PNNL-17231
WTP-RPT-150 Rev 0

Pacific Northwest
National Laboratory
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U.S. Department of Energy

Pulse Jet Mixer Overblow Testing for Assessment of Loadings During Multiple Overblows

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March 2008

Prepared for the U.S. Department of Energy
under Contract DE-AC05-76RL01830

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Test specification:	24590-WTP-TSP-RT-06-001 Rev. 0
Test plan:	TP-RPP-WTP-452 Rev. 0
Test exceptions:	24590-WTP-TEF-RT-06-00003
	24590-WTP-TEF-RT-07-00003
	24590-WTP-TEF-RT-07-00009
	24590-WTP-TEF-RT-07-00011
R&T focus area:	Pretreatment & HLW Vitrification

Prepared for
the U.S. Department of Energy
under Contract DE-AC05-76RL01830

Pacific Northwest National Laboratory
Richland, Washington 99354

Completeness of Testing

This report describes the results of work and testing specified by Test Specification 24590-WTP-TSP-RT-06-001, Rev. 0 and Test Plan TP-RPP-WTP-452 Rev. 0 as modified by test exceptions 24590-WTP-TEF-RT-06-00003, 24590-WTP-TEF-RT-07-00003, 24590-WTP-TEF-RT-07-00009, 24590-WTP-TEF-RT-07-00011. The work and any associated testing followed the quality assurance requirements outlined in the Test Specification and Test Plan. The descriptions provided in this test report are an accurate account of both the conduct of the work and the data collected. Test plan results are reported. Also reported are any unusual or anomalous occurrences that are different from expected results. The test results and this report have been reviewed and verified.

Approved:

Gordon H. Beeman, Manager
WTP R&T Support Project

3/3/06
Date

Testing Summary

The U.S. Department of Energy (DOE) Office of River Protection's Waste Treatment Plant (WTP) is being designed and built to pretreat and then vitrify a large portion of the wastes in Hanford's 177 underground waste storage tanks. The WTP consists of three primary facilities: pretreatment, low-activity waste (LAW) vitrification, and high-level waste (HLW) vitrification. The pretreatment facility will receive waste feed from the Hanford tank farms and separate it into 1) a high-volume, low-activity liquid stream stripped of most solids and radionuclides and 2) a much smaller volume of HLW slurry containing most of the solids and most of the radioactivity.

Many of the vessels in the pretreatment facility will contain pulse jet mixers (PJMs) that will provide some or all of the mixing in the vessels. This technology was selected for use in so-called "black cell" regions of the WTP, where maintenance capability will not be available for the operating life of the WTP. PJM technology was selected for use in these regions because it has no moving mechanical parts that require maintenance. The vessels with the most concentrated slurries will also be mixed with air spargers and/or steady jets in addition to the mixing provided by the PJMs.

This report contains the results of single and multiple PJM overblow tests conducted in a large, ~13-ft-diameter × 15-ft-tall tank located in the high bay of the Pacific Northwest National Laboratory (PNNL) 336 Building test facility. These single and multiple PJM overblow tests were conducted using water and a clay simulant to bound the lower and upper rheological properties of the waste streams anticipated to be processed in the WTP. Hydrodynamic pressures were measured at a number of locations in the test vessel using an array of nine pressure sensors and four hydrophones. These measurements were made under normal and limiting vessel operating conditions (i.e., maximum PJM fluid emptying velocity, maximum and minimum vessel contents for PJM operation, and maximum and minimum rheological properties). Test data collected from the PJM overblow tests were provided to Bechtel National, Inc. (BNI) for assessing hydrostatic, dynamic, and acoustic pressure loadings on in-tank structures during 1) single overblows; 2) multiple overlapping overblows of two to four PJMs; 3) simultaneous overblows of pairs of PJMs.

Objectives

Table S.1 summarizes objectives and results of the PJM overblow testing.

Table S.1. Summary of Test Objectives and Results

Test Objective	Objective Met?	Discussion
Measure the hydrodynamic pressures associated with single and simultaneous multiple PJM overblows in WTP vessels during the drive phase of the PJM cycle. The hydrodynamic pressures will be measured at a number of locations in the test vessel using an array of pressure sensors and up to four hydrophones.	Yes	An array of four hydrophones measured acoustic pressures over a bandwidth of 1 to 5120 Hz at three (for the 8-PJM configuration) to four (for the 4-PJM configuration) different elevations in the tank. An array of nine in-tank pressure sensors measured dynamic pressures over the same bandwidth at three elevations in the tank and for three independent directions at each elevation. Overblow pressures were measured over a range of ±10 psig. Instrument types, models, and locations, the test matrix, and the formats of supplied data were approved by BNI before testing. Measurements were performed for single, multiple, and simultaneous overblows, as specified in the Test Specification and Test Exceptions.
The overblows and measurements will be made under normal and limiting vessel operating conditions (i.e., maximum PJM fluid emptying velocity, maximum and minimum vessel contents for PJM operation, and maximum and minimum rheological properties).	Yes	Data were collected over a broad range of liquid levels and drive velocities. Liquid height to tank diameter ratios ranged between 0.3 and 0.8—the usable range of the test vessel. Drive velocities were 8 to 15 m/s in the 8-PJM configuration and 6 to 12 m/s in the 4-PJM configuration, the upper velocities being limited by the flow capacity of the drive air regulators on the BNI-supplied jet pump pair (JPP) skids. These velocities and fluid properties cover a limiting range of process conditions as defined in the Test Specification and Test Exceptions. Water was used as a test fluid to represent the lower limit of viscosity for Newtonian fluids in the WTP. A slurry of ~29 wt% clay (consisting of 80 wt% kaolin and 20 wt% bentonite clays) in water was used represent the upper limit of yield strength for non-Newtonian fluids in the WTP.
Data will be obtained for selection of scaling approaches for multiple PJM overblows and development of load specifications for plan vessel internal components.	Yes	The PNNL test matrix was refined continuously based on discussions with BNI and Dominion Engineering, Inc. (DEI; the BNI contracted organization developing the load specifications). All data called for in the BNI and DEI-approved Test Specification, Test Plan, and Test Exceptions have been delivered to BNI and DEI as electronic data files.

Test Exceptions

A summary description of test exceptions applied to PJM overblow testing is presented in Table S.2.

Table S.2. Test Exceptions

Test Exceptions	Description of Test Exceptions
24590-WTP-TEF-RT-06-00003	Added scope after review of the Test Plan by BNI and DEI. This exception defined instrumentation necessary to enable making the needed structural engineering analysis. Added scoping tests of new instrumentation, and more instrumentation, including: ▪ Conductivity probes for overblow detection ▪ Accelerometer ▪ High-speed submerged video ▪ Velocity probes.
24590-WTP-TEF-RT-07-00003	Made changes to test conditions, control and data requirements based on scoping test results. Modified test conditions to facilitate testing and to meet the test objectives. Set targets for overblow duration and maximum PJM velocity.
24590-WTP-TEF-RT-07-00009	Added additional high speed submerged video tests requested by DEI for the 4-PJM test stand.
24590-WTP-TEF-RT-07-00011	After discussions with BNI and DEI, the target drive velocities for 4-PJM testing were revised to 6, 8, 10, and 12 m/s (instead of the original 8, 12, 14, and 15 m/s).

Results and Performance against Success Criteria

The research and technology success criteria are discussed in Table S.3.

Table S.3. Success Criteria

Success Criterion	How Testing Did or Did Not Meet Success Criterion
Provide the hydrodynamic pressure profiles with supporting data and testing documentation for each set of conditions tested.	All data called for in the BNI and DEI approved Test Specification, Test Plan and Test Exceptions have been delivered to BNI and DEI as electronic data files. Supporting data in the form of instrument and equipment descriptions, dimensions, experimental conditions, run parameters, and data file formats are included in this report. Instrument calibrations, analysis spreadsheets and software, bench sheets and laboratory record books have been documented, crosschecked, and reviewed as specified in the QA requirements listed below.
Data will be appropriate for selection of scaling approaches for multiple overblows and development of load specifications for plant vessel internal components.	The data collected are considered suitable for the purpose intended based on the needs listed in the Test Specification, Test Plan and Test Exceptions. Continuous reassessment of needs was done in conjunction with BNI and DEI. Such discussions of data resulted in the Test Exceptions listed above.
Data profiles will be suitable for application with component structural analysis.	See above.

Quality Requirements

Pacific Northwest National Laboratory (PNNL) is operated by Battelle for the U.S. Department of Energy. Battelle's Pacific Northwest Division (PNWD) has a Quality Assurance Program based on requirements defined in U.S. Department of Energy (DOE) Order 414.1C, Quality Assurance, and 10 CFR 830, Energy/Nuclear Safety Management, Subpart A, Quality Assurance Requirements. PNWD has chosen to implement the requirements of DOE Order 414.1C and 10 CFR 830 Subpart A by integrating them into PNNL's management systems and daily operating processes. Procedures necessary to implement the requirements are documented through the Laboratory's Standards-Based Management System.

PNNL implements the RPP-WTP quality requirements by performing work in accordance with the *River Protection Project – Waste Treatment Plant Support Program (RPP-WTP) Quality Assurance Plan (*RPP-WTP-QA-001, QAP*)*. Work was performed to the quality requirements of NQA-1-1989 Part I, Basic and Supplementary Requirements; NQA-2a-1990, Part 2.7; and DOE/RW-0333P, Rev 13, *Quality Assurance Requirements and Descriptions (QARD)*. These quality requirements are implemented through the *River Protection Project – Waste Treatment Plant Support Program (RPP-WTP) Quality Assurance Manual* (RPP-WTP-QA-003, QAM).

General laboratory procedures and calibration experiments were performed in accordance with RPP-WTP's procedures QA-RPP-WTP-1101, "Scientific Investigations," and QA-RPP-WTP-1201, "Calibration Control System," ensuring that sufficient data are taken with properly calibrated measuring and test equipment to obtain quality results. The requirements of DOE/RW-0333P Rev 13, *Quality Assurance Requirements and Descriptions (QARD)*, were not required for this work because the work is not high-level-waste quality affecting.

Reportable measurements of distance were made using standard commercially available equipment (e.g., tape measure) and needed no traceable calibration requirements. All other test equipment generating reportable data were calibrated according to PNWD's WTPSP QA program.

RPP-WTP addresses internal verification and validation activities by conducting an Independent Technical Review of the final data report in accordance with RPP-WTP's procedure QA-RPP-WTP-604. This review verifies that the reported results are traceable, that inferences and conclusions are soundly based, and the reported work satisfies the Test Plan objectives. This review procedure is part of PNNL's *RPP-WTP Quality Assurance Manual*.

Simulant Use

Two simulants were used in this testing and were selected to bound the expected rheological properties to be encountered in the WTP. Water was used to provide a fluid with rheological properties at the lower bound. A kaolin-bentonite clay mixture was selected to provide a fluid with rheological properties at the upper bound. The clay simulant used was selected based on actual waste slurry rheology measurements that indicate the WTP non-Newtonian waste stream can be represented by a Bingham plastic rheology model, which is represented by

$$\tau = \kappa\dot{\gamma} + \tau_y \qquad \text{(S.1)}$$

where

τ = shear stress

κ = consistency factor

$\dot{\gamma}$ = shear rate or strain rate

τ_y = Bingham yield stress, the assumed minimum stress required to initiate fluid movement as determined by a flow curve obtained by fitting rheological data using a Bingham plastic rheological model.

The non-Newtonian waste stream upper bounding rheological value of τ_y = 30 Pa was identified based on limited data from actual waste slurries that can be represented by a Bingham plastic rheology model (Poloski et al. 2006). These values provide the basis for the simulant used for this testing. Additional information on the selection and development of the kaolin-bentonite clay simulant may be found in Poloski et al. (2004).

Discrepancies and Follow-on Tests

The drive air flow capacity of the jet pump pairs was insufficient to achieve the original target velocity of 15 m/s in the 4-PJM system. Additional testing with the 4-PJM system may be needed to meet the testing objective of providing data at the limiting conditions of PJM operation in the WTP. Air flow was limited by the maximum capacity of the supply regulators on the JPP skids.

A QA surveillance of the vendor providing the calibration services for the Valeport velocity probes revealed that the vendor did not correct the reported velocities for wall effects arising from the use of an 8–inch pipe diameter for the tow vessel during the probe calibration. For water simulant, the wall correction can be determined theoretically, and the inaccuracy of the reported velocities is estimated to be +6% (i.e., the fluid velocities measured by the Valeport velocity probes were 6% more than the actual velocities). For the clay simulant, however, the determination of the wall effect correction was complicated by the non-Newtonian nature of the simulant and the unknown effect of the viscosity on the Valeport velocity probe performance. Based on the deviation of the probe response from a 1:1 correspondence with the tow velocity, it is estimated this error could be as high as +25% (i.e., the fluid velocities measured by the Valeport velocity probes were 25% more than the actual velocities. Therefore, additional testing of the Valeport velocity probes may be required after assessment by BNI and DEI, particularly to reduce/eliminate the errors associated with these probes in the clay simulant.

References

Poloski AP, PA Meyer, LK Jagoda, and PR Hrma. 2004. *Non-Newtonian Slurry Simulant Development and Selection for Pulse Jet Mixer Testing.* WTP-RPT-111 Rev. 0 (PNWD-3495), Battelle – Pacific Northwest Division, Richland, Washington.

Poloski AP, ST Arm, OP Bredt, TB Calloway, Y Onishi, RA Peterson, GL Smith, and HD Smith. 2006. *Final Report: Technical Basis for HLW Vitrification Stream Physical and Rheological Property Bounding Conditions.* WTP-RPT-112 Rev. 0 (PNWD-3675), Battelle – Pacific Northwest Division, Richland, Washington.

Acknowledgments

The authors would like to thank Matt Fountain for his patient and careful technical reviews of this report and other project documentation. In addition, we would like to the many people that have worked hard in the lab or in preparing the data packages for this project including Aaron Richter, Naveen Karri, Shelly Carlson, Keith Peterson, Bob Fulton, Anna Lundeby, Anthony Guzman, Mike Johnson and Mike White.

Acronyms and Abbreviations

AEA	Atomic Energy Agency of United Kingdom
Bar, g	gauge pressure, bar
BNI	Bechtel National, Inc.
DAS	data acquisition system
DEI	Dominion Engineering Inc.
DOE	U.S. Department of Energy
HPAV	hydrogen in pipes and ancillary vessels
JPP	jet pump pair
PJM	pulse jet mixer
PNNL	Pacific Northwest National Laboratory
PNWD	Battelle – Pacific Northwest Division
QA	quality assurance
RFO	(JPP drive air) regulators fully open
RPP	River Protection Project
WTP	Waste Treatment Plant

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1.0 Introduction

Previous pulse jet mixer (PJM) tests in the half-scale lag storage vessel (Bontha et al. 2005) have shown that the planned baseline method of PJM operation at 50% stroke does not meet the hydrogen in pipes and ancillary vessels (HPAV) requirements for hydrogen control by turning over the PJM vessel contents. The testing indicates that the PJMs need to be operated by a control system that produces a longer stroke, during which about 85% (often referred to as full-stroke operation) of the waste is expelled from the PJM on each drive stroke. This stroke length is sufficient for meeting the HPAV requirements, but will increase the probability of overblows. The adopted HPAV solution to use an 85% stroke requires vessels and vessel internals to be evaluated against the hydrodynamic forces associated with multiple PJM overblows. Testing is needed to characterize the vessel components loading associated with multiple overblows, and an analysis is required of these effects on typical Waste Treatment Plant (WTP) vessel components.

Overblow testing was performed to measure the hydrodynamic pressures associated with single, multiple, and simultaneous PJM drive overblows (i.e., when more than one PJM overblow occurs at any particular time), for both clay simulant and water. This testing is required to provide data for a possible change in design criteria for PJM-mixed vessels to include loading associated with the simultaneous drive overblow of all PJMs within a vessel. Current vessel design includes loading for single PJM drive overblows. PJM-agitated vessels in the WTP are equipped with up to 12 PJMs. Mixing requirements of these vessels have been evaluated for and are anticipated to require synchronous operation of these PJMs in the WTP, increasing the likelihood of multiple overblows.

The objective of the PJM overblow testing was to measure the hydrodynamic pressures associated with single and simultaneous multiple-PJM overblows in WTP vessels during the drive phase of the PJM cycle. The hydrodynamic pressures were measured at several locations in the test vessel using an array of nine in-tank pressure sensors and four hydrophones. Pressure, level, and conductivity sensors were also used to monitor PJM operation and the start of the overblow. Overblow measurements were made under normal and limiting vessel operating conditions (i.e., minimum/maximum PJM fluid emptying velocity, maximum and minimum vessel contents for PJM operation, and maximum and minimum rheological properties). The data generated through this testing were provided to Bechtel National, Inc. (BNI) for selecting scaling approaches for multiple PJM overblows and development of load specifications for planned vessel internal components.

This document discusses the conditions of the overblow tests conducted with the 8-PJM and 4-PJM test stands (Bontha et al. 2005, Bamberger et al. 2005) using water and clay simulants. The clay simulant consisted of a mixture of kaolin and bentonite clays in water with a yield stress 30±5 Pa. Water represents waste with rheological properties at the lower bound of the rheological limits set for the WTP.

2.0 Quality Requirements

2.1 Application of RPP-WTP Quality Assurance Requirements

Pacific Northwest National Laboratory (PNNL) is operated by Battelle for the U.S. Department of Energy. PNNL has a Quality Assurance Program that is based on requirements defined in the U.S. Department of Energy (DOE) Order 414.1C, Quality Assurance, and 10 CFR 830, Energy/Nuclear Safety Management, Subpart A, Quality Assurance Requirements. PNWD has chosen to implement the requirements of DOE Order 414.1C and 10 CFR 830, Subpart A by integrating them into PNNL's management systems and daily operating processes. The procedures necessary to implement the requirements are documented through the laboratory's Standards-Based Management System.

PNNL implements the RPP-WTP quality requirements by performing work in accordance with the *River Protection Project – Waste Treatment Plant Support Program (RPP-WTP) Quality Assurance Plan (*RPP-WTP-QA-001, QAP*)*. Work was performed to the quality requirements of NQA-1-1989 Part I, Basic and Supplementary Requirements; NQA-2a-1990, Part 2.7; and DOE/RW-0333P, Rev 13, *Quality Assurance Requirements and Descriptions (QARD)*. These quality requirements are implemented through the *River Protection Project – Waste Treatment Plant Support Program (RPP-WTP) Quality Assurance Manual* (RPP-WTP-QA-003, QAM).

The work discussed in this report was planned, executed, reviewed and documented in accord with the above noted requirements.

2.2 Conduct of Experimental and Analytical Work

Test requirements that were specific to the overblow experiments were listed in Test Specification *Pulse Jet Mixer Overblow Testing* (24590-WTP-TSP-RT-06-001) and in *Test Plan for Pulse Jet Mixer Overblow Testing* (TP RPP-WTP-452), together with subsequent Test Exceptions (24590-WTP-TEF-RT-06-00003, 24590-WTP-TEF-RT-07-00003, 24590-WTP-TEF-RT-07-00009 and 24590-WTP-TEF-RT-07-00011) .

General laboratory procedures and calibration experiments were performed in accordance with RPP-WTP's procedures QA-RPP-WTP-1101, "Scientific Investigations," and QA-RPP-WTP-1201, "Calibration Control System," ensuring that data are taken with properly calibrated measuring and test equipment to obtain quality results. The requirements of DOE/RW-0333P Rev 13, *Quality Assurance Requirements and Descriptions (QARD),* were not required for this work.

Additional equipment that was used included a thermometer, clock, and balances. The thermometer, for monitoring simulant temperature, and the clock were standard laboratory equipment used as indicators only. Balances were calibrated yearly by a qualified contractor, QC Services Portland, Oregon per quality assurance requirements.

2.3 Internal Data Verification and Validation

RPP-WTP addresses internal verification and validation activities by conducting an Independent Technical Review (ITR) of the final data report in accordance with RPP-WTP's procedure QA-RPP-WTP-604. This review verifies that the reported results are traceable, that inferences and conclusions are soundly based, and the reported work satisfies the Test Plan objectives. This review procedure is part of PNNL's *RPP-WTP Quality Assurance Manual*. For this project ITRs were conducted on laboratory record books, bench data sheets, experimental checklists, and run logs. ITRs were also conducted on data acquisition computer programs and on data processing software and spreadsheets.

Electronic data are not considered records under the RPP-WTP QA Program. However, the accuracy of electronic file data transfers to portable (DVD and portable hard disk drives) media was verified.

3.0 Instrumentation and Data Acquisition System Description

This section contains a description of the various instrumentation and data acquisition systems used during the overblow testing.

3.1 Instrumentation

Several analytical instruments were used to collect and record data during the overblow testing in the 8- and 4-PJM configurations. These are listed in Tables 3.1 and 3.2. All instruments listed in Table 3.1 were connected to Data Acquisition System-1 (or DAS-1; see Section 3.2.1) and were sampled/recorded at frequency of 1 kHz. Similarly, all instruments listed in Table 3.2 were connected to DAS-2 (see Section 3.2.2) and sampled/recorded at a frequency of 10.24 kHz. All instruments listed in Tables 3.1 and 3.2 were calibrated or performance checked according to RPP-WTP QA requirements. The signal conditioners for the DAS-1 and DAS-2 channels were calibrated according to the RPP-WTP QA assurance requirements.

Additional data were recorded manually in either laboratory record books (LRB) or bench sheets. Tank liquid fill levels were measured with an ordinary tape measure. Uncalibrated pressure sensors on the AEA-built jet pump pair (JPP) skids provided approximate indications of drive and suction pressures on the controller display. These data were recorded on bench sheets for information only. In-tank temperatures were measured with J-type thermocouples installed at two levels in the tank. A hand-held readout was temporarily connected twice a day and the simulant temperatures were entered into the LRB.

Videotape recordings were made of the liquid surface for a subset of the experiments. In addition, for the subset of those experiments done with water, high speed and high-resolution subsurface videos were made of the fluid jet emerging out of the PJM nozzle. The video recordings involve no calibration and no performance requirements were placed upon them in the Test Specification. Video records are considered to be “for information only.”

This section contains a description of the instruments. Equipment and instrument locations are discussed in Sections 4 and 5. Unless otherwise noted, the values for the response times and accuracy were obtained from vendor literature for the indicated sensor. These accuracy values do not include uncertainty that may be introduced by signal noise, signal conditioners or transmitters.

3.1.1 PJM Pressures

Air pressures inside the PJMs were measured using Endress + Hauser pressure transmitters (Model PMP 135-A4G01R4R) with an operating pressure range of 0 to 150 psia and an accuracy of ±0.5% of full scale (±0.75 psi). In the 8-PJM configuration, the pressure transmitters were mounted in one leg of a cross that was attached to ~4-ft-long spool piece that was included on top of the pulse tubes (see Figure 3.1). In the 4-PJM configuration the spool piece was removed.

Table 3.1. Data Recorded on DAS 1 (DASYLab)

Parameter	Sensor Type	Manufacturer	Model	Qty	Range	Bandwidth[a]	Accuracy[a]
PJM pressure	Pressure transmitter	E+H PMP	135-A4G01R4R	8[b,c]	0 to 150 psia	2 kHz	±0.75 psi
PJM level	Capacitance level probe	Drexelbrook	700-0002-057	8[b,c]	0~144 inch[d]	> 1 Hz[e]	±1% of nominal
Tank surface level	Laser level transmitter	Optech	Sentinel 3100	3[f]	0.2 to 150 m	2 Hz[g]	±7 mm[g] (accuracy) ±4 mm (repeatability)
PJM #5/A air inlet temperature	Type J thermocouple	Not available	Not available	2	0 to 50°C	0.25 Hz[h]	±2.2°C
Velocity (two axes; vertical and radial)	Velocity probe; 3.2 cm diameter probe head disk	Valeport	Transmitter model 802	3	±5 m/s	16 Hz[i]	Water, +6%; clay, up to +25%[j]

(a) Bandwidth and accuracy values are the vendors' nominal values and are presented for information only.
(b) All data were sampled by and recorded on DAS-1 at a frequency of 1 kHz. Where a quantity of 8 is listed (for the PJM pressure and PJM level) the number refers to the maximum number of sensors that were used in the 8-PJM configuration. The corresponding quantities are 4 in 4-PJM configuration.
(c) In the 8-PJM configuration all eight pulse tubes had pressure transmitters, Data were recorded from only 5 of these transmitters at any one time.
(d) Nominal range.
(e) Response is an estimate from a Drexelbrook technical representative because an integration capacitor was removed from the transmitter circuit board to improve response.
(f) Laser levels do not function properly with water due to a lack of a reflective surface.
(g) Operating accuracy at a measurement rate of 2 readings per second. Depends upon limited variations in temperature, material, and distance associated with installation. The 2Hz value in the bandwidth column was the sampling rate (max theoretical bandwidth 1Hz) used during the majority of the experiments. At 10Hz sampling rate accuracy decreased to +/- 15mm and repeatability decreased to +/- 9 mm.
(h) The response time is typical of a $1/16^{th}$-inch O.D. bare thermocouple wire in air at room temperature and atmospheric pressure moving with a velocity of 65 ft/sec. The time constant is defined as the time required to reach 63.2% of an instantaneous temperature change; here it is expressed in Hz (1/response time).
(i) According to the Valeport operations manual, there is a digital finite impulse response filter that attenuates signals with a frequency greater than 4 Hz with a cutoff at 8 Hz and results in a phase delay in the data. If data are being synchronized with other sources of data, this delay needs to be taken into account in data processing. At a 16 Hz rate the data delay is 0.3125 sec.
(j) See Section 3.1.6 for more detailed discussion of the measurement uncertainty associated with the velocity sensors.

Table 3.2. Data Recorded on DAS 2 (DACTRON)[a]

Parameter	Sensor Type	Manufacturer	Model	Qty	Range	Bandwidth[b]	Accuracy[b]
PJM overblow	Hydrophones	Reson	4040	4	ND (Pa)	1 to 80 kHz[c]	ND
	Charge amplifier	Dytran Inst. Inc	4705M3	4		1 to 10 kHz	ND
	Signal analyzer	Dactron	Focus II	1		-	ND
In-tank pressure	Pressure transmitter	Entran	EPX-V0-1-10P	9	0–10 psig	20 kHz	1.44%[d]
Bubble egress time from nozzle	Conductivity probe	NA; wire leads used	NA; wire leads used	5[e]	NA	NA	NA[f]
	Conductivity Signal conditioner	Analog Devices	5B41-02	5	-5 to +5 V input and output	10 kHz	NA[f]
Probe mast tip acceleration[g]	Tri-axial accelerometer	PCB Piezotronics	356A15	1	±50 g	1.4 to 6500 Hz	1%[h]
	ICP power supply and amplifier	PCB Piezotronics	482A16	1	±10 V max output	0.225 to 100 kHz	ND

(a) All data on the DAS 2 DACTRON were recorded at a sampling rate of 10.24 kHz.
(b) Bandwidth and accuracy values are the vendors' nominal values and are presented for information only.
(c) Linear frequency 1-80kHz at ± 2 db.
(d) Based on a combination of noise, linearity, hysteresis, non-repeatability, and thermal shift. Precision is estimated at +/- 0.027 psi at the 95% confidence level, based on field calibration data.
(e) Only the pulse tubes that provided test data had bubble detectors. For the 8-PJM tests, these were pulse tubes 4, 5, 6, 7, and 8. For the 4-PJM tests all pulse tubes A, B, C and D had detectors.
(f) Accuracy is not applicable because these were just used to determine the time of bubble egress from the PJM nozzle.
ND=no data.
(g) The accelerometer was installed and used only during the 4-PJM tests. It was not installed during the 8-PJM tests.
(h) Nonlinearity

3.1.2 PJM Simulant Level

The change of liquid height in each pulse tube was individually measured using ~12-ft-long, Teflon-coated capacitance liquid-level sensors fabricated by Drexelbrook, Inc. These sensors were mounted in the center of each pulse tube through one end of a cross fitting and routed through the ~4-ft-long spool (removed in the 4-PJM configuration) piece connected to the top of the pulse tube (see Figure 3.1).

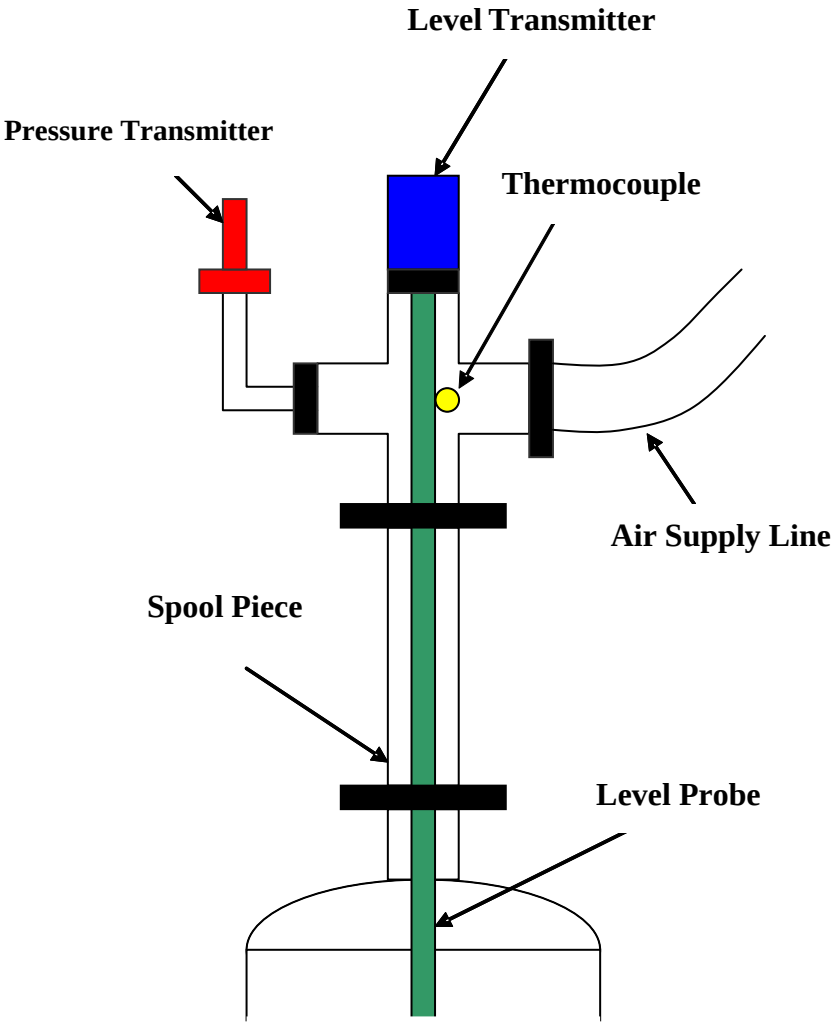

Figure 3.1. PJM Level, Pressure, and Temperature Sensor Arrangement on Top of the PJM (the spool piece shown was present only in the 8-PJM configuration)

The capacitance level sensors were performance checked in place by varying the level of the each simulant in the tank and recording the voltage output from the PJM level probes. Probe voltage measurements were compared to levels obtained with a tape measure. This was done at least at four points, and a linear least squares fit was obtained for the simulant level versus voltage. The output from the level probes varied from 1 to 5 volts with 1 volt corresponding to zero level.

3.1.3 Tank Surface Level

The simulant level in the tank was measured manually using a tape measure (±0.5-inch accuracy). In addition, three Sentinel (Model 3100) laser level sensors mounted on the top of the tank were used to record the level of the simulant continuously throughout the testing with clay. Laser level devices do not work with transparent fluids such as water. The laser level data were used to determine the PJM nozzle velocity and loss coefficients (K values) for the 8-PJM configuration[(a)] and to obtain information on the overblow phenomena by observing the clay simulant surface lift. These level sensors have a range of 0.2–150 m, an absolute accuracy of ±2 cm, an operating accuracy of ±7 mm, and a resolution of 4 mm.

3.1.4 Simulant Temperature

Two type J thermocouples, located at depths of 62 and 136 ±3inches (as measured from the tank rim) were used to measure the temperature of the simulant in the tank. The accuracy of this type of thermocouple is ±2ºC. During testing, the simulant temperature was periodically recorded using a hand-held Fluke Model 52 II thermocouple reader. The temperatures were measured at the start and end of each day of overblow testing.

3.1.5 PJM Air Inlet Temperature

Two type J thermocouples were used to measure the temperature of the air entering the PJM during the drive phase. The first was located in the air line just after the JPP connecting to PJM #5 (8-PJM configuration) or PJM A (4-PJM configuration); the other thermocouple was positioned in the cross located on the top of the same PJM (see Figure 3.1).

3.1.6 In-Tank Fluid Velocity

The velocity of the fluid at three locations in the tank was measured using 3.2-cm (1.26-inch) disc-shaped Valeport 802 electromagnetic flow sensors. The Valeport electromagnetic flow sensors were chosen for this application primarily because of their ruggedness and their applicability for measuring velocities in the presence of solids in the test system (i.e., clay simulant). In addition, Valeport sensors also have the advantage of measuring the flow in two dimensions. In this application, the local velocity changes were measured vertically and radially. These probes had a range of measurable velocities of ±5 m/s. According to the velocity probe operating manual, the sensing volume was a cylinder with a diameter of 0.8 inches and a height of 0.4 inches out from the sensor.

The three velocity sensors were mounted on a vertical mast at three elevations in the tank. The elevations and locations are discussed in Sections 4 and 5. Pictured in Figure 3.2 is a detail of the mount used to attach each velocity probe to the mast. The mast passes down through the hole shown, normal to the plane of the page. The probe disk was offset from the mast 2½ inches in one direction and 12½ inches in the other in the horizontal plane. The probe disk was attached vertically at the end of the 12½ inch rod shown in the figure. Figure 3.3 is a photograph of a probe in the tank (in the 4-PJM system).

(a) For the 4-PJM configuration, the laser level data was found to be too noisy for use in determining the nozzle loss coefficients and therefore the PJM level data were used.

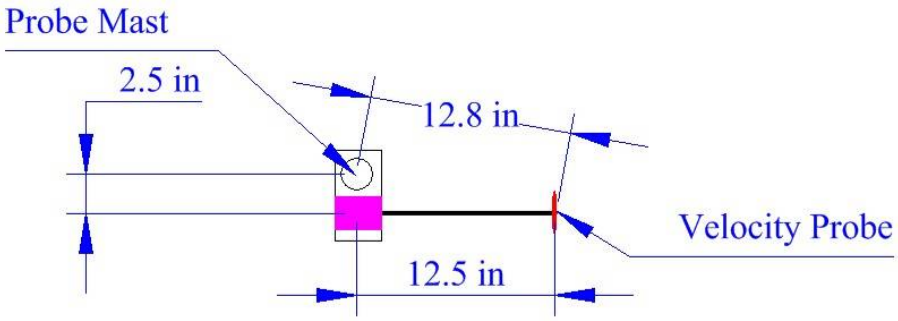

Figure 3.2. Detail of a Velocity Probe Mount (looking down)

Figure 3.3. Velocity Probe Inside the Tank (in the 4-PJM configuration) at an Early Stage of the Installation. (It is not in the final position.)

The probe disks had factory-supplied orientation marks on the faces. The probes were installed in the tank with the marks pointing up. In this orientation the vertical component of the velocity indicated positive for downward fluid flow. The radial/horizontal component indicated positive for flow from right to left across the open probe face (from top to bottom in Figure 3.2). In the 8-PJM configuration radial/horizontal velocities had a positive sign for radial flow in the direction from the tank center outwards towards PJM 4. In the 4-PJM configuration radial/horizontal velocities had a positive sign for flow in the direction from the center outwards towards PJM C.

A QA surveillance of the vendor providing the calibration services for the Valeport velocity probes revealed that the vendor did not correct the reported velocities for wall effects arising from the use of an 8–inch pipe diameter for the tow vessel during the probe calibration. For water simulant, the wall correction can be determined theoretically, and the inaccuracy of the reported velocities is estimated[(a)] to be +6% (i.e., the fluid velocities measured by the Valeport velocity probes were 6% more than the actual velocities). For the clay simulant, however, the determination of the wall effect correction was complicated by the non-Newtonian nature of the simulant and the unknown effect of the viscosity on the Valeport velocity probe performance. Based on the deviation of the probe response from a 1:1 correspondence with the tow velocity, it is estimated this error could be as high as +25% (i.e., the fluid velocities measured by the Valeport velocity probes were 25% more than the actual velocities).

Finally, the velocity probe used at the 18-inch elevation[(b)] during the 4-PJM water and clay testing (see Section 5 for more detail about the velocity probe location) was calibrated only between ~ ±2.5 m/s, while all other probes in both the 8- and 4-PJM configurations were calibrated between ±5 m/s. This was due to calibration problems observed during the calibration at high tow tank velocities. For the velocity probe located at the 18-inch elevation in the 4-PJM configuration, the calibration coefficients are considered to be applicable to the full range of the probe response (i.e., ±5 m/s) because the Valeport velocity probes respond linearly with velocity.

3.1.7 Bubble Egress Time

The time at which the air in each pulse tube egresses or leaves the nozzle (the start of an overblow) was determined by the sudden change in the conductivity of the solution between two custom-made electrodes mounted at the end of each PJM nozzle. The bubble egress time was used to ensure simultaneous or near-simultaneous overblow (i.e., within 20 to 250 ms) of the PJMs during the multiple PJM overblow tests.

Measurement of the solution conductivity was achieved by a signal conditioner that applies 5 volts between two resistors in series. The second resistor was wired in parallel with the electrodes attached to the PJM nozzle. The signal conditioner sensed the voltage drop across the second resistor/electrode combination and sent this value to the DAS-2. For example, when water was in contact with the electrodes, the voltage drop was on the order of 1.4 volts. During an overblow, the conductivity was very low, and the voltage recorded rose to approximately 1.8 volts.

(a) This uncertainty was determined assuming that the probe was positioned at the center of the tow vessel.
(b) The velocity probe at the 18-inch location was replaced during the 4-PJM testing due to a drift in the baseline velocity during the 8-PJM clay testing.

3.1.8 Hydrophones

Four Reson TC4040 hydrophones were used to measure the acoustic and dynamic pressure signals associated with single and multiple (simultaneous) PJM drive overblows. The hydrophones were connected through Dytran Instruments, Inc., model 4705M3 inline charge amplifiers. The charge amplifiers converted the charge signal from the hydrophone to low impedance voltage signals. These signals were then passed through an LDS Dactron Focus II spectrum analyzer (DAS-2), where voltage data were converted to meaningful pressure units (Pa).

3.1.9 In-Tank Pressure

Pressure transmitters mounted on an instrument tree support were used to measure hydrodynamic and static pressures. Nine pressure transmitters, Entran model EPX-V0-10P units with a range of 0–10 psig and a response time <1 ms, were mounted on the instrument tree. These sensors were miniature units with small (0.15-inch diameter) flush mounted stainless steel diaphragms. Each transmitter was mounted at the submerged end of a length of 1/2-inch O.D. stainless steel tubing in such a way that its diaphragm was fully wetted and not inside a pocket or recess.

The nine sensors were mounted at three different elevations in the tank, as will be discussed in detail in Sections 4 and 5. Figure 3.4 contains photographs of the ½-inch mounting tubes at the top (on the left), middle (in the center) and bottom (on the right) elevations, taken before installation of the pressure sensors in the tubes and before mounting the tubes in the tank. At the upper elevation one sensor pointed down and angled slightly off of vertical (denoted as the 'TA' sensor elsewhere in this report), another pointed straight down (the 'TD' sensor) and another pointed horizontally (the 'TT' or 'top tangential' sensor). A similar arrangement was used at the middle elevation in the tank. At the bottom elevation, one sensor pointed down at approximately 45^{o} (the 'BAD' sensor) while another pointed up at approximately 45^{o} (the 'BAU' sensor) and the third pointed horizontally (the 'BT' sensor).

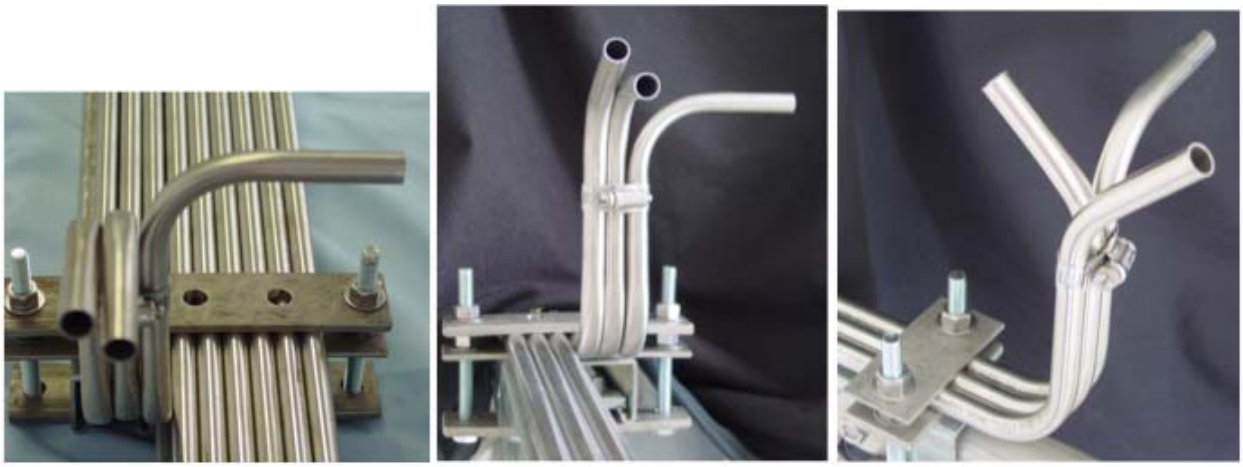

Figure 3.4. In-Tank Pressure Sensor Mounting Tubes at Top (Left), Middle (Center) and Bottom (Right) Elevations

Each sensor was screwed into a plug that was machined to fit snug into the submerged end of the ½-inch tubing after de-burring the tube ends. The sensor cables were threaded up the tubing and the plugs were epoxied into place at the ends of the tubes. The sensor threads, vent tubes and cable splices were all sealed with a marine silicone sealant as further protection of the sensors against water damage. As noted above, the sensor diaphragms were flush with the exposed plug faces. Figure 3.5 is a photograph of the lower sensors installed in the tank (in the 4-PJM system).

Figure 3.5. Lower In-Tank Pressure Sensors in the Tank (4-PJM configuration). Note the flush mounting of the diaphragm on the tip of the probe.

3.1.10 Probe Mast Acceleration

A submerged accelerometer was used during testing in the 4-PJM configuration. The accelerometer was installed at the end of a vertical mast that was positioned between PJM A and PJM D. The mast was constructed from 2-inch schedule 80 stainless steel pipe, and the accelerometer was mounted inside a housing at the end of the pipe. (Note: the schedule 80 stainless steel pipe mast of the accelerometer was approved by DEI upon examination of preliminary PJM overblow data collected with the accelerometer in the tank.) The mast was rigidly clamped to PJM support cross beams at the top and again farther down, but the submerged end of the pipe was allowed to swing freely. Refer to Section 5.5 for a detailed discussion of the mast dimensions and mounting. The accelerometer was glued (with Loctite 454) to the inside of a flange plate that bolted to the base of the housing. Figure 3.6 is a drawing of the housing. The accelerometer was glued to the vertical mounting tab inside the flange plate. Figure 3.7 is a photograph of the housing inside the tank (in the 4-PJM system).

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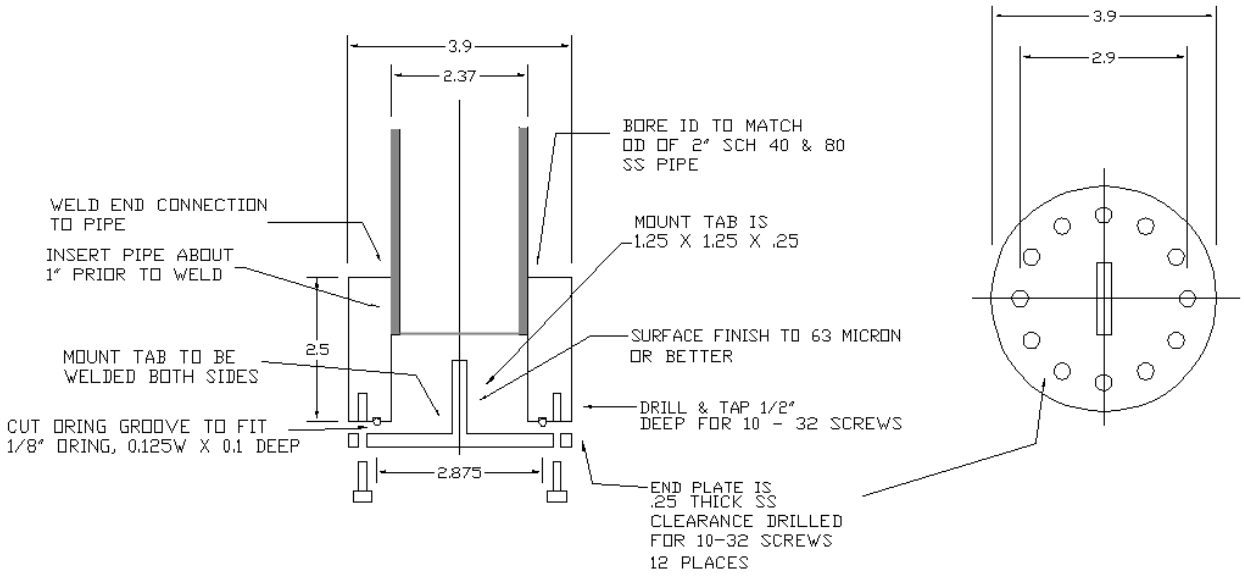


Figure 3.6. Accelerometer Housing (dimensions in inches)

Figure 3.7. Accelerometer Housing Inside the Tank in 4-PJM Configuration (the distance from the PJM was changed slightly after this picture was taken)

The accelerometer (PCB model 356A15) measured acceleration along three orthogonal directions. The manufacturer's specifications were for <5% off-axis sensitivity in each direction. One axis (z-axis) was pointed toward the center of the tank, another (y-axis) circumferentially, and a third (x-axis) down along the center of the mast. The tab that the accelerometer was glued to was normal to the z-axis. The three output signals passed through a signal conditioning unit before being sent to DAS-2. The unit was a PCB model 482A16.

3.1.11 Video Cameras

Standard video cameras were used to provide a visual recording of overblows and to aid in understanding the overblow phenomena. The video cameras were either mounted above the tank rim to view the tank surface or were held by hand from the bridge above the tank. These standard cameras run at 30 fps and were used to record selected overblows.

For selected water tests, a Photron 1280 PCI high-speed digital video camera placed in a waterproof enclosure and fixed to the tank bottom near a PJM nozzle was used to record videos of overblows. The camera was mounted near PJM #7 during the 8-PJM tests and near PJM B during the 4-PJM tests. Subsurface videos were obtained at each water level and at each overblow condition, as discussed in Sections 6 and 7. The camera employed a 10-bit complementary metal oxide semiconductor sensor and had an electronic shutter that could operate as fast as 7.8 μs. It was capable of up to a 500-frame-per-second frame rate at a resolution of 1,280 x 1,024 pixels and up to 16,000 frames per second at reduced resolution. High-speed video recordings were made at between 250 and 1000 fps. The frame rate used appears in the images.

3.1.12 JPP Skid Pressures

The drive and suction pressures at the JPP skids were measured using Druck (Model PTX-611) pressure transmitters. These pressure transmitters had a range of 0-to-10 Bar-gauge with an accuracy of ±0.01% of full scale. The drive and suction pressures recorded by the pressure transmitters on the JPP skids did not feed into either of PNNL's data acquisition systems but rather into a BNI-provided controller. Pressure indications from the controller were recorded manually into the LRB or the bench sheets used during the tests. These data are provided for indication only.

3.2 Data Acquisition Systems

Several data acquisition systems were used to obtain and record data from the various instruments used in the present testing. These systems are discussed in this section.

3.2.1 DAS-1 (DASYLab)

Data that did not require extremely high data recording rates were recorded digitally on a computer using DASYLab Version 8.0 data acquisition software. The list of the various instruments connected to DAS-1 is presented in Table 3.1. This system could handle up to 64 channels of input. The number of inputs used was limited to a maximum of 35 at our desired sampling rates and durations of data logging.

3.2.2 DAS 2 (DACTRON)

The hydrophones and other instruments (see Table 3.2) that required high (>10 kHz) data sampling rates were connected to an LDS-Dactron Focus II spectrum analyzer that converted the input voltages to output in meaningful units (e.g., Pa). During 8-PJM testing, one Focus II unit was used that sampled 20 channels at 10.24 kHz. During 4-PJM testing, a second unit was added to sample a total of 22 channels at 10.24 kHz. The Focus II units can sample at up to 42 kHz; however, preliminary testing revealed that the lower rate used provided sufficient over-sampling. The units discretized all channels to 24-bit resolution.

3.2.3 DAS 4 (High-Speed Video Camera)

The computer that controlled the high-speed underwater video camera and temporarily stored the video files was denoted as DAS-4.

3.3 Time Synchronization

The data recorded on DAS-1 and DAS-2 included a time stamp signal that provided a common time reference in the output files of each system. The signal was a voltage pulse triggered by a manually operated push button. The rise times of the pulses were of the order of 1 ms. The button was generally pushed twice during each experiment, so usually two synchronization pulses were recorded in each file.

The subsurface video controller DAS-4 sent a trigger signal to DAS-2 that indicated the start and the stop of high-speed video recording. This timing signal was recorded by DAS-2 to allow the video frames to be correlated with the pressure and acoustic signals. During testing it was discovered that there was a small time delay between the start of the video recording and initiation of the timing signal. This time delay is discussed in Section 9.9.

4.0 8-PJM Equipment Configuration

As discussed in Section 3, a variety of instruments including hydrophones, pressure transmitters, and velocity were included in the tank to characterize the PJM overblow phenomena. This section discusses the location of these instruments in the tank during the 8-PJM testing. Information regarding the 8-PJM test configuration is presented in Bontha et al. (2005). All dimensions presented in this section were obtained with a standard tape measure, or were derived from such measurements, and are considered to be within ±0.5 inch of the true values. Except where otherwise noted, stated angles were estimated from other measurements using the program "TurboCAD" and are considered to be within ±1 degree of the true values.

4.1 General Information

Table 4.1 lists the general information relating to all as-built measurements of the instrument locations made in the tank. This information is presented in plan view in Figure 4.1. Shown in the figure are the locations of the spargers and the diameter of the central shroud. Also shown is the width of the overhead walkway—a dimension that is important in determining the locations of instruments that were mounted from the sides of the walkway. See Bontha et al. (2005) for more details of the 8-PJM configuration.

Table 4.1. General Information Relating to all as-Built Measurements, 8-PJM Configuration

General Information	Distance (inches)
Tank inside diameter	153
Tank height as measured from the tank centerline	178.2
Vertical distance from top of hand rail to top of tank	70.5
Vertical distance of top of tank rim to center of perimeter nozzles	168.0

4.2 Hydrophones

A plan view of the radial locations of the four hydrophones installed in the tank in the 8-PJM configuration is shown in Figure 4.2. Corresponding dimensions are listed in Table 4.2. The dimensions listed in the table were derived from a collection of as-built measurements of instrument and PJM locations inside the tank, together with the manufactured dimensions of the tank itself.

The hydrophones were secured at the end of unistrut columns. The columns were supported by mounts on the upper and lower handrails of the bridge over the tank. This design had the advantage of allowing the hydrophone vertical positions in the tank to be varied, but had the disadvantage of allowing some movement of the hydrophones in the horizontal plane. According to the test specification for the overblow testing in the 8-PJM system, the lowest, middle, and highest elevation of the hydrophones correspond to 18, 48, and 96 (±2) inches from the tip of the hydrophone down to the level of a perimeter PJM nozzle. The specified hydrophone levels relative to the nozzles are illustrated in the vertical section drawing (Figure 4.3).

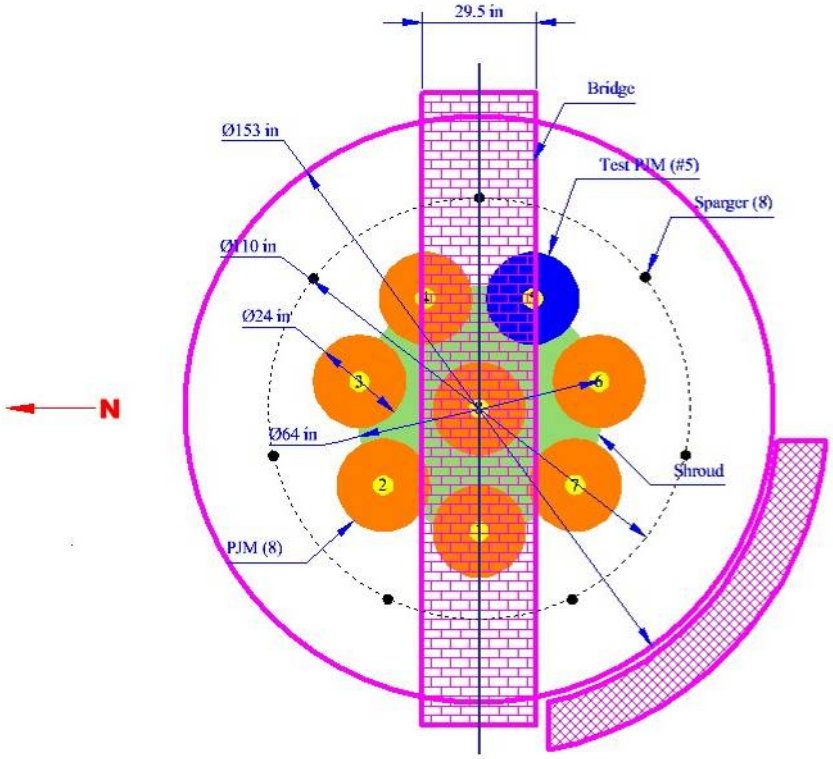


Figure 4.1. Plan View of the 8-PJM Configuration (see Bontha et al. 2005)

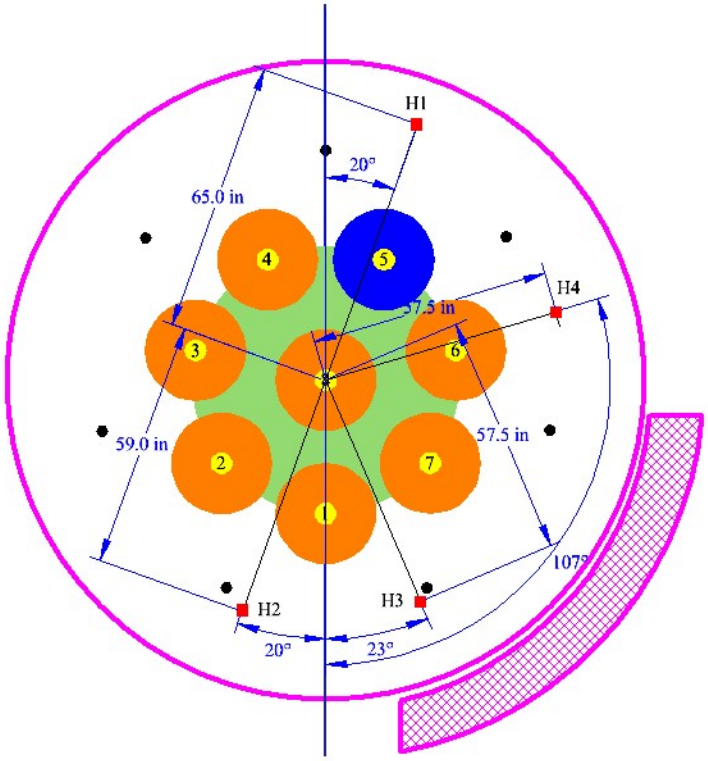


Figure 4.2. Radial Location of the Four Hydrophones Installed in the 8-PJM Configuration

Table 4.2. Hydrophone Locations, 8-PJM Configuration

	Radial Pos. R (in.)[(a)]	Angular Pos. θ (deg)[(b)]	Elevation Above Tank Floor (in.)[(c)]			Elevation Above Perimeter PJM Nozzle (in.)		
			Low	Mid	High	Low	Mid	High
Hydrophone 1	65.0	160	28.2	58.0	105.6	18.0	47.8	95.4
Hydrophone 2	59.0	340	28.4	58.2	105.8	18.2	48.0	95.6
Hydrophone 3	57.5	23	28.4	58.0	106.4	18.2	47.8	96.2
Hydrophone 4	57.6	107	28.2	58.0	106.2	18.0	47.8	96.0

(a) All radial positions are measured from the tank center line.
(b) All angular positions are measured counterclockwise from the line joining the tank center and the center of PJM 1.
(c) All elevations above the tank floor are determined from the tank centerline.

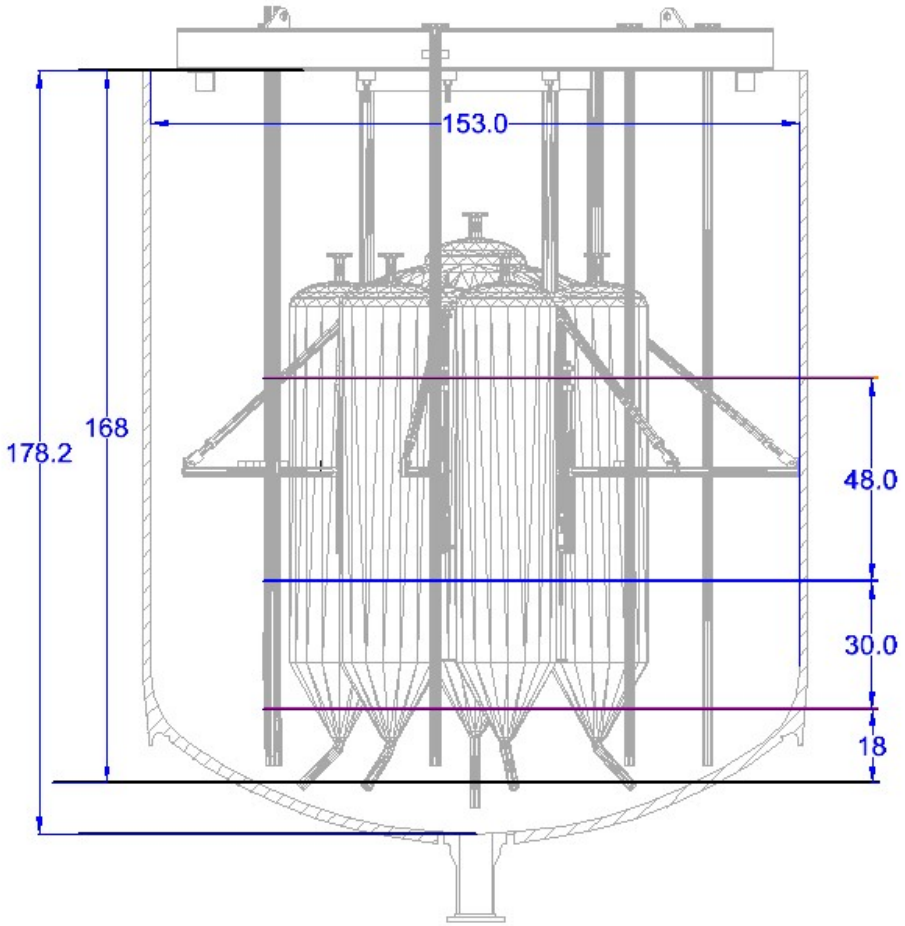


Figure 4.3. Hydrophone Spacing in the 8-PJM Configuration

4.3 Velocity Probes

Three velocity probe sensors were mounted on a vertical mast that was rigidly positioned in the tank by fixing the top of the tree to the bridge above the tank and inserting the bottom of the tree into a cup glued to the bottom of the tank. Figure 4.4 shows a plan view of the radial location of velocity probe center and the mast holding the probes. The corresponding dimensions are listed in Table 4.3. The three probes were arrayed on the mast at elevations of 18, 48, and 96 (±2) inches above the perimeter PJM nozzles.

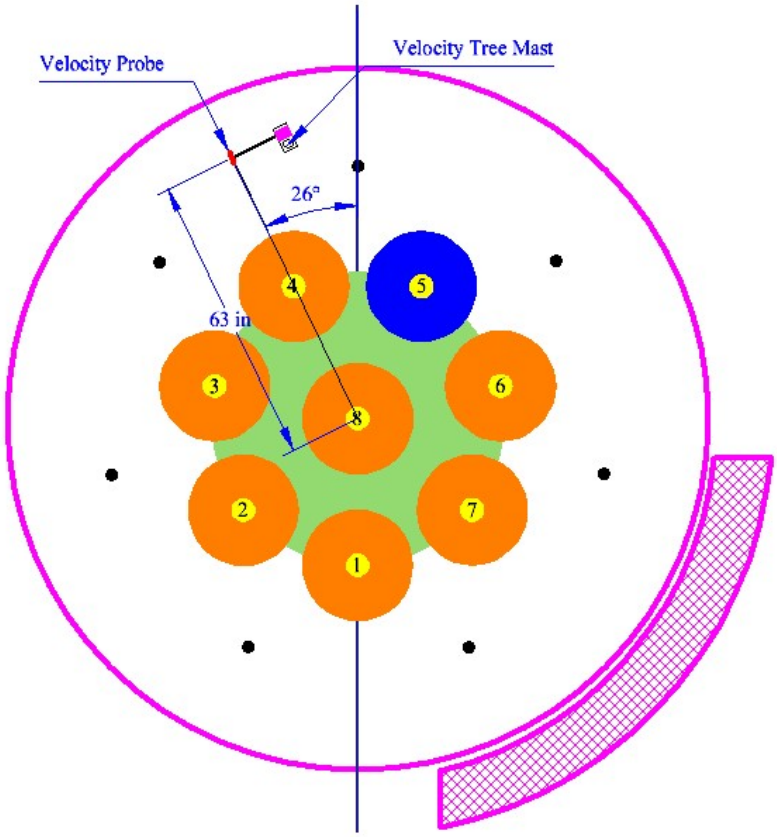


Figure 4.4. Plan View Showing Location of Velocity Probe and Mast Installed in 8-PJM Configuration

4.4 In-Tank Pressure Transmitters

Nine in-tank pressure transmitters were positioned at three elevations in the tank (with three sensors at each elevation) by mounting each transmitter in a separate tube oriented in the desired direction and affixing the tubes onto a mast. The mast was rigidly positioned in the tank by fixing the top of the mast to the bridge above the tank and inserting the bottom of the tree into a cup glued to the bottom of the tank. The pressure tree was mounted close to hydrophone 1. A plan view showing the radial location of the pressure transmitter tree mast is presented in Figure 4.5. The corresponding dimensions are included in Table 4.3. Additional as-built measurements of the pressure sensor locations, with details about their

Table 4.3. Velocity Probe, Laser Level, and Pressure Transmitter Mast Locations, 8-PJM Configuration

Instrument	Radial Pos. R (in.)[(a)]	Angular Pos., θ (deg)[(b)]	Elevation Above Tank Floor (in.)[(c)]			Elevation Above Perimeter PJM Nozzle (in.)		
			Low	Mid	High	Low	Mid	High
Velocity Probe	63.0	206	28.2	58.2	106.2	18.0	48.0	96.0
Laser Probe 1	59.7	118	NA	NA	NA	NA	NA	NA
Laser probe 2	50.5	212	NA	NA	NA	NA	NA	NA
Laser Probe 4	50.2	53	NA	NA	NA	NA	NA	NA
Press. Trans. Tree Mast	62.0	156	See Tables 4.4 and 4.5 for additional information about pressure sensor location					

(a) All radial positions are measured from the tank center line.
(b) All angular positions are measured counterclockwise from the line joining the tank center and the center of PJM 1.
(c) All elevations above the tank floor are determined from the tank centerline.

relative orientations and the positions of the active diaphragms relative to the mast and to the PJMs are listed in Tables 4.4 and 4.5. The distances listed in Table 4.5 are straight lines between the tip of the PJM-5 nozzle and the tips of the sensors. They are not elevations (they include the x, y and z displacements of the nozzle tip from the PJM centerline and the x, y and z displacements of the sensor tip from the mast centerline).

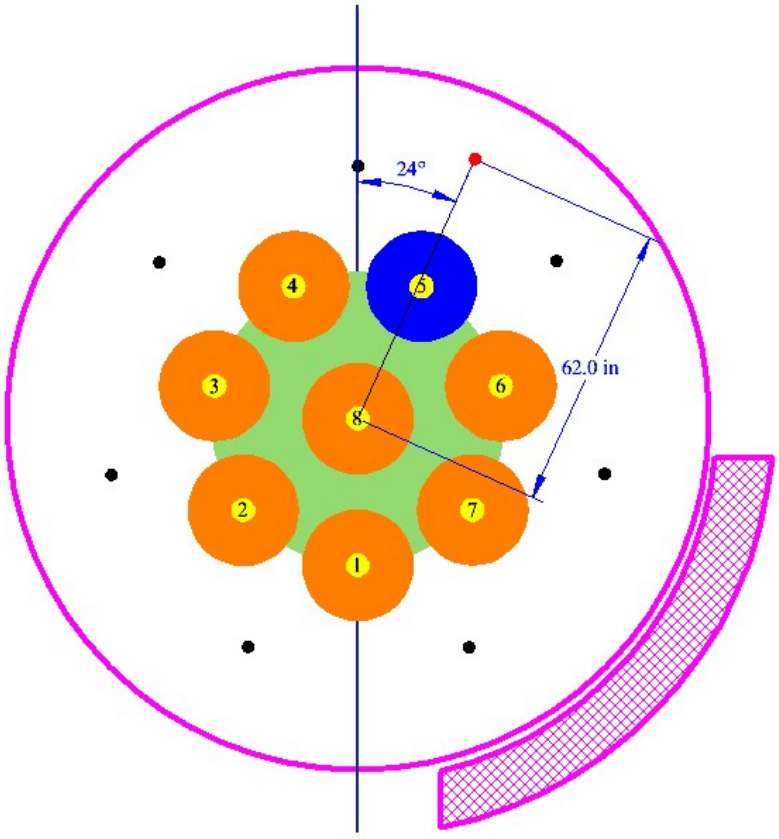


Figure 4.5. Plan View of the Tank Showing the Location of the Pressure Transmitter Tree Mast Installed in the 8-PJM Configuration

4.5 Laser Levels

The locations of the laser beam strike points are illustrated with red stars in Figure 4.6. They were positioned to measure levels near operating PJMs 4–7. Corresponding dimensions are listed in Table 4.3.

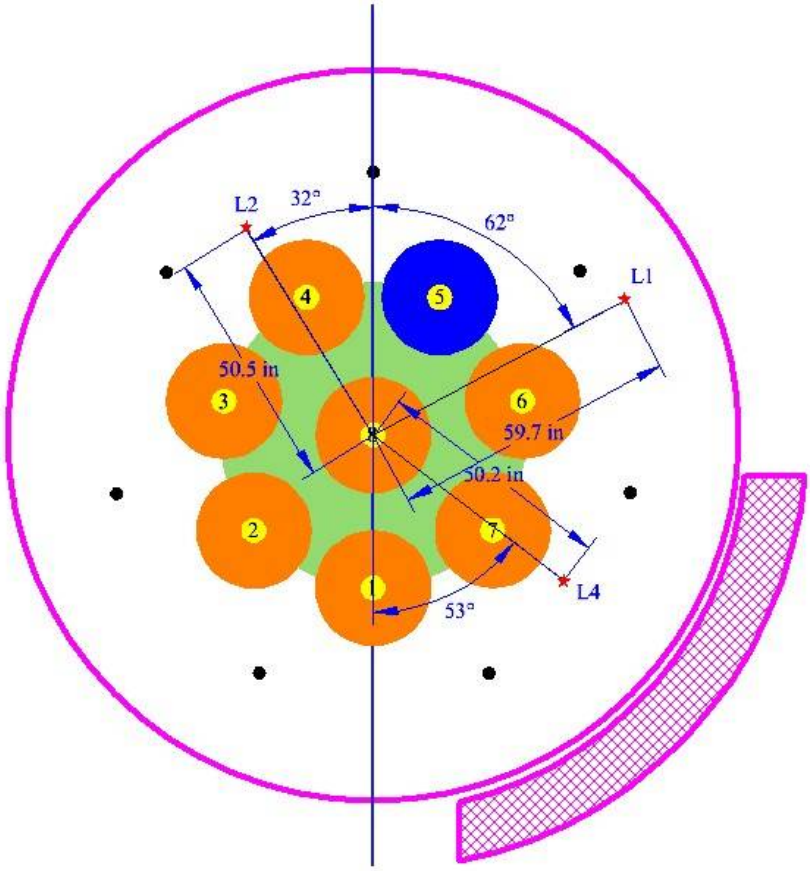


Figure 4.6. Location of the Laser Levels, 8-PJM Configuration

Table 4.4. In-Tank Pressure Transmitter Nomenclature, Orientation, and As-Built Information, 8-PJM Configuration

Code	Transmitter Name	Diaphragm Orientation[a]	Vertical Distance of Sensor Tip Below Tank Rim (inches)	Offset of Sensor Tip from Centerline of Mast[b]	
				Radially Toward PJM 5 (in.)	Tangentially Toward SW (in.)[c]
BT	Bottom tangential	Tangential, pointing toward SW[c]	146.9[d]	7.6	4.5
BAD	Bottom angled down	Angled down 44° facing PJM 5 nozzle	148.5[d]	8.5	0
BAU	Bottom angled up	Angled up 46°,facing PJM 5 nozzle	145.8[d]	8.6	0
MT	Middle tangential	Tangential, pointing toward SW[c]	123.0[e]	7.0	5.5
MD	Middle straight down	Pointing straight down, facing PJM 5 nozzle	126.5[e]	7.3	0
MA	Middle angled down	Angled down 69°, facing PJM 5 nozzle	126.1[e]	7.8	0
TT	Top tangential	Tangential, pointing toward SW[c]	75.0[f]	7.5	2.0
TD	Top straight down	Pointing straight down, facing PJM 5 nozzle	79.1[f]	7.3	-1.5
TA	Top angled down	Angled down 79°, facing PJM 5 nozzle	79.1[f]	7.5	-2.0

(a) Up/down diaphragm orientation angles listed are considered to be within ± 3 degrees of the true values.
(b) The location of the mast within the tank is illustrated in Figure 4.5.
(c) Positive tangential (circumferential) offsets were to the SW (clockwise in Figure 4.5) from the mast centerline. Negative tangential offsets were to the NE (counter-clockwise) from the mast centerline.
(d) The bottom sensors were 19.5 to 22.2 inches above the perimeter 8-PJM nozzles. Thus they were slightly above the low hydrophone and velocity probe elevations listed in Tables 4.2 and 4.3.
(e) The middle sensors were 41.5 to 45 inches above the perimeter 8-PJM nozzles. Thus they were slightly below the mid hydrophone and velocity probe elevations listed in Tables 4.2 and 4.3.
(f) The top sensors were 88.9 to 93 inches above the perimeter 8-PJM nozzles. Thus they were slightly below the high hydrophone and velocity probe elevations listed in Tables 4.2 and 4.3.

Table 4.5. As-Built Information of the In-Tank Pressure Transmitter Distances from PJM 5 Nozzle, 8-PJM Configuration

Measurement	**Distance** (inches)
Straight line distance from center of PJM 5 nozzle to tip of center of pressure transmitter ’BT’	26.5
Straight line distance from center of PJM 5 nozzle to tip of center of pressure transmitter ’BAD’	23.8
Straight line distance from center of PJM 5 nozzle to tip of center of pressure transmitter ’BAU’	27.3
Straight line distance from center of PJM 5 nozzle to tip of center of pressure transmitter ’MT’	48.5
Straight line distance from center of PJM 5 nozzle to tip of center of pressure transmitter ’MD’	44.8
Straight line distance from center of PJM 5 nozzle to tip of center of pressure transmitter ’MA’	44.8
Straight line distance from center of PJM 5 nozzle to tip of center of pressure transmitter ’TT’	95.0
Straight line distance from center of PJM 5 nozzle to tip of center of pressure transmitter ’TD’	91.5
Straight line distance from center of PJM 5 nozzle to tip of center of pressure transmitter ’TA’	91.5

5.0 4-PJM Equipment Configuration

During 4-PJM testing, hydrophones, pressure transmitters, and velocity probes used in the earlier 8-PJM testing were relocated, and a submerged accelerometer was installed for the 4-PJM testing. This section discusses the location of these instruments in the tank. Information regarding the 4-PJM equipment configuration is presented in Bontha et al. (2003a,b). All dimensions presented herein were obtained with a standard tape measure—or derived from such measurements—and are considered to be within ±0.5 inch of the true values. Except where otherwise noted, stated angles were estimated from other measurements using "TurboCAD" and are considered to be within ±1 degree of the true values.

5.1 General Information

Figure 5.1 is the plan view, and Table 5.1 shows the general information relating to all as-built measurements of the instrument locations made in the tank. Shown in the figure are the relative locations of the PJMs. Also shown is the width of the overhead walkway—a dimension that is important in determining the locations of instruments that were mounted from the sides of the walkway. See Bontha et al. (2003b) for more details of the 4-PJM configuration.

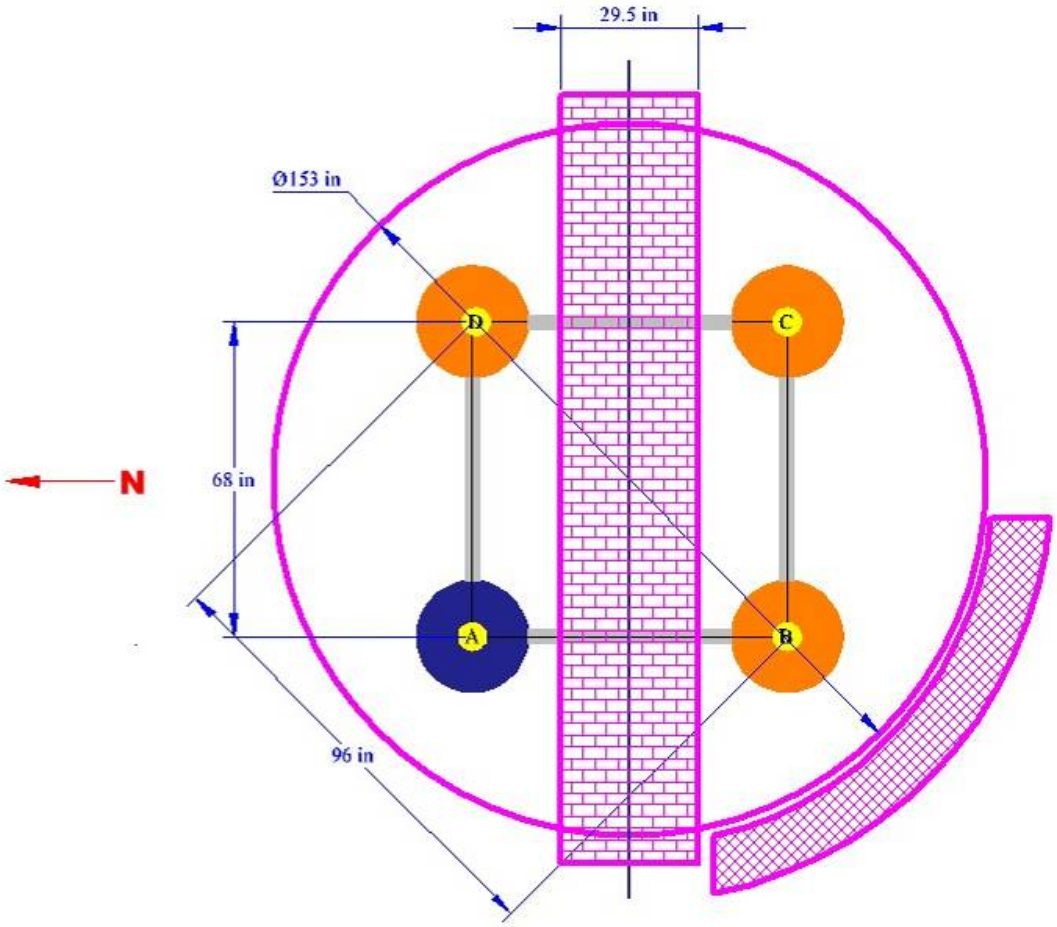


Figure 5.1. Plan View of the 4-PJM Configuration (see Bontha et al. 2003b)

Table 5.1. General Information Relating to all as-Built Measurements, 4-PJM Configuration

General Information	Distance (inches)
Tank inside diameter	153
Tank height as measured from the tank centerline	178.2
Vertical distance of top of tank rim to center of perimeter nozzles	162.5

5.2 Hydrophones

A plan view of the radial locations of the four hydrophones installed in the tank in the 4-PJM configuration is shown in Figure 5.2, and corresponding dimensions are listed in Table 5.2. The dimensions listed in the table were derived from a collection of as-built measurements of instrument and PJM locations inside the tank, together the manufactured dimensions of the tank itself. The hydrophones were secured at the end of unistrut columns. The columns were supported by mounts on the upper and lower handrails of the bridge over the tank. Figure 5.3 contains photographs of such columns.

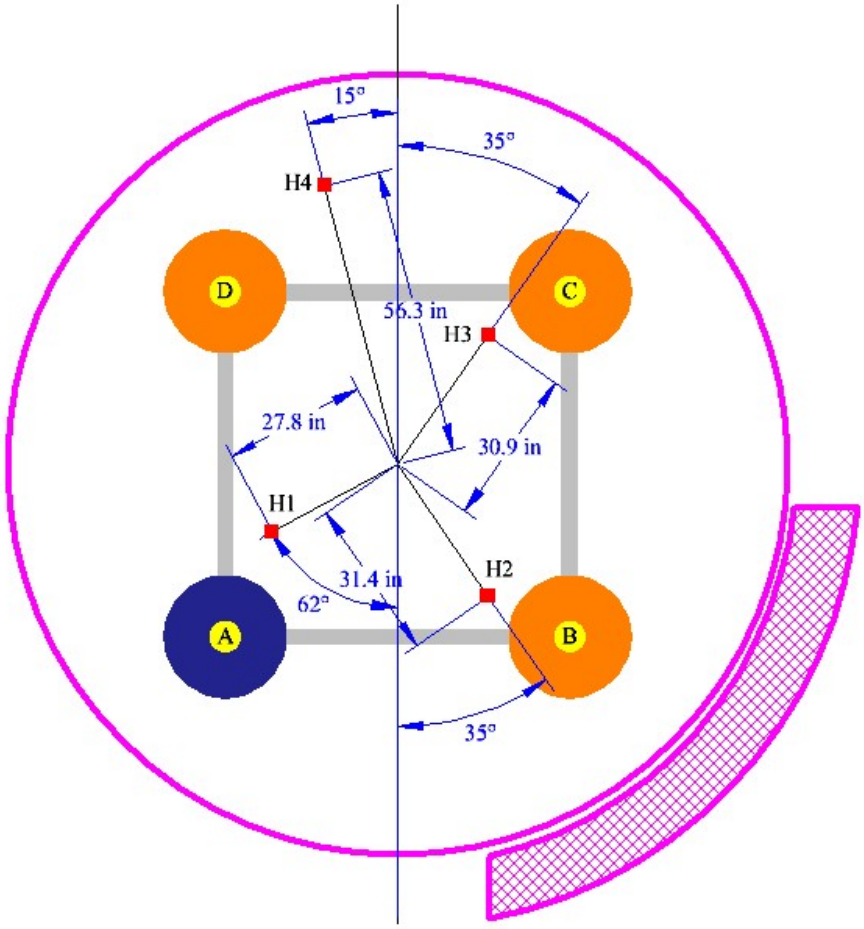


Figure 5.2. Radial Location of the Four Hydrophones Installed in the 4-PJM Configuration

Table 5.2. Hydrophone Locations, 4-PJM Configuration

	Radial Pos. R (in.)[a]	Angular Pos. θ (deg)[b]	Elevation above Tank Floor (in.)[c]				Elevation above Perimeter PJM Nozzle (in.)			
			Low	Other	Mid	High	Low	Other	Mid	High
Hyd. 1	27.8	298	15.7	33.7	63.7	111.7	0.0	18.0	48.0	96.0
Hyd. 2	31.4	35	15.7	33.7	63.7	111.7	0.0	18.0	48.0	96.0
Hyd. 3	30.9	145	15.7	33.7	63.7	111.7	0.0	18.0	48.0	96.0
Hyd. 4	56.3	195	15.7	33.7	63.7	111.7	0.0	18.0	48.0	96.0

(a) All radial positions are measured from the tank center line.
(b) All angular positions are measured counterclockwise from the line joining the tank center and the line passing through the center of PJMs A and B.
(c) All elevations above the tank floor are determined from the tank centerline.

Figure 5.3. Hydrophone Mounting Columns (top left, bottom end with black tip of hydrophone protruding from the end; top right, rising shaft with rubber snubber mounted on red crossbeam; bottom, top of column attached to frame mounted on handrails above tank)

This design had the advantage of allowing the hydrophone vertical positions in the tank to be varied, but had the disadvantage of allowing some movement of the hydrophones in the horizontal plane. During experiments, the vertical position of the hydrophones was set at either the low (in line with the PJM nozzles), other (18 inches above the nozzles), middle (48 inches above the nozzles) or upper (96 inches above the nozzles) vertical level. The levels relative to nozzles are illustrated in the vertical section drawing (Figure 5.4). The low hydrophone level in the 4-PJM configuration is not the same as the low level in the 8-PJM configuration (the "other" hydrophone level is the same as the low level in the 8-PJM configuration).

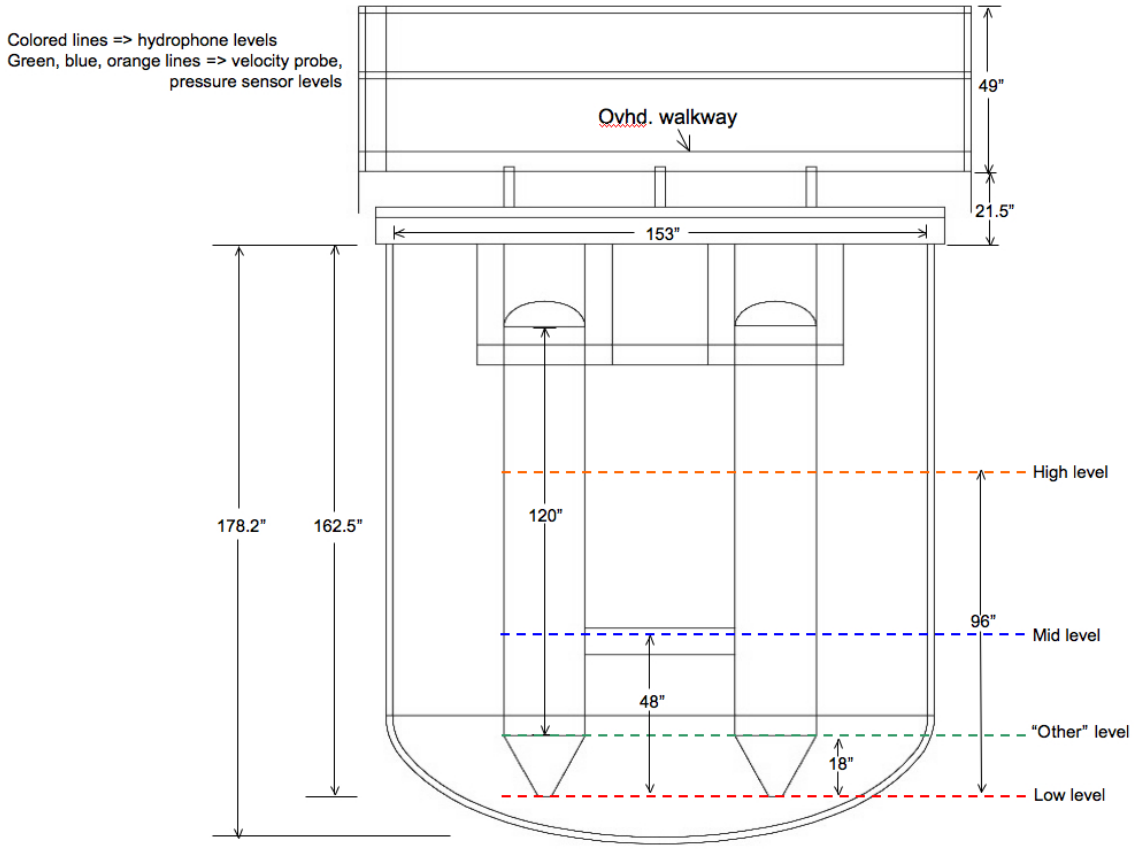


Figure 5.4. The Four Hydrophone Levels in the 4-PJM Configuration

5.3 Velocity Probes

Three velocity probe sensors were mounted on a vertical tree that was rigidly positioned in the tank by fixing the top of the tree to the bridge above the tank and inserting the bottom of the tree into a cup glued to the bottom of the tank. A plan view of the radial location of velocity probe center and the mast holding the probes is shown in Figure 5.5. The corresponding dimensions are listed in Table 5.3. The mast was placed so that the probe heads were directly above the bottom dead center of the tank. The three probes were positioned at levels of 18, 48, and 96 inches above the PJM nozzles, as illustrated in Figure 5.4. The lowest velocity probe level (18 inches above the nozzles) is the same as the "other" hydrophone level in the 4-PJM configuration.

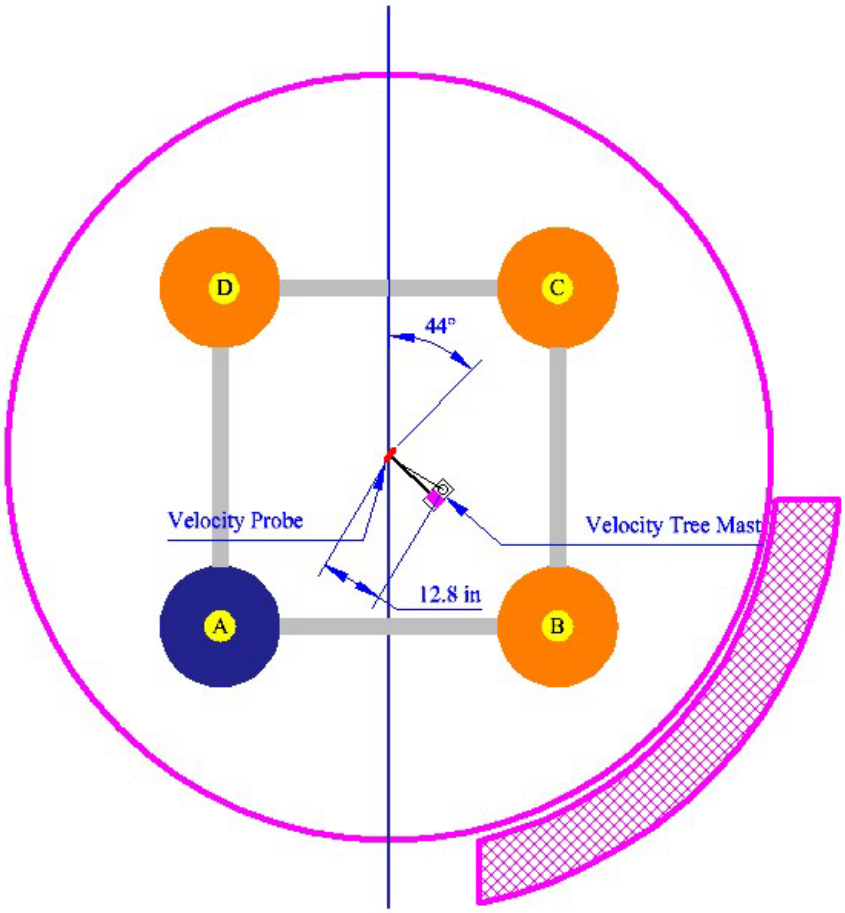


Figure 5.5. Plan View Showing Location of Velocity Probes and Mast Installed in 4-PJM Configuration

Table 5.3. Velocity Probe, Laser Level and Pressure Transmitter Mast Locations, 4-PJM Configuration

	Radial Pos. R (in.)[(a)]	**Angular Pos.,θ (deg)[(b)]**	**Elevation above Tank Floor (in.)[(c)]**			**Elevation above Perimeter PJM Nozzle (in.)**		
			Low	**Mid**	**High**	**Low**	**Mid**	**High**
Velocity Probe	0	136	33.7	63.7	111.7	18.0	48.0	96.0
Laser Probe 2	28.0	90	NA	NA	NA	NA	NA	NA
Laser probe 3	28.0	270	NA	NA	NA	NA	NA	NA
Laser Probe 4	61.3	158	NA	NA	NA	NA	NA	NA
Press. Trans. Tree Mast	38.0	283	See Table 5.4 for additional information about pressure sensor location					
Accelerometer	18.6	225	29.7			14.0		

(a) All radial positions are measured from the tank center line.
(b) All angular positions are angles (measured counterclockwise) from the line joining the tank center and the line passing through the center of PJM A and PJM B.
(c) All elevations above the tank floor are determined from the tank centerline.

5.4 In-Tank Pressure Transmitters

Nine in-tank pressure transmitters were positioned at three elevations in the tank (with three sensors at each elevation) by mounting each transmitter in a separate tube oriented in the desired direction and affixing the tubes onto a mast. The mast was rigidly positioned in the tank by fixing the top of the mast to the bridge above the tank and inserting the bottom of the mast into a cup glued to the bottom of the tank.

A plan view showing the radial location of the pressure transmitter tree mast is shown in Figure 5.6. The corresponding dimensions are included in Table 5.3. The names of the sensors and their orientations relative to each other remain the same as in the 8-PJM configuration unless otherwise noted in the table. Additional as-built measurements of the pressure sensor locations are listed in Table 5.4.

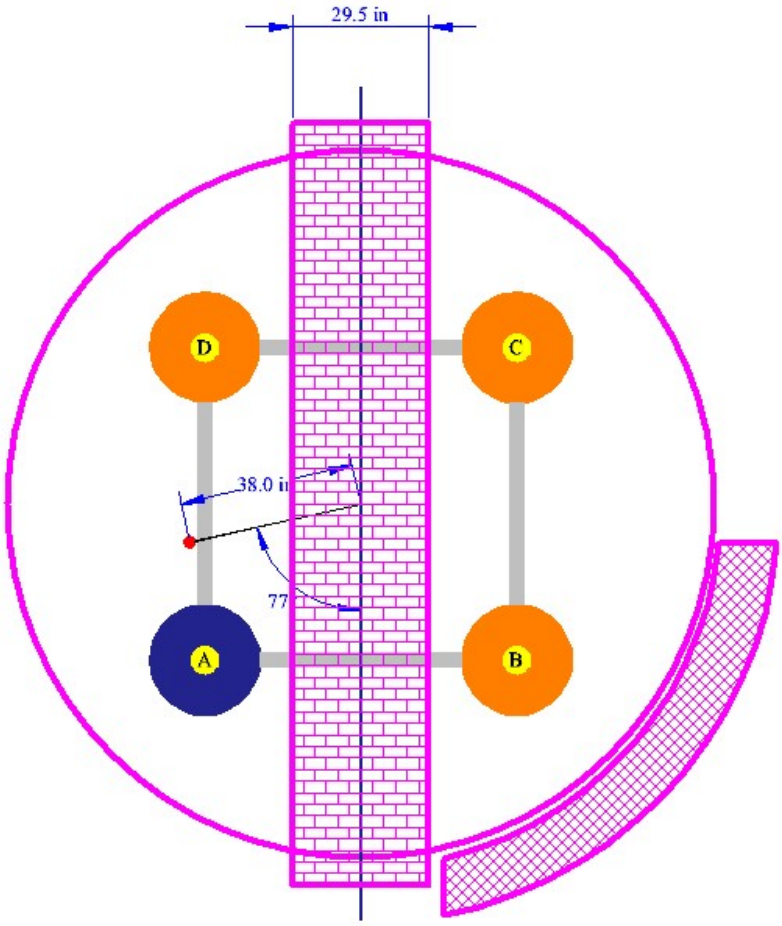


Figure 5.6. Plan View of the Tank Showing the Location of the Pressure Transmitter Tree Mast Installed in the 4-PJM Configuration

Table 5.4. As-Built Information of the In-Tank Pressure Transmitters, 4-PJM Configuration

Measurement	Distance (inches)
BT pressure sensor to tank centerline	35.75
BT pressure sensor to nozzle level (PJM A)	18
BT pressure sensor to MT pressure sensor	24[(a)]
BT pressure sensor to TT pressure sensor	72[(b)]
MT pressure sensor to tank centerline	34.75
TT pressure sensor to tank centerline	36
Center of pressure tree mast to tank centerline	38
Center of PJM A nozzle to pressure tree mast	25.75

(a) Test plan specification is 30 in. Dimension was changed to move the sensors away from a crossbeam.
(b) Test plan specification is 78 inches. The relative spacing between the middle and upper sensors was kept at the specification in the Test Plan.
(c) Relative orientations of the pressure sensors to each other remain the same as the 8-PJM configuration.

5.5 Accelerometer

As discussed in Section 3.1.10, the accelerometer was mounted at the end of a 2-inch schedule 80 stainless steel mast. The accelerometer probe mast was hung at the location shown in the plan view (Figure 5.7) between PJMs A and D. Locating dimensions are listed in Table 5.3.

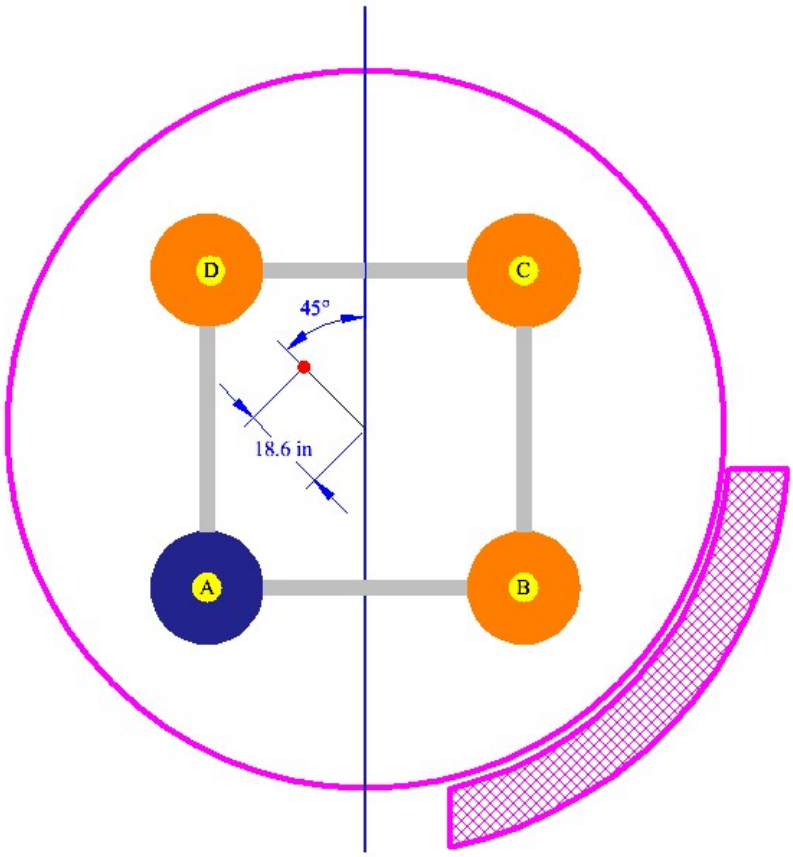


Figure 5.7. Location of the Accelerometer

The accelerometer probe mast was clamped with a unistrut bracket at a point on top of an 8-inch-tall beam that rested on the rim of the tank. It was similarly clamped on top of a 6-inch L-beam (open side facing the mast) the top of which was 30 inches below the tank rim. The total supported length of mast was approximately 39-inches. A vertical unistrut backbone was run between the two beams and was butted against the mast. The mast was attached to the backbone with two U-bolts. Figure 5.8 is a photograph of this upper portion of the mast. The bottom of the mast was 148.5 inches below the tank rim. The unsupported length of the mast was approximately 118.5 inches. The length of the mast was sufficient to make sure that the wetted end was always at least 12 inches below the liquid level during overblow at the lowest tank fill height.

Figure 5.8. The Mount for the Accelerometer Mast

5.6 Laser Levels

The locations of the laser beam strike points are illustrated with red stars in Figure 5.9. They were positioned to provide at least one measurement near the tank center and near any operating PJM (L2 and L3) and one more peripheral measurement (L4). Additional measurements of beam locations are listed in Table 5.3.

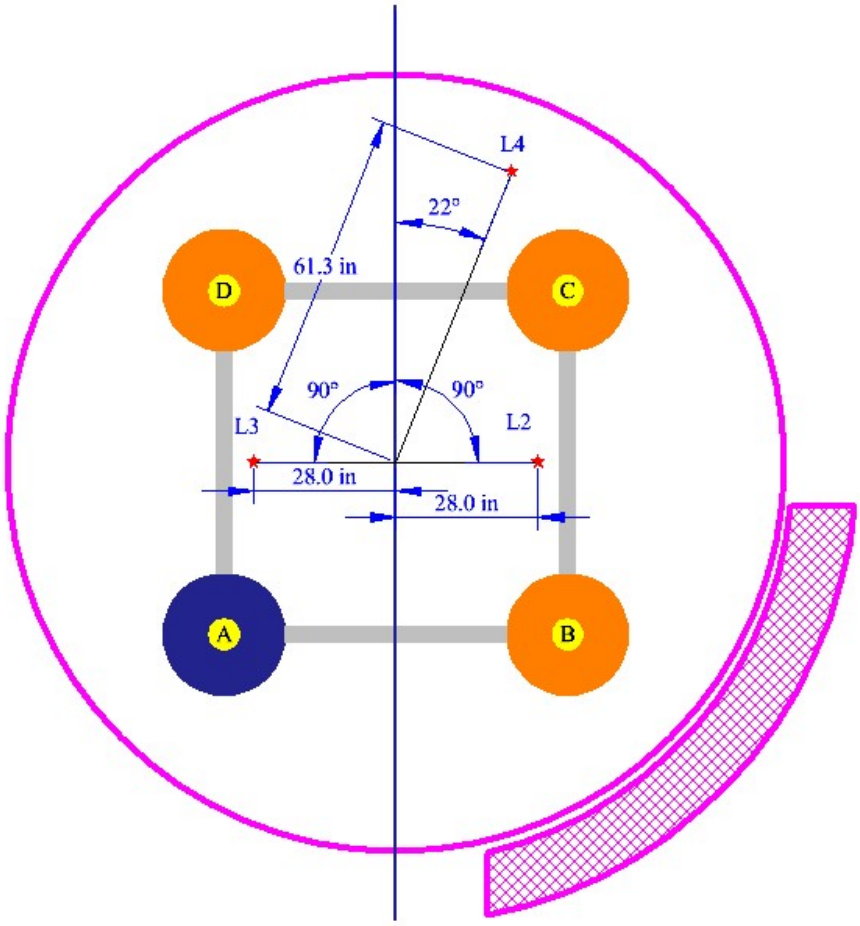


Figure 5.9. Location of the Laser Levels, 4-PJM Configuration

6.0 8-PJM Overblow Test Matrix

For each simulant, the various single and multiple overblow tests that were performed with the 8-PJM test configuration are shown in Tables 6.1, 6.2, and 6.3. Most of the overblow tests with the 8-PJM system were primarily concentrated around PJM#5. The tests were conducted with an overblow duration that typically ranged from 1.5 to as high as 7.5 seconds.

The tests required to assess the effect of simultaneous overblows on the loads inside the vessel are shown in Table 6.1. Simultaneous overblow tests were conducted at a simulant H/D = 0.8 (and also at 0.96 in water) and the hydrophones located at the low, mid, and high positions. Preliminary tests with two pulse tubes have shown that there is considerable variability in the times at which each PJM starts to overblow, with differences in the start times being as high as 300 ms. In this work, overblow data were collected from two pulse tubes until a set of overblows was obtained with a start time difference less than 20 ms. In the laboratory the time difference was estimated from plots of the conductivity probe data recorded on DAS-2 (at a rate of 10.24 kHz).

The tests required to assess the effect of Reynolds number on the loads inside the vessel are listed in Table 6.2. During these tests, one or two PJMs were overblown at varying nozzle velocities. Three repetitions were performed at each velocity. These tests were conducted in triplicate at each of the three target hydrophone levels. These tests were done with both water and clay simulants. Surface videos were made at each nozzle velocity and liquid level. Subsurface, high-speed videos of an overblow jet were made at each nozzle velocity and each level of water.

The tests required to assess the effect of multiple (three and four) overblows on loadings are listed in Table 6.3. These tests were conducted at only one nozzle velocity but were performed at all three hydrophone levels and all three liquid levels for each simulant. Surface videos were made of these tests at each liquid level. Subsurface high-speed videos were made at each level in water.

Most of the tests listed in Tables 6.2 and 6.3 were conducted without air sparging. A few selected tests were repeated with the air spargers turned on. These tests are noted in the Master Run Log, Appendix A.

Table 6.1. Simultaneous Overblow Test Conditions for the 8-PJM Configuration

Test Stand	**Simulant Level** (H/D)	**Simulant**	**Target Velocity**	**No. of PJMs**	**Repetitions**	**Hydrophone Levels**[(a)]
8-PJM	0.96	Water	14 ± 1 m/s	2 (PJMs #4 and #5)	As many as needed to obtain a data set with less than a 20 ms difference	Low, mid, high
8-PJM	0.8	Clay	14 ± 1 m/s	2 (PJMs #4 and #5)	As many as needed to obtain a data set with less than a 20 ms difference	Low, mid, high
(a) Low, medium and high hydrophone levels were 18”, 48” and 96” above the perimeter nozzles, respectively.						

Table 6.2. Single and Double Overblow Tests Performed to Investigate the Effect of Reynolds Number on Loadings in the 8-PJM Configuration

Test Stand	Simulant Level (H/D)	Simulant	Target Velocity (m/s)	PJMs	Repetitions	Hydrophone Levels[a]
8-PJM	0.31 0.55	Water/Clay	8 ± 1 12 ±1	#5	3	Low Mid[b] High[b]
8-PJM	0.8 0.96[c]		14 ±1 15 ±1	#4 and #5		

(a) Low, medium and high hydrophone levels were 18, 48 and 96 inches above the perimeter nozzles, respectively.
(b) Hydrophone measurements at the mid and high levels were not obtained at the low simulant fill level (H/D=0.31) because the hydrophones would be above the simulant surface. Hydrophone measurements at the high level were not obtained at the mid simulant fill level (H/D=0.55) because the hydrophones would be above the simulant surface.
(c) This level was used only in tests with water.

Table 6.3. Tests Performed to Investigate the Effect of Multiple Overblows on Loadings in the 8-PJM Configuration

Test Stand	Simulant Level (H/D)	Simulants	Target Velocity	PJMs	Repetitions	Hydrophone Elevations[a]
8-PJM	0.31 0.55	Water/Clay	14 ± 1 m/s	#4,5,6	3	Low Mid[b] High[b]
8-PJM	0.8 0.96[c]			#4,5,6,7		

(a) Low, medium, and high hydrophone levels were 18, 48, and 96 in. above the perimeter nozzles, respectively.
(b) Hydrophone measurements at the mid and high levels were not obtained at the low simulant fill level (H/D=0.31) because the hydrophones would be above the simulant surface. Hydrophone measurements at the high level were not obtained at the mid simulant fill level (H/D=0.55) because the hydrophones would be located above the simulant surface.
(c) This level was used only in tests with water.

7.0 4-PJM Overblow Test Matrix

For each simulant, the various single and multiple overblow tests that were performed with the 4-PJM test configuration are shown in Tables 7.1, 7.2, and 7.3. Most of the overblow tests with the 4-PJM system were primarily concentrated around PJM A. The tests were conducted with overblow durations that ranged from 2.5 and 7.5 seconds, most being 4 to 5 seconds long. A list of the tests performed is given in Appendix B, Master Run Log.

Many of the desired tests were to be performed at a target velocity of 12 m/s. Because of air flow limitations through the regulators on the JPP skids,(a) the value of 12 m/s is a nominal figure that may not have been reached under some conditions with more than one PJM operating. For all runs with a nominal target velocity of 12 m/s, the relevant supply regulators on both JPP skids were set at 100% open. No tolerance on the target velocity is shown here for the 12 m/s runs.

The tests required to assess the effect of simultaneous overblows in-tank loadings are shown in Table 7.1. Preliminary tests with two pulse tubes have shown that there is considerable variability in the times at which the overblows start, with differences as high as 300 ms. In this work, overblow data were collected from two pulse tubes until a set of overblows was obtained with a start time difference less than 20 ms. In the laboratory, the time difference was estimated from plots of the conductivity probe data recorded on DAS-2. In water these tests were performed using PJMs A and C. The conductivity probe on PJM C failed (showing evidence of a short circuit to ground) during the time the simultaneous overblow tests were to be performed with the clay simulant. Simultaneous overblow tests with clay were performed using PJMs A and B. Simultaneous overblow tests in clay were also attempted using a simultaneity criterion based PJM inlet pressures (instead of nozzle area conductivity). These latter tests were conducted using PJMs A and C, and the results are presented for information only.

The tests required to assess the effect of Reynolds number on the in-tank loadings are listed in Table 7.2. During these tests, one or two PJMs were overblown at four different target nozzle velocities. Three repetitions were performed at each velocity. The tests were conducted at each of the four target hydrophone levels and were repeated at each of the three target liquid levels. The whole series was done with both water and clay simulants. Surface videos were made at each nozzle velocity and liquid level. Subsurface, high-speed videos of an overblow jet were made at each nozzle velocity and each water level.

The tests required to assess the effect of multiple (three and four) overblows on loadings are listed in Table 7.3. These tests were conducted at only one nozzle velocity but were performed at all four hydrophone levels and all three liquid levels for each simulant. Surface videos were made of these tests at each liquid level. Subsurface high-speed videos were made at each level in water. There were no air spargers installed in the 4-PJM configuration.

(a) To achieve target velocities of >10 m/s with the 4-PJM configuration, two JPPs were combined to supply the required air flow to each pulse tube. This is sometimes referred to as the 2-rack configuration.

Table 7.1. Simultaneous Overblow Test Conditions for the 4-PJM Configuration

Test Stand	Simulant Level (H/D)	Simulant	Target Velocity	No. of PJMs	Repetitions	Hydrophone Levels[(a)]
4-PJM	0.8	Water	12 m/s	2 (PJMs A and C)	As many as needed to obtain a data set with less than a 20 ms difference	Low, other, mid, high
4-PJM	0.8	Clay	12 m/s	2 (PJMs A and B)	As many as needed to obtain a data set with less than a 20 ms difference	Low, other mid, high
(a) Low, other, medium, and high hydrophone levels were 0, 18, 48, and 96 inches above the nozzles, respectively.						

Table 7.2. Single and Double Overblow Tests Performed to Investigate the Effect of Reynolds Number on Loadings in the 4-PJM Configuration

Test Stand	Simulant Level (H/D)	Simulant	Target Velocity (m/s)	PJMs	Repetitions	Hydrophone Levels[(a)]
4-PJM	0.31 0.55 0.8	Water/Clay	6 ± 1 8 ±1 10 ±1 12	A	3	Low Other Mid[(b)] High[(b)]
4-PJM				A and B		
(a) Low, other, medium and high hydrophone levels were 0, 18, 48, and 96 inches above the nozzles, respectively. (b) Hydrophone measurements at the mid and high levels were not obtained at the low simulant fill level (H/D=0.31) because the hydrophones would be located above the simulant surface. Hydrophone measurements at the high level were not obtained at the mid simulant fill level (H/D=0.55) because the hydrophones would be located above the simulant surface.						

Table 7.3. Tests Performed to Investigate the Effect of Multiple Overblows on Loadings in the 4-PJM Configuration

Test Stand	Simulant Level (H/D)	Simulants	Target Velocity	PJMs	Repetitions	Hydrophone Elevations[(a)]
4-PJM	0.31 0.55 0.8	Water/Clay	12 m/s	A,B,C	3	Low Other Mid[(b)] High[(b)]
4-PJM				A,B,C,D		
(a) Low, other, medium, and high hydrophone levels were 0, 18, 48, and 96 inches above the nozzles, respectively. (b) Hydrophone measurements at the mid and high levels were not obtained at the low simulant fill level (H/D=0.31) because the hydrophones would be located above the simulant surface. Hydrophone measurements at the high level were not obtained at the mid simulant fill level (H/D=0.55) because the hydrophones would be located above the simulant surface.						

8.0 Run Logs and Data Files

8.1 Master Run Logs

The master run logs for the water and clay runs are provided as Appendices A and B of this report. These master run log sheets summarize the test conditions and provide the file names for the data recorded on DAS-1, DAS-2, DAS-4, and the surface video recording. The entries in each column of the master run log are described below.

- Column A provides a sequential numbering of each test. The format is E####, where #### is the sequential experiment number.
- Column B indicates the PJM configuration. An "8" denotes the 8-PJM cluster configuration, a "4" denotes the 4-PJM configuration.
- Column C indicates the simulant used, which is either water or clay.
- Column D provides the simulant height in inches, as measured from the tank rim. The simulant depth may be determined by subtracting the simulant distance from the tank rim from the total tank height of 178.2 inches. The total tank height is the distance from the inner bottom center of the tank to the tank rim.
- Column E provides the simulant height-to-diameter (H/D) ratio. The tank diameter is 153 inches.
- Column F provides the Bingham plastic yield stress (τ_{ys}) in Pa. This does not apply to water.
- Column G provide the Bingham plastic consistency (κ) in cP. This does not apply to water.
- Column H provides the total number of PJMs that are overblowing.
- Column I provides the pulse tube numbers for the PJMs that are being subjected to an overblow. See Figure 4.1 for the locations of the pulse tubes in the 8-PJM configuration. See Figure 5.1 for the locations of the pulse tubes in the 4-PJM configuration.
- Column J provides an estimate of the duration of the overblow. The values shown were estimated by eye from a computer display using the output from the conductivity probes. These values are presented for information only. The actual duration of a PJM overblow should be obtained from electronic data recorded during the testing (for example, from the pressure transmitter data recorded on DAS-1 or the conductivity probe data recorded on DAS-2).
- Columns K-O provide the drive pressure settings for each PJM in the 8-PJM configuration. These values are obtained from pressure transmitters on the PJM air supply racks and are for presented information only. A dash indicates that the PJM was not being tested.
- Columns K-N provide the drive pressure settings for each PJM in the 4-PJM configuration. If two pressures appear in a column in the master run log (Appendix B) for a PJM drive pressure, the values separated by a slash, this means that two JPP racks were used to supply drive air to the PJM during the experiment. The drive pressure values are obtained from pressure transmitters on the PJM air supply racks and are for presented information only. A dash indicates that the PJM was not being tested.

- Columns P-T provide the PJM operating settings for each PJM being tested in the 8-PJM configuration. The numbers provided are the times in milliseconds of the four steps in the PJM cycle in the format: vacuum/delay/drive/vent. These values are presented for information only.
- Columns O-R provide the PJM operating settings for each PJM being tested in the 4-PJM configuration.
- Column U in the 8-PJM configuration or column S in the 4-PJM configuration provides the target nominal peak average nozzle velocity. The values presented are for information only.
- Columns V-Y in the 8-PJM configuration indicate the level of each of the hydrophones during the test. Refer to Section 3 for the actual elevations and locations of the hydrophones at each level.
- Columns T-W in the 4-PJM configuration indicate the level of each of the hydrophones during the test. Refer to Section 4 for the actual elevations and locations of the hydrophones at each level.
- Column Z indicates whether spargers were on or off in the 8-PJM configuration
- Column AA in the 8-PJM configuration or column X in the 4-PJM configuration indicates whether any videos (surface or subsurface) were recorded.
- Column AB in the 8-PJM configuration or column Y in the 4-PJM configuration gives an index of which repeat the experiment corresponds in a set done at equivalent conditions. Most tests were done in triplicate.
- Column AC in the 8-PJM configuration or column Z in the 4-PJM configuration contains the DAS-1 (DASYLAB) file name.
- Column AD in the 8-PJM configuration or column AA in the 4-PJM configuration contains the DAS-2 (DACTRON) file name.
- Column AE in the 8-PJM configuration or column AB in the 4-PJM configuration contains the DAS-4 file name (high speed video file name). Note that the frame rate used is stamped on the recorded video along with time and frame step data.

8.2 DAS-1 (DASYLAB) File Naming Convention and Description of File Contents

The data files saved from DAS-1 were named as E#-D1-YYMMDD.ASC, where:

- # = 4-digit cumulative running value of the experiment starting at 0001
- D1 = DAS-1
- YY = 2-digit extension of the year
- MM = 2-digit extension of the month
- DD = 2-digit extension of the day.

The DAS-1 files were multicolumn ASCI format where data for each channel were recorded in separate columns, as described in Table 8.1 (for data taken in the 8-PJM equipment configuration) or Table 8.2 (for the 4-PJM configuration).

Table 8.1. Channel Names as Used in the DAS-1 Log Files with a Brief Description (8-PJM Configuration)

Channel Name	Description (units)
Date (month/day/year)	
Time	Run clock (minutes past the hour:sec.decimal). Wall clock time appears in the file header.
PJM Level 1	PJM 1 level probe data (inches)
PJM Level 2	PJM 2 level probe data (inches)
PJM Level 3	PJM 3 level probe data (inches)
PJM Level 4	PJM 4 level probe data (inches)
PJM Level 5	PJM 5 level probe data (inches)
PJM Level 6	PJM 6 level probe data (inches)
PJM Level 7	PJM 7 level probe data (inches)
PJM Level 8	PJM 8 level probe data (inches)
PJM Pres 1	Top of PJM 1 pressure transducer data (psia)
PJM Pres 2	Top of PJM 2 pressure transducer data (psia)
PJM Pres 3	Top of PJM 3 pressure transducer data (psia)
PJM Pres 4	Top of PJM 4 pressure transducer data (psia)
PJM Pres 5	Top of PJM 5 pressure transducer data (psia)
PJM Pres 6	Top of PJM 6 pressure transducer data (psia)
PJM Pres 7	Top of PJM 7 pressure transducer data (psia)
PJM Pres 8	Top of PJM 8 pressure transducer data (psia)
PJM 5 Manif Temp	PJM 5 air temperature measured at manifold (^{o}C)
PJM 5 Temp	PJM 5 air temperature measured on top of PJM 5 (^{o}C)
Time Sync	Time synchronization switch signal to determine and correct for logged time difference between DAS-1 and DAS-2 (volts)
Vel Vert 18	Vertical velocity component measured 18 inches above nozzle (m/s)
Vel Rad 18	Radial velocity component measured 18 inches above nozzle (m/s)
Vel Vert 48	Vertical velocity component measured 48 inches above nozzle (m/s)
Vel Rad 48	Radial velocity component measured 48 inches above nozzle (m/s)
Vel Vert 96	Vertical velocity component measured 96 inches above nozzle (m/s)
Vel Rad 96	Radial velocity component measured 96 inches above nozzle (m/s)
Tk Sur Level 1	Tank surface level reading at position 1 (m)
Tk Sur Level 2	Tank surface level reading at position 2 (m)
Tk Sur Level 3	This instrument was not operational.
Tk Sur Level 4	Tank surface level reading at position 4 (m)
TK Sur Level 1 - error code	Error code signal for measured tank surface level reading at position 1 (1 = measurement without error signal, 0 = error signal sent by instrument) Not verified; for information only.
TK Sur Level 2 - error code	Error code signal for measured tank surface level reading at position 2 (1 = measurement without error signal, 0 = error signal sent by instrument). Not verified; for information only.
TK Sur Level 3 - error code	This instrument was not operational.
TK Sur Level 4 - error code	Error code signal for measured tank surface level reading at position 4 (1 = measurement without error signal, 0 = error signal sent by instrument). Not verified; for information only.

Table 8.2. Channel Names as Used in the DAS-1 Log Files with a Brief Description (4-PJM Configuration)

Channel Name	Description (units)
Date	Date (month/day/year)
Time	Run clock (minutes past the hour:sec.decimal). Wall clock time appears in the file header.
PJM Lvl A	PJM A level probe data (inches)
PJM Lvl B	PJM B level probe data (inches)
PJM Lvl C	PJM C level probe data (inches)
PJM Lvl D	PJM D level probe data (inches)
PJM Pres A	Top of PJM A pressure transducer data (psia)
PJM Pres B	Top of PJM B pressure transducer data (psia)
PJM Pres C	Top of PJM C pressure transducer data (psia)
PJM Pres D	Top of PJM D pressure transducer data (psia)
PJM A Manif Temp	PJM A air temperature measured at manifold (^{o}C)
PJM A Temp	PJM A air temperature measured on top of PJM 5 (^{o}C)
Time Sync	Time synchronization switch signal to determine and correct for logged time difference between DAS-1 and DAS-2 (volts)
Vel Vert 18	Vertical velocity component measured 18 inches above nozzle (m/s)
Vel Rad 18	Radial velocity component measured 18 inches above nozzle (m/s)
Vel Vert 48	Vertical velocity component measured 48 inches above nozzle (m/s)
Vel Rad 48	Radial velocity component measured 48 inches above nozzle (m/s)
Vel Vert 96	Vertical velocity component measured 96 inches above nozzle (m/s)
Vel Rad 96	Radial velocity component measured 96 inches above nozzle (m/s)
Tk Sur Level 1	This instrument was not operational.
Tk Sur Level 2	Tank surface level reading at position 2 (m).
Tk Sur Level 3	Tank surface level reading at position 3 (m). Laser sensor #1 was installed in this position instead of sensor #3.
Tk Sur Level 4	Tank surface level reading at position 4 (m).
TK Sur Lvl 1 - error code	This instrument was not operational.
TK Sur Lvl 2 - error code	Error code signal for measured tank surface level reading at position 2 (1 = measurement without error signal, 0 = error signal sent by instrument). Not verified; for information only.
TK Sur Lvl 3 - error code	Error code signal for measured tank surface level reading at position 3 (1 = measurement without error signal, 0 = error signal sent by instrument). Not verified; for information only.
TK Sur Lvl 4 - error code	Error code signal for measured tank surface level reading at position 4 (1 = measurement without error signal, 0 = error signal sent by instrument). Not verified; for information only.

Data were taken periodically when the PJMs were not operating. These baseline data provided information about instrument offsets, drifts and noise levels. The resulting data files were saved with the same naming convention except that the letters BL (indicates baseline) have been added to the file names. For example, the files containing baseline data have the format E#-D1-BL-YYMMDD.ASC. These baseline data files were generally recorded at the start and finish of testing each day.

8.3 DAS-2 (DACTRON) File Naming Nomenclature

All data files saved from DAS-2 files have names that began with E#-D2-Channel# (or **E#-D2-C#**). Here, D2 stands for DAS-2 and Channel# (or C#) stands for the channel number. Refer to Table 8.3 for an explanation of these channel numbers in the 8-PJM configuration. Refer to Table 8.4 for an explanation of the DAS-2 channel numbers in the 4-PJM configuration. All DAS-2 data file names ended with date and time stamps. For example, the file name E0017-D2-Channel 3 Feb 13, 2007 15-26-32.TXT represents the test file for Channel 3 (conductivity probe on PJM #4), created on February 13, 2007, at 15:26:32.

Data were taken periodically when the PJMs were not operating. These baseline data provided information about instrument offsets, drifts and noise levels. The resulting data files were saved with the same naming convention except that the letters BL (indicates baseline) have been added to the file names. For example, the files containing baseline data have the format E#-D2-BL-Channel#. These baseline data files were recorded at the start and finish of testing each day and often during testing, at approximately 1 hour intervals. Frequent baseline data were obtained on DAS 2 because the output from the in-tank pressure sensors drifted.

Table 8.3. Channel Numbers and Names as Used in the DAS-2 Log Files with a Brief Description (8-PJM Configuration)

Channel Number	Description (units)
1	Time synchronization switch signal to determine and correct for logged time difference between DAS-1 and DAS-2 (volts)
2	Time synchronization signal between DAS-2 and DAS-4 (high-speed video) that gets activated when the subsurface camera starts recording. (volts)
3	PJM 4 conductivity probe overblow signal (volts)
4	PJM 5 conductivity probe overblow signal (volts)
5	PJM 6 conductivity probe overblow signal (volts)
6	PJM 7 conductivity probe overblow signal (volts)
7	PJM 8 conductivity probe overblow signal (volts)
8	Measurements obtained from Hydrophone 1 (Pa)
9	Measurements obtained from Hydrophone 2 (Pa)
10	Measurements obtained from Hydrophone 3 (Pa)
11	Measurements obtained from Hydrophone 4 (Pa)
12	Top level pressure transducer ‘TA’ (Pa)
13	Top level pressure transducer ‘TT’ (Pa)
14	Top level pressure transducer ‘TD’ (Pa)
15	Middle level pressure transducer ‘MA’ (Pa)
16	Middle level pressure transducer ‘MT’ (Pa)
17	Middle level pressure transducer ‘MD’ (Pa)
18	Lower level pressure transducer ‘BT’ (Pa)
19	Lower level pressure transducer ‘BAU’ (Pa)
20	Low level pressure transducer ‘BAD’ (Pa)

Table 8.4. Channel Numbers and Names as Used in the DAS-2 Log Files with a Brief Description (4-PJM Configuration)

Channel Number	Description (units)
A1	Time synchronization switch signal to determine and correct for logged time difference between DAS-1 and DAS-2 (volts)
A2	Time synchronization signal between DAS-2 and DAS-4 (high-speed video) that gets activated when the subsurface camera starts recording. (volts)
A3	PJM A conductivity probe overblow signal (volts)
A4	PJM B conductivity probe overblow signal (volts)
A5	PJM C conductivity probe overblow signal (volts)
A6	PJM D conductivity probe overblow signal (volts)
A7	Channel not used
A8	Measurements obtained from Hydrophone 1 (Pa)
A9	Measurements obtained from Hydrophone 2 (Pa)
A10	Measurements obtained from Hydrophone 3 (Pa)
A11	Measurements obtained from Hydrophone 4 (Pa)
A12	Top level pressure transducer ‘TA’ (Pa)
A13	Top level pressure transducer ‘TT’ (Pa)
A14	Top level pressure transducer ‘TD’ (Pa)
A15	Middle level pressure transducer ‘MA’ (Pa)
A16	Middle level pressure transducer ‘MT’ (Pa)
A17	Middle level pressure transducer ‘MD’ (Pa)
A18	Lower level pressure transducer ‘BT’ (Pa)
A19	Lower level pressure transducer ‘BAU’ (Pa)
A20	Low level pressure transducer ‘BAD’ (Pa)
B1	Accelerometer x-axis (points straight down)
B2	Accelerometer y-axis (orthogonal to the other two)
B3	Accelerometer z-axis (points toward the tank center)

8.4 Description of DVDs Containing 8-PJM data

Several duplicate sets of DVD’s containing the 8-PJM test data was provided to BNI. Test files included on DVDs were organized by the day the tests were conducted. The DVD name convention is YYMMDD_Data Acquisition System. On occasion, the DAS-2 runs were copied onto two DVDs due to the large number of files. These sets included an A and B extension to the DVD name. In addition, multiple DVDs were used to copy the high speed video (DAS-4) generated on February 23, 2007 and February 26, 2007. These DVDs included the run numbers on the DVD labels. Each DVD also has files with data taken with no tank activity to provide baseline data. These files used the file naming convention discussed earlier in this section except that the letters BL (indicates baseline) were added to the file names.

There was a separate DVD labeled “Water_Surface_Video” containing files of surface video for each test, corresponding to three different camera viewing angles. For example, for E0025, files included were

- 070219_E0025_run1_pjm4over.avi

- 070219_E0025_run1_pjm7over.avi
- 070219_E0025_run1_pjm4surf.avi.

These corresponded to the three camera positions:

- pjm4over: a fixed camera over PJM#4 and looking vertically downward
- pjm7over: a hand-held camera over PJM#7 looking vertically downward
- pjm7surf: a hand-held camera at the tank rim adjacent to PJM#7, looking across the tank surface.

The overhead camera positions were used for all of the video tests and the tank rim camera was used in most cases.

8.5 Description of the Portable Hard Disk Drives Containing 4-PJM Data

Triplicate copies 4-PJM test data were provided to BNI on three 1TB portable hard drives. Each of the 1TB drives contained copies of all of the electronic data files generated during 4-PJM testing. At the top level the files were grouped under directories "4PJM Clay" and "4PJM Water." Each of these in turn had subdirectories "DAS-1," "DAS-2," "Surface Video," and (in the case of 4PJM water) "DAS-4." The DAS-4 subdirectory contained the subsurface video files. Within the subdirectories were dated folders, named according to the 'YYMMDD' convention that contained the individual data files.

The surface videos taken during 4-PJM testing had their own particular naming convention. The "E#" experiment number was followed by the characters "SV" (for surface video) and then by either "O" (for overhead) or "S" (for surface or side or south). The O videos were taken from the overhead walkway above the tank; the S videos were taken from the observation deck at the south rim of the tank. O video files with "PJMAD" in the name were taken from the overhead walkway with a camera aimed down between PJM A and PJM D. O video files with PJMBC in the name were taken from the walkway with a camera aimed down between PJM B and PJM C. In the S videos the camera looked from the south rim toward the tank center and across the tank. In these latter S videos the camera sometimes panned up and down or zoomed in or out.

9.0 Data Discussion

9.1 Nozzle Velocity Settings

This section discusses the determination of the JPP settings required to produce the desired PJM nozzle velocities in both the 8- and 4-PJM configurations. Shakedown tests were performed before beginning the formal test series to determine the JPP drive pressure values needed to achieve the targeted peak average PJM nozzle velocities.[(a)] These target velocities were 8, 12, 14, 15 ±1 m/s in the 8-PJM configuration and 6, 8, 10, and 12 ±1 m/s in the 4-PJM configuration. All runs for determining the JPP rack pressures were performed at an H/D of 0.94 to 0.96, which was slightly greater than the maximum H/D of 0.8 for the overblow tests. High H/D or fill levels ensured that the PJMs were sufficiently full before starting the drive phase and eliminated the need for suction to fill up the tubes. This simplified subsequent calculations for the nozzle velocity because the velocity could be calculated either from changes in the simulant level in the PJMs or changes in the bulk tank surface level. For a given rack pressure, nozzle velocity increases as the fill level is decreased.

9.1.1 Peak Average Nozzle Velocity Settings

The peak average nozzle velocity versus JPP rack pressure curves for water and clay simulants in the 8-PJM configuration are plotted in Figure 9.1. All reported JPP rack pressures are based on gauge values and identified by bar-g units. The rack pressures shown were obtained from sensors on the JPP skids that had expired calibrations. Rack pressures were used only as operational indicators of the drive regulator settings, not as actual pressure measurements, and the values were not used in calculations. All runs were performed at H/D = 0.96. For water simulant, 15 to 20 cycles of PJM level probe data were averaged to obtain the nozzle velocities. On the other hand, for the clay simulant, 5 to 6 cycles of laser-level data were used to obtain the nozzle velocities.

9.1.2 Rack Pressure Settings for 4-PJM Configuration

For a given nozzle velocity, a factor of four increase in the volumetric flow rate out of the 4-inch diameter nozzle as compared to the 2-inch diameter nozzle resulted in considerably higher drive air flow requirements for the 4-PJM configuration than those for the 8-PJM configuration. To maximize the drive air flow in the 4-PJM configuration, the supply piping was rearranged so that two drive regulators/JPP combinations (one regulator on each JPP skid) were available to supply air in parallel to each PJM if desired. To enable a further increase in the air flow to the PJMs, modifications were made to the JPP vent system to throttle the flow if needed.

(a). The definition of peak average nozzle velocity can be found in Section 3.2.2 of Meyer et al. (2005).

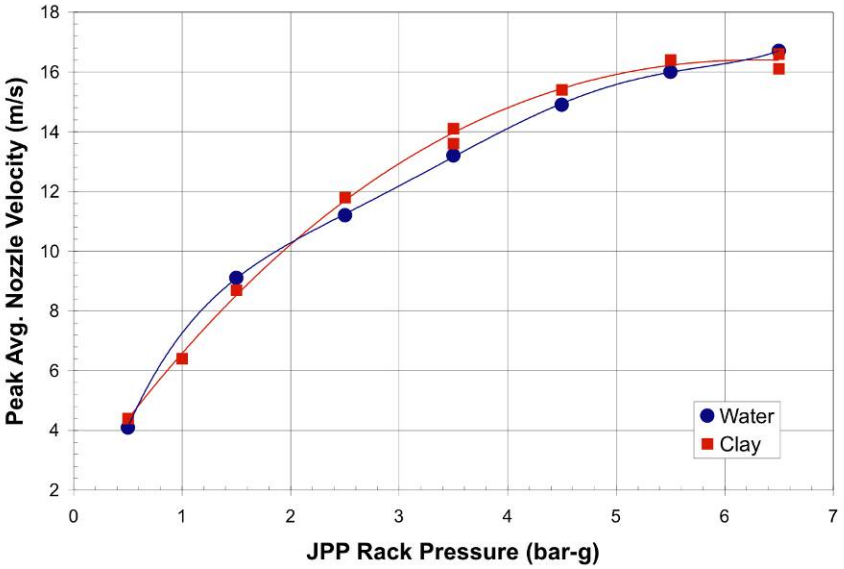


Figure 9.1. Nozzle Velocity Versus Rack Pressure, 8-PJM Configuration (values from Tables 9.1 and 9.2)

All rack pressure versus nozzle velocity determination runs with water were performed at an H/D=0.96. The peak average nozzle velocities for water were determined in the same way as in the 8-PJM testing by averaging 15 to 20 cycles of PJM level probe data. The nozzle velocity versus rack pressure for water using the one and two JPP rack configurations is plotted in Figure 9.2, where blue circles identify water tests in which each PJM was driven with one drive regulator on one JPP rack/skid. For PJMs driven using 1 JPP rack, the vent flow was not throttled to increase the pressure in the PJM. The red circles show the data when the PJMs were driven with two racks and a 3:1 reducer on the JPP vents to choke the vent flow. The last data point for this series was performed at maximum air flow by operating both regulators fully open (RFO) (this data point is labeled on Figure 9.2).[(a)] Also shown in Figure 9.2 is one data point (green square) obtained with from a single test conducted by driving each PJM at maximum air flow (i.e., RFO) and without the 3:1 reducer on the JPP vent.

It can be seen from the data in Figure 9.2 that 1) for the same rack pressure, driving with two regulators in parallel resulted in significantly higher velocities than those observed when driving with one regulator and 2) when driving the PJMs with both racks going from an unthrottled vent to a throttled vent resulted in only a marginal increase peak velocity (12.0 m/s for the un-throttled versus 12.2 m/s for the throttled vent). Also, during the runs with a 3:1 reducer on the JPP vent, it was observed that throttling the vent flow resulted in a significant backflow of air into off-PJMs through the common vent header when fewer than 4 PJMs were being operated. Because of the marginal benefit and the backflow disadvantage, the approach to increasing the drive velocities by throttling the vent flow was abandoned.

(a) The rack pressure under the RFO condition varies from ~7.2 bar-g at the start of the drive phase to ~6.5 bar-g at the end of the drive phase. Therefore, this point is represented by a nominal 6.8 bar-g on the plots.

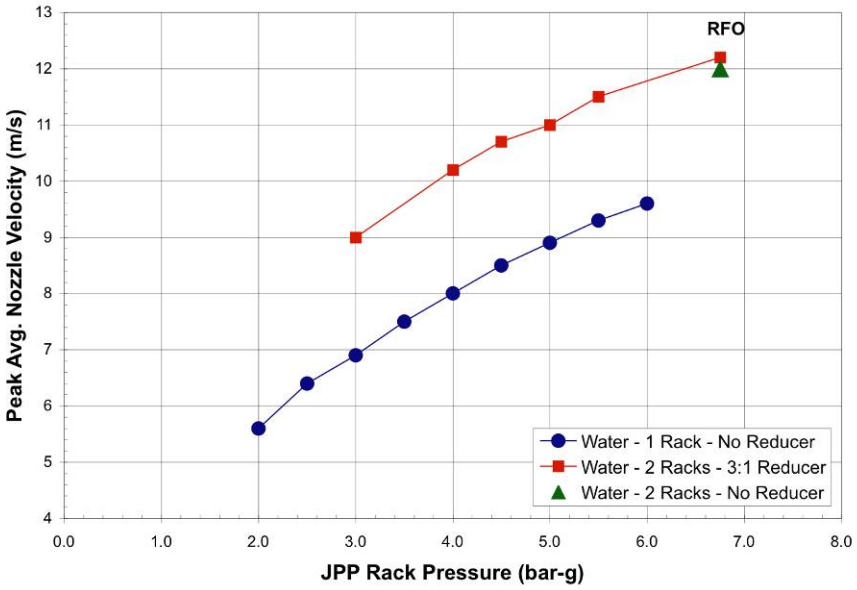


Figure 9.2. Nozzle Velocity Versus Rack Pressure, 4-PJM Configuration, Water Simulant (driving all four PJMs; values from Table 9.3)

At the start of the 4-PJM clay testing, not enough clay was available to accurately calibrate nozzle velocities to drive pressures. On agreement with BNI and DEI, the drive pressures for achieving the target nozzle velocities of 6, 8, and 10 were estimated by matching the slopes of the PJM level probe data versus time during the drive phase using clay simulant with the corresponding slopes obtained during testing of the 4-PJM system with water. In this approach, the slopes were matched to within ±0.25 m/s. The drive pressures estimated for target velocities of 6, 8, and 10 m/s were 2.6 bar driving with one JPP rack, 4.6 bar driving with one JPP rack, and 4.8 bar driving with both JPP racks, respectively. The tests with the maximum drive velocity, which was presumed to be very close to the target of 12 m/s, were carried out by driving the PJMs with both JPP racks with drive regulators fully open.

More accurate estimates of the nozzle velocity versus rack pressure in the 4-PJM system with clay were made later after the receipt of more clay. These runs were performed at a simulant level of H/D=0.94. The rack pressure versus nozzle velocity data is shown in Figure 9.3 for driving the PJMs with one JPP rack (blue circles) and two JPP racks (red circles). Also shown in Figure 9.3 are the estimated pressures (green squares) at the target velocities of 6, 8, and 10 m/s obtained by matching slopes discussed above. Unlike the 8-PJM case with clay, the peak average nozzle velocities shown in Figure 9.3 were determined from the PJM level probe data instead of the tank laser-level data because the tank laser level data for the 4-PJM case was found to be extremely noisy and finding 5 to 6 cycles of good noise-free data to average was not possible. It can be seen from the data in Figure 9.3 that the estimated values for 6, 8, 10 m/s fall very close (within ± 0.2 m/s) to actual values, and the maximum achievable velocity (i.e., at RFO with two racks) was only 11 m/s as opposed to the nominal target of 12 m/s.

9.2 K Value Calculations for Water and Clay

In tests where PJMs are used in a cycle to mix tank contents, nozzle velocities can be inferred by several methods. Measurements of liquid levels in the tank or in the PJMs can be used, assuming conservation of volume and validity of finite differencing to obtain velocities from successive liquid levels. Alternatively, the pressure in the PJM headspace as a function of time can be used to calculate changing nozzle velocities during the cycle. Finite differencing of liquid levels can result in noisy inferred velocities, though the liquid level behavior is quantitatively correct on the time scale of a pulse. Calculating nozzle velocity from pressure is a simpler and more noise-free, but some calibration is required to determine the contribution of friction to the energy balance (i.e., nozzle loss coefficients).

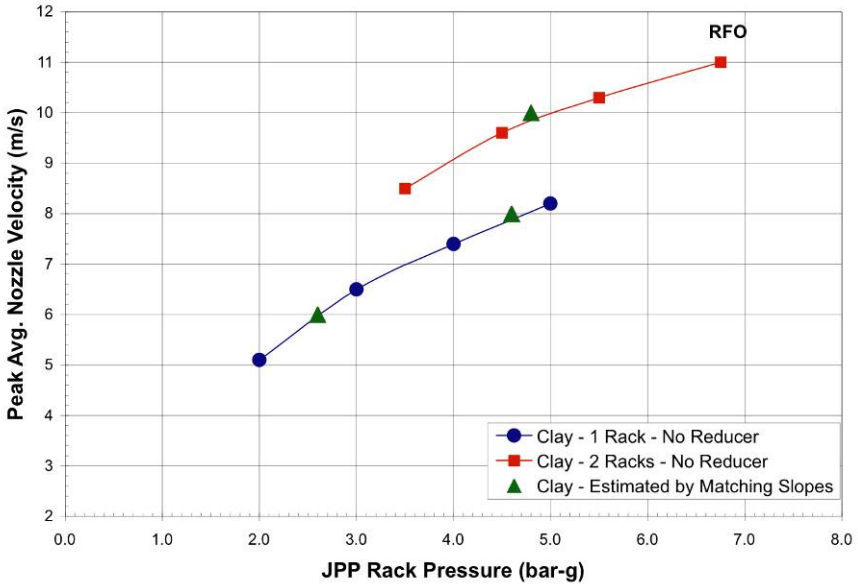


Figure 9.3. Nozzle Velocity Versus Rack Pressure, 4-PJM Configuration, Clay Simulant (driving all four PJMs; values from Tables 9.4)

Bontha et al. (2005) presented a calibration procedure for determining PJM nozzle loss coefficients. Using that approach, nozzle loss coefficients were calculated from the velocity and pressure data. The approach is presented in detail in Appendix C. The nozzle loss coefficients (K values) calculated from level and pressure for water and clay simulants using the 8- and 4-PJM systems are shown in Tables 9.1 through 9.4. The K values listed are based on the velocity at the nozzle exit diameter. It can be seen from the data in Tables 9.1 to 9.4, the loss coefficients for the 4PJM are significantly greater than those for the 8PJM. The larger k-value for the 4-PJM setup is attributed to the *vena contracta* effect of the free jet emerging from the 4-inch nozzle. In the 8-PJM setup, the 45° bend at the end of the contraction plus the 12-inch angled pipe appears to prevent the vena contracta effect (flow streamlines re-attach to the pipe in the 12-inch long pipe before emerging into the tank).

Table 9.1. Peak Average Nozzle Velocities and Loss Coefficients with Water, 8-PJM Configuration

Test Run Title	Peak Average Velocity[(a)] from PJM Level[(b)] (m/s)	Peak Average Velocity[(a)] from PJM Pressure (m/s)	Nozzle Loss Coefficient for Forward Flow[(c)] (kf)
NV0.5bar-070122-1	4.1	4.3	0.27
NV1.5bar-070119-1	9.1	9.1	0.215
NV2.5bar-070117-1	11.2	11.2	0.273
NV3.5bar-070117-1	13.2	13.2	0.25
NV4.5bar-070117-1	14.9	14.9	0.245
NV5.5bar-070117-1	16	15.9	0.272
NV6.5bar-070117-1	16.7	16.7	0.278
NV7.5bar-070119-1	17.6	17.5	0.22
Average	N/A	N/A	0.253[(d)]

(a) Peak average velocities for the forward flow (discharge process)
(b) PJM tube levels were obtained by the capacitance level probes.
(c) Used for peak average velocity calculations from PJM pressure data for the forward flow (discharge process).
(d) Average over eight test runs of the drag coefficients for the forward flow.

Table 9.2. Peak Average Velocities and Drag Loss Coefficients with Clay, 8-PJM Configuration

Test Run Title	Rack Pressure (bar)	Peak Average Velocity from Tank Level Data[(a)] (m/s)	Peak Average Velocity from Tank Level Data[(b)] (m/s)	Peak Average Velocity from Pressure Data[(a)] (m/s)	Peak Average Velocity from Pressure Data[(b)] (m/s)	K[(c)]
NV0.5bar-Clay-070327-1	0.5	4.4	3.9	-	-	-
NV1.0bar-Clay-070329-1	1.0	6.4	5.6	6.5	5.7	0.5
NV1.5bar-Clay-070327-1	1.5	8.7	7.7	-	-	-
NV2.5bar-Clay-070327-1	2.5	11.8	10.4	-	-	-
NV3.5bar-Clay-070326-1	3.5	14.1	12.4	-	-	-
NV_3.5bar-Clay-070423-1	3.5	13.6	12.0	13.3	12.0	0.25
NV4.5bar-Clay-070326-1	4.5	15.4	13.7	-	-	-
NV5.5bar-Clay-070326-1	5.5	16.4	14.5	-	-	-
NV6.5bar-Clay-070327-1	6.5	16.6	14.6	-	-	-
NV_6.5bar-Clay-070423-1	6.5	16.1	14.2	16.6	14.6	0.3

(a) Four inoperative 4 PJM tubes were included into the tank fluid surface area.
(b) Four inoperative 4 PJM tubes were excluded from the tank fluid surface area.
(c) Nozzle loss coefficient in the discharge flow used for the peak average velocity calculation excluding the four inoperative 4 PJM tubes from the tank fluid surface area. Values estimated for K based on including the four inoperative PJMs into the tank surface area calculation were essentially zero.

Table 9.3. Peak Average Nozzle Velocities and Loss Coefficients with Water, 4-PJM Configuration

Test Run Title	Peak Average Velocity[(a)] from PJM Level[(b)] (m/s)	Peak Average Velocity[(a)] from PJM Pressure (m/s)	Nozzle Loss Coefficient for Forward Flow[(c)] (kf)	Nozzle Loss Coefficient for Backward Flow[(d)] (kb)
070709-4PJM-NV 2.0 Bar[(e)]	5.6	5.6	0.850	1.8
070709-4PJM-NV 2.5 Bar[(e)]	6.4	6.4	0.875	1.8
070709-4PJM-NV 3.0 Bar[(e)]	6.9	7.0	0.875	1.8
070709-4PJM-NV 3.5 Bar[(e)]	7.5	7.5	0.875	1.8
070709-4PJM-NV 4.0 Bar[(e)]	8.0	8.0	0.875	1.8
070709-4PJM-NV 4.5 Bar[(e)]	8.5	8.5	0.875	1.8
070709-4PJM-NV 5.0 Bar[(e)]	8.9	-	-	-
070711-4PJM-NV 5.5 Bar[(e)]	9.3	-	-	-
070711-4PJM-NV 6.0 Bar[(e)]	9.6	-	-	-
070803-4PJM-NV 3.0 Bar 3 to 1 Red[(f)]	9.0	9.0	1.000	1.9
070803-4PJM-NV 4.0 Bar 3 to 1 Red[(f)]	10.2	10.2	1.020	1.7
070803-4PJM-NV 4.5 Bar 3 to 1 Red[(f)]	10.7	10.7	1.030	1.7
070803-4PJM-NV 5.0 Bar 3 to 1 Red[(f)]	11.0	11.1	1.040	1.7
070803-4PJM-NV 5.5 Bar 3 to 1 Red[(f)]	11.5	11.5	1.050	1.8
070802-4PJM-NV 6.0 Bar 3 to 1 Red[(f)]	12.2	12.2	1.125	1.6
070802-4PJM-NV 6.0 Bar[(g)]	11.98	11.95	1.05	1.8
Average driving with 1 JPP rack	N/A	N/A	0.871	1.8
Average driving with 2 JPP racks	N/A	N/A	1.045	1.74

(a) Peak average velocities for the forward flow (discharge process).
(b) PJM tube levels were obtained by the capacitance level probes.
(c) Used for peak average velocity calculations from PJM pressure data for the forward flow (discharge process).
(d) Peak average velocities for the backward flow (refill process) are not reported.
(e) Driving all 4 PJMs with one JPP rack.
(f) Driving all 4 PJMs with two JPP racks. The JPP vent outlet was throttled with at 3x1 reducer.
(g) Driving all 4 PJMs with two JPP racks, no throttling of vent outlets.

Table 9.4. Peak Average Velocities and Nozzle Loss Coefficients with Clay, 4-PJM Configuration

Test Run Title	Peak Average Velocity[(a)] from PJM Level[(b)] (m/s)	Peak Average Velocity[(a)] from PJM Pressure (m/s)	Nozzle Loss Coefficient for Forward Flow[(c)] (kf)	Nozzle Loss Coefficient for Backward Flow[(d)] (kb)
070927-PJM-L&P 2.0 Bar-1 Rack[(e)]	5.1	5.2	1.11	1.8
070927-PJM-L&P 3.0 Bar-1 Rack[(e)]	6.5	6.5	1.05	1.7
070927-PJM-L&P 4.0 Bar-1 Rack[(e)]	7.4	7.4	1.06	1.65
070927-PJM-L&P 5.0 Bar-1 Rack[(e)]	8.2	8.2	1.08	1.75
070928-PJM-L&P 3.5 Bar-2 Racks[(f)]	8.5	8.5	1.09	1.8
070928-PJM-L&P 4.5 Bar-2 Racks[(f)]	9.6	9.6	1.1	1.6
070928-PJM-L&P 5.5 Bar-2 Racks[(f)]	10.3	10.4	1.13	1.6
070927-PJM-L&P RFO-2 Racks[(f,g)]	11	11	1.12	1.75
Average driving with 1 JPP rack	N/A	N/A	1.08	1.73
Average driving with 2 JPP racks	N/A	N/A	1.11	1.69

(a) Peak average velocities for the forward flow (discharge process).
(b) PJM tube levels were obtained with the laser level probes.
(c) Used for peak average velocity calculations from PJM pressure data for the forward flow (discharge process).
(d) Peak average velocities for the backward flow (refill process) are not reported.
(e) Driving all 4 PJMs with one JPP rack.
(f) Driving all 4 PJMs with two JPP racks.
(g) RFO – drive regulators fully open.

9.3 Clay Property Measurements

9.3.1 Density

Seven density measurements of the clay slurry were made using pycnometers during the course of the 8-PJM clay testing. Thirty density measurements on nine samples of the clay slurry were made during the course of the 4-PJM clay testing. Density measurements were made whenever clay, water or make-up slurry were added to the tank, as required by the Test Specifications. No deviations in the density from Test Specification requirements were noted.

9.3.2 Rheology

Rheological measurements on 12 grab samples of the clay slurry were made during the course of the 8-PJM overblow testing with clay. Measurements on 13 grab samples of clay were made during the course of the 4-PJM overblow testing. Samples were taken daily and rheology measurements were made at a minimum frequency of once every three days, as required by the Test Specifications. Samples were also taken and measurements made whenever clay, water or make-up slurry were added to the tank. No deviations in the slurry rheology from Test Specification requirements were noted.

Rheological measurements (i.e., yield stress and viscosity) were made using a TA Instruments AR2000 rheometer. Stainless steel sample cups and recessed-end concentric cylinder geometry were used for the measurements. The sample cup used with the rheometer maintained the sample temperature at

25°C. The rheometer was verified every 30 days with a Brookfield standard fluid to ensure that it measured the standard fluid to within 10% of stated value.

The measurement procedure adhered to the standard *Guidelines for Performing Chemical, Physical and Rheological Properties Measurements,* 24590-WTP-GPG-RTD-001 Rev. 0. In this procedure the properties of each sample were measured with three different shear rate programs:

- Shear rate ramps up from 0 to 1000s^{-1} over 5 minutes
- Shear rate is held at 1000s^{-1} for 1 minute
- Shear rate ramps down from 1000 to 0s^{-1} over 5 minutes.

Three such measurements were performed on each grab sample from the tank:

- Fresh run—a fresh volume from the grab sample was placed in the cup
- Rerun—a repeat test of the existing volume in cup
- Repeat fresh run—the cup is cleaned and a new volume from the same grab sample was placed in cup.

Using the TA Instruments Rheology Advantage data analysis software, the down ramp data were fit to a Bingham plastic model over a range of shear rates from 50 to 1000s^{-1},

$$\tau = \kappa\dot{\gamma} + \tau_y$$

where

τ = shear stress (Pa)
κ = consistency factor or Bingham viscosity (Pa-s; reported in cP)
$\dot{\gamma}$ = shear rate or strain rate (per second, 1/s)
τ_y = Bingham yield stress, the assumed minimum stress required to initiate fluid movement as determined by a flow curve obtained by fitting rheological data using a Bingham plastic rheological model (Pa).

The Bingham model parameters fit to the down ramp data were used to verify that the yield stress of the clay simulant was within the target range. The Bingham yield stress parameter τ_y averaged over the fresh run, rerun, and repeat fresh runs was required to be 30 ±5 Pa.

9.4 General Comments on Overblow Experiments

The laser level probes did not measure water levels reliably. That medium did not reflect enough laser probe beam power from the liquid surface back to the receiver. DAS-1 data on channels "Tk Sur Lvl 1," "Tk Sur Lvl 2," "Tk Sur Lvl 3," and "Tk Sur Lvl 4" were used with caution when the working fluid was water. These data are provided for BNI's information only and are not considered to be of high quality. Laser levels taken when the working fluid was clay are considered to be high-quality data, provided that no error codes (as listed in Tables 8.1 and 8.2) of 0 were recorded for the sensor and time of interest and provided the sensor was operational (again as listed in Tables 8.1 and 8.2).

Baseline (with the PJMs off) hydrostatic pressure measurements from the in-tank sensors drifted. These sensors were calibrated after installation in the tank to take into account offset shifts during installation. Even so, these offset values were not constant and changed on an hourly time scale. Calibration re-checks verified that the instruments remained linear, with constant psi/volt slopes, after the offset changes occurred. So, dynamic pressure measurements made during overblows were not compromised by the offset shifts. Frequent (roughly hourly) baseline hydrostatic pressure measurements were recorded on DAS-2 to track the changes. Total pressures during an overblow experiment can be estimated by subtracting the mean of the most recent baseline (at the same tank level) from the time series of interest and adding the known hydrostatic head (at that tank level) above the sensor.

The in-tank pressure transmitter in the top position facing down (labeled TD) was calibrated with a non-zero offset. Data from this sensor were recorded on channel 14 of DAS-2. The offset output with 0 psig applied to the sensor during calibration was -0.75V (which drifted subsequently). It was not feasible, because of software limitations and the need for high rates of data acquisition, to remove the offset in real time at DAS-2. Because of this negative voltage offset the recorded gauge pressure values from channel 14 were negative much of the time. As above, dynamic pressure measurements were not compromised by the negative offset. Such offset can be removed to calculate the total pressure, if desired, by subtracting the baseline and adding the hydrostatic head above the sensor as discussed above.

As noted above, the in-tank pressure transducers were calibrated in place in the field. The field pressure source had very small fluctuations that determined the ultimate precision of the calibration. The resulting calibration curves determined individual pressure values to no worse than ± 0.027 psi (±190 Pa) Such uncertainty estimates varied from transducer to transducer with factors, such as the tightness of the gas fittings used during calibration, in some cases being an order of magnitude lower than the values listed above.

A QA surveillance of the vendor providing the calibration services for the velocity probes revealed that the vendor did not correct the reported velocities for wall effects arising from the use of an 8–inch pipe diameter for the tow vessel during the probe calibration. For water simulant, the wall correction can be determined theoretically, and the inaccuracy of the reported velocities is estimated to be +6% (i.e., the fluid velocities measured by the Valeport velocity probes were 6% more than the actual velocities). For the clay simulant, however, the determination of the wall effect correction was complicated by the non-Newtonian nature of the simulant and the unknown effect of the viscosity on the Valeport velocity probe performance. Based on the deviation of the probe response from a 1:1 correspondence with the tow velocity, it is estimated this error could be as high as +25% (i.e., the fluid velocities measured by the Valeport velocity probes were 25% more than the actual velocities.

Occasionally, a nozzle conductivity probe short-circuited during clay experiments, making the probe temporarily useless for estimating overblow start times and durations. Our speculation is that this shorting was related to clay deposits on the electrodes. When this was observed is noted below.

9.5 Notes on 8-PJM Water Data

When 8-PJM water tests began, nozzle velocity calibration data at low drive pressures (0.5 bar) had not yet been evaluated. The drive pressure needed to achieve a nozzle velocity of 8 m/s was estimated to

be 0.9 bar, based on extrapolation of data taken at 1.5, 2.5, 3.5, and 4.5 bar to lower pressures. This drive pressure was too low to obtain the target 8 (±1) m/s. The actual nozzle velocity during overblow experiments at 0.9 bar drive pressure was roughly 6.5 m/s.

For tests E0001-E0185, the data obtained by the velocity probe in the lower position should be used with caution. This includes data on channels "Vel Vert 18" and "Vel Rad 18" on DAS-1. Examination of the baseline data indicates that the zero offset increased steadily during testing. From test E0185 onward, the lower velocity probe (sensor S/N 20557) was replaced (with sensor S/N 21073), and the data are considered to be of good quality.

The thermocouple installed near the top of PJM 5 failed starting with run E0029 on 2/20/07 due to a loose connection. The failure is evident from a questionable high or low temperature spike. Starting with run E0072 the thermocouple reading was 300, which means the connection failed completely. Some subsequent temperatures during 8-PJM water runs may appear to have reasonable values, but values from runs after E0028 should not be considered reliable.

9.6 Notes on 8-PJM Clay Data

The vertical velocity probe (sensor S/N 21073) at the lowest (18-inch) level exhibited substantial drift during clay testing. Its baseline value drifted from an average (over 30,000 points) of 0.022 m/s at the beginning of the clay testing (March 30, 2007) to approximately 0.2 on April 24 (three baselines taken that day within a 4-hour period had average values of 0.20, 0.17, and 0.15). A comparison of overblow runs before the baseline shift (E0481-E0483) with comparable runs after the shift (E0731-E0733) showed the same dynamic response in the vertical component of the velocity at 18 inches during the overblow. This suggests the probe was still functioning but with an offset of ~0.15 m/s.

When the clay was drained from the tank, a significant amount of clay was found adhering to the hydrophones and their masts. The adhered clay was fairly soft and appeared to be a thicker version of the clay in the tank. The adhered clay had a thickness estimated to be about 3–4 inches and formed spherical clumps centered on each hydrophone (the total diameter of a clump was about 6–8 inches). Other equipment in the tank also was observed to have an adhered layer of clay, but the amount on the hydrophones was significantly greater. PNNL and DEI examined the output from the hydrophones over time, over the course of the 8-PJM experiments with clay. They were unable to detect a significant reduction in hydrophone output caused by clay accumulation.

Clay did not adhere to the velocity probe sensors, although it did adhere to the mast holding the sensors. The in-tank pressure sensor tree had clay on the mast and the horizontal portions of the tubes holding the pressure sensors. However, the faces of the sensors appeared free of significant clay buildup. Examination of pressure data for two sets of plotted data taken 12 days apart (runs E0416 and E0578 which done were under equivalent experimental conditions) indicated that the pressure responses were remarkably similar, indicating that the sensors were not affected by clay buildup.

The PJM 8 conductivity probe intermittently produced an abnormally low voltage. Intermittent shorting could have caused this low voltage across the electrodes. However, the mechanism or location of the short circuit was unknown. Researchers at DEI said they observed other instances of low voltages

from conductivity probes in some of the other pulse tubes when operating with clay. While the conductivity probes clearly provide a different type of signal with clay than with water, they were deemed suitable (by BNI and DEI) for indicating when the overblow starts.

Runs E0731 through E0739 were repetitions of various earlier experiments, but using a higher laser level sampling rate than normal (10 Hz instead of the usual 2 Hz). These extra experiments were performed at the request of BNI and DEI.

9.7 Notes on 4-PJM Water Data

The elevations of the middle in-tank pressure transducers were set approximately 6 inches lower than originally specified (24 inches instead of 30 inches above the PJM nozzles). The sensors were lowered to position them below an interfering cross beam. The spacing between the middle and upper levels of pressure sensors was maintained at 48 inches. Upper pressure sensors were also lowered 6 inches (to 72 inches above the nozzles). The lower pressure sensors remained at the originally specified 18 inches above the nozzle. Refer to section 5 of this report for more measurements.

The velocity probes were not operating during runs E0778 through E0795 due to a power interruption prior to the start of these runs. To replace the missing data the experiments were repeated with the probes on in runs E0796 through E0814. It should be noted that the video recordings made during runs E0778 through E0795 were not repeated during runs E0796 through E0814.

9.8 Notes on 4-PJM Clay Data

Valeport velocity probe at the lower level, sensor S/N 21073, was removed after the water testing and replaced with spare sensor S/N 21077 for the clay testing. This was done because sensor S/N 21073 was only recalibrated in water after the end of the 8-PJM testing, when a baseline drift was noted.

The conductivity probe on PJM C failed sometime after run E1236, during downtime while awaiting a new shipment of clay. Probe output went down to nearly 0 V, indicating a short to ground. Routine tests demonstrated that the problem was not in the signal conditioning electronics but somewhere in the sensor or cabling. The probe operated briefly and intermittently after that, but was essentially dead for runs E1237 through E1378. As with the low probe voltages noticed during the 8-PJM experiments with clay, the failure was attributed to shorting of the probe electrodes with clay deposits.

The simultaneous overblow tests were conducted with PJMs A and B instead of the planned PJMs A and C because of the failure of the conductivity probe on PJM C. PJM A was always used during simultaneous overblow testing because most of the instrumentation was clustered around it.

Extra simultaneous overblow tests were conducted with PJMs A and C using a simultaneity criterion based on PJM inlet pressures instead of nozzle conductivity. The PJM pressure criterion was tried because of the inability to apply the conductivity criterion used in all other tests (because of the failure of the conductivity probe on PJM C). The pressure criterion used during these runs (E1366 through E1378) was not approved in the Test Plan, evaluated during scoping tests or considered in detail by BNI or DEI. We present these data for BNI’s and DEI's information only.

9.9 Video Camera Time Synchronization

Early scoping test data submitted to DEI suggested there was a roughly 200 ms delay between the time overblow was indicated from conductivity probe data and the time it was apparent in the high speed video images. An effort was undertaken by PNNL to quantify purported delays in the transmission of the camera sync pulse from DAS-4 to DAS-2 with bench tests using an oscilloscope to display the pulse. These crude tests estimated an average delay (from 10 determinations) of only 4 ms, but particular delays could have been between a 32-ms lead to a 40-ms lag. There was no indication of a 200 ms delay in these bench tests. Subsequent evaluation of test results by DEI indicated that the large purported delay was an outcome of the overblow detection thresholding algorithm being used, and the delay was greatly reduced after tuning that algorithm. PNNL made no additional estimates of the possible camera sync pulse delays. The estimates given were from scoping tests and are considered to be "For Information Only."

9.10 Linear Approximation for Nozzle Velocity Determination

In this section, we present a simple approach to approximately estimate the peak average nozzle velocities from the PJM level probe data of the overblow runs. It should be noted that the approach presented in this section is only an approximation and the approach presented in Appendix C along with the loss coefficient data presented in Tables 9.1 to 9.4 represents the best method for determination of the peak average nozzle velocities from the pressure data.

The approach involves performing a linear regression fit of the level probe data during the drive phase in the region where the pulse tube pressure is constant. Because the slope determined from the PJM level probe data represents the average fluid velocity in the pulse tube, it can be converted to the velocity in the nozzle using the PJM/nozzle area ratio and a conversion factor to convert the velocity from "inches/sec" to "m/s" as shown below:

$$Peak\ Avg.\ Noz.\ Vel.\ (m/\sec) \quad = \quad Slope\ (inch/\sec) * \left[\frac{Area\ PJM}{Area\ Nozzle} \right] * 0.0254\ (m/inch) \quad (9.1)$$

For the 8-PJM configuration with a 23.5-inch-ID pulse tube containing a 0.75-inch-OD level probe and 2-inch ID nozzle, the area ratio is 137.92. Similarly, for the 4-PJM configuration with a 23.5-inch-ID pulse tube containing a 0.75-inch-OD level probe and 4-inch-ID nozzle, the area ratio is 34.48.

Using the linear approximation outlined here requires some user judgment, particularly in identifying the region of the level probe data to use in the regression due to acceleration effects and because the pressure in the PJM is not truly constant. The following recommendations are a guide:

- When a full set of PJM level data is available, it is recommended that the upper region of the level probe used in the regression be no greater than 50 inches because acceleration effects become important above this point.
- Level probe data below 10 inches for the 8-PJM tests and 15 inches for the 4-PJM runs should not be used in the regression because the portion of the probe near the end penetrates the PJM cone.

Typical examples demonstrating the use of linear approximation at the low and high target velocities for the 8-PJM and 4-PJM configuration are illustrated in Figures 9.4 to 9.7, respectively. In addition to the level probe and pressure data, the region of the level probe data used in the regression fit is also shown on the graphs as dashed lines. The estimated velocities from the slope of the linear regression fit and target velocities are shown in Table 9.5.

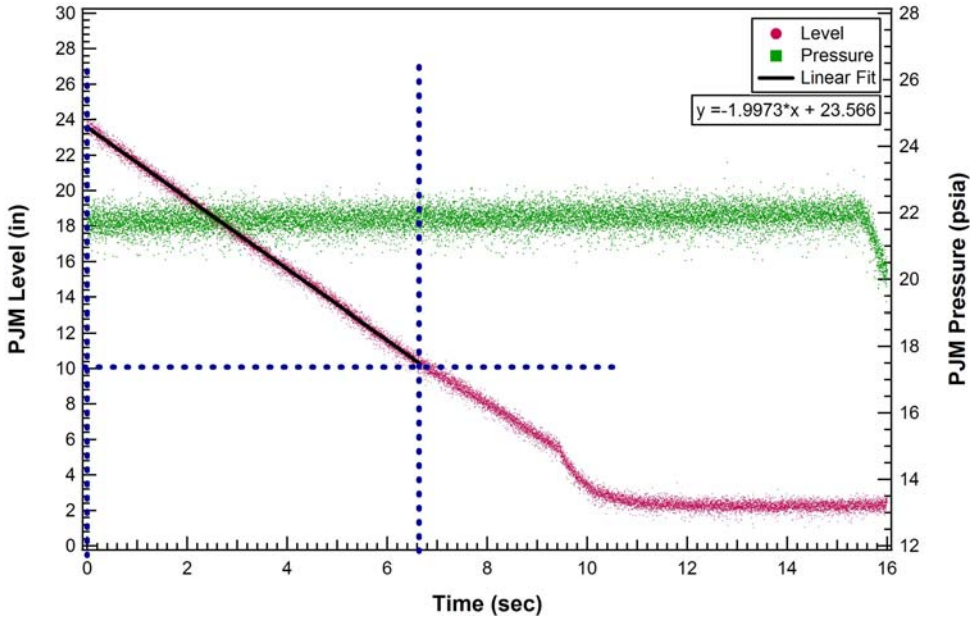


Figure 9.4. Illustration of Linear Approximation for Nozzle Velocity Determination for 8-PJM Low-Velocity Case (8 m/s) Using DAS-1 Data from Run E0515

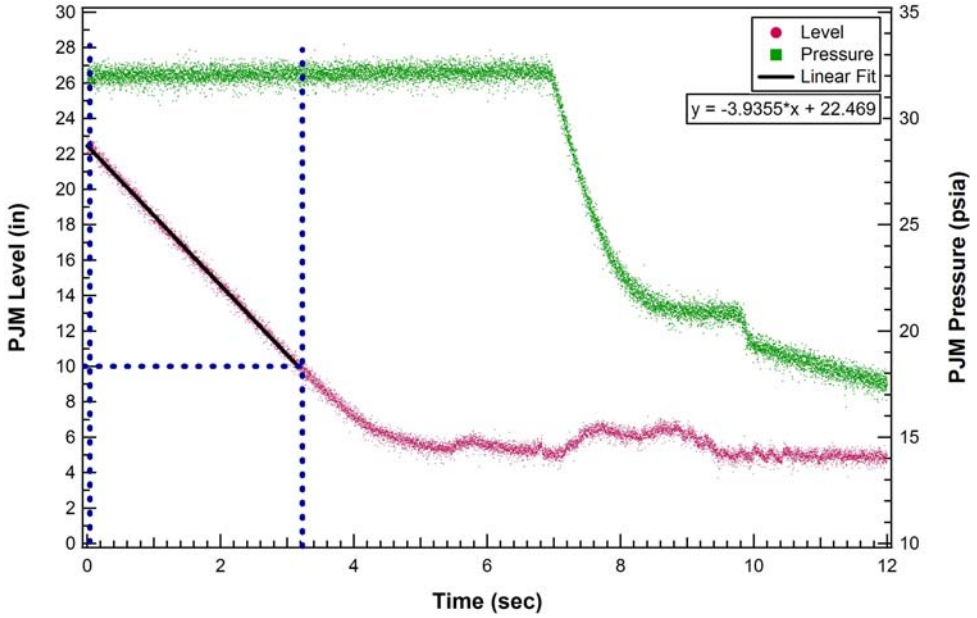


Figure 9.5. Illustration of the Linear Approximation for Nozzle Velocity Determination for the 8PJM High-Velocity Case (14 m/s) Using DAS-1 Data from Run E0481

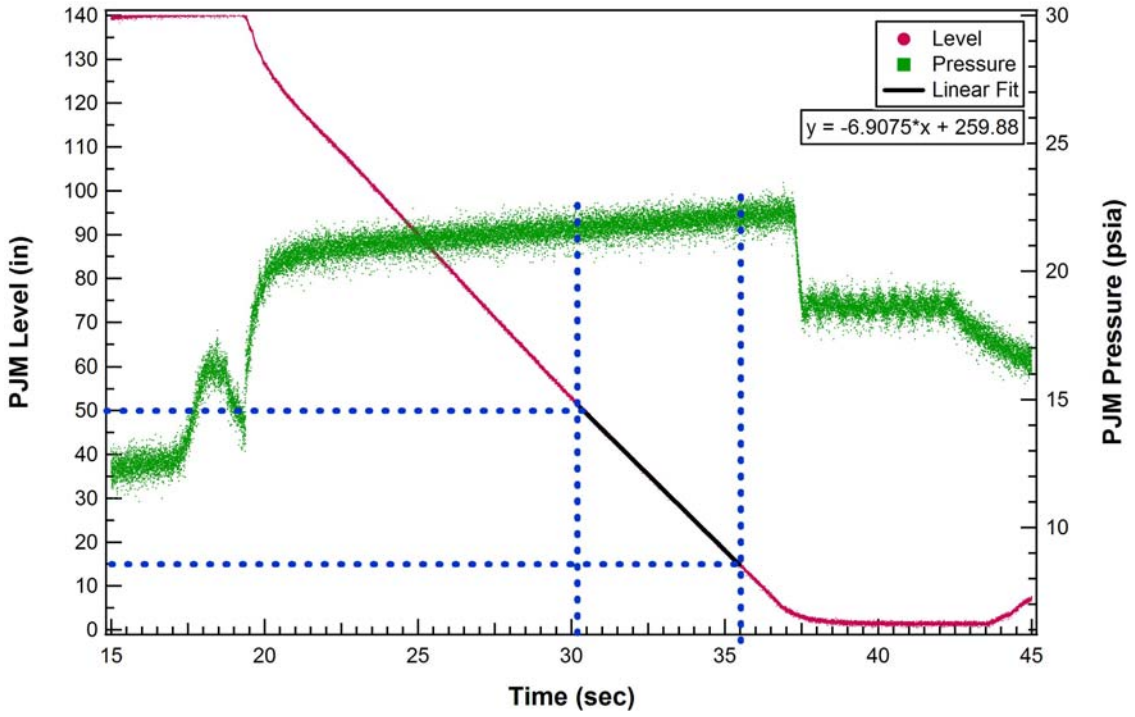


Figure 9.6. Illustration of the Linear Approximation for Nozzle Velocity Determination for the 4-PJM Low-Velocity Case (6 m/s) Using DAS-1 Data from Run E0875

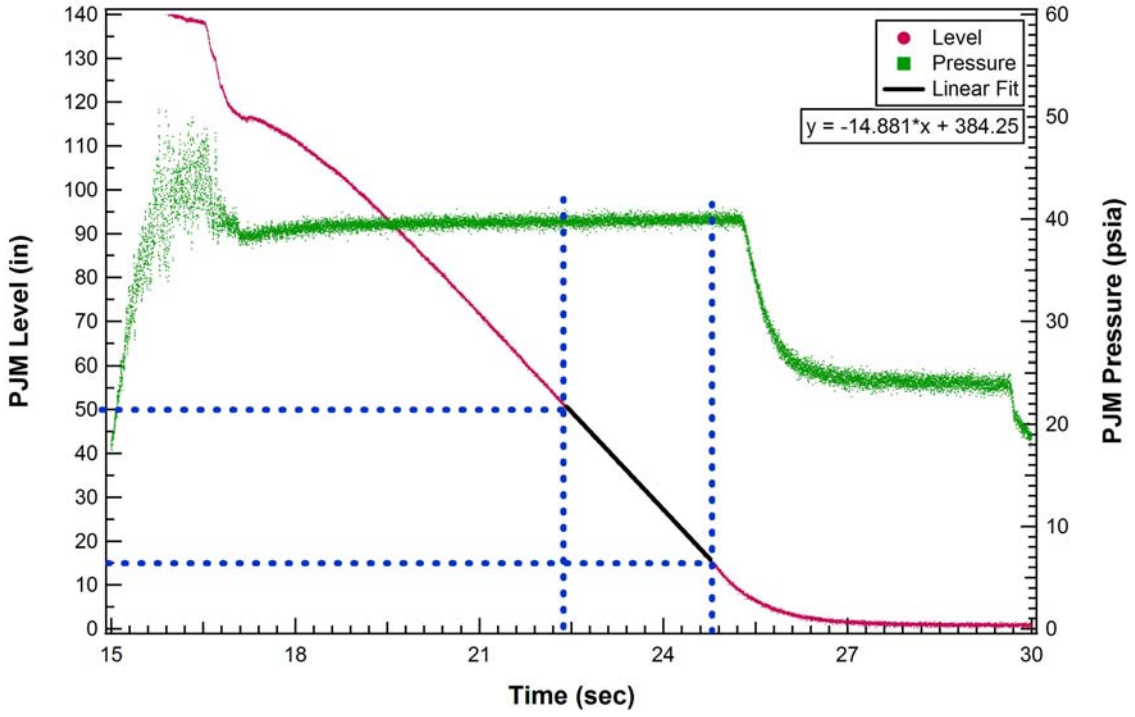


Figure 9.7. Illustration of the Linear Approximation for Nozzle Velocity Determination for the 4-PJM High-Velocity Case (12 m/s) Using DAS-1 Data from Run E0896

Table 9.5. Target and Estimated Peak Average Nozzle Velocities Using the Linear Approximation

Run No.	Slope	Nozzle Velocity (m/s)	
		Target	Estimated
E0515	-1.9973	8.0	7.0
E0481	-3.9355	14.0	13.8
E0875	-6.9075	6.0	6.0
E0896	-14.881	12.0	13.0

9.11 Example Data

The volume of data obtained in this project was much too large to allow a complete presentation in this report. Example 8-PJM data from run E0530 and 4-PJM data from run E1302 are provided in plots in Appendixes D and E, respectively. These data are presented for BNI and DEI to aid in the testing of their data preprocessing computer software.

Example runs E0530 and E1302 were both done with clay, so no subsurface videos could be taken. For those runs, the camera synchronization pulse was absent and DAS-2 channel 2 recorded only baseline noise. Additional camera synchronization pulse data from DAS-2 channel 2 are included in Appendixes D and E from runs E0110 and E0781. These were runs with water where subsurface videos were taken and DAS-2 channel 2 records a 5V rectangular pulse.

10.0 References

Poloski AP, ST Arm, OP Bredt, TB Calloway, Y Onishi, RA Peterson, GL. Smith, and HD Smith. 2006. *Final Report: Technical Basis for HLW Vitrification Stream Physical and Rheological Property Bounding Conditions.* PNWD-3675 (WTP-RPT-112 Rev. 0), Battelle – Pacific Northwest Division, Richland, Washington.

Poloski AP, PA Meyer, LK Jagoda, and PR Hrma. 2004. *Non-Newtonian Slurry Simulant Development and Selection for Pulsed Jet Mixer Testing.* PNWD-3495 (WTP-RPT-111 Rev. 0), Battelle – Pacific Northwest Division, Richland, Washington.

Bamberger JA, PA Meyer, and JR Bontha. 2005. *Technical Basis for Testing Scaled Pulse Jet Mixing Systems for Non-Newtonian Slurries.* PNWD-3551 (WTP-RPT-113 Rev. 0), Battelle – Pacific Northwest Division, Richland, Washington.

Bontha JR, DS Trent, MD Johnson, TE Michener, and JM Bates. 2003a. *Development and Assessment of the TEMPEST CFD Model of the Pulsed Jet Mixing Systems*. PNWD-3261 (WTP-RTP-061), Battelle – Pacific Northwest Division, Richland, Washington.

Bontha JR, JM Bates, CW Enderlin, and MG Dodson. 2003b. *Large Tank Experimental Data for Validation of the FLUENT CFD Model of Pulse Jet Mixers*. PNWD-3303 (WTP-RTP-081), Battelle – Pacific Northwest Division, Richland, Washington.

Bontha JR, CW Stewart, and DE Kurath. 2005. *Technical Basis for Predicting Mixing and Flammable Gas Behavior in the Ultrafiltration Feed Process and High-Level Waste Lag Storage Vessels with Non-Newtonian Slurries*. PNWD-3676 (WTP-RPT-132 Rev. 0), Battelle – Pacific Northwest Division, Richland, Washington.

Meyer PA, DE Kurath, and CW Stewart. 2005. *Overview of the Pulse Jet Mixer Non-Newtonian Scaled Test Program.* PNWD-3677 (WTP-RPT-127 Rev. 0), Battelle – Pacific Northwest Division, Richland, Washington.

Appendix A

Master Run Log, 8-PJM Configuration

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0001	8	Water	31	0.96	-	-	1	7	7	-	-	-	0.92	-	0.001/0.001/65/100					8	L	L	L	L	N	Y 250 fps	1	E0001-D1-070122.ASC	E0001-D2-C1 Jan 22, 2007 15-13-33.txt	E0001-NV-070122.AVI
E0002	8	Water	31	0.96	-	-	1	7	7	-	-	-	0.92	-	0.001/0.001/65/100					8	L	L	L	L	N	Y 500 fps	1	E0002-D1-070122.ASC	E0002-D2-C1 Jan 22, 2007 15-28-44.txt	E0002-NV-070122.AVI
E0003	8	Water	31	0.96	-	-	1	7	7	-	-	-	0.92	-	0.001/0.001/65/100					8	L	L	L	L	N	Y 1000.fps	1	E0003-D1-070122.ASC	E0003-D2-C1 Jan 22, 2007 15-42-02.txt	E0003-NV-070122.AVI
E0004	8	Water	31	0.96	-	-	1	7	7	-	-	-	1.95	-	0.001/0.001/40/100					8	L	L	L	L	N	Y 250 fps	1	E0004-D1-070123.ASC	E0004-D2-C1 Jan 23, 2007 11-39-14.txt	E0004-NV-070123,AVI
E0005	8	Water	31	0.96	-	-	1	7	7	-	-	-	1.95	-	0.001/0.001/40/100					8	L	L	L	L	N	Y 500 fps	1	E0005-D1-070123.ASC	E0005-D2-C1 Jan 23, 2007 11-43-44.txt	E0005-NV-070123,AVI
E0006	8	Water	31	0.96	-	-	1	7	7	-	-	-	1.95	-	0.001/0.001/40/100					8	L	L	L	L	N	Y 1000.fps	1	E0006-D1-070123.ASC	E0006-D2-C1 Jan 23, 2007 15-49-23.txt	E0006-NV-070123,AVI
Simultaneous OB; hydrophone level = L																															
E0025	8	Water	31	0.96	-	-	2	4,5	~5	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	L	L	L	L	N	Y 250 fps	1	E0025-D1-070219.ASC	E0025-D2-Channel1 Feb 19, 2007 15-09-00.txt	E0025Run1-NV-070219
E0026	8	Water	31	0.96	-	-	2	4,5	~3	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	L	L	L	L	N	Y 250 fps	2	E0026-D1-070219.ASC	E0026-D2-Channel1 Feb 19, 2007 15-17-11.txt	E0026Run2-NV-070219
E0027	8	Water	31	0.96	-	-	2	4,5	~4	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.200/27/110	-	-	-	14	L	L	L	L	N	N	1	E0027-D1-070219.ASC	E0027-D2-Channel1 Feb 19, 2007 16-11-17.txt	No video taken
E0028	8	Water	31	0.96	-	-	2	4,5	~4	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.200/27/110	-	-	-	14	L	L	L	L	N	N	2	E0028-D1-070219.ASC	E0028-D2-Channel1 Feb 19, 2007 16-14-33.txt	No video taken
E0029	8	Water	31	0.96	-	-	2	4,5	~4	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.200/27/110	-	-	-	14	L	L	L	L	N	N	1	E0029-D1-070220.ASC	E0029-D2-Channel1 Feb 20, 2007 08-56-35.txt	No video taken
E0030	8	Water	31	0.96	-	-	2	4,5	~4	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.200/27/110	-	-	-	14	L	L	L	L	N	N	2	E0030 D1-070220.ASC	E0030 D2-Channel1 Feb 20, 2007 08-59-33.txt	No video taken
Simultaneous OB; hydrophone level = M																															
E0031	8	Water	31	0.96	-	-	2	4,5	~4	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.200/27/110	-	-	-	14	M	M	M	M	N	N	1	E0031-D1-070220.ASC	E0031-D2-Channel1 Feb 20, 2007 09-46-40.txt	No video taken
E0032	8	Water	31	0.96	-	-	2	4,5	~4	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.200/27/110	-	-	-	14	M	M	M	M	N	N	2	E0032-D1-070220.ASC	E0032-D2-Channel1 Feb 20, 2007 10-05-05.txt	No video taken
E0033	8	Water	31	0.96	-	-	2	4,5	~4	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.200/27/110	-	-	-	14	M	M	M	M	N	N	3	E0033-D1-070220.ASC	E0033-D2-Channel1 Feb 20, 2007 10-08-39.txt	No video taken
E0034	8	Water	31	0.96	-	-	2	4,5	ND[e]	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.200/27/110	-	-	-	14	M	M	M	M	N	N	4	E0034-D1-070220.ASC	E0034-D2-Channel1 Feb 20, 2007 10-12-59.txt	No video taken
E0035	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.200/27/110	-	-	-	14	M	M	M	M	N	N	5	E0035-D1-070220.ASC	E0035-D2-Channel1 Feb 20, 2007 10-16-16.txt	No video taken
E0036	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.200/27/110	-	-	-	14	M	M	M	M	N	N	6	E0036-D1-070220.ASC	E0036-D2-Channel1 Feb 20, 2007 10-19-23.txt	No video taken
E0037	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.215/27/110	-	-	-	14	M	M	M	M	N	N	1	E0037-D1-070220.ASC	E0037-D2-Channel1 Feb 20, 2007 10-24-41.txt	No video taken
Simultaneous OB; hydrophone level = H																															
E0038	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.215/27/110	-	-	-	14	H	H	H	H	N	N	1	E0038-D1-070220.ASC	E0038-D2-Channel1 Feb 20, 2007 10-53-57.txt	No video taken
E0039	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.215/27/110	-	-	-	14	H	H	H	H	N	N	2	E0039-D1-070220.ASC	E0039-D2-Channel1 Feb 20, 2007 10-59-05.txt	No video taken
E0040	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.215/27/110	-	-	-	14	H	H	H	H	N	N	3	E0040-D1-070220.ASC	E0040-D2-Channel1 Feb 20, 2007 11-07-18.txt	No video taken
E0041	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.250/27/110	-	-	-	14	H	H	H	H	N	N	1	E0041-D1-070220.ASC	E0041-D2-Channel1 Feb 20, 2007 11-22-42.txt	No video taken
E0042	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.115/27/110	-	-	-	14	H	H	H	H	N	N	1	E0042-D1-070220.ASC	E0042-D2-Channel1 Feb 20, 2007 13-22-35.txt	No video taken
E0043	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.115/27/110	-	-	-	14	H	H	H	H	N	N	2	E0043-D1-070220.ASC	E0043-D2-Channel1 Feb 20, 2007 13-48-34.txt	No video taken
E0044	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.235/27/110	-	-	-	14	H	H	H	H	N	N	1	E0044-D1-070220.ASC	E0044-D2-Channel1 Feb 20, 2007 14-45-08.txt	No video taken
E0045	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.235/27/110	-	-	-	14	H	H	H	H	N	N	2	E0045-D1-070220.ASC	E0045-D2-Channel1 Feb 20, 2007 14-49-01.txt	No video taken
E0046	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.235/27/110	-	-	-	14	H	H	H	H	N	N	3	E0046-D1-070220.ASC	E0046-D2-Channel1 Feb 20, 2007 14-57-26.txt	No video taken
E0047	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.235/27/110	-	-	-	14	H	H	H	H	N	N	4	E0047-D1-070220.ASC	E0047-D2-Channel1 Feb 20, 2007 15-00-45.txt	No video taken
E0048	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.235/27/110	-	-	-	14	H	H	H	H	N	N	5	E0048-D1-070220.ASC	E0048-D2-Channel1 Feb 20, 2007 15-04-33.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0049	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.235/27/110	-	-	-	14	H	H	H	H	N	N	6	E0049-D1-070220.ASC	E0049-D2-Channel1 Feb 20, 2007 15-17-26.txt	No video taken
E0050	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.235/27/110	-	-	-	14	H	H	H	H	N	N	7	E0050-D1-070220.ASC	E0050-D2-Channel1 Feb 20, 2007 15-19-43.txt	No video taken
E0051	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.235/27/110	-	-	-	14	H	H	H	H	N	N	8	E0051-D1-070220.ASC	E0051-D2-Channel1 Feb 20, 2007 15-22-49.txt	No video taken
E0052	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.185/27/110	-	-	-	14	H	H	H	H	N	N	1	E0052-D1-070220.ASC	E0052-D2-Channel1 Feb 20, 2007 15-30-15.txt	No video taken
E0053	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.185/27/110	-	-	-	14	H	H	H	H	N	N	2	E0053-D1-070220.ASC	E0053-D2-Channel1 Feb 20, 2007 15-33-14.txt	No video taken
E0054	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.185/27/110	-	-	-	14	H	H	H	H	N	N	3	E0054-D1-070220.ASC	E0054-D2-Channel1 Feb 20, 2007 15-43-32.txt	No video taken
E0055	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.150/27/110	-	-	-	14	H	H	H	H	N	N	1	E0055-D1-070220.ASC	E0055-D2-Channel1 Feb 20, 2007 15-48-27.txt	No video taken
E0056	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.160/27/110	-	-	-	14	H	H	H	H	N	N	1	E0056-D1-070221.ASC	E0056-D2-Channel1 Feb 21, 2007 10-05-10.txt	No video taken
E0057	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.160/27/110	-	-	-	14	H	H	H	H	N	N	2	E0057-D1-070221.ASC	E0057-D2-Channel1 Feb 21, 2007 10-25-40.txt	No video taken
E0058	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.110/27/110	-	-	-	14	H	H	H	H	N	N	1	E0058-D1-070221.ASC	E0058-D2-Channel1 Feb 21, 2007 10-33-15.txt	No video taken
E0059	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.110/27/110	-	-	-	14	H	H	H	H	N	N	2	E0059-D1-070221.ASC	E0059-D2-Channel1 Feb 21, 2007 10-42-05.txt	No video taken
E0060	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.110/27/110	-	-	-	14	H	H	H	H	N	N	3	E0060-D1-070221.ASC	E0060-D2-Channel1 Feb 21, 2007 10-52-50.txt	No video taken
E0061	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.110/27/110	-	-	-	14	H	H	H	H	N	N	4	E0061-D1-070221.ASC	E0061-D2-Channel1 Feb 21, 2007 11-02-56.txt	No video taken
E0062	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.110/27/110	-	-	-	14	H	H	H	H	N	N	5	E0062-D1-070221.ASC	E0062-D2-Channel1 Feb 21, 2007 11-16-29.txt	No video taken
E0063	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.110/27/110	-	-	-	14	H	H	H	H	N	N	6	E0063-D1-070221.ASC	E0063-D2-Channel1 Feb 21, 2007 11-26-57.txt	No video taken
E0064	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.110/27/110	-	-	-	14	H	H	H	H	N	N	7	E0064-D1-070221.ASC	E0064-D2-Channel1 Feb 21, 2007 11-39-29.txt	No video taken
E0065	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.110/27/110	-	-	-	14	H	H	H	H	N	N	1	E0065-D1-070221.ASC	E0065-D2-Channel1 Feb 21, 2007 11-48-54.txt	No video taken
E0066	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.110/27/110	-	-	-	14	H	H	H	H	N	N	2	E0066-D1-070221.ASC	E0066-D2-Channel1 Feb 21, 2007 13-39-56.txt	No video taken
E0067	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.020/27/110	-	-	-	14	H	H	H	H	N	N	1	E0067-D1-070221.ASC	E0067-D2-Channel1 Feb 21, 2007 13-51-58.txt	No video taken
E0068	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	H	H	H	H	N	N	1	E0068-D1-070221.ASC	E0068-D2-Channel1 Feb 21, 2007 14-01-41.txt	No video taken
E0069	8	Water	31	0.96	-	-	2	4,5	ND	3.9	4.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	H	H	H	H	N	N	1	E0069-D1-070221.ASC	E0069-D2-Channel1 Feb 21, 2007 14-21-39.txt	No video taken
E0070	8	Water	31	0.96	-	-	2	4,5	ND	3.9	4.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	H	H	H	H	N	N	2	E0070-D1-070221.ASC	E0070-D2-Channel1 Feb 21, 2007 14-34-19.txt	No video taken
E0071	8	Water	31	0.96	-	-	2	4,5	ND	3.9	4.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	H	H	H	H	N	N	3	E0071-D1-070221.ASC	E0071-D2-Channel1 Feb 21, 2007 14-38-04.txt	No video taken
E0072	8	Water	31	0.96	-	-	2	4,5	ND	3.9	4.0	-	-	-	0.001/0.001/27/110	0.001/0.100/27/110	-	-	-	14	H	H	H	H	N	N	1	E0072-D1-070221.ASC	E0072-D2-Channel1 Feb 21, 2007 14-43-45.txt	No video taken
High water level, hydrophone level = H																														
E0073	8	Water	31	0.96	-	-	1	5	ND	-	4.0	-	-	-	-	0.001/0.001/27/110	-	-	-	14	H	H	H	H	N	N	1	E0073-D1-070222.ASC	E0073-D2-Channel1 Feb 22, 2007 09-25-30.txt	No video taken
E0074	8	Water	31	0.96	-	-	1	5	ND	-	4.0	-	-	-	-	0.001/0.001/27/110	-	-	-	14	H	H	H	H	N	N	2	E0074-D1-070222.ASC	E0074-D2-Channel1 Feb 22, 2007 09-31-09.txt	No video taken
E0075	8	Water	31	0.96	-	-	1	5	ND	-	4.0	-	-	-	-	0.001/0.001/27/110	-	-	-	14	H	H	H	H	N	N	3	E0075-D1-070222.ASC	E0075-D2-Channel1 Feb 22, 2007 09-33-45.txt	No video taken
E0076	8	Water	31	0.96	-	-	1	8	ND	-	-	-	-	4.0	-	-	-	-	0.001/0.001/31/110	14	H	H	H	H	N	N	1	E0076-D1-070222.ASC	E0076-D2-Channel1 Feb 22, 2007 09-45-49.txt	No video taken
E0077	8	Water	31	0.96	-	-	1	8	ND	-	-	-	-	4.0	-	-	-	-	0.001/0.001/31/110	14	H	H	H	H	N	N	2	E0077-D1-070222.ASC	E0077-D2-Channel1 Feb 22, 2007 09-48-29.txt	No video taken
E0078	8	Water	31	0.96	-	-	1	8	ND	-	-	-	-	4.0	-	-	-	-	0.001/0.001/31/110	14	H	H	H	H	N	N	3	E0078-D1-070222.ASC	E0078-D2-Channel1 Feb 22, 2007 09-51-03.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0079	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	H	H	H	H	N	N	1	E0079-D1-070222.ASC	E0079-D2-Channel1 Feb 22, 2007 10-01-42.txt	No video taken
E0080	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	H	H	H	H	N	N	2	E0080-D1-070222.ASC	E0080-D2-Channel1 Feb 22, 2007 10-05-21.txt	No video taken
E0081	8	Water	31	0.96	-	-	2	4,5	ND	4.0	4.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	H	H	H	H	N	N	3	E0081-D1-070222.ASC	E0081-D2-Channel1 Feb 22, 2007 10-07-55.txt	No video taken
E0082	8	Water	31	0.96	-	-	3	4,5,6	ND	4.0	4.0	4.0	-	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	-	14	H	H	H	H	N	N	1	E0082-D1-070222.ASC	E0082-D2-Channel1 Feb 22, 2007 10-31-59.txt	No video taken
E0083	8	Water	31	0.96	-	-	3	4,5,6	ND	4.0	4.0	4.0	-	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	-	14	H	H	H	H	N	N	2	E0083-D1-070222.ASC	E0083-D2-Channel1 Feb 22, 2007 10-34-03.txt	No video taken
E0084	8	Water	31	0.96	-	-	3	4,5,6	ND	4.0	4.0	4.0	-	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	-	14	H	H	H	H	N	N	3	E0084-D1-070222.ASC	E0084-D2-Channel1 Feb 22, 2007 10-37-06.txt	No video taken
E0085	8	Water	31	0.96	-	-	4	4,5,6,7	ND	4.0	4.0	4.0	4.0	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	14	H	H	H	H	N	N	1	E0085-D1-070222.ASC	E0085-D2-Channel1 Feb 22, 2007 10-47-19.txt	No video taken
E0086	8	Water	31	0.96	-	-	4	4,5,6,7	ND	4.0	4.0	4.0	4.0	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	14	H	H	H	H	N	N	2	E0086-D1-070222.ASC	E0086-D2-Channel1 Feb 22, 2007 10-50-25.txt	No video taken
E0087	8	Water	31	0.96	-	-	4	4,5,6,7	ND	4.0	4.0	4.0	4.0	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	14	H	H	H	H	N	N	3	E0087-D1-070222.ASC	E0087-D2-Channel1 Feb 22, 2007 10-53-25.txt	No video taken
E0088	8	Water	31	0.96	-	-	1	5	ND	-	5.0	-	-	-	-	0.001/0.001/27/110	-	-	-	> 15	H	H	H	H	N	N	1	E0088-D1-070222.ASC	E0088-D2-Channel1 Feb 22, 2007 11-07-35.txt	No video taken
E0089	8	Water	31	0.96	-	-	1	5	ND	-	5.0	-	-	-	-	0.001/0.001/27/110	-	-	-	> 15	H	H	H	H	N	N	2	E0089-D1-070222.ASC	E0089-D2-Channel1 Feb 22, 2007 11-10-54.txt	No video taken
E0090	8	Water	31	0.96	-	-	1	5	ND	-	5.0	-	-	-	-	0.001/0.001/27/110	-	-	-	> 15	H	H	H	H	N	N	3	E0090-D1-070222.ASC	E0090-D2-Channel1 Feb 22, 2007 11-13-32.txt	No video taken
E0091	8	Water	31	0.96	-	-	2	4,5	ND	5.0	5.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	> 15	H	H	H	H	N	N	1	E0091-D1-070222.ASC	E0091-D2-Channel1 Feb 22, 2007 11-23-07.txt	No video taken
E0092	8	Water	31	0.96	-	-	2	4,5	ND	5.0	5.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	> 15	H	H	H	H	N	N	2	E0092-D1-070222.ASC	E0092-D2-Channel1 Feb 22, 2007 11-25-52.txt	No video taken
E0093	8	Water	31	0.96	-	-	2	4,5	ND	5.0	5.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	> 15	H	H	H	H	N	N	3	E0093-D1-070222.ASC	E0093-D2-Channel1 Feb 22, 2007 11-29-43.txt	No video taken
E0094	8	Water	31	0.96	-	-	1	5	ND	-	3.0	-	-	-	-	0.001/0.001/27/110	-	-	-	12	H	H	H	H	N	N	1	E0094-D1-070222.ASC	E0094-D2-Channel1 Feb 22, 2007 13-03-44.txt	No video taken
E0095	8	Water	31	0.96	-	-	1	5	ND	-	3.0	-	-	-	-	0.001/0.001/27/110	-	-	-	12	H	H	H	H	N	N	2	E0095-D1-070222.ASC	E0095-D2-Channel1 Feb 22, 2007 13-06-22.txt	No video taken
E0096	8	Water	31	0.96	-	-	1	5	ND	-	3.0	-	-	-	-	0.001/0.001/27/110	-	-	-	12	H	H	H	H	N	N	3	E0096-D1-070222.ASC	E0096-D2-Channel1 Feb 22, 2007 13-09-17.txt	No video taken
E0097	8	Water	31	0.96	-	-	1	5	~ 2.5	-	3.0	-	-	-	-	0.001/0.001/30/110	-	-	-	12	H	H	H	H	N	N	1	E0097-D1-070222.ASC	E0097-D2-Channel1 Feb 22, 2007 13-33-35.txt	No video taken
E0098	8	Water	31	0.96	-	-	1	5	~ 2.5	-	3.0	-	-	-	-	0.001/0.001/30/110	-	-	-	12	H	H	H	H	N	N	2	E0098-D1-070222.ASC	E0098-D2-Channel1 Feb 22, 2007 13-36-54.txt	No video taken
E0099	8	Water	31	0.96	-	-	1	5	~ 2.5	-	3.0	-	-	-	-	0.001/0.001/30/110	-	-	-	12	H	H	H	H	N	N	3	E0099-D1-070222.ASC	E0099-D2-Channel1 Feb 22, 2007 13-39-38.txt	No video taken
E0100	8	Water	31	0.96	-	-	2	4,5	~ 2.5	3.0	3.0	-	-	-	0.001/0.001/30/110	0.001/0.001/30/110	-	-	-	12	H	H	H	H	N	N	1	E0100-D1-070222.ASC	E0100-D2-Channel1 Feb 22, 2007 13-50-51.txt	No video taken
E0101	8	Water	31	0.96	-	-	2	4,5	~ 2.5	3.0	3.0	-	-	-	0.001/0.001/30/110	0.001/0.001/30/110	-	-	-	12	H	H	H	H	N	N	2	E0101-D1-070222.ASC	E0101-D2-Channel1 Feb 22, 2007 13-53-30.txt	No video taken
E0102	8	Water	31	0.96	-	-	2	4,5	~ 2.5	3.0	3.0	-	-	-	0.001/0.001/30/110	0.001/0.001/30/110	-	-	-	12	H	H	H	H	N	N	3	E0102-D1-070222.ASC	E0102-D2-Channel1 Feb 22, 2007 13-56-11.txt	No video taken
E0103	8	Water	31	0.96	-	-	1	5	~ 4.5	-	0.9	-	-	-	-	0.001/0.001/60/110	-	-	-	8	H	H	H	H	N	N	1	E0103-D1-070222.ASC	E0103-D2-Channel1 Feb 22, 2007 14-25-13.txt	No video taken
E0104	8	Water	31	0.96	-	-	1	5	~ 4.5	-	0.9	-	-	-	-	0.001/0.001/60/110	-	-	-	8	H	H	H	H	N	N	2	E0104-D1-070222.ASC	E0104-D2-Channel1 Feb 22, 2007 14-28-44.txt	No video taken
E0105	8	Water	31	0.96	-	-	1	5	~ 4.5	-	0.9	-	-	-	-	0.001/0.001/60/110	-	-	-	8	H	H	H	H	N	N	3	E0105-D1-070222.ASC	E0105-D2-Channel1 Feb 22, 2007 14-31-41.txt	No video taken
E0106	8	Water	31	0.96	-	-	2	4,5	~ 5	1.0	0.9	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	H	H	H	H	N	N	1	E0106-D1-070222.ASC	E0106-D2-Channel1 Feb 22, 2007 14-43-17.txt	No video taken
E0107	8	Water	31	0.96	-	-	2	4,5	~ 5	1.0	0.9	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	H	H	H	H	N	N	2	E0107-D1-070222.ASC	E0107-D2-Channel1 Feb 22, 2007 14-47-06.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0108	8	Water	31	0.96	-	-	2	4,5	~ 5	1.0	0.9	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	H	H	H	H	N	N	3	E0108-D1-070222.ASC	E0108-D2-Channel1 Feb 22, 2007 14-50-27.txt	No video taken
High water level, hydrophone level = M																															
E0109	8	Water	31	0.96	-	-	1	5	~ 4	-	0.9	-	-	-	-	0.001/0.001/60/110	-	-	-	8	M	M	M	M	N	Y (but bad)	1	E0109-D1-070223.ASC	E0109-D2-Channel1 Feb 23, 2007 10-00-22.txt	E0109Run1-NV-070223
E0110	8	Water	31	0.96	-	-	1	5	~ 3.5	-	0.9	-	-	-	-	0.001/0.001/60/110	-	-	-	8	M	M	M	M	N	yes	2	E0110-D1-070223.ASC	E0110-D2-Channel1 Feb 23, 2007 10-22-32.txt	E0110Run2-NV-070223
E0111	8	Water	31	0.96	-	-	1	5	ND	-	0.9	-	-	-	-	0.001/0.001/60/110	-	-	-	8	M	M	M	M	N	yes	3	E0111-D1-070223.ASC	E0111-D2-Channel1 Feb 23, 2007 10-33-32.txt	E0111Run3-NV-070223
E0112	8	Water	31	0.96	-	-	2	4,5	~ 1.5 , ~ 5	0.9	0.9	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	M	M	M	M	N	yes	1	E0112-D1-070223.ASC	E0112-D2-Channel1 Feb 23, 2007 10-44-27.txt	E0112Run4-NV-070223
E0113	8	Water	31	0.96	-	-	2	4,5	~ 2.5 , ~ 4.5	0.9	0.9	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	M	M	M	M	N	Y(sub surf)/N(surface)	1	E0113-D1-070223.ASC	E0113-D2-Channel1 Feb 23, 2007 10-54-18.txt	E0113Run5-NV-070223
E0114	8	Water	31	0.96	-	-	2	4,5	~1.5 , ~ 4.5	0.9	0.9	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	M	M	M	M	N	yes	1	E0114-D1-070223.ASC	E0114-D2-Channel1 Feb 23, 2007 11-02-51.txt	E0114Run6-NV-070223
E0115	8	Water	31	0.96	-	-	2	4,5	~ 2.5 , ~ 5	0.9	0.9	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	M	M	M	M	N	yes	1	E0115-D1-070223.ASC	E0115-D2-Channel1 Feb 23, 2007 11-15-04.txt	E0115Run7-NV-070223
E0116	8	Water	31	0.96	-	-	2	4,5	~ 4 , ~ 5	1.0	0.9	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	M	M	M	M	N	yes	2	E0116-D1-070223.ASC	E0116-D2-Channel1 Feb 23, 2007 11-31-51.txt	E0116Run8-NV-070223
E0117	8	Water	31	0.96	-	-	1	5	~ 2.5	-	3.0	-	-	-	-	0.001/0.001/30/110	-	-	-	12	M	M	M	M	N	yes	1	E0117-D1-070223.ASC	E0117-D2-Channel1 Feb 23, 2007 11-48-03.txt	E0117Run9-NV-070223
E0118	8	Water	31	0.96	-	-	1	5	~ 2.5	-	3.0	-	-	-	-	0.001/0.001/30/110	-	-	-	12	M	M	M	M	N	yes	2	E0118-D1-070223.ASC	E0118-D2-Channel1 Feb 23, 2007 11-53-43.txt	E0118Run10-NV-070223
E0119	8	Water	31	0.96	-	-	1	5	~ 2.5	-	3.0	-	-	-	-	0.001/0.001/30/110	-	-	-	12	M	M	M	M	N	No	3	E0119-D1-070223.ASC	E0119-D2-Channel1 Feb 23, 2007 11-57-27.txt	No video taken
E0120	8	Water	31	0.96	-	-	2	4,5	~ 2	3.0	3.0	-	-	-	0.001/0.001/30/110	0.001/0.001/30/110	-	-	-	12	M	M	M	M	N	Yes	1	E0120-D1-070223.ASC	E0120-D2-Channel1 Feb 23, 2007 13-09-11.txt	E0120Run12-NV-070223
E0121	8	Water	31	0.96	-	-	2	4,5	~ 2	3.0	3.0	-	-	-	0.001/0.001/30/110	0.001/0.001/30/110	-	-	-	12	M	M	M	M	N	Yes	2	E0121-D1-070223.ASC	E0121-D2-Channel1 Feb 23, 2007 13-17-02.txt	E0121Run13-NV-070223
E0122	8	Water	31	0.96	-	-	2	4,5	~ 2	3.0	3.0	-	-	-	0.001/0.001/30/110	0.001/0.001/30/110	-	-	-	12	M	M	M	M	N	No	3	E0122-D1-070223.ASC	E0122-D2-Channel1 Feb 23, 2007 13-23-45.txt	No video taken
E0123	8	Water	31	0.96	-	-	1	5	> 4	-	5.1	-	-	-	-	0.001/0.001/27/110	-	-	-	>15	M	M	M	M	N	Yes	1	E0123-D1-070223.ASC	E0123-D2-Channel1 Feb 23, 2007 13-39-35.txt	E0123Run15-NV-070223
E0124	8	Water	31	0.96	-	-	1	5	>4.5	-	5.0	-	-	-	-	0.001/0.001/27/110	-	-	-	>15	M	M	M	M	N	Yes	1	E0124-D1-070223.ASC	E0124-D2-Channel1 Feb 23, 2007 13-48-24.txt	E0124Run16-NV-070223
E0125	8	Water	31	0.96	-	-	1	5	>5	-	5.0	-	-	-	-	0.001/0.001/27/110	-	-	-	>15	M	M	M	M	N	Yes	2	E0125-D1-070223.ASC	E0125-D2-Channel1 Feb 23, 2007 13-55-42.txt	E0125Run17-NV-070223
E0126	8	Water	31	0.96	-	-	1	5	~ 5	-	5.0	-	-	-	-	0.001/0.001/27/110	-	-	-	>15	M	M	M	M	N	No	3	E0126-D1-070223.ASC	E0126-D2-Channel1 Feb 23, 2007 14-04-03.txt	No video taken
E0127	8	Water	31	0.96	-	-	2	4,5	> 5	5.0	5.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	>15	M	M	M	M	N	Yes	1	E0127-D1-070223.ASC	E0127-D2-Channel1 Feb 23, 2007 14-14-35.txt	E0127Run19-NV-070223
E0128	8	Water	31	0.96	-	-	2	4,5	> 5	5.0	5.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	>15	M	M	M	M	N	Yes	2	E0128-D1-070223.ASC	E0128-D2-Channel1 Feb 23, 2007 14-22-22.txt	E0128Run20-NV-070223
E0129	8	Water	31	0.96	-	-	2	4,5	~ 5	5.0	5.0	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	>15	M	M	M	M	N	No	3	E0129-D1-070223.ASC	E0129-D2-Channel1 Feb 23, 2007 14-28-59.txt	No video taken
E0130	8	Water	31	0.96	-	-	1	8	> 5	-	-	-	-	4.0	-	-	-	-	0.001/0.001/31/110	14	M	M	M	M	N	Yes	1	E0130-D1-070223.ASC	E0130-D2-Channel1 Feb 23, 2007 14-41-25.txt	E0130Run22-NV-070223
E0131	8	Water	31	0.96	-	-	1	8	~ 5	-	-	-	-	4.0	-	-	-	-	0.001/0.001/31/110	14	M	M	M	M	N	Yes	2	E0131-D1-070223.ASC	E0131-D2-Channel1 Feb 23, 2007 14-49-50.txt	E0131Run23-NV-070223
E0132	8	Water	31	0.96	-	-	1	8	~ 5	-	-	-	-	4.0	-	-	-	-	0.001/0.001/31/110	14	M	M	M	M	N	No	3	E0132-D1-070223.ASC	E0132-D2-Channel1 Feb 23, 2007 15-00-21.txt	No video taken
E0133	8	Water	31	0.96	-	-	1	5	~3.5	-	4.01	-	-	-	-	0.001/0.001/27/110	-	-	-	14	M	M	M	M	N	Yes	1	E0133-D1-070226.ASC	E0133-D2-Channel1 Feb 26, 2007 10-20-23.txt	E0133Run1-NV-070226
E0134	8	Water	31	0.96	-	-	1	5	~3.5	-	4.01	-	-	-	-	0.001/0.001/27/110	-	-	-	14	M	M	M	M	N	Yes	2	E0134-D1-070226.ASC	E0134-D2-Channel1 Feb 26, 2007 10-29-43.txt	E0134Run2-NV-070226
E0135	8	Water	31	0.96	-	-	1	5	~3.5	-	4.01	-	-	-	-	0.001/0.001/27/110	-	-	-	14	M	M	M	M	N	No	3	E0135-D1-070226.ASC	E0135-D2-Channel1 Feb 26, 2007 10-36-58.txt	No video taken
E0136	8	Water	31	0.96	-	-	2	4,5	~3.5	3.99	4.01	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	M	M	M	M	N	Yes	1	E0136-D1-070226.ASC	E0136-D2-Channel1 Feb 26, 2007 10-45-50.txt	E0136Run4-NV-070226

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0137	8	Water	31	0.96	-	-	2	4,5	~3.5	3.99	4.01	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	M	M	M	M	N	Yes	2	E0137-D1-070226.ASC	E0137-D2-Channel1 Feb 26, 2007 10-53-29.txt	E0137Run5-NV-070226
E0138	8	Water	31	0.96	-	-	2	4,5	~3.	3.99	4.01	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	M	M	M	M	N	No	3	E0138-D1-070226.ASC	E0138-D2-Channel1 Feb 26, 2007 11-01-47.txt	No video taken
E0139	8	Water	31	0.96	-	-	3	4,5,6	~3.	3.96	4.07	3.95	-	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	-	14	M	M	M	M	N	Yes	1	E0139-D1-070226.ASC	E0139-D2-Channel1 Feb 26, 2007 11.14.05.txt	E0139Run7-NV-070226
E0140	8	Water	31	0.96	-	-	3	4,5,6	~3.	4.01	4.08	4.01	-	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	-	14	M	M	M	M	N	Yes	1	E0140-D1-070226.ASC	E0140-D2-Channel1 Feb 26, 2007 13-13-51.txt	E0140Run8-NV-070226
E0141	8	Water	31	0.96	-	-	3	4,5,6	~3.	4.01	4.08	4.01	-	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	-	14	M	M	M	M	N	Yes	2	E0141-D1-070226.ASC	E0141-D2-Channel1 Feb 26, 2007 13-21-56.txt	E0141Run9-NV-070226
E0142	8	Water	31	0.96	-	-	3	4,5,6	~3.	4.01	4.08	4.01	-	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	-	14	M	M	M	M	N	No	3	E0142-D1-070226.ASC	E0142-D2-Channel1 Feb 26, 2007 13-29-03.txt	No video taken
E0143	8	Water	31	0.96	-	-	4	4,5,6,7	~3.	3.98	4.01	3.99	4.04	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	14	M	M	M	M	N	Yes	1	E0143-D1-070226.ASC	E0143-D2-Channel1 Feb 26, 2007 13-40-01.txt	E0143Run11-NV-070226
E0144	8	Water	31	0.96	-	-	4	4,5,6,7	~3.	3.98	4.01	3.99	4.04	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	14	M	M	M	M	N	Yes	2	E0144-D1-070226.ASC	E0144-D2-Channel1 Feb 26, 2007 13-48-32.txt	E0144Run12-NV-070226
E0145	8	Water	31	0.96	-	-	4	4,5,6,7	~3.	3.98	4.01	3.99	4.04	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	14	M	M	M	M	N	No	3	E0145-D1-070226.ASC	E0145-D2-Channel1 Feb 26, 2007 13-56-30.txt	No video taken
High water level, hydrophone level = L																														
E0146	8	Water	31	0.96	-	-	1	8	~4.5	-	-	-	-	4.02	-	-	-	-	0.001/0.001/31/110	14	L	L	L	L	N	No	1	E0146-D1-070226.ASC	E0146-D2-Channel1 Feb 26, 2007 14-23-06.txt	No video taken
E0147	8	Water	31	0.96	-	-	1	8	>5	-	-	-	-	4.02	-	-	-	-	0.001/0.001/31/110	14	L	L	L	L	N	No	2	E0147-D1-070226.ASC	E0147-D2-Channel1 Feb 26, 2007 14-25-47.txt	No video taken
E0148	8	Water	31	0.96	-	-	1	8	>5	-	-	-	-	4.02	-	-	-	-	0.001/0.001/31/110	14	L	L	L	L	N	No	3	E0148-D1-070226.ASC	E0148-D2-Channel1 Feb 26, 2007 14-28-19.txt	No video taken
E0149	8	Water	31	0.96	-	-	1	5	~3	-	3.99	-	-	-	-	0.001/0.001/27/110	-	-	-	14	L	L	L	L	N	No	1	E0149-D1-070226.ASC	E0149-D2-Channel1 Feb 26, 2007 14-35-57.txt	No video taken
E0150	8	Water	31	0.96	-	-	1	5	~3	-	3.99	-	-	-	-	0.001/0.001/27/110	-	-	-	14	L	L	L	L	N	No	2	E0150-D1-070226.ASC	E0150-D2-Channel1 Feb 26, 2007 14-38-24.txt	No video taken
E0151	8	Water	31	0.96	-	-	1	5	~3.5	-	3.99	-	-	-	-	0.001/0.001/27/110	-	-	-	14	L	L	L	L	N	No	3	E0151-D1-070226.ASC	E0151-D2-Channel1 Feb 26, 2007 14-41-08.txt	No video taken
E0152	8	Water	31	0.96	-	-	2	4,5	~3.	4	4.07	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	L	L	L	L	N	No	1	E0152-D1-070226.ASC	E0152-D2-Channel1 Feb 26, 2007 14-51-16.txt	No video taken
E0153	8	Water	31	0.96	-	-	2	4,5	~3.	4	4.07	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	L	L	L	L	N	No	2	E0153-D1-070226.ASC	E0153-D2-Channel1 Feb 26, 2007 14-53-46.txt	No video taken
E0154	8	Water	31	0.96	-	-	2	4,5	~3.	4	4.07	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	14	L	L	L	L	N	No	3	E0154-D1-070226.ASC	E0154-D2-Channel1 Feb 26, 2007 14-56-00.txt	No video taken
E0155	8	Water	31	0.96	-	-	3	4,5,6	~3.	3.98	3.99	3.97	-	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	-	14	L	L	L	L	N	No	1	E0155-D1-070226.ASC	E0155-D2-Channel1 Feb 26, 2007 15-05-19.txt	No video taken
E0156	8	Water	31	0.96	-	-	3	4,5,6	~3.	3.98	3.99	3.97	-	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	-	14	L	L	L	L	N	No	2	E0156-D1-070226.ASC	E0156-D2-Channel1 Feb 26, 2007 15-07-37.txt	No video taken
E0157	8	Water	31	0.96	-	-	3	4,5,6	~2.5	3.98	3.99	3.97	-	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	-	14	L	L	L	L	N	No	3	E0157-D1-070226.ASC	E0157-D2-Channel1 Feb 26, 2007 15-09-59.txt	No video taken
E0158	8	Water	31	0.96	-	-	4	4,5,6,7	~3	4	3.98	3.98	3.97	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	14	L	L	L	L	N	No	1	E0158-D1-070227.ASC	E0158-D2-Channel1 Feb 27, 2007 09-21-04.txt	No video taken
E0159	8	Water	31	0.96	-	-	4	4,5,6,7	~3	4	3.98	3.98	3.97	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	14	L	L	L	L	N	No	2	E0159-D1-070227.ASC	E0159-D2-Channel1 Feb 27, 2007 09-24-02.txt	No video taken
E0160	8	Water	31	0.96	-	-	4	4,5,6,7	~3	4	3.98	3.98	3.97	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	14	L	L	L	L	N	No	3	E0160-D1-070227.ASC	E0160-D2-Channel1 Feb 27, 2007 09-26-41.txt	No video taken
E0161	8	Water	31	0.96	-	-	4	4,5,6,7	~3	4.01	4.01	3.96	4	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/	0.001/0.001/27/	-	14	L	L	L	L	Y	No	1	E0161-D1-070227.ASC	E0161-D2-Channel1 Feb 27, 2007 09-57-17.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
																	110	110												
E0162	8	Water	31	0.96	-	-	4	4,5,6,7	~3	4.01	4.01	3.96	4	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	14	L	L	L	L	Y	No	2	E0162-D1-070227.ASC	E0162-D2-Channel1 Feb 27, 2007 10-01-07.txt	No video taken
E0163	8	Water	31	0.96	-	-	4	4,5,6,7	~3	4.01	4.01	3.96	4	-	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	0.001/0.001/27/110	-	14	L	L	L	L	Y	No	3	E0163-D1-070227.ASC	E0163-D2-Channel1 Feb 27, 2007 10-04-06.txt	No video taken
E0164	8	Water	31	0.96	-	-	1	5	>5	-	5.02	-	-	-	-	0.001/0.001/27/110	-	-	-	>15	L	L	L	L	N	No	1	E0164-D1-070227.ASC	E0164-D2-Channel1 Feb 27, 2007 10-18-38.txt	No video taken
E0165	8	Water	31	0.96	-	-	1	5	>5	-	5.02	-	-	-	-	0.001/0.001/27/110	-	-	-	>15	L	L	L	L	N	No	2	E0165-D1-070227.ASC	E0165-D2-Channel1 Feb 27, 2007 10-20-47.txt	No video taken
E0166	8	Water	31	0.96	-	-	1	5	>5	-	5.02	-	-	-	-	0.001/0.001/27/110	-	-	-	>15	L	L	L	L	N	No	3	E0166-D1-070227.ASC	E0166-D2-Channel1 Feb 27, 2007 10-23-15.txt	No video taken
E0167	8	Water	31	0.96	-	-	2	4,5	>5	5	4.99	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	>15	L	L	L	L	N	No	1	E0167-D1-070227.ASC	E0167-D2-Channel1 Feb 27, 2007 10-37-16.txt	No video taken
E0168	8	Water	31	0.96	-	-	2	4,5	>5	5	4.99	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	>15	L	L	L	L	N	No	2	E0168-D1-070227.ASC	E0168-D2-Channel1 Feb 27, 2007 10-39-40.txt	No video taken
E0169	8	Water	31	0.96	-	-	2	4,5	>5	5	4.99	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	>15	L	L	L	L	N	No	3	E0169-D1-070227.ASC	E0169-D2-Channel1 Feb 27, 2007 10-42-14.txt	No video taken
E0170	8	Water	31	0.96	-	-	2	4,5	>5	5	4.99	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	>15	L	L	L	L	Y	No	1	E0170-D1-070227.ASC	E0170-D2-Channel1 Feb 27, 2007 10-46-35.txt	No video taken
E0171	8	Water	31	0.96	-	-	2	4,5	>5	5	4.99	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	>15	L	L	L	L	Y	No	2	E0171-D1-070227.ASC	E0171-D2-Channel1 Feb 27, 2007 10-48-52.txt	No video taken
E0172	8	Water	31	0.96	-	-	2	4,5	>5	5	4.99	-	-	-	0.001/0.001/27/110	0.001/0.001/27/110	-	-	-	>15	L	L	L	L	Y	No	3	E0172-D1-070227.ASC	E0172-D2-Channel1 Feb 27, 2007 10-50-58.txt	No video taken
E0173	8	Water	31	0.96	-	-	1	5	~2.5	-	2.97	-	-	-	-	0.001/0.001/30/110	-	-	-	12	L	L	L	L	N	No	1	E0173-D1-070227.ASC	E0173-D2-Channel1 Feb 27, 2007 11-14-09.txt	No video taken
E0174	8	Water	31	0.96	-	-	1	5	~2.5	-	2.97	-	-	-	-	0.001/0.001/30/110	-	-	-	12	L	L	L	L	N	No	2	E0174-D1-070227.ASC	E0174-D2-Channel1 Feb 27, 2007 11-16-38.txt	No video taken
E0175	8	Water	31	0.96	-	-	1	5	~2.5	-	2.97	-	-	-	-	0.001/0.001/30/110	-	-	-	12	L	L	L	L	N	No	3	E0175-D1-070227.ASC	E0175-D2-Channel1 Feb 27, 2007 11-18-49.txt	No video taken
E0176	8	Water	31	0.96	-	-	2	4,5	~2.5	2.99	2.99	-	-	-	0.001/0.001/30/110	0.001/0.001/30/110	-	-	-	12	L	L	L	L	N	No	1	E0176-D1-070227.ASC	E0176-D2-Channel1 Feb 27, 2007 11-27-57.txt	No video taken
E0177	8	Water	31	0.96	-	-	2	4,5	~2.5	2.99	2.99	-	-	-	0.001/0.001/30/110	0.001/0.001/30/110	-	-	-	12	L	L	L	L	N	No	2	E0177-D1-070227.ASC	E0177-D2-Channel1 Feb 27, 2007 11-30-28.txt	No video taken
E0178	8	Water	31	0.96	-	-	2	4,5	~2.5	2.99	2.99	-	-	-	0.001/0.001/30/110	0.001/0.001/30/110	-	-	-	12	L	L	L	L	N	No	3	E0178-D1-070227.ASC	E0178-D2-Channel1 Feb 27, 2007 11-33-13.txt	No video taken
E0179	8	Water	31	0.96	-	-	1	5	~5	-	0.92	-	-	-	-	0.001/0.001/60/110	-	-	-	8	L	L	L	L	N	No	1	E0179-D1-070227.ASC	E0179-D2-Channel1 Feb 27, 2007 13-12-17.txt	No video taken
E0180	8	Water	31	0.96	-	-	1	5	~5	-	0.92	-	-	-	-	0.001/0.001/60/110	-	-	-	8	L	L	L	L	N	No	2	E0180-D1-070227.ASC	E0180-D2-Channel1 Feb 27, 2007 13-21-17.txt	No video taken
E0181	8	Water	31	0.96	-	-	1	5	~5	-	0.92	-	-	-	-	0.001/0.001/60/110	-	-	-	8	L	L	L	L	N	No	3	E0181-D1-070227.ASC	E0181-D2-Channel1 Feb 27, 2007 13-24-46.txt	No video taken
E0182	8	Water	31	0.96	-	-	2	4,5	~4	0.93	0.94	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	L	L	L	L	N	No	1	E0182-D1-070227.ASC	E0182-D2-Channel1 Feb 27, 2007 13-34-29.txt	No video taken
E0183	8	Water	31	0.96	-	-	2	4,5	~4	0.93	0.94	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	L	L	L	L	N	No	2	E0183-D1-070227.ASC	E0183-D2-Channel1 Feb 27, 2007 13-37-56.txt	No video taken
E0184	8	Water	31	0.96	-	-	2	4,5	~4	0.89	0.93	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	L	L	L	L	N	No	1	E0184-D1-070227.ASC	E0184-D2-Channel1 Feb 27, 2007 13-50-01.txt	No video taken
E0185	8	Water	31	0.96	-	-	2	4,5	~3.5	0.93	0.91	-	-	-	0.001/0.001/60/110	0.001/0.001/60/110	-	-	-	8	L	L	L	L	N	No	2	E0185-D1-070227.ASC	E0185-D2-Channel1 Feb 27, 2007 13-56-33.txt	No video taken
Low water level, hydrophone level = L																														
E0186	8	Water	130	0.31	-	-	1	8	>5	-	-	-	-	4.02	-	-	-	-	45/0.001/31/110	14	L	L	L	L	N	Y	1	E0186-D1-070305.ASC	E0186-D2-Channel1 March 5, 2007 10-01-34.txt	E0186-RUN1-NV-070305.AVI
E0187	8	Water	130	0.31	-	-	1	5	~4	-	3.96	-	-	-	-	45/0.001/27/110	-	-	-	14	L	L	L	L	N	No	1	E0187-D1-070305.ASC	E0187-D2-Channel1 March 5, 2007 10-28-20.txt	No video taken
E0188	8	Water	130	0.31	-	-	1	5	~4	-	3.96	-	-	-	-	45/0.001/27/110	-	-	-	14	L	L	L	L	N	No	2	E0188-D1-070305.ASC	E0188-D2-Channel1 March 5, 2007 10-31-46.txt	No video taken
E0189	8	Water	130	0.31	-	-	1	5	~4	-	3.96	-	-	-	-	45/0.001/27/110	-	-	-	14	L	L	L	L	N	No	3	E0189-D1-070305.ASC	E0189-D2-Channel1 March 5, 2007 10-35-08.txt	No video taken
E0190	8	Water	130	0.31	-	-	2	4,5	~4	4	3.95	-	-	-	45/0.001/27/110	45/0.001/27/110	-	-	-	14	L	L	L	L	N	No	1	E0190-D1-070305.ASC	E0190-D2-Channel1 March 5, 2007 10-50-37.txt	No video taken
E0191	8	Water	130	0.31	-	-	2	4,5	~4	4	3.95	-	-	-	45/0.001/27/110	45/0.001/27/110	-	-	-	14	L	L	L	L	N	No	2	E0191-D1-070305.ASC	E0191-D2-Channel1 March 5, 2007 10-55-05.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0192	8	Water	130	0.31	-	-	2	4,5	~3.5	4	3.95	-	-	-	45/0.001/27/110	45/0.001/27/110	-	-	-	14	L	L	L	L	N	No	3	E0192-D1-070305.ASC	E0192-D2-Channel1 March 5, 2007 10-57-40.txt	No video taken
E0193	8	Water	130	0.31	-	-	3	4,5,6	~3.5	3.97	3.92	3.99	-	-	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	-	-	14	L	L	L	L	N	No	1	E0193-D1-070305.ASC	E0193-D2-Channel1 March 5, 2007 11-16-59.txt	No video taken
E0194	8	Water	130	0.31	-	-	3	4,5,6	~3.5	3.97	3.92	3.99	-	-	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	-	-	14	L	L	L	L	N	No	2	E0194-D1-070305.ASC	E0194-D2-Channel1 March 5, 2007 11-19-40.txt	No video taken
E0195	8	Water	130	0.31	-	-	3	4,5,6	~3.5	3.91	3.92	3.99	-	-	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	-	-	14	L	L	L	L	N	No	3	E0195-D1-070305.ASC	E0195-D2-Channel1 March 5, 2007 11-22-30.txt	No video taken
E0196	8	Water	130	0.31	-	-	1	8	>5	-	-	-	-	4.05	-	-	-	-	45/0.001/31/110	14	L	L	L	L	N	Y	1	E0196-D1-070305.ASC	E0196-D2-Channel1 March 5, 2007 13-12-38.txt	E0196-RUN11-NV-070305.AVI
E0197	8	Water	130	0.31	-	-	1	8	>5	-	-	-	-	4.05	-	-	-	-	45/0.001/31/110	14	L	L	L	L	N	Y	2	E0197-D1-070305.ASC	E0197-D2-Channel1 March 5, 2007 13-23-36.txt	E0197-RUN12-NV-070305.AVI
E0198	8	Water	130	0.31	-	-	1	8	>5	-	-	-	-	4.05	-	-	-	-	45/0.001/31/110	14	L	L	L	L	N	N	3	E0198-D1-070305.ASC	E0198-D2-Channel1 March 5, 2007 13-30-46.txt	No video taken
E0199	8	Water	130	0.31	-	-	4	4,5,6,7	~3.5	4.06	3.95	3.97	3.95	-	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	-	14	L	L	L	L	N	Y(but bad)	1	E0199-D1-070305.ASC	E0199-D2-Channel1 March 5, 2007 13-44-08.txt	E0199-RUN14-NV-070305.AVI
E0200	8	Water	130	0.31	-	-	4	4,5,6,7	~3.5	4.06	3.95	3.97	3.95	-	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	-	14	L	L	L	L	N	Y	2	E0200-D1-070305.ASC	E0200-D2-Channel1 March 5, 2007 13-56-50.txt	E0200-RUN15-NV-070305.AVI
E0201	8	Water	130	0.31	-	-	4	4,5,6,7	~3.5	4.06	3.95	3.97	3.95	-	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	-	14	L	L	L	L	N	Y	3	E0201-D1-070305.ASC	E0201-D2-Channel1 March 5, 2007 14-05-08.txt	E0201-RUN16-NV-070305.AVI
E0202	8	Water	131	0.31	-	-	1	5	>5	-	5.01	-	-	-	-	45/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	1	E0202-D1-070306.ASC	E0202-D2-Channel1 March 6, 2007 09-20-09.txt	No video taken
E0203	8	Water	131	0.31	-	-	1	5	>5	-	5.01	-	-	-	-	45/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	2	E0203-D1-070306.ASC	E0203-D2-Channel1 March 6, 2007 09-25-14.txt	No video taken
E0204	8	Water	131	0.31	-	-	1	5	>5	-	5.01	-	-	-	-	45/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	3	E0204-D1-070306.ASC	E0204-D2-Channel1 March 6, 2007 09-28-58.txt	No video taken
E0205	8	Water	131	0.31	-	-	2	4,5	>5	5	4.96	-	-	-	45/0.001/27/110	45/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	1	E0205-D1-070306.ASC	E0205-D2-Channel1 March 6, 2007 09-39-25.txt	No video taken
E0206	8	Water	131	0.31	-	-	2	4,5	>5	5	4.96	-	-	-	45/0.001/27/110	45/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	2	E0206-D1-070306.ASC	E0206-D2-Channel1 March 6, 2007 09-44-52.txt	No video taken
E0207	8	Water	131	0.31	-	-	2	4,5	>5	5	4.96	-	-	-	45/0.001/27/110	45/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	3	E0207-D1-070306.ASC	E0207-D2-Channel1 March 6, 2007 09-48-50.txt	No video taken
E0208	8	Water	131	0.31	-	-	1	5	~4	-	3.07	-	-	-	-	45/0.001/30/110	-	-	-	12	L	L	L	L	N	N	1	E0208-D1-070306.ASC	E0208-D2-Channel1 March 6, 2007 10-19-15.txt	No video taken
E0209	8	Water	131	0.31	-	-	1	5	~4	-	3.07	-	-	-	-	45/0.001/30/110	-	-	-	12	L	L	L	L	N	N	2	E0209-D1-070306.ASC	E0209-D2-Channel1 March 6, 2007 10-23-14.txt	No video taken
E0210	8	Water	131	0.31	-	-	1	5	~4	-	3.07	-	-	-	-	45/0.001/30/110	-	-	-	12	L	L	L	L	N	N	3	E0210-D1-070306.ASC	E0210-D2-Channel1 March 6, 2007 10-26-52.txt	No video taken
E0211	8	Water	131	0.31	-	-	2	4,5	~4	2.98	3.02	-	-	-	45/0.001/30/110	45/0.001/30/110	-	-	-	12	L	L	L	L	N	N	1	E0211-D1-070306.ASC	E0211-D2-Channel1 March 6, 2007 10-38-50.txt	No video taken
E0212	8	Water	131	0.31	-	-	2	4,5	~4	2.98	3.02	-	-	-	45/0.001/30/110	45/0.001/30/110	-	-	-	12	L	L	L	L	N	N	2	E0212-D1-070306.ASC	E0212-D2-Channel1 March 6, 2007 10-42-13.txt	No video taken
E0213	8	Water	131	0.31	-	-	2	4,5	~4.5	2.98	3.02	-	-	-	45/0.001/30/110	45/0.001/30/110	-	-	-	12	L	L	L	L	N	N	3	E0213-D1-070306.ASC	E0213-D2-Channel1 March 6, 2007 10-45-31.txt	No video taken
E0214	8	Water	131	0.31	-	-	1	5	>10	-	0.94	-	-	-	-	45/0.001/60/110	-	-	-	8	L	L	L	L	N	N	1	E0214-D1-070306.ASC	E0214-D2-Channel1 March 6, 2007 11-07-38.txt	No video taken
E0215	8	Water	131	0.31	-	-	1	5	>10	-	0.94	-	-	-	-	45/0.001/60/110	-	-	-	8	L	L	L	L	N	N	2	E0215-D1-070306.ASC	E0215-D2-Channel1 March 6, 2007 11-12-36.txt	No video taken
E0216	8	Water	131	0.31	-	-	1	5	>10	-	0.94	-	-	-	-	45/0.001/60/110	-	-	-	8	L	L	L	L	N	N	3	E0216-D1-070306.ASC	E0216-D2-Channel1 March 6, 2007 11-17-22.txt	No video taken
E0217	8	Water	131	0.31	-	-	2	4,5	>10	0.95	0.94	-	-	-	45/0.001/60/110	45/0.001/60/110	-	-	-	8	L	L	L	L	N	N	1	E0217-D1-070306.ASC	E0217-D2-Channel1 March 6, 2007 11-36-39.txt	No video taken
E0218	8	Water	131	0.31	-	-	2	4,5	>10	0.95	0.94	-	-	-	45/0.001/60/110	45/0.001/60/110	-	-	-	8	L	L	L	L	N	N	2	E0218-D1-070306.ASC	E0218-D2-Channel1 March 6, 2007 11-42-28.txt	No video taken
E0219	8	Water	131	0.31	-	-	2	4,5	>10	0.95	0.94	-	-	-	45/0.001/60/110	45/0.001/60/110	-	-	-	8	L	L	L	L	N	N	3	E0219-D1-070306.ASC	E0219-D2-Channel1 March 6, 2007 11-47-29.txt	No video taken
Middle water level, hydrophone level = L																														
E0220	8	Water	94	0.55	-	-	1	5	~5	-	0.93	-	-	-	-	27/0.001/50/110	-	-	-	8	L	L	L	L	N	N	1	E0220-D1-070306.ASC	E0220-D2-Channel1 March 6, 2007 13-29-13.txt	No video taken
E0221	8	Water	94	0.55	-	-	1	5	~1.5	-	0.93	-	-	-	-	27/0.001/50/110	-	-	-	8	L	L	L	L	N	N	2	E0221-D1-070306.ASC	E0221-D2-Channel1 March 6, 2007 13-35-31.txt	No video taken
E0222	8	Water	94	0.55	-	-	1	5	4	-	0.93	-	-	-	-	27/0.001/50/110	-	-	-	8	L	L	L	L	N	N	3	E0222-D1-070306.ASC	E0222-D2-Channel1 March 6, 2007 13-40-21.txt	No video taken
E0223	8	Water	94	0.55	-	-	2	4,5	~4.5	0.91	0.97	-	-	-	27/0.001/50/	27/0.001/50/	-	-	-	8	L	L	L	L	N	N	1	E0223-D1-	E0223-D2-Channel1 March	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
															110	110												070306.ASC	6, 2007 14-09-35.txt	
E0224	8	Water	94	0.55	-	-	2	4,5	~4	0.91	0.97	-	-	-	27/0.001/50/110	27/0.001/50/110	-	-	-	8	L	L	L	L	N	N	2	E0224-D1-070306.ASC	E0224-D2-Channel1 March 6, 2007 14-18-09.txt	No video taken
E0225	8	Water	94	0.55	-	-	2	4,5	~4	0.91	0.97	-	-	-	27/0.001/50/110	27/0.001/50/110	-	-	-	8	L	L	L	L	N	N	3	E0225-D1-070306.ASC	E0225-D2-Channel1 March 6, 2007 14-22-14.txt	No video taken
E0226	8	Water	94	0.55	-	-	1	5	~3	-	3.02	-	-	-	-	27/0.001/30/110	-	-	-	12	L	L	L	L	N	N	1	E0226-D1-070306.ASC	E0226-D2-Channel1 March 6, 2007 14-40-55.txt	No video taken
E0227	8	Water	94	0.55	-	-	1	5	~3	-	3.02	-	-	-	-	27/0.001/30/110	-	-	-	12	L	L	L	L	N	N	2	E0227-D1-070306.ASC	E0227-D2-Channel1 March 6, 2007 14-45-17.txt	No video taken
E0228	8	Water	94	0.55	-	-	1	5	~3	-	3.02	-	-	-	-	27/0.001/30/110	-	-	-	12	L	L	L	L	N	N	3	E0228-D1-070306.ASC	E0228-D2-Channel1 March 6, 2007 14-49-25.txt	No video taken
E0229	8	Water	94	0.55	-	-	2	4,5	~2.5	2.93	3.01	-	-	-	27/0.001/30/110	27/0.001/30/110	-	-	-	12	L	L	L	L	N	N	1	E0229-D1-070306.ASC	E0229-D2-Channel1 March 6, 2007 15-04-02.txt	No video taken
E0230	8	Water	94	0.55	-	-	2	4,5	~2.5	2.93	3.01	-	-	-	27/0.001/30/110	27/0.001/30/110	-	-	-	12	L	L	L	L	N	N	2	E0230-D1-070306.ASC	E0230-D2-Channel1 March 6, 2007 15-08-40.txt	No video taken
E0231	8	Water	94	0.55	-	-	2	4,5	~2.5	2.93	3.01	-	-	-	27/0.001/30/110	27/0.001/30/110	-	-	-	12	L	L	L	L	N	N	3	E0231-D1-070306.ASC	E0231-D2-Channel1 March 6, 2007 15-12-14.txt	No video taken
E0232	8	Water	94	0.55	-	-	1	8	~5	-	-	-	-	4	-	-	-	-	27/0.001/31/110	14	L	L	L	L	N	Y	1	E0232-D1-070307.ASC	E0232-D2-Channel1 March 7, 2007 13-42-09.txt	E0232-RUN1-NV-070307.AVI
E0233	8	Water	94	0.55	-	-	1	8	~5	-	-	-	-	4	-	-	-	-	27/0.001/31/110	14	L	L	L	L	N	Y	2	E0233-D1-070307.ASC	E0233-D2-Channel1 March 7, 2007 13-51-09.txt	E0233-RUN2-NV-070307.AVI
E0234	8	Water	94	0.55	-	-	1	8	~3	-	-	-	-	4	-	-	-	-	27/0.001/31/110	14	L	L	L	L	N	N	3	E0234-D1-070307.ASC	E0234-D2-Channel1 March 7, 2007 13-59-02.txt	No video taken
E0235	8	Water	94	0.55	-	-	4	4,5,6,7	~3	3.95	3.99	3.96	3.98	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	L	L	L	L	N	Y	1	E0235-D1-070307.ASC	E0235-D2-Channel1 March 7, 2007 14-15-55.txt	E0235-RUN4-NV-070307.AVI
E0236	8	Water	94	0.55	-	-	4	4,5,6,7	~3	3.95	3.99	3.96	3.98	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	L	L	L	L	N	Y	2	E0236-D1-070307.ASC	E0236-D2-Channel1 March 7, 2007 14-28-40.txt	E0236-RUN4-NV-070307.AVI
E0237	8	Water	94	0.55	-	-	4	4,5,6,7	~3	3.95	3.99	3.96	3.98	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	L	L	L	L	N	N	3	E0237-D1-070307.ASC	E0237-D2-Channel1 March 7, 2007 14-37-13.txt	No video taken
E0238	8	Water	94	0.55	-	-	1	5	3.5	-	4.03	-	-	-	-	27/0.001/27/110	-	-	-	14	L	L	L	L	N	N	1	E0238-D1-070307.ASC	E0238-D2-Channel1 March 7, 2007 15-08-17.txt	No video taken
E0239	8	Water	94	0.55	-	-	1	5	3.5	-	4.03	-	-	-	-	27/0.001/27/110	-	-	-	14	L	L	L	L	N	N	2	E0239-D1-070307.ASC	E0239-D2-Channel1 March 7, 2007 15-11-43.txt	No video taken
E0240	8	Water	94	0.55	-	-	1	5	3.5	-	4.03	-	-	-	-	27/0.001/27/110	-	-	-	14	L	L	L	L	N	N	3	E0240-D1-070307.ASC	E0240-D2-Channel1 March 7, 2007 15-16-12.txt	No video taken
E0241	8	Water	94	0.55	-	-	2	4,5	~3	4	4.03	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	14	L	L	L	L	N	N	1	E0241-D1-070307.ASC	E0241-D2-Channel1 March 7, 2007 15-33-04.txt	No video taken
E0242	8	Water	94	0.55	-	-	2	4,5	~3	4	4.03	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	14	L	L	L	L	N	N	2	E0242-D1-070307.ASC	E0242-D2-Channel1 March 7, 2007 15-36-45.txt	No video taken
E0243	8	Water	94	0.55	-	-	2	4,5	~3	4	4.03	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	14	L	L	L	L	N	N	3	E0243-D1-070307.ASC	E0243-D2-Channel1 March 7, 2007 15-39-38.txt	No video taken
E0244	8	Water	94	0.55	-	-	3	4,5,6	~2.5	3.99	4.03	3.96	-	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	-	14	L	L	L	L	N	N	1	E0244-D1-070307.ASC	E0244-D2-Channel1 March 7, 2007 16-03-52.txt	No video taken
E0245	8	Water	94	0.55	-	-	3	4,5,6	~2.5	3.99	4.03	3.96	-	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	-	14	L	L	L	L	N	N	2	E0245-D1-070307.ASC	E0245-D2-Channel1 March 7, 2007 16-07-18.txt	No video taken
E0246	8	Water	94	0.55	-	-	3	4,5,6	~2.5	3.99	4.03	3.96	-	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	-	14	L	L	L	L	N	N	3	E0246-D1-070307.ASC	E0246-D2-Channel1 March 7, 2007 16-12-19.txt	No video taken
E0247	8	Water	94	0.55	-	-	1	5	~5	-	5.01	-	-	-	-	27/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	1	E0247-D1-070307.ASC	E0247-D2-Channel1 March 7, 2007 16-33-15.txt	No video taken
E0248	8	Water	94	0.55	-	-	1	5	~5	-	5.01	-	-	-	-	27/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	2	E0248-D1-070307.ASC	E0248-D2-Channel1 March 7, 2007 16-37-50.txt	No video taken
E0249	8	Water	94	0.55	-	-	1	5	~5	-	5.01	-	-	-	-	27/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	3	E0249-D1-070307.ASC	E0249-D2-Channel1 March 7, 2007 16-41-45.txt	No video taken
E0250	8	Water	94	0.55	-	-	2	4,5	~5	4.97	4.98	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	1	E0250-D1-070307.ASC	E0250-D2-Channel1 March 7, 2007 16-54-37.txt	No video taken
E0251	8	Water	94	0.55	-	-	2	4,5	~5	4.97	4.98	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	2	E0251-D1-070307.ASC	E0251-D2-Channel1 March 7, 2007 16-59-06.txt	No video taken
E0252	8	Water	94	0.55	-	-	2	4,5	~5	4.97	4.98	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	3	E0252-D1-070307.ASC	E0252-D2-Channel1 March 7, 2007 17-03-18.txt	No video taken
E0253	8	Water	94	0.55	-	-	2	4,5	~3	4	4.01	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	14	L	L	L	L	Y	N	1	E0253-D1-070308.ASC	E0253-D2-Channel1 March 8, 2007 09-38-43.txt	No video taken
E0254	8	Water	94	0.55	-	-	2	4,5	~3	4	4.01	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	14	L	L	L	L	Y	N	2	E0254-D1-070308.ASC	E0254-D2-Channel1 March 8, 2007 09-43-39.txt	No video taken
E0255	8	Water	94	0.55	-	-	2	4,5	~3	4	4.01	-	-	-	27/0.001/27/	27/0.001/27/	-	-	-	14	L	L	L	L	Y	N	3	E0255-D1-	E0255-D2-Channel1 March	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
															110	110												070308.ASC	8, 2007 09-48-26.txt	
E0256	8	Water	94	0.55	-	-	3	4,5,6,7	~3	4.01	4	4.04	4	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	L	L	L	L	Y	N	1	E0256-D1-070308.ASC	E0256-D2-Channel1 March 8, 2007 10-15-35.txt	No video taken
E0257	8	Water	94	0.55	-	-	3	4,5,6,7	~3	4.01	4	4.04	4	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	L	L	L	L	Y	N	2	E0257-D1-070308.ASC	E0257-D2-Channel1 March 8, 2007 10-19-33.txt	No video taken
E0258	8	Water	94	0.55	-	-	3	4,5,6,7	~3	4.01	4	4.04	4	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	L	L	L	L	Y	N	3	E0258-D1-070308.ASC	E0258-D2-Channel1 March 8, 2007 10-22-47.txt	No video taken
Middle water level, hydrophone level = M																														
E0259	8	Water	94	0.55	-	-	2	4,5	~4	4.02	3.97	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	14	M	M	M	M	Y	N	1	E0259-D1-070308.ASC	E0259-D2-Channel1 March 8, 2007 11-02-30.txt	No video taken
E0260	8	Water	94	0.55	-	-	2	4,5	~3.5	4.02	3.97	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	14	M	M	M	M	Y	N	2	E0260-D1-070308.ASC	E0260-D2-Channel1 March 8, 2007 11-07-41.txt	No video taken
E0261	8	Water	94	0.55	-	-	2	4,5	~3.5	4.02	3.97	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	14	M	M	M	M	Y	N	3	E0261-D1-070308.ASC	E0261-D2-Channel1 March 8, 2007 11-12-25.txt	No video taken
E0262	8	Water	94	0.55	-	-	3	4,5,6,7	~3	3.98	3.98	4.02	3.97	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	M	M	M	M	Y	N	1	E0262-D1-070308.ASC	E0262-D2-Channel1 March 8, 2007 11-25-09.txt	No video taken
E0263	8	Water	94	0.55	-	-	3	4,5,6,7	~3	3.98	3.98	4.02	3.97	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	M	M	M	M	Y	N	2	E0263-D1-070308.ASC	E0263-D2-Channel1 March 8, 2007 11-28-32.txt	No video taken
E0264	8	Water	94	0.55	-	-	3	4,5,6,7	~3	3.98	3.98	4.02	3.97	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	M	M	M	M	Y	N	3	E0264-D1-070308.ASC	E0264-D2-Channel1 March 8, 2007 11-32-56.txt	No video taken
E0265	8	Water	94	0.55	-	-	1	8	ND	-	-	-	-	4	-	-	-	-	27/0.001/31/110	14	M	M	M	M	N	N	1	E0265-D1-070308.ASC	E0265-D2-Channel1 March 8, 2007 13-14-26.txt	No video taken
E0266	8	Water	94	0.55	-	-	1	8	>5	-	-	-	-	4	-	-	-	-	27/0.001/31/110	14	M	M	M	M	N	N	2	E0266-D1-070308.ASC	E0266-D2-Channel1 March 8, 2007 13-19-35.txt	No video taken
E0267	8	Water	94	0.55	-	-	1	8	>5	-	-	-	-	4	-	-	-	-	27/0.001/31/110	14	M	M	M	M	N	N	3	E0267-D1-070308.ASC	E0267-D2-Channel1 March 8, 2007 13-23-02.txt	No video taken
E0268	8	Water	94	0.55	-	-	1	5	~3	-	4.01	-	-	-	-	27/0.001/27/110	-	-	-	14	M	M	M	M	N	N	1	E0268-D1-070308.ASC	E0268-D2-Channel1 March 8, 2007 13-33-14.txt	No video taken
E0269	8	Water	94	0.55	-	-	1	5	~3	-	4.01	-	-	-	-	27/0.001/27/110	-	-	-	14	M	M	M	M	N	N	2	E0269-D1-070308.ASC	E0269-D2-Channel1 March 8, 2007 13-37-31.txt	No video taken
E0270	8	Water	94	0.55	-	-	1	5	~3	-	4.01	-	-	-	-	27/0.001/27/110	-	-	-	14	M	M	M	M	N	N	3	E0270-D1-070308.ASC	E0270-D2-Channel1 March 8, 2007 13-41-47.txt	No video taken
E0271	8	Water	94	0.55	-	-	2	4,5	~3.5	4.01	4.01	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	14	M	M	M	M	N	N	1	E0271-D1-070308.ASC	E0271-D2-Channel1 March 8, 2007 13-57-22.txt	No video taken
E0272	8	Water	94	0.55	-	-	2	4,5	~3	4.01	4.01	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	14	M	M	M	M	N	N	2	E0272-D1-070308.ASC	E0272-D2-Channel1 March 8, 2007 14-01-33.txt	No video taken
E0273	8	Water	94	0.55	-	-	2	4,5	~3	4.01	4.01	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	14	M	M	M	M	N	N	3	E0273-D1-070308.ASC	E0273-D2-Channel1 March 8, 2007 14-06-33.txt	No video taken
E0274	8	Water	94	0.55	-	-	3	4,5,6	~3	4.01	4.01	4.03	-	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	-	14	M	M	M	M	N	N	1	E0274-D1-070308.ASC	E0274-D2-Channel1 March 8, 2007 14-28-36.txt	No video taken
E0275	8	Water	94	0.55	-	-	3	4,5,6	~3	4.01	4.01	4.03	-	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	-	14	M	M	M	M	N	N	2	E0275-D1-070308.ASC	E0275-D2-Channel1 March 8, 2007 14-32-06.txt	No video taken
E0276	8	Water	94	0.55	-	-	3	4,5,6	~3	4.01	4.01	4.03	-	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	-	14	M	M	M	M	N	N	3	E0276-D1-070308.ASC	E0276-D2-Channel1 March 8, 2007 14-35-44.txt	No video taken
E0277	8	Water	94	0.55	-	-	4	4,5,6,7	~3	3.99	4.02	4	4.03	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	M	M	M	M	N	N	1	E0277-D1-070308.ASC	E0277-D2-Channel1 March 8, 2007 14-56-32.txt	No video taken
E0278	8	Water	94	0.55	-	-	4	4,5,6,7	~3	3.99	4.02	4	4.03	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	M	M	M	M	N	N	2	E0278-D1-070308.ASC	E0278-D2-Channel1 March 8, 2007 15-02-28.txt	No video taken
E0279	8	Water	94	0.55	-	-	4	4,5,6,7	~3	3.99	4.02	4	4.03	-	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	27/0.001/27/110	-	14	M	M	M	M	N	N	3	E0279-D1-070308.ASC	E0279-D2-Channel1 March 8, 2007 15-05-48.txt	No video taken
E0280	8	Water	94	0.55	-	-	1	5	>5	-	5.02	-	-	-	-	27/0.001/27/110	-	-	-	15	M	M	M	M	N	N	1	E0280-D1-070309.ASC	E0280-D2-Channel1 March 9, 2007 10-11-14.txt	No video taken
E0281	8	Water	94	0.55	-	-	1	5	>5	-	5.02	-	-	-	-	27/0.001/27/110	-	-	-	15	M	M	M	M	N	N	2	E0281-D1-070309.ASC	E0281-D2-Channel1 March 9, 2007 10-14-40.txt	No video taken
E0282	8	Water	94	0.55	-	-	1	5	>5	-	5.02	-	-	-	-	27/0.001/27/110	-	-	-	15	M	M	M	M	N	N	3	E0282-D1-070309.ASC	E0282-D2-Channel1 March 9, 2007 10-18-11.txt	No video taken
E0283	8	Water	94	0.55	-	-	2	4,5	>5	4.98	4.99	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	15	M	M	M	M	N	N	1	E0283-D1-070309.ASC	E0283-D2-Channel1 March 9, 2007 10-24-33.txt	No video taken
E0284	8	Water	94	0.55	-	-	2	4,5	>5	4.98	4.99	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	15	M	M	M	M	N	N	2	E0284-D1-070309.ASC	E0284-D2-Channel1 March 9, 2007 10-27-24.txt	No video taken
E0285	8	Water	94	0.55	-	-	2	4,5	>5	4.98	4.99	-	-	-	27/0.001/27/110	27/0.001/27/110	-	-	-	15	M	M	M	M	N	N	3	E0285-D1-070309.ASC	E0285-D2-Channel1 March 9, 2007 10-30-10.txt	No video taken
E0286	8	Water	94	0.55	-	-	1	5	~3	-	2.99	-	-	-	-	27/0.001/30/110	-	-	-	12	M	M	M	M	N	N	1	E0286-D1-070309.ASC	E0286-D2-Channel1 March 9, 2007 10-48-57.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0287	8	Water	94	0.55	-	-	1	5	~3	-	2.99	-	-	-	-	27/0.001/30/110	-	-	-	12	M	M	M	M	N	N	2	E0287-D1-070309.ASC	E0287-D2-Channel1 March 9, 2007 10-51-37.txt	No video taken
E0288	8	Water	94	0.55	-	-	1	5	~3	-	2.99	-	-	-	-	27/0.001/30/110	-	-	-	12	M	M	M	M	N	N	3	E0288-D1-070309.ASC	E0288-D2-Channel1 March 9, 2007 10-55-01.txt	No video taken
E0289	8	Water	94	0.55	-	-	2	4,5	~3	3.01	2.98	-	-	-	27/0.001/30/110	27/0.001/30/110	-	-	-	12	M	M	M	M	N	N	1	E0289-D1-070309.ASC	E0289-D2-Channel1 March 9, 2007 11-06-44.txt	No video taken
E0290	8	Water	94	0.55	-	-	2	4,5	~3	3.01	2.98	-	-	-	27/0.001/30/110	27/0.001/30/110	-	-	-	12	M	M	M	M	N	N	2	E0290-D1-070309.ASC	E0290-D2-Channel1 March 9, 2007 11-09-44.txt	No video taken
E0291	8	Water	94	0.55	-	-	2	4,5	~3	3.01	2.98	-	-	-	27/0.001/30/110	27/0.001/30/110	-	-	-	12	M	M	M	M	N	N	3	E0291-D1-070309.ASC	E0291-D2-Channel1 March 9, 2007 11-12-35.txt	No video taken
E0292	8	Water	94	0.55	-	-	1	5	~4	-	0.91	-	-	-	-	27/0.001/50/110	-	-	-	8	M	M	M	M	N	N	1	E0292-D1-070309.ASC	E0292-D2-Channel1 March 9, 2007 11-22-15.txt	No video taken
E0293	8	Water	94	0.55	-	-	1	5	~4.5	-	0.91	-	-	-	-	27/0.001/50/110	-	-	-	8	M	M	M	M	N	N	2	E0293-D1-070309.ASC	E0293-D2-Channel1 March 9, 2007 11-25-31.txt	No video taken
E0294	8	Water	94	0.55	-	-	1	5	~4	-	0.91	-	-	-	-	27/0.001/50/110	-	-	-	8	M	M	M	M	N	N	3	E0294-D1-070309.ASC	E0294-D2-Channel1 March 9, 2007 11-28-38.txt	No video taken
E0295	8	Water	94	0.55	-	-	2	4,5	~4	0.93	0.91	-	-	-	27/0.001/50/110	27/0.001/50/110	-	-	-	8	M	M	M	M	N	N	1	E0295-D1-070309.ASC	E0295-D2-Channel1 March 9, 2007 11-35-43.txt	No video taken
E0296	8	Water	94	0.55	-	-	2	4,5	~3.5	0.93	0.91	-	-	-	27/0.001/50/110	27/0.001/50/110	-	-	-	8	M	M	M	M	N	N	2	E0296-D1-070309.ASC	E0296-D2-Channel1 March 9, 2007 11-47-11.txt	No video taken
E0297	8	Water	94	0.55	-	-	2	4,5	~3	0.93	0.91	-	-	-	27/0.001/50/110	27/0.001/50/110	-	-	-	8	M	M	M	M	N	N	3	E0297-D1-070309.ASC	E0297-D2-Channel1 March 9, 2007 11-52-58.txt	No video taken
High water level, hydrophone level = M																														
E0298	8	Water	56	0.8	-	-	1	5	>5	-	0.9	-	-	-	-	10/0.001/57/110	-	-	-	8	M	M	M	M	N	N	1	E0298-D1-070309.ASC	E0298-D2-Channel1 Mar 9, 2007 14-31-42.txt	No video taken
E0299	8	Water	56	0.8	-	-	1	5	>5	-	0.9	-	-	-	-	10/0.001/57/110	-	-	-	8	M	M	M	M	N	N	2	E0299-D1-070309.ASC	E0299-D2-Channel1 Mar 9, 2007 14-34-41.txt	No video taken
E0300	8	Water	56	0.8	-	-	1	5	>5	-	0.9	-	-	-	-	10/0.001/57/110	-	-	-	8	M	M	M	M	N	N	3	E0300-D1-070309.ASC	E0300-D2-Channel1 Mar 9, 2007 14-40-31.txt	No video taken
E0301	8	Water	56	0.8	-	-	2	4,5	~3.5	0.9	0.9	-	-	-	10/0.001/57/110	10/0.001/57/110	-	-	-	8	M	M	M	M	N	N	1	E0301-D1-070309.ASC	E0301-D2-Channel1 Mar 9, 2007 14-56-01.txt	No video taken
E0302	8	Water	56	0.8	-	-	2	4,5	~4	0.9	0.9	-	-	-	10/0.001/57/110	10/0.001/57/110	-	-	-	8	M	M	M	M	N	N	2	E0302-D1-070309.ASC	E0302-D2-Channel1 Mar 9, 2007 14-59-31.txt	No video taken
E0303	8	Water	56	0.8	-	-	2	4,5	~4	0.9	0.9	-	-	-	10/0.001/57/110	10/0.001/57/110	-	-	-	8	M	M	M	M	N	N	3	E0303-D1-070309.ASC	E0303-D2-Channel1 Mar 9, 2007 15-02-43.txt	No video taken
E0304	8	Water	56	0.8	-	-	1	5	~2.5	-	3.02	-	-	-	-	10/0.001/31/110	-	-	-	12	M	M	M	M	N	N	1	E0304-D1-070312.ASC	E0304-D2-Channel1 Mar 12, 2007 09-36-43.txt	No video taken
E0305	8	Water	56	0.8	-	-	1	5	~2.5	-	3.02	-	-	-	-	10/0.001/31/110	-	-	-	12	M	M	M	M	N	N	2	E0305-D1-070312.ASC	E0305-D2-Channel1 Mar 12, 2007 09-39-48.txt	No video taken
E0306	8	Water	56	0.8	-	-	1	5	~2.5	-	3.03	-	-	-	-	10/0.001/31/110	-	-	-	12	M	M	M	M	N	N	3	E0306-D1-070312.ASC	E0306-D2-Channel1 Mar 12, 2007 09-42-22.txt	No video taken
E0307	8	Water	56	0.8	-	-	2	4,5	~2.5	2.99	3.01	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	12	M	M	M	M	N	N	1	E0307-D1-070312.ASC	E0307-D2-Channel1 Mar 12, 2007 09-49-32.txt	No video taken
E0308	8	Water	56	0.8	-	-	2	4,5	~2.5	2.95	3.01	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	12	M	M	M	M	N	N	2	E0308-D1-070312.ASC	E0308-D2-Channel1 Mar 12, 2007 09-52-50.txt	No video taken
E0309	8	Water	56	0.8	-	-	2	4,5	~2.5	3.03	3.02	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	12	M	M	M	M	N	N	3	E0309-D1-070312.ASC	E0309-D2-Channel1 Mar 12, 2007 09-58-08.txt	No video taken
E0310	8	Water	56	0.8	-	-	1	8	~4	-	-	-	-	4.00	-	-	-	-	10/0.001/31/110	14	M	M	M	M	N	N	1	E0310-D1-070312.ASC	E0310-D2-Channel1 Mar 12, 2007 10-09-59.txt	No video taken
E0311	8	Water	56	0.8	-	-	1	8	~3.5	-	-	-	-	4.00	-	-	-	-	10/0.001/31/110	14	M	M	M	M	N	N	2	E0311-D1-070312.ASC	E0311-D2-Channel1 Mar 12, 2007 10-12-39.txt	No video taken
E0312	8	Water	56	0.8	-	-	1	8	~4	-	-	-	-	4.00	-	-	-	-	10/0.001/31/110	14	M	M	M	M	N	N	3	E0312-D1-070312.ASC	E0312-D2-Channel1 Mar 12, 2007 10-15-03.txt	No video taken
E0313	8	Water	56	0.8	-	-	1	5	>5	-	4.00	-	-	-	-	10/0.001/31/110	-	-	-	14	M	M	M	M	N	N	1	E0313-D1-070312.ASC	E0313-D2-Channel1 Mar 12, 2007 10-35-30.txt	No video taken
E0314	8	Water	56	0.8	-	-	1	5	>5	-	4.03	-	-	-	-	10/0.001/31/110	-	-	-	14	M	M	M	M	N	N	2	E0314-D1-070312.ASC	E0314-D2-Channel1 Mar 12, 200710-38-00.txt	No video taken
E0315	8	Water	56	0.8	-	-	1	5	>5	-	4.03	-	-	-	-	10/0.001/31/110	-	-	-	14	M	M	M	M	N	N	3	E0315-D1-070312.ASC	E0315-D2-Channel1 Mar 12, 2007 10-42-56.txt	No video taken
E0316	8	Water	56	0.8	-	-	2	4,5	>5	4.03	4.03	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	14	M	M	M	M	N	N	1	E0316-D1-070312.ASC	E0316-D2-Channel1 Mar 12, 2007 10-52-06.txt	No video taken
E0317	8	Water	56	0.8	-	-	2	4,5	>5	4.02	4.03	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	14	M	M	M	M	N	N	2	E0317-D1-070312.ASC	E0317-D2-Channel1 Mar 12, 200710-59-01.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0318	8	Water	56	0.8	-	-	2	4,5	>5	4.02	4.03	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	14	M	M	M	M	N	N	3	E0318-D1-070312.ASC	E0318-D2-Channel1 Mar 12, 2007 11-02-12.txt	No video taken
E0319	8	Water	56	0.8	-	-	3	4,5,6	>5	4.07	4.01	4.01	-	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	-	`	M	M	M	M	N	N	1	E0319-D1-070312.ASC	E0319-D2-Channel1 Mar 12, 2007 11-09-08.txt	No video taken
E0320	8	Water	56	0.8	-	-	3	4,5,6	>5	3.95	4.01	4.01	-	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	-	14	M	M	M	M	N	N	2	E0320-D1-070312.ASC	E0320-D2-Channel1 Mar 12, 2007 11-13-57.txt	No video taken
E0321	8	Water	56	0.8	-	-	3	4,5,6	>5	3.95	4.01	4.01	-	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	-	14	M	M	M	M	N	N	3	E0321-D1-070312.ASC	E0321-D2-Channel1 Mar 12, 2007 11-16-18.txt	No video taken
E0322	8	Water	56	0.8	-	-	4	4,5,6,7	>5	3.98	4.00	3.99	4.00	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	14	M	M	M	M	N	N	1	E0322-D1-070312.ASC	E0322-D2-Channel1 Mar 12, 2007 11-27-53.txt	No video taken
E0323	8	Water	56	0.8	-	-	4	4,5,6,7	>5	3.99	4.00	4.00	3.99	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	14	M	M	M	M	N	N	2	E0323-D1-070312.ASC	E0323-D2-Channel1 Mar 12, 200711-31-32.txt	No video taken
E0324	8	Water	56	0.8	-	-	4	4,5,6,7	>5	4.00	4.00	3.99	3.95	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	14	M	M	M	M	N	N	3	E0324-D1-070312.ASC	E0324-D2-Channel1 Mar 12, 2007 11-34-06.txt	No video taken
E0325	8	Water	56	0.8	-	-	1	5	~4.5	-	4.99	-	-	-	-	10/0.001/27/110	-	-	-	>15	M	M	M	M	N	N	1	E0325-D1-070312.ASC	E0325-D2-Channel1 Mar 12, 2007 13-16-22.txt	No video taken
E0326	8	Water	56	0.8	-	-	1	5	~4.5	-	4.99	-	-	-	-	10/0.001/27/110	-	-	-	>15	M	M	M	M	N	N	2	E0326-D1-070312.ASC	E0326-D2-Channel1 Mar 12, 2007 13-22-48.txt	No video taken
E0327	8	Water	56	0.8	-	-	1	5	~4.5	-	4.99	-	-	-	-	10/0.001/27/110	-	-	-	>15	M	M	M	M	N	N	3	E0327-D1-070312.ASC	E0327-D2-Channel1 Mar 12, 2007 13-25-44.txt	No video taken
E0328	8	Water	56	0.8	-	-	2	4,5	~4.5	4.98	4.96	-	-	-	10/0.001/27/110	10/0.001/27/110	-	-	-	>15	M	M	M	M	N	N	1	E0328-D1-070312.ASC	E0328-D2-Channel1 Mar 12, 2007 13-34-36.txt	No video taken
E0329	8	Water	56	0.8	-	-	2	4,5	~4.5	4.98	4.96	-	-	-	10/0.001/27/110	10/0.001/27/110	-	-	-	>15	M	M	M	M	N	N	2	E0329-D1-070312.ASC	E0329-D2-Channel1 Mar 12, 2007 13-38-47.txt	No video taken
E0330	8	Water	56	0.8	-	-	2	4,5	~4.0	4.98	4.96	-	-	-	10/0.001/27/110	10/0.001/27/110	-	-	-	>15	M	M	M	M	N	N	3	E0330-D1-070312.ASC	E0330-D2-Channel1 Mar 12, 2007 13-41-42.txt	No video taken
High water level, hydrophone level = H																														
E0331	8	Water	56	0.8	-	-	1	5	~4.5	-	4.97	-	-	-	-	10/0.001/27/110	-	-	-	>15	H	H	H	H	N	N	1	E0331-D1-070312.ASC	E0331-D2-Channel1 Mar 12, 2007 14-09-04.txt	No video taken
E0332	8	Water	56	0.8	-	-	1	5	~4.5	-	4.97	-	-	-	-	10/0.001/27/110	-	-	-	>15	H	H	H	H	N	N	2	E0332-D1-070312.ASC	E0332-D2-Channel1 Mar 12, 2007 14-13-29.txt	No video taken
E0333	8	Water	56	0.8	-	-	1	5	~4.5	-	4.97	-	-	-	-	10/0.001/27/110	-	-	-	>15	H	H	H	H	N	N	3	E0333-D1-070312.ASC	E0333-D2-Channel1 Mar 12, 2007 14-16-33.txt	No video taken
E0334	8	Water	56	0.8	-	-	2	4,5	~4.5	5.01	4.97	-	-	-	10/0.001/27/110	10/0.001/27/110	-	-	-	>15	H	H	H	H	N	N	1	E0334-D1-070312.ASC	E0334-D2-Channel1 Mar 12, 2007 14-28-51.txt	No video taken
E0335	8	Water	56	0.8	-	-	2	4,5	~4.5	5.01	4.97	-	-	-	10/0.001/27/110	10/0.001/27/110	-	-	-	>15	H	H	H	H	N	N	2	E0335-D1-070312.ASC	E0335-D2-Channel1 Mar 12, 2007 14-33-19.txt	No video taken
E0336	8	Water	56	0.8	-	-	2	4,5	~4.5	5.01	4.97	-	-	-	10/0.001/27/110	10/0.001/27/110	-	-	-	>15	H	H	H	H	N	N	3	E0336-D1-070312.ASC	E0336-D2-Channel1 Mar 12, 2007 14-36-30.txt	No video taken
E0337	8	Water	56	0.8	-	-	1	5	>5	-	3.98	-	-	-	-	10/0.001/31/110	-	-	-	14	H	H	H	H	N	N	1	E0337-D1-070312.ASC	E0337-D2-Channel1 Mar 12, 2007 14-46-42.txt	No video taken
E0338	8	Water	56	0.8	-	-	1	5	>5	-	3.98	-	-	-	-	10/0.001/31/110	-	-	-	14	H	H	H	H	N	N	2	E0338-D1-070312.ASC	E0338-D2-Channel1 Mar 12, 2007 14-50-52.txt	No video taken
E0339	8	Water	56	0.8	-	-	1	5	>5	-	3.98	-	-	-	-	10/0.001/31/110	-	-	-	14	H	H	H	H	N	N	3	E0339-D1-070312.ASC	E0339-D2-Channel1 Mar 12, 2007 14-54-29.txt	No video taken
E0340	8	Water	56	0.8	-	-	2	4,5	>5	4.04	3.98	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	14	H	H	H	H	N	N	1	E0340-D1-070312.ASC	E0340-D2-Channel1 Mar 12, 2007 15-03-49.txt	No video taken
E0341	8	Water	56	0.8	-	-	2	4,5	>5	4.04	3.98	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	14	H	H	H	H	N	N	2	E0341-D1-070312.ASC	E0341-D2-Channel1 Mar 12, 2007 15-07-39.txt	No video taken
E0342	8	Water	56	0.8	-	-	2	4,5	>5	4.04	3.98	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	14	H	H	H	H	N	N	3	E0342-D1-070312.ASC	E0342-D2-Channel1 Mar 12, 2007 15-11-08.txt	No video taken
E0343	8	Water	56	0.8	-	-	3	4,5,6	>5	3.96	3.99	3.97	-	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	-	14	H	H	H	H	N	N	1	E0343-D1-070313.ASC	E0343-D2-Channel1 Mar 13, 2007 10-51-29.txt	No video taken
E0344	8	Water	56	0.8	-	-	3	4,5,6	>5	3.96	3.99	3.97	-	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	-	14	H	H	H	H	N	N	2	E0344-D1-070313.ASC	E0344-D2-Channel1 Mar 13, 2007 10-55-08.txt	No video taken
E0345	8	Water	56	0.8	-	-	3	4,5,6	>5	3.96	3.99	3.97	-	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	-	14	H	H	H	H	N	N	3	E0345-D1-070313.ASC	E0345-D2-Channel1 Mar 13, 2007 10-57-48.txt	No video taken
E0346	8	Water	56	0.8	-	-	4	4,5,6,7	>5	3.95	4.00	3.98	3.96	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	14	H	H	H	H	N	N	1	E0346-D1-070313.ASC	E0346-D2-Channel1 Mar 13, 2007 11-04-16.txt	No video taken
E0347	8	Water	56	0.8	-	-	4	4,5,6,7	>5	3.99	4.00	3.98	3.96	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	14	H	H	H	H	N	N	2	E0347-D1-070313.ASC	E0347-D2-Channel1 Mar 13, 2007 11.09.01.txt	No video taken
E0348	8	Water	56	0.8	-	-	4	4,5,6,7	>5	3.99	4.00	3.98	3.96	-	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	10/0.001/31/110	-	14	H	H	H	H	N	N	3	E0348-D1-070313.ASC	E0348-D2-Channel1 Mar 13, 200711-11-32.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0349	8	Water	56	0.8	-	-	1	8	~4	-	-	-	-	3.99	-	-	-	-	10/0.001/31/110	14	H	H	H	H	N	N	1	E0349-D1-070313.ASC	E0349-D2-Channel1 Mar 13, 2007 11-19-12.txt	No video taken
E0350	8	Water	56	0.8	-	-	1	8	~4	-	-	-	-	3.99	-	-	-	-	10/0.001/31/110	14	H	H	H	H	N	N	2	E0350-D1-070313.ASC	E0350-D2-Channel1 Mar 13, 2007 11-21-50.txt	No video taken
E0351	8	Water	56	0.8	-	-	1	8	~4	-	-	-	-	3.99	-	-	-	-	10/0.001/31/110	14	H	H	H	H	N	N	3	E0351-D1-070313.ASC	E0351-D2-Channel1 Mar 13, 2007 11-24-43.txt	No video taken
E0352	8	Water	56	0.8	-	-	1	5	~2.5	-	2.98	-	-	-	-	10/0.001/31/110	-	-	-	12	H	H	H	H	N	N	1	E0352-D1-070313.ASC	E0352-D2-Channel1 Mar 13, 2007 11-37-48.txt	No video taken
E0353	8	Water	56	0.8	-	-	1	5	~2.5	-	3.01	-	-	-	-	10/0.001/31/110	-	-	-	12	H	H	H	H	N	N	2	E0353-D1-070313.ASC	E0353-D2-Channel1 Mar 13, 2007 11-41-03.txt	No video taken
E0354	8	Water	56	0.8	-	-	1	5	~2.5	-	3.02	-	-	-	-	10/0.001/31/110	-	-	-	12	H	H	H	H	N	N	3	E0354-D1-070313.ASC	E0354-D2-Channel1 Mar 13, 2007 11-43-18.txt	No video taken
E0355	8	Water	56	0.8	-	-	2	4,5	~2.5	3.01	3.00	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	12	H	H	H	H	N	N	1	E0355-D1-070313.ASC	E0355-D2-Channel1 Mar 13, 2007 11-51-34.txt	No video taken
E0356	8	Water	56	0.8	-	-	2	4,5	~2.5	3.01	3.00	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	12	H	H	H	H	N	N	2	E0356-D1-070313.ASC	E0356-D2-Channel1 Mar 13, 2007 11-55-28.txt	No video taken
E0357	8	Water	56	0.8	-	-	2	4,5	~2.5	3.00	3.02	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	12	H	H	H	H	N	N	3	E0357-D1-070313.ASC	E0357-D2-Channel1 Mar 13, 2007 11-59-46.txt	No video taken
E0358	8	Water	56	0.8	-	-	1	5	~5	-	0.94	-	-	-	-	10/0.001/57/110	-	-	-	8	H	H	H	H	N	N	1	E0358-D1-070313.ASC	E0358-D2-Channel1 Mar 13, 2007 13-20-44.txt	No video taken
E0359	8	Water	56	0.8	-	-	1	5	~4	-	0.90	-	-	-	-	10/0.001/57/110	-	-	-	8	H	H	H	H	N	N	2	E0359-D1-070313.ASC	E0359-D2-Channel1 Mar 13, 2007 13-24-37.txt	No video taken
E0360	8	Water	56	0.8	-	-	1	5	~5	-	0.94	-	-	-	-	10/0.001/57/110	-	-	-	8	H	H	H	H	N	N	3	E0360-D1-070313.ASC	E0360-D2-Channel1 Mar 13, 2007 13-30-14.txt	No video taken
E0361	8	Water	56	0.8	-	-	2	4,5	~3.5	0.90	0.90	-	-	-	10/0.001/57/110	10/0.001/57/110	-	-	-	8	H	H	H	H	N	N	1	E0361-D1-070313.ASC	E0361-D2-Channel1 Mar 13, 2007 13-44-17.txt	No video taken
E0362	8	Water	56	0.8	-	-	2	4,5	~3.5	0.89	0.93	-	-	-	10/0.001/57/110	10/0.001/57/110	-	-	-	8	H	H	H	H	N	N	2	E0362-D1-070313.ASC	E0362-D2-Channel1 Mar 13, 2007 13-49-14.txt	No video taken
E0363	8	Water	56	0.8	-	-	2	4,5	~4	0.92	0.93	-	-	-	10/0.001/57/110	10/0.001/57/110	-	-	-	8	H	H	H	H	N	N	3	E0363-D1-070313.ASC	E0363-D2-Channel1 Mar 13, 2007 13-52-49.txt	No video taken
E0364	8	Water	56	0.8	-	-	2	4,5	~3	0.89	0.93	-	-	-	10/0.001/57/110	10/0.001/57/110	-	-	-	8	H	H	H	H	N	N	4	E0364-D1-070313.ASC	E0364-D2-Channel1 Mar 13, 2007 13-55-53.txt	No video taken
E0365	8	Water	56	0.8	-	-	1	5	~5	-	0.94	-	-	-	-	10/0.001/57/110	-	-	-	8	L	L	L	L	N	N	1	E0365-D1-070313.ASC	E0365-D2-Channel1 Mar 13, 2007 14-27-13.txt	No video taken
E0366	8	Water	56	0.8	-	-	1	5	~5	-	0.94	-	-	-	-	10/0.001/57/110	-	-	-	8	L	L	L	L	N	N	2	E0366-D1-070313.ASC	E0366-D2-Channel1 Mar 13, 2007 14-30-06.txt	No video taken
E0367	8	Water	56	0.8	-	-	1	5	~5	-	0.92	-	-	-	-	10/0.001/57/110	-	-	-	8	L	L	L	L	N	N	3	E0367-D1-070313.ASC	E0367-D2-Channel1 Mar 13, 2007 14-32-57.txt	No video taken
E0368	8	Water	56	0.8	-	-	2	4,5	~4	0.94	0.97	-	-	-	10/0.001/57/110	10/0.001/57/110	-	-	-	8	L	L	L	L	N	N	1	E0368-D1-070313.ASC	E0368-D2-Channel1 Mar 13, 2007 14-40-12.txt	No video taken
E0369	8	Water	56	0.8	-	-	2	4,5	~3	0.96	0.89	-	-	-	10/0.001/57/110	10/0.001/57/110	-	-	-	8	L	L	L	L	N	N	2	E0369-D1-070313.ASC	E0369-D2-Channel1 Mar 13, 2007 14-46-47.txt	No video taken
E0370	8	Water	56	0.8	-	-	2	4,5	~3	0.90	0.88	-	-	-	10/0.001/57/110	10/0.001/57/110	-	-	-	8	L	L	L	L	N	N	3	E0370-D1-070313.ASC	E0370-D2-Channel1 Mar 13, 2007 14-50-29.txt	No video taken
E0371	8	Water	56	0.8	-	-	2	4,5	~3	0.89	0.94	-	-	-	10/0.001/57/110	10/0.001/57/110	-	-	-	8	L	L	L	L	N	N	4	E0371-D1-070313.ASC	E0371-D2-Channel1 Mar 13, 2007 14-53-34.txt	No video taken
E0372	8	Water	56	0.8	-	-	1	5	~2.5	-	3.01	-	-	-	-	10/0.001/31/110	-	-	-	12	L	L	L	L	N	N	1	E0372-D1-070313.ASC	E0372-D2-Channel1 Mar 13, 2007 15-04-34.txt	No video taken
E0373	8	Water	56	0.8	-	-	1	5	~3	-	3.04	-	-	-	-	10/0.001/31/110	-	-	-	12	L	L	L	L	N	N	2	E0373-D1-070313.ASC	E0373-D2-Channel1 Mar 13, 2007 15-06-56.txt	No video taken
E0374	8	Water	56	0.8	-	-	1	5	~3	-	3.04	-	-	-	-	10/0.001/31/110	-	-	-	12	L	L	L	L	N	N	3	E0374-D1-070313.ASC	E0374-D2-Channel1 Mar 13, 2007 15-09-25.txt	No video taken
E0375	8	Water	56	0.8	-	-	2	4,5	~3	3.05	3.01	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	12	L	L	L	L	N	N	1	E0375-D1-070313.ASC	E0375-D2-Channel1 Mar 13, 2007 15-21-10.txt	No video taken
E0376	8	Water	56	0.8	-	-	2	4,5	~3	3.02	3.00	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	12	L	L	L	L	N	N	2	E0376-D1-070313.ASC	E0376-D2-Channel1 Mar 13, 2007 15-29-23.txt	No video taken
E0377	8	Water	56	0.8	-	-	2	4,5	~3	3.02	3.02	-	-	-	10/0.001/31/110	10/0.001/31/110	-	-	-	12	L	L	L	L	N	N	3	E0377-D1-070313.ASC	E0377-D2-Channel1 Mar 13, 2007 15-39-42.txt	No video taken
E0378	8	Water	56	0.8	-	-	1	8	~4	-	-	-	-	4.00	-	-	-	-	10/0.001/31/110	14	L	L	L	L	N	N	1	E0378-D1-070314.ASC	E0378-D2-Channel1 Mar 14, 2007 09-12-31.txt	No video taken
E0379	8	Water	56	0.8	-	-	1	8	~4	-	-	-	-	4.00	-	-	-	-	10/0.001/31/110	14	L	L	L	L	N	N	2	E0379-D1-070314.ASC	E0379-D2-Channel1 Mar 14, 2007 09-15-32.txt	No video taken
E0380	8	Water	56	0.8	-	-	1	8	~4	-	-	-	-	4.00	-	-	-	-	10/0.001/31/110	14	L	L	L	L	N	N	3	E0380-D1-070314.ASC	E0380-D2-Channel1 Mar 14, 2007 09-18-10.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0381	8	Water	56	0.8	-	-	1	5	~2.5	-	4.04	-	-	-	-	10/0.001/27/110	-	-	-	14	L	L	L	L	N	N	1	E0381-D1-070314.ASC	E0381-D2-Channel1 Mar 14, 2007 09-25-32.txt	No video taken
E0382	8	Water	56	0.8	-	-	1	5	~2.5	-	4.05	-	-	-	-	10/0.001/27/110	-	-	-	14	L	L	L	L	N	N	2	E0382-D1-070314.ASC	E0382-D2-Channel1 Mar 14, 2007 09-30-06.txt	No video taken
E0383	8	Water	56	0.8	-	-	1	5	~2.5	-	4.05	-	-	-	-	10/0.001/27/110	-	-	-	14	L	L	L	L	N	N	3	E0383-D1-070314.ASC	E0383-D2-Channel1 Mar 14, 2007 09-33-00.txt	No video taken
E0384	8	Water	56	0.8	-	-	2	4,5	~2	3.97	4.00	-	-	-	10/0.001/27/110	10/0.001/27/110	-	-	-	14	L	L	L	L	N	N	1	E0384-D1-070314.ASC	E0384-D2-Channel1 Mar 14, 2007 09-38-30.txt	No video taken
E0385	8	Water	56	0.8	-	-	2	4,5	~4	3.96	4.00	-	-	-	10/0.001/29/110	10/0.001/29/110	-	-	-	14	L	L	L	L	N	N	1	E0385-D1-070314.ASC	E0385-D2-Channel1 Mar 14, 2007 09-49-00.txt	No video taken
E0386	8	Water	56	0.8	-	-	2	4,5	~4	4.04	4.01	-	-	-	10/0.001/29/110	10/0.001/29/110	-	-	-	14	L	L	L	L	N	N	2	E0386-D1-070314.ASC	E0386-D2-Channel1 Mar 14, 2007 09-54-04.txt	No video taken
E0387	8	Water	56	0.8	-	-	2	4,5	~4	3.96	4.00	-	-	-	10/0.001/29/110	10/0.001/29/110	-	-	-	14	L	L	L	L	N	N	3	E0387-D1-070314.ASC	E0387-D2-Channel1 Mar 14, 2007 09-56-39.txt	No video taken
E0388	8	Water	56	0.8	-	-	3	4,5,6	~4	3.96	3.99	3.99	-	-	10/0.001/29/110	10/0.001/29/110	10/0.001/29/110	-	-	14	L	L	L	L	N	N	1	E0388-D1-070314.ASC	E0388-D2-Channel1 Mar 14, 2007 10-05-06.txt	No video taken
E0389	8	Water	56	0.8	-	-	3	4,5,6	~4	3.99	3.98	3.99	-	-	10/0.001/29/110	10/0.001/29/110	10/0.001/29/110	-	-	14	L	L	L	L	N	N	2	E0389-D1-070314.ASC	E0389-D2-Channel1 Mar 14, 2007 10-11-43.txt	No video taken
E0390	8	Water	56	0.8	-	-	3	4,5,6	~4	3.95	3.99	3.99	-	-	10/0.001/29/110	10/0.001/29/110	10/0.001/29/110	-	-	14	L	L	L	L	N	N	3	E0390-D1-070314.ASC	E0390-D2-Channel1 Mar 14, 2007 10-16-27.txt	No video taken
E0391	8	Water	56	0.8	-	-	4	4,5,6,7	~3.5	3.97	3.96	3.97	3.96	-	10/0.001/29/110	10/0.001/29/110	10/0.001/29/110	10/0.001/29/110	-	14	L	L	L	L	N	N	1	E0391-D1-070314.ASC	E0391-D2-Channel1 Mar 14, 2007 10-30-31.txt	No video taken
E0392	8	Water	56	0.8	-	-	4	4,5,6,7	~4	3.95	3.96	3.97	4.01	-	10/0.001/29/110	10/0.001/29/110	10/0.001/29/110	10/0.001/29/110	-	14	L	L	L	L	N	N	2	E0392-D1-070314.ASC	E0392-D2-Channel1 Mar 14, 2007 10-35-19.txt	No video taken
E0393	8	Water	56	0.8	-	-	4	4,5,6,7	~4	3.95	3.96	3.97	3.98	-	10/0.001/29/110	10/0.001/29/110	10/0.001/29/110	10/0.001/29/110	-	14	L	L	L	L	N	N	3	E0393-D1-070314.ASC	E0393-D2-Channel1 Mar 14, 2007 10-38-02.txt	No video taken
E0394	8	Water	56	0.8	-	-	1	5	~5	-	5.04	-	-	-	-	10/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	1	E0394-D1-070314.ASC	E0394-D2-Channel1 Mar 14, 2007 10-47-09.txt	No video taken
E0395	8	Water	56	0.8	-	-	1	5	~5	-	5.04	-	-	-	-	10/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	2	E0395-D1-070314.ASC	E0395-D2-Channel1 Mar 14, 2007 10-49-42.txt	No video taken
E0396	8	Water	56	0.8	-	-	1	5	~5	-	5.04	-	-	-	-	10/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	3	E0396-D1-070314.ASC	E0396-D2-Channel1 Mar 14, 2007 10-52-39.txt	No video taken
E0397	8	Water	56	0.8	-	-	2	4,5	~4.5	5.03	5.01	-	-	-	10/0.001/27/110	10/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	1	E0397-D1-070314.ASC	E0397-D2-Channel1 Mar 14, 2007 10-59-27.txt	No video taken
E0398	8	Water	56	0.8	-	-	2	4,5	~4.5	5.03	5.01	-	-	-	10/0.001/27/110	10/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	2	E0398-D1-070314.ASC	E0398-D2-Channel1 Mar 14, 2007 11-03-19.txt	No video taken
E0399	8	Water	56	0.8	-	-	2	4,5	~4.5	5.03	5.01	-	-	-	10/0.001/27/110	10/0.001/27/110	-	-	-	>15	L	L	L	L	N	N	3	E0399-D1-070314.ASC	E0399-D2-Channel1 Mar 14, 2007 11-06-02.txt	No video taken
E0400	8	Water	132	0.31	-	-	2	4,5	~4	4.00	3.98	-	-	-	45/0.001/27/110	45/0.001/27/110	-	-	-	14	L	L	L	L	Y	N	1	E0400-D1-070315.ASC	E0400-D2-Channel1 Mar 15, 2007 14-41-40.txt	No video taken
E0401	8	Water	132	0.31	-	-	2	4,5	~4	3.95	3.99	-	-	-	45/0.001/27/110	45/0.001/27/110	-	-	-	14	L	L	L	L	Y	N	2	E0401-D1-070315.ASC	E0401-D2-Channel1 Mar 15, 2007 14-44-46.txt	No video taken
E0402	8	Water	132	0.31	-	-	2	4,5	~4	4.01	3.99	-	-	-	45/0.001/27/110	45/0.001/27/110	-	-	-	14	L	L	L	L	Y	N	3	E0402-D1-070315.ASC	E0402-D2-Channel1 Mar 15, 2007 14-47-24.txt	No video taken
E0403	8	Water	132	0.31	-	-	4	4,5,6,7	~4	4.00	3.96	3.97	3.95	-	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	-	14	L	L	L	L	Y	N	1	E0403-D1-070315.ASC	E0403-D2-Channel1 Mar 15, 2007 14-56-09.txt	No video taken
E0404	8	Water	132	0.31	-	-	4	4,5,6,7	~4	4.05	3.96	3.97	4.03	-	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	-	14	L	L	L	L	Y	N	2	E0404-D1-070315.ASC	E0404-D2-Channel1 Mar 15, 2007 15-02-59.txt	No video taken
E0405	8	Water	132	0.31	-	-	4	4,5,6,7	~4	4.05	3.96	3.97	3.97	-	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	45/0.001/27/110	-	14	L	L	L	L	Y	N	3	E0405-D1-070315.ASC	E0405-D2-Channel1 Mar 15, 2007 15-05-33.txt	No video taken
Simultaneous clay overblow; hydrophone level = L																														
E0406BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0406-D1-BL-070330.ASC	E0406-D2-BL-Channel# Mar30, 2007 14-08-05.txt	-
E0406	8	Clay	55	0.8	34.8	29.3	2	4,5	~3.5	3.46	3.54	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	L	L	L	L	N	N	1	E0406-D1-070330.ASC	E0406-D2-Channel1 Mar 30, 2007 14-19-32.txt	No video taken
E0407	8	Clay	55	0.8	34.8	29.3	2	4,5	~3	3.47	3.45	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	L	L	L	L	N	N	1	E0407-D1-070330.ASC	E0407-D2-Channel1 Mar 30, 2007 14-27-44.txt	No video taken
E0408	8	Clay	55	0.8	34.8	29.3	2	4,5	~3	3.52	3.44	-	-	-	12/0.001/34/110	12/0.100/34/110	-	-	-	14	L	L	L	L	N	N	1	E0408-D1-070330.ASC	E0408-D2-Channel1 Mar 30, 2007 14-43-37.txt	No video taken
E0409	8	Clay	55	0.8	34.8	29.3	2	4,5	~3	3.47	3.42	-	-	-	12/0.001/34/110	12/0.100/34/110	-	-	-	14	L	L	L	L	N	N	1	E0409-D1-070330.ASC	E0409-D2-Channel1 Mar 30, 2007 14-55-41.txt	No video taken
E0410	8	Clay	55	0.8	34.8	29.3	2	4,5	~3	3.47	3.47	-	-	-	12/0.001/34/110	12/0.090/34/110	-	-	-	14	L	L	L	L	N	N	1	E0410-D1-070330.ASC	E0410-D2-Channel1 Mar 30, 2007 15-08-40.txt	No video taken
E0411	8	Clay	55	0.8	34.8	29.3	2	4,5	~3	3.47	3.44	-	-	-	12/0.001/34/	12/0.090/34/	-	-	-	14	L	L	L	L	N	N	1	E0411-D1-	E0411-D2-Channel1 Mar 30,	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
															110	110												070330.ASC	2007 15-15-26.txt	
E0412	8	Clay	55	0.8	34.8	29.3	2	4,5	~3	3.47	3.44	-	-	-	12/0.001/34/110	12/0.150/34/110	-	-	-	14	L	L	L	L	N	N	1	E0412-D1-070330.ASC	E0412-D2-Channel1 Mar 30, 2007 15-22-25.txt	No video taken
E0413	8	Clay	55	0.8	34.8	29.3	2	4,5	~3	3.46	3.54	-	-	-	12/0.001/34/110	12/0.200/34/110	-	-	-	14	L	L	L	L	N	N	1	E0413-D1-070330.ASC	E0413-D2-Channel1 Mar 30, 2007 15-26-28.txt	No video taken
E0414	8	Clay	55	0.8	34.8	29.3	2	4,5	~3	3.47	3.43	-	-	-	12/0.001/34/110	12/0.200/34/110	-	-	-	14	L	L	L	L	N	N	1	E0414-D1-070330.ASC	E0414-D2-Channel1 Mar 30, 2007 15-32-08.txt	No video taken
E0415	8	Clay	55	0.8	34.8	29.3	2	4,5	~3	3.48	3.44	-	-	-	12/0.001/34/110	12/0.200/34/110	-	-	-	14	L	L	L	L	N	N	1	E0415-D1-070330.ASC	E0415-D2-Channel1 Mar 30, 2007 15-36-06.txt	No video taken
E0416	8	Clay	55	0.8	34.8	29.3	2	4,5	~3	3.46	3.43	-	-	-	12/0.001/34/110	12/0.200/34/110	-	-	-	14	L	L	L	L	N	N	1	E0416-D1-070330.ASC	E0416-D2-Channel1 Mar 30, 2007 15-45-20.txt	No video taken
E0416BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0416-D1-BL-070330.ASC	E0416-D2-BL-Channel# Mar30, 2007 15-54-35.txt	-
Simultaneous clay overblow; hydrophone level =H																														
E0417BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0417-D1-BL-070402.ASC	E0417-D2-BL-Channel# Apr 2, 2007 12-46-49.txt	-
E0417	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.48	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	H	H	H	H	N	N	1	E0417-D1-070402.ASC	E0417-D2-Channel1 Apr 02, 2007 12-53-07.txt	No video taken
E0418	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.60[f]	-	-	-	12/0.001/34/110	12/0.200/34/110	-	-	-	14	H	H	H	H	N	N	1	E0418-D1-070402.ASC	E0418-D2-Channel1 Apr 02, 2007 12-57-10.txt	No video taken
E0419	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.48	3.49	-	-	-	12/0.001/34/110	12/0.200/34/110	-	-	-	14	H	H	H	H	N	N	1	E0419-D1-070402.ASC	E0419-D2-Channel1 Apr 02, 2007 13-01-39.txt	No video taken
E0420	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.48	3.61	-	-	-	12/0.001/34/110	12/0.300/34/110	-	-	-	14	H	H	H	H	N	N	1	E0420-D1-070402.ASC	E0420-D2-Channel1 Apr 02, 2007 13-06-45.txt	No video taken
E0421	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.48	3.52	-	-	-	12/0.001/34/110	12/0.300/34/110	-	-	-	14	H	H	H	H	N	N	1	E0421-D1-070402.ASC	E0421-D2-Channel1 Apr 02, 200713-11-07.txt	No video taken
E0422	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.50	3.52	-	-	-	12/0.001/34/110	12/0.300/34/110	-	-	-	14	H	H	H	H	N	N	1	E0422-D1-070402.ASC	E0422-D2-Channel1 Apr 02, 2007 13-14-53.txt	No video taken
E0423	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.46	-	-	-	12/0.001/34/110	12/0.300/34/110	-	-	-	14	H	H	H	H	N	N	1	E0423-D1-070402.ASC	E0423-D2-Channel1 Apr 02, 2007 13-25-45.txt	No video taken
E0424	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.54	3.59	-	-	-	12/0.001/34/110	12/0.300/34/110	-	-	-	14	H	H	H	H	N	N	1	E0424-D1-070402.ASC	E0424-D2-Channel1 Apr 02, 2007 13-29-33.txt	No video taken
E0425	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.52	-	-	-	12/0.001/34/110	12/0.300/34/110	-	-	-	14	H	H	H	H	N	N	1	E0425-D1-070402.ASC	E0425-D2-Channel1 Apr 02, 2007 13-33-19.txt	No video taken
E0426	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.56	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0426-D1-070402.ASC	E0426-D2-Channel1 Apr 02, 2007 13-38-07.txt	No video taken
E0427	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.44	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0427-D1-070402.ASC	E0427-D2-Channel1 Apr 02, 2007 13-43-07.txt	No video taken
E0428	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.55	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0428-D1-070402.ASC	E0428-D2-Channel1 Apr 02, 2007 13-46-26.txt	No video taken
E0429	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.50	3.41	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0429-D1-070402.ASC	E0429-D2-Channel1 Apr 02, 2007 13-52-38.txt	No video taken
E0430	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.50	3.52	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0430-D1-070402.ASC	E0430-D2-Channel1 Apr 02, 2007 13-56-57.txt	No video taken
E0431	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.42	-	-	-	12/0.001/34/110	12/0.500/34/110	-	-	-	14	H	H	H	H	N	N	1	E0431-D1-070402.ASC	E0431-D2-Channel1 Apr 02, 2007 14-09-17.txt	No video taken
E0432	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.54	-	-	-	12/0.001/34/110	12/0.500/34/110	-	-	-	14	H	H	H	H	N	N	1	E0432-D1-070402.ASC	E0432-D2-Channel1 Apr 02, 2007 14-13-04.txt	No video taken
E0433	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.41	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	H	H	H	H	N	N	1	E0433-D1-070402.ASC	E0433-D2-Channel1 Apr 02, 2007 14-25-09.txt	No video taken
E0434	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.51	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	H	H	H	H	N	N	1	E0434-D1-070402.ASC	E0434-D2-Channel1 Apr 02, 2007 14-28-45.txt	No video taken
E0435	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.50	3.41	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	H	H	H	H	N	N	1	E0435-D1-070402.ASC	E0435-D2-Channel1 Apr 02, 2007 14-35-28.txt	No video taken
E0436	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.48	3.43	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	H	H	H	H	N	N	1	E0436-D1-070402.ASC	E0436-D2-Channel1 Apr 02, 2007 14-39-49.txt	No video taken
E0437	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.48	3.43	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	H	H	H	H	N	N	1	E0437-D1-070402.ASC	E0437-D2-Channel1 Apr 02, 2007 14-45-01.txt	No video taken
E0438	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.49	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	H	H	H	H	N	N	1	E0438-D1-070402.ASC	E0438-D2-Channel1 Apr 02, 2007 14-54-50.txt	No video taken
E0439	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.48	3.49	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0439-D1-070402.ASC	E0439-D2-Channel1 Apr 02, 2007 15-01-36.txt	No video taken
E0440	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.48	3.43	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0440-D1-070402.ASC	E0440-D2-Channel1 Apr 02, 2007 15-06-04.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0441	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.54	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0441-D1-070402.ASC	E0441-D2-Channel1 Apr 02, 2007 15-09-29.txt	No video taken
E0442	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.42	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0442-D1-070402.ASC	E0442-D2-Channel1 Apr 02, 2007 15-13-46.txt	No video taken
E0443	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.50	3.54	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0443-D1-070402.ASC	E0443-D2-Channel1 Apr 02, 2007 15-18-59.txt	No video taken
E0444	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.42	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0444-D1-070402.ASC	E0444-D2-Channel1 Apr 02, 2007 15-26-34.txt	No video taken
E0445	8	Clay	55	0.8	33.4	28.6	2	4,5	~3	3.49	3.54	-	-	-	12/0.001/34/110	12/0.400/34/110	-	-	-	14	H	H	H	H	N	N	1	E0445-D1-070402.ASC	E0445-D2-Channel1 Apr 02, 2007 15-31-27.txt	No video taken
E0445BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0445-D1-BL-070402.ASC	E0445-D2-BL-Channel# Apr 2, 2007 15-35-46.txt	-
E0446BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0446-D1-BL-070403.ASC	E0446-D2-BL-Channel# Apr 3, 2007 10-12-07.txt	-
E0446	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.51	3.46	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	H	H	H	H	N	N	1	E0446-D1-070403.ASC	E0446-D2-Channel1 Apr 03, 2007 10-34-28.txt	No video taken
E0447	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.51	3.46	-	-	-	12/0.001/34/110	12/0.250/34/110	-	-	-	14	H	H	H	H	N	N	1	E0447-D1-070403.ASC	E0447-D2-Channel1 Apr 03, 2007 10-46-16.txt	No video taken
E0448	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.60	-	-	-	12/0.001/34/110	12/0.250/34/110	-	-	-	14	H	H	H	H	N	N	1	E0448-D1-070403.ASC	E0448-D2-Channel1 Apr 03, 2007 10-54-55.txt	No video taken
E0449	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.46	-	-	-	12/0.001/34/110	12/0.250/34/110	-	-	-	14	H	H	H	H	N	N	1	E0449-D1-070403.ASC	E0449-D2-Channel1 Apr 03, 2007 11-01-36.txt	No video taken
E0450	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.45	-	-	-	12/0.001/34/110	12/0.200/34/110	-	-	-	14	H	H	H	H	N	N	1	E0450-D1-070403.ASC	E0450-D2-Channel1 Apr 03, 2007 11-09-27.txt	No video taken
E0451	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.45	-	-	-	12/0.001/34/110	12/0.200/34/110	-	-	-	14	H	H	H	H	N	N	1	E0451-D1-070403.ASC	E0451-D2-Channel1 Apr 03, 2007 11-17-00.txt	No video taken
E0452	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.52	-	-	-	12/0.001/34/110	12/0.200/34/110	-	-	-	14	H	H	H	H	N	N	1	E0452-D1-070403.ASC	E0452-D2-Channel1 Apr 03, 2007 11-33-43.txt	No video taken
E0453	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.48	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	H	H	H	H	N	N	1	E0453-D1-070403.ASC	E0453-D2-Channel1 Apr 03, 2007 11-39-57.txt	No video taken
Simultaneous clay overblow; hydrophone level =M																														
E0454	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.51	3.43	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	M	M	M	M	N	N	1	E0454-D1-070403.ASC	E0454-D2-Channel1 Apr 03, 2007 13-52-35.txt	No video taken
E0455	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.50	3.46	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	M	M	M	M	N	N	1	E0455-D1-070403.ASC	E0455-D2-Channel1 Apr 03, 2007 13-57-43.txt	No video taken
E0456	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.50	3.46	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	M	M	M	M	N	N	1	E0456-D1-070403.ASC	E0456-D2-Channel1 Apr 03, 2007 14-02-44.txt	No video taken
E0457	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.50	3.48	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	M	M	M	M	N	N	1	E0457-D1-070403.ASC	E0457-D2-Channel1 Apr 03, 2007 14-07-34.txt	No video taken
E0458	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.45	-	-	-	12/0.001/34/110	12/0.600/34/110	-	-	-	14	M	M	M	M	N	N	1	E0458-D1-070403.ASC	E0458-D2-Channel1 Apr 03, 2007 14-12-48.txt	No video taken
E0459	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.51	-	-	-	12/0.001/34/110	12/0.610/34/110	-	-	-	14	M	M	M	M	N	N	1	E0459-D1-070403.ASC	E0459-D2-Channel1 Apr 03, 2007 14-21-40.txt	No video taken
E0460	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.45	-	-	-	12/0.001/34/110	12/0.610/34/110	-	-	-	14	M	M	M	M	N	N	1	E0460-D1-070403.ASC	E0460-D2-Channel1 Apr 03, 2007 14-28-14.txt	No video taken
E0461	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.45	-	-	-	12/0.001/34/110	12/0.610/34/110	-	-	-	14	M	M	M	M	N	N	1	E0461-D1-070403.ASC	E0461-D2-Channel1 Apr 03, 2007 14-34-24.txt	No video taken
E0462	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.45	-	-	-	12/0.001/34/110	12/0.580/34/110	-	-	-	14	M	M	M	M	N	N	1	E0462-D1-070403.ASC	E0462-D2-Channel1 Apr 03, 2007 14-42-15.txt	No video taken
E0463	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.46	-	-	-	12/0.001/34/110	12/0.580/34/110	-	-	-	14	M	M	M	M	N	N	1	E0463-D1-070403.ASC	E0463-D2-Channel1 Apr 03, 2007 14-47-32.txt	No video taken
E0464	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.54	3.58	-	-	-	12/0.001/34/110	12/0.580/34/110	-	-	-	14	M	M	M	M	N	N	1	E0464-D1-070403.ASC	E0464-D2-Channel1 Apr 03, 2007 14-58-25.txt	No video taken
E0465	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.49	3.46	-	-	-	12/0.001/34/110	12/0.580/34/110	-	-	-	14	M	M	M	M	N	N	1	E0465-D1-070403.ASC	E0465-D2-Channel1 Apr 03, 2007 15-10-16.txt	No video taken
E0466	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.47	3.43	-	-	-	12/0.001/34/110	12/0.550/34/110	-	-	-	14	M	M	M	M	N	N	1	E0466-D1-070403.ASC	E0466-D2-Channel1 Apr 03, 2007 15-21-01.txt	No video taken
E0467	8	Clay	54	0.8	31.6	26.5	2	4,5	~3	3.52	3.45	-	-	-	12/0.001/34/110	12/0.550/34/110	-	-	-	14	M	M	M	M	N	N	1	E0467-D1-070403.ASC	E0467-D2-Channel1 Apr 03, 2007 15-29-22.txt	No video taken
E0467BL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0467-D1-BL-070403.ASC	E0467-D2-BL-Channel# Apr 3, 2007 15-38-05.txt	-
E0468BL	-	-	-	-	30.8	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0468-D1-BL-070404.ASC	E0468-D2-BL-Channel# Apr 4, 2007 11-02-37.txt	-
E0468	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.50	3.45	-	-	-	12/0.001/34/	12/0.550/34/	-	-	-	14	M	M	M	M	N	N	1	E0468-D1-	E0468-D2-Channel1 Apr 04,	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
															110	110												070404.ASC	2007 11-19-24.txt	
E0469	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.50	3.49	-	-	-	12/0.001/34/110	12/0.550/34/110	-	-	-	14	M	M	M	M	N	N	1	E0469-D1-070404.ASC	E0469-D2-Channel1 Apr 04, 2007 11-25-06.txt	No video taken
E0470	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.53	3.49	-	-	-	12/0.001/34/110	12/0.550/34/110	-	-	-	14	M	M	M	M	N	N	1	E0470-D1-070404.ASC	E0470-D2-Channel1 Apr 04, 2007 11-29-13.txt	No video taken
E0471	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.50	3.49	-	-	-	12/0.001/34/110	12/0.250/34/110	-	-	-	14	M	M	M	M	N	N	1	E0471-D1-070404.ASC	E0471-D2-Channel1 Apr 04, 2007 11-37-37.txt	No video taken
E0472	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.49	3.50	-	-	-	12/0.001/34/110	12/0.250/34/110	-	-	-	14	M	M	M	M	N	N	1	E0472-D1-070404.ASC	E0472-D2-Channel1 Apr 04, 2007 11-42-33.txt	No video taken
E0473	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.50	3.49	-	-	-	12/0.001/34/110	12/0.50/34/110	-	-	-	14	M	M	M	M	N	N	1	E0473-D1-070404.ASC	E0473-D2-Channel1 Apr 04, 2007 11-49-54.txt	No video taken
E0474BL	-	-	-	-	30.8	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0474-D1-BL-070404.ASC	E0474-D2-BL-Channel# Apr 4, 2007 13-04-08.txt	-
E0474	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.49	3.52	-	-	-	12/0.001/34/110	12/0.50/34/110	-	-	-	14	M	M	M	M	N	N	1	E0474-D1-070404.ASC	E0474-D2-Channel1 Apr 04, 2007 13-10-51.txt	No video taken
E0475	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.50	3.49	-	-	-	12/0.001/34/110	12/0.55/34/110	-	-	-	14	M	M	M	M	N	N	1	E0475-D1-070404.ASC	E0475-D2-Channel1 Apr 04, 2007 13-27-07.txt	No video taken
E0476	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.47	3.50	-	-	-	12/0.001/34/110	12/0.55/34/110	-	-	-	14	M	M	M	M	N	N	1	E0476-D1-070404.ASC	E0476-D2-Channel1 Apr 04, 2007 13-31-32.txt	No video taken
E0477	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.51	3.52	-	-	-	12/0.001/34/110	12/0.55/34/110	-	-	-	14	M	M	M	M	N	N	1	E0477-D1-070404.ASC	E0477-D2-Channel1 Apr 04, 2007 13-39-45.txt	No video taken
E0478	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.50	3.52	-	-	-	12/0.001/34/110	12/0.54/34/110	-	-	-	14	M	M	M	M	N	N	1	E0478-D1-070404.ASC	E0478-D2-Channel1 Apr 04, 2007 13-44-41.txt	No video taken
E0479	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.53	3.48	-	-	-	12/0.001/34/110	12/0.54/34/110	-	-	-	14	M	M	M	M	N	N	1	E0479-D1-070404.ASC	E0479-D2-Channel1 Apr 04, 2007 13-49-50.txt	No video taken
E0480	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.48	3.48	-	-	-	12/0.001/34/110	12/0.54/34/110	-	-	-	14	M	M	M	M	N	N	1	E0480-D1-070404.ASC	E0480-D2-Channel1 Apr 04, 2007 13-54-43.txt	No video taken
High clay level, hydrophone level = M																														
E0481	8	Clay	54	0.8	30.8	26.0	1	5	~3	-	3.48	-	-	-	-	12/0.001/34/110	-	-	-	14	M	M	M	M	N	N	1	E0481-D1-070404.ASC	E0481-D2-Channel1 Apr 04, 2007 14-35-40.txt	No video taken
E0482	8	Clay	54	0.8	30.8	26.0	1	5	~3	-	3.53	-	-	-	-	12/0.001/34/110	-	-	-	14	M	M	M	M	N	N	2	E0482-D1-070404.ASC	E0482-D2-Channel1 Apr 04, 2007 14-38-52.txt	No video taken
E0483	8	Clay	54	0.8	30.8	26.0	1	5	~3	-	3.49	-	-	-	-	12/0.001/34/110	-	-	-	14	M	M	M	M	N	N	3	E0483-D1-070404.ASC	E0483-D2-Channel1 Apr 04, 2007 14-44-05.txt	No video taken
E0484	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.49	3.49	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	M	M	M	M	N	N	1	E0484-D1-070404.ASC	E0484-D2-Channel1 Apr 04, 2007 14-49-43.txt	No video taken
E0485	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.49	3.54	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	M	M	M	M	N	N	2	E0485-D1-070404.ASC	E0485-D2-Channel1 Apr 04, 2007 14-55-53.txt	No video taken
E0486	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.48	3.48	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	M	M	M	M	N	N	3	E0486-D1-070404.ASC	E0486-D2-Channel1 Apr 04, 2007 15-04-30.txt	No video taken
E0486BL	-	-	-	-	30.8	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0486-D1-BL-070404.ASC	E0486-D2-BL-Channel# Apr 4, 2007 15-16-56.txt	-
E0487BL	-	-	-	-	30.8	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0487-D1-BL-070405.ASC	E0487-D2-BL-Channel# Apr 5, 2007 10-11-19.txt	-
E0487	8	Clay	54	0.8	30.8	26.0	3	4,5,6	~3	3.51	3.53	3.48	-	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	-	14	M	M	M	M	N	N	1	E0487-D1-070405.ASC	E0487-D2-Channel1 Apr 05, 2007 10-25-05.txt	No video taken
E0488	8	Clay	54	0.8	30.8	26.0	3	4,5,6	~3	3.47	3.48	3.49	-	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	-	14	M	M	M	M	N	N	2	E0488-D1-070405.ASC	E0488-D2-Channel1 Apr 05, 2007 10-29-13.txt	No video taken
E0489	8	Clay	54	0.8	30.8	26.0	3	4,5,6	~3	3.46	3.51	3.49	-	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	-	14	M	M	M	M	N	N	3	E0489-D1-070405.ASC	E0489-D2-Channel1 Apr 05, 2007 10-33-10.txt	No video taken
E0490	8	Clay	54	0.8	30.8	26.0	4	4,5,6,7	~3	3.49	3.54	3.48	3.45	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	14	M	M	M	M	N	N	1	E0490-D1-070405.ASC	E0490-D2-Channel1 Apr 05, 2007 10-47-30.txt	No video taken
E0491	8	Clay	54	0.8	30.8	26.0	4	4,5,6,7	~3	3.49	3.45	3.48	3.52	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	14	M	M	M	M	N	N	2	E0491-D1-070405.ASC	E0491-D2-Channel1 Apr 05, 2007 10-53-19.txt	No video taken
E0492	8	Clay	54	0.8	30.8	26.0	4	4,5,6,7	~3	3.49	3.45	3.48	3.54	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	14	M	M	M	M	N	N	3	E0492-D1-070405.ASC	E0492-D2-Channel1 Apr 05, 2007 10-57-38.txt	No video taken
E0493	8	Clay	54	0.8	30.8	26.0	4	4,5,6,7	~3	3.49	3.52	3.48	3.45	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	14	M	M	M	M	N	N	4	E0493-D1-070405.ASC	E0493-D2-Channel1 Apr 05, 2007 11-03-37.txt	No video taken
E0494	8	Clay	54	0.8	30.8	26.0	1	8	~4	-	-	-	-	3.50	-	-	-	-	12/0.001/38/110	14	M	M	M	M	N	N	1	E0494-D1-070405.ASC	E0494-D2-Channel1 Apr 05, 2007 11-19-24.txt	No video taken
E0495	8	Clay	54	0.8	30.8	26.0	1	8	~4	-	-	-	-	3.50	-	-	-	-	12/0.001/38/110	14	M	M	M	M	N	N	2	E0495-D1-070405.ASC	E0495-D2-Channel1 Apr 05, 2007 11-26-19.txt	No video taken
E0496	8	Clay	54	0.8	30.8	26.0	1	8	~4	-	-	-	-	3.51	-	-	-	-	12/0.001/38/110	14	M	M	M	M	N	N	3	E0496-D1-070405.ASC	E0496-D2-Channel1 Apr 05, 2007 11-30-11.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0497	8	Clay	54	0.8	30.8	26.0	2	4,5	~12	3.50	3.53	-	-	-	12/0.001/43/110	12/0.001/43/110	-	-	-	14	M	M	M	M	N	N	1	E0497-D1-070405.ASC	E0497-D2-Channel1 Apr 05, 2007 14-07-05.txt	No video taken
E0498	8	Clay	54	0.8	30.8	26.0	2	4,5	~12	3.51	3.52	-	-	-	12/0.001/43/110	12/0.001/43/110	-	-	-	14	M	M	M	M	N	N	2	E0498-D1-070405.ASC	E0498-D2-Channel1 Apr 05, 200714-10-13.txt	No video taken
E0499	8	Clay	54	0.8	30.8	26.0	2	4,5	~12	3.49	3.51	-	-	-	12/0.001/43/110	12/0.001/43/110	-	-	-	14	M	M	M	M	N	N	3	E0499-D1-070405.ASC	E0499-D2-Channel1 Apr 05, 2007 14-16-10.txt	No video taken
E0500	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.49	3.45	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	M	M	M	M	Y	N	1	E0500-D1-070405.ASC	E0500-D2-Channel1 Apr 05, 2007 14-25-15.txt	No video taken
E0501	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.48	3.49	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	M	M	M	M	Y	N	2	E0501-D1-070405.ASC	E0501-D2-Channel1 Apr 05, 2007 14-35-21.txt	No video taken
E0502	8	Clay	54	0.8	30.8	26.0	2	4,5	~3	3.50	3.48	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	M	M	M	M	Y	N	3	E0502-D1-070405.ASC	E0502-D2-Channel1 Apr 05, 2007 14-40-12.txt	No video taken
E0503	8	Clay	54	0.8	30.8	26.0	1	5	~4.5	-	4.04	-	-	-	-	12/0.001/34/110	-	-	-	15	M	M	M	M	N	N	1	E0503-D1-070405.ASC	E0503-D2-Channel1 Apr 05, 2007 14-57-40.txt	No video taken
E0504	8	Clay	54	0.8	30.8	26.0	1	5	~4.5	-	4.05	-	-	-	-	12/0.001/34/110	-	-	-	15	M	M	M	M	N	N	2	E0504-D1-070405.ASC	E0504-D2-Channel1 Apr 05, 2007 15-01-34.txt	No video taken
E0505	8	Clay	54	0.8	30.8	26.0	1	5	~4.5	-	4.05	-	-	-	-	12/0.001/34/110	-	-	-	15	M	M	M	M	N	N	3	E0505-D1-070405.ASC	E0505-D2-Channel1 Apr 05, 2007 15-05-43.txt	No video taken
E0506	8	Clay	54	0.8	30.8	26.0	2	4,5	~4.5	4.01	4.04	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	15	M	M	M	M	N	N	1	E0506-D1-070405.ASC	E0506-D2-Channel1 Apr 05, 2007 15-12-23.txt	No video taken
E0507	8	Clay	54	0.8	30.8	26.0	2	4,5	~4.5	4.01	4.00	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	15	M	M	M	M	N	N	2	E0507-D1-070405.ASC	E0507-D2-Channel1 Apr 05, 2007 15-16-31.txt	No video taken
E0508	8	Clay	54	0.8	30.8	26.0	2	4,5	~4.5	4.00	4.02	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	15	M	M	M	M	N	N	3	E0508-D1-070405.ASC	E0508-D2-Channel1 Apr 05, 2007 15-19-37.txt	No video taken
E0509	8	Clay	54	0.8	30.8	26.0	1	5	~4.5	-	2.52	-	-	-	-	12/0.001/41/110	-	-	-	12	M	M	M	M	N	N	1	E0509-D1-070405.ASC	E0509-D2-Channel1 Apr 05, 2007 15-36-29.txt	No video taken
E0510	8	Clay	54	0.8	30.8	26.0	1	5	~4	-	2.54	-	-	-	-	12/0.001/41/110	-	-	-	12	M	M	M	M	N	N	2	E0510-D1-070405.ASC	E0510-D2-Channel1 Apr 05, 2007 15-39-21.txt	No video taken
E0511	8	Clay	54	0.8	30.8	26.0	1	5	~4	-	2.55	-	-	-	-	12/0.001/41/110	-	-	-	12	M	M	M	M	N	N	3	E0511-D1-070405.ASC	E0511-D2-Channel1 Apr 05, 2007 15-46-42.txt	No video taken
E0512	8	Clay	54	0.8	30.8	26.0	2	4,5	~4	2.48	2.53	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	M	M	M	M	N	N	1	E0512-D1-070405.ASC	E0512-D2-Channel1 Apr 05, 2007 15-56-10.txt	No video taken
E0513	8	Clay	54	0.8	30.8	26.0	2	4,5	~4	2.54	2.48	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	M	M	M	M	N	N	2	E0513-D1-070405.ASC	E0513-D2-Channel1 Apr 05, 2007 15-59-28.txt	No video taken
E0514	8	Clay	54	0.8	30.8	26.0	2	4,5	~4	2.46	2.46	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	M	M	M	M	N	N	3	E0514-D1-070405.ASC	E0514-D2-Channel1 Apr 05, 2007 16-06-45.txt	No video taken
E0514BL	-	-	-	-	30.8	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0514-D1-BL-070405.ASC	E0514-D2-BL-Channel# Apr 5, 2007 16-11-36.txt	-
E0515BL	-	-	-	-	30.8	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0515-D1-BL-070406.ASC	E0515-D2-BL-Channel# Apr 6, 2007 09-42-25.txt	-
E0515	8	Clay	54.5	0.8	30.8	26.0	1	5	~3	-	1.28	-	-	-	-	12/0.001/60/110	-	-	-	8	M	M	M	M	N	N	1	E0515-D1-070406.ASC	E0515-D2-Channel1 Apr 06, 2007 09-51-44.txt	No video taken
E0516	8	Clay	54.5	0.8	30.8	26.0	1	5	~3	-	1.26	-	-	-	-	12/0.001/60/110	-	-	-	8	M	M	M	M	N	N	2	E0516-D1-070406.ASC	E0516-D2-Channel1 Apr 06, 2007 09-56-36.txt	No video taken
E0517	8	Clay	54.5	0.8	30.8	26.0	1	5	~3	-	1.27	-	-	-	-	12/0.001/62/110	-	-	-	8	M	M	M	M	N	N	1	E0517-D1-070406.ASC	E0517-D2-Channel1 Apr 06, 2007 10-02-13.txt	No video taken
E0518	8	Clay	54.5	0.8	30.8	26.0	1	5	~3	-	1.28	-	-	-	-	12/0.001/62/110	-	-	-	8	M	M	M	M	N	N	2	E0518-D1-070406.ASC	E0518-D2-Channel1 Apr 06, 2007 10-06-05.txt	No video taken
E0519	8	Clay	54.5	0.8	30.8	26.0	1	5	~3	-	1.28	-	-	-	-	12/0.001/62/110	-	-	-	8	M	M	M	M	N	N	3	E0519-D1-070406.ASC	E0519-D2-Channel1 Apr 06, 2007 10-10-32.txt	No video taken
E0520	8	Clay	54.5	0.8	30.8	26.0	2	4,5	~3	1.26	1.28	-	-	-	12/0.001/62/110	12/0.001/62/110	-	-	-	8	M	M	M	M	N	N	1	E0520-D1-070406.ASC	E0520-D2-Channel1 Apr 06, 2007 10-19-50.txt	No video taken
E0521	8	Clay	54.5	0.8	30.8	26.0	2	4,5	~3	1.28	1.28	-	-	-	12/0.001/62/110	12/0.001/62/110	-	-	-	8	M	M	M	M	N	N	2	E0521-D1-070406.ASC	E0521-D2-Channel1 Apr 06, 2007 10-26-29.txt	No video taken
E0522	8	Clay	54.5	0.8	30.8	26.0	2	4,5	~3	1.29	1.28	-	-	-	12/0.001/62/110	12/0.001/62/110	-	-	-	8	M	M	M	M	N	N	3	E0522-D1-070406.ASC	E0522-D2-Channel1 Apr 06, 2007 10-30-58.txt	No video taken
High clay level, hydrophone level = H																														
E0523BL	-	-	-	-	30.8	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0523-D1-BL-070406.ASC	E0523-D2-BL-Channel# Apr 6, 2007 11-02-48.txt	-
E0523	8	Clay	54.5	0.8	30.8	26.0	1	5	~3	-	1.31	-	-	-	-	12/0.001/62/110	-	-	-	8	H	H	H	H	N	N	1	E0523-D1-070406.ASC	E0523-D2-Channel1 Apr 06, 2007 11-13-30.txt	No video taken
E0524	8	Clay	54.5	0.8	30.8	26.0	1	5	~3	-	1.28	-	-	-	-	12/0.001/62/110	-	-	-	8	H	H	H	H	N	N	2	E0524-D1-070406.ASC	E0524-D2-Channel1 Apr 06, 2007 11-16-57.txt	No video taken
E0525	8	Clay	54.5	0.8	30.8	26.0	1	5	~3	-	1.27	-	-	-	-	12/0.001/62/	-	-	-	8	H	H	H	H	N	N	3	E0525-D1-	E0525-D2-Channel1 Apr 06,	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
																110												070406.ASC	2007 11-20-43.txt	
E0526	8	Clay	54.5	0.8	30.8	26.0	2	4,5	~3.5	1.30	1.27	-	-	-	12/0.001/62/110	12/0.001/62/110	-	-	-	8	H	H	H	H	N	N	1	E0526-D1-070406.ASC	E0526-D2-Channel1 Apr 06, 2007 11-25-52.txt	No video taken
E0527	8	Clay	54.5	0.8	30.8	26.0	2	4,5	~3.5	1.27	1.27	-	-	-	12/0.001/62/110	12/0.001/62/110	-	-	-	8	H	H	H	H	N	N	2	E0527-D1-070406.ASC	E0527-D2-Channel1 Apr 06, 2007 11-32-03.txt	No video taken
E0528	8	Clay	54.5	0.8	30.8	26.0	2	4,5	~3.5	1.27	1.27	-	-	-	12/0.001/62/110	12/0.001/62/110	-	-	-	8	H	H	H	H	N	N	3	E0528-D1-070406.ASC	E0528-D2-Channel1 Apr 06, 2007 11-36-46.txt	No video taken
E0529	8	Clay	54.5	0.8	30.8	26.0	1	5	4	-	2.57	-	-	-	-	12/0.001/41/110	-	-	-	12	H	H	H	H	N	N	1	E0529-D1-070406.ASC	E0529-D2-Channel1 Apr 06, 2007 13-00-02.txt	No video taken
E0530	8	Clay	54.5	0.8	30.8	26.0	1	5	4	-	2.53	-	-	-	-	12/0.001/41/110	-	-	-	12	H	H	H	H	N	N	1	E0530-D1-070406.ASC	E0530-D2-Channel1 Apr 06, 2007 13-03-43.txt	No video taken
E0531	8	Clay	54.5	0.8	30.8	26.0	1	5	4	-	2.53	-	-	-	-	12/0.001/41/110	-	-	-	12	H	H	H	H	N	N	2	E0531-D1-070406.ASC	E0531-D2-Channel1 Apr 06, 2007 13-07-44.txt	No video taken
E0532	8	Clay	54.5	0.8	30.8	26.0	1	5	4	-	2.47	-	-	-	-	12/0.001/41/110	-	-	-	12	H	H	H	H	N	N	3	E0532-D1-070406.ASC	E0532-D2-Channel1 Apr 06, 2007 13-14-48.txt	No video taken
E0533	8	Clay	54.5	0.8	30.8	26.0	2	4,5	3	2.46	2.54	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	H	H	H	H	N	N	1	E0533-D1-070406.ASC	E0533-D2-Channel1 Apr 06, 2007 13-21-54.txt	No video taken
E0534	8	Clay	54.5	0.8	30.8	26.0	2	4,5	3.5	2.51	2.51	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	H	H	H	H	N	N	2	E0534-D1-070406.ASC	E0534-D2-Channel1 Apr 06, 2007 13-27-09.txt	No video taken
E0535	8	Clay	54.5	0.8	30.8	26.0	2	4,5	3	2.51	2.54	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	H	H	H	H	N	N	3	E0535-D1-070406.ASC	E0535-D2-Channel1 Apr 06, 2007 13-31-33.txt	No video taken
E0535BL	-	-	-	-	30.8	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0535-D1-BL-070406.ASC	E0535-D2-BL-Channel# Apr 6, 2007 13-44-20.txt	-
E0536BL	-	-	-	-	30.6	26.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0536-D1-BL-070410.ASC	E0536-D2-BL-Channel# Apr 10, 2007 13-42-40.txt	-
E0536	8	Clay	53.4	0.8	30.6	26.2	1	8	>3	-	-	-	-	3.50	-	-	-	-	12/0.001/38/110	14	H	H	H	H	N	N	1	E0536-D1-070410.ASC	E0536-D2-Channel1 Apr 10, 2007 13-50-49.txt	No video taken
E0537	8	Clay	53.4	0.8	30.6	26.2	1	8	>3	-	-	-	-	3.50	-	-	-	-	12/0.001/38/110	14	H	H	H	H	N	N	2	E0537-D1-070410.ASC	E0537-D2-Channel1 Apr 10, 2007 13-54-24.txt	No video taken
E0538	8	Clay	53.4	0.8	30.6	26.2	1	8	>3	-	-	-	-	3.50	-	-	-	-	12/0.001/38/110	14	H	H	H	H	N	N	3	E0538-D1-070410.ASC	E0538-D2-Channel1 Apr 10, 2007 13-59-17.txt	No video taken
E0539	8	Clay	53.4	0.8	30.6	26.2	1	5	>3	-	3.55	-	-	-	-	12/0.001/34/110	-	-	-	14	H	H	H	H	N	N	1	E0539-D1-070410.ASC	E0539-D2-Channel1 Apr 10, 2007 14-07-18.txt	No video taken
E0540	8	Clay	53.4	0.8	30.6	26.2	1	5	~3	-	3.54	-	-	-	-	12/0.001/34/110	-	-	-	14	H	H	H	H	N	N	2	E0540-D1-070410.ASC	E0540-D2-Channel1 Apr 10, 2007 14-10-29.txt	No video taken
E0541	8	Clay	53.4	0.8	30.6	26.2	1	5	>3	-	3.52	-	-	-	-	12/0.001/34/110	-	-	-	14	H	H	H	H	N	N	3	E0541-D1-070410.ASC	E0541-D2-Channel1 Apr 10, 2007 14-13-57.txt	No video taken
E0542	8	Clay	53.4	0.8	30.6	26.2	2	4,5	3	3.53	3.48	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	H	H	H	H	N	N	1	E0542-D1-070410.ASC	E0542-D2-Channel1 Apr 10, 2007 14-22-53.txt	No video taken
E0543	8	Clay	53.4	0.8	30.6	26.2	2	4,5	3	3.50	3.47	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	H	H	H	H	N	N	2	E0543-D1-070410.ASC	E0543-D2-Channel1 Apr 10, 2007 14-26-29.txt	No video taken
E0544	8	Clay	53.4	0.8	30.6	26.2	2	4,5	3	3.51	3.46	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	H	H	H	H	N	N	3	E0544-D1-070410.ASC	E0544-D2-Channel1 Apr 10, 2007 14-29-39.txt	No video taken
E0545	8	Clay	53.4	0.8	30.6	26.2	2	4,5	3	3.49	3.47	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	H	H	H	H	Y	N	1	E0545-D1-070410.ASC	E0545-D2-Channel1 Apr 10, 2007 14-36-23.txt	No video taken
E0546	8	Clay	53.4	0.8	30.6	26.2	2	4,5	2.5	3.48	3.46	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	H	H	H	H	Y	N	2	E0546-D1-070410.ASC	E0546-D2-Channel1 Apr 10, 2007 14-39-46.txt	No video taken
E0547	8	Clay	53.4	0.8	30.6	26.2	2	4,5	2.5	3.48	3.46	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	H	H	H	H	Y	N	3	E0547-D1-070410.ASC	E0547-D2-Channel1 Apr 10, 2007 14-43-31.txt	No video taken
E0548	8	Clay	53.4	0.8	30.6	26.2	2	4,5	12	3.49	3.52	-	-	-	12/0.001/43/110	12/0.001/43/110	-	-	-	14	H	H	H	H	N	N	1	E0548-D1-070410.ASC	E0548-D2-Channel1 Apr 10, 2007 14-56-07.txt	No video taken
E0549	8	Clay	53.4	0.8	30.6	26.2	2	4,5	12	3.51	3.48	-	-	-	12/0.001/43/110	12/0.001/43/110	-	-	-	14	H	H	H	H	N	N	2	E0549-D1-070410.ASC	E0549-D2-Channel1 Apr 10, 2007 14-59-48.txt	No video taken
E0550	8	Clay	53.4	0.8	30.6	26.2	2	4,5	12	3.52	3.48	-	-	-	12/0.001/43/110	12/0.001/43/110	-	-	-	14	H	H	H	H	N	N	3	E0550-D1-070410.ASC	E0550-D2-Channel1 Apr 10, 2007 15-04-09.txt	No video taken
E0551	8	Clay	53.4	0.8	30.6	26.2	3	4,5,6	3	3.48	3.52	3.51	-	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	-	14	H	H	H	H	N	N	1	E0551-D1-070410.ASC	E0551-D2-Channel1 Apr 10, 2007 15-14-18.txt	No video taken
E0552	8	Clay	53.4	0.8	30.6	26.2	3	4,5,6	2.5	3.49	3.47	3.51	-	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	-	14	H	H	H	H	N	N	2	E0552-D1-070410.ASC	E0552-D2-Channel1 Apr 10, 2007 15-18-09.txt	No video taken
E0553	8	Clay	53.4	0.8	30.6	26.2	3	4,5,6	2.5	3.48	3.46	3.51	-	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	-	14	H	H	H	H	N	N	3	E0553-D1-070410.ASC	E0553-D2-Channel1 Apr 10, 2007 15-22-57.txt	No video taken
E0554	8	Clay	53.4	0.8	30.6	26.2	4	4,5,6,7	2.5	3.54	3.48	3.51	3.47	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	14	H	H	H	H	N	N	1	E0554-D1-070410.ASC	E0554-D2-Channel1 Apr 10, 2007 15-33-19.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0555	8	Clay	53.4	0.8	30.6	26.2	4	4,5,6,7	2.5	3.46	3.52	3.50	3.48	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	14	H	H	H	H	N	N	2	E0555-D1-070410.ASC	E0555-D2-Channel1 Apr 10, 2007 15-36-51.txt	No video taken
E0556	8	Clay	53.4	0.8	30.6	26.2	4	4,5,6,7	2.5	3.49	3.46	3.50	3.46	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	14	H	H	H	H	N	N	3	E0556-D1-070410.ASC	E0556-D2-Channel1 Apr 10, 2007 15-41-24.txt	No video taken
E0556BL	-	-	-	-	30.6	26.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0556-D1-BL-070410.ASC	E0556-D2-BL-Channel# Apr 10, 2007 15-48-09.txt	-
E0557BL	-	-	-	-	30.4	26.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0557-D1-BL-070411.ASC	E0557-D2-BL-Channel# Apr 11, 2007 09-40-10.txt	-
E0557	8	Clay	53.5	0.8	30.4	26.1	1	5	4.5	-	3.96	-	-	-	-	12/0.001/34/110	-	-	-	15	H	H	H	H	N	N	1	E0557-D1-070411.ASC	E0557-D2-Channel1 Apr 11, 2007 09-51-48.txt	No video taken
E0558	8	Clay	53.5	0.8	30.4	26.1	1	5	4.5	-	4.03	-	-	-	-	12/0.001/34/110	-	-	-	15	H	H	H	H	N	N	2	E0558-D1-070411.ASC	E0558-D2-Channel1 Apr 11, 2007 09-55-38.txt	No video taken
E0559	8	Clay	53.5	0.8	30.4	26.1	1	5	4.5	-	3.96	-	-	-	-	12/0.001/34/110	-	-	-	15	H	H	H	H	N	N	3	E0559-D1-070411.ASC	E0559-D2-Channel1 Apr 11, 2007 09-58-40.txt	No video taken
E0560	8	Clay	53.5	0.8	30.4	26.1	2	4,5	>5	4.02	3.96	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	15	H	H	H	H	N	N	1	E0560-D1-070411.ASC	E0560-D2-Channel1 Apr 11, 2007 10-12-09.txt	No video taken
E0561	8	Clay	53.5	0.8	30.4	26.1	2	4,5	4.5	4.01	3.97	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	15	H	H	H	H	N	N	2	E0561-D1-070411.ASC	E0561-D2-Channel1 Apr 11, 2007 10-15-41.txt	No video taken
E0562	8	Clay	53.5	0.8	30.4	26.1	2	4,5	4.5	3.95	3.98	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	15	H	H	H	H	N	N	3	E0562-D1-070411.ASC	E0562-D2-Channel1 Apr 11, 2007 10-18-56.txt	No video taken
High clay level, hydrophone level = L																														
E0563BL	-	-	-	-	30.4	26.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0563-D1-BL-070411.ASC	E0563-D2-BL-Channel# Apr 11, 2007 11-09-47.txt	-
E0563	8	Clay	53.5	0.8	30.4	26.1	1	5	4.5	-	4.01	-	-	-	-	12/0.001/34/110	-	-	-	15	L	L	L	L	N	Y	1	E0563-D1-070411.ASC	E0563-D2-Channel1 Apr 11, 2007 11-15-05.txt	No video taken
E0564	8	Clay	53.5	0.8	30.4	26.1	1	5	4.5	-	4.02	-	-	-	-	12/0.001/34/110	-	-	-	15	L	L	L	L	N	Y	2	E0564-D1-070411.ASC	E0564-D2-Channel1 Apr 11, 2007 11-19-27.txt	No video taken
E0565	8	Clay	53.5	0.8	30.4	26.1	1	5	4.5	-	4.02	-	-	-	-	12/0.001/34/110	-	-	-	15	L	L	L	L	N	Y	3	E0565-D1-070411.ASC	E0565-D2-Channel1 Apr 11, 2007 11-24-53.txt	No video taken
E0566	8	Clay	53.5	0.8	30.4	26.1	2	4,5	4.5	3.96	4.04	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	15	L	L	L	L	N	Y	1	E0566-D1-070411.ASC	E0566-D2-Channel1 Apr 11, 2007 11-31-27.txt	No video taken
E0567	8	Clay	53.5	0.8	30.4	26.1	2	4,5	4.5	3.95	4.03	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	15	L	L	L	L	N	Y	2	E0567-D1-070411.ASC	E0567-D2-Channel1 Apr 11, 2007 11-35-12.txt	No video taken
E0568	8	Clay	53.5	0.8	30.4	26.1	2	4,5	4.5	4.05	4.04	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	15	L	L	L	L	N	Y	3	E0568-D1-070411.ASC	E0568-D2-Channel1 Apr 11, 2007 11-39-19.txt	No video taken
E0569	8	Clay	53.5	0.8	30.4	26.1	2	4,5	4.5	3.99	4.02	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	15	L	L	L	L	N	Y	4	E0569-D1-070411.ASC	E0569-D2-Channel1 Apr 11, 2007 11-43-27.txt	No video taken
E0570	8	Clay	53.5	0.8	30.4	26.1	1	8	>3	-	-	-	-	3.50	-	-	-	-	12/0.001/38/110	14	L	L	L	L	N	Y	1	E0570-D1-070411.ASC	E0570-D2-Channel1 Apr 11, 2007 13-53-54.txt	No video taken
E0571	8	Clay	53.5	0.8	30.4	26.1	1	8	>3	-	-	-	-	3.49	-	-	-	-	12/0.001/38/110	14	L	L	L	L	N	Y	2	E0571-D1-070411.ASC	E0571-D2-Channel1 Apr 11, 2007 13-58-29.txt	No video taken
E0572	8	Clay	53.5	0.8	30.4	26.1	1	8	>3	-	-	-	-	3.49	-	-	-	-	12/0.001/38/110	14	L	L	L	L	N	Y	3	E0572-D1-070411.ASC	E0572-D2-Channel1 Apr 11, 2007 14-02-17.txt	No video taken
E0573	8	Clay	53.5	0.8	30.4	26.1	1	5	2.5	-	3.52	-	-	-	-	12/0.001/34/110	-	-	-	14	L	L	L	L	N	Y	1	E0573-D1-070411.ASC	E0573-D2-Channel1 Apr 11, 2007 14-08-00.txt	No video taken
E0574	8	Clay	53.5	0.8	30.4	26.1	1	5	3	-	3.53	-	-	-	-	12/0.001/34/110	-	-	-	14	L	L	L	L	N	Y	2	E0574-D1-070411.ASC	E0574-D2-Channel1 Apr 11, 2007 14-11-38.txt	No video taken
E0575	8	Clay	53.5	0.8	30.4	26.1	1	5	3	-	3.54	-	-	-	-	12/0.001/34/110	-	-	-	14	L	L	L	L	N	Y	3	E0575-D1-070411.ASC	E0575-D2-Channel1 Apr 11, 2007 14-15-51.txt	No video taken
E0576	8	Clay	53.5	0.8	30.4	26.1	2	4,5	3	3.49	3.52	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	L	L	L	L	N	Y	1	E0576-D1-070411.ASC	E0576-D2-Channel1 Apr 11, 2007 14-41-47.txt	No video taken
E0577	8	Clay	53.5	0.8	30.4	26.1	2	4,5	3	3.52	3.52	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	L	L	L	L	N	Y	2	E0577-D1-070411.ASC	E0577-D2-Channel1 Apr 11, 2007 14-48-01.txt	No video taken
E0578	8	Clay	53.5	0.8	30.4	26.1	2	4,5	3	3.52	3.52	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	L	L	L	L	N	Y	3	E0578-D1-070411.ASC	E0578-D2-Channel1 Apr 11, 2007 14-52-21.txt	No video taken
E0579	8	Clay	53.5	0.8	30.4	26.1	3	4,5,6	3	3.50	3.50	3.50	-	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	-	14	L	L	L	L	N	Y	1	E0579-D1-070411.ASC	E0579-D2-Channel1 Apr 11, 2007 15-02-03.txt	No video taken
E0580	8	Clay	53.5	0.8	30.4	26.1	3	4,5,6	3	3.45	3.51	3.50	-	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	-	14	L	L	L	L	N	Y	2	E0580-D1-070411.ASC	E0580-D2-Channel1 Apr 11, 2007 15-07-37.txt	No video taken
E0581	8	Clay	53.5	0.8	30.4	26.1	3	4,5,6	3	3.48	3.51	3.50	-	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	-	14	L	L	L	L	N	Y	3	E0581-D1-070411.ASC	E0581-D2-Channel1 Apr 11, 2007 15-11-26.txt	No video taken
E0582	8	Clay	53.5	0.8	30.4	26.1	4	4,5,6,7	3	3.50	3.51	3.49	3.48	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	14	L	L	L	L	N	Y	1	E0582-D1-070411.ASC	E0582-D2-Channel1 Apr 11, 2007 15-17-55.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0583	8	Clay	53.5	0.8	30.4	26.1	4	4,5,6,7	3	3.49	3.49	3.49	3.49	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	14	L	L	L	L	N	Y	2	E0583-D1-070411.ASC	E0583-D2-Channel1 Apr 11, 2007 15-22-51.txt	No video taken
E0584	8	Clay	53.5	0.8	30.4	26.1	4	4,5,6,7	3	3.50	3.54	3.49	3.47	-	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	12/0.001/34/110	-	14	L	L	L	L	N	Y	3	E0584-D1-070411.ASC	E0584-D2-Channel1 Apr 11, 2007 15-27-39.txt	No video taken
E0584BL	-	-	-	-	30.4	26.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0584-D1-BL-070411.ASC	E0584-D2-BL-Channel# Apr 11, 2007 15-33-52.txt	-
E0585BL1	-	-	-	-	30.9	26.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	E0585-D1-BL1-070412.ASC	E0585-D2-BL1-Channel# Apr 12, 2007 09-50-20.txt	-
E0585BL2	-	-	-	-	30.9	26.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	E0585-D1-BL2-070412.ASC	E0585-D2-BL2-Channel# Apr 12, 2007 09-59-55.txt	-
E0585	8	Clay	54.0	0.8	30.9	26.7	2	4,5	3	3.46	3.53	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	L	L	L	L	Y	Y	1	E0585-D1-070412.ASC	E0585-D2-Channel1 Apr 12, 2007 10-11-00.txt	No video taken
E0586	8	Clay	54.0	0.8	30.9	26.7	2	4,5	3	3.53	3.54	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	L	L	L	L	Y	Y	2	E0586-D1-070412.ASC	E0586-D2-Channel1 Apr 12, 2007 10-15-48.txt	No video taken
E0587	8	Clay	54.0	0.8	30.9	26.7	2	4,5	3	3.46	3.54	-	-	-	12/0.001/34/110	12/0.001/34/110	-	-	-	14	L	L	L	L	Y	Y	3	E0587-D1-070412.ASC	E0587-D2-Channel1 Apr 12, 2007 10-21-12.txt	No video taken
E0588	8	Clay	54.0	0.8	30.9	26.7	2	4,5	11.5	3.51	3.50	-	-	-	12/0.001/43/110	12/0.001/43/110	-	-	-	14	L	L	L	L	N	Y	1	E0588-D1-070412.ASC	E0588-D2-Channel1 Apr 12, 2007 10-27-49.txt	No video taken
E0589	8	Clay	54.0	0.8	30.9	26.7	2	4,5	11.5	3.57	3.53	-	-	-	12/0.001/43/110	12/0.001/43/110	-	-	-	14	L	L	L	L	N	Y	2	E0589-D1-070412.ASC	E0589-D2-Channel1 Apr 12, 2007 10-32-34.txt	No video taken
E0590	8	Clay	54.0	0.8	30.9	26.7	2	4,5	11.5	3.51	3.51	-	-	-	12/0.001/43/110	12/0.001/43/110	-	-	-	14	L	L	L	L	N	Y	3	E0590-D1-070412.ASC	E0590-D2-Channel1 Apr 12, 2007 10-36-43.txt	No video taken
E0591	8	Clay	54.0	0.8	30.9	26.7	2	4,5	11.5	3.52	3.54	-	-	-	12/0.001/43/110	12/0.001/43/110	-	-	-	14	L	L	L	L	N	Y	4	E0591-D1-070412.ASC	E0591-D2-Channel1 Apr 12, 2007 10-40-36.txt	No video taken
E0592	8	Clay	54.0	0.8	30.9	26.7	1	5	3.5	-	2.49	-	-	-	-	12/0.001/41/110	-	-	-	12	L	L	L	L	N	Y	1	E0592-D1-070412.ASC	E0592-D2-Channel1 Apr 12, 2007 10-59-07.txt	No video taken
E0593	8	Clay	54.0	0.8	30.9	26.7	1	5	4	-	2.55	-	-	-	-	12/0.001/41/110	-	-	-	12	L	L	L	L	N	Y	2	E0593-D1-070412.ASC	E0593-D2-Channel1 Apr 12, 2007 11-03-15.txt	No video taken
E0594	8	Clay	54.0	0.8	30.9	26.7	1	5	4	-	2.52	-	-	-	-	12/0.001/41/110	-	-	-	12	L	L	L	L	N	Y	3	E0594-D1-070412.ASC	E0594-D2-Channel1 Apr 12, 2007 11-07-13.txt	No video taken
E0595	8	Clay	54.0	0.8	30.9	26.7	2	4,5	-	2.69	2.37	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	L	L	L	L	N	Y	1	E0595-D1-070412.ASC	E0595-D2-Channel1 Apr 12, 2007 11-14-29.txt	No video taken
E0596	8	Clay	54.0	0.8	30.9	26.7	2	4,5	-	2.57	2.49	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	L	L	L	L	N	Y	2	E0596-D1-070412.ASC	E0596-D2-Channel1 Apr 12, 2007 11-19-35.txt	No video taken
E0597	8	Clay	54.0	0.8	30.9	26.7	2	4,5	3.5	2.48	2.55	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	L	L	L	L	N	Y	3	E0597-D1-070412.ASC	E0597-D2-Channel1 Apr 12, 2007 11-23-41.txt	No video taken
E0598	8	Clay	54.0	0.8	30.9	26.7	2	4,5	3.5	2.47	2.56	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	L	L	L	L	N	Y	4	E0598-D1-070412.ASC	E0598-D2-Channel1 Apr 12, 2007 11-28-28.txt	No video taken
E0599	8	Clay	54.0	0.8	30.9	26.7	2	4,5	3.5	2.52	2.50	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	L	L	L	L	N	Y	5	E0599-D1-070412.ASC	E0599-D2-Channel1 Apr 12, 2007 11-34-26.txt	No video taken
E0600	8	Clay	54.0	0.8	30.9	26.7	2	4,5	3	2.55	2.46	-	-	-	12/0.001/41/110	12/0.001/41/110	-	-	-	12	L	L	L	L	N	Y	6	E0600-D1-070412.ASC	E0600-D2-Channel1 Apr 12, 2007 11-38-38.txt	No video taken
E0601	8	Clay	54.0	0.8	30.9	26.7	1	5	3	-	1.29	-	-	-	-	12/0.001/62/110	-	-	-	8	L	L	L	L	N	Y	1	E0601-D1-070412.ASC	E0601-D2-Channel1 Apr 12, 2007 13-26-08.txt	No video taken
E0602	8	Clay	54.0	0.8	30.9	26.7	1	5	3	-	1.33	-	-	-	-	12/0.001/62/110	-	-	-	8	L	L	L	L	N	Y	2	E0602-D1-070412.ASC	E0602-D2-Channel1 Apr 12, 2007 13-30-46.txt	No video taken
E0603	8	Clay	54.0	0.8	30.9	26.7	1	5	3	-	1.30	-	-	-	-	12/0.001/62/110	-	-	-	8	L	L	L	L	N	Y	3	E0603-D1-070412.ASC	E0603-D2-Channel1 Apr 12, 2007 13-35-09.txt	No video taken
E0604	8	Clay	54.0	0.8	30.9	26.7	2	4,5	3	1.30	1.31	-	-	-	12/0.001/62/110	12/0.001/62/110	-	-	-	8	L	L	L	L	N	Y	1	E0604-D1-070412.ASC	E0604-D2-Channel1 Apr 12, 2007 13-42-36.txt	No video taken
E0605	8	Clay	54.0	0.8	30.9	26.7	2	4,5	3	1.31	1.30	-	-	-	12/0.001/62/110	12/0.001/62/110	-	-	-	8	L	L	L	L	N	Y	2	E0605-D1-070412.ASC	E0605-D2-Channel1 Apr 12, 2007 13-46-49.txt	No video taken
E0606	8	Clay	54.0	0.8	30.9	26.7	2	4,5	3	1.32	1.32	-	-	-	12/0.001/62/110	12/0.001/62/110	-	-	-	8	L	L	L	L	N	Y	3	not recorded by error	E0606-D2-Channel1 Apr 12, 2007 13-51-24.txt	No video taken
E0607	8	Clay	54.0	0.8	30.9	26.7	2	4,5	3	1.32	1.34	-	-	-	12/0.001/62/110	12/0.001/62/110	-	-	-	8	L	L	L	L	N	Y	4	E0607-D1-070412.ASC	E0607-D2-Channel1 Apr 12, 2007 13-57-36.txt	No video taken
E0607BL	-	-	-	-	30.9	26.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0607-D1-BL-070412.ASC	E0607-D2-BL-Channel# Apr 12, 2007 14-07-35.txt	-
Medium clay level, hydrophone level = L																														
E0608BL	-	-	-	-	31.0	27.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0608-D1-BL-070416.ASC	E0608-D2-BL-Channel# Apr 16, 2007 09-58-08.txt	-
E0608	8	Clay	94.9	0.55	31.0	27.0	1	5	4	-	1.29	-	-	-	-	30/0.001/52/110	-	-	-	8	L	L	L	L	N	N	1	E0608-D1-070416.ASC	E0608-D2-Channel1 Apr 16, 2007 10-27-59.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0609	8	Clay	94.9	0.55	31.0	27.0	1	5	4	-	1.30	-	-	-	-	30/0.001/52/110	-	-	-	8	L	L	L	L	N	N	2	E0609-D1-070416.ASC	E0609-D2-Channel1 Apr 16, 2007 10-32-08.txt	No video taken
E0610	8	Clay	94.9	0.55	31.0	27.0	1	5	4	-	1.33	-	-	-	-	30/0.001/52/110	-	-	-	8	L	L	L	L	N	N	3	E0610-D1-070416.ASC	E0610-D2-Channel1 Apr 16, 2007 10-36-50.txt	No video taken
E0611	8	Clay	94.9	0.55	31.0	27.0	2	4,5	4	1.32	1.30	-	-	-	30/0.001/52/110	30/0.001/52/110	-	-	-	8	L	L	L	L	N	N	1	E0611-D1-070416.ASC	E0611-D2-Channel1 Apr 16, 2007 10-45-17.txt	No video taken
E0612	8	Clay	94.9	0.55	31.0	27.0	2	4,5	4	1.32	1.29	-	-	-	30/0.001/52/110	30/0.001/52/110	-	-	-	8	L	L	L	L	N	N	2	E0612-D1-070416.ASC	E0612-D2-Channel1 Apr 16, 2007 10-49-36.txt	No video taken
E0613	8	Clay	94.9	0.55	31.0	27.0	2	4,5	4	1.33	1.29	-	-	-	30/0.001/52/110	30/0.001/52/110	-	-	-	8	L	L	L	L	N	N	3	E0613-D1-070416.ASC	E0613-D2-Channel1 Apr 16, 2007 10-53-42.txt	No video taken
E0614	8	Clay	94.9	0.55	31.0	27.0	1	5	4	-	2.51	-	-	-	-	30/0.001/39/110	-	-	-	12	L	L	L	L	N	N	1	E0614-D1-070416.ASC	E0614-D2-Channel1 Apr 16, 2007 11-08-48.txt	No video taken
E0615	8	Clay	94.9	0.55	31.0	27.0	1	5	4	-	2.49	-	-	-	-	30/0.001/39/110	-	-	-	12	L	L	L	L	N	N	2	E0615-D1-070416.ASC	E0615-D2-Channel1 Apr 16, 2007 11-14-01.txt	No video taken
E0616	8	Clay	94.9	0.55	31.0	27.0	1	5	4	-	2.51	-	-	-	-	30/0.001/39/110	-	-	-	12	L	L	L	L	N	N	3	E0616-D1-070416.ASC	E0616-D2-Channel1 Apr 16, 2007 11-18-02.txt	No video taken
E0617	8	Clay	94.9	0.55	31.0	27.0	2	4,5	4.5	2.46	2.51	-	-	-	30/0.001/39/110	30/0.001/39/110	-	-	-	12	L	L	L	L	N	N	1	E0617-D1-070416.ASC	E0617-D2-Channel1 Apr 16, 2007 11-24-32.txt	No video taken
E0618	8	Clay	94.9	0.55	31.0	27.0	2	4,5	4.5	2.45	2.50	-	-	-	30/0.001/39/110	30/0.001/39/110	-	-	-	12	L	L	L	L	N	N	2	E0618-D1-070416.ASC	E0618-D2-Channel1 Apr 16, 2007 11-28-35.txt	No video taken
E0619	8	Clay	94.9	0.55	31.0	27.0	2	4,5	4.5	2.45	2.46	-	-	-	30/0.001/39/110	30/0.001/39/110	-	-	-	12	L	L	L	L	N	N	3	E0619-D1-070416.ASC	E0619-D2-Channel1 Apr 16, 2007 11-32-02.txt	No video taken
E0620	8	Clay	94.9	0.55	31.0	27.0	1	8	4	-	-	-	-	3.52	-	-	-	-	35/0.001/35/110	14	L	L	L	L	N	N	1	E0620-D1-070416.ASC	E0620-D2-Channel1 Apr 16, 2007 13-05-36.txt	No video taken
E0621	8	Clay	94.9	0.55	31.0	27.0	1	8	4	-	-	-	-	3.51	-	-	-	-	35/0.001/35/110	14	L	L	L	L	N	N	2	E0621-D1-070416.ASC	E0621-D2-Channel1 Apr 16, 2007 13-09-38.txt	No video taken
E0622	8	Clay	94.9	0.55	31.0	27.0	1	8	4	-	-	-	-	3.52	-	-	-	-	35/0.001/35/110	14	L	L	L	L	N	N	3	E0622-D1-070416.ASC	E0622-D2-Channel1 Apr 16, 2007 13-15-43.txt	No video taken
E0623	8	Clay	94.9	0.55	31.0	27.0	1	5	2.5	-	3.48	-	-	-	-	30/0.001/32/110	-	-	-	14	L	L	L	L	N	N	1	E0623-D1-070416.ASC	E0623-D2-Channel1 Apr 16, 2007 13-22-38.txt	No video taken
E0624	8	Clay	94.9	0.55	31.0	27.0	1	5	2.5	-	3.54	-	-	-	-	30/0.001/32/110	-	-	-	14	L	L	L	L	N	N	2	E0624-D1-070416.ASC	E0624-D2-Channel1 Apr 16, 2007 13-28-48.txt	No video taken
E0625	8	Clay	94.9	0.55	31.0	27.0	1	5	2.5	-	3.54	-	-	-	-	30/0.001/32/110	-	-	-	14	L	L	L	L	N	N	3	E0625-D1-070416.ASC	E0625-D2-Channel1 Apr 16, 2007 13-34-53.txt	No video taken
E0626	8	Clay	94.9	0.55	31.0	27.0	2	4,5	2.5	3.46	3.49	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	L	L	L	L	N	N	1	E0626-D1-070416.ASC	E0626-D2-Channel1 Apr 16, 2007 13-49-20.txt	No video taken
E0627	8	Clay	94.9	0.55	31.0	27.0	2	4,5	2.5	3.52	3.49	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	L	L	L	L	N	N	2	E0627-D1-070416.ASC	E0627-D2-Channel1 Apr 16, 2007 13-58-15.txt	No video taken
E0628	8	Clay	94.9	0.55	31.0	27.0	2	4,5	2.5	3.52	3.48	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	L	L	L	L	N	N	3	E0628-D1-070416.ASC	E0628-D2-Channel1 Apr 16, 2007 14-04-11.txt	No video taken
E0629	8	Clay	94.9	0.55	31.0	27.0	3	4,5,6	2.5	3.48	3.47	3.49	-	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	-	14	L	L	L	L	N	N	1	E0629-D1-070416.ASC	E0629-D2-Channel1 Apr 16, 2007 14-19-00.txt	No video taken
E0630	8	Clay	94.9	0.55	31.0	27.0	3	4,5,6	2.5	3.48	3.47	3.49	-	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	-	14	L	L	L	L	N	N	2	E0630-D1-070416.ASC	E0630-D2-Channel1 Apr 16, 2007 14-25-16.txt	No video taken
E0631	8	Clay	94.9	0.55	31.0	27.0	3	4,5,6	2.5	3.48	3.46	3.49	-	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	-	14	L	L	L	L	N	N	3	E0631-D1-070416.ASC	E0631-D2-Channel1 Apr 16, 2007 14-29-15.txt	No video taken
E0632	8	Clay	94.9	0.55	31.0	27.0	4	4,5,6,7	2.5	3.47	3.46	3.48	3.53	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	14	L	L	L	L	N	N	1	E0632-D1-070416.ASC	E0632-D2-Channel1 Apr 16, 2007 14-36-49.txt	No video taken
E0633	8	Clay	94.9	0.55	31.0	27.0	4	4,5,6,7	2.5	3.48	3.47	3.48	3.48	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	14	L	L	L	L	N	N	2	E0633-D1-070416.ASC	E0633-D2-Channel1 Apr 16, 2007 14-47-42.txt	No video taken
E0634	8	Clay	94.9	0.55	31.0	27.0	4	4,5,6,7	2.5	3.48	3.55	3.48	3.48	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	14	L	L	L	L	N	N	3	E0634-D1-070416.ASC	E0634-D2-Channel1 Apr 16, 2007 14-56-18.txt	No video taken
E0635BL1	-	-	-	-	31.0	27.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0635-D1-BL1-070416.ASC	E0635-D2-BL1-Channel# Apr 16, 2007 15-05-14.txt	-
E0635BL2	-	-	-	-	31.0	27.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	E0635-D1-BL2-070416.ASC	E0635-D2-BL2-Channel# Apr 16, 2007 15-10-39.txt	-
E0635	8	Clay	94.9	0.55	31.0	27.0	2	4,5	2.5	3.45	3.49	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	L	L	L	L	Y	N	1	E0635-D1-070416.ASC	E0635-D2-Channel1 Apr 16, 2007 15-16-26.txt	No video taken
E0636	8	Clay	94.9	0.55	31.0	27.0	2	4,5	2.5	3.52	3.47	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	L	L	L	L	Y	N	2	E0636-D1-070416.ASC	E0636-D2-Channel1 Apr 16, 2007 15-20-40.txt	No video taken
E0637	8	Clay	94.9	0.55	31.0	27.0	2	4,5	2.5	3.48	3.48	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	L	L	L	L	Y	N	3	E0637-D1-070416.ASC	E0637-D2-Channel1 Apr 16, 2007 15-26-41.txt	No video taken
E0638	8	Clay	94.9	0.55	31.0	27.0	2	4,5	12.5	3.46	3.49	-	-	-	30/0.001/42/110	30/0.001/42/110	-	-	-	14	L	L	L	L	N	N	1	E0638-D1-070416.ASC	E0638-D2-Channel1 Apr 16, 2007 15-33-51.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0639	8	Clay	94.9	0.55	31.0	27.0	2	4,5	12.5	3.46	3.49	-	-	-	30/0.001/42/110	30/0.001/42/110	-	-	-	14	L	L	L	L	N	N	2	E0639-D1-070416.ASC	E0639-D2-Channel1 Apr 16, 2007 15-37-35.txt	No video taken
E0640	8	Clay	94.9	0.55	31.0	27.0	2	4,5	13	3.51	3.52	-	-	-	30/0.001/42/110	30/0.001/42/110	-	-	-	14	L	L	L	L	N	N	3	E0640-D1-070416.ASC	E0640-D2-Channel1 Apr 16, 2007 15-41-43.txt	No video taken
E0641	8	Clay	94.9	0.55	31.0	27.0	1	5	4.5	-	3.99	-	-	-	-	30/0.001/32/110	-	-	-	15	L	L	L	L	N	N	1	E0641-D1-070416.ASC	E0641-D2-Channel1 Apr 16, 2007 15-53-07.txt	No video taken
E0642	8	Clay	94.9	0.55	31.0	27.0	1	5	4.5	-	3.99	-	-	-	-	30/0.001/32/110	-	-	-	15	L	L	L	L	N	N	2	E0642-D1-070416.ASC	E0642-D2-Channel1 Apr 16, 2007 15-56-19.txt	No video taken
E0643	8	Clay	94.9	0.55	31.0	27.0	1	5	4.5	-	4.00	-	-	-	-	30/0.001/32/110	-	-	-	15	L	L	L	L	N	N	3	E0643-D1-070416.ASC	E0643-D2-Channel1 Apr 16, 2007 16-00-13.txt	No video taken
E0644	8	Clay	94.9	0.55	31.0	27.0	2	4,5	4.5	4.00	4.01	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	15	L	L	L	L	N	N	1	E0644-D1-070416.ASC	E0644-D2-Channel1 Apr 16, 2007 16-05-41.txt	No video taken
E0645	8	Clay	94.9	0.55	31.0	27.0	2	4,5	4.5	4.01	3.99	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	15	L	L	L	L	N	N	2	E0645-D1-070416.ASC	E0645-D2-Channel1 Apr 16, 2007 16-08-33.txt	No video taken
E0646	8	Clay	94.9	0.55	31.0	27.0	2	4,5	4.5	4.01	3.99	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	15	L	L	L	L	N	N	3	E0646-D1-070416.ASC	E0646-D2-Channel1 Apr 16, 2007 16-13-47.txt	No video taken
E0646BL	-	-	-	-	31.0	27.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0646-D1-BL-070416.ASC	E0646-D2-BL-Channel# Apr 16, 2007 16-21-47.txt	-
Medium clay level, hydrophone level = M																														
E0647BL	-	-	-	-	28.8	25.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0647-D1-BL-070417.ASC	E0647-D2-BL-Channel# Apr 17, 2007 09-44-51.txt	-
E0647	8	Clay	95.5	0.55	28.8	25.7	1	5	4.5	-	4.00	-	-	-	-	30/0.001/32/110	-	-	-	15	M	M	M	M	N	Y	1	E0647-D1-070417.ASC	E0647-D2-Channel1 Apr 17, 2007 09-53-35.txt	No video taken
E0648	8	Clay	95.5	0.55	28.8	25.7	1	5	4.5	-	4.01	-	-	-	-	30/0.001/32/110	-	-	-	15	M	M	M	M	N	Y	2	E0648-D1-070417.ASC	E0648-D2-Channel1 Apr 17, 2007 09-58-06.txt	No video taken
E0649	8	Clay	95.5	0.55	28.8	25.7	1	5	4.5	-	4.02	-	-	-	-	30/0.001/32/110	-	-	-	15	M	M	M	M	N	Y	3	E0649-D1-070417.ASC	E0649-D2-Channel1 Apr 17, 2007 10-01-36.txt	No video taken
E0650	8	Clay	95.5	0.55	28.8	25.7	2	4,5	4.5	4.04	4.02	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	15	M	M	M	M	N	Y	1	E0650-D1-070417.ASC	E0650-D2-Channel1 Apr 17, 2007 10-07-43.txt	No video taken
E0651	8	Clay	95.5	0.55	28.8	25.7	2	4,5	4.5	4.02	4.02	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	15	M	M	M	M	N	Y	2	E0651-D1-070417.ASC	E0651-D2-Channel1 Apr 17, 2007 10-12-05.txt	No video taken
E0652	8	Clay	95.5	0.55	28.8	25.7	2	4,5	4.5	4.02	4.01	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	15	M	M	M	M	N	Y	3	E0652-D1-070417.ASC	E0652-D2-Channel1 Apr 17, 2007 10-15-56.txt	No video taken
E0653	8	Clay	95.5	0.55	28.8	25.7	1	5	3	-	3.52	-	-	-	-	30/0.001/32/110	-	-	-	14	M	M	M	M	N	Y	1	E0653-D1-070417.ASC	E0653-D2-Channel1 Apr 17, 2007 10-26-25.txt	No video taken
E0654	8	Clay	95.5	0.55	28.8	25.7	1	5	3	-	3.48	-	-	-	-	30/0.001/32/110	-	-	-	14	M	M	M	M	N	Y	2	E0654-D1-070417.ASC	E0654-D2-Channel1 Apr 17, 2007 10-31-32.txt	No video taken
E0655	8	Clay	95.5	0.55	28.8	25.7	1	5	3	-	3.48	-	-	-	-	30/0.001/32/110	-	-	-	14	M	M	M	M	N	Y	3	E0655-D1-070417.ASC	E0655-D2-Channel1 Apr 17, 2007 10-35-17.txt	No video taken
E0656	8	Clay	95.5	0.55	28.8	25.7	2	4,5	2.5	3.45	3.50	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	M	M	M	M	N	Y	1	E0656-D1-070417.ASC	E0656-D2-Channel1 Apr 17, 2007 10-42-14.txt	No video taken
E0657	8	Clay	95.5	0.55	28.8	25.7	2	4,5	3	3.55	3.48	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	M	M	M	M	N	Y	2	E0657-D1-070417.ASC	E0657-D2-Channel1 Apr 17, 2007 10-47-37.txt	No video taken
E0658	8	Clay	95.5	0.55	28.8	25.7	2	4,5	2.5	3.52	3.48	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	M	M	M	M	N	Y	3	E0658-D1-070417.ASC	E0658-D2-Channel1 Apr 17, 2007 10-52-20.txt	No video taken
E0659	8	Clay	95.5	0.55	28.8	25.7	3	4,5,6	2.5	3.45	3.46	3.49	-	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	-	14	M	M	M	M	N	Y	1	E0659-D1-070417.ASC	E0659-D2-Channel1 Apr 17, 2007 11-09-11.txt	No video taken
E0660	8	Clay	95.5	0.55	28.8	25.7	3	4,5,6	2.5	3.46	3.47	3.49	-	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	-	14	M	M	M	M	N	Y	2	E0660-D1-070417.ASC	E0660-D2-Channel1 Apr 17, 2007 11-15-23.txt	No video taken
E0661	8	Clay	95.5	0.55	28.8	25.7	3	4,5,6	3	3.54	3.46	3.49	-	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	-	14	M	M	M	M	N	Y	3	E0661-D1-070417.ASC	E0661-D2-Channel1 Apr 17, 2007 11-25-28.txt	No video taken
E0662	8	Clay	95.5	0.55	28.8	25.7	4	4,5,6,7	2.5	3.51	3.50	3.48	3.55	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	14	M	M	M	M	N	Y	1	E0662-D1-070417.ASC	E0662-D2-Channel1 Apr 17, 2007 11-35-42.txt	No video taken
E0663	8	Clay	95.5	0.55	28.8	25.7	4	4,5,6,7	2.5	3.52	3.46	3.50	3.43	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	14	M	M	M	M	N	Y	1	not recorded by error	E0663-D2-Channel1 Apr 17, 2007 13-38-38.txt	No video taken
E0664	8	Clay	95.5	0.55	28.8	25.7	4	4,5,6,7	3	3.51	3.46	3.49	3.55	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	14	M	M	M	M	N	Y	2	E0664-D1-070417.ASC	E0664-D2-Channel1 Apr 17, 2007 13-43-55.txt	No video taken
E0665	8	Clay	95.5	0.55	28.8	25.7	4	4,5,6,7	3	3.52	3.46	3.49	3.48	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	14	M	M	M	M	N	Y	3	E0665-D1-070417.ASC	E0665-D2-Channel1 Apr 17, 2007 13-51-39.txt	No video taken
E0666	8	Clay	95.5	0.55	28.8	25.7	4	4,5,6,7	3	3.51	3.46	3.49	3.48	-	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	30/0.001/32/110	-	14	M	M	M	M	N	Y	4	E0666-D1-070417.ASC	E0666-D2-Channel1 Apr 17, 2007 13-58-57.txt	No video taken
E0667	8	Clay	95.5	0.55	28.8	25.7	1	8	3	-	-	-	-	3.49	-	-	-	-	35/0.001/35/110	14	M	M	M	M	N	Y	1	E0667-D1-070417.ASC	E0667-D2-Channel1 Apr 17, 2007 14-05-29.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0668	8	Clay	95.5	0.55	28.8	25.7	1	8	3	-	-	-	-	3.50	-	-	-	-	35/0.001/35/110	14	M	M	M	M	N	Y	2	E0668-D1-070417.ASC	E0668-D2-Channel1 Apr 17, 2007 14-09-57.txt	No video taken
E0669	8	Clay	95.5	0.55	28.8	25.7	1	8	3	-	-	-	-	3.50	-	-	-	-	35/0.001/35/110	14	M	M	M	M	N	N	3	E0669-D1-070417.ASC	E0669-D2-Channel1 Apr 17, 2007 14-16-10.txt	No video taken
E0670	8	Clay	95.5	0.55	28.8	25.7	1	8	3	-	-	-	-	3.50	-	-	-	-	35/0.001/35/110	14	M	M	M	M	N	Y	4	E0670-D1-070417.ASC	E0670-D2-Channel1 Apr 17, 2007 14-20-25.txt	No video taken
E0671BL1	-	-	-	-	28.8	25.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0671-D1-BL1-070417.ASC	E0671-D2-BL1-Channel# Apr 17, 2007 14-25-11.txt	-
E0671BL2	-	-	-	-	28.8	25.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	E0671-D1-BL2-070417.ASC	E0671-D2-BL2-Channel# Apr 17, 2007 14-31-58.txt	-
E0671	8	Clay	95.5	0.55	28.8	25.7	2	4,5	3.5	3.51	3.46	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	M	M	M	M	Y	Y	1	E0671-D1-070417.ASC	E0671-D2-Channel1 Apr 17, 2007 14-38-03.txt	No video taken
E0672	8	Clay	95.5	0.55	28.8	25.7	2	4,5	3.5	3.52	3.46	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	M	M	M	M	Y	Y	2	E0672-D1-070417.ASC	E0672-D2-Channel1 Apr 17, 2007 14-41-51.txt	No video taken
E0673	8	Clay	95.5	0.55	28.8	25.7	2	4,5	3	3.52	3.47	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	M	M	M	M	Y	Y	3	E0673-D1-070417.ASC	E0673-D2-Channel1 Apr 17, 2007 14-46-23.txt	No video taken
E0674	8	Clay	95.5	0.55	28.8	25.7	2	4,5	3	3.45	3.50	-	-	-	30/0.001/32/110	30/0.001/32/110	-	-	-	14	M	M	M	M	N	Y	1	E0674-D1-070417.ASC	E0674-D2-Channel1 Apr 17, 2007 14-56-54.txt	No video taken
E0675	8	Clay	95.5	0.55	28.8	25.7	2	4,5	13	3.52	3.49	-	-	-	30/0.001/42/110	30/0.001/42/110	-	-	-	14	M	M	M	M	N	Y	1	E0675-D1-070417.ASC	E0675-D2-Channel1 Apr 17, 2007 15-06-52.txt	No video taken
E0676	8	Clay	95.5	0.55	28.8	25.7	2	4,5	13	3.51	3.47	-	-	-	30/0.001/42/110	30/0.001/42/110	-	-	-	14	M	M	M	M	N	Y	2	E0676-D1-070417.ASC	E0676-D2-Channel1 Apr 17, 2007 15-12-08.txt	No video taken
E0677	8	Clay	95.5	0.55	28.8	25.7	2	4,5	13	3.49	3.46	-	-	-	30/0.001/42/110	30/0.001/42/110	-	-	-	14	M	M	M	M	N	Y	3	E0677-D1-070417.ASC	E0677-D2-Channel1 Apr 17, 2007 15-18-15.txt	No video taken
E0678	8	Clay	95.5	0.55	28.8	25.7	1	5	5	-	2.45	-	-	-	-	30/0.001/39/110	-	-	-	12	M	M	M	M	N	Y	1	E0678-D1-070417.ASC	E0678-D2-Channel1 Apr 17, 2007 15-32-36.txt	No video taken
E0679	8	Clay	95.5	0.55	28.8	25.7	1	5	5	-	2.46	-	-	-	-	30/0.001/39/110	-	-	-	12	M	M	M	M	N	Y	2	E0679-D1-070417.ASC	E0679-D2-Channel1 Apr 17, 2007 15-37-21.txt	No video taken
E0680	8	Clay	95.5	0.55	28.8	25.7	1	5	5	-	2.50	-	-	-	-	30/0.001/39/110	-	-	-	12	M	M	M	M	N	Y	3	E0680-D1-070417.ASC	E0680-D2-Channel1 Apr 17, 2007 15-41-13.txt	No video taken
E0680BL	-	-	-	-	28.8	25.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0680-D1-BL-070417.ASC	E0680-D2-BL-Channel# Apr 17, 2007 15-47-24.txt	-
E0681BL	-	-	-	-	29.5	25.7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0681-D1-BL-070418.ASC	E0681-D2-BL-Channel# Apr 18, 2007 10-42-17.txt	-
E0681	8	Clay	95.25	0.55	29.5	26.0	2	4,5	5	2.47	2.53	-	-	-	30/0.001/39/110	30/0.001/39/110	-	-	-	12	M	M	M	M	N	Y	1	E0681-D1-070418.ASC	E0681-D2-Channel1 Apr 18, 2007 10-57-08.txt	No video taken
E0682	8	Clay	95.25	0.55	29.5	26.0	2	4,5	5	2.47	2.52	-	-	-	30/0.001/39/110	30/0.001/39/110	-	-	-	12	M	M	M	M	N	Y	2	E0682-D1-070418.ASC	E0682-D2-Channel1 Apr 18, 2007 11-02-02.txt	No video taken
E0683	8	Clay	95.25	0.55	29.5	26.0	2	4,5	5	2.51	2.51	-	-	-	30/0.001/39/110	30/0.001/39/110	-	-	-	12	M	M	M	M	N	Y	3	E0683-D1-070418.ASC	E0683-D2-Channel1 Apr 18, 2007 11-06-12.txt	No video taken
E0684	8	Clay	95.25	0.55	29.5	26.0	1	5	4.5	-	1.32	-	-	-	-	30/0.001/52/110	-	-	-	8	M	M	M	M	N	Y	1	E0684-D1-070418.ASC	E0684-D2-Channel1 Apr 18, 2007 11-29-15.txt	No video taken
E0685	8	Clay	95.25	0.55	29.5	26.0	1	5	5	-	1.32	-	-	-	-	30/0.001/52/110	-	-	-	8	M	M	M	M	N	Y	2	E0685-D1-070418.ASC	E0685-D2-Channel1 Apr 18, 2007 11-34-41.txt	No video taken
E0686	8	Clay	95.25	0.55	29.5	26.0	1	5	5	-	1.32	-	-	-	-	30/0.001/52/110	-	-	-	8	M	M	M	M	N	Y	3	E0686-D1-070418.ASC	E0686-D2-Channel1 Apr 18, 2007 11-39-01.txt	No video taken
E0687	8	Clay	95.25	0.55	29.5	26.0	2	4,5	5	1.30	1.32	-	-	-	30/0.001/52/110	30/0.001/52/110	-	-	-	8	M	M	M	M	N	Y	1	E0687-D1-070418.ASC	E0687-D2-Channel1 Apr 18, 2007 11-46-54.txt	No video taken
E0688	8	Clay	95.25	0.55	29.5	26.0	2	4,5	5	1.27	1.31	-	-	-	30/0.001/52/110	30/0.001/52/110	-	-	-	8	M	M	M	M	N	Y	2	E0688-D1-070418.ASC	E0688-D2-Channel1 Apr 18, 2007 11-51-40.txt	No video taken
E0689	8	Clay	95.25	0.55	29.5	26.0	2	4,5	4.5	1.27	1.31	-	-	-	30/0.001/52/110	30/0.001/52/110	-	-	-	8	M	M	M	M	N	Y	3	E0689-D1-070418.ASC	E0689-D2-Channel1 Apr 18, 2007 11-56-28.txt	No video taken
E0689BL	-	-	-	-	29.5	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0689-D1-BL-070418.ASC	E0689-D2-BL-Channel# Apr 18, 2007 12-01-36.txt	-
Low clay level, hydrophone level = L																														
E0690BL	-	-	-	-	29.5	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0690-D1-BL-070418.ASC	E0690-D2-BL-Channel# Apr 18, 2007 14-20-56.txt	-
E0690	8	Clay	130.88	0.31	29.5	26.0	1	5	>5	-	1.29	-	-	-	-	50/0.001/50/110	-	-	-	8	L	L	L	L	N	Y	1	E0690-D1-070418.ASC	E0690-D2-Channel1 Apr 18, 2007 14-44-56.txt	No video taken
E0691	8	Clay	130.88	0.31	29.5	26.0	1	5	>5	-	1.30	-	-	-	-	50/0.001/50/110	-	-	-	8	L	L	L	L	N	Y	2	E0691-D1-070418.ASC	E0691-D2-Channel1 Apr 18, 2007 14-49-55.txt	No video taken
E0692	8	Clay	130.88	0.31	29.5	26.0	1	5	>5	-	1.30	-	-	-	-	50/0.001/50/110	-	-	-	8	L	L	L	L	N	Y	3	E0692-D1-070418.ASC	E0692-D2-Channel1 Apr 18, 2007 14-58-55.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0693	8	Clay	130.88	0.31	29.5	26.0	2	4,5	>5	1.28	1.32	-	-	-	50/0.001/50/110	50/0.001/50/110	-	-	-	8	L	L	L	L	N	Y	1	E0693-D1-070418.ASC	E0693-D2-Channel1 Apr 18, 2007 15-07-55.txt	No video taken
E0694	8	Clay	130.88	0.31	29.5	26.0	2	4,5	>5	1.28	1.30	-	-	-	50/0.001/50/110	50/0.001/50/110	-	-	-	8	L	L	L	L	N	Y	2	E0694-D1-070418.ASC	E0694-D2-Channel1 Apr 18, 2007 15-13-19.txt	No video taken
E0695	8	Clay	130.88	0.31	29.5	26.0	2	4,5	>5	1.29	1.28	-	-	-	50/0.001/50/110	50/0.001/50/110	-	-	-	8	L	L	L	L	N	Y	3	E0695-D1-070418.ASC	E0695-D2-Channel1 Apr 18, 2007 15-18-49.txt	No video taken
E0696	8	Clay	130.88	0.31	29.5	26.0	1	5	5	-	2.55	-	-	-	-	50/0.001/36/110	-	-	-	12	L	L	L	L	N	Y	1	E0696-D1-070418.ASC	E0696-D2-Channel1 Apr 18, 2007 15-32-46.txt	No video taken
E0697	8	Clay	130.88	0.31	29.5	26.0	1	5	4	-	2.48	-	-	-	-	50/0.001/36/110	-	-	-	12	L	L	L	L	N	Y	2	E0697-D1-070418.ASC	E0697-D2-Channel1 Apr 18, 2007 15-37-49.txt	No video taken
E0698	8	Clay	130.88	0.31	29.5	26.0	1	5	4	-	2.46	-	-	-	-	50/0.001/36/110	-	-	-	12	L	L	L	L	N	Y	3	E0698-D1-070418.ASC	E0698-D2-Channel1 Apr 18, 2007 15-42-26.txt	No video taken
E0698BL	-	-	-	-	29.5	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0698-D1-BL-070418.ASC	E0698-D2-BL-Channel# Apr 18, 2007 15-47-34.txt	-
E0699BL	-	-	-	-	29.5	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0699-D1-BL-070419.ASC	E0699-D2-BL-Channel# Apr 19, 2007 09-36-02.txt	-
E0699	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4	2.51	2.46	-	-	-	50/0.001/36/110	50/0.001/36/110	-	-	-	12	L	L	L	L	N	Y	1	E0699-D1-070419.ASC	E0699-D2-Channel1 Apr 19, 2007 09-46-10.txt	No video taken
E0700	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4.5	2.52	2.47	-	-	-	50/0.001/36/110	50/0.001/36/110	-	-	-	12	L	L	L	L	N	Y	2	E0700-D1-070419.ASC	E0700-D2-Channel1 Apr 19, 2007 09-50-45.txt	No video taken
E0701	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4	2.51	2.46	-	-	-	50/0.001/36/110	50/0.001/36/110	-	-	-	12	L	L	L	L	N	Y	3	E0701-D1-070419.ASC	E0701-D2-Channel1 Apr 19, 2007 09-55-02.txt	No video taken
E0702	8	Clay	131.00	0.31	29.5	26.0	1	8	4.5	-	-	-	-	3.51	-	-	-	-	50/0.001/35/110	14	L	L	L	L	N	Y	1	E0702-D1-070419.ASC	E0702-D2-Channel1 Apr 19, 2007 10-08-09.txt	No video taken
E0703	8	Clay	131.00	0.31	29.5	26.0	1	8	4.5	-	-	-	-	3.51	-	-	-	-	50/0.001/35/110	14	L	L	L	L	N	Y	2	E0703-D1-070419.ASC	E0703-D2-Channel1 Apr 19, 2007 10-12-16.txt	No video taken
E0704	8	Clay	131.00	0.31	29.5	26.0	1	8	5	-	-	-	-	3.52	-	-	-	-	50/0.001/35/110	14	L	L	L	L	N	Y	3	E0704-D1-070419.ASC	E0704-D2-Channel1 Apr 19, 2007 10-16-19.txt	No video taken
E0705	8	Clay	131.00	0.31	29.5	26.0	1	5	4.5	-	3.46	-	-	-	-	50/0.001/32/110	-	-	-	14	L	L	L	L	N	Y	1	E0705-D1-070419.ASC	E0705-D2-Channel1 Apr 19, 2007 10-21-35.txt	No video taken
E0706	8	Clay	131.00	0.31	29.5	26.0	1	5	4.5	-	3.47	-	-	-	-	50/0.001/32/110	-	-	-	14	L	L	L	L	N	Y	2	E0706-D1-070419.ASC	E0706-D2-Channel1 Apr 19, 2007 10-25-04.txt	No video taken
E0707	8	Clay	131.00	0.31	29.5	26.0	1	5	4.5	-	3.47	-	-	-	-	50/0.001/32/110	-	-	-	14	L	L	L	L	N	Y	3	E0707-D1-070419.ASC	E0707-D2-Channel1 Apr 19, 2007 10-28-50.txt	No video taken
E0708	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4	3.48	3.47	-	-	-	50/0.001/32/110	50/0.001/32/110	-	-	-	14	L	L	L	L	N	Y	1	E0708-D1-070419.ASC	E0708-D2-Channel1 Apr 19, 2007 10-41-33.txt	No video taken
E0709	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4	3.55	3.48	-	-	-	50/0.001/32/110	50/0.001/32/110	-	-	-	14	L	L	L	L	N	Y	2	E0709-D1-070419.ASC	E0709-D2-Channel1 Apr 19, 2007 10-46-58.txt	No video taken
E0710	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4	3.54	3.47	-	-	-	50/0.001/32/110	50/0.001/32/110	-	-	-	14	L	L	L	L	N	Y	3	E0710-D1-070419.ASC	E0710-D2-Channel1 Apr 19, 2007 10-51-41.txt	No video taken
E0711	8	Clay	131.00	0.31	29.5	26.0	3	4,5,6	4.5	3.54	3.47	3.49	-	-	50/0.001/32/110	50/0.001/32/110	50/0.001/32/110	-	-	14	L	L	L	L	N	Y	1	E0711-D1-070419.ASC	E0711-D2-Channel1 Apr 19, 2007 10-58-18.txt	No video taken
E0712	8	Clay	131.00	0.31	29.5	26.0	3	4,5,6	4.5	3.53	3.46	3.49	-	-	50/0.001/32/110	50/0.001/32/110	50/0.001/32/110	-	-	14	L	L	L	L	N	Y	2	E0712-D1-070419.ASC	E0712-D2-Channel1 Apr 19, 2007 11-03-06.txt	No video taken
E0713	8	Clay	131.00	0.31	29.5	26.0	3	4,5,6	4.5	3.52	3.46	3.49	-	-	50/0.001/32/110	50/0.001/32/110	50/0.001/32/110	-	-	14	L	L	L	L	N	Y	3	E0713-D1-070419.ASC	E0713-D2-Channel1 Apr 19, 2007 11-08-26.txt	No video taken
E0714	8	Clay	131.00	0.31	29.5	26.0	4	4,5,6,7	4.5	3.53	3.51	3.49	3.60	-	50/0.001/32/110	50/0.001/32/110	50/0.001/32/110	50/0.001/32/110	-	14	L	L	L	L	N	Y	1	E0714-D1-070419.ASC	E0714-D2-Channel1 Apr 19, 200711-15-28.txt	No video taken
E0715	8	Clay	131.00	0.31	29.5	26.0	4	4,5,6,7	4.5	3.45	3.46	3.49	3.48	-	50/0.001/32/110	50/0.001/32/110	50/0.001/32/110	50/0.001/32/110	-	14	L	L	L	L	N	Y	1	E0715-D1-070419.ASC	E0715-D2-Channel1 Apr 19, 2007 11-21-20.txt	No video taken
E0716	8	Clay	131.00	0.31	29.5	26.0	4	4,5,6,7	4.5	3.52	3.46	3.49	3.50	-	50/0.001/32/110	50/0.001/32/110	50/0.001/32/110	50/0.001/32/110	-	14	L	L	L	L	N	Y	2	E0716-D1-070419.ASC	E0716-D2-Channel1 Apr 19, 2007 11-27-19.txt	No video taken
E0717	8	Clay	131.00	0.31	29.5	26.0	4	4,5,6,7	4.5	3.51	3.45	3.48	3.55	-	50/0.001/32/110	50/0.001/32/110	50/0.001/32/110	50/0.001/32/110	-	14	L	L	L	L	N	Y	3	E0717-D1-070419.ASC	E0717-D2-Channel1 Apr 19, 2007 11-33-13.txt	No video taken
E0718BL1	-	-	-	-	29.5	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0718-D1-BL1-070419.ASC	E0718-D2-BL1-Channel# Apr 19, 2007 13-15-19.txt	-
E0718BL2	-	-	-	-	29.5	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Y	-	-	E0718-D1-BL2-070419.ASC	E0718-D2-BL2-Channel# Apr 19, 2007 13-19-04.txt	-
E0718	8	Clay	131.00	0.31	29.5	26.0	2	4,5	3	3.55	3.46	-	-	-	50/0.001/32/110	50/0.001/32/110	-	-	-	14	L	L	L	L	Y	Y	1	E0718-D1-070419.ASC	E0718-D2-Channel1 Apr 19, 2007 13-26-42.txt	No video taken
E0719	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4	3.53	3.46	-	-	-	50/0.001/32/110	50/0.001/32/110	-	-	-	14	L	L	L	L	Y	Y	1	E0719-D1-070419.ASC	E0719-D2-Channel1 Apr 19, 2007 13-32-23.txt	No video taken
E0720	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4	3.54	3.46	-	-	-	50/0.001/32/110	50/0.001/32/110	-	-	-	14	L	L	L	L	Y	Y	2	E0720-D1-070419.ASC	E0720-D2-Channel1 Apr 19, 2007 13-36-51.txt	No video taken

Table A.1. Master Run Log, 8-PJM Configuration

Exp. No.[a]	PJM Config	Simulant					No. PJMs OB[b]	OB PJMs	OB Duration[c]	Drive Pressure Settings (bar, g)[c]					PJM OP Conditions (vacuum/delay/drive/vent time) (sec)					Target Noz. Vel. (m/s)[c]	Hydrophone Elevation				Sparger (Y/N)	Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[d]	DAS-4 (Video) Filename
		Type	Ht. fm Rim (in)	H/D	T_{ys} (Pa)	k (cP)				PJM 4	PJM 5	PJM 6	PJM 7	PJM 8	PJM 4	PJM 5	PJM 6	PJM 7	PJM 8		H1	H2	H3	H4						
E0721	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4	3.47	3.46	-	-	-	50/0.001/32/110	50/0.001/32/110	-	-	-	14	L	L	L	L	Y	Y	3	E0721-D1-070419.ASC	E0721-D2-Channel1 Apr 19, 2007 13-51-52.txt	No video taken
E0722	8	Clay	131.00	0.31	29.5	26.0	2	4,5	12	3.47	3.47	-	-	-	50/0.001/40/110	50/0.001/40/110	-	-	-	14	L	L	L	L	N	Y	1	E0722-D1-070419.ASC	E0722-D2-Channel1 Apr 19, 2007 14-00-13.txt	No video taken
E0723	8	Clay	131.00	0.31	29.5	26.0	2	4,5	12	3.49	3.48	-	-	-	50/0.001/40/110	50/0.001/40/110	-	-	-	14	L	L	L	L	N	Y	2	E0723-D1-070419.ASC	E0723-D2-Channel1 Apr 19, 2007 14-04-55.txt	No video taken
E0724	8	Clay	131.00	0.31	29.5	26.0	2	4,5	12	3.46	3.48	-	-	-	50/0.001/40/110	50/0.001/40/110	-	-	-	14	L	L	L	L	N	Y	3	E0724-D1-070419.ASC	E0724-D2-Channel1 Apr 19, 2007 14-09-49.txt	No video taken
E0725	8	Clay	131.00	0.31	29.5	26.0	1	5	4	-	3.98	-	-	-	-	50/0.001/30/110	-	-	-	15	L	L	L	L	N	Y	1	E0725-D1-070419.ASC	E0725-D2-Channel1 Apr 19, 2007 14-33-38.txt	No video taken
E0726	8	Clay	131.00	0.31	29.5	26.0	1	5	4	-	4.01	-	-	-	-	50/0.001/30/110	-	-	-	15	L	L	L	L	N	Y	2	E0726-D1-070419.ASC	E0726-D2-Channel1 Apr 19, 2007 14-38-43.txt	No video taken
E0727	8	Clay	131.00	0.31	29.5	26.0	1	5	4	-	4.02	-	-	-	-	50/0.001/30/110	-	-	-	15	L	L	L	L	N	Y	3	E0727-D1-070419.ASC	E0727-D2-Channel1 Apr 19, 2007 14-49-52.txt	No video taken
E0728	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4	3.97	3.99	-	-	-	50/0.001/30/110	50/0.001/30/110	-	-	-	15	L	L	L	L	N	Y	1	E0728-D1-070419.ASC	E0728-D2-Channel1 Apr 19, 2007 14-54-43.txt	No video taken
E0729	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4	3.98	3.99	-	-	-	50/0.001/30/110	50/0.001/30/110	-	-	-	15	L	L	L	L	N	Y	2	E0729-D1-070419.ASC	E0729-D2-Channel1 Apr 19, 2007 15-00-27.txt	No video taken
E0730	8	Clay	131.00	0.31	29.5	26.0	2	4,5	4	3.98	4.02	-	-	-	50/0.001/30/110	50/0.001/30/110	-	-	-	15	L	L	L	L	N	Y	3	E0730-D1-070419.ASC	E0730-D2-Channel1 Apr 19, 2007 15-04-09.txt	No video taken
E0730BL	-	-	-	-	29.5	26.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N	-	-	E0730-D1-BL-070419.ASC	E0730-D2-BL-Channel# Apr 19, 2007 15-11-48.txt	-
Laser level probe tests with clay at 10Hz sampling rate																														
E0731BL	8	Clay	55	0.8	31.9	27.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	-	-	E0731-D1-BL-070424.ASC	E0731-D2-BL-Channel# Apr 24, 2007 11-04-35.txt	-
E0731	8	Clay	55.00	0.8	31.9	27.4	1	5	4	-	3.49	-	-	-	-	12/0.001/34/110	-	-	-	14	L	L	L	L	N	N	1	E0731-D1-070424.ASC	E0731-D2-Channel1 Apr 24, 2007 11-14-43.txt	No video taken
E0732	8	Clay	55.00	0.8	31.9	27.4	1	5	4	-	3.52	-	-	-	-	12/0.001/34/110	-	-	-	14	L	L	L	L	N	N	2	E0732-D1-070424.ASC	E0732-D2-Channel1 Apr 24, 2007 11-19-38.txt	No video taken
E0733	8	Clay	55.00	0.8	31.9	27.4	1	5	4	-	3.52	-	-	-	-	12/0.001/34/110	-	-	-	14	L	L	L	L	N	N	3	E0733-D1-070424.ASC	E0733-D2-Channel1 Apr 24, 2007 11-23-41.txt	No video taken
E0734BL	8	Clay	96	0.55	31.9	27.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	-	1	E0734-D1-BL-070424.ASC	E0734-D2-BL-Channel# Apr 24, 2007 13-18-56.txt	-
E0734	8	Clay	96	0.55	31.9	27.4	1	5	4	-	3.48	-	-	-	-	30/0.001/32/110	-	-	-	14	L	L	L	L	N	N	1	E0734-D1-070424.ASC	E0734-D2-Channel1 Apr 24, 2007 13-23-32.txt	No video taken
E0735	8	Clay	96	0.55	31.9	27.4	1	5	4	-	3.52	-	-	-	-	30/0.001/32/110	-	-	-	14	L	L	L	L	N	N	2	E0735-D1-070424.ASC	E0735-D2-Channel1 Apr 24, 2007 13-30-06.txt	No video taken
E0736	8	Clay	96	0.55	31.9	27.4	1	5	4	-	3.48	-	-	-	-	30/0.001/32/110	-	-	-	14	L	L	L	L	N	N	3	E0736-D1-070424.ASC	E0736-D2-Channel1 Apr 24, 2007 13-34-58.txt	No video taken
E0737BL	8	Clay	132	0.31	31.9	27.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	-	1	E0737-D1-BL-070424.ASC	E0737-D2-BL-Channel# Apr 24, 2007 15-15-43.txt	-
E0737	8	Clay	132	0.31	31.9	27.4	1	5	4.5	-	3.46	-	-	-	-	50/0.001/32/110	-	-	-	14	L	L	L	L	N	N	1	E0737-D1-070424.ASC	E0737-D2-Channel1 Apr 24, 2007 15-22-59.txt	No video taken
E0738	8	Clay	132	0.31	31.9	27.4	1	5	4.5	-	3.46	-	-	-	-	50/0.001/32/110	-	-	-	14	L	L	L	L	N	N	2	E0738-D1-070424.ASC	E0738-D2-Channel1 Apr 24, 2007 15-30-54.txt	No video taken
E0739	8	Clay	132	0.31	31.9	27.4	1	5	4.5	-	3.46	-	-	-	-	50/0.001/32/110	-	-	-	14	L	L	L	L	N	N	3	E0739-D1-070424.ASC	E0739-D2-Channel1 Apr 24, 2007 15-34-51.txt	No video taken

(a) Tests E0001-0024 were scoping tests; data are not being supplied to client.
(b) OB = overblow.
(c) Values are for information only.
(d) Channels 1 through 20; only channel 1 data file name displayed for DAS 2 files.
(e) ND = no data, for example, when overblow duration was not captured by operators. This value can be accurately obtained from the conductivity probe data.
(f) Colored cells indicate that the value is out of range or otherwise incorrect, suggesting the test not be used. The tolerance used to determine "out of range" was ±0.05 bar, which is a smaller range than the ±0.2 bar specified in the test plan.

Appendix B

Master Run Log, 4-PJM Configuration

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
Simultaneous overblow; hydrophone level = L																											
E0746BL	4	Water	55	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E0746-D1-BL-070806.ASC	E0746-D2-BL-Channel# Aug6 2007 10-29-22.txt	-
E0746	4	Water	55	0.8	-	-	2	A,C	> 5	6.9/6.4	-	6.5/6.4	-	10000/1/14000/75000	-	10000/1/14000/75000	-	12	L	L	L	L	N	1	E0746-D1-070806.ASC	E0746-D2-Channel# Aug6 2007 10-42-16.txt	no video
E0747	4	Water	55	0.8	-	-	2	A,C	~5	6.9/6.4	-	6.5/6.4	-	10000/1/14000/75000	-	10000/1/14000/75000	-	12	L	L	L	L	N	2	E0747-D1-070806.ASC	E0747-D2-Channel# Aug6 2007 10-48-04.txt	no video
E0748	4	Water	55	0.8	-	-	2	A,C	~5	6.8/6.4	-	6.5/6.3	-	10000/1/14000/75000	-	10000/250/14000/75000	-	12	L	L	L	L	N	1	E0748-D1-070806.ASC	E0748-D2-Channel# Aug6 2007 10-53-24.txt	no video
E0749	4	Water	55	0.8	-	-	2	A,C	~5	6.8/6.4	-	6.5/6.3	-	10000/125/14000/75000	-	10000/1/14000/75000	-	12	L	L	L	L	N	1	E0749-D1-070806.ASC	E0749-D2-Channel# Aug6 2007 10-58-24.txt	no video
E0750	4	Water	55	0.8	-	-	2	A,C	~5	6.8/6.4	-	6.5/6.3	-	13000/1/14000/75000	-	13000/1/14000/75000	-	12	L	L	L	L	N	1	E0750-D1-070806.ASC	E0750-D2-Channel# Aug6 2007 11-04-04.txt	no video
E0751	4	Water	55	0.8	-	-	2	A,C	~5	6.6/6.3	-	6.4/6.2	-	13000/1/14000/75000	-	13000/1/14000/75000	-	12	L	L	L	L	N	2	E0751-D1-070806.ASC	E0751-D2-Channel# Aug6 2007 11-12-37.txt	no video
E0752	4	Water	55	0.8	-	-	2	A,C	~5	6.6/6.3	-	6.4/6.2	-	13000/1/14000/75000	-	13000/100/14000/75000	-	12	L	L	L	L	N	1	E0752-D1-070806.ASC	E0752-D2-Channel# Aug6 2007 11-16-42.txt	no video
E0753	4	Water	55	0.8	-	-	2	A,C	~5	6.6/6.3	-	6.4/6.2	-	13000/1/14000/75000	-	13000/350/14000/75000	-	12	L	L	L	L	N	1	E0753-D1-070806.ASC	E0753-D2-Channel# Aug6 2007 11-31-41.txt	no video
E0754	4	Water	55	0.8	-	-	2	A,C	~5	6.6/6.3	-	6.4/6.2	-	13000/1/14000/75000	-	13000/60/14000/75000	-	12	L	L	L	L	N	1	E0754-D1-070806.ASC	E0754-D2-Channel# Aug6 2007 11-49-17.txt	no video
Simultaneous overblow; hydrophone level = O																											
E0755	4	Water	55	0.8	-	-	2	A,C	~5	6.6/6.3	-	6.4/6.2	-	13000/1/14000/75000	-	13000/60/14000/75000	-	12	other	other	other	other	N	1	E0755-D1-070806.ASC	E0755-D2-Channel# Aug6 2007 12-48-33.txt	no video
Simultaneous overblow; hydrophone level = M																											
E0756	4	Water	55	0.8	-	-	2	A,C	~5	6.6/6.3	-	6.4/6.2	-	13000/1/14000/75000	-	13000/60/14000/75000	-	12	M	M	M	M	N	1	E0756-D1-070806.ASC	E0756-D2-Channel# Aug6 2007 13-21-17.txt	no video
E0757	4	Water	55	0.8	-	-	2	A,C	~5	6.6/6.3	-	6.4/6.2	-	13000/1/14000/75000	-	13000/60/14000/75000	-	12	M	M	M	M	N	2	E0757-D1-070806.ASC	E0757-D2-Channel# Aug6 2007 13-26-23.txt	no video
Simultaneous overblow; hydrophone level = H																											
E0758	4	Water	55	0.8	-	-	2	A,C	~5	6.6/6.3	-	6.4/6.2	-	13000/1/14000/75000	-	13000/60/14000/75000	-	12	H	H	H	H	N	1	E0758-D1-070806.ASC	E0758-D2-Channel# Aug6 2007 13-52-11.txt	no video
E0759	4	Water	55	0.8	-	-	2	A,C	~5	6.6/6.3	-	6.4/6.2	-	13000/1/14000/75000	-	13000/60/14000/75000	-	12	H	H	H	H	N	2	E0759-D1-070806.ASC	E0759-D2-Channel# Aug6 2007 14-01-33.txt	no video
High water level; hydrophone level = H																											
E0760	4	Water	55	0.8	-	-	1	A	~5	7.15/6.77	-	-	-	13000/1/14000/75000	-	-	-	12	H	H	H	H	N	1	E0760-D1-070806.ASC	E0760-D2-Channel# Aug6 2007 14-27-34.txt	no video
E0761	4	Water	55	0.8	-	-	1	A	4	7.15/6.77	-	-	-	13000/1/14000/75000	-	-	-	12	H	H	H	H	N	2	E0761-D1-070806.ASC	E0761-D2-Channel# Aug6 2007 14-30-52.txt	no video
E0762	4	Water	55	0.8	-	-	1	A	4	7.15/6.77	-	-	-	13000/1/14000/75000	-	-	-	12	H	H	H	H	N	3	E0762-D1-070806.ASC	E0762-D2-Channel# Aug6 2007 14-34-03.txt	no video
E0763	4	Water	55	0.8	-	-	2	A,B	4.5	6.58/6.30	6.58/6.28	-	-	13000/1/14000/75000	13000/1/14000/75000	-	-	12	H	H	H	H	N	1	E0763-D1-070806.ASC	E0763-D2-Channel# Aug6 2007 14-39-03.txt	no video
E0764	4	Water	55	0.8	-	-	2	A,B	4.5	6.58/6.30	6.58/6.28	-	-	13000/1/14000/75000	13000/1/14000/75000	-	-	12	H	H	H	H	N	2	E0764-D1-070806.ASC	E0764-D2-Channel# Aug6 2007 14-46-44.txt	no video
E0765	4	Water	55	0.8	-	-	2	A,B	4.5	6.58/6.30	6.58/6.28	-	-	13000/1/14000/75000	13000/1/14000/75000	-	-	12	H	H	H	H	N	3	E0765-D1-070806.ASC	E0765-D2-Channel# Aug6 2007 14-52-55.txt	no video
E0766	4	Water	55	0.8	-	-	1	A	4.5	7.15/6.77	-	-	-	10000/1/15000/75000	-	-	-	12	H	H	H	H	N	1	E0766-D1-070806.ASC	E0766-D2-Channel# Aug6 2007 15-31-24.txt	no video
E0767	4	Water	55	0.8	-	-	1	A	4.5	7.18/6.74	-	-	-	10000/1/15000/75000	-	-	-	12	H	H	H	H	N	2	E0767-D1-070806.ASC	E0767-D2-Channel# Aug6 2007 15-35-47.txt	no video
E0768	4	Water	55	0.8	-	-	1	A	5	7.16/6.73	-	-	-	10000/1/15000/75000	-	-	-	12	H	H	H	H	N	3	E0768-D1-070806.ASC	E0768-D2-Channel# Aug6 2007 15-38-46.txt	no video
E0769	4	Water	55	0.8	-	-	2	A,B	4.5	6.67/6.33	6.65/6.34	-	-	10000/1/15000/75000	10000/1/15000/75000	-	-	12	H	H	H	H	N	1	E0769-D1-070806.ASC	E0769-D2-Channel# Aug6 2007 15-45-11.txt	no video
E0770	4	Water	55	0.8	-	-	2	A,B	4.5	6.67/6.33	6.65/6.34	-	-	10000/1/15000/75000	10000/1/15000/75000	-	-	12	H	H	H	H	N	2	E0770-D1-070806.ASC	E0770-D2-Channel# Aug6 2007 15-49-25.txt	no video
E0771	4	Water	55	0.8	-	-	2	A,B	4.5	6.67/6.33	6.65/6.34	-	-	10000/1/15000/75000	10000/1/15000/75000	-	-	12	H	H	H	H	N	3	E0771-D1-070806.ASC	E0771-D2-Channel# Aug6 2007 15-52-41.txt	no video
E0772	4	Water	55	0.8	-	-	3	A,B,C	4.5	6.31/5.83	6.31/5.83	6.02/5.77	-	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	-	12	H	H	H	H	N	1	E0772-D1-070806.ASC	E0772-D2-Channel# Aug6 2007 15-58-27.txt	no video
E0773	4	Water	55	0.8	-	-	3	A,B,C	4.5	6.31/5.83	6.31/5.83	6.02/5.77	-	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	-	12	H	H	H	H	N	2	E0773-D1-070806.ASC	E0773-D2-Channel# Aug6 2007 16-03-04.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E0774	4	Water	55	0.8	-	-	3	A,B,C	4.5	6.31/ 5.83	6.31/ 5.83	6.02/ 5.77	-	10000/1/15000/ 75000	10000/1/15000/ 75000	10000/1/15000/ 75000	-	12	H	H	H	H	N	3	E0774-D1-070806.ASC	E0774-D2-Channel# Aug6 2007 16-06-19.txt	no video
E0775	4	Water	55	0.8	-	-	4	A,B,C,D	4	6.01/ 5.51	6.03/ 5.50	6.01/ 5.48	6.00/ 5.51	10000/1/15000/ 75000	10000/1/15000/ 75000	10000/1/15000/ 75000	10000/1/ 15000/ 75000	12	H	H	H	H	N	1	E0775-D1-070806.ASC	E0775-D2-Channel# Aug6 2007 16-13-03.txt	no video
E0776	4	Water	55	0.8	-	-	4	A,B,C,D	4.5	6.01/ 5.51	6.03/ 5.50	6.01/ 5.48	6.00/ 5.51	10000/1/15000/ 75000	10000/1/15000/ 75000	10000/1/15000/ 75000	10000/1/ 15000/ 75000	12	H	H	H	H	N	2	E0776-D1-070806.ASC	E0776-D2-Channel# Aug6 2007 16-16-30.txt	no video
E0777	4	Water	55	0.8	-	-	4	A,B,C,D	4.5	6.01/ 5.51	6.03/ 5.50	6.01/ 5.48	6.00/ 5.51	10000/1/15000/ 75000	10000/1/15000/ 75000	10000/1/15000/ 75000	10000/1/ 15000/ 75000	12	H	H	H	H	N	3	E0777-D1-070806.ASC	E0777-D2-Channel# Aug6 2007 16-20-49.txt	no video
E0777BL	4	Water	55	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	H	H	H	H	N	1	E0777-D1-BL-070806.ASC	E0777-D2-BL-Channel# Aug6 2007 16-25-31.txt	no video
E0778BL	4	Water	55.125	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	H	H	H	H	N	1	E0778-D1-BL-070807.ASC	E0778-D2-BL-Channel# Aug7 2007 09-22-26.txt	no video
E0778	4	Water	55.125	0.8	-	-	1	A	4.5	4.03/ 3.99	-	-	-	10000/1/17000/ 75000	-	-	-	10	H	H	H	H	Y	1	E0778-D1-070807.ASC	E0778-D2-Channel# Aug7 2007 09-34-08.txt	no subsurface video
E0779	4	Water	55.125	0.8	-	-	1	A	4.5	4.04/ 4.00	-	-	-	10000/1/17000/ 75000	-	-	-	10	H	H	H	H	Y	2	E0779-D1-070807.ASC	E0779-D2-Channel# Aug7 2007 09-39-21.txt	no subsurface video
E0780	4	Water	55.125	0.8	-	-	1	A	4.5	4.01/ 3.99	-	-	-	10000/1/17000/ 75000	-	-	-	10	H	H	H	H	Y	3	E0780-D1-070807.ASC	E0780-D2-Channel# Aug7 2007 09-43-38.txt	no subsurface video
E0781	4	Water	55.125	0.8	-	-	2	A,B	4.5	4.01/ 3.99	3.97/ 4.00	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	H	H	H	H	Y	1	E0781-D1-070807.ASC	E0781-D2-Channel# Aug7 2007 09-55-09.txt	E0781-NV-070807
E0782	4	Water	55.125	0.8	-	-	2	A,B	4.5	4.01/ 3.99	3.97/ 4.00	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	H	H	H	H	Y	2	E0782-D1-070807.ASC	E0782-D2-Channel# Aug7 2007 10-01-30.txt	E0782-NV-070807
E0783	4	Water	55.125	0.8	-	-	2	A,B	4.5	4.01/ 3.99	3.97/ 4.00	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	H	H	H	H	Y	3	E0783-D1-070807.ASC	E0783-D2-Channel# Aug7 2007 10-08-03.txt	E0783-NV-070807
E0784	4	Water	55.125	0.8	-	-	1	A	5	4.02	-	-	-	10000/1/19000/ 75000	-	-	-	8	H	H	H	H	Y	1	E0784-D1-070807.ASC	E0784-D2-Channel# Aug7 2007 10-23-55.txt	no subsurface video
E0785	4	Water	55.125	0.8	-	-	1	A	5	4.01	-	-	-	10000/1/19000/ 75000	-	-	-	8	H	H	H	H	Y	2	E0785-D1-070807.ASC	E0785-D2-Channel# Aug7 2007 10-30-56.txt	E0785-NV-070807
E0786	4	Water	55.125	0.8	-	-	1	A	5	4.01	-	-	-	10000/1/19000/ 75000	-	-	-	8	H	H	H	H	Y	3	E0786-D1-070807.ASC	E0786-D2-Channel# Aug7 2007 10-38-08.txt	E0786-NV-070807
E0787	4	Water	55.125	0.8	-	-	2	A,B	4.5	4.01	4.02	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	H	H	H	H	Y	1	E0787-D1-070807.ASC	E0787-D2-Channel# Aug7 2007 10-43-59.txt	E0787-NV-070807
E0788	4	Water	55.125	0.8	-	-	2	A,B	5/3	4.01	4.03	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	H	H	H	H	Y	2	E0788-D1-070807.ASC	E0788-D2-Channel# Aug7 2007 10-50-54.txt	E0788-NV-070807
E0789	4	Water	55.125	0.8	-	-	2	A,B	5.0/4.0	4.01	4.03	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	H	H	H	H	Y	3	E0789-D1-070807.ASC	E0789-D2-Channel# Aug7 2007 11-00-20txt	E0789-NV-070807
E0790	4	Water	55.125	0.8	-	-	1	A	5	2.32	-	-	-	12000/2750/ 23000/75000	-	-	-	6	H	H	H	H	Y	1	E0790-D1-070807.ASC	E0790-D2-Channel# Aug7 2007 11-26-51.txt	E0790-NV-070807
E0791	4	Water	55.125	0.8	-	-	1	A	6	2.32	-	-	-	12000/2750/ 23000/75000	-	-	-	6	H	H	H	H	Y	2	E0791-D1-070807.ASC	E0791-D2-Channel# Aug7 2007 11-32-19.txt	E0791-NV-070807
E0792	4	Water	55.125	0.8	-	-	1	A	6	2.32	-	-	-	12000/2750/ 23000/75000	-	-	-	6	H	H	H	H	Y	3	E0792-D1-070807.ASC	E0792-D2-Channel# Aug7 2007 11-38-01.txt	no subsurface video
E0793	4	Water	55.125	0.8	-	-	1	A	6	2.30	-	-	-	12000/2750/ 23000/75000	-	-	-	6	H	H	H	H	Y	4	E0793-D1-070807.ASC	E0793-D2-Channel# Aug7 2007 13-19-14.txt	E0793-NV-070807
E0794	4	Water	55.125	0.8	-	-	2	A,B	>5	2.30	2.30	-	-	12000/2750/ 23000/75000	12000/1/25000/ 75000	-	-	6	H	H	H	H	Y	1	E0794-D1-070807.ASC	E0794-D2-Channel# Aug7 2007 13-25-55.txt	E0794-NV-070807
E0795	4	Water	55.125	0.8	-	-	2	A,B	>5	2.30	2.31	-	-	12000/2750/ 23000/75000	12000/1/25000/ 75000	-	-	6	H	H	H	H	Y	2	E0795-D1-070807.ASC	E0795-D2-Channel# Aug7 2007 13-33-16.txt	E0795-NV-070807
E0796BL	4	Water	55.125	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	H	H	H	H	N	1	E0796-D1-BL-070807.ASC	E0796-D2-BL-Channel# Aug7 2007 14-03-28.txt	no video
E0796	4	Water	55.125	0.8	-	-	1	A	6	2.30	-	-	-	12000/2750/ 23000/75000	-	-	-	6	H	H	H	H	N	1	E0796-D1-070807.ASC	E0796-D2-Channel# Aug7 2007 14-08-44.txt	no video
E0797	4	Water	55.125	0.8	-	-	1	A	6	2.31	-	-	-	12000/2750/ 23000/75000	-	-	-	6	H	H	H	H	N	2	E0797-D1-070807.ASC	E0797-D2-Channel# Aug7 2007 14-14-30.txt	no video
E0798	4	Water	55.125	0.8	-	-	1	A	6	2.31	-	-	-	12000/2750/ 23000/75000	-	-	-	6	H	H	H	H	N	3	E0798-D1-070807.ASC	E0798-D2-Channel# Aug7 2007 14-17-53.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4				
E0799	4	Water	55.125	0.8	-	-	2	A,B	>5	2.32	2.32	-	-	12000/2750/ 23000/75000	12000/1/25000/ 75000	-	-	6	H	H	H	H	N	1	E0799-D1-070807.ASC	E0799-D2-Channel# Aug7 2007 14-22-05.txt	no video
E0800	4	Water	55.125	0.8	-	-	2	A,B	>5	2.32	2.32	-	-	12000/2750/ 23000/75000	12000/1/25000/ 75000	-	-	6	H	H	H	H	N	2	E0800-D1-070807.ASC	E0800-D2-Channel# Aug7 2007 14-25-13.txt	no video
E0801	4	Water	55.125	0.8	-	-	2	A,B	>5	2.32	2.32	-	-	12000/2750/ 23000/75000	12000/1/25000/ 75000	-	-	6	H	H	H	H	N	3	E0801-D1-070807.ASC	E0801-D2-Channel# Aug7 2007 14-28-03.txt	no video
E0802	4	Water	55.125	0.8	-	-	1	A	>5	4.02	-	-	-	10000/1/19000/ 75000	-	-	-	8	H	H	H	H	N	1	E0802-D1-070807.ASC	E0802-D2-Channel# Aug7 2007 14-38-50.txt	no video
E0803	4	Water	55.125	0.8	-	-	1	A	5	4.03	-	-	-	10000/1/19000/ 75000	-	-	-	8	H	H	H	H	N	2	E0803-D1-070807.ASC	E0803-D2-Channel# Aug7 2007 14-43-09.txt	no video
E0804	4	Water	55.125	0.8	-	-	1	A	5	4.02	-	-	-	10000/1/19000/ 75000	-	-	-	8	H	H	H	H	N	3	E0804-D1-070807.ASC	E0804-D2-Channel# Aug7 2007 14-45-45.txt	no video
E0805	4	Water	55.125	0.8	-	-	2	A,B	5.0/4.0	4.02	3.99	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	H	H	H	H	N	1	E0805-D1-070807.ASC	E0805-D2-Channel# Aug7 2007 14-48-52.txt	no video
E0806	4	Water	55.125	0.8	-	-	2	A,B	5.0/4.0	4.02	3.99	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	H	H	H	H	N	2	E0806-D1-070807.ASC	E0806-D2-Channel# Aug7 2007 14-52-24.txt	no video
E0807	4	Water	55.125	0.8	-	-	2	A,B	5.0/4.0	4.02	3.99	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	H	H	H	H	N	3	E0807-D1-070807.ASC	E0807-D2-Channel# Aug7 2007 14-55-24.txt	no video
E0808	4	Water	55.125	0.8	-	-	1	A	4.5	4.01/ 4.01	-	-	-	10000/1/17000/ 75000	-	-	-	10	H	H	H	H	N	1	E0808-D1-070807.ASC	E0808-D2-Channel# Aug7 2007 15-12-59.txt	no video
E0809	4	Water	55.125	0.8	-	-	1	A	4.5	3.95/ 4.01	-	-	-	10000/1/17000/ 75000	-	-	-	10	H	H	H	H	N	2	E0809-D1-070807.ASC	E0809-D2-Channel# Aug7 2007 15-16-20.txt	no video
E0810	4	Water	55.125	0.8	-	-	1	A	4.5	3.97/ 4.01	-	-	-	10000/1/17000/ 75000	-	-	-	10	H	H	H	H	N	3	E0810-D1-070807.ASC	E0810-D2-Channel# Aug7 2007 15-19-29.txt	no video
E0811	4	Water	55.125	0.8	-	-	2	A,B	4.5	3.92/ 3.98	3.98/ 3.98	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	H	H	H	H	N	1	E0811-D1-070807.ASC	E0811-D2-Channel# Aug7 2007 15-24-12.txt	no video
E0812	4	Water	55.125	0.8	-	-	2	A,B	4.5	4.07/ 3.98	3.98/ 3.98	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	H	H	H	H	N	2	E0812-D1-070807.ASC	E0812-D2-Channel# Aug7 2007 15-28-14.txt	no video
E0813	4	Water	55.125	0.8	-	-	2	A,B	4.5	4.04/ 3.98	3.98/ 3.98	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	H	H	H	H	N	3	E0813-D1-070807.ASC	E0813-D2-Channel# Aug7 2007 15-32-17.txt	no video
E0814	4	Water	55.125	0.8	-	-	2	A,B	4.5	4.04/ 3.98	3.98/ 3.98	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	H	H	H	H	N	4	E0814-D1-070807.ASC	E0814-D2-Channel# Aug7 2007 15-38-51.txt	no video
High water level; hydrophone level = M																										
E0815	4	Water	55.125	0.8	-	-	1	A	4.5	4.07/ 4.02	-	-	-	10000/1/17000/ 75000	-	-	-	10	M	M	M	M	N	1	E0815-D1-070807.ASC	E0815-D2-Channel# Aug7 2007 15-59-20.txt	no video
E0816	4	Water	55.125	0.8	-	-	1	A	4.5	4.07/ 4.02	-	-	-	10000/1/17000/ 75000	-	-	-	10	M	M	M	M	N	2	E0816-D1-070807.ASC	E0816-D2-Channel# Aug7 2007 16-03-01.txt	no video
E0817	4	Water	55.125	0.8	-	-	1	A	4.5	4.05/ 4.01	-	-	-	10000/1/17000/ 75000	-	-	-	10	M	M	M	M	N	3	E0817-D1-070807.ASC	E0817-D2-Channel# Aug7 2007 16-09-30.txt	no video
E0818	4	Water	55.125	0.8	-	-	2	A,B	4.5	4.03/ 3.99	3.98/ 3.97	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	M	M	M	M	N	1	E0818-D1-070807.ASC	E0818-D2-Channel# Aug7 2007 16-14-47.txt	no video
E0819	4	Water	55.125	0.8	-	-	2	A,B	4.5	4.04/ 3.99	3.98/ 3.97	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	M	M	M	M	N	2	E0819-D1-070807.ASC	E0819-D2-Channel# Aug7 2007 16-18-37.txt	no video
E0820	4	Water	55.125	0.8	-	-	2	A,B	4.5	4.04/ 3.99	3.98/ 3.97	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	M	M	M	M	N	3	E0820-D1-070807.ASC	E0820-D2-Channel# Aug7 2007 16-22-14.txt	no video
E0821	4	Water	55.125	0.8	-	-	1	A	4.5	4.03	-	-	-	10000/1/19000/ 75000	-	-	-	8	M	M	M	M	N	1	E0821-D1-070807.ASC	E0821-D2-Channel# Aug7 2007 16-43-56.txt	no video
E0822	4	Water	55.125	0.8	-	-	1	A	4.5	4.03	-	-	-	10000/1/19000/ 75000	-	-	-	8	M	M	M	M	N	2	E0822-D1-070807.ASC	E0822-D2-Channel# Aug7 2007 16-49-36.txt	no video
E0823	4	Water	55.125	0.8	-	-	1	A	5	4.03	-	-	-	10000/1/19000/ 75000	-	-	-	8	M	M	M	M	N	3	E0823-D1-070807.ASC	E0823-D2-Channel# Aug7 2007 16-53-10.txt	no video
E0824	4	Water	55.125	0.8	-	-	2	A,B	5.0/4.0	4.02	4.00	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	M	M	M	M	N	1	E0824-D1-070807.ASC	E0824-D2-Channel# Aug7 2007 17-03-01.txt	no video
E0825	4	Water	55.125	0.8	-	-	2	A,B	5.0/3.5	4.02	3.99	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	M	M	M	M	N	2	E0825-D1-070807.ASC	E0825-D2-Channel# Aug7 2007 17-05-56.txt	no video
E0826	4	Water	55.125	0.8	-	-	2	A,B	5.0/3.5	4.02	3.99	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	M	M	M	M	N	3	E0826-D1-070807.ASC	E0826-D2-Channel# Aug7 2007 17-09-47.txt	no video
E0827	4	Water	55.125	0.8	-	-	1	A	6	2.32	-	-	-	12000/2750/ 23000/75000	-	-	-	6	M	M	M	M	N	1	E0827-D1-070807.ASC	E0827-D2-Channel# Aug7 2007 17-19-32.txt	no video
E0828	4	Water	55.125	0.8	-	-	1	A	5.5	2.32	-	-	-	12000/2750/ 23000/75000	-	-	-	6	M	M	M	M	N	2	E0828-D1-070807.ASC	E0828-D2-Channel# Aug7 2007 17-23-47.txt	no video
E0829	4	Water	55.125	0.8	-	-	1	A	6	2.32	-	-	-	12000/2750/ 23000/75000	-	-	-	6	M	M	M	M	N	3	E0829-D1-070807.ASC	E0829-D2-Channel# Aug7 2007 17-28-12.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E0830	4	Water	55.125	0.8	-	-	2	A,B	5.5/5.0	2.31	2.30	-	-	12000/2750/23000/75000	12000/1/25000/75000	-	-	6	M	M	M	M	N	1	E0830-D1-070807.ASC	E0830-D2-Channel# Aug7 2007 17-46-30.txt	no video
E0831	4	Water	55.125	0.8	-	-	2	A,B	5.5/4.5	2.31	2.30	-	-	12000/2750/23000/75000	12000/1/25000/75000	-	-	6	M	M	M	M	N	2	E0831-D1-070807.ASC	E0831-D2-Channel# Aug7 2007 17-50-58.txt	no video
E0832	4	Water	55.125	0.8	-	-	2	A,B	5.5/4.5	2.31	2.30	-	-	12000/2750/23000/75000	12000/1/25000/75000	-	-	6	M	M	M	M	N	3	E0832-D1-070807.ASC	E0832-D2-Channel# Aug7 2007 17-55-01.txt	no video
E0833	4	Water	55.125	0.8	-	-	1	A	5	7.18/6.74	-	-	-	10000/1/15000/75000	-	-	-	12	M	M	M	M	N	1	E0833-D1-070807.ASC	E0833-D2-Channel# Aug7 2007 18-11-28.txt	no video
E0834	4	Water	55.125	0.8	-	-	1	A	5	7.18/6.74	-	-	-	10000/1/15000/75000	-	-	-	12	M	M	M	M	N	2	E0834-D1-070807.ASC	E0834-D2-Channel# Aug7 2007 18-15-55.txt	no video
E0835	4	Water	55.125	0.8	-	-	1	A	5	7.18/6.74	-	-	-	10000/1/15000/75000	-	-	-	12	M	M	M	M	N	3	E0835-D1-070807.ASC	E0835-D2-Channel# Aug7 2007 18-19-06.txt	no video
E0836	4	Water	55.125	0.8	-	-	2	A,B	4.5	6.65/6.30	7.16/6.80	-	-	10000/1/15000/75000	10000/1/15000/75000		-	12	M	M	M	M	N	1	E0836-D1-070807.ASC	E0836-D2-Channel# Aug7 2007 18-31-00.txt	no video
E0837	4	Water	55.125	0.8	-	-	2	A,B	4.5	6.65/6.30	7.16/6.80	-	-	10000/1/15000/75000	10000/1/15000/75000		-	12	M	M	M	M	N	2	E0837-D1-070807.ASC	E0837-D2-Channel# Aug7 2007 18-36-52.txt	no video
E0838	4	Water	55.125	0.8	-	-	2	A,B	4.5	6.65/6.30	7.16/6.80	-	-	10000/1/15000/75000	10000/1/15000/75000		-	12	M	M	M	M	N	3	E0838-D1-070807.ASC	E0838-D2-Channel# Aug7 2007 18-40-39.txt	no video
E0839	4	Water	55.125	0.8	-	-	3	A,B,C	4.5	6.70/5.90	6.76/5.91	6.79/5.79	-	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	-	12	M	M	M	M	N	1	E0839-D1-070807.ASC	E0839-D2-Channel# Aug7 2007 18-54-19.txt	no video
E0840	4	Water	55.125	0.8	-	-	3	A,B,C	4.5	6.70/5.90	6.76/5.91	6.79/5.79	-	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	-	12	M	M	M	M	N	2	E0840-D1-070807.ASC	E0840-D2-Channel# Aug7 2007 18-59-44.txt	no video
E0841	4	Water	55.125	0.8	-	-	3	A,B,C	4.5	6.70/5.90	6.76/5.91	6.79/5.79	-	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	-	12	M	M	M	M	N	3	E0841-D1-070807.ASC	E0841-D2-Channel# Aug7 2007 19-04-13.txt	no video
E0841BL	4	Water	55.125	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	N	1	E0841-D1-BL-070807.ASC	E0841-D2-BL-Channel# Aug7 2007 19-08-13.txt	no video
E0842BL	4	Water	55.125	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	N	1	E0842-D1-BL-070808.ASC	E0842-D2-BL-Channel# Aug8 2007 09-38-31.txt	no video
E0842	4	Water	55.125	0.8	-	-	4	A,B,C,D	4.5	5.95/6.15	5.79/6.15	6.46/6.00	6.3/6.10	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	12	M	M	M	M	N	1	E0842-D1-070808.ASC	E0842-D2-Channel# Aug8 2007 09-51-47.txt	no video
E0843	4	Water	55.125	0.8	-	-	4	A,B,C,D	4.5	5.95/6.15	5.79/6.15	6.46/6.00	6.3/6.10	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	12	M	M	M	M	N	2	E0843-D1-070808.ASC	E0843-D2-Channel# Aug8 2007 09-57-15.txt	no video
E0844	4	Water	55.125	0.8	-	-	4	A,B,C,D	4.5	5.95/6.15	5.79/6.15	6.46/6.00	6.3/6.10	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	12	M	M	M	M	N	3	E0844-D1-070808.ASC	E0844-D2-Channel# Aug8 2007 10-01-20.txt	no video
High water level; hydrophone level = O																											
E0845	4	Water	55.125	0.8	-	-	1	A	5	7.3/6.5	-	-	-	10000/1/15000/75000	-	-	-	12	O	O	O	O	Y	1	E0845-D1-070808.ASC	E0845-D2-Channel# Aug8 2007 10-23-04.txt	no subsurface video
E0846	4	Water	55.125	0.8	-	-	1	A	5	7.3/6.5	-	-	-	10000/1/15000/75000	-	-	-	12	O	O	O	O	Y	2	E0846-D1-070808.ASC	E0846-D2-Channel# Aug8 2007 10-32-44.txt	E0846-NV-070808
E0847	4	Water	55.125	0.8	-	-	1	A	5	7.3/6.5	-	-	-	10000/1/15000/75000	-	-	-	12	O	O	O	O	Y	3	E0847-D1-070808.ASC	E0847-D2-Channel# Aug8 2007 10-41-51.txt	E0847-NV-070808
E0848	4	Water	55.125	0.8	-	-	2	A,B	5	7.15/6.71	7.15/6.79	-	-	10000/1/15000/75000	10000/1/15000/75000	-	-	12	O	O	O	O	Y	1	E0848-D1-070808.ASC	E0848-D2-Channel# Aug8 2007 10-54-02.txt	E0848-NV-070808
E0849	4	Water	55.125	0.8	-	-	2	A,B	4.5	6.72/6.36	6.72/6.42	-	-	10000/1/15000/75000	10000/1/15000/75000	-	-	12	O	O	O	O	Y	2	E0849-D1-070808.ASC	E0849-D2-Channel# Aug8 2007 11-03-48.txt	E0849-NV-070808
E0850	4	Water	55.125	0.8	-	-	2	A,B	4.5	6.72/6.36	6.72/6.42	-	-	10000/1/15000/75000	10000/1/15000/75000	-	-	12	O	O	O	O	Y	3	E0850-D1-070808.ASC	E0850-D2-Channel# Aug8 2007 11-10-42.txt	E0850-NV-070808
E0851	4	Water	55.125	0.8	-	-	3	A,B,C	4.5	6.42/6.11	6.23/6.11	6.14/6.02	-	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	-	12	O	O	O	O	Y	1	E0851-D1-070808.ASC	E0851-D2-Channel# Aug8 2007 11-17-18.txt	E0851-NV-070808
E0852	4	Water	55.125	0.8	-	-	3	A,B,C	4.5	6.42/6.11	6.23/6.11	6.14/6.02	-	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	-	12	O	O	O	O	Y	2	E0852-D1-070808.ASC	E0852-D2-Channel# Aug8 2007 11-25-54.txt	E0852-NV-070808
E0853	4	Water	55.125	0.8	-	-	3	A,B,C	4.5	6.42/6.11	6.23/6.11	6.14/6.02	-	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	-	12	O	O	O	O	Y	3	E0853-D1-070808.ASC	E0853-D2-Channel# Aug8 2007 11-30-55.txt	no subsurface video
E0854	4	Water	55.125	0.8	-	-	4	A,B,C,D	4	5.56/5.3	5.57/5.2	5.62/5.4	5.30/5.2	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	12	O	O	O	O	Y	1	E0854-D1-070808.ASC	E0854-D2-Channel# Aug8 2007 13-32-23.txt	E0854-NV-070808
E0855	4	Water	55.125	0.8	-	-	4	A,B,C,D	4	5.56/5.3	5.57/5.2	5.62/5.4	5.30/5.2	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	12	O	O	O	O	Y	2	E0855-D1-070808.ASC	E0855-D2-Channel# Aug8 2007 13-39-53.txt	E0855-NV-070808

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E0856	4	Water	55.125	0.8	-	-	4	A,B,C,D	4	5.56/ 5.3	5.57/ 5.2	5.62/ 5.4	5.30/ 5.2	10000/1/15000/ 75000	10000/1/15000/ 75000	10000/1/15000/ 75000	10000/1/ 15000/ 75000	12	O	O	O	O	Y	3	E0856-D1-070808.ASC	E0856-D2-Channel# Aug8 2007 13-46-02.txt	E0856-NV-070808
E0857	4	Water	55.125	0.8	-	-	1	A	4.5	4.06/ 4.07	-	-	-	10000/1/17000/ 75000	-	-	-	10	O	O	O	O	Y	1	E0857-D1-070808.ASC	E0857-D2-Channel# Aug8 2007 14-10-08.txt	E0857-NV-070808
E0858	4	Water	55.125	0.8	-	-	1	A	4.5	4.04/ 4.07	-	-	-	10000/1/17000/ 75000	-	-	-	10	O	O	O	O	Y	2	E0858-D1-070808.ASC	E0858-D2-Channel# Aug8 2007 14-18-23.txt	E0858-NV-070808
E0859	4	Water	55.125	0.8	-	-	1	A	4.5	4.03/ 4.06	-	-	-	10000/1/17000/ 75000	-	-	-	10	O	O	O	O	Y	3	E0859-D1-070808.ASC	E0859-D2-Channel# Aug8 2007 14-25-29.txt	E0859-NV-070808
E0860	4	Water	55.125	0.8	-	-	2	A,B	4	3.98/ 4.03	3.98/ 3.99	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	O	O	O	O	Y	1	E0860-D1-070808.ASC	E0860-D2-Channel# Aug8 2007 14-34-02.txt	E0860-NV-070808
E0861	4	Water	55.125	0.8	-	-	2	A,B	4	3.99/ 4.02	3.99/ 3.99	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	O	O	O	O	Y	2	E0861-D1-070808.ASC	E0861-D2-Channel# Aug8 2007 14-40-12.txt	E0861-NV-070808
E0862	4	Water	55.125	0.8	-	-	2	A,B	4.5	3.99/ 4.02	3.99/ 3.99	-	-	10000/1/17000/ 75000	10000/1/17000/ 75000	-	-	10	O	O	O	O	Y	3	E0862-D1-070808.ASC	E0862-D2-Channel# Aug8 2007 14-46-24.txt	E0862-NV-070808
E0863	4	Water	55.125	0.8	-	-	1	A	5	4.06	-	-	-	10000/1/19000/ 75000	-	-	-	8	O	O	O	O	Y	1	E0863-D1-070808.ASC	E0863-D2-Channel# Aug8 2007 15-00-28.txt	E0863-NV-070808
E0864	4	Water	55.125	0.8	-	-	1	A	5	4.05	-	-	-	10000/1/19000/ 75000	-	-	-	8	O	O	O	O	Y	2	E0864-D1-070808.ASC	E0864-D2-Channel# Aug8 2007 15-06-01.txt	E0864-NV-070808
E0865	4	Water	55.125	0.8	-	-	1	A	5	4.06	-	-	-	10000/1/19000/ 75000	-	-	-	8	O	O	O	O	Y	3	E0865-D1-070808.ASC	E0865-D2-Channel# Aug8 2007 15-12-47.txt	E0865-NV-070808
E0866	4	Water	55.125	0.8	-	-	2	A,B	5.0/3.0	4.03	4.02	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	O	O	O	O	Y	1	E0866-D1-070808.ASC	E0866-D2-Channel# Aug8 2007 15-49-48.txt	E0866-NV-070808
E0867	4	Water	55.125	0.8	-	-	2	A,B	5.0/3.0	4.03	4.02	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	O	O	O	O	Y	2	E0867-D1-070808.ASC	E0867-D2-Channel# Aug8 2007 15-58-37.txt	E0867-NV-070808
E0868	4	Water	55.125	0.8	-	-	2	A,B	5.0/3.5	4.03	4.02	-	-	10000/1/19000/ 75000	10000/1/19000/ 75000	-	-	8	O	O	O	O	Y	3	E0868-D1-070808.ASC	E0868-D2-Channel# Aug8 2007 16-05-08.txt	E0868-NV-070808
E0869	4	Water	55.125	0.8	-	-	1	A	6	2.32	-	-	-	12000/2750/ 23000/75000	-	-	-	6	O	O	O	O	Y	1	E0869-D1-070808.ASC	E0869-D2-Channel# Aug8 2007 16-19-53.txt	E0869-NV-070808
E0870	4	Water	55.125	0.8	-	-	1	A	6	2.32	-	-	-	12000/2750/ 23000/75000	-	-	-	6	O	O	O	O	Y	2	E0870-D1-070808.ASC	E0870-D2-Channel# Aug8 2007 16-27-11.txt	E0870-NV-070808
E0871	4	Water	55.125	0.8	-	-	1	A	6	2.32	-	-	-	12000/2750/ 23000/75000	-	-	-	6	O	O	O	O	Y	3	E0871-D1-070808.ASC	E0871-D2-Channel# Aug8 2007 16-34-16.txt	E0871-NV-070808
E0872	4	Water	55.125	0.8	-	-	2	A,B	6.0/4.0	2.34	2.30	-	-	12000/2750/ 23000/75000	12000/1/25000/ 75000	-	-	6	O	O	O	O	Y	1	E0872-D1-070808.ASC	E0872-D2-Channel# Aug8 2007 16-43-07.txt	E0872-NV-070808
E0873	4	Water	55.125	0.8	-	-	2	A,B	6.0/4.0	2.32	2.30	-	-	12000/2750/ 23000/75000	12000/1/25000/ 75000	-	-	6	O	O	O	O	Y	2	E0873-D1-070808.ASC	E0873-D2-Channel# Aug8 2007 16-51-07.txt	E0873-NV-070808
E0874	4	Water	55.125	0.8	-	-	2	A,B	6.0/4.0	2.32	2.32	-	-	12000/2750/ 23000/75000	12000/1/25000/ 75000	-	-	6	O	O	O	O	Y	3	E0874-D1-070808.ASC	E0874-D2-Channel# Aug8 2007 16-59-22.txt	E0874-NV-070808
E0874BL	4	Water	55.125	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	N	1	E0874-D1-BL-070808.ASC	E0874-D2-BL-Channel# Aug8 2007 17-02-24.txt	no video
High water level; hydrophone level = L																										
E0875BL	4	Water	55.25	0.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E0875-D1-BL-070809.ASC	E0875-D2-BL-Channel# Aug9 2007 08-57-10.txt	no video
E0875	4	Water	55.25	0.8	-	-	1	A	6	2.28	-	-	-	12000/2750/ 23000/75000	-	-	-	6	L	L	L	L	N	1	E0875-D1-070809.ASC	E0875-D2-Channel# Aug9 2007 09-15-04.txt	no video
E0876	4	Water	55.25	0.8	-	-	1	A	6	2.26	-	-	-	12000/2750/ 23000/75000	-	-	-	6	L	L	L	L	N	2	E0876-D1-070809.ASC	E0876-D2-Channel# Aug9 2007 09-21-09.txt	no video
E0877	4	Water	55.25	0.8	-	-	1	A	6	2.25	-	-	-	12000/2750/ 23000/75000	-	-	-	6	L	L	L	L	N	3	E0877-D1-070809.ASC	E0877-D2-Channel# Aug9 2007 09-26-10.txt	no video
E0878	4	Water	55.25	0.8	-	-	2	A,B	5.5/4.0	2.26	2.26	-	-	12000/2750/ 23000/75000	12000/1/25000/ 75000	-	-	6	L	L	L	L	N	1	E0878-D1-070809.ASC	E0878-D2-Channel# Aug9 2007 09-30-20.txt	no video
E0879	4	Water	55.25	0.8	-	-	2	A,B	6.0/3.5	2.33	2.32	-	-	12000/2750/ 23000/75000	12000/1/25000/ 75000	-	-	6	L	L	L	L	N	2	E0879-D1-070809.ASC	E0879-D2-Channel# Aug9 2007 09-41-19.txt	no video
E0880	4	Water	55.25	0.8	-	-	2	A,B	6.0/4.0	2.33	2.30	-	-	12000/2750/ 23000/75000	12000/1/25000/ 75000	-	-	6	L	L	L	L	N	3	E0880-D1-070809.ASC	E0880-D2-Channel# Aug9 2007 09-44-35.txt	no video
E0881	4	Water	55.25	0.8	-	-	1	B	4	-	2.30	-	-	-	12000/1/25000/ 75000	-	-	6	L	L	L	L	Y	1	E0881-D1-070809.ASC	E0881-D2-Channel# Aug9 2007 09-51-42.txt	E0881-NV-070809
E0882	4	Water	55.25	0.8	-	-	1	A	4.5	3.98	-	-	-	10000/1/19000/ 75000	-	-	-	8	L	L	L	L	N	1	E0882-D1-070809.ASC	E0882-D2-Channel# Aug9 2007 10-54-58.txt	no video
E0883	4	Water	55.25	0.8	-	-	1	A	4.5	3.98	-	-	-	10000/1/19000/ 75000	-	-	-	8	L	L	L	L	N	2	E0883-D1-070809.ASC	E0883-D2-Channel# Aug9 2007 10-58-56.txt	no video
E0884	4	Water	55.25	0.8	-	-	1	A	4.5	3.98	-	-	-	10000/1/19000/ 75000	-	-	-	8	L	L	L	L	N	3	E0884-D1-070809.ASC	E0884-D2-Channel# Aug9 2007 11-01-58.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E0885	4	Water	55.25	0.8	-	-	2	A,B	5.0/3.5	3.96	3.99	-	-	10000/1/19000/75000	10000/1/19000/75000	-	-	8	L	L	L	L	N	1	E0885-D1-070809.ASC	E0885-D2-Channel# Aug9 2007 11-09-38.txt	no video
E0886	4	Water	55.25	0.8	-	-	2	A,B	4.5/3.5	3.96	3.99	-	-	10000/1/19000/75000	10000/1/19000/75000	-	-	8	L	L	L	L	N	2	E0886-D1-070809.ASC	E0886-D2-Channel# Aug9 2007 11-13-20.txt	no video
E0887	4	Water	55.25	0.8	-	-	2	A,B	4.5/3.5	3.96	3.99	-	-	10000/1/19000/75000	10000/1/19000/75000	-	-	8	L	L	L	L	N	3	E0887-D1-070809.ASC	E0887-D2-Channel# Aug9 2007 11-16-21.txt	no video
E0888	4	Water	55.25	0.8	-	-	1	B	3.5	-	4.01	-	-	-	10000/1/19000/75000	-	-	8	L	L	L	L	Y	1	E0888-D1-070809.ASC	E0888-D2-Channel# Aug9 2007 11-24-43.txt	E0888-NV-070809
E0889	4	Water	55.25	0.8	-	-	1	A	4	4.01/4.01	-	-	-	10000/1/17000/75000	-	-	-	10	L	L	L	L	N	1	E0889-D1-070809.ASC	E0889-D2-Channel# Aug9 2007 12-22-04.txt	no video
E0890	4	Water	55.25	0.8	-	-	1	A	5	4.00/4.03	-	-	-	10000/1/17000/75000	-	-	-	10	L	L	L	L	N	2	E0890-D1-070809.ASC	E0890-D2-Channel# Aug9 2007 12-26-15.txt	no video
E0891	4	Water	55.25	0.8	-	-	1	A	4.5	4.01/4.03	-	-	-	10000/1/17000/75000	-	-	-	10	L	L	L	L	N	3	E0891-D1-070809.ASC	E0891-D2-Channel# Aug9 2007 12-30-20.txt	no video
E0892	4	Water	55.25	0.8	-	-	2	A,B	4	4.00/4.00	4.00/4.01	-	-	10000/1/17000/75000	10000/1/17000/75000	-	-	10	L	L	L	L	N	1	E0892-D1-070809.ASC	E0892-D2-Channel# Aug9 2007 12-37-22.txt	no video
E0893	4	Water	55.25	0.8	-	-	2	A,B	4	4.01/4.01	4.01/4.01	-	-	10000/1/17000/75000	10000/1/17000/75000	-	-	10	L	L	L	L	N	2	E0893-D1-070809.ASC	E0893-D2-Channel# Aug9 2007 12-41-34.txt	no video
E0894	4	Water	55.25	0.8	-	-	2	A,B	4	4.00/4.00	4.00/4.01	-	-	10000/1/17000/75000	10000/1/17000/75000	-	-	10	L	L	L	L	N	3	E0894-D1-070809.ASC	E0894-D2-Channel# Aug9 2007 12-45-33.txt	no video
E0895	4	Water	55.25	0.8	-	-	1	B	4.5	-	4.04/4.03	-	-	-	10000/1/17000/75000	-	-	10	L	L	L	L	Y	1	E0895-D1-070809.ASC	E0895-D2-Channel# Aug9 2007 13-02-46.txt	E0895-NV-070809
E0896	4	Water	55.25	0.8	-	-	1	A	4.5	7.12/6.77	-	-	-	10000/1/15000/75000	-	-	-	12	L	L	L	L	N	1	E0896-D1-070809.ASC	E0896-D2-Channel# Aug9 2007 13-16-03.txt	no video
E0897	4	Water	55.25	0.8	-	-	1	A	4.5	7.12/6.77	-	-	-	10000/1/15000/75000	-	-	-	12	L	L	L	L	N	2	E0897-D1-070809.ASC	E0897-D2-Channel# Aug9 2007 13-20-39.txt	no video
E0898	4	Water	55.25	0.8	-	-	1	A	4.5	7.12/6.77	-	-	-	10000/1/15000/75000	-	-	-	12	L	L	L	L	N	3	E0898-D1-070809.ASC	E0898-D2-Channel# Aug9 2007 13-23-41.txt	no video
E0899	4	Water	55.25	0.8	-	-	2	A,B	5	RFO[d]	RFO	-	-	10000/1/15000/75000	10000/1/15000/75000	-	-	12	L	L	L	L	N	1	E0899-D1-070809.ASC	E0899-D2-Channel# Aug9 2007 13-29-04.txt	no video
E0900	4	Water	55.25	0.8	-	-	2	A,B	5	RFO	RFO	-	-	10000/1/15000/75000	10000/1/15000/75000	-	-	12	L	L	L	L	N	2	E0900-D1-070809.ASC	E0900-D2-Channel# Aug9 2007 13-33-47.txt	no video
E0901	4	Water	55.25	0.8	-	-	2	A,B	5.5	RFO	RFO	-	-	10000/1/15000/75000	10000/1/15000/75000	-	-	12	L	L	L	L	N	3	E0901-D1-070809.ASC	E0901-D2-Channel# Aug9 2007 13-37-41.txt	no video
E0902	4	Water	55.25	0.8	-	-	3	A,B,C	4.5	RFO	RFO	RFO	-	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	-	12	L	L	L	L	N	1	E0902-D1-070809.ASC	E0902-D2-Channel# Aug9 2007 13-44-59.txt	no video
E0903	4	Water	55.25	0.8	-	-	3	A,B,C	4.5	RFO	RFO	RFO	-	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	-	12	L	L	L	L	N	2	E0903-D1-070809.ASC	E0903-D2-Channel# Aug9 2007 13-50-06.txt	no video
E0904	4	Water	55.25	0.8	-	-	3	A,B,C	4.5	RFO	RFO	RFO	-	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	-	12	L	L	L	L	N	3	E0904-D1-070809.ASC	E0904-D2-Channel# Aug9 2007 13-53-03.txt	no video
E0905	4	Water	55.25	0.8	-	-	4	A,B,C,D	4.5	RFO	RFO	RFO	RFO	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	12	L	L	L	L	N	1	E0905-D1-070809.ASC	E0905-D2-Channel# Aug9 2007 13-59-29.txt	no video
E0906	4	Water	55.25	0.8	-	-	4	A,B,C,D	4.5	RFO	RFO	RFO	RFO	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	12	L	L	L	L	N	2	E0906-D1-070809.ASC	E0906-D2-Channel# Aug9 2007 14-02-22.txt	no video
E0907	4	Water	55.25	0.8	-	-	4	A,B,C,D	4.5	RFO	RFO	RFO	RFO	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	10000/1/15000/75000	12	L	L	L	L	N	3	E0907-D1-070809.ASC	E0907-D2-Channel# Aug9 2007 14-09-07.txt	no video
E0908	4	Water	55.25	0.8	-	-	1	B	4.5	-	RFO	-	-	-	10000/1/15000/75000	-	-	12	L	L	L	L	Y	1	E0908-D1-070809.ASC	E0908-D2-Channel# Aug9 2007 14-15-28.txt	no subsurface video
E0909	4	Water	55.25	0.8	-	-	1	B	4.5	-	RFO	-	-	-	10000/1/15000/75000	-	-	12	L	L	L	L	Y	2	E0909-D1-070809.ASC	E0909-D2-Channel# Aug9 2007 14-19-16.txt	E0909-NV-070809
Middle water level; hydrophone level = L																											
E0910BL	4	Water	94.25	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E0910-D1-BL-070809.ASC	E0910-D2-BL-Channel# Aug9 2007 15-26-54.txt	no video
E0910	4	Water	94.25	0.55	-	-	1	A	5	RFO	-	-	-	16000/1/14750/75000	-	-	-	12	L	L	L	L	Y	1	E0910-D1-070809.ASC	E0910-D2-Channel# Aug9 2007 15-57-48.txt	E0910-NV-070809
E0911	4	Water	94.25	0.55	-	-	1	A	5	RFO	-	-	-	16000/1/14750/75000	-	-	-	12	L	L	L	L	Y	2	E0911-D1-070809.ASC	E0911-D2-Channel# Aug9 2007 16-08-26.txt	E0911-NV-070809
E0912	4	Water	94.25	0.55	-	-	1	A	5	RFO	-	-	-	16000/1/14750/75000	-	-	-	12	L	L	L	L	Y	3	E0912-D1-070809.ASC	E0912-D2-Channel# Aug9 2007 16-18-31.txt	E0912-NV-070809
E0912B	4	Water	94.25	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E0912-D1-BL-	E0912-D2-BL-Channel# Aug9 2007 16-29-38.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
L																									070809.ASC		
Middle water level; hydrophone level = O																												
E0913BL	4	Water	94.75	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	N	1	E0913-D1-BL-070812.ASC	E0913-D2-BL-Channel# Aug12 2007 08-42-58.txt	no video
E0913	4	Water	94.75	0.55	-	-	1	A	5	RFO	-	-	-	16000/1/14750/75000	-	-	-	12	O	O	O	O	N	1	E0913-D1-070812.ASC	E0913-D2-Channel# Aug12 2007 08-58-59.txt	no video
E0914	4	Water	94.75	0.55	-	-	1	A	5	RFO	-	-	-	16000/1/14750/75000	-	-	-	12	O	O	O	O	N	2	E0914-D1-070812.ASC	E0914-D2-Channel# Aug12 2007 09-03-44.txt	no video
E0915	4	Water	94.75	0.55	-	-	1	A	5	RFO	-	-	-	16000/1/14750/75000	-	-	-	12	O	O	O	O	N	3	E0915-D1-070812.ASC	E0915-D2-Channel# Aug12 2007 09-07-04.txt	no video
E0916	4	Water	94.75	0.55	-	-	2	A,B	5.0/5.0	RFO	RFO	-	-	16000/1/14750/75000	16000/1/14750/75000	-	-	12	O	O	O	O	N	1	E0916-D1-070812.ASC	E0916-D2-Channel# Aug12 2007 09-12-27.txt	no video
E0917	4	Water	94.75	0.55	-	-	2	A,B	5.0/5.0	RFO	RFO	-	-	16000/1/14750/75000	16000/1/14750/75000	-	-	12	O	O	O	O	N	2	E0917-D1-070812.ASC	E0917-D2-Channel# Aug12 2007 09-18-17.txt	no video
E0918	4	Water	94.75	0.55	-	-	2	A,B	5.0/5.0	RFO	RFO	-	-	16000/1/14750/75000	16000/1/14750/75000	-	-	12	O	O	O	O	N	3	E0918-D1-070812.ASC	E0918-D2-Channel# Aug12 2007 09-21-39.txt	no video
E0919	4	Water	94.75	0.55	-	-	3	A,B,C	4.5/4.5/4.5	RFO	RFO	RFO	-	18000/1/14750/75000	18000/1/14750/75000	18000/1/14750/75000	-	12	O	O	O	O	N	1	E0919-D1-070812.ASC	E0919-D2-Channel# Aug12 2007 09-32-29.txt	no video
E0920	4	Water	94.75	0.55	-	-	3	A,B,C	4.5/4.5/4.5	RFO	RFO	RFO	-	18000/1/14750/75000	18000/1/14750/75000	18000/1/14750/75000	-	12	O	O	O	O	N	2	E0920-D1-070812.ASC	E0920-D2-Channel# Aug12 2007 09-38-08.txt	no video
E0921	4	Water	94.75	0.55	-	-	3	A,B,C	4.5/4.5/4.5	RFO	RFO	RFO	-	18000/1/14750/75000	18000/1/14750/75000	18000/1/14750/75000	-	12	O	O	O	O	N	3	E0921-D1-070812.ASC	E0921-D2-Channel# Aug12 2007 09-41-07.txt	no video
E0922	4	Water	94.75	0.55	-	-	4	A,B,C,D	4.5/4.5/4.5/4.5	RFO	RFO	RFO	RFO	18000/1/14750/75000	18000/1/14750/75000	18000/1/14750/75000	18000/1/14750/75000	12	O	O	O	O	N	1	E0922-D1-070812.ASC	E0922-D2-Channel# Aug12 2007 09-49-12.txt	no video
E0923	4	Water	94.75	0.55	-	-	4	A,B,C,D	4.5/4.5/4.5/4.5	RFO	RFO	RFO	RFO	18000/1/14750/75000	18000/1/14750/75000	18000/1/14750/75000	18000/1/14750/75000	12	O	O	O	O	N	2	E0923-D1-070812.ASC	E0923-D2-Channel# Aug12 2007 09-53-28.txt	no video
E0924	4	Water	94.75	0.55	-	-	4	A,B,C,D	4.5/4.5/4.5/4.5	RFO	RFO	RFO	RFO	18000/1/14750/75000	18000/1/14750/75000	18000/1/14750/75000	18000/1/14750/75000	12	O	O	O	O	N	3	E0924-D1-070812.ASC	E0924-D2-Channel# Aug12 2007 09-56-46.txt	no video
E0925	4	Water	94.75	0.55	-	-	1	A	4.5	4.00/4.00	-	-	-	18000/1/16750/75000	-	-	-	10	O	O	O	O	N	1	E0925-D1-070812.ASC	E0925-D2-Channel# Aug12 2007 10-20-54.txt	no video
E0926	4	Water	94.75	0.55	-	-	1	A	4.5	4.00/4.00	-	-	-	18000/1/16750/75000	-	-	-	10	O	O	O	O	N	2	E0926-D1-070812.ASC	E0926-D2-Channel# Aug12 2007 10-25-30.txt	no video
E0927	4	Water	94.75	0.55	-	-	1	A	4.5	4.00/4.00	-		-	18000/1/16750/75000	-	-	-	10	O	O	O	O	N	3	E0927-D1-070812.ASC	E0927-D2-Channel# Aug12 2007 10-28-29.txt	no video
E0928	4	Water	94.75	0.55	-	-	2	A,B	4.5	3.99/3.98	4.01/4.02	-	-	18000/1/16750/75000	18000/1/16750/75000	-	-	10	O	O	O	O	N	1	E0928-D1-070812.ASC	E0928-D2-Channel# Aug12 2007 10-34-40.txt	no video
E0929	4	Water	94.75	0.55	-	-	2	A,B	4.5	4.00/3.98	4.01/4.02	-	-	18000/1/16750/75000	18000/1/16750/75000	-	-	10	O	O	O	O	N	2	E0929-D1-070812.ASC	E0929-D2-Channel# Aug12 2007 10-39-06.txt	no video
E0930	4	Water	94.75	0.55	-	-	2	A,B	4.5	4.00/3.98	4.01/4.02	-	-	18000/1/16750/75000	18000/1/16750/75000	-	-	10	O	O	O	O	N	3	E0930-D1-070812.ASC	E0930-D2-Channel# Aug12 2007 10-43-13.txt	no video
E0931	4	Water	94.75	0.55	-	-	1	A	5	4.00	-	-	-	23000/1/19000/75000	-	-	-	8	O	O	O	O	N	1	E0931-D1-070812.ASC	E0931-D2-Channel# Aug12 2007 11-02-49.txt	no video
E0932	4	Water	94.75	0.55	-	-	1	A	5	4.01	-	-	-	23000/1/19000/75000	-	-	-	8	O	O	O	O	N	2	E0932-D1-070812.ASC	E0932-D2-Channel# Aug12 2007 11-07-10.txt	no video
E0933	4	Water	94.75	0.55	-	-	1	A	5	4.01	-	-	-	23000/1/19000/75000	-	-	-	8	O	O	O	O	N	3	E0933-D1-070812.ASC	E0933-D2-Channel# Aug12 2007 11-10-08.txt	no video
E0934	4	Water	94.75	0.55	-	-	2	A,B	5/3.5	3.99	4.04	-	-	23000/1/19000/75000	23000/1/19000/75000	-	-	8	O	O	O	O	N	1	E0934-D1-070812.ASC	E0934-D2-Channel# Aug12 2007 11-16-44.txt	no video
E0935	4	Water	94.75	0.55	-	-	2	A,B	5/3.5	3.99	4.04	-	-	23000/1/19000/75000	23000/1/19000/75000	-	-	8	O	O	O	O	N	2	E0935-D1-070812.ASC	E0935-D2-Channel# Aug12 2007 11-20-31.txt	no video
E0936	4	Water	94.75	0.55	-	-	2	A,B	5/3.5	3.99	4.04	-	-	23000/1/19000/75000	23000/1/19000/75000	-	-	8	O	O	O	O	N	3	E0936-D1-070812.ASC	E0936-D2-Channel# Aug12 2007 11-23-57.txt	no video
E0937	4	Water	94.75	0.55	-	-	1	A	5	2.29	-	-	-	23000/1/22000/75000	-	-	-	6	O	O	O	O	N	1	E0937-D1-070812.ASC	E0937-D2-Channel# Aug12 2007 13-43-34.txt	no video
E0938	4	Water	94.75	0.55	-	-	1	A	5	2.29	-	-	-	23000/1/22000/75000	-	-	-	6	O	O	O	O	N	2	E0938-D1-070812.ASC	E0938-D2-Channel# Aug12 2007 13-47-33.txt	no video
E0939	4	Water	94.75	0.55	-	-	1	A	5	2.29	-	-	-	23000/1/22000/75000	-	-	-	6	O	O	O	O	N	3	E0939-D1-070812.ASC	E0939-D2-Channel# Aug12 2007 13-51-14.txt	no video
E0940	4	Water	94.75	0.55	-	-	2	A,B	4.0/2.0	2.29	2.28	-	-	23000/1/22000/75000	23000/1/22000/75000	-	-	6	O	O	O	O	N	1	E0940-D1-070812.ASC	E0940-D2-Channel# Aug12 2007 13-57-29.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4				
E0941	4	Water	94.75	0.55	-	-	2	A,B	6.0/2.0	2.29	2.28	-	-	23000/1000/ 23000/75000	23000/1/22000/ 75000	-	-	6	O	O	O	O	N	2	E0941-D1-070812.ASC	E0941-D2-Channel# Aug12 2007 14-02-02.txt	no video
E0942	4	Water	94.75	0.55	-	-	2	A,B	6.0/2.0	2.34	2.26	-	-	23000/2000/ 23000/75000	23000/1/22000/ 75000	-	-	6	O	O	O	O	N	3	E0942-D1-070812.ASC	E0942-D2-Channel# Aug12 2007 14-05-51.txt	no video
Middle water level; hydrophone level = M																										
E0943BL	4	Water	94.75	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	N	1	E0943-D1-BL-070812.ASC	E0943-D2-BL-Channel# Aug12 2007 14-25-32.txt	no video
E0943	4	Water	94.75	0.55	-	-	1	A	5	2.32	-	-	-	23000/1/22000/ 75000	-	-	-	6	M	M	M	M	N	1	E0943-D1-070812.ASC	E0943-D2-Channel# Aug12 2007 14-29-30.txt	no video
E0944	4	Water	94.75	0.55	-	-	1	A	5	2.28	-	-	-	23000/1/22000/ 75000	-	-	-	6	M	M	M	M	N	2	E0944-D1-070812.ASC	E0944-D2-Channel# Aug12 2007 14-32-32.txt	no video
E0945	4	Water	94.75	0.55	-	-	1	A	5	2.25	-	-	-	23000/1/22000/ 75000	-	-	-	6	M	M	M	M	N	3	E0945-D1-070812.ASC	E0945-D2-Channel# Aug12 2007 14-34-42.txt	no video
E0946	4	Water	94.75	0.55	-	-	2	A,B	5.0/5.0	2.26	2.29	-	-	23000/1/22000/ 75000	21000/1/24000/ 75000	-	-	6	M	M	M	M	N	1	E0946-D1-070812.ASC	E0946-D2-Channel# Aug12 2007 14-43-37.txt	no video
E0947	4	Water	94.75	0.55	-	-	2	A,B	5.0/5.0	2.28	2.28	-	-	23000/1/22000/ 75000	21000/1/24000/ 75000	-	-	6	M	M	M	M	N	2	E0947-D1-070812.ASC	E0947-D2-Channel# Aug12 2007 14-47-08.txt	no video
E0948	4	Water	94.75	0.55	-	-	2	A,B	5.0/5.0	2.25	2.28	-	-	23000/1/22000/ 75000	21000/1/24000/ 75000	-	-	6	M	M	M	M	N	3	E0948-D1-070812.ASC	E0948-D2-Channel# Aug12 2007 14-49-53.txt	no video
E0949	4	Water	94.75	0.55	-	-	1	A	5	4.00	-	-	-	23000/1/19000/ 75000	-	-	-	8	M	M	M	M	N	1	E0949-D1-070812.ASC	E0949-D2-Channel# Aug12 2007 15-05-19.txt	no video
E0950	4	Water	94.75	0.55	-	-	1	A	5.5	4.00	-	-	-	23000/1/19000/ 75000	-	-	-	8	M	M	M	M	N	2	E0950-D1-070812.ASC	E0950-D2-Channel# Aug12 2007 15-08-41.txt	no video
E0951	4	Water	94.75	0.55	-	-	1	A	5.5	4.00	-	-	-	23000/1/19000/ 75000	-	-	-	8	M	M	M	M	N	3	E0951-D1-070812.ASC	E0951-D2-Channel# Aug12 2007 15-11-53.txt	no video
E0952	4	Water	94.75	0.55	-	-	2	A,B	5/3.5	3.98	3.96	-	-	23000/1/19000/ 75000	23000/1/19000/ 75000	-	-	8	M	M	M	M	N	1	E0952-D1-070812.ASC	E0952-D2-Channel# Aug12 2007 15-16-45.txt	no video
E0953	4	Water	94.75	0.55	-	-	2	A,B	5/3.5	3.98	3.98	-	-	23000/1/19000/ 75000	23000/1/19000/ 75000	-	-	8	M	M	M	M	N	2	E0953-D1-070812.ASC	E0953-D2-Channel# Aug12 2007 15-21-39.txt	no video
E0954	4	Water	94.75	0.55	-	-	2	A,B	5/3.5	3.99	3.97	-	-	23000/1/19000/ 75000	23000/1/19000/ 75000	-	-	8	M	M	M	M	N	3	E0954-D1-070812.ASC	E0954-D2-Channel# Aug12 2007 15-25-28.txt	no video
E0955	4	Water	94.75	0.55	-	-	1	A	5	3.98/ 4.01	-	-	-	18000/1/17000/ 75000	-	-	-	10	M	M	M	M	N	1	E0955-D1-070812.ASC	E0955-D2-Channel# Aug12 2007 15-40-13.txt	no video
E0956	4	Water	94.75	0.55	-	-	1	A	5	3.99/ 4.01	-	-	-	18000/1/17000/ 75000	-	-	-	10	M	M	M	M	N	2	E0956-D1-070812.ASC	E0956-D2-Channel# Aug12 2007 15-43-09.txt	no video
E0957	4	Water	94.75	0.55	-	-	1	A	5	4.00/ 4.02	-	-	-	18000/1/17000/ 75000	-	-	-	10	M	M	M	M	N	3	E0957-D1-070812.ASC	E0957-D2-Channel# Aug12 2007 15-45-37.txt	no video
E0958	4	Water	94.75	0.55	-	-	2	A,B	5/5	3.99/ 3.99	4.11/ 3.99	-	-	18000/1/17000/ 75000	18000/1/17000/ 75000	-	-	10	M	M	M	M	N	1	E0958-D1-070812.ASC	E0958-D2-Channel# Aug12 2007 15-49-52.txt	no video
E0959	4	Water	94.75	0.55	-	-	2	A,B	5/5	3.99/ 3.99	3.99/ 3.99	-	-	18000/1/17000/ 75000	18000/1/17000/ 75000	-	-	10	M	M	M	M	N	2	E0959-D1-070812.ASC	E0959-D2-Channel# Aug12 2007 15-52-52.txt	no video
E0960	4	Water	94.75	0.55	-	-	2	A,B	5/5	3.99/ 3.99	3.99/ 3.99	-	-	18000/1/17000/ 75000	18000/1/17000/ 75000	-	-	10	M	M	M	M	N	3	E0960-D1-070812.ASC	E0960-D2-Channel# Aug12 2007 15-55-51.txt	no video
E0960BL	4	Water	94.75	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	N	1	E0960-D1-BL-070812.ASC	E0960-D2-BL-Channel# Aug12 2007 15-59-13.txt	no video
Middle water level; hydrophone level = M																										
E0961BL	4	Water	94.5	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	N	1	E0961-D1-BL-070813.ASC	E0961-D2-BL-Channel# Aug13 2007 09-28-44.txt	no video
E0961	4	Water	94.5	0.55	-	-	1	A	5	7.25/ 6.89	-	-	-	16000/1/14750/ 75000	-	-	-	12	M	M	M	M	N	1	E0961-D1-070813.ASC	E0961-D2-Channel# Aug13 2007 09-37-44.txt	no video
E0962	4	Water	94.5	0.55	-	-	1	A	5.5	7.25/ 6.89	-	-	-	16000/1/14750/ 75000	-	-	-	12	M	M	M	M	N	2	E0962-D1-070813.ASC	E0962-D2-Channel# Aug13 2007 09-41-41.txt	no video
E0963	4	Water	94.5	0.55	-	-	1	A	5.5	7.25/ 6.89	-	-	-	16000/1/14750/ 75000	-	-	-	12	M	M	M	M	N	3	E0963-D1-070813.ASC	E0963-D2-Channel# Aug13 2007 09-44-41.txt	no video
E0964	4	Water	94.5	0.55	-	-	2	A,B	5.0/5.0	6.85/ 6.59	6.85/ 6.59	-	-	16000/1/14750/ 75000	16000/1/14750/ 75000	-	-	12	M	M	M	M	N	1	E0964-D1-070813.ASC	E0964-D2-Channel# Aug13 2007 09-51-49.txt	no video
E0965	4	Water	94.5	0.55	-	-	2	A,B	4.5/4.5	6.85/ 6.59	6.85/ 6.59	-	-	16000/1/14750/ 75000	16000/1/14750/ 75000	-	-	12	M	M	M	M	N	2	E0965-D1-070813.ASC	E0965-D2-Channel# Aug13 2007 09-56-54.txt	no video
E0966	4	Water	94.5	0.55	-	-	2	A,B	4.5/4.5	6.85/ 6.59	6.85/ 6.59	-	-	16000/1/14750/ 75000	16000/1/14750/ 75000	-	-	12	M	M	M	M	N	3	E0966-D1-070813.ASC	E0966-D2-Channel# Aug13 2007 09-59-48.txt	no video
E0967	4	Water	94.5	0.55	-	-	3	A,B,C	4.5/4.5/4.5	6.72/ 6.01	6.72/ 6.01	6.59/ 5.94	-	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/ 75000	-	12	M	M	M	M	N	1	E0967-D1-070813.ASC	E0967-D2-Channel# Aug13 2007 10-08-14.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E0968	4	Water	94.5	0.55	-	-	3	A,B,C	4.5/4.5/4.5	6.72/ 6.01	6.72/ 6.01	6.59/ 5.94	-	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/ 75000	-	12	M	M	M	M	N	2	E0968-D1-070813.ASC	E0968-D2-Channel# Aug13 2007 10-13-44.txt	no video
E0969	4	Water	94.5	0.55	-	-	3	A,B,C	4.5/4.5/4.5	6.72/ 6.01	6.72/ 6.01	6.59/ 5.94	-	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/ 75000	-	12	M	M	M	M	N	3	E0969-D1-070813.ASC	E0969-D2-Channel# Aug13 2007 10-17-48.txt	no video
E0970	4	Water	94.5	0.55	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	6.3/5.6	6.3/5.6	6.3/5.4	5.8/5.4	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/ 14750/ 75000	12	M	M	M	M	N	1	E0970-D1-070813.ASC	E0970-D2-Channel# Aug13 2007 10-27-18.txt	no video
E0971	4	Water	94.5	0.55	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	6.3/5.6	6.3/5.6	6.3/5.4	5.8/5.4	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/ 14750/ 75000	12	M	M	M	M	N	2	E0971-D1-070813.ASC	E0971-D2-Channel# Aug13 2007 10-32-00.txt	no video
E0972	4	Water	94.5	0.55	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	6.3/5.6	6.3/5.6	6.3/5.4	5.8/5.4	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/ 14750/ 75000	12	M	M	M	M	N	3	E0972-D1-070813.ASC	E0972-D2-Channel# Aug13 2007 10-35-58.txt	no video
Middle water level; hydrophone level = L																											
E0973	4	Water	94.5	0.55	-	-	1	A	5	7.23/ 6.88	-	-	-	16000/1/14750/ 75000	-	-	-	12	L	L	L	L	Y	1	E0973-D1-070813.ASC	E0973-D2-Channel# Aug 13, 2007 11-07-19.txt	no subsurface video
E0974	4	Water	94.5	0.55	-	-	1	A	5.5	7.23/ 6.88	-	-	-	16000/1/14750/ 75000	-	-	-	12	L	L	L	L	Y	2	E0974-D1-070813.ASC	E0974-D2-Channel# Aug 13, 2007 11-11-32.txt	no subsurface video
E0975	4	Water	94.5	0.55	-	-	1	A	5	7.23/ 6.88	-	-	-	16000/1/14750/ 75000	-	-	-	12	L	L	L	L	N	3	E0975-D1-070813.ASC	E0975-D2-Channel# Aug 13, 2007 11-19-17.txt	no video
E0976	4	Water	94.5	0.55	-	-	2	A,B	4.5/4.5	6.98/ 6.54	6.96/ 6.45	-	-	16000/1/14750/ 75000	16000/1/14750/ 75000	-	-	12	L	L	L	L	Y	1	E0976-D1-070813.ASC	E0976-D2-Channel# Aug 13, 2007 11-25-44.txt	E0976-NV-070813
E0977	4	Water	94.5	0.55	-	-	2	A,B	5/5	6.98/ 6.54	6.96/ 6.45	-	-	16000/1/14750/ 75000	16000/1/14750/ 75000	-	-	12	L	L	L	L	Y	2	E0977-D1-070813.ASC	E0977-D2-Channel# Aug 13, 2007 11-33-56.txt	E0977-NV-070813
E0978	4	Water	94.5	0.55	-	-	2	A,B	4.5/4.5	6.98/ 6.54	6.96/ 6.45	-	-	16000/1/14750/ 75000	16000/1/14750/ 75000	-	-	12	L	L	L	L	N	3	E0978-D1-070813.ASC	E0978-D2-Channel# Aug 13, 2007 11-37-17.txt	no video
E0979	4	Water	94.5	0.55	-	-	3	A,B,C	4.5/4.5/4.5	6.32/ 5.86	6.32/ 5.92	6.19/ 5.84	-	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/75 000	-	12	L	L	L	L	Y	1	E0979-D1-070813.ASC	E0979-D2-Channel# Aug 13, 2007 11-45-50.txt	E0979-NV-070813
E0980	4	Water	94.5	0.55	-	-	3	A,B,C	4.5/4.5/4.5	6.32/ 5.86	6.32/ 5.92	6.19/ 5.84	-	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/75 000	-	12	L	L	L	L	Y	2	E0980-D1-070813.ASC	E0980-D2-Channel# Aug 13, 2007 11-53-21.txt	E0980-NV-070813
E0981	4	Water	94.5	0.55	-	-	3	A,B,C	4.5/4.5/4.5	6.32/ 5.86	6.32/ 5.92	6.19/ 5.84	-	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/75 000	-	12	L	L	L	L	N	3	E0981-D1-070813.ASC	E0981-D2-Channel# Aug 13, 2007 11-57-25.txt	no video
E0982	4	Water	94.5	0.55	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	6.4/5.5	6.4/5.5	6.4/5.5	6.4/5.5	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/75 000	16000/1/ 14750/ 75000	12	L	L	L	L	Y	1	E0982-D1-070813.ASC	E0982-D2-Channel# Aug 13, 2007 12-05-07.txt	E0982-NV-070813
E0983	4	Water	94.5	0.55	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	6.4/5.5	6.4/5.5	6.4/5.5	6.4/5.5	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/ 14750/ 75000	12	L	L	L	L	Y	2	E0983-D1-070813.ASC	E0983-D2-Channel# Aug 13, 2007 12-12-16.txt	E0983-NV-070813
E0984	4	Water	94.5	0.55	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	6.4/5.5	6.4/5.5	6.4/5.5	6.4/5.5	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/14750/ 75000	16000/1/ 14750/ 75000	12	L	L	L	L	N	3	E0984-D1-070813.ASC	E0984-D2-Channel# Aug 13, 2007 12-16-02.txt	no video
E0985	4	Water	94.5	0.55	-	-	1	A	5	4.03/4.0 3	-	-	-	18000/1/17000/ 75000	-	-	-	10	L	L	L	L	Y	1	E0985-D1-070813.ASC	E0985-D2-Channel# Aug 13, 2007 13-36-53.txt	E0985-NV-070813
E0986	4	Water	94.5	0.55	-	-	1	A	5	4.03/4.0 3	-	-	-	18000/1/17000/ 75000	-	-	-	10	L	L	L	L	Y	2	E0986-D1-070813.ASC	E0986-D2-Channel# Aug 13, 2007 13-43-13.txt	no subsurface video
E0987	4	Water	94.5	0.55	-	-	1	A	5	4.03/4.0 3	-	-	-	18000/1/17000/ 75000	-	-	-	10	L	L	L	L	N	3	E0987-D1-070813.ASC	E0987-D2-Channel# Aug 13, 2007 13-49-34.txt	no video
E0988	4	Water	94.5	0.55	-	-	2	A,B	5	4.0/3.99	3.95/4. 02	-	-	18000/1/17000/ 75000	18000/1/17000/ 75000	-	-	10	L	L	L	L	Y	1	E0988-D1-070813.ASC	E0988-D2-Channel# Aug 13, 2007 13-58-05.txt	E0988-NV-070813
E0989	4	Water	94.5	0.55	-	-	2	A,B	5	4.0/3.99	3.95/4. 02	-	-	18000/1/17000/ 75000	18000/1/17000/ 75000	-	-	10	L	L	L	L	Y	2	E0989-D1-070813.ASC	E0989-D2-Channel# Aug 13, 2007 14-05-56.txt	E0989-NV-070813
E0990	4	Water	94.5	0.55	-	-	2	A,B	5	4.0/3.99	3.95/4. 02	-	-	18000/1/17000/ 75000	18000/1/17000/ 75000	-	-	10	L	L	L	L	N	3	E0990-D1-070813.ASC	E0990-D2-Channel# Aug 13, 2007 14-12-45.txt	no video
E0991	4	Water	94.5	0.55	-	-	1	B	4.5	-	3.98/4. 05	-	-	-	18000/1/17000/ 75000	-	-	10	L	L	L	L	Y	1	E0991-D1-070813.ASC	E0991-D2-Channel# Aug 13, 2007 14-25-05.txt	E0991-NV-070813
E0992	4	Water	94.5	0.55	-	-	1	A	4.5	4.03	-	-	-	23000/1/19000/ 75000	-	-	-	8	L	L	L	L	Y	1	E0992-D1-070813.ASC	E0992-D2-Channel# Aug 13, 2007 14-40-51.txt	E0992-NV-070813
E0993	4	Water	94.5	0.55	-	-	1	A	5	4.03	-	-	-	23000/1/19000/ 75000	-	-	-	8	L	L	L	L	Y	2	E0993-D1-070813.ASC	E0993-D2-Channel# Aug 13, 2007 14-48-35.txt	no subsurface video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4				
E0994	4	Water	94.5	0.55	-	-	1	A	5	4.04	-	-	-	23000/1/19000/75000	-	-	-	8	L	L	L	L	N	3	E0994-D1-070813.ASC	E0994-D2-Channel# Aug 13, 2007 14-51-14.txt	no video
E0995	4	Water	94.5	0.55	-	-	2	A,B	4.5/3.5	4.01	3.99	-	-	23000/1/19000/75000	23000/1/19000/75000	-	-	8	L	L	L	L	Y	1	E0995-D1-070813.ASC	E0995-D2-Channel# Aug 13, 2007 14-59-59.txt	E0995-NV-070813
E0996	4	Water	94.5	0.55	-	-	2	A,B	5/4	4.02	3.99	-	-	23000/1/19000/75000	23000/1/19000/75000	-	-	8	L	L	L	L	Y	2	E0996-D1-070813.ASC	E0996-D2-Channel# Aug 13, 2007 15-23-37.txt	E0996-NV-070813
E0997	4	Water	94.5	0.55	-	-	2	A,B	5/4	4.02	3.99	-	-	23000/1/19000/75000	23000/1/19000/75000	-	-	8	L	L	L	L	N	3	E0997-D1-070813.ASC	E0997-D2-Channel# Aug 13, 2007 15-28-39.txt	no video
E0998	4	Water	94.5	0.55	-	-	1	B	3.5	-	4.00	-	-	-	23000/1/19000/75000	-	-	8	L	L	L	L	Y	1	E0998-D1-070813.ASC	E0998-D2-Channel# Aug 13, 2007 15-34-37.txt	E0998-NV-070813
E0999	4	Water	94.5	0.55	-	-	1	A	4.5	2.30	-	-	-	23000/1/22000/75000	-	-	-	6	L	L	L	L	Y	1	E0999-D1-070813.ASC	E0999-D2-Channel# Aug 13, 2007 15-54-44.txt	E0999-NV-070813
E1000	4	Water	94.5	0.55	-	-	1	A	4.5	2.26	-	-	-	23000/1/22000/75000	-	-	-	6	L	L	L	L	Y	2	E1000-D1-070813.ASC	E1000-D2-Channel# Aug 13, 2007 16-00-21.txt	no subsurface video
E1001	4	Water	94.5	0.55	-	-	1	A	4.5	2.30	-	-	-	23000/1/22000/75000	-	-	-	6	L	L	L	L	N	3	E1001-D1-070813.ASC	E1001-D2-Channel# Aug 13, 2007 16-03-49.txt	no video
E1002	4	Water	94.5	0.55	-	-	2	A,B	4.5/4.5	2.30	2.30	-	-	23000/1/22000/75000	21000/1/24000/75000	-	-	6	L	L	L	L	Y	1	E1002-D1-070813.ASC	E1002-D2-Channel# Aug 13, 2007 16-11-56.txt	E1002-NV-070813
E1003	4	Water	94.5	0.55	-	-	2	A,B	4.5/4.5	2.30	2.29	-	-	23000/1/22000/75000	21000/1/24000/75000	-	-	6	L	L	L	L	Y	2	E1003-D1-070813.ASC	E1003-D2-Channel# Aug 13, 2007 16-20-33.txt	E1003-NV-070813
E1004	4	Water	94.5	0.55	-	-	2	A,B	4.5/4.5	2.30	2.28	-	-	23000/1/22000/75000	21000/1/24000/75000	-	-	6	L	L	L	L	N	3	E1004-D1-070813.ASC	E1004-D2-Channel# Aug 13, 2007 16-26-26.txt	no video
E1005	4	Water	94.5	0.55	-	-	1	B	4.5	-	2.29	-	-	-	21000/1/24000/75000	-	-	6	L	L	L	L	Y	1	E1005-D1-070813.ASC	E1005-D2-Channel# Aug 13, 2007 16-30-43.txt	E1005-NV-070813
E1005BL	4	Water	94.5	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1005-D1-BL-070813.ASC	E1005-D2-BL-Channel# Aug 13, 2007 16-37-14.txt	no video
Low water level; hydrophone level = L																										
E1006BL	4	Water	131.25	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1006-D1-BL-070814.ASC	E1006-D2-BL-Channel# Aug 14, 2007 09-14-48.txt	no video
E1006	4	Water	131.25	0.3	-	-	1	A	4.5	2.34	-	-	-	33500/2500/19000/75000	-	-	-	6	L	L	L	L	Y	1	E1006-D1-070814.ASC	E1006-D2-Channel# Aug 14, 2007 09-21-11.txt	E1006-NV-070814
E1007	4	Water	131.25	0.3	-	-	1	A	4.5	2.30	-	-	-	33500/2500/19000/75000	-	-	-	6	L	L	L	L	Y	2	E1007-D1-070814.ASC	E1007-D2-Channel# Aug 14, 2007 09-26-24.txt	no subsurface video
E1008	4	Water	131.25	0.3	-	-	1	A	4.5	2.31	-	-	-	33500/2500/19000/75000	-	-	-	6	L	L	L	L	N	3	E1008-D1-070814.ASC	E1008-D2-Channel# Aug 14, 2007 09-30-35.txt	no video
E1009	4	Water	131.25	0.3	-	-	2	A,B	4/3.5	2.29	2.32	-	-	33500/2500/19000/75000	33000/1/22000/75000	-	-	6	L	L	L	L	Y	1	E1009-D1-070814.ASC	E1009-D2-Channel# Aug 14, 2007 09-36-39.txt	E1009-NV-070814
E1010	4	Water	131.25	0.3	-	-	2	A,B	4/3.5	2.28	2.32	-	-	33500/2500/19000/75000	33000/1/22000/75000	-	-	6	L	L	L	L	Y	2	E1010-D1-070814.ASC	E1010-D2-Channel# Aug 14, 2007 09-44-39.txt	E1010-NV-070814
E1011	4	Water	131.25	0.3	-	-	2	A,B	4/3.5	2.28	2.32	-	-	33500/2500/19000/75000	33000/1/22000/75000	-	-	6	L	L	L	L	Y	3	E1011-D1-070814.ASC	E1011-D2-Channel# Aug 14, 2007 09-53-09.txt	E1011-NV-070814
E1012	4	Water	131.25	0.3	-	-	1	B	3.5	-	2.31	-	-	-	33000/1/22000/75000	-	-	6	L	L	L	L	Y	1	E1012-D1-070814.ASC	E1012-D2-Channel# Aug 14, 2007 10-00-19.txt	E1012-NV-070814
E1013	4	Water	131.25	0.3	-	-	1	A	5	4.03	-	-	-	33500/2500/17000/75000	-	-	-	8	L	L	L	L	Y	1	E1013-D1-070814.ASC	E1013-D2-Channel# Aug 14, 2007 10-15-51.txt	E1013-NV-070814
E1014	4	Water	131.25	0.3	-	-	1	A	5	4.03	-	-	-	33500/2500/17000/75000	-	-	-	8	L	L	L	L	Y	2	E1014-D1-070814.ASC	E1014-D2-Channel# Aug 14, 2007 10-21-34.txt	no subsurface video
E1015	4	Water	131.25	0.3	-	-	1	A	5	4.01	-	-	-	33500/2500/17000/75000	-	-	-	8	L	L	L	L	N	3	E1015-D1-070814.ASC	E1015-D2-Channel# Aug 14, 2007 10-24-50.txt	no video
E1016	4	Water	131.25	0.3	-	-	2	A,B	5.5/5.5	4.00	4.00	-	-	33500/2500/17000/75000	33500/1/20000/75000	-	-	8	L	L	L	L	Y	1	E1016-D1-070814.ASC	E1016-D2-Channel# Aug 14, 2007 10-32-40.txt	E1016-NV-070814
E1017	4	Water	131.25	0.3	-	-	2	A,B	5.5/5.5	4.00	4.00	-	-	33500/2500/17000/75000	33500/1/20000/75000	-	-	8	L	L	L	L	Y	2	E1017-D1-070814.ASC	E1017-D2-Channel# Aug 14, 2007 10-41-04.txt	E1017-NV-070814
E1018	4	Water	131.25	0.3	-	-	2	A,B	5.5/5.5	4.02	3.99	-	-	33500/2500/17000/75000	33500/1/20000/75000	-	-	8	L	L	L	L	N	3	E1018-D1-070814.ASC	E1018-D2-Channel# Aug 14, 2007 10-46-47.txt	no video
E1019	4	Water	131.25	0.3	-	-	1	B	5.5	-	4.00	-	-	-	33500/1/20000/75000	-	-	8	L	L	L	L	Y	1	E1019-D1-070814.ASC	E1019-D2-Channel# Aug 14, 2007 10-52-35.txt	E1019-NV-070814
E1020	4	Water	131.25	0.3	-	-	1	A	5	4.04/4.02	-	-	-	29500/1000/16000/75000	-	-	-	10	L	L	L	L	Y	1	E1020-D1-070814.ASC	E1020-D2-Channel# Aug 14, 2007 11-14-21.txt	E1020-NV-070814
E1021	4	Water	131.25	0.3	-	-	1	A	5	4.05/4.03	-	-	-	29500/1000/16000/75000	-	-	-	10	L	L	L	L	Y	2	E1021-D1-070814.ASC	E1021-D2-Channel# Aug 14, 2007 11-19-13.txt	no subsurf video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E1022	4	Water	131.25	0.3	-	-	1	A	5	4.05/ 4.01	-	-	-	29500/1000/ 16000/75000	-	-	-	10	L	L	L	L	N	3	E1022-D1-070814.ASC	E1022-D2-Channel# Aug 14, 2007 11-23-47.txt	no video
E1023	4	Water	131.25	0.3	-	-	2	A,B	5.5/5.5	4.02/ 3.96	4.01/ 4.01	-	-	29500/1000/ 16000/75000	29500/1/17000/ 75000	-	-	10	L	L	L	L	Y	1	E1023-D1-070814.ASC	E1023-D2-Channel# Aug 14, 2007 11-29-17.txt	E1023-NV-070814
E1024	4	Water	131.25	0.3	-	-	2	A,B	5.5/5.5	4.02/ 3.98	4.01/ 4.01	-	-	29500/1000/ 16000/75000	29500/1/17000/ 75000	-	-	10	L	L	L	L	Y	2	E1024-D1-070814.ASC	E1024-D2-Channel# Aug 14, 2007 11-36-47.txt	E1024-NV-070814
E1025	4	Water	131.25	0.3	-	-	2	A,B	5.5/5.5	4.02/ 3.98	4.01/ 3.97	-	-	29500/1000/ 16000/75000	29500/1/17000/ 75000	-	-	10	L	L	L	L	N	3	E1025-D1-070814.ASC	E1025-D2-Channel# Aug 14, 2007 11-42-25.txt	no video
E1026	4	Water	131.25	0.3	-	-	1	B	5.5	-	4.02/ 3.99	-	-	-	29500/1/17000/ 75000	-	-	10	L	L	L	L	Y	1	E1026-D1-070814.ASC	E1026-D2-Channel# Aug 14, 2007 11-46-28.txt	E1026-NV-070814
E1027	4	Water	131.25	0.3	-	-	1	A	5	7.13/ 6.82	-	-	-	25000/1/14500/ 75000	-	-	-	12	L	L	L	L	Y	1	E1027-D1-070814.ASC	E1027-D2-Channel# Aug 14, 2007 13-06-40.txt	E1027-NV-070814
E1028	4	Water	131.25	0.3	-	-	1	A	5	7.11/ 6.83	-	-	-	25000/1/14500/ 75000	-	-	-	12	L	L	L	L	Y	2	E1028-D1-070814.ASC	E1028-D2-Channel# Aug 14, 2007 13-11-59.txt	no subsurface video
E1029	4	Water	131.25	0.3	-	-	1	A	5	7.11/ 6.83	-	-	-	25000/1/14500/ 75000	-	-	-	12	L	L	L	L	N	3	E1029-D1-070814.ASC	E1029-D2-Channel# Aug 14, 2007 13-16-11.txt	no video
E1030	4	Water	131.25	0.3	-	-	2	A,B	4.5/4.5	6.68/ 6.32	6.65/ 6.36	-	-	25000/1/14500/ 75000	25000/1/14500/ 75000	-	-	12	L	L	L	L	Y	1	E1030-D1-070814.ASC	E1030-D2-Channel# Aug 14, 2007 13-23-02.txt	E1030-NV-070814
E1031	4	Water	131.25	0.3	-	-	2	A,B	5/5	6.68/ 6.32	6.65/ 6.36	-	-	25000/1/14500/ 75000	25000/1/14500/ 75000	-	-	12	L	L	L	L	Y	2	E1031-D1-070814.ASC	E1031-D2-Channel# Aug 14, 2007 13-30-53.txt	E1031-NV-070814
Low water level; hydrophone level = O																										
E1032BL	4	Water	131.25	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	N	1	E1032-D1-BL-070814.ASC	E1032-D2-BL-Channel# Aug 14, 2007 13-55-35.txt	no video
E1032	4	Water	131.25	0.3	-	-	1	A	5	7.10/ 6.85	-	-	-	25000/1/14500/ 75000	-	-	-	12	O	O	O	O	N	1	E1032-D1-070814.ASC	E1032-D2-Channel# Aug 14, 2007 14-00-45.txt	no video
E1033	4	Water	131.25	0.3	-	-	1	A	5	7.10/ 6.85	-	-	-	25000/1/14500/ 75000	-	-	-	12	O	O	O	O	N	2	E1033-D1-070814.ASC	E1033-D2-Channel# Aug 14, 2007 14-03-51.txt	no video
E1034	4	Water	131.25	0.3	-	-	1	A	5	7.14/ 6.83	-	-	-	25000/1/14500/ 75000	-	-	-	12	O	O	O	O	N	3	E1034-D1-070814.ASC	E1034-D2-Channel# Aug 14, 2007 14-06-53.txt	no video
E1035	4	Water	131.25	0.3	-	-	2	A,B	5/5	6.94/ 6.40	6.94/ 6.34	-	-	25000/1/14500/ 75000	25000/1/14500/ 75000	-	-	12	O	O	O	O	N	1	E1035-D1-070814.ASC	E1035-D2-Channel# Aug 14, 2007 14-12-22.txt	no video
E1036	4	Water	131.25	0.3	-	-	2	A,B	5/5	6.94/ 6.40	6.94/ 6.34	-	-	25000/1/14500/ 75000	25000/1/14500/ 75000	-	-	12	O	O	O	O	N	2	E1036-D1-070814.ASC	E1036-D2-Channel# Aug 14, 2007 14-16-33.txt	no video
E1037	4	Water	131.25	0.3	-	-	2	A,B	5/5	6.94/ 6.40	6.94/ 6.34	-	-	25000/1/14500/ 75000	25000/1/14500/ 75000	-	-	12	O	O	O	O	N	3	E1037-D1-070814.ASC	E1037-D2-Channel# Aug 14, 2007 14-19-44.txt	no video
E1038	4	Water	131.25	0.3	-	-	3	A,B,C	4.5/4.5/4.5	6.53/ 6.09	6.54/ 6.01	6.48/ 6.01	-	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/ 75000	-	12	O	O	O	O	N	1	E1038-D1-070814.ASC	E1038-D2-Channel# Aug 14, 2007 14-25-26.txt	no video
E1039	4	Water	131.25	0.3	-	-	3	A,B,C	4.5/4.5/4.5	6.53/ 6.09	6.54/ 6.01	6.48/ 6.01	-	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/ 75000	-	12	O	O	O	O	N	2	E1039-D1-070814.ASC	E1039-D2-Channel# Aug 14, 2007 14-30-57.txt	no video
E1040	4	Water	131.25	0.3	-	-	3	A,B,C	4.5/4.5/4.5	6.53/ 6.09	6.54/ 6.01	6.48/ 6.01	-	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/ 75000	-	12	O	O	O	O	N	3	E1040-D1-070814.ASC	E1040-D2-Channel# Aug 14, 2007 14-36-24.txt	no video
E1041	4	Water	131.25	0.3	-	-	3	A,B,C	4.5/4.5/4.5	6.53/ 6.09	6.54/ 6.01	6.48/ 6.01	-	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/ 75000	-	12	O	O	O	O	N	4	E1041-D1-070814.ASC	E1041-D2-Channel# Aug 14, 2007 14-41-51.txt	no video
E1042	4	Water	131.25	0.3	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	5.9/5.2	5.9/5.2	5.9/5.2	5.9/5.2	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/ 14500/ 75000	12	O	O	O	O	N	1	E1042-D1-070814.ASC	E1042-D2-Channel# Aug 14, 2007 14-48-11.txt	no video
E1043	4	Water	131.25	0.3	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	5.9/5.2	5.9/5.2	5.9/5.2	5.9/5.2	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/ 14500/ 75000	12	O	O	O	O	N	2	E1043-D1-070814.ASC	E1043-D2-Channel# Aug 14, 2007 14-54-00.txt	no video
E1044	4	Water	131.25	0.3	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	5.9/5.2	5.9/5.2	5.9/5.2	5.9/5.2	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/ 14500/ 75000	12	O	O	O	O	N	3	E1044-D1-070814.ASC	E1044-D2-Channel# Aug 14, 2007 14-58-37.txt	no video
E1045	4	Water	131.25	0.3	-	-	1	A	5	4.01/ 3.97	-	-	-	29500/1000/ 16000/75000	-	-	-	10	O	O	O	O	N	1	E1045-D1-070814.ASC	E1045-D2-Channel# Aug 14, 2007 15-22-43.txt	no video
E1046	4	Water	131.25	0.3	-	-	1	A	5	4.02/ 4.05	-	-	-	29500/1000/ 16000/75000	-	-	-	10	O	O	O	O	N	2	E1046-D1-070814.ASC	E1046-D2-Channel# Aug 14, 2007 15-26-16.txt	no video
E1047	4	Water	131.25	0.3	-	-	1	A	5	4.01/ 3.97	-	-	-	29500/1000/ 16000/75000	-	-	-	10	O	O	O	O	N	3	E1047-D1-070814.ASC	E1047-D2-Channel# Aug 14, 2007 15-29-52.txt	no video
E1048	4	Water	131.25	0.3	-	-	2	A,B	5/5.5	4.01/ 4.02	3.99/ 4.04	-	-	29500/1000/ 16000/75000	29500/1/17000/ 75000	-	-	10	O	O	O	O	N	1	E1048-D1-070814.ASC	E1048-D2-Channel# Aug 14, 2007 15-35-07.txt	no video
E1049	4	Water	131.25	0.3	-	-	2	A,B	5/5.5	4.01/ 4.02	3.99/ 4.04	-	-	29500/1000/ 16000/75000	29500/1/17000/ 75000	-	-	10	O	O	O	O	N	2	E1049-D1-070814.ASC	E1049-D2-Channel# Aug 14, 2007 15-39-55.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4				
E1050	4	Water	131.25	0.3	-	-	2	A,B	5/5.5	4.01/ 4.02	3.99/ 4.04	-	-	29500/1000/ 16000/75000	29500/1/17000/ 75000	-	-	10	O	O	O	O	N	3	E1050-D1-070814.ASC	E1050-D2-Channel# Aug 14, 2007 15-43-11.txt	no video
E1051	4	Water	131.25	0.3	-	-	1	A	5	4.03	-	-	-	33500/2500/ 17000/75000	-	-	-	8	O	O	O	O	N	1	E1051-D1-070814.ASC	E1051-D2-Channel# Aug 14, 2007 16-00-21.txt	no video
E1052	4	Water	131.25	0.3	-	-	1	A	5.5	4.03	-	-	-	33500/2500/ 17000/75000	-	-	-	8	O	O	O	O	N	2	E1052-D1-070814.ASC	E1052-D2-Channel# Aug 14, 2007 16-07-06.txt	no video
E1053	4	Water	131.25	0.3	-	-	1	A	5.5	4.04	-	-	-	33500/2500/ 17000/75000	-	-	-	8	O	O	O	O	N	3	E1053-D1-070814.ASC	E1053-D2-Channel# Aug 14, 2007 16-09-59.txt	no video
E1054	4	Water	131.25	0.3	-	-	2	A,B	5/5.5	4.02	4.04	-	-	33500/2500/ 17000/75000	33500/1/20000/ 75000	-	-	8	O	O	O	O	N	1	E1054-D1-070814.ASC	E1054-D2-Channel# Aug 14, 2007 16-22-25.txt	no video
E1055	4	Water	131.25	0.3	-	-	2	A,B	5/5	4.02	4.04	-	-	33500/2500/ 17000/75000	33500/1/20000/ 75000	-	-	8	O	O	O	O	N	2	E1055-D1-070814.ASC	E1055-D2-Channel# Aug 14, 2007 16-28-46.txt	no video
E1056	4	Water	131.25	0.3	-	-	2	A,B	5/5.5	4.02	4.04	-	-	33500/2500/ 17000/75000	33500/1/20000/ 75000	-	-	8	O	O	O	O	N	3	E1056-D1-070814.ASC	E1056-D2-Channel# Aug 14, 2007 16-34-11.txt	no video
E1057	4	Water	131.25	0.3	-	-	1	A	4.5	2.33	-	-	-	33500/2500/ 19000/75000	-	-	-	6	O	O	O	O	N	1	E1057-D1-070814.ASC	E1057-D2-Channel# Aug 14, 2007 16-43-48.txt	no video
E1058	4	Water	131.25	0.3	-	-	1	A	4.5	2.31	-	-	-	33500/2500/ 19000/75000	-	-	-	6	O	O	O	O	N	2	E1058-D1-070814.ASC	E1058-D2-Channel# Aug 14, 2007 16-47-29.txt	no video
E1059	4	Water	131.25	0.3	-	-	1	A	4.5	2.31	-	-	-	33500/2500/ 19000/75000	-	-	-	6	O	O	O	O	N	3	E1059-D1-070814.ASC	E1059-D2-Channel# Aug 14, 2007 16-51-21.txt	no video
E1060	4	Water	131.25	0.3	-	-	2	A,B	4/3.5	2.29	2.31	-	-	33500/2500/ 19000/75000	33000/1/22000/ 75000	-	-	6	O	O	O	O	N	1	E1060-D1-070814.ASC	E1060-D2-Channel# Aug 14, 2007 16-58-33.txt	no video
E1061	4	Water	131.25	0.3	-	-	2	A,B	4.5/4	2.29	2.29	-	-	33500/2500/ 19000/75000	33000/1/22000/ 75000	-	-	6	O	O	O	O	N	2	E1061-D1-070814.ASC	E1061-D2-Channel# Aug 14, 2007 17-03-29.txt	no video
E1062	4	Water	131.25	0.3	-	-	2	A,B	4.5/4	2.29	2.30	-	-	33500/2500/ 19000/75000	33000/1/22000/ 75000	-	-	6	O	O	O	O	N	3	E1062-D1-070814.ASC	E1062-D2-Channel# Aug 14, 2007 17-07-28.txt	no video
E1062BL	4	Water	131.25	0.3	-	-	-	-	-	-	-	-	-	33500/2500/ 19000/75000	33000/1/22000/ 75000	-	-	-	O	O	O	O	N	1	E1062-D1-BL-070814.ASC	E1062-D2-BL-Channel# Aug 14, 2007 17-10-38.txt	no video
Low water level; hydrophone level =L																										
E1063BL	4	Water	131	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1063-D1-BL-070815.ASC	E1063-D2-BL-Channel# Aug 15, 2007 09-18-48.txt	no video
E1063	4	Water	131	0.3	-	-	2	A,B	5/5	3.98	4.03	-	-	33500/2500/ 17000/75000	33000/1/20000/ 75000	-	-	8	L	L	L	L	Y	1	E1063-D1-070815.ASC	E1063-D2-Channel# Aug 15, 2007 09-31-35.txt	E1063-NV-070815
E1064	4	Water	131	0.3	-	-	2	A,B	5/5	3.98	4.03	-	-	33500/2500/ 17000/75000	33000/1/20000/ 75000	-	-	8	L	L	L	L	Y	2	E1064-D1-070815.ASC	E1064-D2-Channel# Aug 15, 2007 09-37-16.txt	no subsurface video
E1065	4	Water	131	0.3	-	-	2	A,B	5/5	3.98	4.03	-	-	33500/2500/ 17000/75000	33000/1/20000/ 75000	-	-	8	L	L	L	L	N	3	E1065-D1-070815.ASC	E1065-D2-Channel# Aug 15, 2007 09-40-34.txt	no video
E1066	4	Water	131	0.3	-	-	1	B	5	-	4.03	-	-	-	33000/1/20000/ 75000	-	-	8	L	L	L	L	Y	1	E1066-D1-070815.ASC	E1066-D2-Channel# Aug 15, 2007 09-46-02.txt	E1066-NV-070815
E1067	4	Water	131	0.3	-	-	1	A	5	4.08/ 3.99	-	-	-	29500/1000/ 16000/75000	-	-	-	10	L	L	L	L	Y	1	E1067-D1-070815.ASC	E1067-D2-Channel# Aug 15, 2007 09-59-50.txt	E1067-NV-070815
E1068	4	Water	131	0.3	-	-	1	A	5	4.07/ 3.99	-	-	-	29500/1000/ 16000/75000	-	-	-	10	L	L	L	L	Y	2	E1068-D1-070815.ASC	E1068-D2-Channel# Aug 15, 2007 10-04-46.txt	no subsurface video
E1069	4	Water	131	0.3	-	-	1	A	5	4.05/ 3.98	-	-	-	29500/1000/ 16000/75000	-	-	-	10	L	L	L	L	N	3	E1069-D1-070815.ASC	E1069-D2-Channel# Aug 15, 2007 10-08-41.txt	no video
E1070	4	Water	131	0.3	-	-	2	A,B	5/5	4.00/ 3.94	3.94/ 4.00	-	-	29500/1000/ 16000/75000	29500/1/17000/ 75000	-	-	10	L	L	L	L	Y	1	E1070-D1-070815.ASC	E1070-D2-Channel# Aug 15, 2007 10-20-45.txt	E1070-NV-070815
E1071	4	Water	131	0.3	-	-	2	A,B	5.5/5.5	4.02/ 3.95	3.98/ 3.99	-	-	29500/1000/ 16000/75000	29500/1/17000/ 75000	-	-	10	L	L	L	L	Y	2	E1071-D1-070815.ASC	E1071-D2-Channel# Aug 15, 2007 10-27-34.txt	no subsurface video
E1072	4	Water	131	0.3	-	-	2	A,B	5.5/5.5	4.02/ 3.95	3.98/ 3.99	-	-	29500/1000/ 16000/75000	29500/1/17000/ 75000	-	-	10	L	L	L	L	N	3	E1072-D1-070815.ASC	E1072-D2-Channel# Aug 15, 2007 10-32-43.txt	no video
E1073	4	Water	131	0.3	-	-	2	B	5.5	-	4.05/ 4.01	-	-	-	29500/1/17000/ 75000	-	-	10	L	L	L	L	Y	1	E1073-D1-070815.ASC	E1073-D2-Channel# Aug 15, 2007 10-41-04.txt	E1073-NV-070815
E1074	4	Water	131	0.3	-	-	1	A	5	7.12/ 6.83	-	-	-	25000/1/14500/ 75000	-	-	-	12	L	L	L	L	Y	1	E1074-D1-070815.ASC	E1074-D2-Channel# Aug 15 2007 10-50-20.txt	E1074-NV-070815
E1075	4	Water	131	0.3	-	-	1	A	5	7.16/ 6.86	-	-	-	25000/1/14500/ 75000	-	-	-	12	L	L	L	L	Y	2	E1075-D1-070815.ASC	E1075-D2-Channel# Aug 15 2007 10-55-26.txt	no subsurface video
E1076	4	Water	131	0.3	-	-	1	A	5	7.08/ 6.84	-	-	-	25000/1/14500/ 75000	-	-	-	12	L	L	L	L	N	3	E1076-D1-070815.ASC	E1076-D2-Channel# Aug 15 2007 10-58-33.txt	no video
E1077	4	Water	131	0.3	-	-	2	A,B	4.5/4.5	6.64/	6.95/	-	-	25000/1/14500/	25000/1/14500/	-	-	12	L	L	L	L	Y	1	E1077-D1-	E1077-D2-Channel# Aug 15 2007 11-07-54.txt	E1077-NV-

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
										6.43	6.57			75000	75000										070815.ASC		070815
E1078	4	Water	131	0.3	-	-	2	A,B	5/5	6.64/ 6.43	6.95/ 6.57	-	-	25000/1/14500/ 75000	25000/1/14500/ 75000	-	-	12	L	L	L	L	Y	2	E1078-D1-070815.ASC	E1078-D2-Channel# Aug 15 2007 11-16-02.txt	E1078-NV-070815
E1079	4	Water	131	0.3	-	-	2	A,B	5/5	6.64/ 6.43	6.95/ 6.57	-	-	25000/1/14500/ 75000	25000/1/14500/ 75000	-	-	12	L	L	L	L	N	3	E1079-D1-070815.ASC	E1079-D2-Channel# Aug 15 2007 11-18-56.txt	no video
E1080	4	Water	131	0.3	-	-	3	A,B,C	4.5/4.5/4.5	6.21/ 6.02	6.35/ 6.11	6.25/ 6.08	-	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/75 000	-	12	L	L	L	L	Y	1	E1080-D1-070815.ASC	E1080-D2-Channel# Aug 15 2007 11-29-22.txt	E1080-NV-070815
E1081	4	Water	131	0.3	-	-	3	A,B,C	4.5/4.5/4.5	6.21/ 6.02	6.35/ 6.11	6.25/ 6.08	-	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/75 000	-	12	L	L	L	L	Y	2	E1081-D1-070815.ASC	E1081-D2-Channel# Aug 15 2007 11-38-07.txt	E1081-NV-070815
E1082	4	Water	131	0.3	-	-	3	A,B,C	4.5/4.5/4.5	6.21/ 6.02	6.35/ 6.11	6.25/ 6.08	-	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/75 000	-	12	L	L	L	L	N	3	E1082-D1-070815.ASC	E1082-D2-Channel# Aug 15 2007 11-42-44.txt	no video
E1083	4	Water	131	0.3	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	6.5/5.5	6.5/5.5	6.5/5.5	6.5/5.5	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/75 000	25000/1/ 14500/ 75000	12	L	L	L	L	Y	1	E1083-D1-070815.ASC	E1083-D2-Channel# Aug 15 2007 13-16-42.txt	E1083-NV-070815
E1084	4	Water	131	0.3	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	6.5/5.5	6.5/5.5	6.5/5.5	6.5/5.5	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/75 000	25000/1/ 14500/ 75000	12	L	L	L	L	Y	2	E1084-D1-070815.ASC	E1084-D2-Channel# Aug 15 2007 13-20-59.txt	no subsurface video
E1085	4	Water	131	0.3	-	-	4	A,B,C,D	4.5/4.5/4.5 /4.5	6.5/5.5	6.5/5.5	6.5/5.5	6.5/5.5	25000/1/14500/ 75000	25000/1/14500/ 75000	25000/1/14500/75 000	25000/1/ 14500/ 75000	12	L	L	L	L	N	3	E1085-D1-070815.ASC	E1085-D2-Channel# Aug 15 2007 13-24-18.txt	no video
E1086	4	Water	131	0.3	-	-	1	B	5	-	7.17/ 6.87	-	-	-	25000/1/14500/ 75000	-	-	12	L	L	L	L	Y	1	E1086-D1-070815.ASC	E1086-D2-Channel# Aug 15 2007 13-30-48.txt	E1086-NV-070815
E1086BL	4	Water	131	0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1086-D1-BL-070815.ASC	E1086-D2-BL-Channel# Aug 15 2007 13-36-09.txt	no video
Clay, mid liquid level; hydrophone level =L																										
E1087BL	4	Clay	95	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1087-D1-BL-070827.ASC	E1087-D2-BL-Channel# Aug 27 2007 10-23-01.txt	no video
E1087	4	Clay	95	0.55	33.51	NA	1	A	4	7.16/ 6.85	-	-	-	20000/1/14500/ 75000	-	-	-	12	L	L	L	L	Y	1	E1087-D1-070827.ASC	E1087-D2-Channel# Aug 27 2007 10-36-47.txt	no subsurface video
E1088	4	Clay	95	0.55	33.51	NA	1	A	4	7.16/ 6.85	-	-	-	20000/1/14500/ 75000	-	-	-	12	L	L	L	L	Y	2	E1088-D1-070827.ASC	E1088-D2-Channel# Aug 27 2007 10-43-34.txt	no subsurface video
E1089	4	Clay	95	0.55	33.51	NA	1	A	4	7.16/ 6.85	-	-	-	20000/1/14500/ 75000	-	-	-	12	L	L	L	L	Y	3	E1089-D1-070827.ASC	E1089-D2-Channel# Aug 27 2007 10-49-10.txt	no subsurface video
E1090	4	Clay	95	0.55	33.51	NA	2	A,B	4	6.77/ 6.41	6.75/ 6.42	-	-	20000/1/14500/ 75000	20000/1/14500/ 75000	-	-	12	L	L	L	L	Y	1	E1090-D1-070827.ASC	E1090-D2-Channel# Aug 27 2007 10-58-15.txt	no subsurface video
E1091	4	Clay	95	0.55	33.51	NA	2	A,B	4.5	6.77/ 6.41	6.75/ 6.42	-	-	20000/1/14500/ 75000	20000/1/14500/ 75000	-	-	12	L	L	L	L	Y	2	E1091-D1-070827.ASC	E1091-D2-Channel# Aug 27 2007 11-03-54.txt	no subsurface video
E1092	4	Clay	95	0.55	33.51	NA	2	A,B	4	6.77/ 6.41	6.75/ 6.42	-	-	20000/1/14500/ 75000	20000/1/14500/ 75000	-	-	12	L	L	L	L	Y	3	E1092-D1-070827.ASC	E1092-D2-Channel# Aug 27 2007 11-11-33.txt	no subsurface video
E1093	4	Clay	95	0.55	33.51	NA	3	A,B,C	3.5	6.31/ 6.04	6.31/ 6.01	6.10/ 5.92	-	20000/1/14500/ 75000	20000/1/14500/ 75000	20000/1/14500/ 75000	-	12	L	L	L	L	Y	1	E1093-D1-070827.ASC	E1093-D2-Channel# Aug 27 2007 11-23-37.txt	no subsurface video
E1094	4	Clay	95	0.55	33.51	NA	3	A,B,C	4	6.31/ 6.04	6.31/ 6.01	6.10/ 5.92	-	20000/1/14500/ 75000	20000/1/14500/ 75000	20000/1/14500/ 75000	-	12	L	L	L	L	Y	2	E1094-D1-070827.ASC	E1094-D2-Channel# Aug 27 2007 11-32-03.txt	no subsurface video
E1095	4	Clay	95	0.55	33.51	NA	3	A,B,C	3.5	6.31/ 6.04	6.31/ 6.01	6.10/ 5.92	-	20000/1/14500/ 75000	20000/1/14500/ 75000	20000/1/14500/ 75000	-	12	L	L	L	L	Y	3	E1095-D1-070827.ASC	E1095-D2-Channel# Aug 27 2007 11-38-11.txt	no subsurface video
E1096	4	Clay	95	0.55	33.51	NA	4	A,B,C,D	3.5	6.41/ 5.32	5.88/ 5.64	5.22/ 5.53	5.81/ 5.55	20000/1/14500/ 75000	20000/1/14500/ 75000	20000/1/14500/ 75000	20000/1/ 14500/ 75000	12	L	L	L	L	Y	1	E1096-D1-070827.ASC	E1096-D2-Channel# Aug 27 2007 11-49-34.txt	no subsurface video
E1097	4	Clay	95	0.55	33.51	NA	4	A,B,C,D	3.5	6.41/ 5.32	5.88/ 5.64	5.22/ 5.53	5.81/ 5.55	20000/1/14500/ 75000	20000/1/14500/ 75000	20000/1/14500/ 75000	20000/1/ 14500/ 75000	12	L	L	L	L	Y	2	E1097-D1-070827.ASC	E1097-D2-Channel# Aug 27 2007 11-55-16.txt	no subsurface video
E1098	4	Clay	95	0.55	33.51	NA	4	A,B,C,D	3.5	6.41/ 5.32	5.88/ 5.64	5.22/ 5.53	5.81/ 5.55	20000/1/14500/ 75000	20000/1/14500/ 75000	20000/1/14500/ 75000	20000/1/ 14500/ 75000	12	L	L	L	L	Y	3	E1098-D1-070827.ASC	E1098-D2-Channel# Aug 27 2007 12-01-12.txt	no subsurface video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E1098BL	4	Clay	95	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1098-D1-BL-070827.ASC	E1098-D2-BL-Channel# Aug 27 2007 12-05-11.txt	no subsurface video
E1099BL	4	Clay	95.25	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1099-D1-BL-070828.ASC	E1099-D2-BL-Channel# Aug 28 2007 10-32-29.txt	no subsurface video
E1099	4	Clay	95.25	0.55	33.51	NA	1	A	4	4.81/ 4.81	-	-	-	20000/1/16000/ 75000	-	-	-	10	L	L	L	L	Y	1	E1099-D1-070828.ASC	E1099-D2-Channel# Aug 28 2007 10-41-16.txt	no subsurface video
E1100	4	Clay	95.25	0.55	33.51	NA	1	A	4	4.81/ 4.81	-	-	-	20000/1/16000/ 75000	-	-	-	10	L	L	L	L	Y	2	E1100-D1-070828.ASC	E1100-D2-Channel# Aug 28 2007 10-46-27.txt	no subsurface video
E1101	4	Clay	95.25	0.55	33.51	NA	1	A	4	4.81/ 4.81	-	-	-	20000/1/16000/ 75000	-	-	-	10	L	L	L	L	Y	3	E1101-D1-070828.ASC	E1101-D2-Channel# Aug 28 2007 10-51-27.txt	no subsurface video
E1102	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.76/ 4.77	4.78/ 4.78	-	-	20000/1/16000/ 75000	20000/1/16000/ 75000	-	-	10	L	L	L	L	Y	1	E1102-D1-070828.ASC	E1102-D2-Channel# Aug 28 2007 11-00-51.txt	no subsurface video
E1103	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.76/ 4.77	4.78/ 4.78	-	-	20000/1/16000/ 75000	20000/1/16000/ 75000	-	-	10	L	L	L	L	Y	2	E1103-D1-070828.ASC	E1103-D2-Channel# Aug 28 2007 11-07-42.txt	no subsurface video
E1104	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5/4	4.76/ 4.77	4.78/ 4.78	-	-	20000/1/16000/ 75000	20000/1/16000/ 75000	-	-	10	L	L	L	L	Y	3	E1104-D1-070828.ASC	E1104-D2-Channel# Aug 28 2007 11-13-45.txt	no subsurface video
E1105	4	Clay	95.25	0.55	33.51	NA	1	A	4	4.63	-	-	-	21000/1/17500/ 75000	-	-	-	8	L	L	L	L	Y	1	E1105-D1-070828.ASC	E1105-D2-Channel# Aug 28 2007 11-42-57.txt	no subsurface video
E1106	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	4.63	-	-	-	21000/1/17500/ 75000	-	-	-	8	L	L	L	L	Y	2	E1106-D1-070828.ASC	E1106-D2-Channel# Aug 28 2007 11-48-42.txt	no subsurface video
E1107	4	Clay	95.25	0.55	33.51	NA	1	A	4	4.63	-	-	-	21000/1/17500/ 75000	-	-	-	8	L	L	L	L	Y	3	E1107-D1-070828.ASC	E1107-D2-Channel# Aug 28 2007 11-54-00.txt	no subsurface video
E1108	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	4.61	4.61	-	-	21000/1/17500/ 75000	21000/1/17500/ 75000	-	-	8	L	L	L	L	Y	1	E1108-D1-070828.ASC	E1108-D2-Channel# Aug 28 2007 13-15-27.txt	no subsurface video
E1109	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.61	4.61	-	-	21000/1/17500/ 75000	21000/1/17500/ 75000	-	-	8	L	L	L	L	Y	2	E1109-D1-070828.ASC	E1109-D2-Channel# Aug 28 2007 13-21-27.txt	no subsurface video
E1110	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.61	4.61	-	-	21000/1/17500/ 75000	21000/1/17500/ 75000	-	-	8	L	L	L	L	Y	3	E1110-D1-070828.ASC	E1110-D2-Channel# Aug 28 2007 13-26-15.txt	no subsurface video
E1111	4	Clay	95.25	0.55	33.51	NA	1	A	4	2.64	-	-	-	21000/1/21000/ 75000	-	-	-	6	L	L	L	L	Y	1	E1111-D1-070828.ASC	E1111-D2-Channel# Aug 28 2007 13-49-38.txt	no subsurface video
E1112	4	Clay	95.25	0.55	33.51	NA	1	A	4	2.64	-	-	-	21000/1/21000/ 75000	-	-	-	6	L	L	L	L	Y	2	E1112-D1-070828.ASC	E1112-D2-Channel# Aug 28 2007 13-54-55.txt	no subsurface video
E1113	4	Clay	95.25	0.55	33.51	NA	1	A	3.5	2.64	-	-	-	21000/1/21000/ 75000	-	-	-	6	L	L	L	L	Y	3	E1113-D1-070828.ASC	E1113-D2-Channel# Aug 28 2007 14-00-12.txt	no subsurface video
E1114	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	2.62	2.63	-	-	21000/1/21000/ 75000	21000/1/21000/ 75000	-	-	6	L	L	L	L	Y	1	E1114-D1-070828.ASC	E1114-D2-Channel# Aug 28 2007 14-10-17.txt	no subsurface video
E1115	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	2.62	2.63	-	-	21000/1/21000/ 75000	21000/1/21000/ 75000	-	-	6	L	L	L	L	Y	2	E1115-D1-070828.ASC	E1115-D2-Channel# Aug 28 2007 14-15-33.txt	no subsurface video
E1116	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	2.62	2.63	-	-	21000/1/21000/ 75000	21000/1/21000/ 75000	-	-	6	L	L	L	L	Y	3	E1116-D1-070828.ASC	E1116-D2-Channel# Aug 28 2007 14-21-34.txt	no subsurf. video
Clay, mid liquid level; hydrophone level =O																											
E1117	4	Clay	95.25	0.55	33.51	NA	1	A	4	2.6	-	-	-	21000/1/21000/ 75000	-	-	-	6	O	O	O	O	N	1	E1117-D1-070828.ASC	E1117-D2-Channel# Aug 28 2007 14-52-12.txt	no video
E1118	4	Clay	95.25	0.55	33.51	NA	1	A	4	2.6	-	-	-	21000/1/21000/ 75000	-	-	-	6	O	O	O	O	N	2	E1118-D1-070828.ASC	E1118-D2-Channel# Aug 28 2007 14-55-54.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms))[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E1119	4	Clay	95.25	0.55	33.51	NA	1	A	4	2.6	-	-	-	21000/1/21000/75000	-	-	-	6	O	O	O	O	N	3	E1119-D1-070828.ASC	E1119-D2-Channel# Aug 28 2007 15-00-40.txt	no video
E1120	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	2.64	2.63	-	-	21000/1/21000/75000	21000/1/21000/75000	-	-	6	O	O	O	O	N	1	E1120-D1-070828.ASC	E1120-D2-Channel# Aug 28 2007 15-05-33.txt	no video
E1121	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	2.64	2.63	-	-	21000/1/21000/75000	21000/1/21000/75000	-	-	6	O	O	O	O	N	2	E1121-D1-070828.ASC	E1121-D2-Channel# Aug 28 2007 15-10-33.txt	no video
E1122	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	2.64	2.63	-	-	21000/1/21000/75000	21000/1/21000/75000	-	-	6	O	O	O	O	N	3	E1122-D1-070828.ASC	E1122-D2-Channel# Aug 28 2007 15-14-32.txt	no video
E1123	4	Clay	95.25	0.55	33.51	NA	1	A	4	4.63	-	-	-	21000/1/17500/75000	-	-	-	8	O	O	O	O	N	1	E1123-D1-070828.ASC	E1123-D2-Channel# Aug 28 2007 15-35-26.txt	no video
E1124	4	Clay	95.25	0.55	33.51	NA	1	A	4	4.63	-	-	-	21000/1/17500/75000	-	-	-	8	O	O	O	O	N	2	E1124-D1-070828.ASC	E1124-D2-Channel# Aug 28 2007 15-39-09.txt	no video
E1125	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	4.63	-	-	-	21000/1/17500/75000	-	-	-	8	O	O	O	O	N	3	E1125-D1-070828.ASC	E1125-D2-Channel# Aug 28 2007 15-43-12.txt	no video
E1126	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.61	4.61	-	-	21000/1/17500/75000	21000/1/17500/75000	-	-	8	O	O	O	O	N	1	E1126-D1-070828.ASC	E1126-D2-Channel# Aug 28 2007 15-53-18.txt	no video
E1127	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.61	4.61	-	-	21000/1/17500/75000	21000/1/17500/75000	-	-	8	O	O	O	O	N	2	E1127-D1-070828.ASC	E1127-D2-Channel# Aug 28 2007 15-57-56.txt	no video
E1128	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.61	4.61	-	-	21000/1/17500/75000	21000/1/17500/75000	-	-	8	O	O	O	O	N	3	E1128-D1-070828.ASC	E1128-D2-Channel# Aug 28 2007 16-02-04.txt	no video
E1129	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	4.82/4.83	-	-	-	21000/1/16000/75000	-	-	-	10	O	O	O	O	N	1	E1129-D1-070828.ASC	E1129-D2-Channel# Aug 28 2007 16-19-07.txt	no video
E1130	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	4.82/4.83	-	-	-	21000/1/16000/75000	-	-	-	10	O	O	O	O	N	2	E1130-D1-070828.ASC	E1130-D2-Channel# Aug 28 2007 16-23-43.txt	no video
E1131	4	Clay	95.25	0.55	33.51	NA	1	A	4	4.82/4.83	-	-	-	21000/1/16000/75000	-	-	-	10	O	O	O	O	N	3	E1131-D1-070828.ASC	E1131-D2-Channel# Aug 28 2007 16-27-14.txt	no video
E1132	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.77/4.78	4.79/4.75	-	-	21000/1/16000/75000	21000/1/16000/75000	-	-	10	O	O	O	O	N	1	E1132-D1-070828.ASC	E1132-D2-Channel# Aug 28 2007 16-32-30.txt	no video
E1133	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.77/4.78	4.79/4.75	-	-	21000/1/16000/75000	21000/1/16000/75000	-	-	10	O	O	O	O	N	2	E1133-D1-070828.ASC	E1133-D2-Channel# Aug 28 2007 16-36-24.txt	no video
E1134	4	Clay	95.25	0.55	33.51	NA	2	A,B	5	4.77/4.78	4.79/4.75	-	-	21000/1/16000/75000	21000/1/16000/75000	-	-	10	O	O	O	O	N	3	E1134-D1-070828.ASC	E1134-D2-Channel# Aug 28 2007 16-40-50.txt	no video
E1134BL	4	Clay	95.25	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	N	1	E1134-D1-BL-070828.ASC	E1134-D2-BL-Channel# Aug 28 2007 16-48-37.txt	no video
E1135BL	4	Clay	95.25	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	N	1	E1135-D1-BL-070829.ASC	E1135-D2-BL-Channel# Aug 29 2007 09-51-11.txt	no video
E1135	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	7.15/6.86	-	-	-	21000/1/14500/75000	-	-	-	12	O	O	O	O	N	1	E1135-D1-070829.ASC	E1135-D2-Channel# Aug 29 2007 09-56-38.txt	no video
E1136	4	Clay	95.25	0.55	33.51	NA	1	A	4	7.15/6.86	-	-	-	21000/1/14500/75000	-	-	-	12	O	O	O	O	N	2	E1136-D1-070829.ASC	E1136-D2-Channel# Aug 29 2007 10-02-21.txt	no video
E1137	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	7.15/6.86	-	-	-	21000/1/14500/75000	-	-	-	12	O	O	O	O	N	3	E1137-D1-070829.ASC	E1137-D2-Channel# Aug 29 2007 10-07-41.txt	no video
E1138	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	6.85/6.47	6.84/6.50	-	-	21000/1/14500/75000	21000/1/14500/75000	-	-	12	O	O	O	O	N	1	E1138-D1-070829.ASC	E1138-D2-Channel# Aug 29 2007 10-12-55.txt	no video
E1139	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	6.85/6.47	6.84/6.50	-	-	21000/1/14500/75000	21000/1/14500/75000	-	-	12	O	O	O	O	N	2	E1139-D1-070829.ASC	E1139-D2-Channel# Aug 29 2007 10-25-35.txt	no video
E1140	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	6.85/6.47	6.84/6.50	-	-	21000/1/14500/75000	21000/1/14500/75000	-	-	12	O	O	O	O	N	3	E1140-D1-070829.ASC	E1140-D2-Channel# Aug 29 2007 10-28-24.txt	no video
E1141	4	Clay	95.25	0.55	33.51	NA	3	A,B,C	4	6.21/5.86	6.17/5.84	5.97/5.83	-	21000/1/14500/75000	21000/1/14500/75000	21000/1/14500/75000	-	12	O	O	O	O	N	1	E1141-D1-070829.ASC	E1141-D2-Channel# Aug 29 2007 11-08-09.txt	no video
E1142	4	Clay	95.25	0.55	33.51	NA	3	A,B,C	4	6.21/5.86	6.17/5.84	5.97/5.83	-	21000/1/14500/75000	21000/1/14500/75000	21000/1/14500/75000	-	12	O	O	O	O	N	2	E1142-D1-070829.ASC	E1142-D2-Channel# Aug 29 2007 11-18-21.txt	no video
E1143	4	Clay	95.25	0.55	33.51	NA	3	A,B,C	4	6.21/5.86	6.17/5.84	5.97/5.83	-	21000/1/14500/75000	21000/1/14500/75000	21000/1/14500/75000	-	12	O	O	O	O	N	3	E1143-D1-070829.ASC	E1143-D2-Channel# Aug 29 2007 11-20-50.txt	no video
E1144	4	Clay	95.25	0.55	33.51	NA	4	A,B,C,D	4	5.83/5.42	5.67/5.53	5.74/5.31	5.68/4.98	21000/1/14500/75000	21000/1/14500/75000	21000/1/14500/75000	21000/1/14500/75000	12	O	O	O	O	N	1	E1144-D1-070829.ASC	E1144-D2-Channel# Aug 29 2007 11-25-37.txt	no video
E1145	4	Clay	95.25	0.55	33.51	NA	4	A,B,C,D	4	5.83/5.42	5.67/5.53	5.74/5.31	5.68/4.98	21000/1/14500/75000	21000/1/14500/75000	21000/1/14500/75000	21000/1/14500/75000	12	O	O	O	O	N	2	E1145-D1-070829.ASC	E1145-D2-Channel# Aug 29 2007 11-31-26.txt	no video
E1146	4	Clay	95.25	0.55	33.51	NA	4	A,B,C,D	4	5.83/5.42	5.67/5.53	5.74/5.31	5.68/4.98	21000/1/14500/75000	21000/1/14500/75000	21000/1/14500/75000	21000/1/14500/75000	12	O	O	O	O	N	3	E1146-D1-070829.ASC	E1146-D2-Channel# Aug 29 2007 11-35-46.txt	no video

Clay, mid liquid level; hydrophone level =M

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E1147	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	7.13/ 6.83	-	-	-	21000/1/14500/ 75000	-	-	-	12	M	M	M	M	N	1	E1147-D1-070829.ASC	E1147-D2-Channel# Aug 29 2007 13-05-32.txt	no video
E1148	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	7.13/ 6.83	-	-	-	21000/1/14500/ 75000	-	-	-	12	M	M	M	M	N	2	E1148-D1-070829.ASC	E1148-D2-Channel# Aug 29 2007 13-08-42.txt	no video
E1149	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	7.13/ 6.83	-	-	-	21000/1/14500/ 75000	-	-	-	12	M	M	M	M	N	3	E1149-D1-070829.ASC	E1149-D2-Channel# Aug 29 2007 13-12-14.txt	no video
E1150	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	6.82/ 6.37	6.74/ 6.42	-	-	21000/1/14500/ 75000	21000/1/14500/ 75000	-	-	12	M	M	M	M	N	1	E1150-D1-070829.ASC	E1150-D2-Channel# Aug 29 2007 13-18-06.txt	no video
E1151	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	6.82/ 6.37	6.74/ 6.42	-	-	21000/1/14500/ 75000	21000/1/14500/ 75000	-	-	12	M	M	M	M	N	2	E1151-D1-070829.ASC	E1151-D2-Channel# Aug 29 2007 13-23-40.txt	no video
E1152	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	6.82/ 6.37	6.74/ 6.42	-	-	21000/1/14500/ 75000	21000/1/14500/ 75000	-	-	12	M	M	M	M	N	3	E1152-D1-070829.ASC	E1152-D2-Channel# Aug 29 2007 13-26-35.txt	no video
E1153	4	Clay	95.25	0.55	33.51	NA	3	A,B,C	4	6.44/ 5.91	6.40/ 5.91	6.05/ 5.83	-	21000/1/14500/ 75000	21000/1/14500/ 75000	21000/1/14500/ 75000	-	12	M	M	M	M	N	1	E1153-D1-070829.ASC	E1153-D2-Channel# Aug 29 2007 13-32-18.txt	no video
E1154	4	Clay	95.25	0.55	33.51	NA	3	A,B,C	4	6.44/ 5.91	6.40/ 5.91	6.05/ 5.83	-	21000/1/14500/ 75000	21000/1/14500/ 75000	21000/1/14500/ 75000	-	12	M	M	M	M	N	2	E1154-D1-070829.ASC	E1154-D2-Channel# Aug 29 2007 13-35-36.txt	no video
E1155	4	Clay	95.25	0.55	33.51	NA	3	A,B,C	4	6.44/ 5.91	6.40/ 5.91	6.05/ 5.83	-	21000/1/14500/ 75000	21000/1/14500/ 75000	21000/1/14500/ 75000	-	12	M	M	M	M	N	3	E1155-D1-070829.ASC	E1155-D2-Channel# Aug 29 2007 13-40-52.txt	no video
E1156	4	Clay	95.25	0.55	33.51	NA	4	A,B,C,D	4	6.05/ 5.41	5.83/ 5.43	5.76/ 5.33	5.23/ 5.47	21000/1/14500/ 75000	21000/1/14500/ 75000	21000/1/14500/ 75000	21000/1/ 14500/ 75000	12	M	M	M	M	N	1	E1156-D1-070829.ASC	E1156-D2-Channel# Aug 29 2007 13-49-13.txt	no video
E1157	4	Clay	95.25	0.55	33.51	NA	4	A,B,C,D	4	6.05/ 5.41	5.83/ 5.43	5.76/ 5.33	5.23/ 5.47	21000/1/14500/ 75000	21000/1/14500/ 75000	21000/1/14500/ 75000	21000/1/ 14500/ 75000	12	M	M	M	M	N	2	E1157-D1-070829.ASC	E1157-D2-Channel# Aug 29 2007 14-04-07.txt	no video
E1158	4	Clay	95.25	0.55	33.51	NA	4	A,B,C,D	4	6.05/ 5.41	5.83/ 5.43	5.76/ 5.33	5.23/ 5.47	21000/1/14500/ 75000	21000/1/14500/ 75000	21000/1/14500/ 75000	21000/1/ 14500/ 75000	12	M	M	M	M	N	3	E1158-D1-070829.ASC	E1158-D2-Channel# Aug 29 2007 14-08-18.txt	no video
E1159	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	4.81/4.87	-	-	-	21000/1/16000/ 75000	-	-	-	10	M	M	M	M	N	1	E1159-D1-070829.ASC	E1159-D2-Channel# Aug 29 2007 14-27-47.txt	no video
E1160	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	4.81/4.86	-	-	-	21000/1/16000/ 75000	-	-	-	10	M	M	M	M	N	2	E1160-D1-070829.ASC	E1160-D2-Channel# Aug 29 2007 14-31-35.txt	no video
E1161	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	4.81/4.80	-	-	-	21000/1/16000/ 75000	-	-	-	10	M	M	M	M	N	3	E1161-D1-070829.ASC	E1161-D2-Channel# Aug 29 2007 14-35-51.txt	no video
E1162	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.77/4.75	4.82/ 4.79	-	-	21000/1/16000/ 75000	21000/1/16000/ 75000	-	-	10	M	M	M	M	N	1	E1162-D1-070829.ASC	E1162-D2-Channel# Aug 29 2007 14-39-47.txt	no video
E1163	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.77/4.75	4.82/ 4.79	-	-	21000/1/16000/ 75000	21000/1/16000/ 75000	-	-	10	M	M	M	M	N	2	E1163-D1-070829.ASC	E1163-D2-Channel# Aug 29 2007 14-42-52.txt	no video
E1164	4	Clay	95.25	0.55	33.51	NA	2	A,B	4.5	4.77/4.75	4.82/ 4.79	-	-	21000/1/16000/ 75000	21000/1/16000/ 75000	-	-	10	M	M	M	M	N	3	E1164-D1-070829.ASC	E1164-D2-Channel# Aug 29 2007 14-46-24.txt	no video
E1165	4	Clay	95.25	0.55	33.51	NA	1	A	4	4.64	-	-	-	21000/1/17500/ 75000	-	-	-	8	M	M	M	M	N	1	E1165-D1-070829.ASC	E1165-D2-Channel# Aug 29 2007 14-55-11.txt	no video
E1166	4	Clay	95.25	0.55	33.51	NA	1	A	4	4.64	-	-	-	21000/1/17500/ 75000	-	-	-	8	M	M	M	M	N	2	E1166-D1-070829.ASC	E1166-D2-Channel# Aug 29 2007 14-58-04.txt	no video
E1167	4	Clay	95.25	0.55	33.51	NA	1	A	4.5	4.64	-	-	-	21000/1/17500/ 75000	-	-	-	8	M	M	M	M	N	3	E1167-D1-070829.ASC	E1167-D2-Channel# Aug 29 2007 15-01-56.txt	no video
E1168	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	4.61	4.62	-	-	21000/1/17500/ 75000	21000/1/17500/ 75000	-	-	8	M	M	M	M	N	1	E1168-D1-070829.ASC	E1168-D2-Channel# Aug 29 2007 15-05-18.txt	no video
E1169	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	4.61	4.62	-	-	21000/1/17500/ 75000	21000/1/17500/ 75000	-	-	8	M	M	M	M	N	2	E1169-D1-070829.ASC	E1169-D2-Channel# Aug 29 2007 15-08-42.txt	no video
E1170	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	4.61	4.62	-	-	21000/1/17500/ 75000	21000/1/17500/ 75000	-	-	8	M	M	M	M	N	3	E1170-D1-070829.ASC	E1170-D2-Channel# Aug 29 2007 15-11-14.txt	no video
E1171	4	Clay	95.25	0.55	33.51	NA	1	A	3.5	2.64	-	-	-	22000/1/21000/ 75000	-	-	-	6	M	M	M	M	N	1	E1171-D1-070829.ASC	E1171-D2-Channel# Aug 29 2007 15-24-37.txt	no video
E1172	4	Clay	95.25	0.55	33.51	NA	1	A	3.5	2.64	-	-	-	22000/1/21000/ 75000	-	-	-	6	M	M	M	M	N	2	E1172-D1-070829.ASC	E1172-D2-Channel# Aug 29 2007 15-27-26.txt	no video
E1173	4	Clay	95.25	0.55	33.51	NA	1	A	3.5	2.64	-	-	-	22000/1/21000/ 75000	-	-	-	6	M	M	M	M	N	3	E1173-D1-070829.ASC	E1173-D2-Channel# Aug 29 2007 15-30-34.txt	no video
E1174	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	2.6	2.61	-	-	22000/1/21000/ 75000	22000/1/21000/ 75000	-	-	6	M	M	M	M	N	1	E1174-D1-070829.ASC	E1174-D2-Channel# Aug 29 2007 15-36-45.txt	no video
E1175	4	Clay	95.25	0.55	33.51	NA	2	A,B	4	2.6	2.61	-	-	22000/1/21000/ 75000	22000/1/21000/ 75000	-	-	6	M	M	M	M	N	2	E1175-D1-070829.ASC	E1175-D2-Channel# Aug 29 2007 15-39-34.txt	no video
E1176	4	Clay	95.25	0.55	33.51	NA	2	A,B	3.5	2.6	2.61	-	-	22000/1/21000/ 75000	22000/1/21000/ 75000	-	-	6	M	M	M	M	N	3	E1176-D1-070829.ASC	E1176-D2-Channel# Aug 29 2007 15-42-32.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E1176BL	4	Clay	95.25	0.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	N	1	E1176-D1-BL-070829.ASC	E1176-D2-BL-Channel# Aug 29 2007 15-47-20.txt	no video
Clay, low liquid level; hydrophone level =L																											
E1177BL	4	Clay	131.375	0.3	31	-	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	baseline file lost	E1177-D2-BL-Channel# Aug 30 2007 12-39-46.txt	no video
E1177	4	Clay	131.375	0.3	31	NA	1	A	4	2.59	-	-	-	35000/1/20000/75000	-	-	-	6	L	L	L	L	Y	1	E1177-D1-070830.asc	E1177-D2-Channel# Aug30 2007 13-09-55.txt	no subsurface video
E1178	4	Clay	131.375	0.3	31	NA	1	A	4	2.59	-	-	-	35000/1/20000/75000	-	-	-	6	L	L	L	L	Y	2	E1178-D1-070830.asc	E1178-D2-Channel# Aug30 2007 13-23-25.txt	no subsurface video
E1179	4	Clay	131.375	0.3	31	NA	1	A	4	2.59	-	-	-	35000/1/20000/75000	-	-	-	6	L	L	L	L	Y	3	E1179-D1-070830.asc	E1179-D2-Channel# Aug30 2007 13-27-59.txt	no subsurface video
E1180	4	Clay	131.375	0.3	31	NA	2	A,B	4/4	2.61	2.61	-	-	35000/1/20000/75000	35000/1/20000/75000	-	-	6	L	L	L	L	Y	1	E1180-D1-070830.asc	E1180-D2-Channel# Aug30 2007 13-34-13.txt	no subsurface video
E1181	4	Clay	131.375	0.3	31	NA	2	A,B	4/4	2.61	2.61	-	-	35000/1/20000/75000	35000/1/20000/75000	-	-	6	L	L	L	L	Y	2	E1181-D1-070830.asc	E1181-D2-Channel# Aug30 2007 13-39-07.txt	no subsurface video
E1182	4	Clay	131.375	0.3	31	NA	2	A,B	4/4	2.61	2.61	-	-	35000/1/20000/75000	35000/1/20000/75000	-	-	6	L	L	L	L	Y	3	E1182-D1-070830.asc	E1182-D2-Channel# Aug30 2007 13-43-11.txt	no subsurface video
E1183	4	Clay	131.375	0.3	31	NA	1	A	4.5	4.59	-	-	-	35000/1/17000/75000	-	-	-	8	L	L	L	L	Y	1	E1183-D1-070830.asc	E1183-D2-Channel# Aug30 2007 14-04-06.txt	no subsurface video
E1184	4	Clay	131.375	0.3	31	NA	1	A	4.5	4.59	-	-	-	35000/1/17000/75000	-	-	-	8	L	L	L	L	Y	2	E1184-D1-070830.asc	E1184-D2-Channel# Aug30 2007 14-07-59.txt	no subsurface video
E1185	4	Clay	131.375	0.3	31	NA	1	A	4.0	4.59	-	-	-	35000/1/17000/75000	-	-	-	8	L	L	L	L	Y	3	E1185-D1-070830.asc	E1185-D2-Channel# Aug30 2007 14-12-13.txt	no subsurface video
E1186	4	Clay	131.375	0.3	31	NA	2	A,B	4.5/4.5	4.57	4.6	-	-	35000/1/17000/75000	35000/1/17000/75000	-	-	8	L	L	L	L	Y	1	E1186-D1-070830.asc	E1186-D2-Channel# Aug30 2007 14-18-56.txt	no subsurface video
E1187	4	Clay	131.375	0.3	31	NA	2	A,B	4.5/4.5	4.57	4.6	-	-	35000/1/17000/75000	35000/1/17000/75000	-	-	8	L	L	L	L	Y	2	E1187-D1-070830.asc	E1187-D2-Channel# Aug30 2007 14-23-45.txt	no subsurface video
E1188	4	Clay	131.375	0.3	31	NA	2	A,B	4.5/4.5	4.57	4.6	-	-	35000/1/17000/75000	35000/1/17000/75000	-	-	8	L	L	L	L	Y	3	E1188-D1-070830.asc	E1188-D2-Channel# Aug30 2007 14-27-45.txt	no subsurface video
E1189	4	Clay	131.375	0.3	31	NA	1	A	4.0	4.87/4.86	-	-	-	26000/1/15000/75000	-	-	-	10	L	L	L	L	Y	1	E1189-D1-070830.asc	E1189-D2-Channel# Aug30 2007 14-47-42.txt	no subsurface video
E1190	4	Clay	131.375	0.3	31	NA	1	A	4.0	4.83/4.82	-	-	-	26000/1/15000/75000	-	-	-	10	L	L	L	L	Y	2	E1190-D1-070830.asc	E1190-D2-Channel# Aug30 2007 14-51-34.txt	no subsurface video
E1191	4	Clay	131.375	0.3	31	NA	1	A	4.0	4.83/4.82	-	-	-	26000/1/15000/75000	-	-	-	10	L	L	L	L	Y	3	E1191-D1-070830.asc	E1191-D2-Channel# Aug30 2007 15-03-30.txt	no subsurface video
E1192	4	Clay	131.375	0.3	31	NA	2	A,B	4/4	4.79/4.78	4.81/4.79	-	-	26000/1/15000/75000	26000/1/15000/75000	-	-	10	L	L	L	L	Y	1	E1192-D1-070830.asc	E1192-D2-Channel# Aug30 2007 15-16-04.txt	no subsurface video
E1193	4	Clay	131.375	0.3	31	NA	2	A,B	4/4	4.79/4.78	4.81/4.79	-	-	26000/1/15000/75000	26000/1/15000/75000	-	-	10	L	L	L	L	Y	2	E1193-D1-070830.asc	E1193-D2-Channel# Aug30 2007 15-19-41.txt	no subsurface video
E1194	4	Clay	131.375	0.3	31	NA	2	A,B	4/4	4.79/4.78	4.81/4.79	-	-	26000/1/15000/75000	26000/1/15000/75000	-	-	10	L	L	L	L	Y	3	E1194-D1-070830.asc	E1194-D2-Channel# Aug30 2007 15-22-54.txt	no subsurface video
E1195	4	Clay	131.375	0.3	31	NA	1	A	4.5	RFO	-	-	-	27000/1/14000/75000	-	-	-	12	L	L	L	L	Y	1	E1195-D1-070830.asc	E1195-D2-Channel# Aug30 2007 15-41-06.txt	no subsurface video
E1196	4	Clay	131.375	0.3	31	NA	1	A	4.5	RFO	-	-	-	27000/1/14000/75000	-	-	-	12	L	L	L	L	Y	2	E1196-D1-070830.asc	E1196-D2-Channel# Aug30 2007 15-44-33.txt	no subsurf. video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E1197	4	Clay	131.375	0.3	31	NA	1	A	4.5	RFO	-	-	-	27000/1/14000/75000	-	-	-	12	L	L	L	L	Y	3	E1197-D1-070830.asc	E1197-D2-Channel# Aug30 2007 15-47-36.txt	no subsurface video
E1198	4	Clay	131.375	0.3	31	NA	2	A,B	4.5/4.5	RFO	RFO	-	-	27000/1/14000/75000	27000/1/14000/75000	-	-	12	L	L	L	L	Y	1	E1198-D1-070830.asc	E1198-D2-Channel# Aug30 2007 15-53-47.txt	no subsurface video
E1199	4	Clay	131.375	0.3	31	NA	2	A,B	4/4	RFO	RFO	-	-	27000/1/14000/75000	27000/1/14000/75000	-	-	12	L	L	L	L	Y	2	E1199-D1-070830.asc	E1199-D2-Channel# Aug30 2007 16-01-00.txt	no subsurface video
E1200	4	Clay	131.375	0.3	31	NA	2	A,B	4/4	RFO	RFO	-	-	27000/1/14000/75000	27000/1/14000/75000	-	-	12	L	L	L	L	Y	3	E1200-D1-070830.asc	E1200-D2-Channel# Aug30 2007 16-04-20.txt	no subsurface video
E1201	4	Clay	131.375	0.3	31	NA	3	A,B,C	4/4/4	RFO	RFO	RFO	-	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	-	12	L	L	L	L	Y	1	E1201-D1-070830.asc	E1201-D2-Channel# Aug30 2007 16-12-55.txt	no subsurface video
E1202	4	Clay	131.375	0.3	31	NA	3	A,B,C	4/4/4	RFO	RFO	RFO	-	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	-	12	L	L	L	L	Y	2	E1202-D1-070830.asc	E1202-D2-Channel# Aug30 2007 16-16-09.txt	no subsurface video
E1203	4	Clay	131.375	0.3	31	NA	3	A,B,C	4/4/4	RFO	RFO	RFO	-	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	-	12	L	L	L	L	Y	3	E1203-D1-070830.asc	E1203-D2-Channel# Aug30 2007 16-19-14.txt	no subsurface video
E1204	4	Clay	131.375	0.3	31	NA	4	A,B,C,D	4/4/4/4	RFO	RFO	RFO	RFO	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	12	L	L	L	L	Y	1	E1204-D1-070830.asc	E1204-D2-Channel# Aug30 2007 16-23-26.txt	no subsurface video
E1205	4	Clay	131.375	0.3	31	NA	4	A,B,C,D	4/4/4/4	RFO	RFO	RFO	RFO	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	12	L	L	L	L	Y	2	E1205-D1-070830.asc	E1205-D2-Channel# Aug30 2007 16-26-20.txt	no subsurface video
E1206	4	Clay	131.375	0.3	31	NA	4	A,B,C,D	4/4/4/4	RFO	RFO	RFO	RFO	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	12	L	L	L	L	Y	3	E1206-D1-070830.asc	E1206-D2-Channel# Aug30 2007 16-29-30.txt	no subsurface video
E1206BL	4	Clay	131.375	0.3	31	NA	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1206-D1-BL-070830.asc	E1206-D2-Channel# BL-Aug30 2007 16-33-35.txt	no video
Clay, low liquid level; hydrophone level =O																											
E1207BL	4	Clay	131.75	0.3	31	NA	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	N	1	E1207-D1-BL-070831.asc	E1207-D2-Channel# BL-Aug31 2007 09-02-34.txt	no video
E1207	4	Clay	131.75	0.3	31	NA	1	A	4.5	RFO	-	-	-	27000/1/14000/75000	-	-	-	12	O	O	O	O	N	1	E1207-D1-070831.asc	E1207-D2-Channel# Aug31 2007 09-17-35.txt	no video
E1208	4	Clay	131.75	0.3	31	NA	1	A	4.5	RFO	-	-	-	27000/1/14000/75000	-	-	-	12	O	O	O	O	N	2	E1208-D1-070831.asc	E1208-D2-Channel# Aug31 2007 09-21-30.txt	no video
E1209	4	Clay	131.75	0.3	31	NA	1	A	4	RFO	-	-	-	27000/1/14000/75000	-	-	-	12	O	O	O	O	N	3	E1209-D1-070831.asc	E1209-D2-Channel# Aug31 2007 09-24-44.txt	no video
E1210	4	Clay	131.75	0.3	31	NA	2	A,B	4/4.5	RFO	RFO	-	-	27000/1/14000/75000	27000/1/14000/75000	-	-	12	O	O	O	O	N	1	E1210-D1-070831.asc	E1210-D2-Channel# Aug31 2007 09-29-25.txt	no video
E1211	4	Clay	131.75	0.3	31	NA	2	A,B	4/4.5	RFO	RFO	-	-	27000/1/14000/75000	27000/1/14000/75000	-	-	12	O	O	O	O	N	2	E1211-D1-070831.asc	E1211-D2-Channel# Aug31 2007 09-32-41.txt	no video
E1212	4	Clay	131.75	0.3	31	NA	2	A,B	4/4.5	RFO	RFO	-	-	27000/1/14000/75000	27000/1/14000/75000	-	-	12	O	O	O	O	N	3	E1212-D1-070831.asc	E1212-D2-Channel# Aug31 2007 09-35-38.txt	no video
E1213	4	Clay	131.75	0.3	31	NA	3	A,B,C	4/4/4	RFO	RFO	RFO	-	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	-	12	O	O	O	O	N	1	E1213-D1-070831.asc	E1213-D2-Channel# Aug31 2007 09-40-54.txt	no video
E1214	4	Clay	131.75	0.3	31	NA	3	A,B,C	4.5/4.5/4.5	RFO	RFO	RFO	-	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	-	12	O	O	O	O	N	2	E1214-D1-070831.asc	E1214-D2-Channel# Aug31 2007 09-44-11.txt	no video
E1215	4	Clay	131.75	0.3	31	NA	3	A,B,C	4.5/4.5/4.5	RFO	RFO	RFO	-	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	-	12	O	O	O	O	N	3	E1215-D1-070831.asc	E1215-D2-Channel# Aug31 2007 09-46-47.txt	no video
E1216	4	Clay	131.75	0.3	31	NA	4	A,B,C,D	4/4/4/4	RFO	RFO	RFO	RFO	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	12	O	O	O	O	N	1	E1216-D1-070831.asc	E1216-D2-Channel# Aug31 2007 09-51-53.txt	no video
E1217	4	Clay	131.75	0.3	31	NA	4	A,B,C,D	4.5/4.5/4.5/4.5	RFO	RFO	RFO	RFO	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	12	O	O	O	O	N	2	E1217-D1-070831.asc	E1217-D2-Channel# Aug31 2007 09-54-59.txt	no video
E1218	4	Clay	131.75	0.3	31	NA	4	A,B,C,D	4.5/4.5/4.5/4.5	RFO	RFO	RFO	RFO	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	27000/1/14000/75000	12	O	O	O	O	N	3	E1218-D1-070831.asc	E1218-D2-Channel# Aug31 2007 09-58-38.txt	no video
E1219	4	Clay	131.75	0.3	31	NA	1	A	4	NR	-	-	-	26000/1/15000/75000	-	-	-	10	O	O	O	O	N	1	E1219-D1-070831.asc	E1219-D2-Channel# Aug31 2007 10-30-51.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E1220	4	Clay	131.75	0.3	31	NA	1	A	4	4.84/ 4.84	-	-	-	26000/1/15000/ 75000	-	-	-	10	O	O	O	O	N	2	E1220-D1-070831.asc	E1220-D2-Channel# Aug31 2007 10-34-30.txt	no video
E1221	4	Clay	131.75	0.3	31	NA	1	A	4	4.84/ 4.84	-	-	-	26000/1/15000/ 75000	-	-	-	10	O	O	O	O	N	3	E1221-D1-070831.asc	E1221-D2-Channel# Aug31 2007 10-37-15.txt	no video
E1222	4	Clay	131.75	0.3	31	NA	2	A,B	4/4	4.82/ 4.78	4.80/ 4.79	-	-	26000/1/15000/ 75000	26000/1/15000/ 75000	-	-	10	O	O	O	O	N	1	E1222-D1-070831.asc	E1222-D2-Channel# Aug31 2007 10-42-19.txt	no video
E1223	4	Clay	131.75	0.3	31	NA	2	A,B	4/4	4.82/ 4.78	4.80/ 4.79	-	-	26000/1/15000/ 75000	26000/1/15000/ 75000	-	-	10	O	O	O	O	N	2	E1223-D1-070831.asc	E1223-D2-Channel# Aug31 2007 10-45-00.txt	no video
E1224	4	Clay	131.75	0.3	31	NA	2	A,B	4/4	4.82/ 4.78	4.80/ 4.79	-	-	26000/1/15000/ 75000	26000/1/15000/ 75000	-	-	10	O	O	O	O	N	3	E1224-D1-070831.asc	E1224-D2-Channel# Aug31 2007 10-47-50.txt	no video
E1225	4	Clay	131.75	0.3	31	NA	1	A	4	4.64	-	-	-	35000/1/17000/ 75000	-	-	-	8	O	O	O	O	N	1	E1225-D1-070831.asc	E1225-D2-Channel# Aug31 2007 11-10-54.txt	no video
E1226	4	Clay	131.75	0.3	31	NA	1	A	4	4.64	-	-	-	35000/1/17000/ 75000	-	-	-	8	O	O	O	O	N	2	E1226-D1-070831.asc	E1226-D2-Channel# Aug31 2007 11-14-40.txt	no video
E1227	4	Clay	131.75	0.3	31	NA	1	A	4	4.64	-	-	-	35000/1/17000/ 75000	-	-	-	8	O	O	O	O	N	3	E1227-D1-070831.asc	E1227-D2-Channel# Aug31 2007 11-17-18.txt	no video
E1228	4	Clay	131.75	0.3	31	NA	2	A,B	4/4	4.61	4.56	-	-	35000/1/17000/ 75000	35000/1/17000/ 75000	-	-	8	O	O	O	O	N	1	E1228-D1-070831.asc	E1228-D2-Channel# Aug31 2007 11-22-48.txt	no video
E1229	4	Clay	131.75	0.3	31	NA	2	A,B	4/4	4.61	4.56	-	-	35000/1/17000/ 75000	35000/1/17000/ 75000	-	-	8	O	O	O	O	N	2	E1229-D1-070831.asc	E1229-D2-Channel# Aug31 2007 11-26-10.txt	no video
E1230	4	Clay	131.75	0.3	31	NA	2	A,B	4/4	4.61	4.56	-	-	35000/1/17000/ 75000	35000/1/17000/ 75000	-	-	8	O	O	O	O	N	3	E1230-D1-070831.asc	E1230-D2-Channel# Aug31 2007 11-29-05.txt	no video
E1231	4	Clay	131.75	0.3	31	NA	1	A	4	2.61	-	-	-	35000/1/20000/ 75000	-	-	-	6	O	O	O	O	N	1	E1231-D1-070831.asc	E1231-D2-Channel# Aug31 2007 11-41-56.txt	no video
E1232	4	Clay	131.75	0.3	31	NA	1	A	4	2.61	-	-	-	35000/1/20000/ 75000	-	-	-	6	O	O	O	O	N	2	E1232-D1-070831.asc	E1232-D2-Channel# Aug31 2007 11-45-34.txt	no video
E1233	4	Clay	131.75	0.3	31	NA	1	A	4	2.61	-	-	-	35000/1/20000/ 75000	-	-	-	6	O	O	O	O	N	3	E1233-D1-070831.asc	E1233-D2-Channel# Aug31 2007 11-48-30.txt	no video
E1234	4	Clay	131.75	0.3	31	NA	2	A,B	4/4	2.61	2.6	-	-	35000/1/20000/ 75000	35000/1/20000/ 75000	-	-	6	O	O	O	O	N	1	E1234-D1-070831.asc	E1234-D2-Channel# Aug31 2007 11-52-51.txt	no video
E1235	4	Clay	131.75	0.3	31	NA	2	A,B	4/4	2.61	2.6	-	-	35000/1/20000/ 75000	35000/1/20000/ 75000	-	-	6	O	O	O	O	N	2	E1235-D1-070831.asc	E1235-D2-Channel# Aug31 2007 11-55-43.txt	no video
E1236	4	Clay	131.75	0.3	31	NA	2	A,B	4.5/4.5	2.61	2.6	-	-	35000/1/20000/ 75000	35000/1/20000/ 75000	-	-	6	O	O	O	O	N	3	E1236-D1-070831.asc	E1236-D2-Channel# Aug31 2007 11-58-19.txt	no video
E1236BL	4	Clay	131.75	0.3	31	NA	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	N	-	E1236-D1-BL-070831.asc	E1236-D2-BL-Channel# Aug31 2007 12-01-53.txt	no video
Clay, high liquid level, simultaneous overblow, hydrophone level=O																											
E1237BL	4	Clay	56	0.8	36.34	NA	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	N	-	E1237-D1-BL-070918.asc	E1237-D2-BL-Channel# Sept 18 2007 09-08-47.txt	no video
E1237	4	Clay	56	0.8	36.34	NA	2	A,C	3.5	6.84/ 6.49	-	6.49/ 6.38	-	11000/1/15000/ 75000	-	11000/500/15000/ 75000	-	12	O	O	O	O	N	1	E1237-D1-070918.ASC	E1237-D2-Channel# Sept 18 2007 09-21-07.txt	no video
E1238	4	Clay	56	0.8	36.34	NA	2	A,C	4.5	6.6/6.5	-	6.4/6.4	-	11000/1/15500/ 75000	-	11000/500/15500/ 75000	-	12	O	O	O	O	N	1	E1238-D1-070918.ASC	E1238-D2-Channel# Sept 18 2007 09-33-31.txt	no video
E1239	4	Clay	56	0.8	36.34	NA	2	A,C	4.5	6.8/6.6	-	6.5/6.4	-	11000/1/15500/ 75000	-	11000/400/15500/ 75000	-	12	O	O	O	O	N	1	E1239-D1-070918.ASC	E1239-D2-Channel# Sept 18 2007 09-44-37.txt	no video
E1240	4	Clay	56	0.8	36.34	NA	2	A,C	4.5	6.9/6.6	-	6.6/6.5	-	11000/1/15500/ 75000	-	11000/400/15500/ 75000	-	12	O	O	O	O	N	1	E1240-D1-070918.ASC	E1240-D2-Channel# Sept 18 2007 09-49-10.txt	no video
E1241BL	4	Clay	54.50	0.8	33.55	NA	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	N	-	E1241-D1-BL-070918.asc	E1241-D2-BL-Channel# Sept 18 2007 12-14-59.txt	no video
Clay, high liquid level; hydrophone level=O																											
E1242BL	4	Clay	54.50	0.8	33.55	NA	-	-	-	-	-	-	-	-	-	-	-	-	O	O	O	O	N	-	E1242-D1-BL-070919.asc	E1242-D2-BL-Channel# Sept 19 2007 09-16-11.txt	no video
E1242	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	7.17/ 6.88	-	-	-	11000/1/15500/ 75000	-	-	-	12	O	O	O	O	Y	1	E1242-D1-070919.ASC	E1242-D2-Channel# Sept 19 2007 09-29-01.txt	no subsurface video
E1243	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	7.17/ 6.88	-	-	-	11000/1/15500/ 75000	-	-	-	12	O	O	O	O	Y	2	E1243-D1-070919.ASC	E1243-D2-Channel# Sept 19 2007 09-35-39.txt	no subsurface video
E1244	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	7.17/ 6.88	-	-	-	11000/1/15500/ 75000	-	-	-	12	O	O	O	O	N	3	E1244-D1-070919.ASC	E1244-D2-Channel# Sept 19 2007 09-40-47.txt	no subsurface video
E1245	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	6.66/ 6.37	6.68/ 6.40	-	-	11000/1/15500/ 75000	11000/1/15500/ 75000	-	-	12	O	O	O	O	Y	1	E1245-D1-070919.ASC	E1245-D2-Channel# Sept 19 2007 09-48-12.txt	no subsurface video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4				
E1246	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	6.66/ 6.37	6.68/ 6.40	-	-	11000/1/15500/ 75000	11000/1/15500/ 75000	-	-	12	O	O	O	O	Y	2	E1246-D1-070919.ASC	E1246-D2-Channel# Sept 19 2007 09-55-26.txt	no subsurface video
E1247	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	6.66/ 6.37	6.68/ 6.40	-	-	11000/1/15500/ 75000	11000/1/15500/ 75000	-	-	12	O	O	O	O	N	3	E1247-D1-070919.ASC	E1247-D2-Channel# Sept 19 2007 10-00-40.txt	no subsurface video
E1248	4	Clay	54.5	0.8	33.55	NA	3	A,B,C	4.5	6.79/ 5.93	6.64/ 5.94	6.30/ 5.84	-	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	-	12	O	O	O	O	Y	1	E1248-D1-070919.ASC	E1248-D2-Channel# Sept 19 2007 10-14-58.txt	no subsurface video
E1249	4	Clay	54.5	0.8	33.55	NA	3	A,B,C	4.5	6.79/ 5.93	6.64/ 5.94	6.30/ 5.84	-	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	-	12	O	O	O	O	Y	2	E1249-D1-070919.ASC	E1249-D2-Channel# Sept 19 2007 10-20-07.txt	no subsurface video
E1250	4	Clay	54.5	0.8	33.55	NA	3	A,B,C	4.5	6.79/ 5.93	6.64/ 5.94	6.30/ 5.84	-	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	-	12	O	O	O	O	N	3	E1250-D1-070919.ASC	E1250-D2-Channel# Sept 19 2007 10-24-38.txt	no subsurface video
E1251	4	Clay	54.5	0.8	33.55	NA	4	A,B,C,D	4.5	5.92/ 5.74	6.27/ 5.65	5.93/ 5.52	5.66/ 5.51	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/ 15500/ 75000	12	O	O	O	O	Y	1	E1251-D1-070919.ASC	E1251-D2-Channel# Sept 19 2007 10-35-54.txt	no subsurface video
E1252	4	Clay	54.5	0.8	33.55	NA	4	A,B,C,D	4.5	5.92/ 5.74	6.27/ 5.65	5.93/ 5.52	5.66/ 5.51	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/ 15500/ 75000	12	O	O	O	O	Y	2	E1252-D1-070919.ASC	E1252-D2-Channel# Sept 19 2007 10-42-20.txt	no subsurface video
E1253	4	Clay	54.5	0.8	33.55	NA	4	A,B,C,D	4.5	5.92/ 5.74	6.27/ 5.65	5.93/ 5.52	5.66/ 5.51	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/75 000	11000/1/ 15500/ 75000	12	O	O	O	O	N	3	E1253-D1-070919.ASC	E1253-D2-Channel# Sept 19 2007 10-48-58.txt	no subsurface video
E1254	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	4.77/ 4.81	4.81/ 4.77	-	-	11000/1/16500/ 75000	11000/1/16500/ 75000	-	-	10	O	O	O	O	Y	1	E1254-D1-070919.ASC	E1254-D2-Channel# Sept 19 2007 11-29-54.txt	no subsurface video
E1255	4	Clay	54.5	0.8	33.55	NA	2	A,B	4	4.77/ 4.81	4.81/ 4.77	-	-	11000/1/16500/ 75000	11000/1/16500/ 75000	-	-	10	O	O	O	O	Y	2	E1255-D1-070919.ASC	E1255-D2-Channel# Sept 19 2007 11-38-27.txt	no subsurface video
E1256	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	4.77/ 4.81	4.81/ 4.77	-	-	11000/1/16500/ 75000	11000/1/16500/ 75000	-	-	10	O	O	O	O	N	3	E1256-D1-070919.ASC	E1256-D2-Channel# Sept 19 2007 11-42-54.txt	no subsurface video
E1257	4	Clay	54.5	0.8	33.55	NA	1	A	4	4.81/ 4.87	-	-	-	11000/1/16500/ 75000	-	-	-	10	O	O	O	O	Y	1	E1257-D1-070919.ASC	E1257-D2-Channel# Sept 19 2007 11-51-24.txt	no subsurface video
E1258	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	4.81/ 4.85	-	-	-	11000/1/16500/ 75000	-	-	-	10	O	O	O	O	Y	2	E1258-D1-070919.ASC	E1258-D2-Channel# Sept 19 2007 11-56-12.txt	no subsurface video
E1259	4	Clay	54.5	0.8	33.55	NA	1	A	4.0	4.81/ 4.85	-	-	-	11000/1/16500/ 75000	-	-	-	10	O	O	O	O	N	3	E1259-D1-070919.ASC	E1259-D2-Channel# Sept 19 2007 11-59-49.txt	no subsurface video
E1260	4	Clay	54.5	0.8	33.55	NA	1	A	4	4.6	-	-	-	11000/1/18500/ 75000	-	-	-	8	O	O	O	O	Y	1	E1260-D1-070919.ASC	E1260-D2-Channel# Sept 19 2007 13-11-58.txt	no subsurface video
E1261	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	4.6	-	-	-	11000/1/18500/ 75000	-	-	-	8	O	O	O	O	Y	2	E1261-D1-070919.ASC	E1261-D2-Channel# Sept 19 2007 13-17-14.txt	no subsurface video
E1262	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	4.6	-	-	-	11000/1/18500/ 75000	-	-	-	8	O	O	O	O	N	3	E1262-D1-070919.ASC	E1262-D2-Channel# Sept 19 2007 13-21-29.txt	no subsurface video
E1263	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	4.57	4.56	-	-	11000/1/18500/ 75000	11000/1/18500/ 75000	-	-	8	O	O	O	O	Y	1	E1263-D1-070919.ASC	E1263-D2-Channel# Sept 19 2007 13-30-00.txt	no subsurface video
E1264	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	4.57	4.56	-	-	11000/1/18500/ 75000	11000/1/18500/ 75000	-	-	8	O	O	O	O	Y	2	E1264-D1-070919.ASC	E1264-D2-Channel# Sept 19 2007 13-38-35.txt	no subsurface video
E1265	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	4.57	4.56	-	-	11000/1/18500/ 75000	11000/1/18500/ 75000	-	-	8	O	O	O	O	N	3	E1265-D1-070919.ASC	E1265-D2-Channel# Sept 19 2007 13-42-39.txt	no subsurface video
E1266	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	2.61	-	-	-	11000/1/23000/ 75000	-	-	-	6	O	O	O	O	Y	1	E1266-D1-070919.ASC	E1266-D2-Channel# Sept 19 2007 14-07-35.txt	no subsurface video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4				
E1267	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	2.61	-	-	-	11000/1/23000/75000	-	-	-	6	O	O	O	O	Y	2	E1267-D1-070919.ASC	E1267-D2-Channel# Sept 19 2007 14-21-41.txt	no subsurface video
E1268	4	Clay	54.5	0.8	33.55	NA	1	A	4	2.61	-	-	-	11000/1/23000/75000	-	-	-	6	O	O	O	O	N	3	E1268-D1-070919.ASC	E1268-D2-Channel# Sept 19 2007 14-16-24.txt	no subsurface video
E1269	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	2.6	2.61	-	-	11000/1/23000/75000	11000/1/23000/75000	-	-	6	O	O	O	O	Y	1	E1269-D1-070919.ASC	E1269-D2-Channel# Sept 19 2007 14-24-43.txt	no subsurface video
E1270	4	Clay	54.5	0.8	33.55	NA	2	A,B	4	2.6	2.61	-	-	11000/1/23000/75000	11000/1/23000/75000	-	-	6	O	O	O	O	Y	2	E1270-D1-070919.ASC	E1270-D2-Channel# Sept 19 2007 14-31-56.txt	no subsurface video
E1271	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	2.6	2.61	-	-	11000/1/23000/75000	11000/1/23000/75000	-	-	6	O	O	O	O	N	3	E1271-D1-070919.ASC	E1271-D2-Channel# Sept 19 2007 14-40-14.txt	no subsurface video
Clay, high liquid level; hydrophone level=M																										
E1272	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	2.61	-	-	-	11000/1/23000/75000	-	-	-	6	M	M	M	M	N	1	E1272-D1-070919.ASC	E1272-D2-Channel# Sept 19 2007 15-02-05.txt	no subsurface video
E1273	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	2.61	-	-	-	11000/1/23000/75000	-	-	-	6	M	M	M	M	N	2	E1273-D1-070919.ASC	E1273-D2-Channel# Sept 19 2007 15-05-44.txt	no subsurface video
E1274	4	Clay	54.5	0.8	33.55	NA	1	A	4	2.61	-	-	-	11000/1/23000/75000	-	-	-	6	M	M	M	M	N	3	E1274-D1-070919.ASC	E1274-D2-Channel# Sept 19 2007 15-09-13.txt	no subsurface video
E1275	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	2.6	2.6	-	-	11000/1/23000/75000	11000/1/23000/75000	-	-	6	M	M	M	M	N	1	E1275-D1-070919.ASC	E1275-D2-Channel# Sept 19 2007 15-16-30.txt	no subsurface video
E1276	4	Clay	54.5	0.8	33.55	NA	2	A,B	5	2.6	2.6	-	-	11000/1/23000/75000	11000/1/23000/75000	-	-	6	M	M	M	M	N	2	E1276-D1-070919.ASC	E1276-D2-Channel# Sept 19 2007 15-22-07.txt	no subsurface video
E1277	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	2.6	2.6	-	-	11000/1/23000/75000	11000/1/23000/75000	-	-	6	M	M	M	M	N	3	E1277-D1-070919.ASC	E1277-D2-Channel# Sept 19 2007 15-25-18.txt	no subsurface video
E1278	4	Clay	54.5	0.8	33.55	NA	1	A	4	4.58	-	-	-	11000/1/18500/75000	-	-	-	8	M	M	M	M	N	1	E1278-D1-070919.ASC	E1278-D2-Channel# Sept 19 2007 15-42-21.txt	no subsurface video
E1279	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	4.58	-	-	-	11000/1/18500/75000	-	-	-	8	M	M	M	M	N	2	E1279-D1-070919.ASC	E1279-D2-Channel# Sept 19 2007 15-46-53.txt	no subsurface video
E1280	4	Clay	54.5	0.8	33.55	NA	1	A	4.5	4.58	-	-	-	11000/1/18500/75000	-	-	-	8	M	M	M	M	N	3	E1280-D1-070919.ASC	E1280-D2-Channel# Sept 19 2007 15-50-42.txt	no subsurface video
E1281	4	Clay	54.5	0.8	33.55	NA	2	A,B	4	4.56	4.59	-	-	11000/1/18500/75000	11000/1/18500/75000	-	-	8	M	M	M	M	N	1	E1281-D1-070919.ASC	E1281-D2-Channel# Sept 19 2007 16-06-34.txt	no subsurface video
E1282	4	Clay	54.5	0.8	33.55	NA	2	A,B	4	4.56	4.59	-	-	11000/1/18500/75000	11000/1/18500/75000	-	-	8	M	M	M	M	N	2	E1282-D1-070919.ASC	E1282-D2-Channel# Sept 19 2007 16-10-33.txt	no subsurface video
E1283	4	Clay	54.5	0.8	33.55	NA	2	A,B	4.5	4.56	4.59	-	-	11000/1/18500/75000	11000/1/18500/75000	-	-	8	M	M	M	M	N	3	E1283-D1-070919.ASC	E1283-D2-Channel# Sept 19 2007 16-13-52.txt	no subsurface video
E1283BL	4	Clay	54.50	0.8	33.55	NA	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	N	1	E1283-D1-BL-070919.asc	E1283-D2-BL-Channel# Sept 19 2007 16-21-49.txt	no video
E1284BL	4	Clay	55.00	0.8	32.5	NA	-	-	-	-	-	-	-	-	-	-	-	-	M	M	M	M	N	1	E1284-D1-BL-070920.asc	E1284-D2-BL-Channel# Sept 20 2007 09-33-21.txt	no video
E1284	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.80/4.80	-	-	-	11000/1/16500/75000	-	-	-	10	M	M	M	M	N	1	E1284-D1-070920.asc	E1284-D2-Channel# Sept 20 2007 09-42-49.txt	no video
E1285	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.80/4.80	-	-	-	11000/1/16500/75000	-	-	-	10	M	M	M	M	N	2	E1285-D1-070920.asc	E1285-D2-Channel# Sept 20 2007 09-50-22.txt	no video
E1286	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.80/4.80	-	-	-	11000/1/16500/75000	-	-	-	10	M	M	M	M	N	3	E1286-D1-070920.asc	E1286-D2-Channel# Sept 20 2007 09-54-34.txt	no video
E1287	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	4.80/4.80	4.80/4.80	-	-	11000/1/16500/75000	11000/1/16500/75000	-	-	10	M	M	M	M	N	1	E1287-D1-070920.asc	E1287-D2-Channel# Sept 20 2007 09-59-06.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4				
E1288	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	4.80/ 4.80	4.80/ 4.80	-	-	11000/1/16500/ 75000	11000/1/16500/ 75000	-	-	10	M	M	M	M	N	2	E1288-D1-070920.asc	E1288-D2-Channel# Sept 20 2007 10-02-46.txt	no video
E1289	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	4.80/ 4.80	4.80/ 4.80	-	-	11000/1/16500/ 75000	11000/1/16500/ 75000	-	-	10	M	M	M	M	N	3	E1289-D1-070920.asc	E1289-D2-Channel# Sept 20 2007 10-05-35.txt	no video
E1290	4	Clay	55.00	0.8	32.5	NA	1	A	5.5	7.2/6.9	-	-	-	11000/1/15500/ 75000	-	-	-	12	M	M	M	M	N	1	E1290-D1-070920.asc	E1290-D2-Channel# Sept 20 2007 10-18-55.txt	no video
E1291	4	Clay	55.00	0.8	32.5	NA	1	A	5	7.2/6.9	-	-	-	11000/1/15500/ 75000	-	-	-	12	M	M	M	M	N	2	E1291-D1-070920.asc	E1291-D2-Channel# Sept 20 2007 10-24-23.txt	no video
E1292	4	Clay	55.00	0.8	32.5	NA	1	A	5.5	7.2/6.9	-	-	-	11000/1/15500/ 75000	-	-	-	12	M	M	M	M	N	3	E1292-D1-070920.asc	E1292-D2-Channel# Sept 20 2007 10-27-27.txt	no video
E1293	4	Clay	55.00	0.8	32.5	NA	2	A,B	5.5/5.5	6.89/ 6.58	6.83/ 6.54	-	-	11000/1/15500/ 75000	11000/1/15500/ 75000	-	-	12	M	M	M	M	N	1	E1293-D1-070920.asc	E1293-D2-Channel# Sept 20 2007 10-35-14.txt	no video
E1294	4	Clay	55.00	0.8	32.5	NA	2	A,B	5.5/5.5	6.89/ 6.58	6.83/ 6.54	-	-	11000/1/15500/ 75000	11000/1/15500/ 75000	-	-	12	M	M	M	M	N	2	E1294-D1-070920.asc	E1294-D2-Channel# Sept 20 2007 10-38-05.txt	no video
E1295	4	Clay	55.00	0.8	32.5	NA	2	A,B	5.5/5.5	6.89/ 6.58	6.83/ 6.54	-	-	11000/1/15500/ 75000	11000/1/15500/ 75000	-	-	12	M	M	M	M	N	3	E1295-D1-070920.asc	E1295-D2-Channel# Sept 20 2007 10-40-43.txt	no video
E1296	4	Clay	55.00	0.8	32.5	NA	3	A,B,C	5/5/5	RFO	RFO	RFO	-	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	-	12	M	M	M	M	N	1	E1296-D1-070920.asc	E1296-D2-Channel# Sept 20 2007 10-45-12.txt	no video
E1297	4	Clay	55.00	0.8	32.5	NA	3	A,B,C	5/5/5	RFO	RFO	RFO	-	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	-	12	M	M	M	M	N	2	E1297-D1-070920.asc	E1297-D2-Channel# Sept 20 2007 10-48-30.txt	no video
E1298	4	Clay	55.00	0.8	32.5	NA	3	A,B,C	5/5/5	RFO	RFO	RFO	-	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	-	12	M	M	M	M	N	3	E1298-D1-070920.asc	E1298-D2-Channel# Sept 20 2007 10-51-20.txt	no video
E1299	4	Clay	55.00	0.8	32.5	NA	4	A,B,C,D	5/5/5/5	RFO	RFO	RFO	RFO	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/ 15500/ 75000	12	M	M	M	M	N	1	E1299-D1-070920.asc	E1299-D2-Channel# Sept 20 2007 10-56-23.txt	no video
E1300	4	Clay	55.00	0.8	32.5	NA	4	A,B,C,D	5.5/5.5/ 5.5/5.5	RFO	RFO	RFO	RFO	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/ 15500/ 75000	12	M	M	M	M	N	2	E1300-D1-070920.asc	E1300-D2-Channel# Sept 20 2007 11-01-08.txt	no video
E1301	4	Clay	55.00	0.8	32.5	NA	4	A,B,C,D	5/5/5/5	RFO	RFO	RFO	RFO	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/ 15500/75 000	12	M	M	M	M	N	3	E1301-D1-070920.asc	E1301-D2-Channel# Sept 20 2007 11-03-56.txt	no video
Clay, high liquid level; hydrophone level=H																										
E1302	4	Clay	55.00	0.8	32.5	NA	1	A	5	RFO	-	-	-	11000/1/15500/ 75000	-	-	-	12	H	H	H	H	N	1	E1302-D1-070920.asc	E1302-D2-Channel# Sept 20 2007 11-37-41.txt	no video
E1303	4	Clay	55.00	0.8	32.5	NA	1	A	5	RFO	-	-	-	11000/1/15500/ 75000	-	-	-	12	H	H	H	H	N	2	E1303-D1-070920.asc	E1303-D2-Channel# Sept 20 2007 11-41-35.txt	no video
E1304	4	Clay	55.00	0.8	32.5	NA	1	A	5	RFO	-	-	-	11000/1/15500/ 75000	-	-	-	12	H	H	H	H	N	3	E1304-D1-070920.asc	E1304-D2-Channel# Sept 20 2007 11-44-12.txt	no video
E1305	4	Clay	55.00	0.8	32.5	NA	2	A,B	5.5/5.5	RFO	RFO	-	-	11000/1/15500/ 75000	11000/1/15500/ 75000	-	-	12	H	H	H	H	N	1	E1305-D1-070920.asc	E1305-D2-Channel# Sept 20 2007 11-49-35.txt	no video
E1306	4	Clay	55.00	0.8	32.5	NA	2	A,B	5.5/5.5	RFO	RFO	-	-	11000/1/15500/ 75000	11000/1/15500/ 75000	-	-	12	H	H	H	H	N	2	E1306-D1-070920.asc	E1306-D2-Channel# Sept 20 2007 11-52-21.txt	no video
E1307	4	Clay	55.00	0.8	32.5	NA	2	A,B	5.5/5.5	RFO	RFO	-	-	11000/1/15500/ 75000	11000/1/15500/ 75000	-	-	12	H	H	H	H	N	3	E1307-D1-070920.asc	E1307-D2-Channel# Sept 20 2007 11-55-55.txt	no video
E1308	4	Clay	55.00	0.8	32.5	NA	3	A,B,C	5.5/5.5/5.5	RFO	RFO	RFO	-	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	-	12	H	H	H	H	N	1	E1308-D1-070920.asc	E1308-D2-Channel# Sept 20 2007 12-03-31.txt	no video
E1309	4	Clay	55.00	0.8	32.5	NA	3	A,B,C	5/5/5	RFO	RFO	RFO	-	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	-	12	H	H	H	H	N	2	E1309-D1-070920.asc	E1309-D2-Channel# Sept 20 2007 12-05-13.txt	no video
E1310	4	Clay	55.00	0.8	32.5	NA	3	A,B,C	5/5/5	RFO	RFO	RFO	-	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	-	12	H	H	H	H	N	3	E1310-D1-070920.asc	E1310-D2-Channel# Sept 20 2007 12-08-07.txt	no video
E1311	4	Clay	55.00	0.8	32.5	NA	4	A,B,C,D	5/5/5/5	RFO	RFO	RFO	RFO	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/ 15500/ 75000	12	H	H	H	H	N	1	E1311-D1-070920.asc	E1311-D2-Channel# Sept 20 2007 12-11-34.txt	no video
E1312	4	Clay	55.00	0.8	32.5	NA	4	A,B,C,D	5/5/5/5	RFO	RFO	RFO	RFO	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/ 15500/ 75000	12	H	H	H	H	N	2	E1312-D1-070920.asc	E1312-D2-Channel# Sept 20 2007 12-15-55.txt	no video
E1313	4	Clay	55.00	0.8	32.5	NA	4	A,B,C,D	5/5/5/5	RFO	RFO	RFO	RFO	11000/1/15500/ 75000	11000/1/15500/ 75000	11000/1/15500/75 000	11000/1/ 15500/ 75000	12	H	H	H	H	N	3	E1313-D1-070920.asc	E1313-D2-Channel# Sept 20 2007 12-18-30.txt	no video
E1314	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.82/ 4.78	-	-	-	11000/1/16500/ 75000	-	-	-	10	H	H	H	H	N	1	E1314-D1-070920.asc	E1314-D2-Channel# Sept 20 2007 14-17-39.txt	no video
E1315	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.82/ 4.78	-	-	-	11000/1/16500/ 75000	-	-	-	10	H	H	H	H	N	2	E1315-D1-070920.asc	E1315-D2-Channel# Sept 20 2007 14-20-10.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E1316	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.82/ 4.78	-	-	-	11000/1/16500/ 75000	-	-	-	10	H	H	H	H	N	3	E1316-D1-070920.asc	E1316-D2-Channel# Sept 20 2007 14-23-25.txt	no video
E1317	4	Clay	55.00	0.8	32.5	NA	2	A,B	5/5	NR	NR	-	-	11000/1/16500/ 75000	11000/1/16500/ 75000	-	-	10	H	H	H	H	N	1	E1317-D1-070920.asc	E1317-D2-Channel# Sept 20 2007 14-27-01.txt	no video
E1318	4	Clay	55.00	0.8	32.5	NA	2	A,B	5/5	4.80/ 4.81	4.77/ 4.77	-	-	11000/1/16500/ 75000	11000/1/16500/ 75000	-	-	10	H	H	H	H	N	2	E1318-D1-070920.asc	E1318-D2-Channel# Sept 20 2007 14-29-51.txt	no video
E1319	4	Clay	55.00	0.8	32.5	NA	2	A,B	5/5	4.80/ 4.81	4.77/ 4.77	-	-	11000/1/16500/ 75000	11000/1/16500/ 75000	-	-	10	H	H	H	H	N	3	E1319-D1-070920.asc	E1319-D2-Channel# Sept 20 2007 14-32-41.txt	no video
E1320	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.62	-	-	-	11000/1/18500/ 75000	-	-	-	8	H	H	H	H	N	1	E1320-D1-070920.asc	E1320-D2-Channel# Sept 20 2007 14-45-22.txt	no video
E1321	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.62	-	-	-	11000/1/18500/ 75000	-	-	-	8	H	H	H	H	N	2	E1321-D1-070920.asc	E1321-D2-Channel# Sept 20 2007 14-48-12.txt	no video
E1322	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.62	-	-	-	11000/1/18500/ 75000	-	-	-	8	H	H	H	H	N	3	E1322-D1-070920.asc	E1322-D2-Channel# Sept 20 2007 14-51-26.txt	no video
E1323	4	Clay	55.00	0.8	32.5	NA	2	A,B	4,5/4.5	4.59	4.6	-	-	11000/1/18500/ 75000	11000/1/18500/ 75000	-	-	8	H	H	H	H	N	1	E1323-D1-070920.asc	E1323-D2-Channel# Sept 20 2007 14-55-55.txt	no video
E1324	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	4.59	4.6	-	-	11000/1/18500/ 75000	11000/1/18500/ 75000	-	-	8	H	H	H	H	N	2	E1324-D1-070920.asc	E1324-D2-Channel# Sept 20 2007 14-58-31.txt	no video
E1325	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	4.59	4.6	-	-	11000/1/18500/ 75000	11000/1/18500/ 75000	-	-	8	H	H	H	H	N	3	E1325-D1-070920.asc	E1325-D2-Channel# Sept 20 2007 15-01-06.txt	no video
E1326	4	Clay	55.00	0.8	32.5	NA	1	A	4	2.61	-	-	-	11000/1/23000/ 75000	-	-	-	6	H	H	H	H	N	1	E1326-D1-070920.asc	E1326-D2-Channel# Sept 20 2007 15-14-49.txt	no video
E1327	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	2.61	-	-	-	11000/1/23000/ 75000	-	-	-	6	H	H	H	H	N	2	E1327-D1-070920.asc	E1327-D2-Channel# Sept 20 2007 15-17-25.txt	no video
E1328	4	Clay	55.00	0.8	32.5	NA	1	A	4	2.61	-	-	-	11000/1/23000/ 75000	-	-	-	6	H	H	H	H	N	3	E1328-D1-070920.asc	E1328-D2-Channel# Sept 20 2007 15-20-21.txt	no video
E1329	4	Clay	55.00	0.8	32.5	NA	2	A,B	4/4	2.60	2.61	-	-	11000/1/23000/ 75000	11000/1/23000/ 75000	-	-	6	H	H	H	H	N	1	E1329-D1-070920.asc	E1329-D2-Channel# Sept 20 2007 15-23-49.txt	no video
E1330	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	2.60	2.61	-	-	11000/1/23000/ 75000	11000/1/23000/ 75000	-	-	6	H	H	H	H	N	2	E1330-D1-070920.asc	E1330-D2-Channel# Sept 20 2007 15-27-09.txt	no video
E1331	4	Clay	55.00	0.8	32.5	NA	2	A,B	4/4	2.60	2.61	-	-	11000/1/23000/ 75000	11000/1/23000/ 75000	-	-	6	H	H	H	H	N	3	E1331-D1-070920.asc	E1331-D2-Channel# Sept 20 2007 15-29-55.txt	no video
E1331BL	4	Clay	55.00	0.8	32.5	NA	-	-	-	-	-	-	-	-	-	-	-	-	H	H	H	H	N	1	E1331-D1-BL-070920.asc	E1331-D2-BL-Channel# Sept 20 2007 15-36-48.txt	no video
Clay, high liquid level; hydrophone level=L																											
E1332BL	4	Clay	55.00	0.8	32.5	NA	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1332-D1-BL-070921.asc	E1332-D2-BL-Channel# Sept 21 2007 09-21-43.txt	no video
E1332	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	2.61	-	-	-	11000/1/23000/ 75000	-	-	-	6	L	L	L	L	N	1	E1332-D1-070921.asc	E1332-D2-Channel# Sept 21 2007 09-31-15.txt	no video
E1333	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	2.61	-	-	-	11000/1/23000/ 75000	-	-	-	6	L	L	L	L	N	2	E1333-D1-070921.asc	E1333-D2-Channel# Sept 21 2007 09-34-14.txt	no video
E1334	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	2.61	-	-	-	11000/1/23000/ 75000	-	-	-	6	L	L	L	L	N	3	E1334-D1-070921.asc	E1334-D2-Channel# Sept 21 2007 09-36-39.txt	no video
E1335	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	2.61	2.61	-	-	11000/1/23000/ 75000	11000/1/23000/ 75000	-	-	6	L	L	L	L	N	1	E1335-D1-070921.asc	E1335-D2-Channel# Sept 21 2007 09-40-38.txt	no video
E1336	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	2.61	2.61	-	-	11000/1/23000/ 75000	11000/1/23000/ 75000	-	-	6	L	L	L	L	N	2	E1336-D1-070921.asc	E1336-D2-Channel# Sept 21 2007 09-43-12.txt	no video
E1337	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	2.61	2.61	-	-	11000/1/23000/ 75000	11000/1/23000/ 75000	-	-	6	L	L	L	L	N	3	E1337-D1-070921.asc	E1337-D2-Channel# Sept 21 2007 09-46-02.txt	no video
E1338	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.62	-	-	-	11000/1/18500/ 75000	-	-	-	8	L	L	L	L	N	1	E1338-D1-070921.asc	E1338-D2-Channel# Sept 21 2007 09-56-11.txt	no video
E1339	4	Clay	55.00	0.8	32.5	NA	1	A	4	4.62	-	-	-	11000/1/18500/ 75000	-	-	-	8	L	L	L	L	N	2	E1339-D1-070921.asc	E1339-D2-Channel# Sept 21 2007 09-58-58.txt	no video
E1340	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.62	-	-	-	11000/1/18500/ 75000	-	-	-	8	L	L	L	L	N	3	E1340-D1-070921.asc	E1340-D2-Channel# Sept 21 2007 10-01-32.txt	no video
E1341	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	4.63	4.62	-	-	11000/1/18500/ 75000	11000/1/18500/ 75000	-	-	8	L	L	L	L	N	1	E1341-D1-070921.asc	E1341-D2-Channel# Sept 21 2007 10-06-30.txt	no video
E1342	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	4.63	4.62	-	-	11000/1/18500/ 75000	11000/1/18500/ 75000	-	-	8	L	L	L	L	N	2	E1342-D1-070921.asc	E1342-D2-Channel# Sept 21 2007 10-09-23.txt	no video
E1343	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	4.63	4.62	-	-	11000/1/18500/ 75000	11000/1/18500/ 75000	-	-	8	L	L	L	L	N	3	E1343-D1-070921.asc	E1343-D2-Channel# Sept 21 2007 10-11-40.txt	no video
E1344	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.83/ 4.84	-	-	-	11000/1/16500/ 75000	-	-	-	10	L	L	L	L	N	1	E1344-D1-070921.asc	E1344-D2-Channel# Sept 21 2007 10-39-43.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E1345	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.83/ 4.84	-	-	-	11000/1/16500/ 75000	-	-	-	10	L	L	L	L	N	2	E1345-D1-070921.asc	E1345-D2-Channel# Sept 21 2007 10-42-24.txt	no video
E1346	4	Clay	55.00	0.8	32.5	NA	1	A	4.5	4.83/ 4.84	-	-	-	11000/1/16500/ 75000	-	-	-	10	L	L	L	L	N	3	E1346-D1-070921.asc	E1346-D2-Channel# Sept 21 2007 10-45-18.txt	no video
E1347	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	4.81/ 4.80	4.80/ 4.80	-	-	11000/1/16500/ 75000	11000/1/16500/ 75000	-	-	10	L	L	L	L	N	1	E1347-D1-070921.asc	E1347-D2-Channel# Sept 21 2007 10-48-41.txt	no video
E1348	4	Clay	55.00	0.8	32.5	NA	2	A,B	4/4	4.81/ 4.80	4.80/ 4.80	-	-	11000/1/16500/ 75000	11000/1/16500/ 75000	-	-	10	L	L	L	L	N	2	E1348-D1-070921.asc	E1348-D2-Channel# Sept 21 2007 10-51-45.txt	no video
E1349	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	4.81/ 4.80	4.80/ 4.80	-	-	11000/1/16500/ 75000	11000/1/16500/ 75000	-	-	10	L	L	L	L	N	3	E1349-D1-070921.asc	E1349-D2-Channel# Sept 21 2007 10-54-16.txt	no video
E1350	4	Clay	55.00	0.8	32.5	NA	1	A	5.5	7.2/6.8	-	-	-	11000/1/15500/ 75000	-	-	-	12	L	L	L	L	N	1	E1350-D1-070921.asc	E1350-D2-Channel# Sept 21 2007 11-03-13.txt	no video
E1351	4	Clay	55.00	0.8	32.5	NA	1	A	5.5	7.2/6.8	-	-	-	11000/1/15500/ 75000	-	-	-	12	L	L	L	L	N	2	E1351-D1-070921.asc	E1351-D2-Channel# Sept 21 2007 11-06-33.txt	no video
E1352	4	Clay	55.00	0.8	32.5	NA	1	A	5.5	7.2/6.8	-	-	-	11000/1/15500/ 75000	-	-	-	12	L	L	L	L	N	3	E1352-D1-070921.asc	E1352-D2-Channel# Sept 21 2007 11-08-58.txt	no video
E1353	4	Clay	55.00	0.8	32.5	NA	2	A,B	5/5	7.2/6.8	7.2/6.9	-	-	11000/1/14500/ 75000	11000/1/14500/ 75000	-	-	12	L	L	L	L	N	1	E1353-D1-070921.asc	E1353-D2-Channel# Sept 21 2007 11-14-31.txt	no video
E1354	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	7.2/6.8	7.2/6.9	-	-	11000/1/14500/ 75000	11000/1/14500/ 75000	-	-	12	L	L	L	L	N	2	E1354-D1-070921.asc	E1354-D2-Channel# Sept 21 2007 11-17-21.txt	no video
E1355	4	Clay	55.00	0.8	32.5	NA	2	A,B	4.5/4.5	7.2/6.8	7.2/6.9	-	-	11000/1/14500/ 75000	11000/1/14500/ 75000	-	-	12	L	L	L	L	N	3	E1355-D1-070921.asc	E1355-D2-Channel# Sept 21 2007 11-19-49.txt	no video
E1356	4	Clay	55.00	0.8	32.5	NA	3	A,B,C	4.5/4.5/4.5	RFO	RFO	RFO	-	11000/1/14500/ 75000	11000/1/14500/ 75000	11000/1/14500/75 000	-	12	L	L	L	L	N	1	E1356-D1-070921.asc	E1356-D2-Channel# Sept 21 2007 11-24-28.txt	no video
E1357	4	Clay	55.00	0.8	32.5	NA	3	A,B,C	3.5/3.5/3.5	RFO	RFO	RFO	-	11000/1/13000/ 75000	11000/1/13000/ 75000	11000/1/13000/75 000	-	12	L	L	L	L	N	2	E1357-D1-070921.asc	E1357-D2-Channel# Sept 21 2007 11-31-43.txt	no video
E1358	4	Clay	55.00	0.8	32.5	NA	3	A,B,C	2.5/2.5/2.5	RFO	RFO	RFO	-	11000/1/13000/ 75000	11000/1/13000/ 75000	11000/1/13000/75 000	-	12	L	L	L	L	N	3	E1358-D1-070921.asc	E1358-D2-Channel# Sept 21 2007 11-35-26.txt	no video
E1358BL	4	Clay	55.00	0.8	32.5	NA	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1358-D1-BL-070921.asc	E1358-D2-BL-Channel# Sept 21 2007 11-43-09.txt	no video
Clay, high liquid level, simultaneous overblow																											
E1359BL	4	Clay	55.00	0.8	32.11	NA	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1359-D1-BL-070924.asc	E1359-D2-BL-Channel# Sept 24 2007 09-18-13.txt	no video
E1359	4	Clay	55.00	0.8	32.11	NA	2	A,B	4.5/4.5	6.85/ 6.49	7.2/ 6.9	-	-	11000/1/14500/ 75000	11000/1/14500/ 75000	-	-	12	L	L	L	L	N	1	E1359-D1-070924.asc	E1359-D2-Channel# Sept 24 2007 09-43-51.txt	no video
E1360	4	Clay	55.00	0.8	32.11	NA	2	A,B	4	6.89/ 6.58	6.83/ 6.54	-	-	11000/250/ 14500/75000	11000/1/14500/ 75000	-	-	12	L	L	L	L	N	1	E1360-D1-070924.asc	E1360-D2-Channel# Sept 24 2007 09-49-50.txt	no video
E1361	4	Clay	55.00	0.8	32.11	NA	2	A,B	4	6.89/ 6.58	6.83/ 6.54	-	-	11000/250/ 14500/75000	11000/1/14500/ 75000	-	-	12	O	O	O	O	N	1	E1361-D1-070924.asc	E1361-D2-Channel# Sept 24 2007 10-25-41.txt	no video
E1362	4	Clay	55.00	0.8	32.11	NA	2	A,B	4	6.89/ 6.58	6.83/ 6.54	-	-	11000/250/ 14500/75000	11000/1/14500/ 75000	-	-	12	M	M	M	M	N	1	E1362-D1-070924.asc	E1362-D2-Channel# Sept 24 2007 11-06-07.txt	no video
E1363	4	Clay	55.00	0.8	32.11	NA	2	A,B	4	6.89/ 6.58	6.83/ 6.54	-	-	11000/250/ 14500/75000	11000/1/14500/ 75000	-	-	12	H	H	H	H	N	1	E1363-D1-070924.asc	E1363-D2-Channel# Sept 24 2007 11-39-25.txt	no video
E1364	4	Clay	55.00	0.8	32.11	NA	2	A,B	4	6.89/ 6.58	6.83/ 6.54	-	-	11000/250/ 14500/75000	11000/1/14500/ 75000	-	-	12	H	H	H	H	N	2	E1364-D1-070924.asc	E1364-D2-Channel# Sept 24 2007 11-43-13.txt	no video
E1365	4	Clay	55.00	0.8	32.11	NA	2	A,B	4	6.89/ 6.58	6.83/ 6.54	-	-	11000/250/ 14500/75000	11000/1/14500/ 75000	-	-	12	H	H	H	H	N	3	E1365-D1-070924.asc	E1365-D2-Channel# Sept 24 2007 11-57-36.txt	no video
E1365BL	4	Clay	55.00	0.8	32.11	NA	2	A,B	4	6.89/ 6.58	6.83/ 6.54	-	-	11000/250/ 14500/75000	11000/1/14500/ 75000	-	-	12	H	H	H	H	N	1	E1365-D1-BL-070924.asc	E1365-D2-BL-Channel# Sept 24 2007 12-14-49.txt	no video
E1366BL	4	Clay	55.50	0.8		NA	-	-	-	-	-	-	-	-	-	-	-	-	H	H	H	H	N	1	E1366-D1-BL-070925.asc	E1366-D2-BL-Channel# Sept 25 2007 10-45-25.txt	no video
E1366	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/400/ 14500/75000	-	11000/1/14500/ 75000	-	12	H	H	H	H	N	1	E1366-D1-070925.asc	E1366-D2-Channel# Sept 25 2007 10-53-14.txt	no video
E1367	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/300/ 14500/75000	-	11000/1/14500/ 75000	-	12	H	H	H	H	N	1	E1367-D1-070925.asc	E1367-D2-Channel# Sept 25 2007 10-58-28.txt	no video
E1368	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/100/ 14500/75000	-	11000/1/14500/ 75000	-	12	H	H	H	H	N	1	E1368-D1-070925.asc	E1368-D2-Channel# Sept 25 2007 11-06-53.txt	no video
E1369	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/~6. 7	~6.5/ ~6.5	-	-	11000/200/ 14500/75000	-	11000/1/14500/ 75000	-	12	H	H	H	H	N	1	E1369-D1-070925.asc	E1369-D2-Channel# Sept 25 2007 11-13-35.txt	no video
E1370	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/400/ 14500/75000	-	11000/1/14500/ 75000	-	12	H	H	H	H	N	1	E1370-D1-070925.asc	E1370-D2-Channel# Sept 25 2007 11-20-13.txt	no video
E1371	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/600/ 14500/75000	-	11000/1/14500/ 75000	-	12	H	H	H	H	N	1	E1371-D1-070925.asc	E1371-D2-Channel# Sept 25 2007 11-24-47.txt	no video

Table B.1. Master Run Log, 4-PJM Configuration

Exp. No.	PJM Config	Simulant					No. PJMs OB[a]	OB PJMs	OB Duration[b]	Drive Pressure Settings[b] (bar, g)				PJM OP Conditions (vacuum/delay/drive/vent time (ms)[b]				Target Noz. Vel.[b] (m/s)	Hydrophone Elevation				Video (Y/N)	Repeat #	DAS-1 Filename	DAS-2 Filename[c]	DAS-4 (video) filename
		Type	Ht from rim (in.)	H/D	T_{ys} (Pa)	κ (cP)				PJM A	PJM B	PJM C	PJM D	PJM A	PJM B	PJM C	PJM D		H1	H2	H3	H4					
E1372	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/600/ 14500/75000	-	11000/1/14500/ 75000	-	12	H	H	H	H	N	1	E1372-D1-070925.asc	E1372-D2-Channel# Sept 25 2007 11-29-38.txt	no video
E1373	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/700/ 14500/75000	-	11000/1/14500/ 75000	-	12	H	H	H	H	N	1	E1373-D1-070925.asc	E1373-D2-Channel# Sept 25 2007 11-35-41.txt	no video
E1374	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/700/ 14500/75000	-	11000/1/14500/ 75000	-	12	M	M	M	M	N	1	E1374-D1-070925.asc	E1374-D2-Channel# Sept 25 2007 12-45-36.txt	no video
E1375	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/700/ 14500/75000	-	11000/1/14500/ 75000	-	12	M	M	M	M	N	2	E1375-D1-070925.asc	E1375-D2-Channel# Sept 25 2007 12-53-15.txt	no video
E1376	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/850/ 14500/75000	-	11000/1/14500/ 75000	-	12	M	M	M	M	N	1	E1376-D1-070925.asc	E1376-D2-Channel# Sept 25 2007 13-02-19.txt	no video
E1377	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/850/ 14500/75000	-	11000/1/14500/ 75000	-	12	O	O	O	O	N	1	E1377-D1-070925.asc	E1377-D2-Channel# Sept 25 2007 13-21-28.txt	no video
E1378	4	Clay	55.50	0.8		NA	2	A,C	-	~6.7/ ~6.7	~6.5/ ~6.5	-	-	11000/850/ 14500/75000	-	11000/1/14500/ 75000	-	12	L	L	L	L	N	1	E1378-D1-070925.asc	E1378-D2-Channel# Sept 25 2007 13-37-42.txt	no video
E1378BL	4	Clay	55.50	0.8		NA	-	-	-	-	-	-	-	-	-	-	-	-	L	L	L	L	N	1	E1378-D1-BL-070925.asc	E1378-D2-BL-Channel# Sept 25 2007 13-45-25.txt	no video

Notes:
(a) OB = Overblow
(b) Values are for information only.
(c) Channel 1 through 20. Only channel 1 data file name displayed for DAS 2 files.
(d) RFO : Regulators fully open
Shaded cells indicate experiments were for information only.

Appendix C

Nozzle Loss Coefficients

Appendix C – Nozzle Loss Coefficients

The following discussion of nozzle loss coefficients and their calculation has been previously presented (see Bontha 2005) and for continuity is being presented here once again.

C.1 Balance Equations for PJM Fluid

Consider the period of time in which the liquid level is within the cylindrical cross-section the PJM. Assuming conservation of liquid volume, we can write $A_{PJM}(dx/dt) = A_{PJM}\dot{x} = A_o u$, where A_{PJM} is PJM cross-section area,[(a)] A_o is nozzle area, u is nozzle velocity, and (dx/dt) or $\dot{x}$ is velocity of the PJM liquid surface inside the PJM cylinder. Similarly, the balance equation on power can be written in the form:

$$\begin{aligned}\left[P+\rho g(L-x)-P_2\right]Q = Q\left[\frac{1}{2}\rho\left(\frac{A_{PJM}}{A_o}\right)^2\dot{x}^2-\frac{1}{2}\rho\dot{x}^2\right] \\ +Q\left[K\frac{1}{2}\rho\left(\frac{A_{PJM}}{A_o}\right)^2\dot{x}^2\right]+Q\rho(L-x)\ddot{x}\end{aligned} \tag{C.1}$$

where

P, P_2	=	pressure in the PJM overhead space and in the tank liquid outside the PJM nozzle
$(P-P_2)Q$	=	net power applied by external pressure on the PJM liquid contents
Q	=	volume flow rate in PJM cross section or out of PJM nozzle
L	=	initial or reference level of liquid surface in PJM, measured up from nozzle level
x	=	instantaneous position of PJM liquid level, measured positive downward from initial or reference liquid level
ρ	=	liquid density
g	=	acceleration of gravity
$\rho g(L-x)Q$	=	power exerted by the flow if liquid at flow rate $Q = A_{PJM}\dot{x}$ at added gravitational pressure head $\rho g(L-x)$ from a column of liquid of instantaneous length L-x and cross section A_{PJM} at velocity $\dot{x}$
$\frac{1}{2}\rho\left(\frac{A_{PJM}}{A_O}\right)^2\dot{x}^2$	=	kinetic energy per unit volume carried out of the nozzle by liquid
$\frac{1}{2}\rho\dot{x}^2$	=	kinetic energy per unit volume carried by liquid before entering nozzle constriction region
$K\frac{1}{2}\rho\left(\frac{A_{PJM}}{A_O}\right)^2\dot{x}^2$	=	Energy per liquid volume dissipated by wall friction and turbulence, according to classical form loss model

(a) For the 8- and 4-PJM configuration, APJM = 433.3 in^2, as determined by subtracting the area of the pulse tube (ID 23.5 inches) from the area of the level probe (diameter = 0.75 inches)

K = friction form loss coefficient for flow through the nozzle region, different for forward or backward flow

$Q\rho(L-x)\ddot{x}$ = Power applied to give column of length L-x acceleration $\ddot{x}$, product of a force $\rho(L-x)\ddot{x}A_{PJM}$ and a velocity $\dot{x}$, with $Q = A_{PJM}\dot{x}$

P_2 = Pressure in tank outside of the nozzle, given by $P_2 = P_{atm} + \rho gH$, where H is the height of the liquid level in the tank measured upward from the nozzle level

It has been demonstrated that the acceleration term $Q\rho(L-x)\ddot{x}$ can typically be neglected for PJM operation in WTP vessels or their scaled versions.

Equation C.1 has tank pressure at nozzle level affected by tank level H according to:

$$P_2 = P_{atm} + \rho gH = P_{atm} + \rho g\left(H_O + x\frac{N_{PJMs}A_{PJM}}{A_{\tan k}}\right) \tag{C.2}$$

In Eq. (C.2), N_{PJMs} is number of PJMs operating, A_{tank} is tank cross-sectional flow area in the current range of tank liquid surface motion, and H_o is the tank liquid level at the initial or reference condition when x = 0. The change in pressure with tank level during a pulse is typically not very important.

Eq. (C.1) and (C.2) have the dependence on tank level and PJM liquid level entering only through the combination H-L. Hence an important initial condition in simulations of a PJM cycle is the value of H_o-L, which by definition is coincident with x = 0. In simulating tests in which liquid is drawn previous to each pulse up into the air supply tubes supplying the PJMs from above, we note very little liquid moves at the start of the pulse until the liquid level descends to the tops of the main parts of the PJMs, and also that Eq. C.1 and C.2 are valid only after the liquid level drops to the tops of the PJMs, where the flow area becomes A_{PJM}. Hence it is useful to define the reference conditions by x = 0 at that instant and to set H_o-L to the appropriate value at that instant.

C.2 Solution Procedure for Determining K

Eq. (C.1), with defining Eq. (C.2) for P_2, can be used to obtain instantaneous velocities $\dot{x}$ and to step PJM liquid surface position x through a cycle. Assuming pressure P(t) known in the PJM headspace at a time when position x is also known, and neglecting inertial reaction, $\dot{x}^2$ can be found from

$$\dot{x}^2 = \frac{P(t) + \rho g(L-x) - P_{atm} - \rho g(H_o + xN_{PJMs}A_{PJM}/A_{\tan k})}{(1+K)\frac{1}{2}\rho\left(\frac{A_{PJM}}{A_o}\right)^2 - \frac{1}{2}\rho} \tag{C.3}$$

from which we obtain $\dot{x}$ with correct algebraic sign by

$$\dot{x} = sqrt\left(\dot{x}^2\right)sign[P(t) + \rho g(L-x) - P_{atm} - \rho g(H_o + xN_{PJMs}A_{PJM}/A_{\tan k})] \tag{C.4}$$

We assume in Eq. (C.3) that we choose K as the forward or backward form loss coefficient depending on the sign of the numerator in Eq. (C.3). With the value of $\dot{x}$ from Eq. (C.4), we obtain a first-order estimate $x_{1,t2}$ of x at time t_2 by

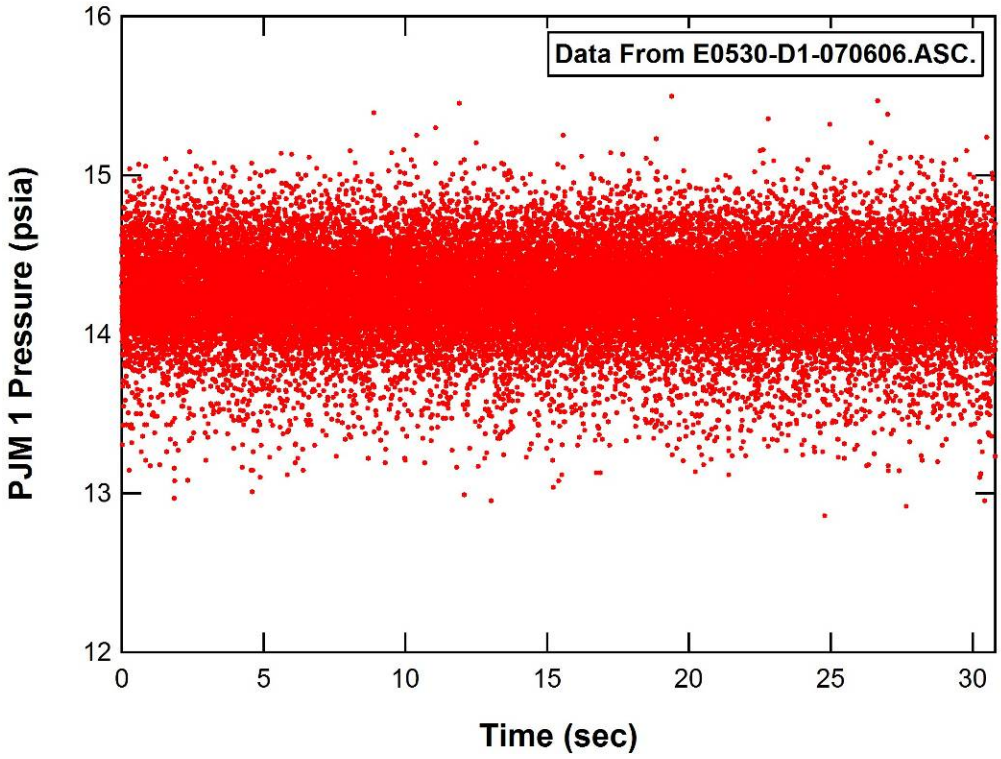
$$x_{1,t2} = x + (t_2 - t)\dot{x} \tag{C.5}$$

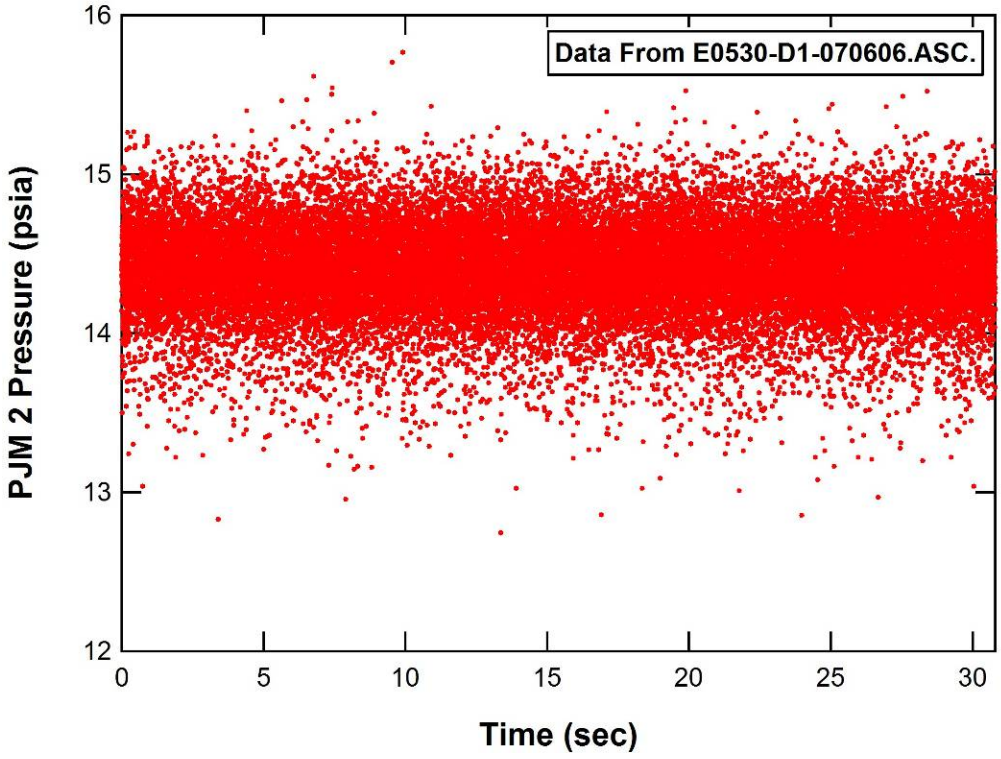
Using an Excel spreadsheet, we performed a second-order refinement of this first-order estimate to obtain x_2 at time t_2. We proceed in this manner to obtain x and $\dot{x}$ values at each time point for which data are stored. Nozzle velocity u is obtained at each time point from $u = (A_{PJM}/A_O)\,\dot{x}$.

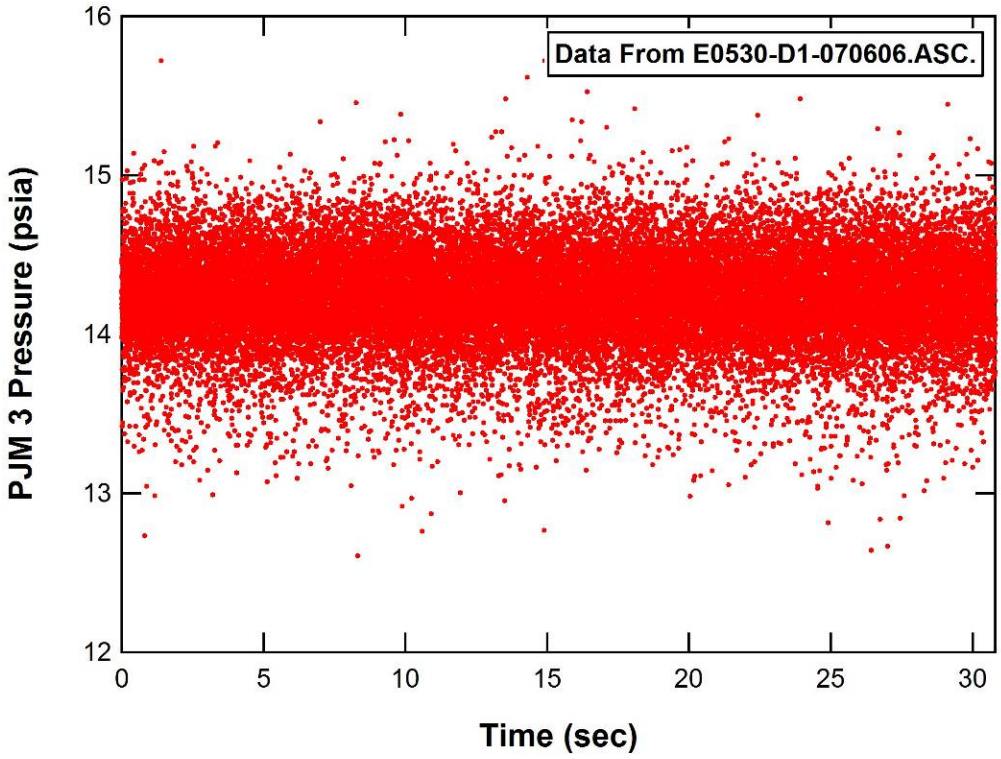
Calculated points x(t) from this pressure-based calculation can be compared with level-based values, and both forward flow and backflow values of K determined for optimum agreement. Alternatively, nozzle velocities $u = (A_{PJM}/A_O)\,\dot{x}$ from the pressure-based calculation can be compared with ones inferred from finite differencing of tank level data, $u = (\Delta H/\Delta t)A_{tank}/(N_{PJMs}A_{PJM})$. An advantage of the comparison of x(t) rather than u data is that the x(t) comparison can be made for data whose noise level is excessively enhanced by differencing.

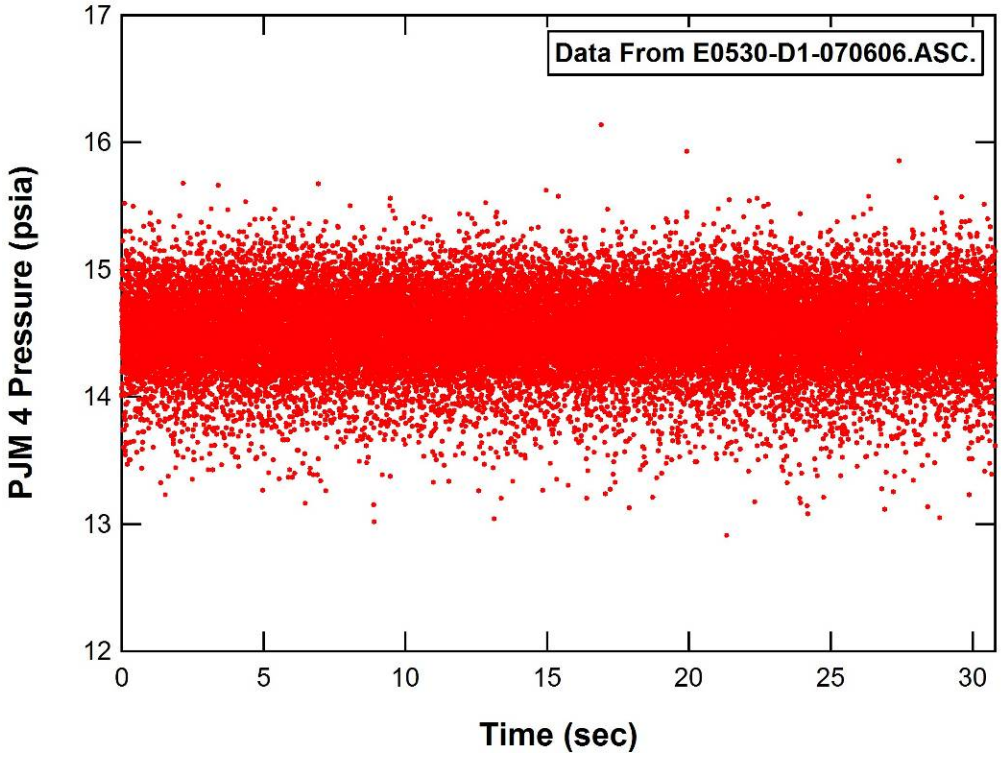
Appendix D

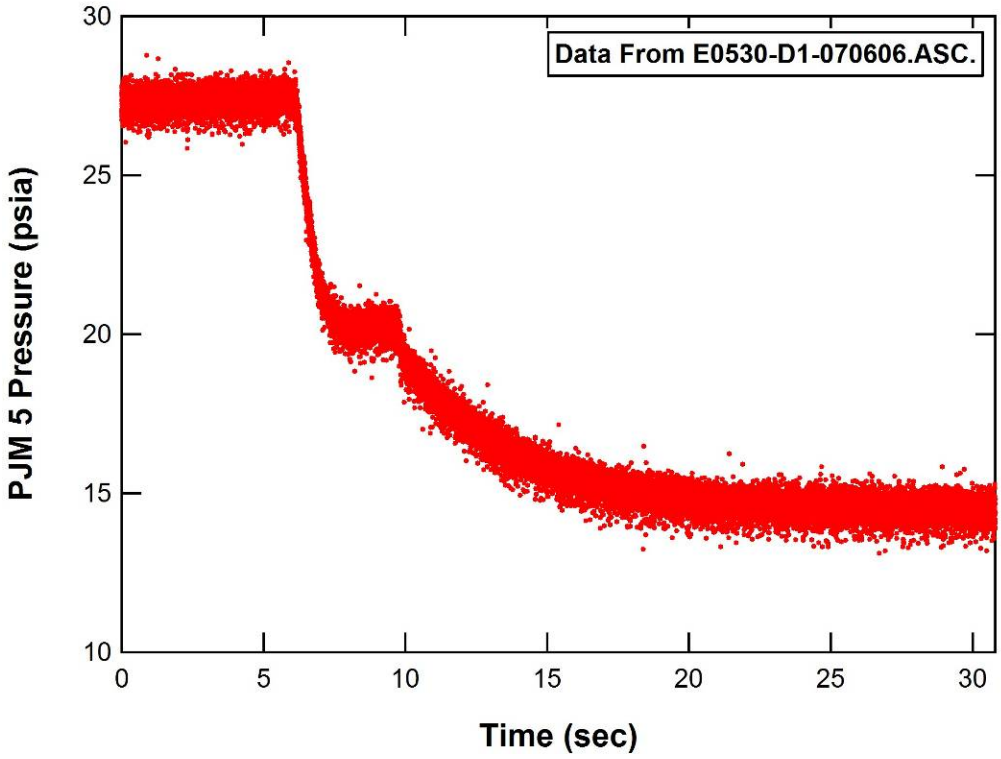
Example 8-PJM Data

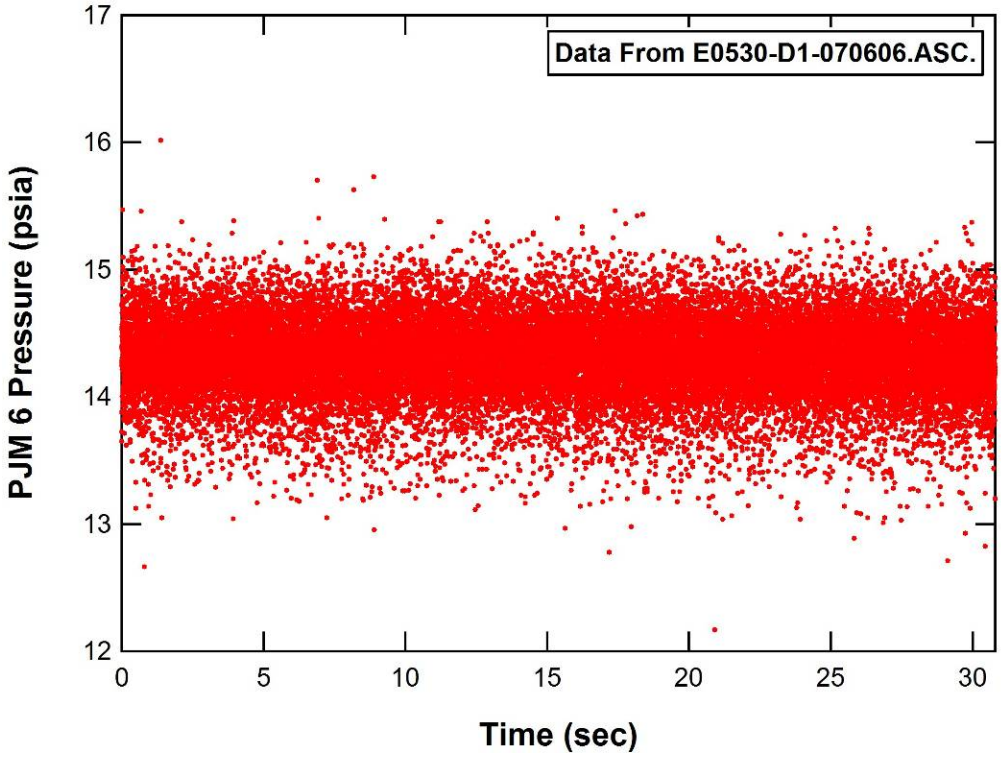

Data From E0530-D1-070606.ASC.
PJM 1 Pressure (psia)
16
15
14
13
12
0
5
10
15
20
25
30
Time (sec)

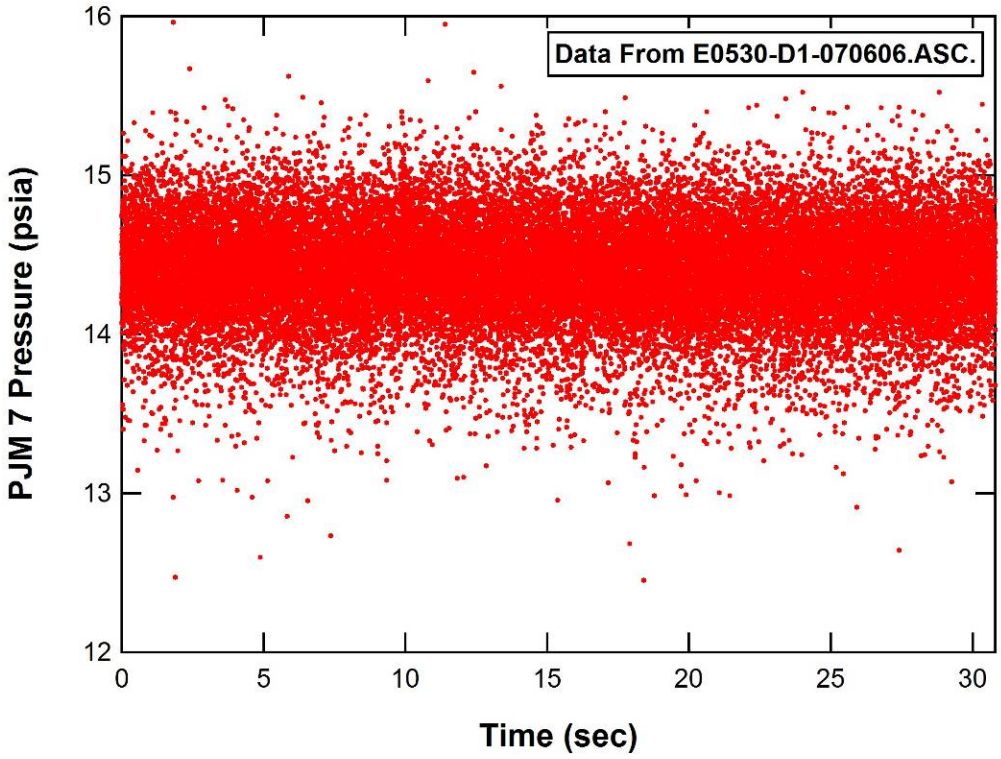

Data From E0530-D1-070606.ASC.
PJM 2 Pressure (psia)
16
15
14
13
12
0
5
10
15
20
25
30
Time (sec)

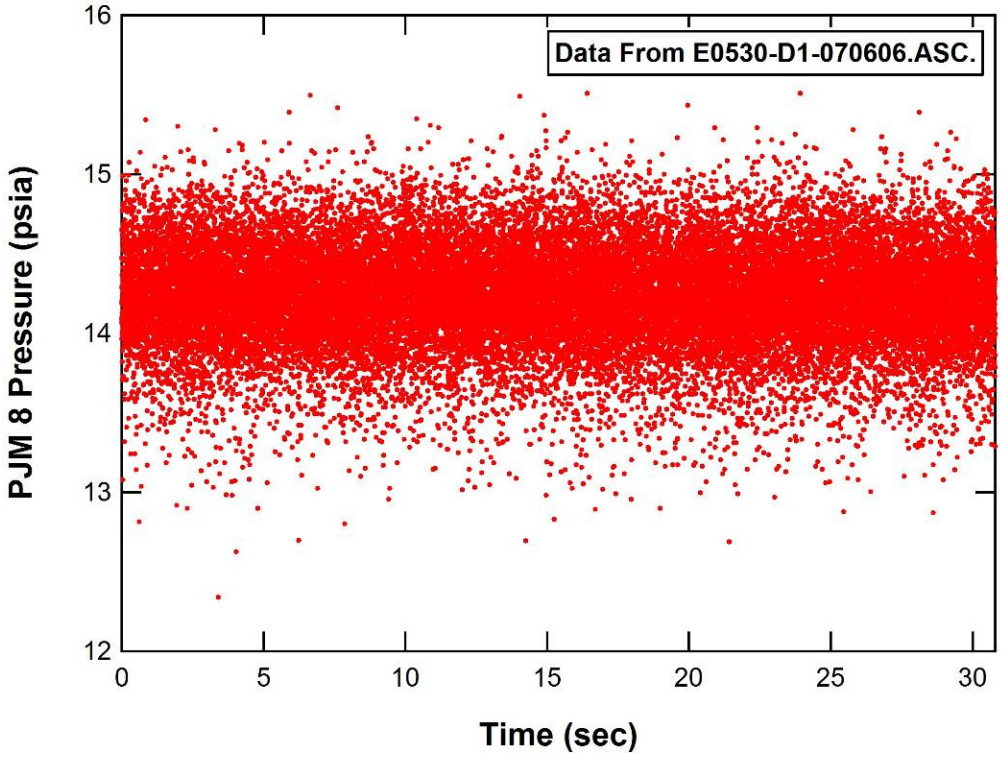

Data From E0530-D1-070606.ASC.
PJM 3 Pressure (psia)
Time (sec)
16
15
14
13
12
0
5
10
15
20
25
30

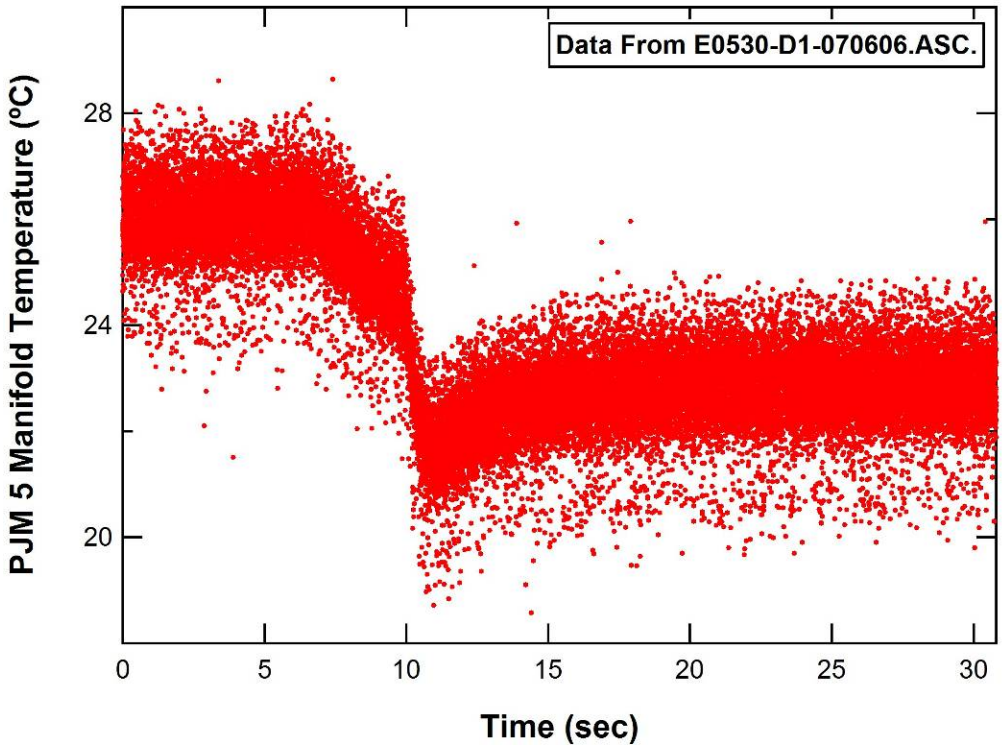

Data From E0530-D1-070606.ASC.
PJM 4 Pressure (psia)
Time (sec)
17
16
15
14
13
12
0
5
10
15
20
25
30

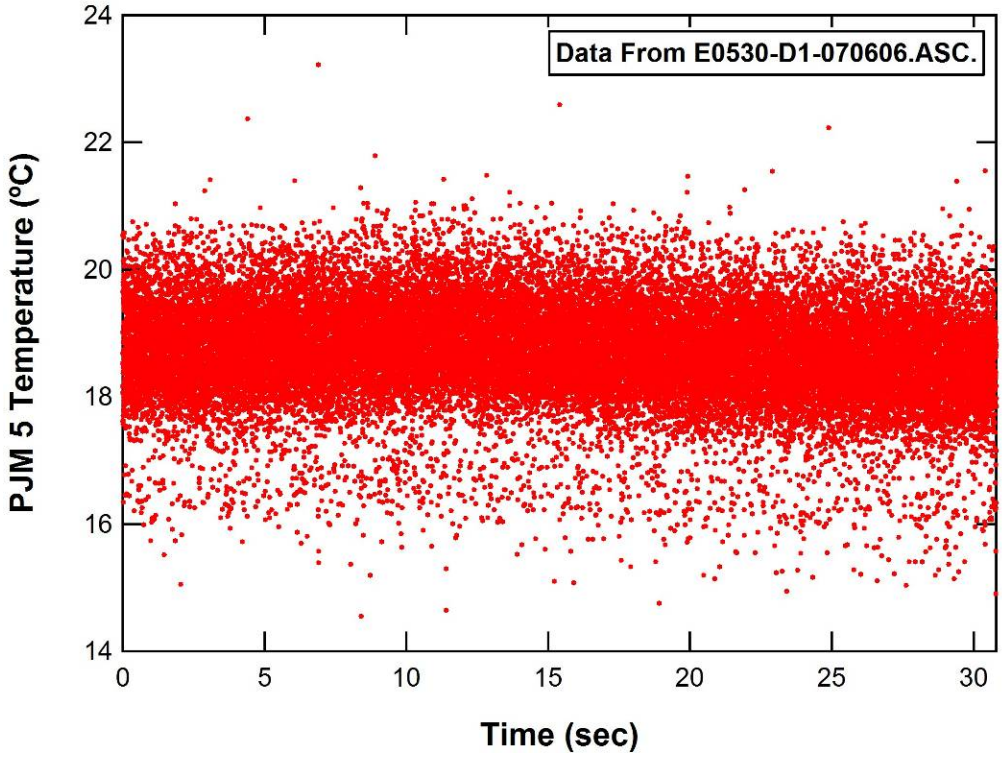

Data From E0530-D1-070606.ASC.
PJM 5 Pressure (psia)
Time (sec)
30
25
20
15
10
0
5
10
15
20
25
30

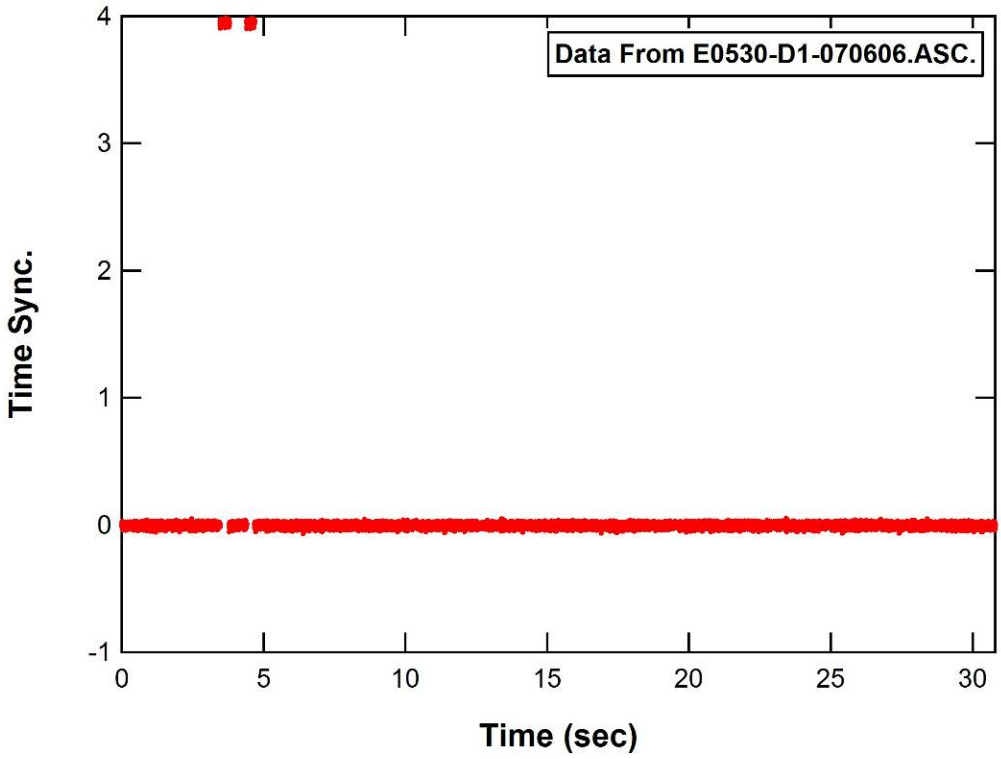

Data From E0530-D1-070606.ASC.
PJM 6 Pressure (psia)
Time (sec)
17
16
15
14
13
12
0
5
10
15
20
25
30

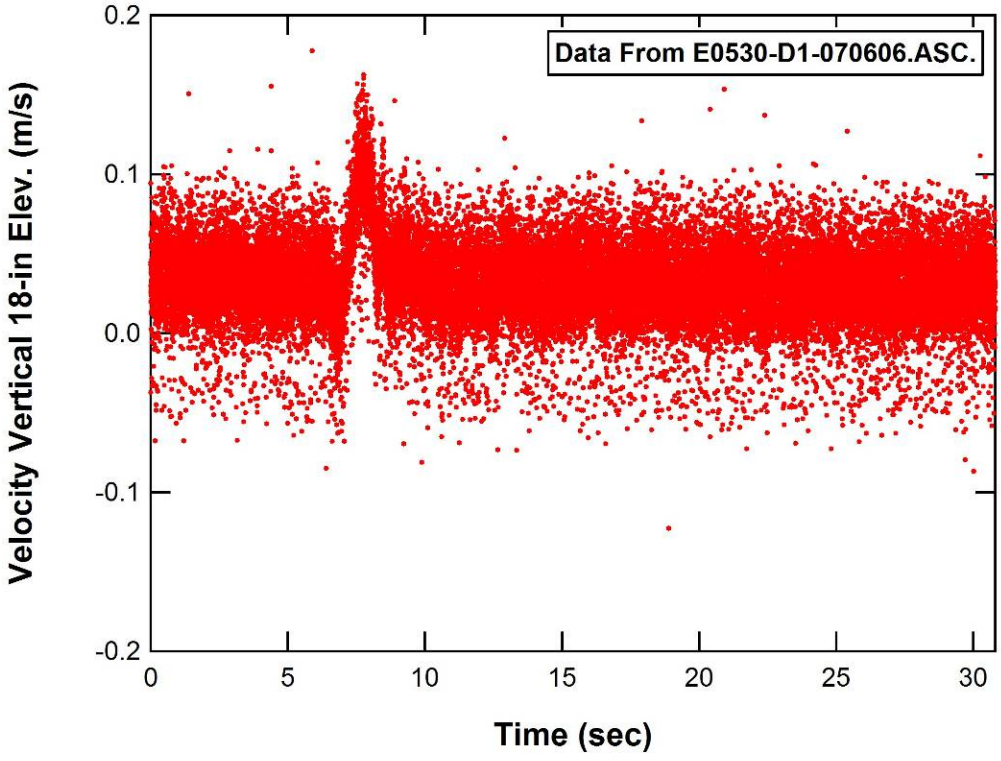

Data From E0530-D1-070606.ASC.
PJM 7 Pressure (psia)
16
15
14
13
12
0
5
10
15
20
25
30
Time (sec)

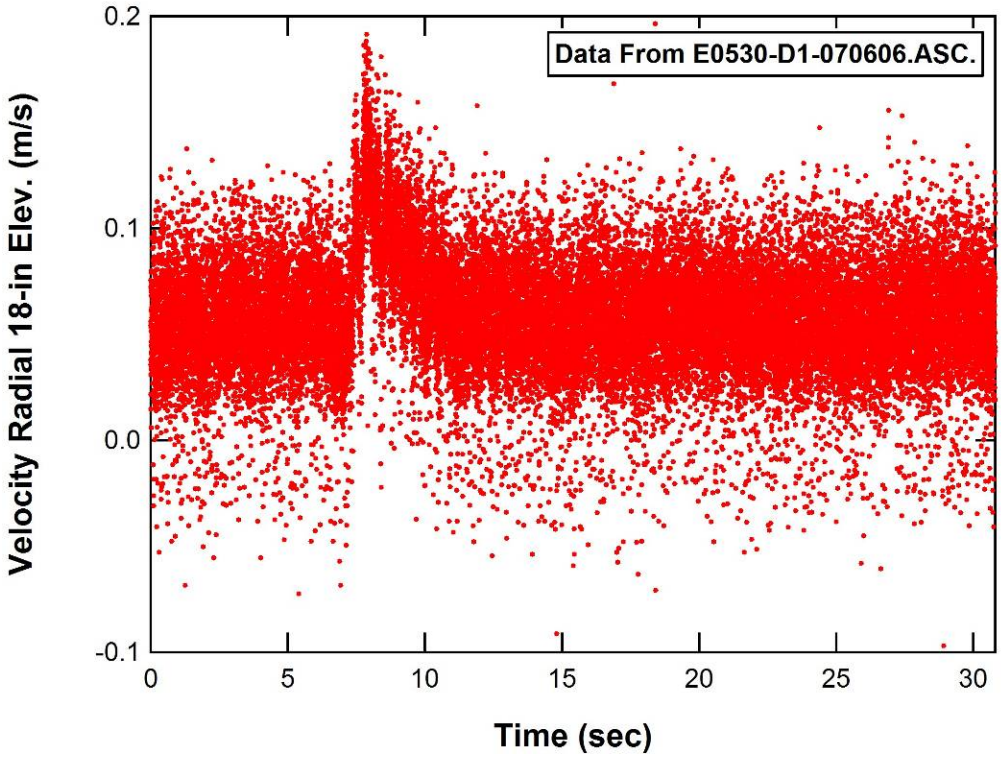

Data From E0530-D1-070606.ASC.
PJM 8 Pressure (psia)
16
15
14
13
12
0
5
10
15
20
25
30
Time (sec)

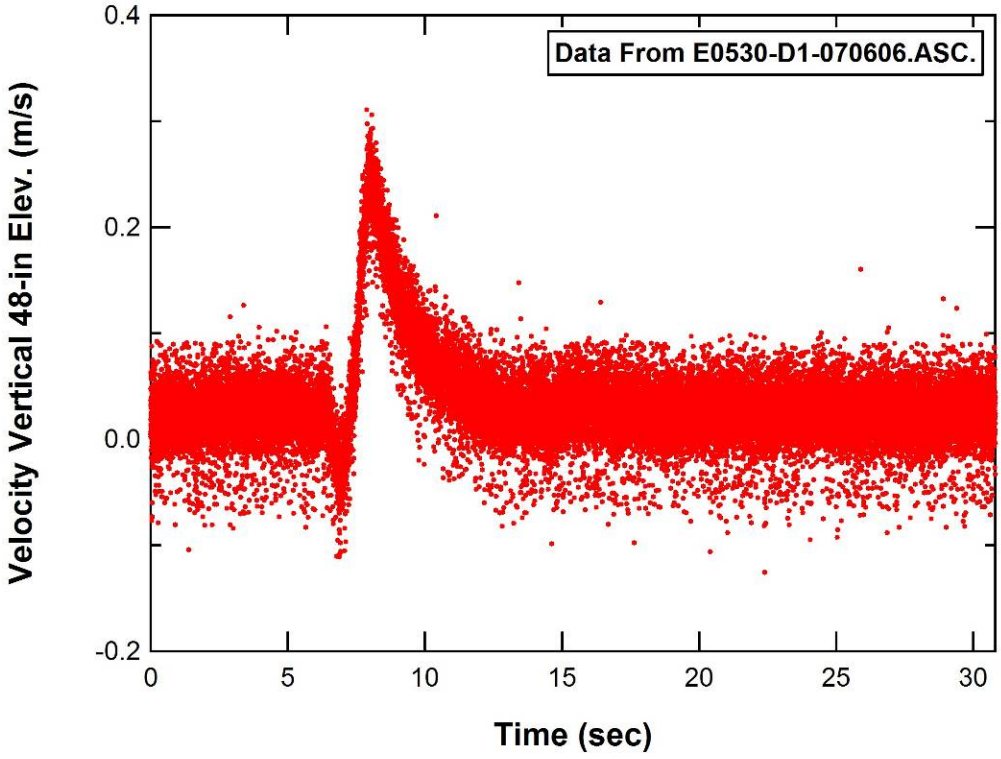

Data From E0530-D1-070606.ASC.
PJM 5 Manifold Temperature (ºC)
28
24
20
0
5
10
15
20
25
30
Time (sec)

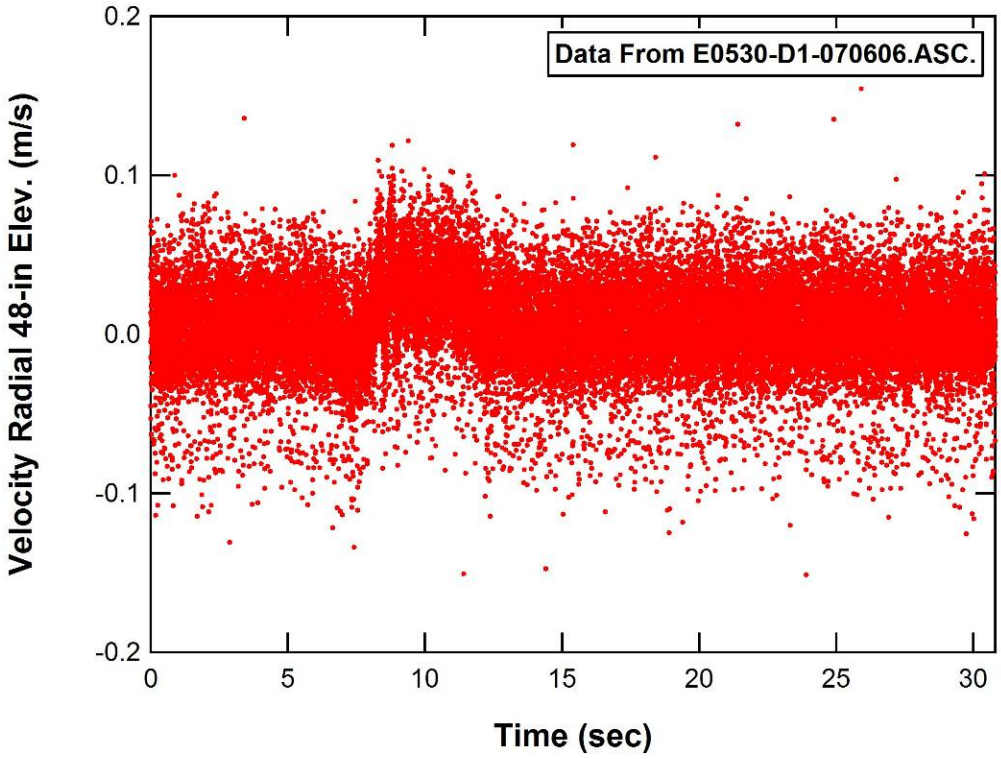

Data From E0530-D1-070606.ASC.
PJM 5 Temperature (ºC)
24
22
20
18
16
14
0
5
10
15
20
25
30
Time (sec)

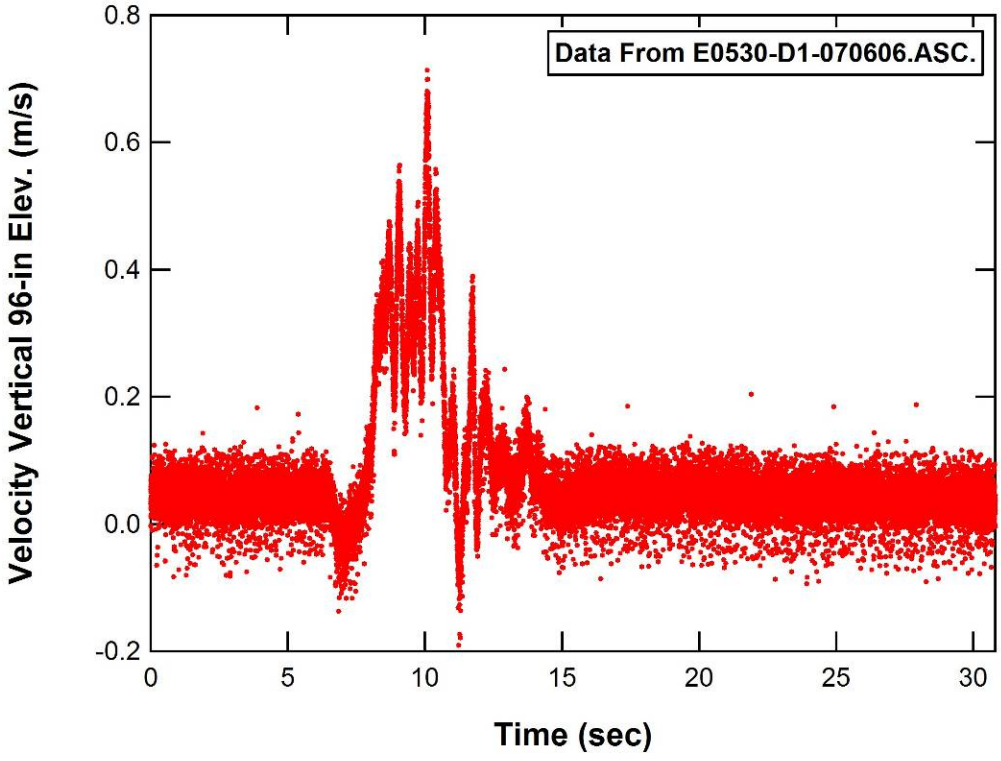

Data From E0530-D1-070606.ASC.
Time Sync.
Time (sec)
4
3
2
1
0
-1
0
5
10
15
20
25
30

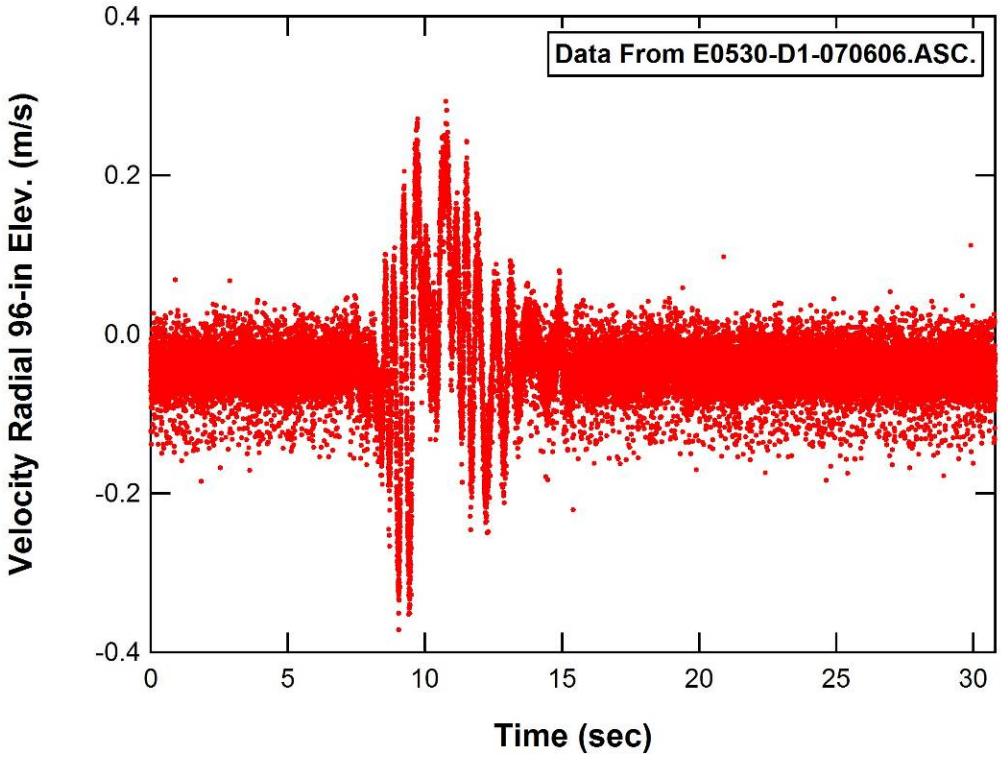

Data From E0530-D1-070606.ASC.
Velocity Vertical 18-in Elev. (m/s)
Time (sec)
0.2
0.1
0.0
-0.1
-0.2
0
5
10
15
20
25
30

