 63                         | Sampler: EJA               |
|---|----------------------------|
| Project #: BE14.0012.00                           | Date: July 29, 2015        |
| Project Manager: Jason Raucci                     | Time:                      |
| Well #:   | Well Diameter: 2 (inches)  |
| Initial Depth to NAPL:                            | Bailer Diameter: 2(inches) |
| Initial Depth to Water: <u>\$2,98</u> (feet btoc) | Start Time:915             |
| Initial NAPL Thickness:(feet)                     | End Time:                  |
| Note:   |                            |

Bailer volume (SCH 40 PVC). 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time | Baile<br># |
|-------------|--|---|-------------------|------------|
| 1           | 0,25                                     | 2,5                                       | 918               | 16         |
| 2           | 1.50                                     | Ø   | •                 | 17         |
| 3           | 2,00                                     | Ø   |                   | 18         |
| 4           | 1.50                                     | 0.25                                      |                   | 19         |
| 5           | 1,25                                     | 0.75                                      | 924               | 20         |
| 6           | 1.00                                     | 0,25                                      |                   | 21         |
| 7           | 0,75                                     | 0.5                                       |                   | 22         |
| 8           | 0.75                                     | Ø   |                   | 23         |
| 9           | 0.5                                      | 0.5                                       |                   | 24         |
| 10          | 0.5                                      | 1   | 931               | 25         |
| 11          | 05                                       | 0.5                                       |                   | 26         |
| 12          | 0.4                                      | 0,25                                      |                   | 27         |
| 13          | 0,4                                      | 0,75                                      |                   | 28         |
| 14          | 0.4                                      | 0.5                                       |                   | 29         |
| 15          | 0.3                                      | 0,5                                       | 938               | 30         |

| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
|-------------|--|---|-------------------|
| 16          | 0.}                                      | 0,75                                      |                   |
| 17          | 0.25                                     | 0,5                                       |                   |
| 18          | <i>0</i> .}                              | 15  |                   |
| 19          | 0,25                                     | i j                                       |                   |
| 20          | 0.3                                      | /   | 945               |
| 21          | 0.25                                     | 0.25                                      |                   |
| 22          | 0.25                                     | 1   |                   |
| 23          | 0.25                                     | 0,75                                      |                   |
| 24          | 0,15                                     | 05  |                   |
| 25          | 0.15                                     | 0.5                                       | 95]               |
| 26          | 0,25                                     | 0.75                                      |                   |
| 27          | 0,15                                     | 0,75                                      |                   |
| 28          | 0.25                                     | 0,75                                      |                   |
| 29          | 0,1                                      | 0,5                                       |                   |
| 30          | 0,1                                      | え   | 1000              |

of

#### Totals:

NAPL Thickness: \_\_\_\_\_(feet) V

Volume of NAPL: \_\_\_\_\_(gal) V

Final Depth to Water: \_\_\_\_\_\_(feet btoc) Final Depth to NAPL: \_\_\_\_\_(feet btoc)

| Vater Thickness:    | (feet)      |
|---------------------|-------------|
| /olume of Water:    | (gal)       |
| inal Depth to NAPL. | (feet btoc) |



#### NAPL RECOVERY DATA SHEET

2

| Project Name: Shamrock 63     |             | Sampler: EJA        |          |
|-------------------------------|-------------|---------------------|----------|
| Project #: BE14.0012.00       |             | Date: July 29, 2015 |          |
| Project Manager: Jason Raucci |             | Time:               |          |
| Well #: Mw-6                  |             | Well Diameter: 2    | (inches) |
| Initial Depth to NAPL:        | (feet btoc) | Bailer Diameter: 2  | (inches) |
| Initial Depth to Water:       | (feet btoc) | Start Time:         |          |
| Initial NAPL Thickness:       | (feet)      | End Time:           |          |
| Note:                         |             |                     |          |

Bailer volume (SCH 40 PVC): 1.5" ID bailer = 0.09 gal/ft; 3.0" = 0.37 gal/ft

|             |  |   |                   | - |             |  |   |                   |
|-------------|--|---|-------------------|---|-------------|--|---|-------------------|
| Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |   | Bailer<br># | NAPL<br>Thickness<br>in Bailer<br>(feet) | Water<br>Thickness<br>in Bailer<br>(feet) | Remarks /<br>Time |
| 1           | 04.0.1                                   | 0.5                                       |                   |   | 16          |  |   | -                 |
| 2           | 0.1                                      |   |                   |   | 17          |  |   |                   |
| 3           | 0,15                                     |   |                   |   | 18          |  |   |                   |
| 4           | 0.1                                      | 0.75                                      |                   |   | 19          |  |   |                   |
| 5           | 0,1                                      | Ì   | 1007              |   | 20          |  |   |                   |
| 6           | 0.1                                      | 0.75                                      |                   |   | 21          |  |   |                   |
| 7           | 0.1                                      | 0,5                                       |                   |   | 22          |  |   |                   |
| 8           |  |   | 1015              |   | 23          |  |   |                   |
| 9           |  |   |                   |   | 24          |  |   |                   |
| 10          |  |   |                   |   | 25          |  |   |                   |
| 11          |  |   |                   |   | 26          |  |   |                   |
| 12          |  |   |                   |   | 27          |  |   |                   |
| 13          |  |   |                   |   | 28          |  |   |                   |
| 14          |  |   |                   |   | 29          |  |   |                   |
| 15          |  |   |                   | ĺ | 30          |  |   |                   |
| Totals:     | nickness:                                |   | (feet)            | v | Vater Thi   | ickness <sup>.</sup>                     |   | (feet)            |

| NALE INICKIESS. | (leet) |
|-----------------|--------|
| Volume of NAPL: | (gal)  |

82,10

| (            |                      |       | (.000)      |
|--------------|----------------------|-------|-------------|
| (gal)        | Volume of Water:     |       | (gal)       |
| _(feet btoc) | Final Depth to NAPL: | 81,90 | (feet btoc) |

Final Depth to Water: