

Atlantic Richfield Company

Chuck Carmel

Remediation Management Project Manager

PO Box 1257
San Ramon, CA 94583
Phone: (925) 275-3804
Mobile: (510) 798-8314
E-Mail: chuck.carmel@bp.com

November 20, 2014

Re: Well Destruction Report
Atlantic Richfield Company Station #4977
2770 Castro Valley Blvd., Castro Valley, California
ACEH Case #RO00002436

"I declare, that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct."

Submitted by,



Chuck Carmel
Remediation Management Project Manager

Attachment:



WELL DESTRUCTION REPORT
Atlantic Richfield Company Station No. 4977
2770 Castro Valley Boulevard
Castro Valley, Alameda County, California

Prepared for:

Mr. Chuck Carmel
Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583

Prepared by:

Broadbent & Associates, Inc.
4820 Business Center Drive, Suite 110
Fairfield, California 94534
(707) 455-7290

November 20, 2014

Project No. 06-82-625



BROADBENT

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broadbentinc.com

Creating Solutions. Building Trust.

November 20, 2014

Project No. 06-82-625

Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583
Submitted via ENFOS

Attn.: Mr. Chuck Carmel

Re: Well Destruction Report, Atlantic Richfield Company Station No. 4977
2770 Castro Valley Boulevard, Castro Valley, Alameda County, California
ACEH Case No. RO0002436, SFBRWQCB Case #01-0097

Dear Mr. Carmel:

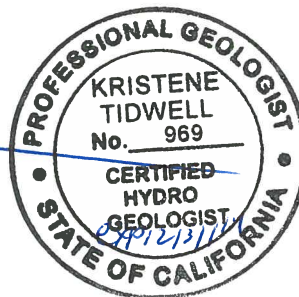
Broadbent & Associates, Inc. (Broadbent) is pleased to submit this *Well Destruction Report* (Report) for Atlantic Richfield Company Station No. 4977 located at 2770 Castro Valley Boulevard, Castro Valley, California (Site). This Report documents the permanent decommissioning of three groundwater monitoring wells. These activities were carried out in accordance with the Alameda County Environmental Health Agency's directive letter dated November 14, 2014.

Should you have questions or require additional information, please do not hesitate to contact us at (707) 455-7290.

Sincerely,

BROADBENT & ASSOCIATES, INC.

Kristene Tidwell, P.G., C.HG.
Associate Hydrogeologist



Enclosures

cc: Ms. Karel Detterman, Alameda County Environmental Health (Submitted via ACEH ftp Site)
Mr. Kevin Brown, California Regional Water Quality Control Board – San Francisco Region
(Submitted via GeoTracker)
Electronic copy uploaded to GeoTracker

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DRAWINGS

Drawing 1	Site Location Map
Drawing 2	Well Destruction Location Map

APPENDICES

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Appendix B	Detailed Site History
Appendix C	Permits
Appendix D	Utility Clearance Survey

WELL DESTRUCTION REPORT

Atlantic Richfield Company Station No. 4977
2770 Castro Valley Blvd., Castro Valley, California
ACEH Case #RO0002436, SFRWQCB Case #01-0097

1.0 INTRODUCTION

On behalf of the Atlantic Richfield Company, RM (a BP affiliated company), Broadbent & Associates, Inc. (Broadbent) has prepared this *Well Destruction Report* (Report) documenting case closure activities at Atlantic Richfield Company Station No. 4977, located at 2770 Castro Valley Blvd., Castro Valley, California (Site). Case Closure was recommended by Alameda County Environmental Health (ACEH) in their November 14, 2014 E-Mail (Appendix A). This Report presents details of the field activities performed.

2.0 SITE BACKGROUND

The Site is located at 2770 Castro Valley Blvd., Castro Valley, California. It is an active ARCO-brand fueling station (Station No. 4977) with an AM/PM convenience store. Current structures on the Site include two underground storage tanks (USTs), four fuel dispenser islands with a total of eight dispensers, and a small commercial building. The majority of the Site is paved with asphalt and concrete. Limited planter islands are present along the perimeter of the Site. A Site location map is included as Drawing 1. A Site Plan depicting current building, UST, and, well locations is presented as Drawing 2.

The Site is bound by Wisteria Street to the east, Castro Valley Boulevard to the south, commercial buildings to the west, and a multi-family residential building to the north. Across Wisteria Street to the east is an auto service shop. Across Castro Valley Boulevard to the south is an auto service shop and a Burger King restaurant.

The Site has operated as a gasoline fueling station since the environmental case was open in 2001. The Site is likely to remain a service station for the foreseeable future. A detailed Site history is included in Appendix B.

3.0 FIELD ACTIVITIES PERFORMED

On November 17, 2014, Broadbent oversaw Cascade Drilling, LP (Cascade), pressure grout three monitoring wells MW-1 through MW-3. The two feet of the top of each well casing was removed following completion of pressure grouting. Cascade then patched the surface asphalt with dyed concrete to match existing grade. A Site map depicting abandoned well locations is provided as Drawing 2.

3.1 Preliminary Field Activities

Necessary permits from Alameda County Public Works Agency (ACPWA) were secured prior to performing the field investigation. Copies of these permits are included in Appendix C. All borings were marked and areas were outlined with white spray paint, and an Underground Service Alert (USA) ticket was secured to notify all member utility companies of the planned field activities. Additionally, all boring locations were cleared for underground utilities by NORCAL Geophysical Consultants, Inc. (NORCAL) on October 7, 2014. NORCAL's survey report is included in Appendix D.

3.2 Well Destruction Activities

On November 17, 2014, Broadbent oversaw Cascade pressure grout three wells by filling each well casing with cement grout via tremmie pipe then applying 25 psi of air pressure for 5 minutes. Where safety concerns permitted, concrete skirts (or similar) were removed following completion of pressure grouting. The top two feet of well casing was removed from each well, then each well was backfilled with concrete and finished to match the existing surface. Each well was destroyed in accordance with ACPWA requirements. California Department of Water Resources Well Completion Reports have been completed, but are not published in this Report due to confidentiality of the records. A Site map depicting abandoned well locations is provided as Drawing 2.

3.3 Excess Material Produced

Excess soil, water, and concrete produced during investigation activities was removed and transported to appropriate California-regulated facilities by Cascade.

4.0 CONCLUSIONS & RECOMMENDATIONS

Monitoring wells were abandoned in general accordance ACPWA monitoring well destruction requirements. Well abandonment work activities complete the Site case closure process. No further actions are recommended. We anticipate that following submittal of this report, Atlantic Richfield Company will be issued a "Remedial Action Completion Certificate."

5.0 LIMITATIONS

This document has been prepared for the exclusive use of Atlantic Richfield Company. The findings presented in this report are based upon the observations of Broadbent field personnel. Services were performed in accordance with the generally accepted standard of practice at the time this report was written. No warranty, expressed or implied, is intended.

DRAWINGS

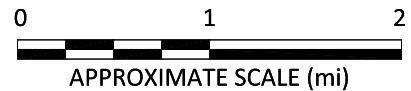


IMAGE SOURCE: DELORME



1370 Ridgewood Dr., Suite 5
Chico, California 95973

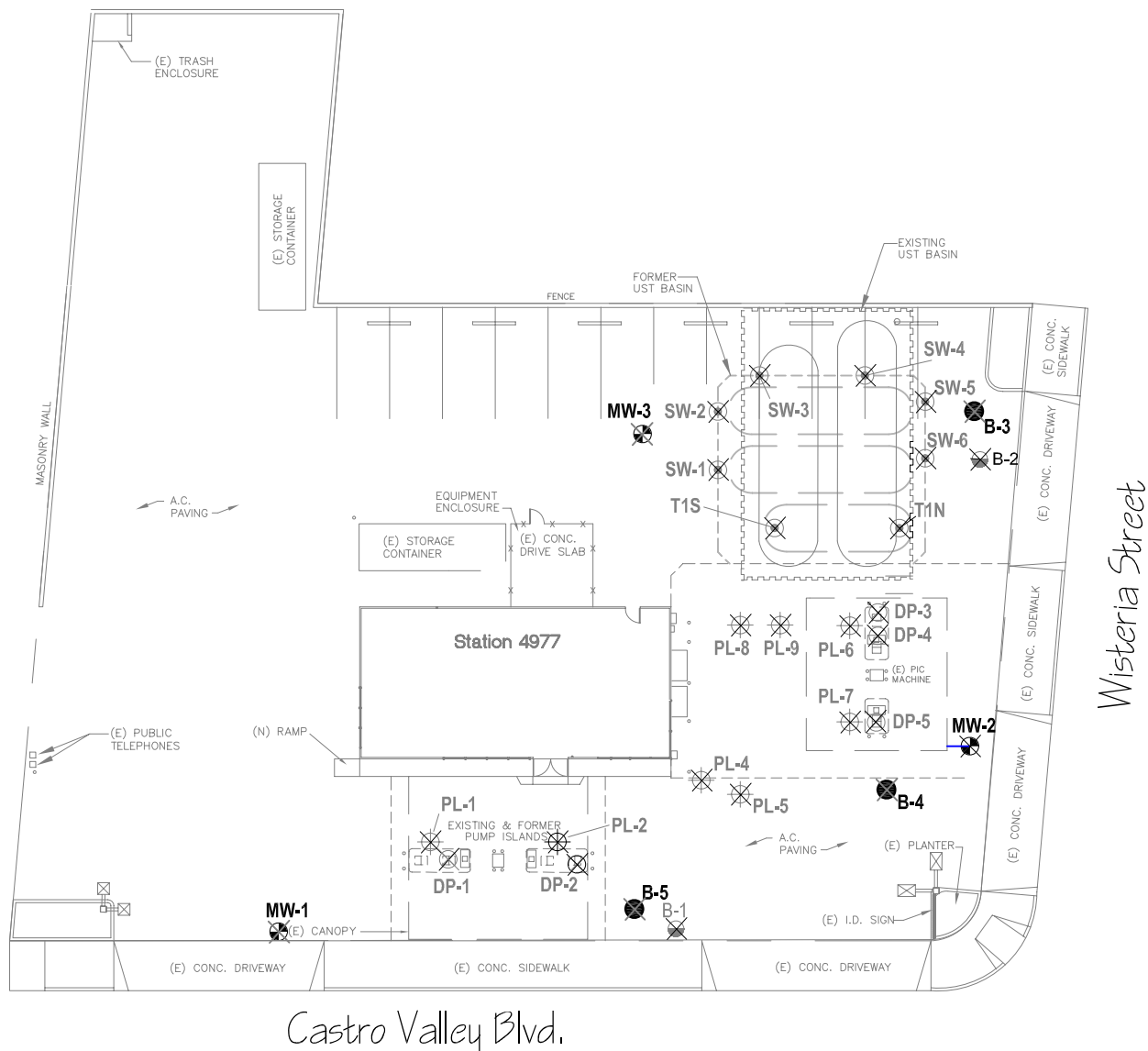
Project No.: 06-82-625 Date: 11/29/2012

Station #4977
2770 Castro Valley Blvd.
Castro Valley, California

Site Location Map

Drawing

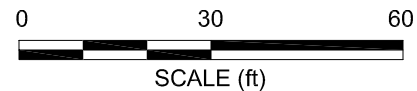
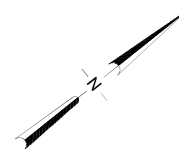
1



LEGEND

- Decommissioned Soil Boring
- Decommissioned Monitoring Well
- Decommissioned Historic Soil Boring
- Decommissioned Dispenser Compliance Sample
- Decommissioned Product Line Samples
- Decommissioned Former Tank Basin Samples

NOTE: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES.
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.



APPENDIX A

REGULATORY CORRESPONDENCE

From: [Detterman, Karel, Env. Health](#)
To: [Chuck Carmel](#)
Cc: "[Kristene Tidwell](#)"; [Rob Miller](#)
Subject: Fuel Leak Case No. RO2436 and GeoTracker Global ID T0600100089, ARCO # 4977, 2770 Castro Valley Blvd., CA 94546
Date: Friday, November 14, 2014 11:44:05 AM

Hello Chuck:

Alameda County Environmental Health (ACEH) is closing the above referenced fuel case. The public notification period ended on 11/7/2014 and no comments were received, so you may now decommission the monitoring wells. In the Well Decommissioning Report, please include signed profile and disposal documentation of the waste (both well decommissioning and remaining site waste) and submit the Well Decommissioning Report according to the following schedule:

TECHNICAL REPORT REQUEST

Please submit the following documents to Alameda County Environmental Health (Attention: Karel Detterman) and Geotracker, according to the following schedule:

- 1/7/2015 – Well Decommissioning Report
File to be named: RO2436_WELL_DCM_R_yyyy-mm-dd

This report is being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

Online case files are available for review at the following website:
<http://www.acgov.org/aceh/index.htm>. If your email address does not appear on the cover page of this notification, ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

Thank you,

Karel Detterman, PG
Hazardous Materials Specialist
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502
Direct: 510.567.6708
Fax: 510.337.9335
Email: karel.detterman@acgov.org

PDF copies of case files can be downloaded at:

<http://www.acgov.org/aceh/lop/ust.htm>

APPENDIX B

DETAILED SITE HISTORY

Previous Environmental Activities at Site

In March 2001, Delta Environmental Consultants (Delta) conducted assessment activities associated with dispenser and product line upgrades along with UST replacement at the Site. Analytical results from soil samples collected during upgrade activities consisted of concentrations of TPHg up to 1,450 mg/kg, benzene up to 8.05 mg/kg, and MTBE up to 9.97 mg/kg. Approximately 1,105 tons of soil was over-excavated and removed from the Site.

In April 2002, Delta observed the installation of groundwater monitoring wells MW-1, MW-2, and MW-3 and advancement of soil borings B-1 and B-2 to evaluate petroleum hydrocarbon impacts in soil and groundwater beneath the Site. TPHg, benzene, toluene, ethylbenzene, xylenes (BTEX constituents), and MTBE impacts were detected between 6 and 12.5 feet bgs and in groundwater concentrations above the state Water Quality Objectives (Table 2 and Table 5).

On September 23, 2011, Broadbent observed the advancement of borings B-3, B-4 and B-5 to further evaluate the lateral and vertical extent of petroleum hydrocarbon impacted soil and groundwater at the Site. The location of boring B-3 was chosen as it was adjacent to historic boring B-2, in which ground-water samples were not originally collected. The location of boring B-4 was southeast of the northernmost dispenser island adjacent to Wisteria Street and slightly southeast of historic product line soil sample PL-7, which contained elevated concentrations of MTBE. The location of boring B-5 was northeast of the southernmost dispenser island adjacent to historic dispenser island soil sample DP-2, which contained elevated concentrations of hydrocarbons. Analytical results from collected soil samples reported GRO and BTEX constituents above laboratory reporting limits. MTBE was not detected above laboratory reporting limits during this event. Due to the presence of clay within the subsurface onsite, groundwater was not encountered in the soil borings; therefore, no groundwater samples were collected during this event. Based on the data available, it was concluded that the vertical extent of impacted soil associated with the Site appeared to be adequately characterized.

On November 9, 2011, Closure Solutions, Inc., prepared a *Sensitive Receptor Survey* to identify the presence of water wells and surface water bodies within a 0.5 mile radius of the Site. Land use information was not included in this report.

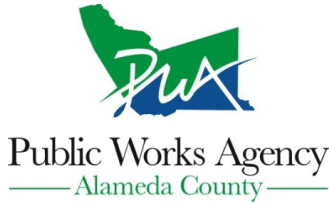
On January 16, 2012, Broadbent prepared an *On-Site Soil & Groundwater Investigation Report* for work conducted in September 2011 at Station #4977. This report was completed to further evaluate the lateral and vertical extent of petroleum hydrocarbon impacted soil and groundwater.

On March 19, 2012, Closure Solutions, Inc., prepared a *Conceptual Site Model* for the purpose of documenting soil and groundwater conditions at the Site.

APPENDIX C

PERMITS

Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 11/12/2014 By jamesy

Permit Numbers: W2014-1090 to W2014-1092
Permits Valid from 11/17/2014 to 11/17/2014

Application Id: 1415311739447
Site Location: 2770 Castro Valley Blvd.
Project Start Date: 11/17/2014
Assigned Inspector: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org

City of Project Site:Castro Valley

Completion Date:11/17/2014

Applicant: Broadbent & Associates, Inc. - Lu Damerell
4820 Business Center Drive #110, Fairfield, CA 94534

Phone: 510-364-2079

Property Owner: Chuck Carmel
P.O. Box 1257, San Ramon, CA 94583

Phone: --

Client: Chuck Carmel
P.O. Box 1257, San Ramon, CA 94583

Phone: --

Total Due: \$1191.00
Receipt Number: WR2014-0464 Total Amount Paid: \$1191.00
Payer Name : Kristene Tidwell, Broadbent & Paid By: VISA **PAID IN FULL**
Associate

Works Requesting Permits:

Well Destruction-Monitoring - 3 Wells

Driller: Cascade Drilling L.P. - Lic #: 938110 - Method: press

Work Total: \$1191.00

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	State Well #	Orig. Permit #	DWR #
W2014-1090	11/12/2014	02/15/2015	MW-1	10.00 in.	4.00 in.	5.00 ft	15.00 ft	No Records	W02-0314	No Records
W2014-1091	11/12/2014	02/15/2015	MW-2	10.00 in.	4.00 in.	5.00 ft	15.00 ft	No Records	W02-0315	No Records
W2014-1092	11/12/2014	02/15/2015	MW-3	10.00 in.	4.00 in.	5.00 ft	15.00 ft	No Records	W02-0316	No Records

Specific Work Permit Conditions

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Include permit number and site map.

Alameda County Public Works Agency - Water Resources Well Permit

4. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost and liability in connection with or resulting from the exercise of this Permit including, but not limited to, property damage, personal injury and wrongful death.

5. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

7. Remove the Christy box or similar structure.

Destroy well by grouting neat cement with a tremie pipe or pressure grouting (25 psi for 5min.) to the bottom of the well and by filling with neat cement to three (3-5) feet below surface grade. Allow the sealing material to spill over the top of the casing to fill any annular space between casing and soil.

After the seal has set, backfill the remaining hole with concrete or compacted material to match existing conditions.

8. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

APPENDIX D

UTILITY CLEARANCE SURVEY

PERSONNEL: DJK

CLIENT: BROADBENT

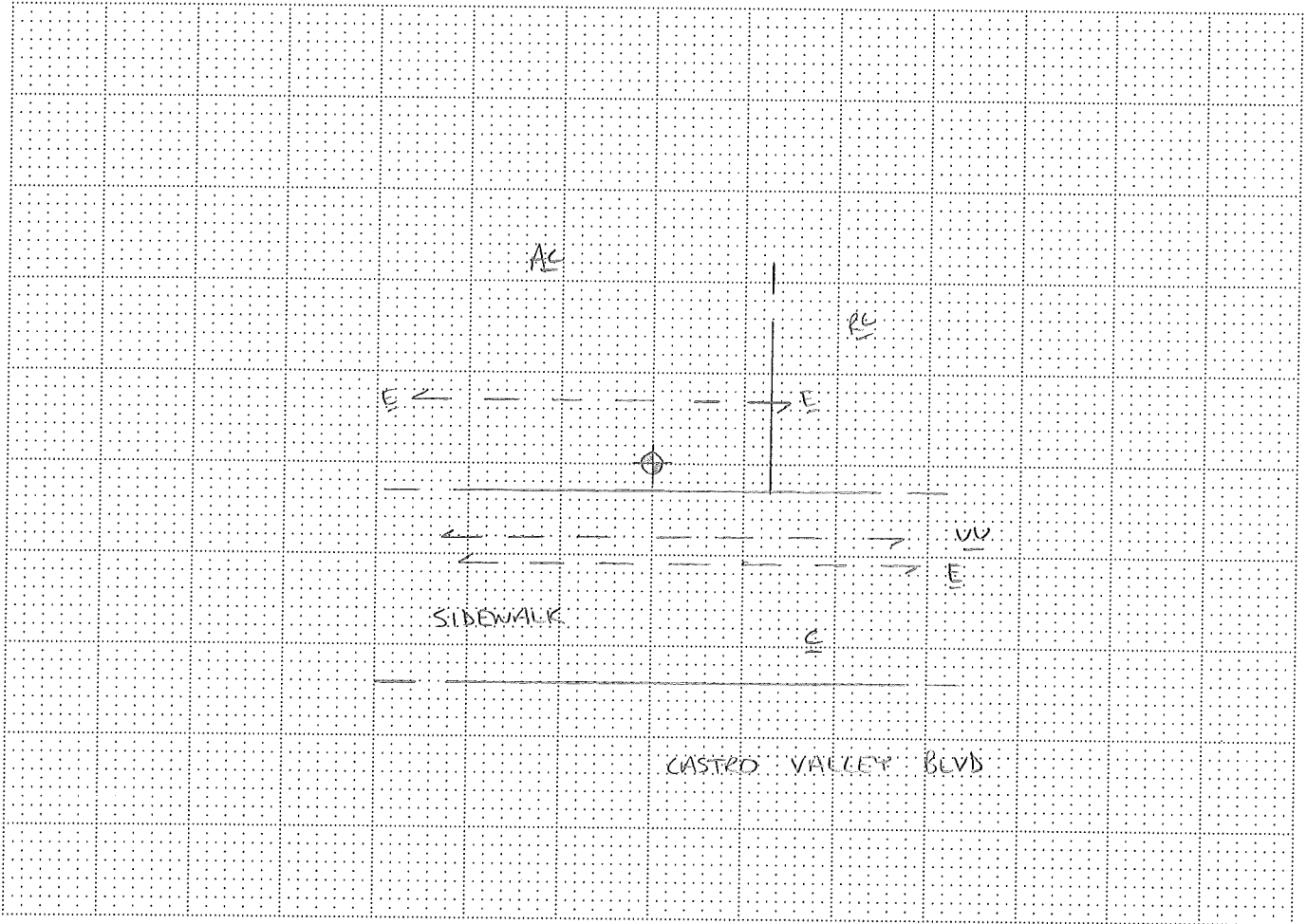
JOB: 14-1034.36

DATE: 10-7-14

LOCATION: ARCO, CASTRO VALLEY



BORING: MW-1



Scale: 1" = 10'

EXPLANATION

- Original Boring Location
- Final Boring Location
- Existing Well Location
- GPR Traverse
- Localized GPR Anomaly
- Utility Alignment

Utilities

- T (Telephone, Comm.)
- ✓ E (Electric)
- NG (Natural Gas)
- CA (Compressed Air)
- STM (Steam)
- SS (Sanitary Sewer)
- SD (Storm Drain)
- W (Water)
- FS (Fire Suplestion)
- ✓ UU (Undifferentiated Utility)

Surface

- RC (Reinforced Concrete)
- ✓ AC (Asphalt)
- C (Concrete)
- Soil
- Gravel
- other

NOTES

- | | | |
|---------------|--------------------|---------------------|
| Equipment: | Procedure: | Surface Conditions: |
| ✓ GPR (Radar) | - EMC (Conduction) | - Wet |
| - RD 4000 | ✓ EMI (Induction) | ✓ Dry |
| ✓ M Scope | - Ambient | - other |
| - other | ✓ GPR | |

REMARKS



PERSONNEL: DJK

CLIENT: BROADBENT

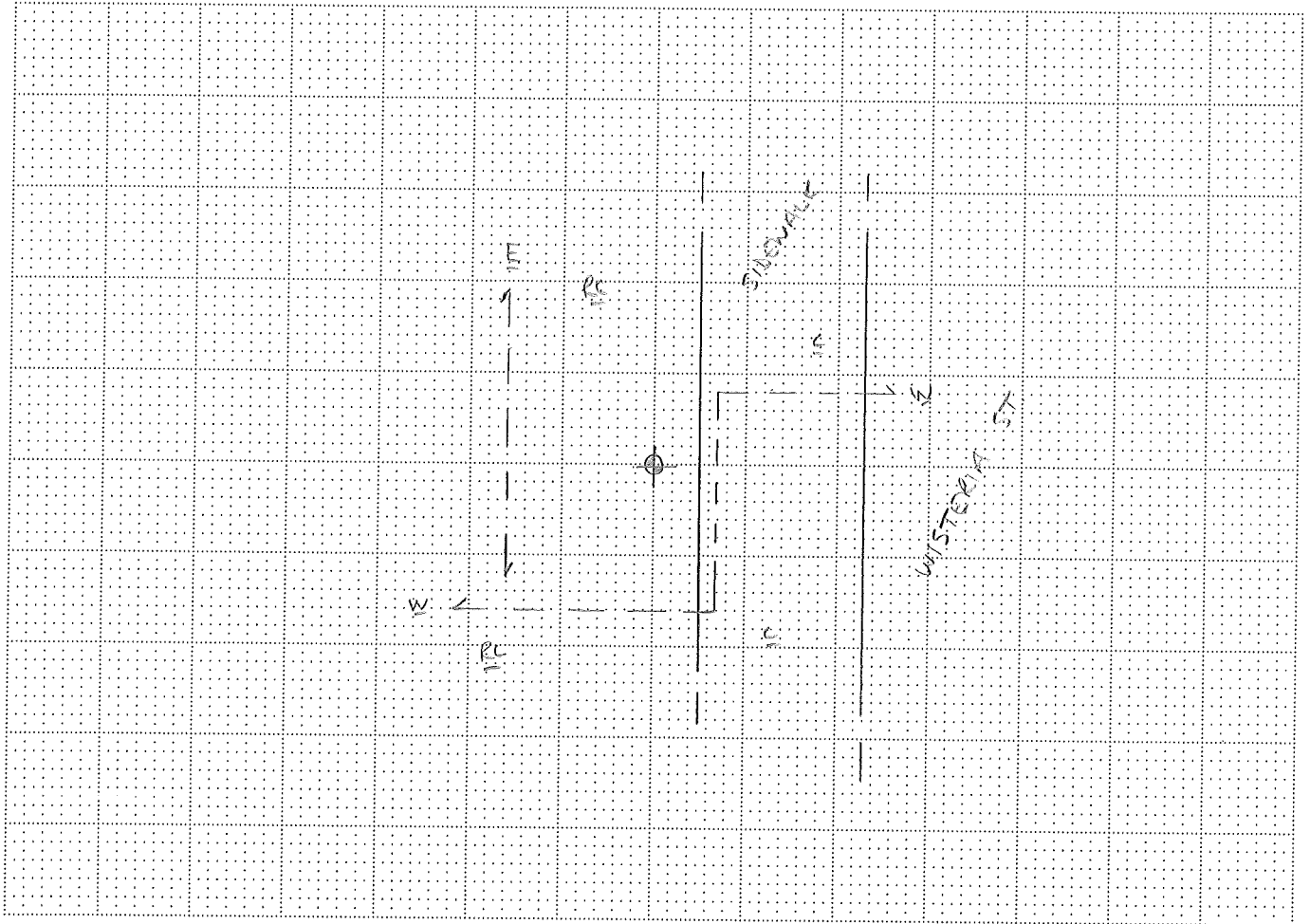
JOB: 14-1034.36

DATE: 10-7-14

LOCATION: ARCO, CASTRO VALLEY



BORING: MW-2



Scale: 1" = 10'

EXPLANATION



Original Boring Location



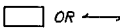
Final Boring Location



Existing Well Location



GPR Traverse



Localized GPR Anomaly



Utility Alignment

Utilities

- T (Telephone, Comm.)
- E (Electric)
- NG (Natural Gas)
- CA (Compressed Air)
- STM (Steam)
- SS (Sanitary Sewer)
- SD (Storm Drain)
- W (Water)
- FS (Fire Suppression)
- UU (Undifferentiated Utility)

Surface

- RC (Reinforced Concrete)
- AC (Asphalt)
- C (Concrete)
- Soil
- Gravel
- other

NOTES

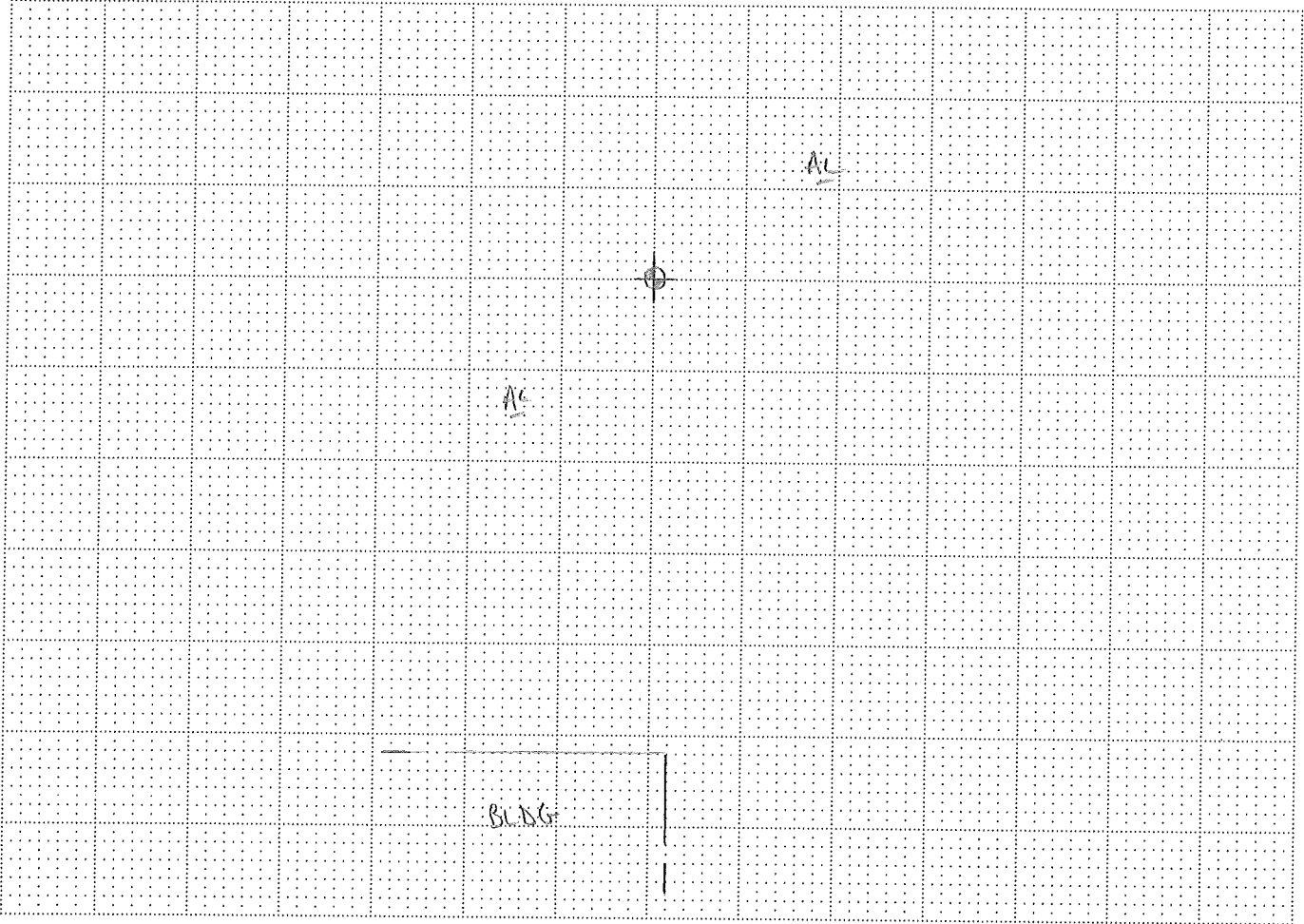
- Equipment: GPR (Radar), RD 4000, M Scope, other
Procedure: EMC (Conduction), EMI (Induction), Ambient, GPR
Surface Conditions: Wet, Dry, other

REMARKS



PERSONNEL: DJK
 JOB: 14-1034.36 DATE: 10-7-14

CLIENT: BROADBENT
 LOCATION: ARCO, CASTRO VALLEY
 BORING: MW-3



Scale: 1" = 10'

EXPLANATION

- Original Boring Location
- Final Boring Location
- Existing Well Location
- GPR Traverse
- Localized GPR Anomaly
- Utility Alignment

Utilities

- T (Telephone, Comm.)
- E (Electric)
- NG (Natural Gas)
- CA (Compressed Air)
- STM (Steam)
- SS (Sanitary Sewer)
- SD (Storm Drain)
- W (Water)
- FS (Fire Suppression)
- UU (Undifferentiated Utility)

Surface

- RC (Reinforced Concrete)
- ✓ AC (Asphalt)
- C (Concrete)
- Soil
- Gravel
- other

NOTES

- | | | |
|---------------|--------------------|---------------------|
| Equipment: | Procedure: | Surface Conditions: |
| ✓ GPR (Radar) | - EMC (Conduction) | - Wet |
| ✓ RD 4000 | ✓ EMI (Induction) | - Dry |
| ✓ M Scope | ✓ Ambient | - other |
| - other | ✓ GPR | |

REMARKS