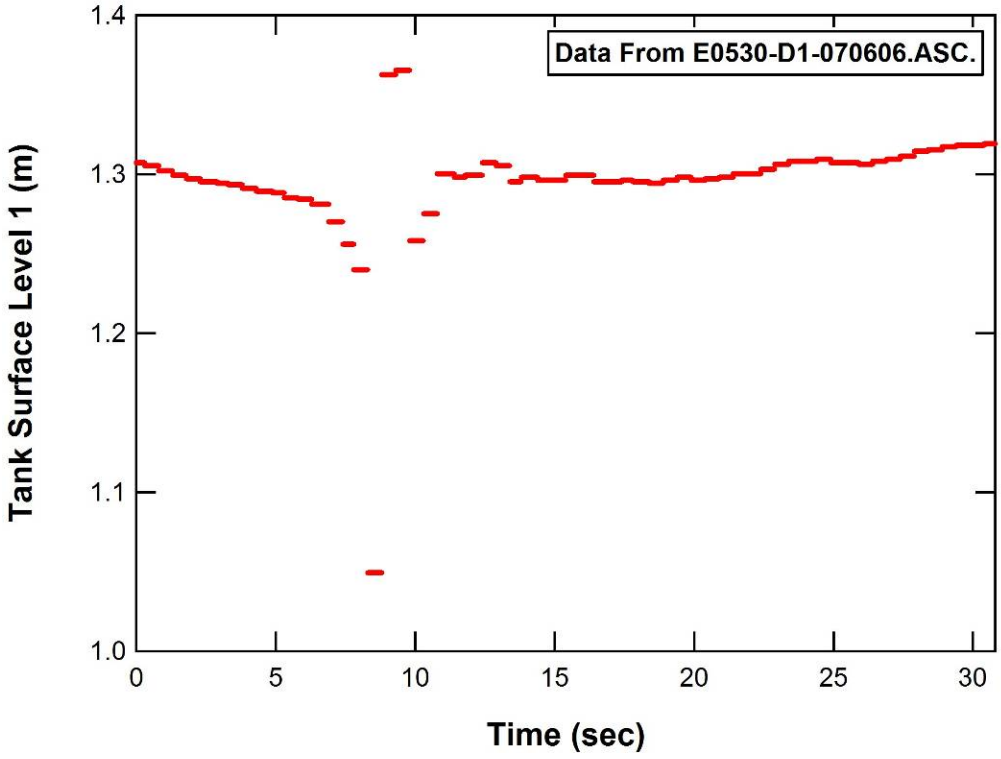

Data From E0530-D1-070606.ASC.
Velocity Radial 18-in Elev. (m/s)
0.2
0.1
0.0
-0.1
0
5
10
15
20
25
30
Time (sec)

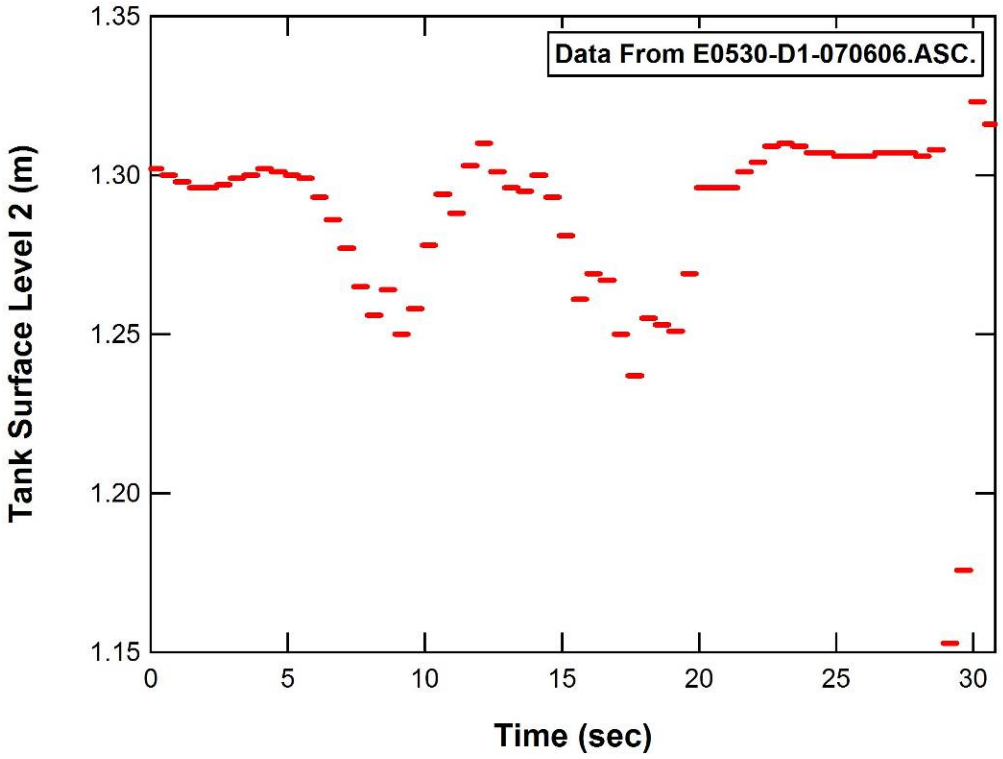

Data From E0530-D1-070606.ASC.
Velocity Vertical 48-in Elev. (m/s)
0.4
0.2
0.0
-0.2
0
5
10
15
20
25
30
Time (sec)

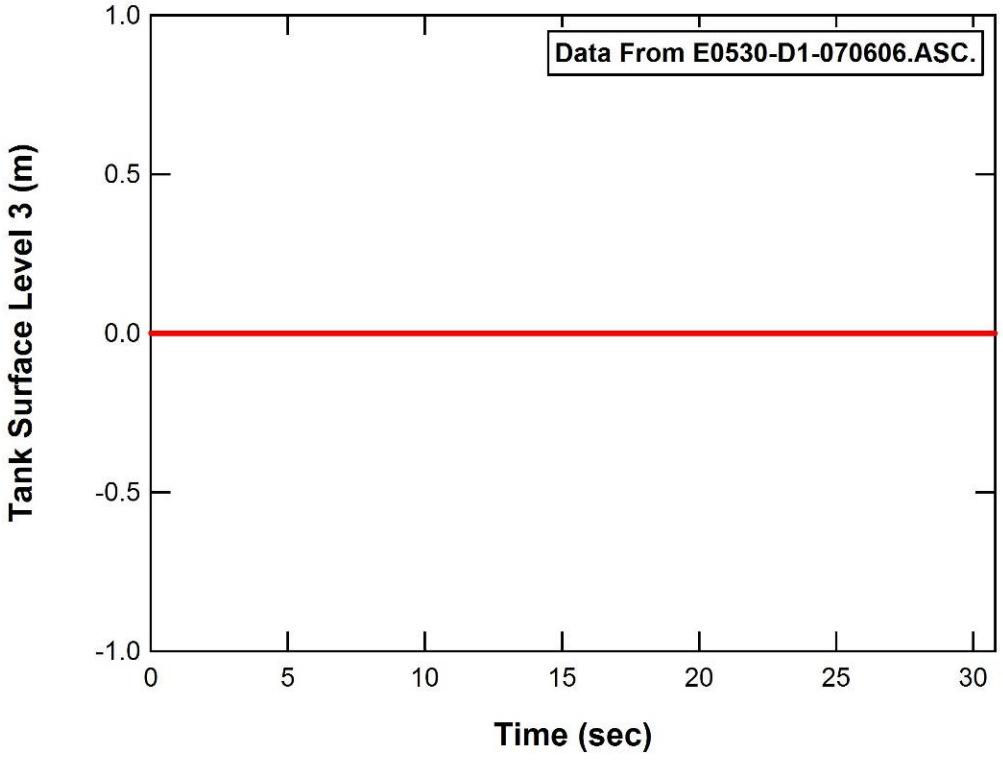

Data From E0530-D1-070606.ASC.
Velocity Radial 48-in Elev. (m/s)
0.2
0.1
0.0
-0.1
-0.2
0
5
10
15
20
25
30
Time (sec)

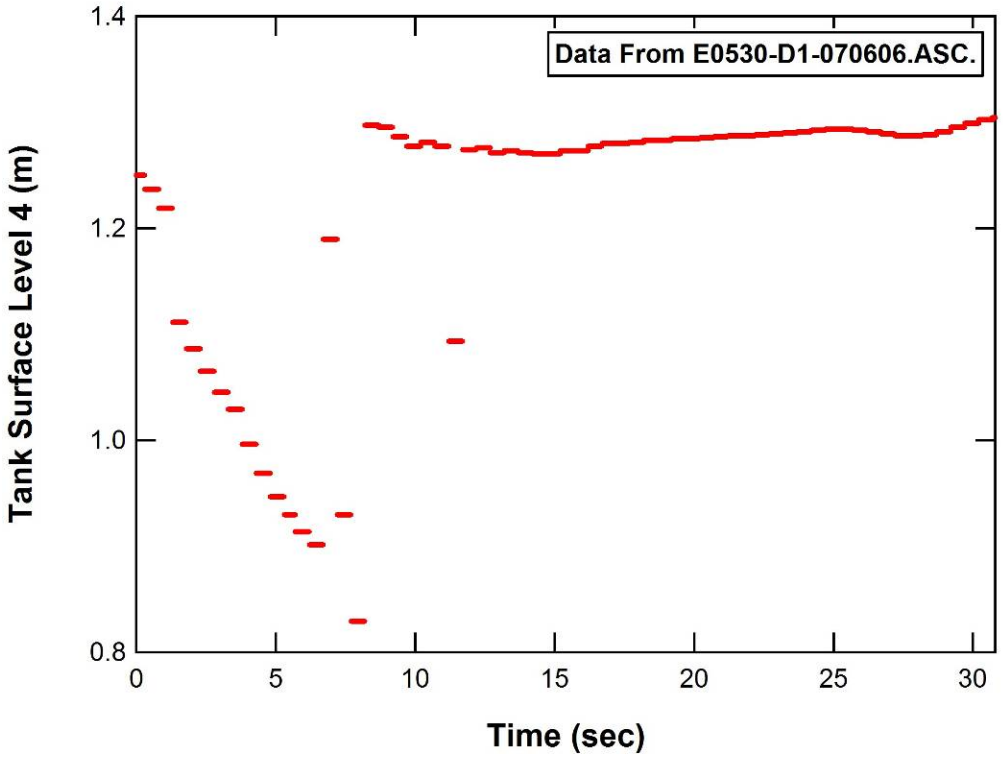

Data From E0530-D1-070606.ASC.
Velocity Vertical 96-in Elev. (m/s)
0.8
0.6
0.4
0.2
0.0
-0.2
0
5
10
15
20
25
30
Time (sec)

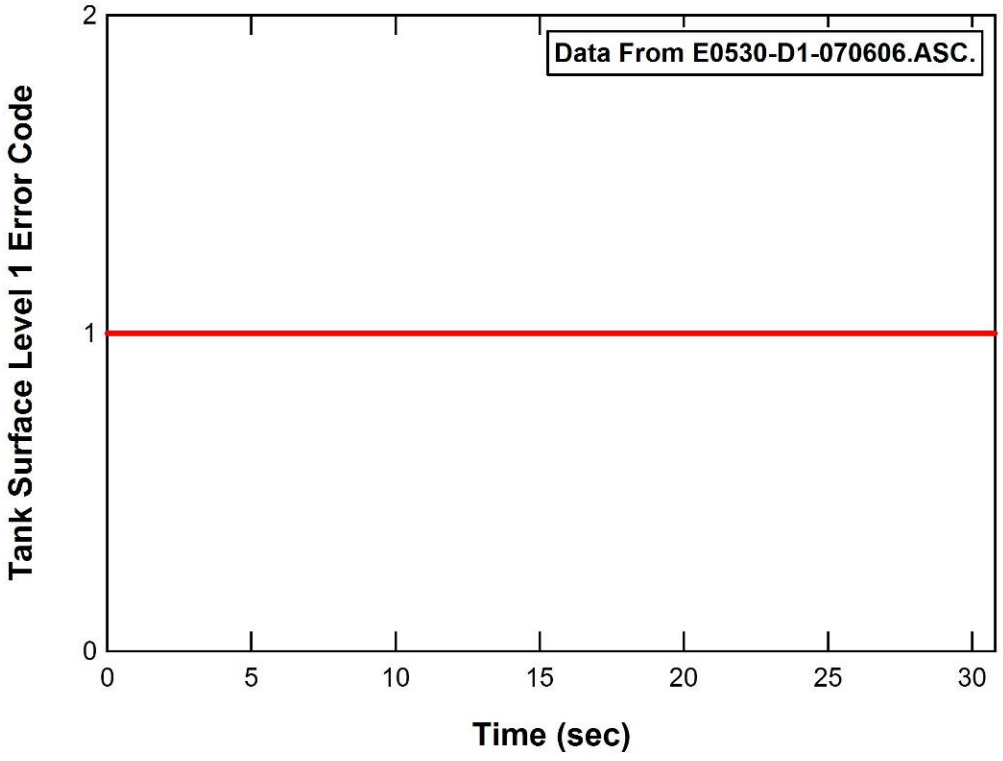

Data From E0530-D1-070606.ASC.
Velocity Radial 96-in Elev. (m/s)
0.4
0.2
0.0
-0.2
-0.4
0
5
10
15
20
25
30
Time (sec)

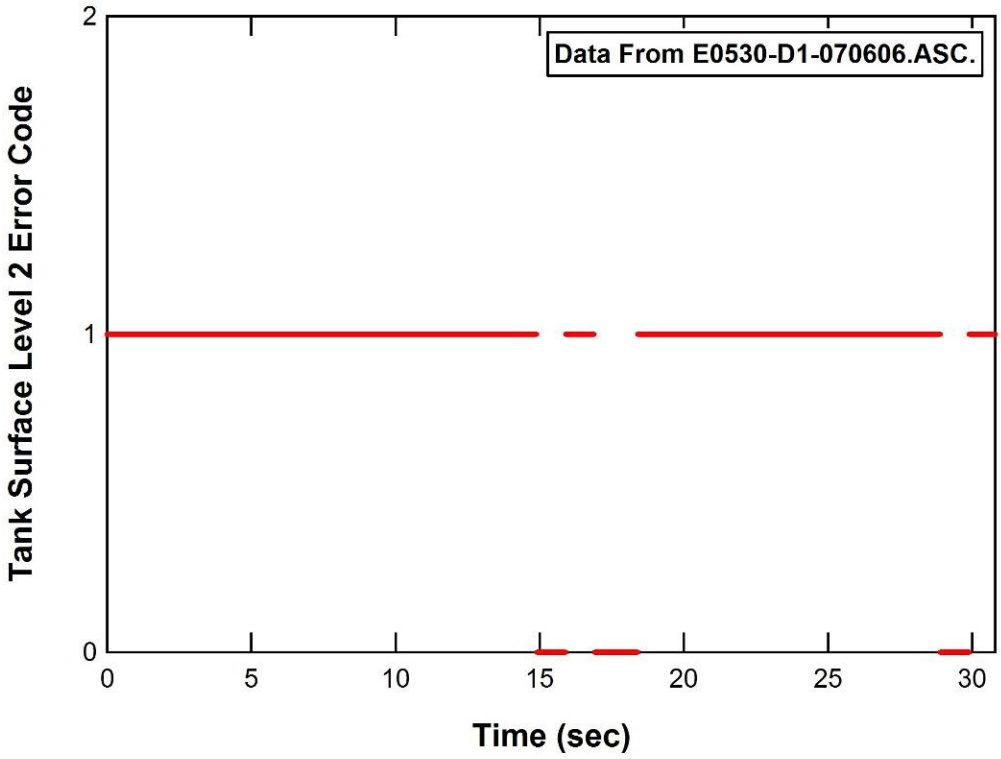

Data From E0530-D1-070606.ASC.
Tank Surface Level 1 (m)
1.4
1.3
1.2
1.1
1.0
0
5
10
15
20
25
30
Time (sec)

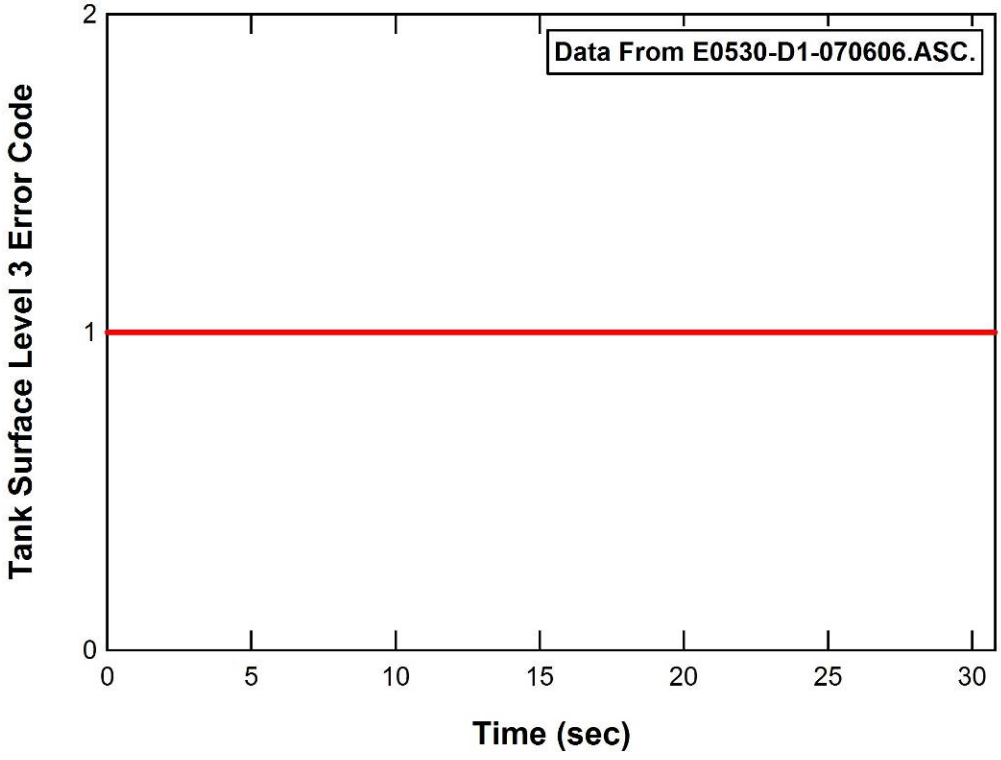

Data From E0530-D1-070606.ASC.
Tank Surface Level 2 (m)
1.35
1.30
1.25
1.20
1.15
0
5
10
15
20
25
30
Time (sec)

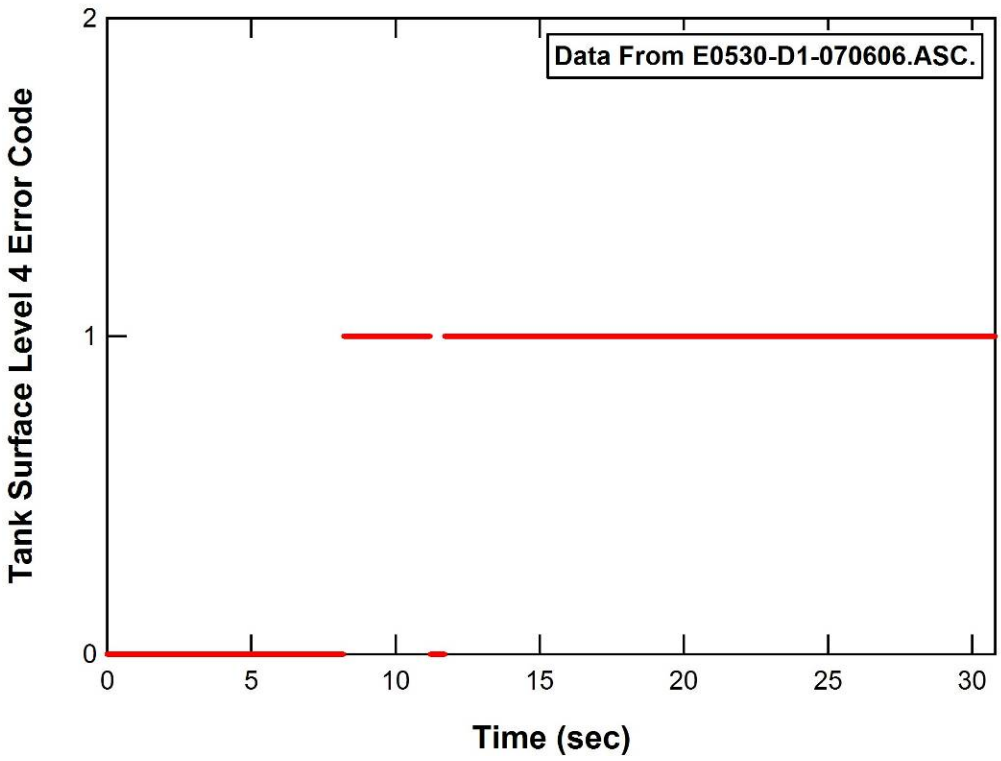

Data From E0530-D1-070606.ASC.
Tank Surface Level 3 (m)
1.0
0.5
0.0
-0.5
-1.0
0
5
10
15
20
25
30
Time (sec)

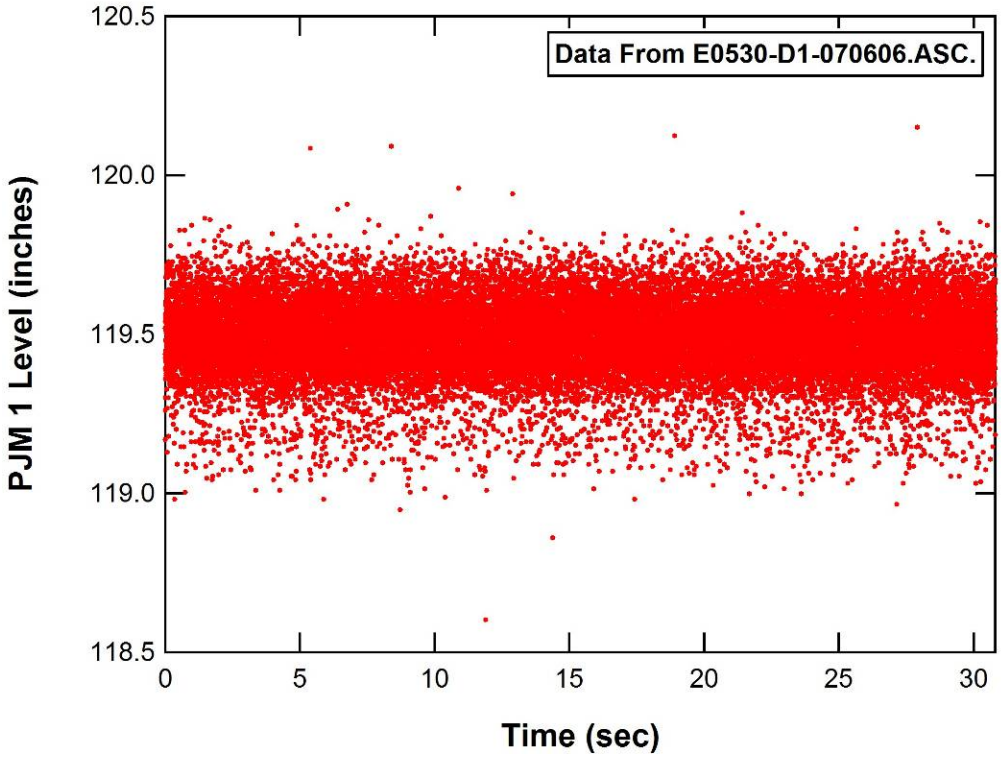

Data From E0530-D1-070606.ASC.
Tank Surface Level 4 (m)
1.4
1.2
1.0
0.8
0
5
10
15
20
25
30
Time (sec)

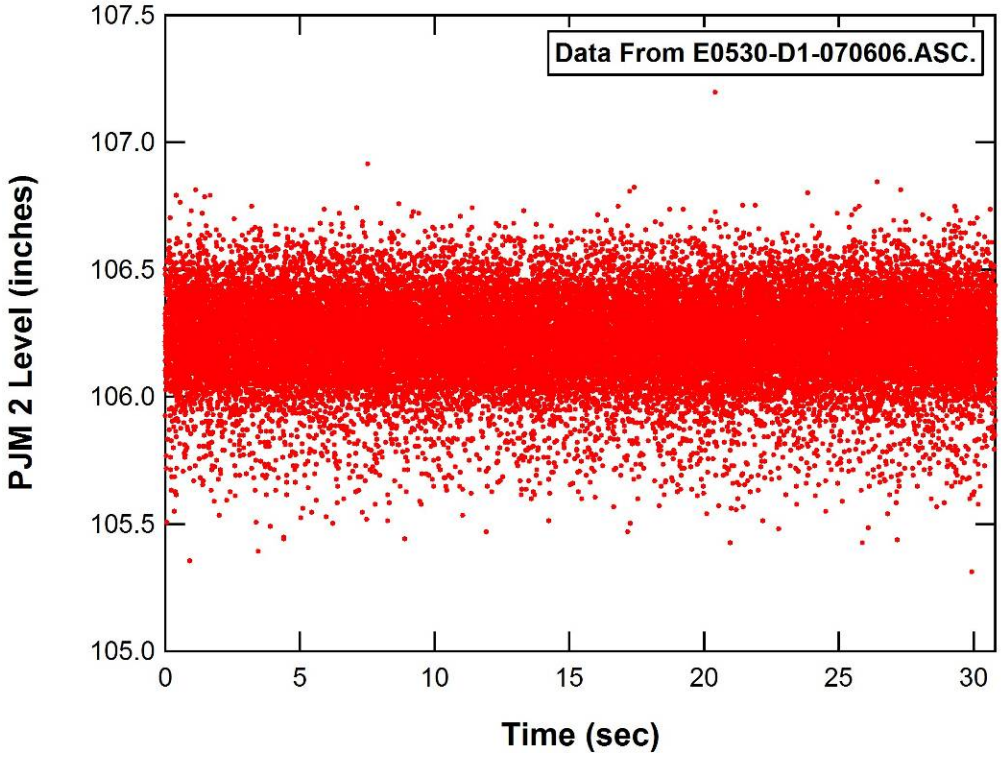

Data From E0530-D1-070606.ASC.
Tank Surface Level 1 Error Code
2
1
0
0
5
10
15
20
25
30
Time (sec)

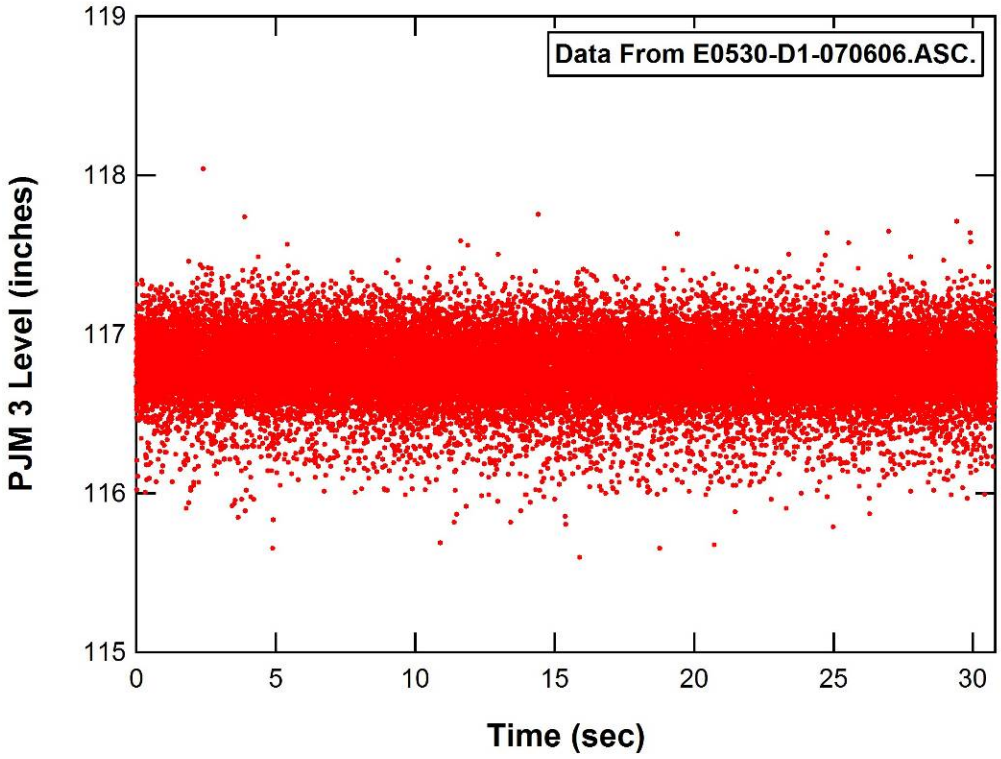

Data From E0530-D1-070606.ASC.
Tank Surface Level 2 Error Code
2
1
0
0
5
10
15
20
25
30
Time (sec)

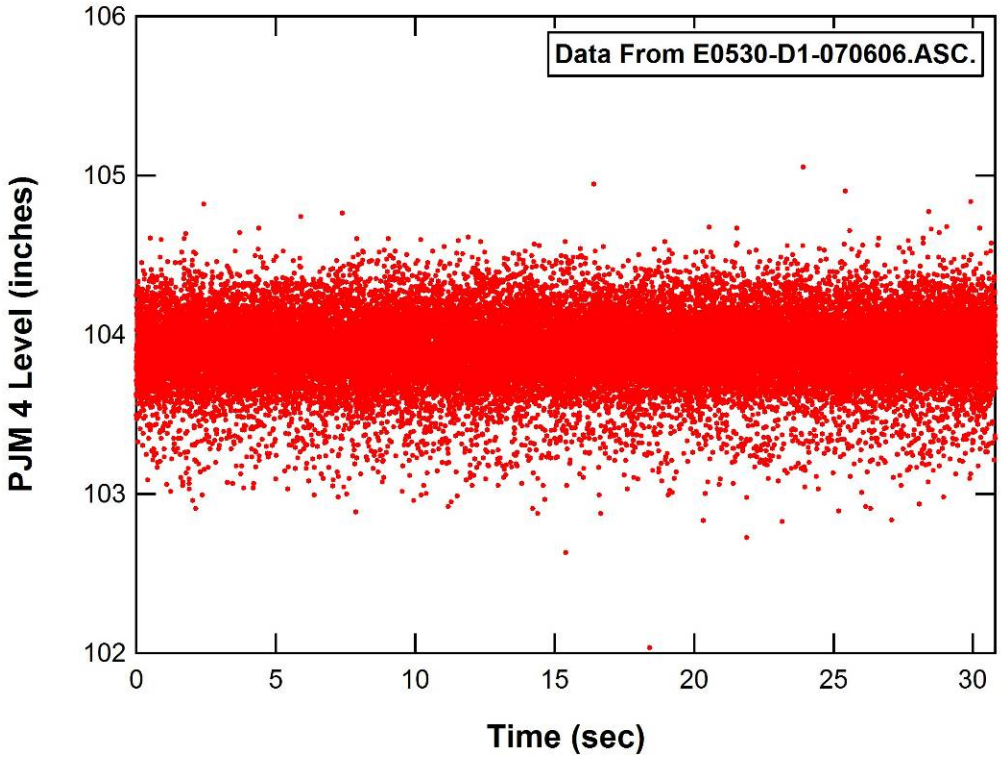

Data From E0530-D1-070606.ASC.
Tank Surface Level 3 Error Code
2
1
0
0
5
10
15
20
25
30
Time (sec)

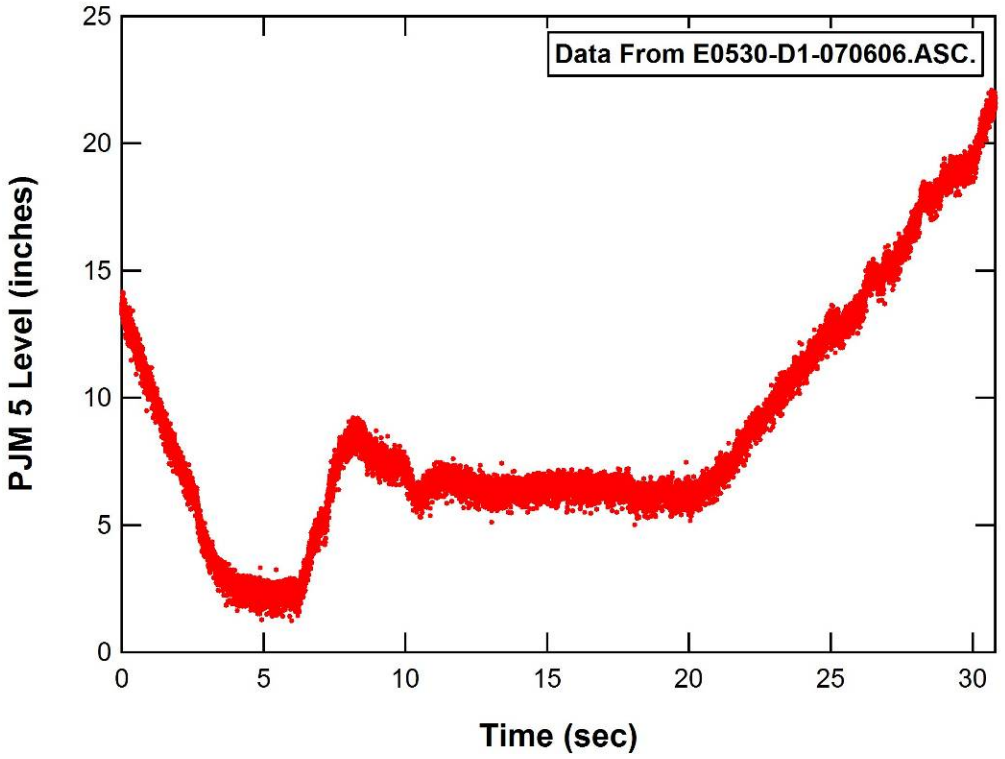

Data From E0530-D1-070606.ASC.
Tank Surface Level 4 Error Code
2
1
0
0
5
10
15
20
25
30
Time (sec)

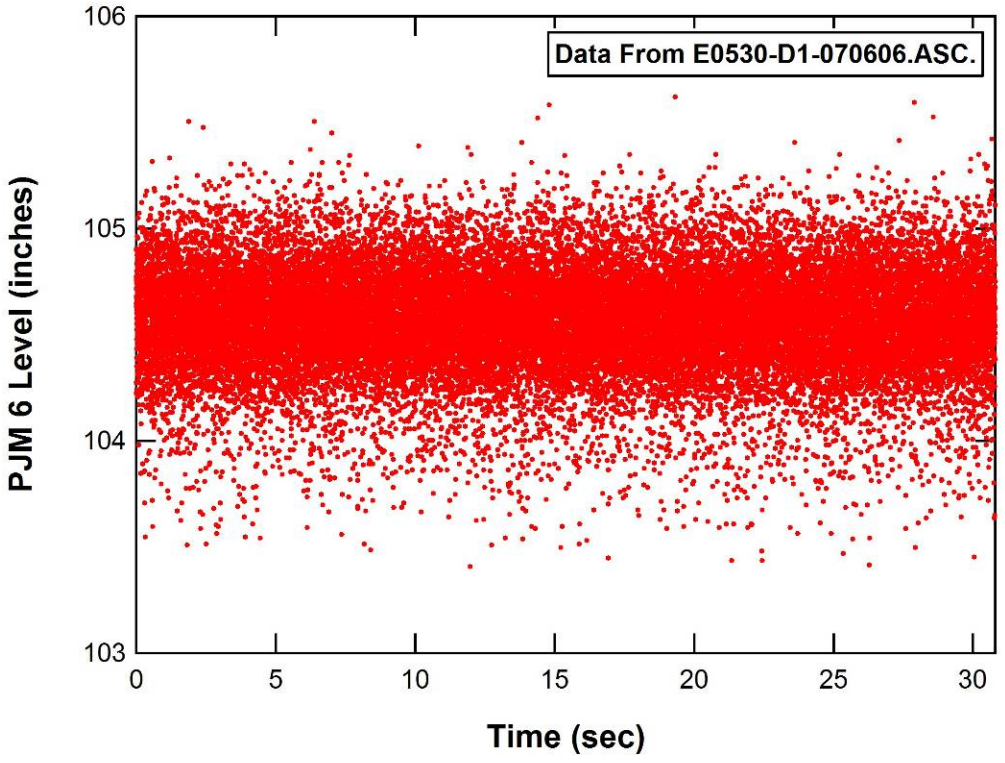

Data From E0530-D1-070606.ASC.
PJM 1 Level (inches)
120.5
120.0
119.5
119.0
118.5
0
5
10
15
20
25
30
Time (sec)

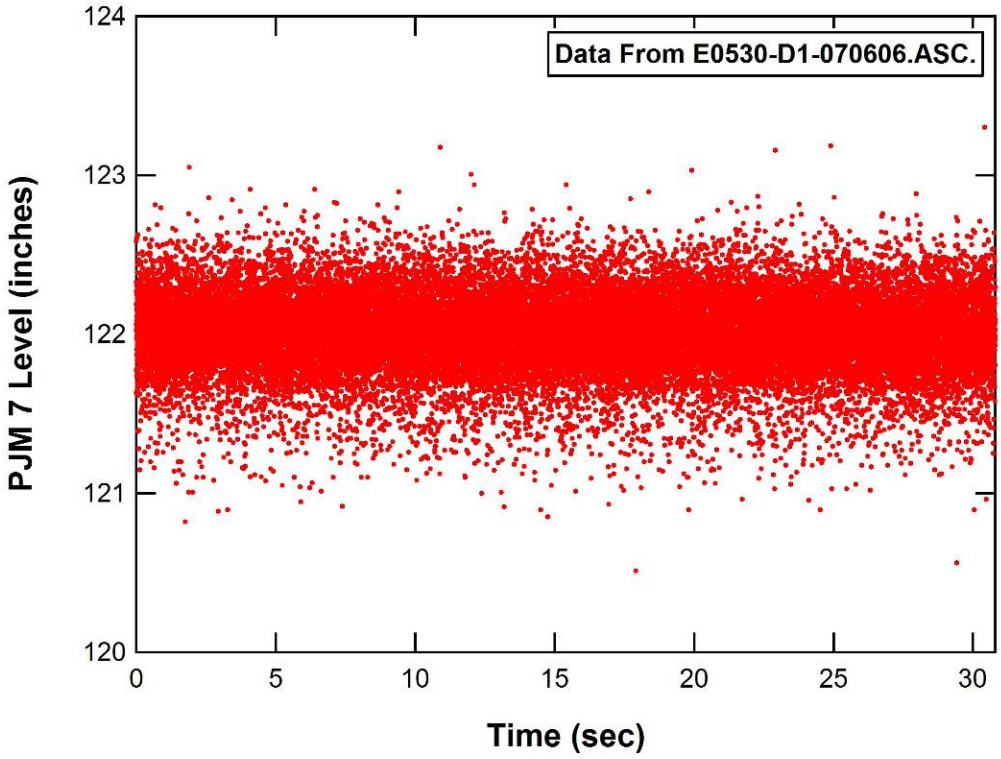

Data From E0530-D1-070606.ASC.
PJM 2 Level (inches)
107.5
107.0
106.5
106.0
105.5
105.0
0
5
10
15
20
25
30
Time (sec)

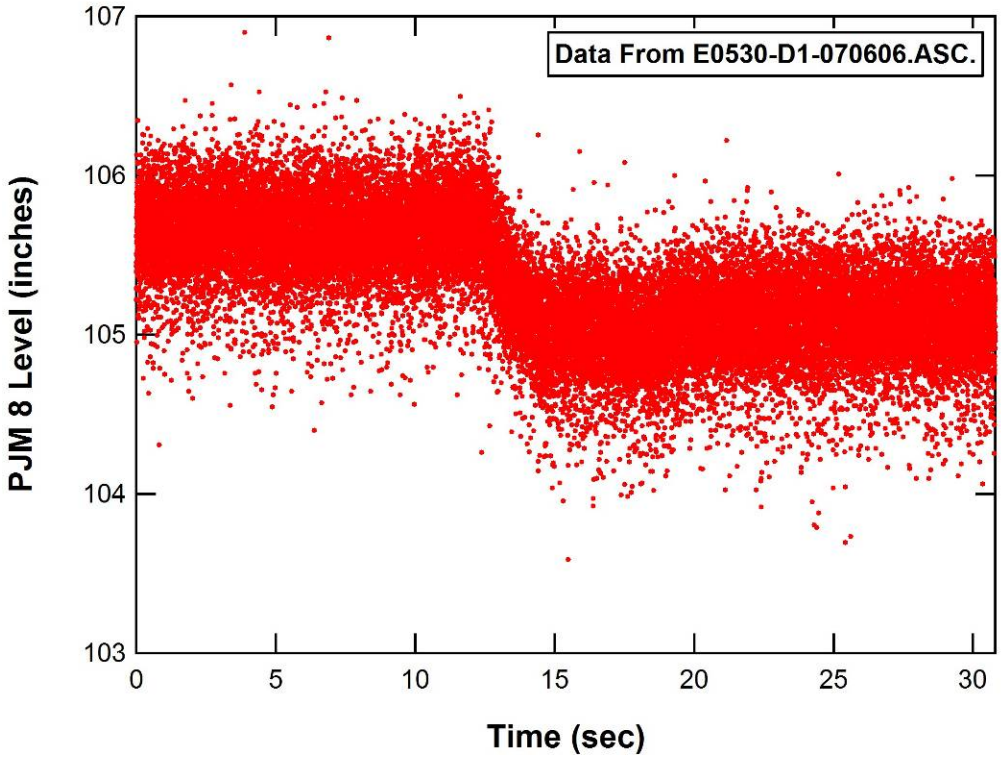

Data From E0530-D1-070606.ASC.
PJM 3 Level (inches)
119
118
117
116
115
0
5
10
15
20
25
30
Time (sec)

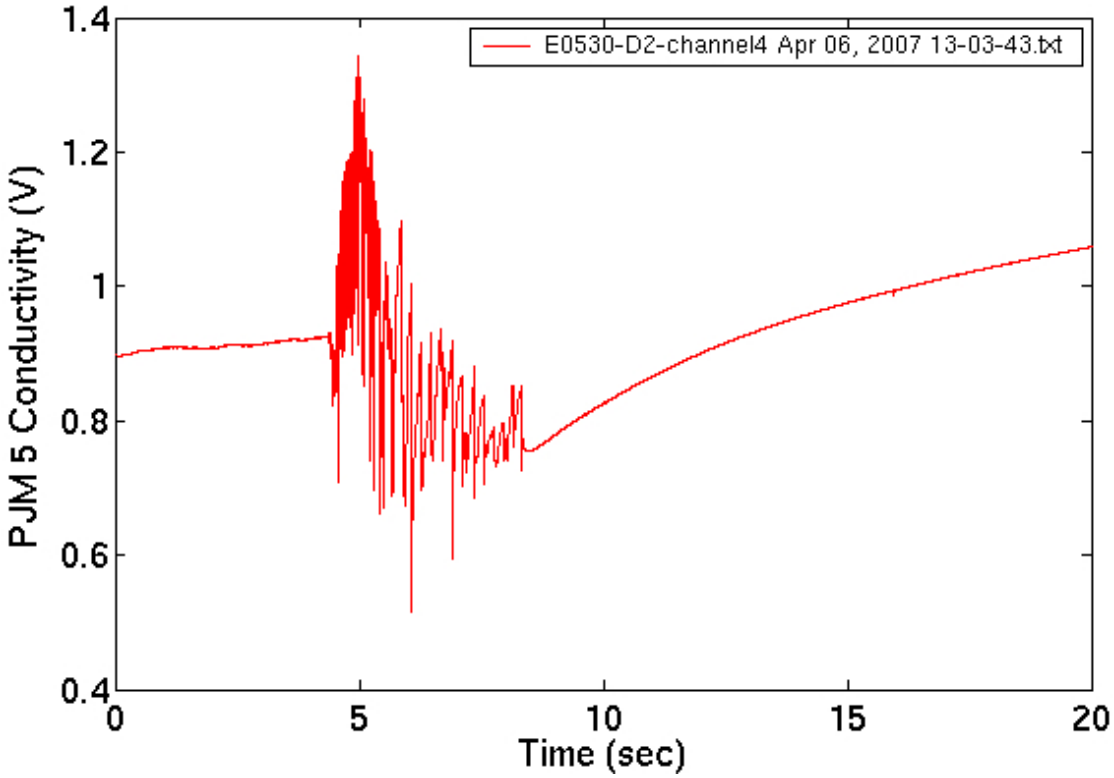

Data From E0530-D1-070606.ASC.
PJM 4 Level (inches)
106
105
104
103
102
0
5
10
15
20
25
30
Time (sec)

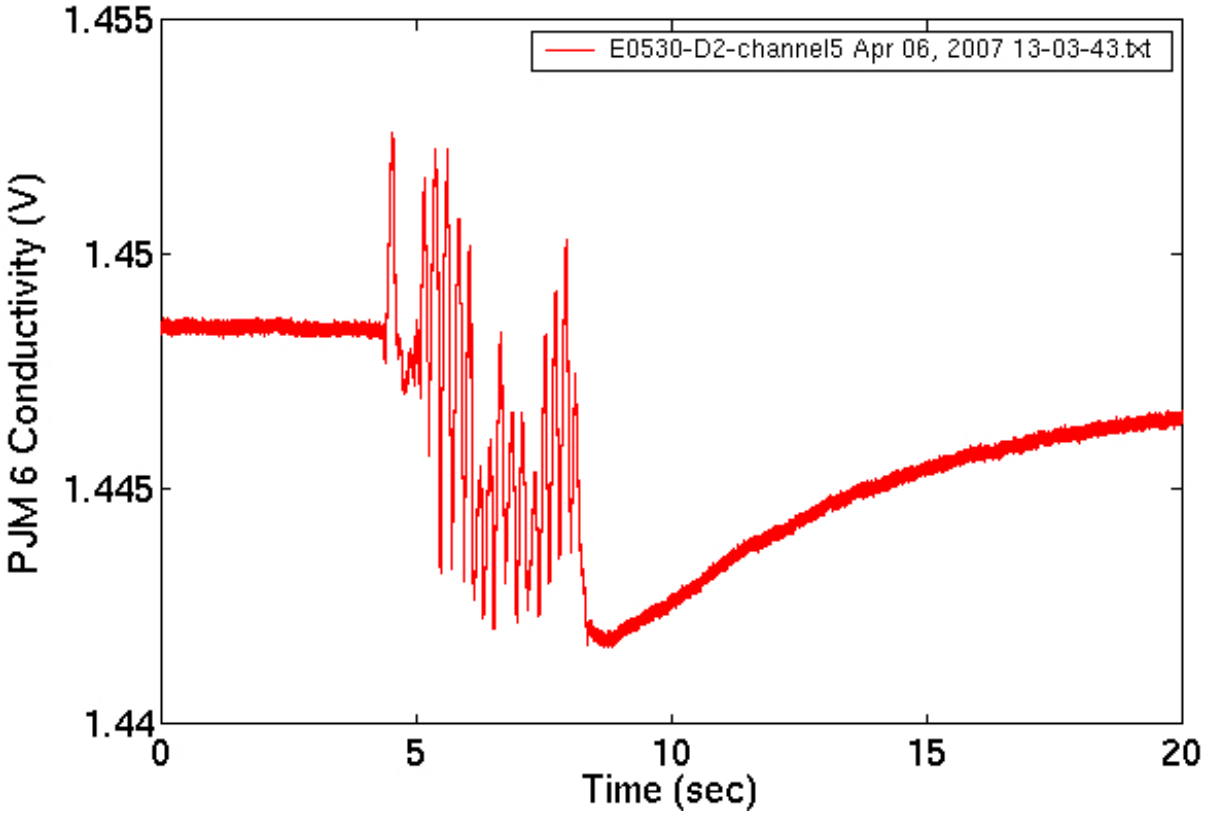

Data From E0530-D1-070606.ASC.
PJM 5 Level (inches)
Time (sec)
0
5
10
15
20
25
30

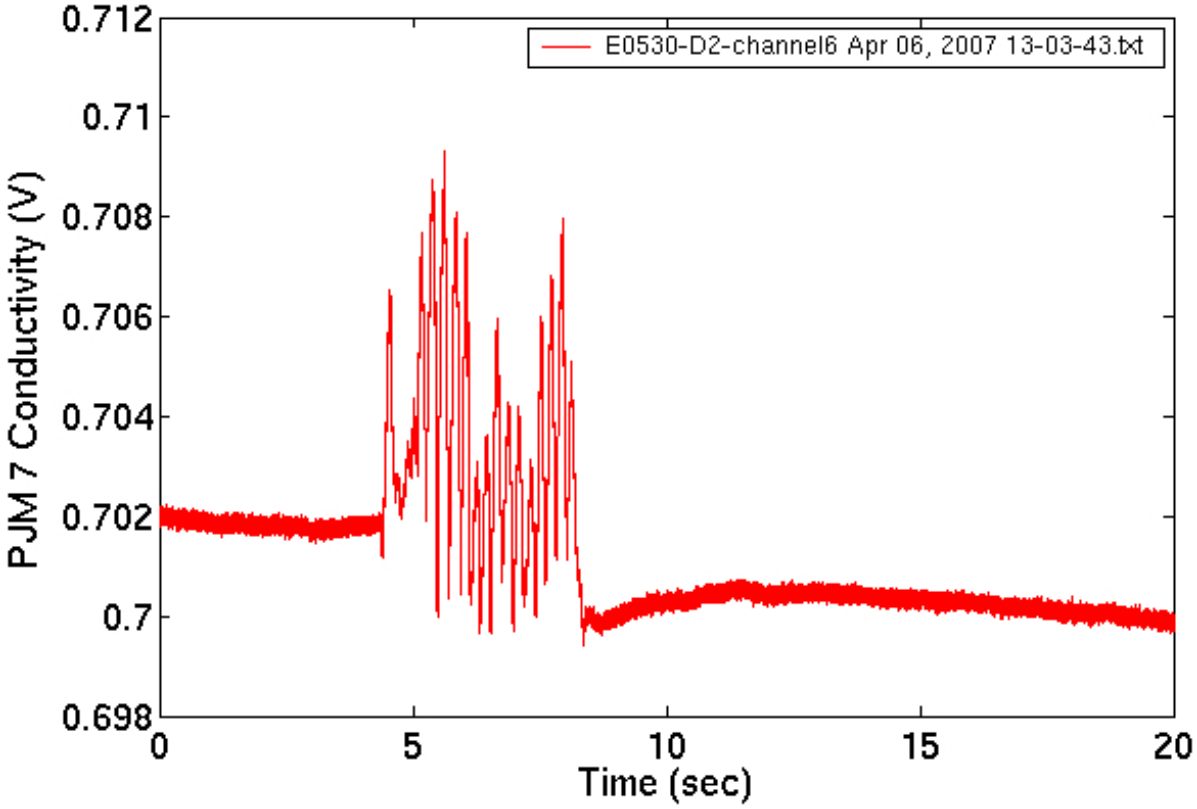

Data From E0530-D1-070606.ASC.
PJM 6 Level (inches)
Time (sec)
103
104
105
106
0
5
10
15
20
25
30

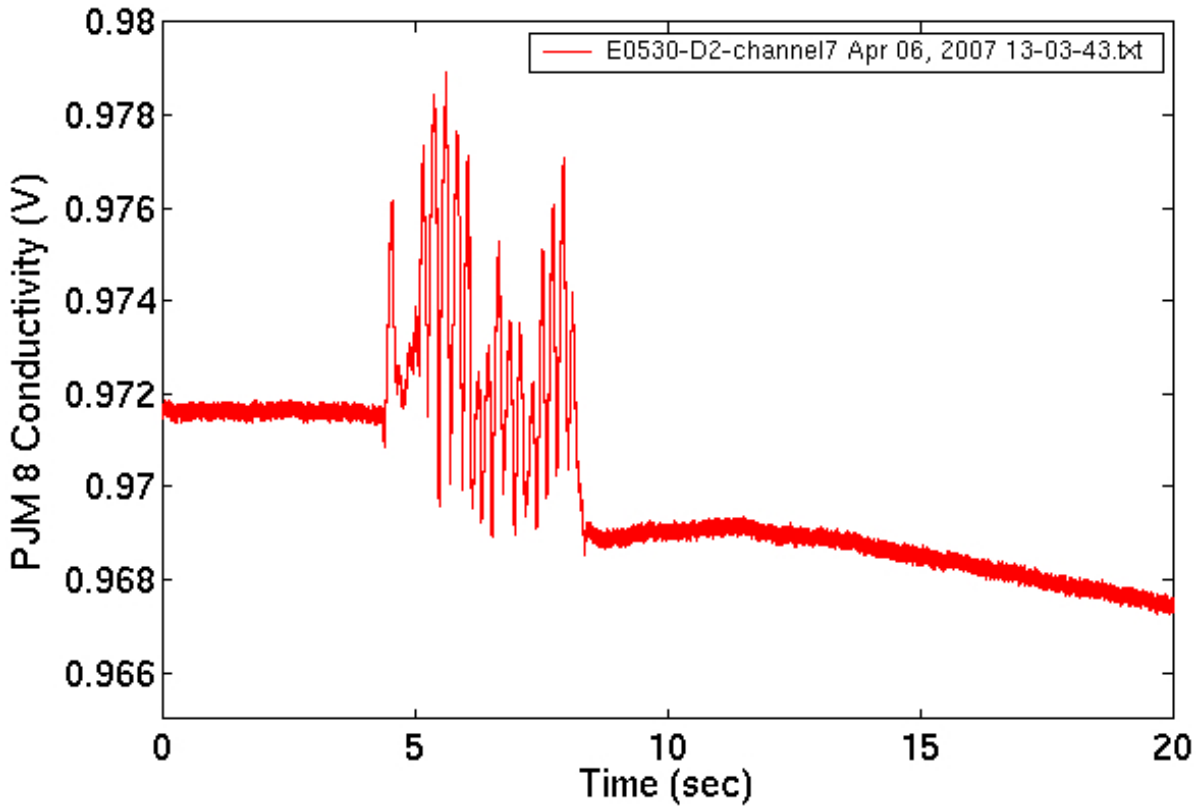

Data From E0530-D1-070606.ASC.
PJM 7 Level (inches)
124
123
122
121
120
0
5
10
15
20
25
30
Time (sec)

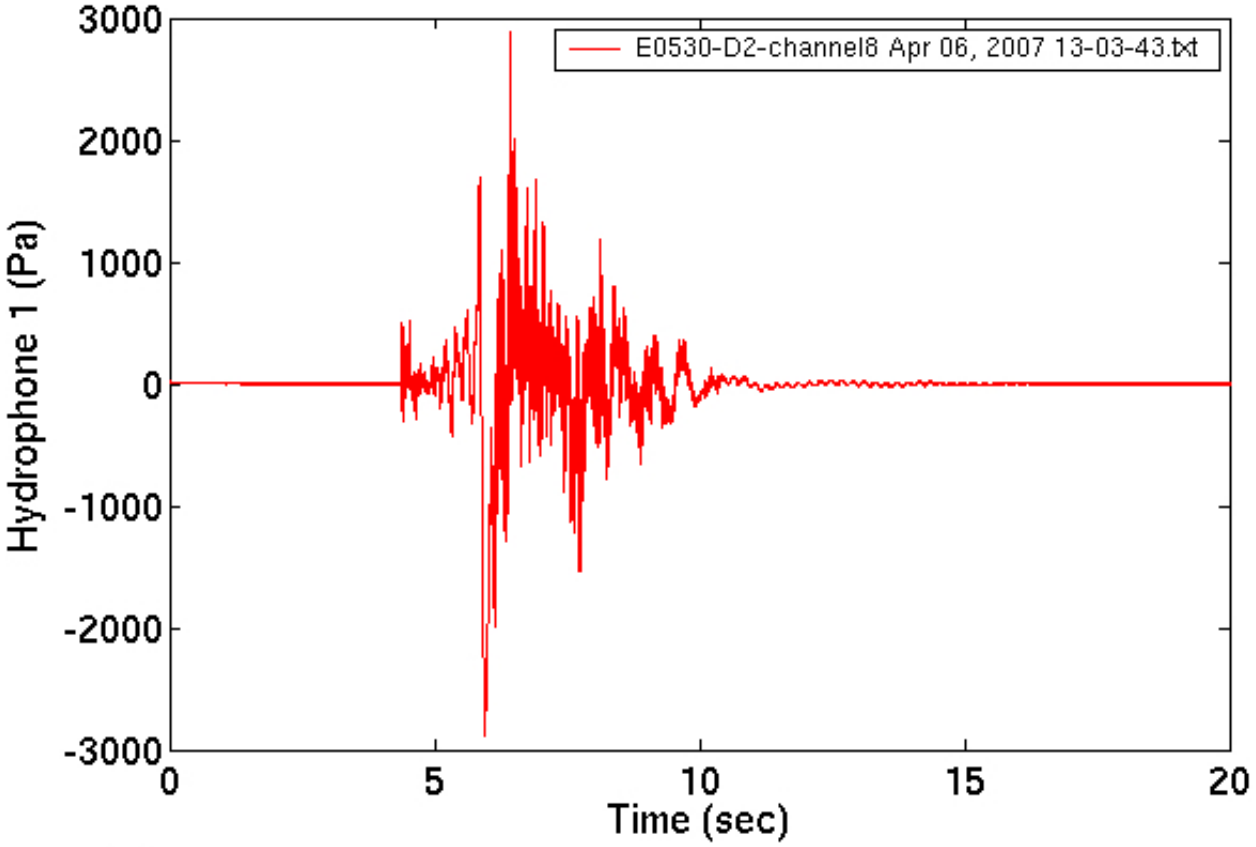

Data From E0530-D1-070606.ASC.
PJM 8 Level (inches)
107
106
105
104
103
0
5
10
15
20
25
30
Time (sec)

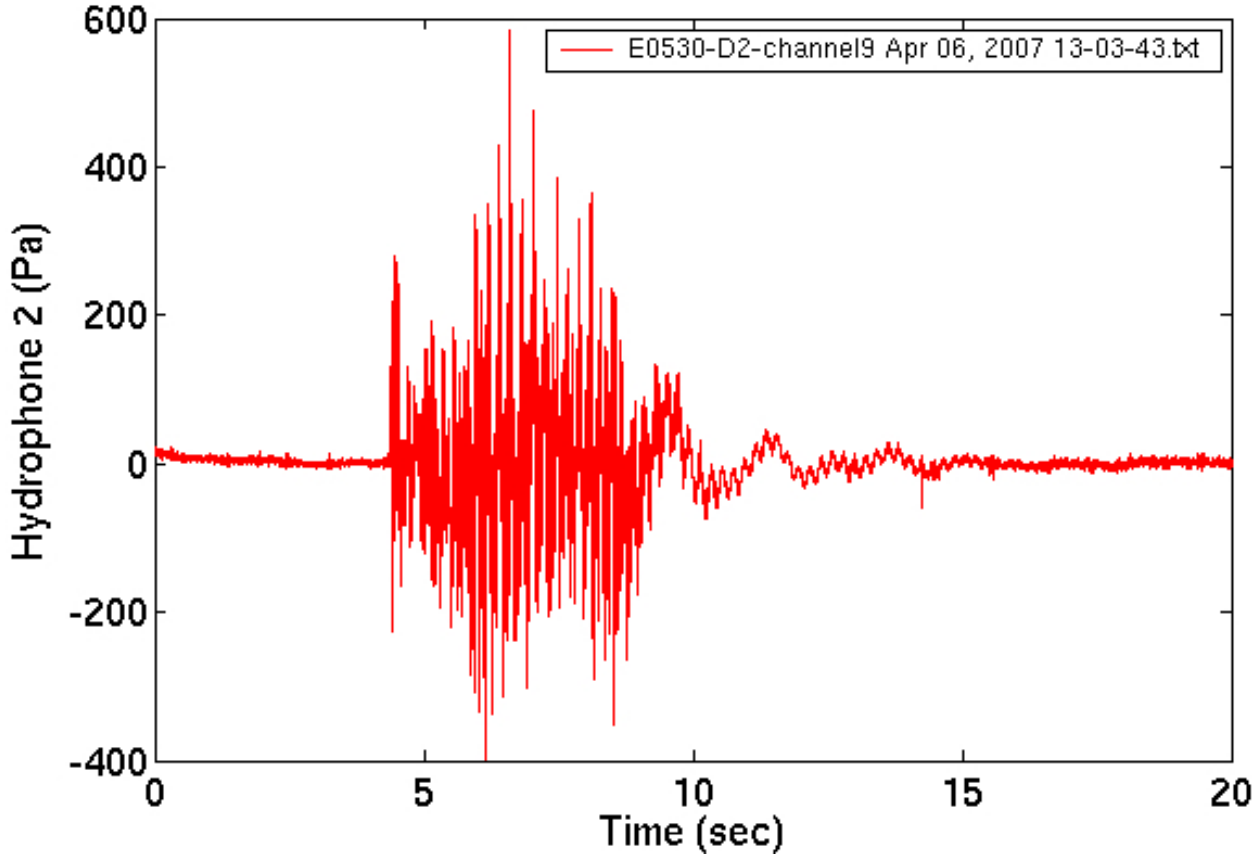

E0530-D2-channel4 Apr 06, 2007 13-03-43.txt
PJM 5 Conductivity (V)
1.4
1.2
1
0.8
0.6
0.4
0
5
10
15
20
Time (sec)

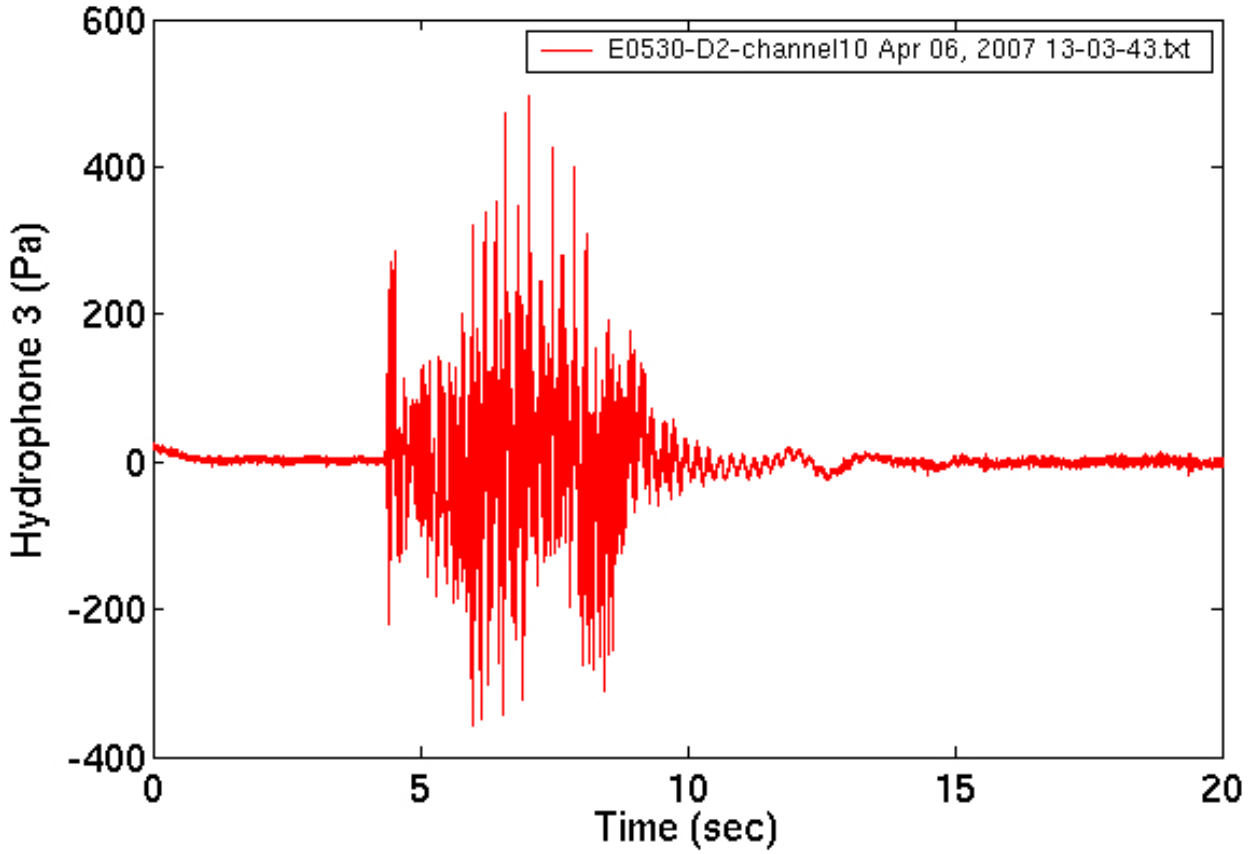

E0530-D2-channel5 Apr 06, 2007 13-03-43.txt
PJM 6 Conductivity (V)
1.455
1.45
1.445
1.44
0
5
10
15
20
Time (sec)

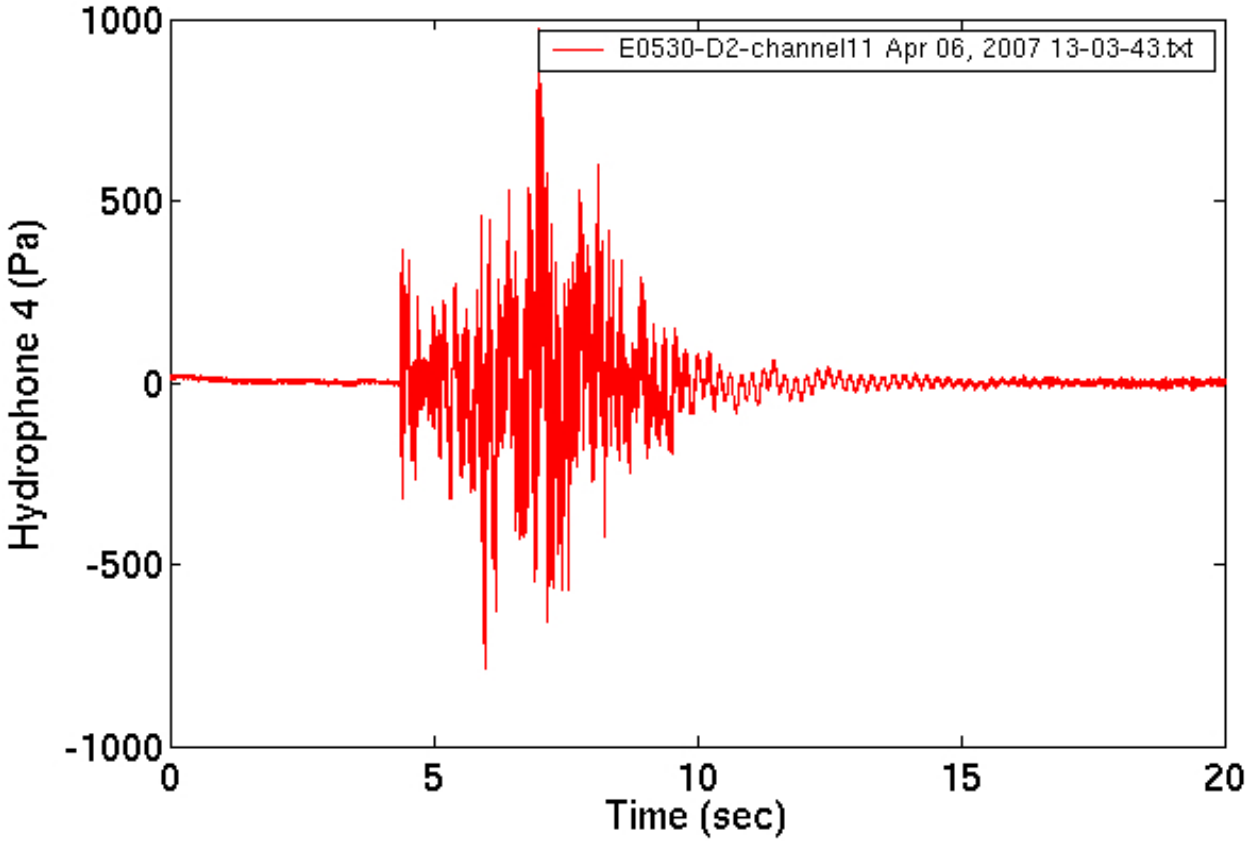

E0530-D2-channel6 Apr 06, 2007 13-03-43.txt
PJM 7 Conductivity (V)
0.712
0.71
0.708
0.706
0.704
0.702
0.7
0.698
0
5
10
15
20
Time (sec)

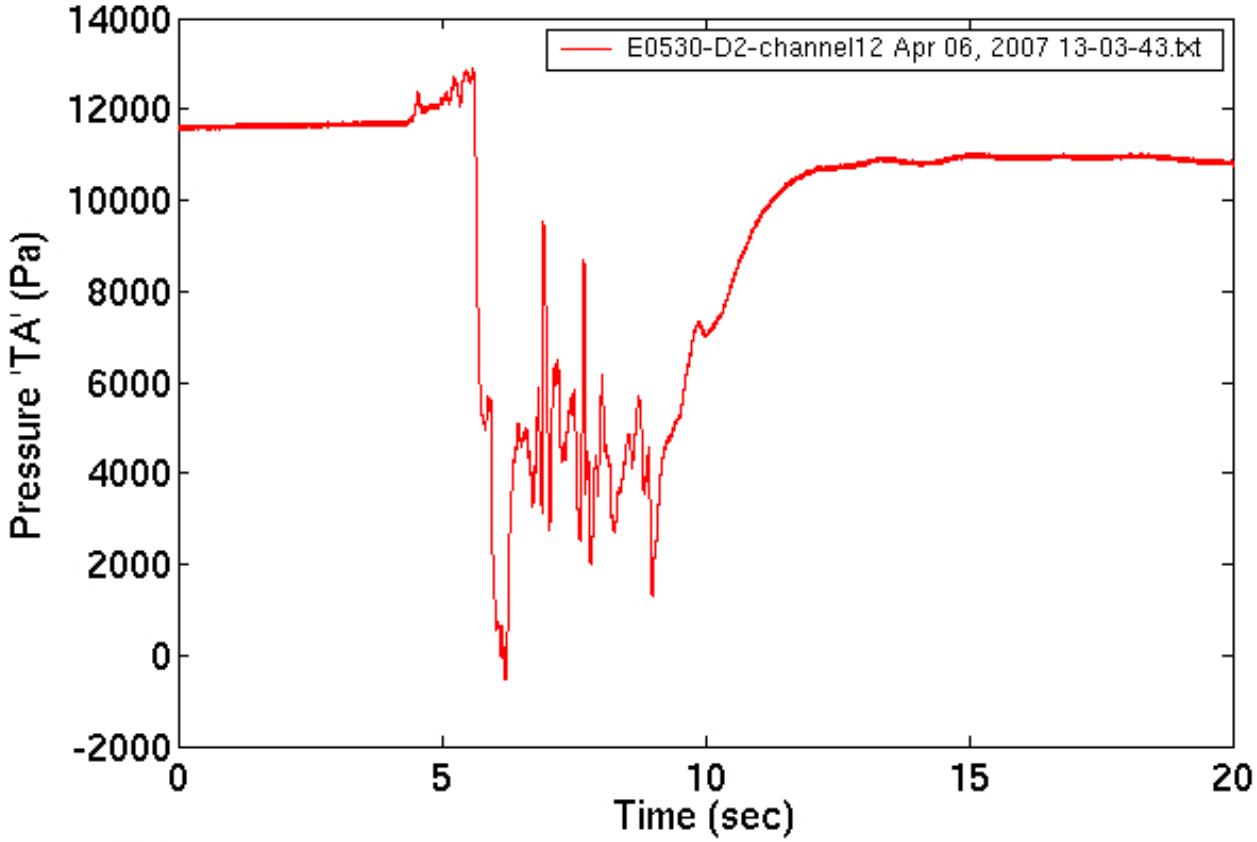

E0530-D2-channel7 Apr 06, 2007 13-03-43.txt
PJM 8 Conductivity (V)
0.98
0.978
0.976
0.974
0.972
0.97
0.968
0.966
0
5
10
15
20
Time (sec)

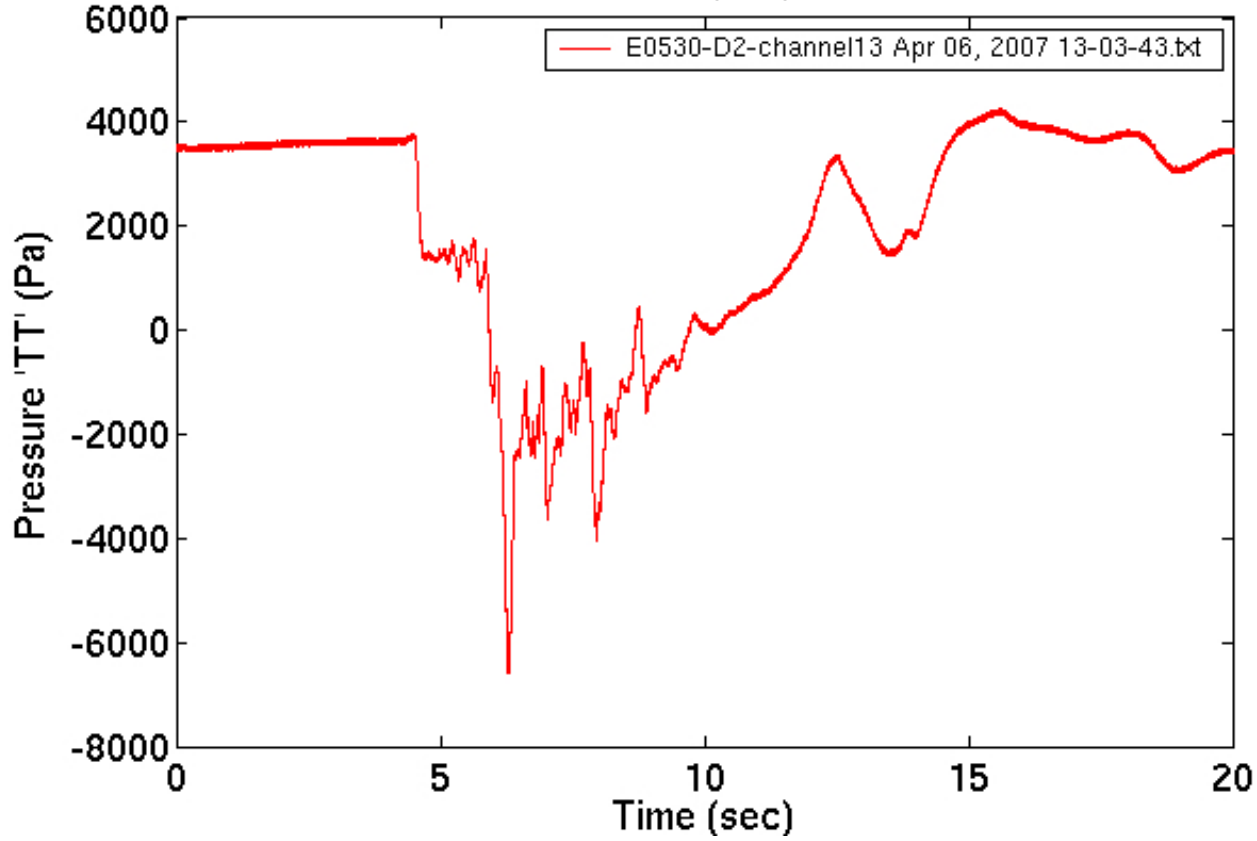

E0530-D2-channel8 Apr 06, 2007 13-03-43.txt
Hydrophone 1 (Pa)
3000
2000
1000
0
-1000
-2000
-3000
0
5
10
15
20
Time (sec)

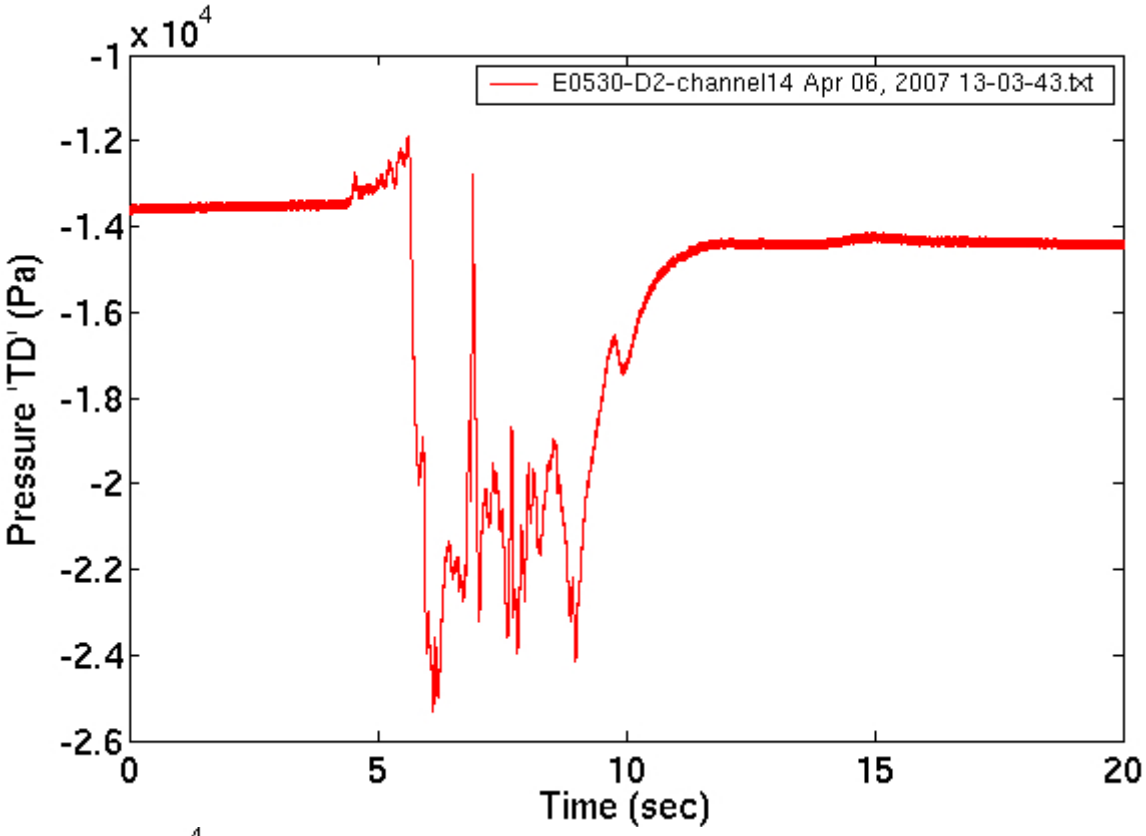

E0530-D2-channel9 Apr 06, 2007 13-03-43.txt
Hydrophone 2 (Pa)
600
400
200
0
-200
-400
0
5
10
15
20
Time (sec)

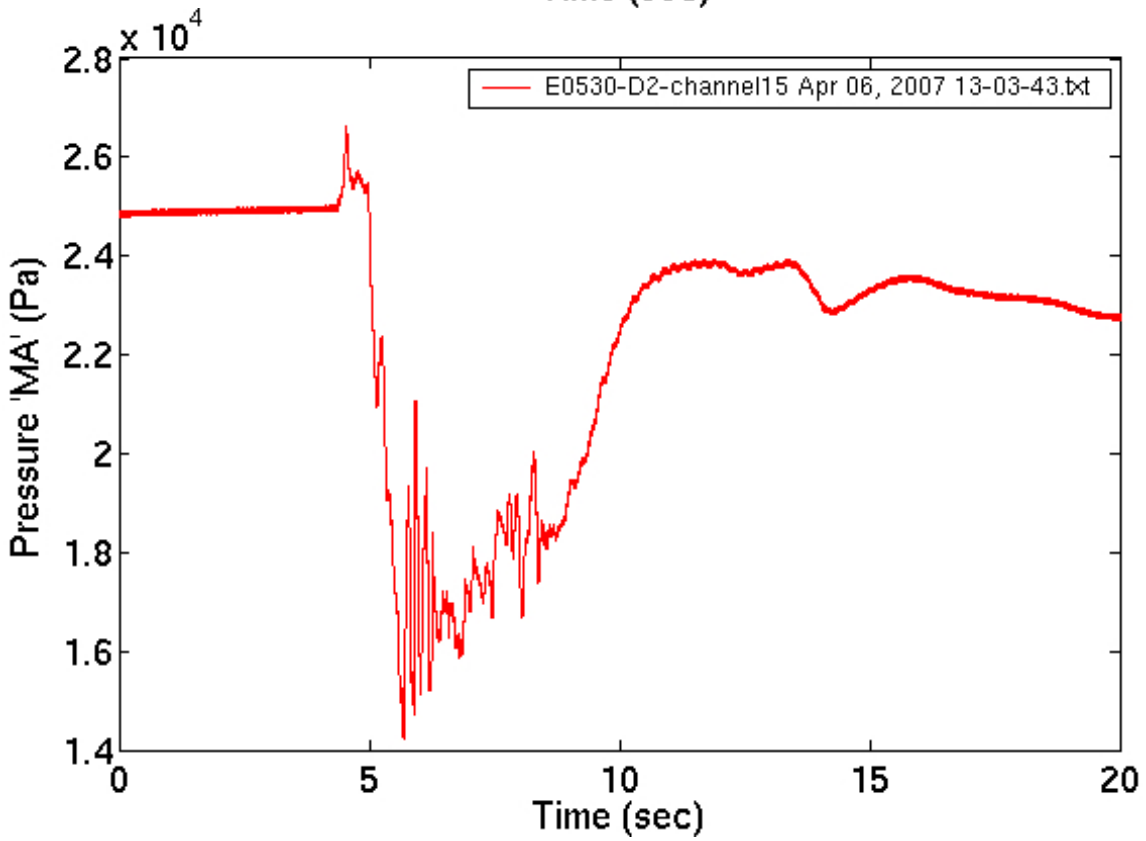

E0530-D2-channel10 Apr 06, 2007 13-03-43.txt
Hydrophone 3 (Pa)
600
400
200
0
-200
-400
0
5
10
15
20
Time (sec)

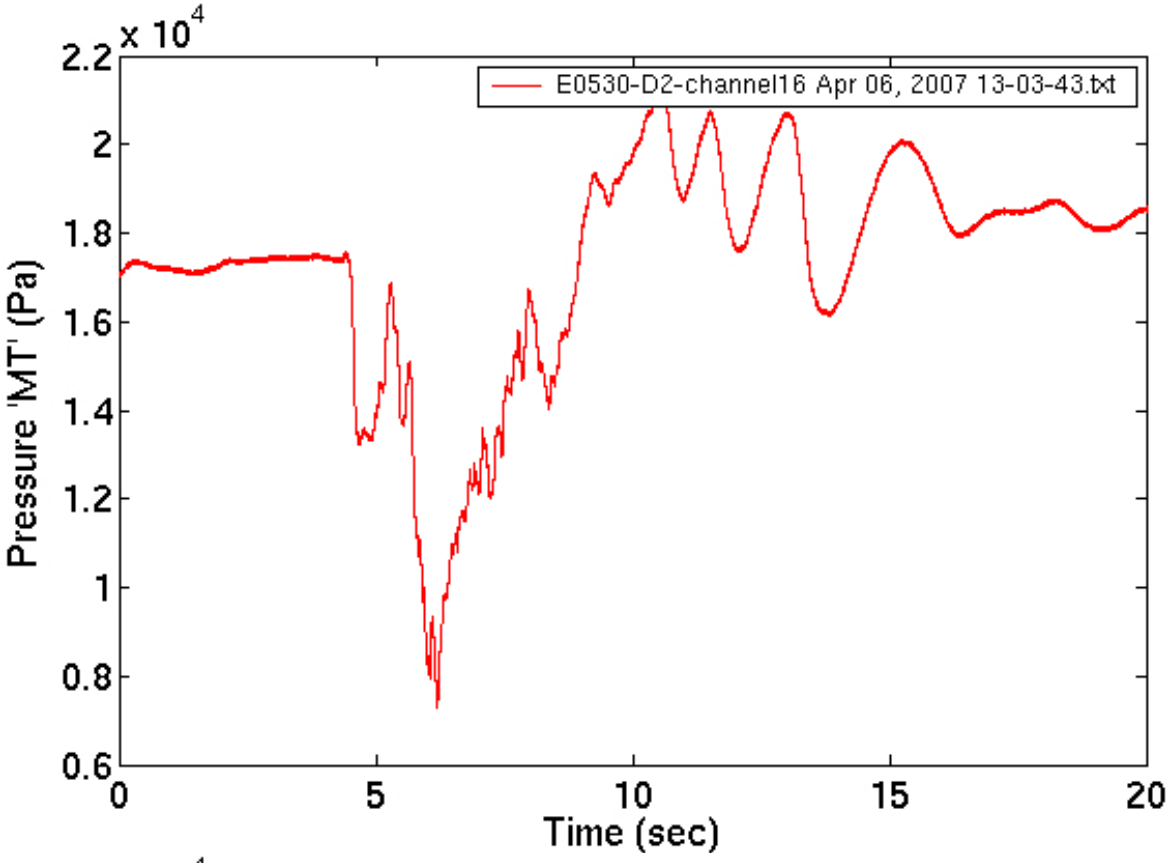

E0530-D2-channel11 Apr 06, 2007 13-03-43.txt
Hydrophone 4 (Pa)
1000
500
0
-500
-1000
0
5
10
15
20
Time (sec)

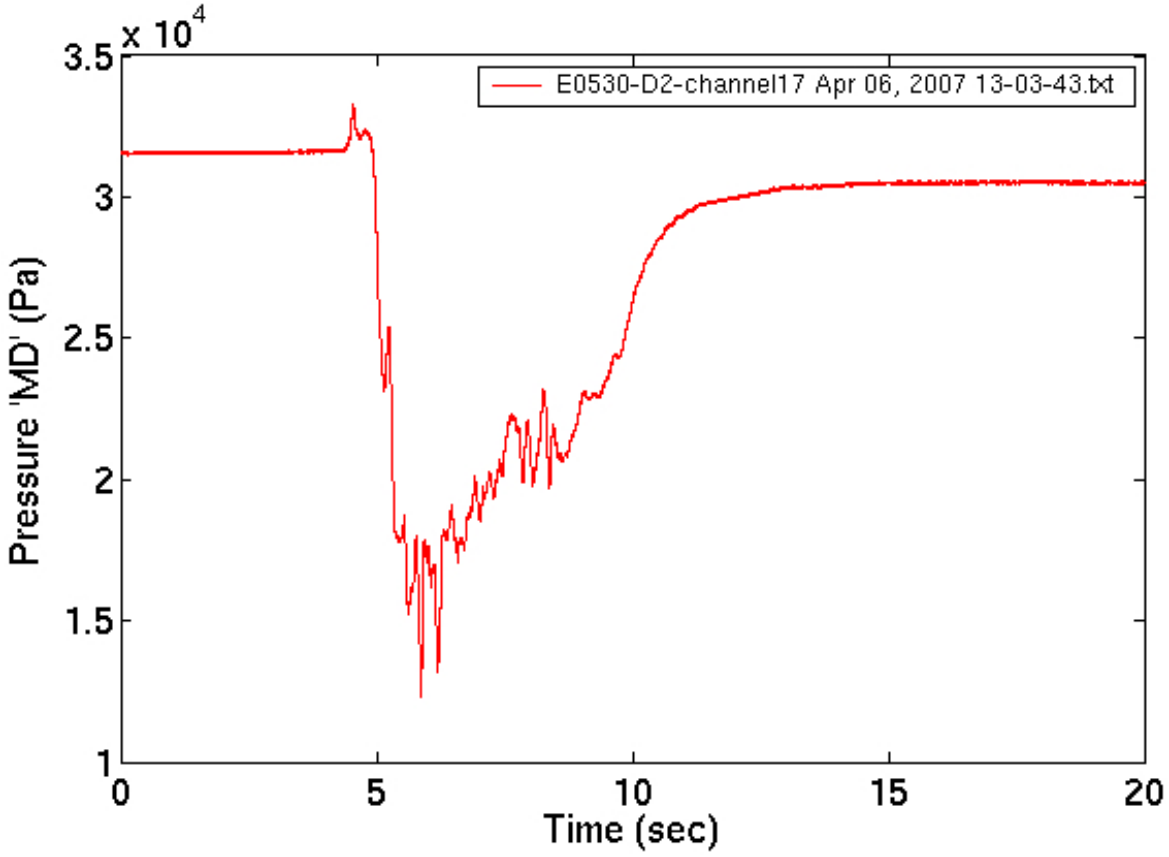

E0530-D2-channel12 Apr 06, 2007 13-03-43.txt
Pressure 'TA' (Pa)
14000
12000
10000
8000
6000
4000
2000
0
-2000
0
5
10
15
20
Time (sec)

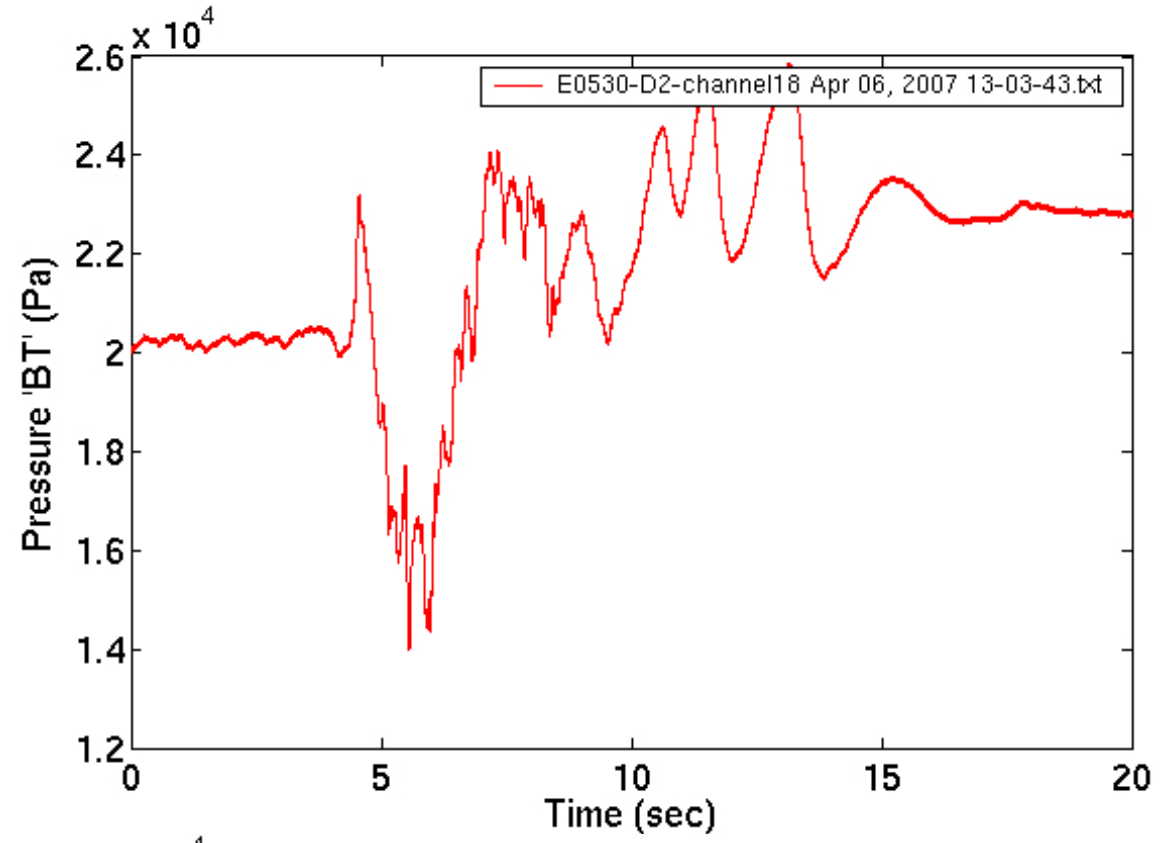

E0530-D2-channel13 Apr 06, 2007 13-03-43.txt
Pressure 'TT' (Pa)
6000
4000
2000
0
-2000
-4000
-6000
-8000
0
5
10
15
20
Time (sec)

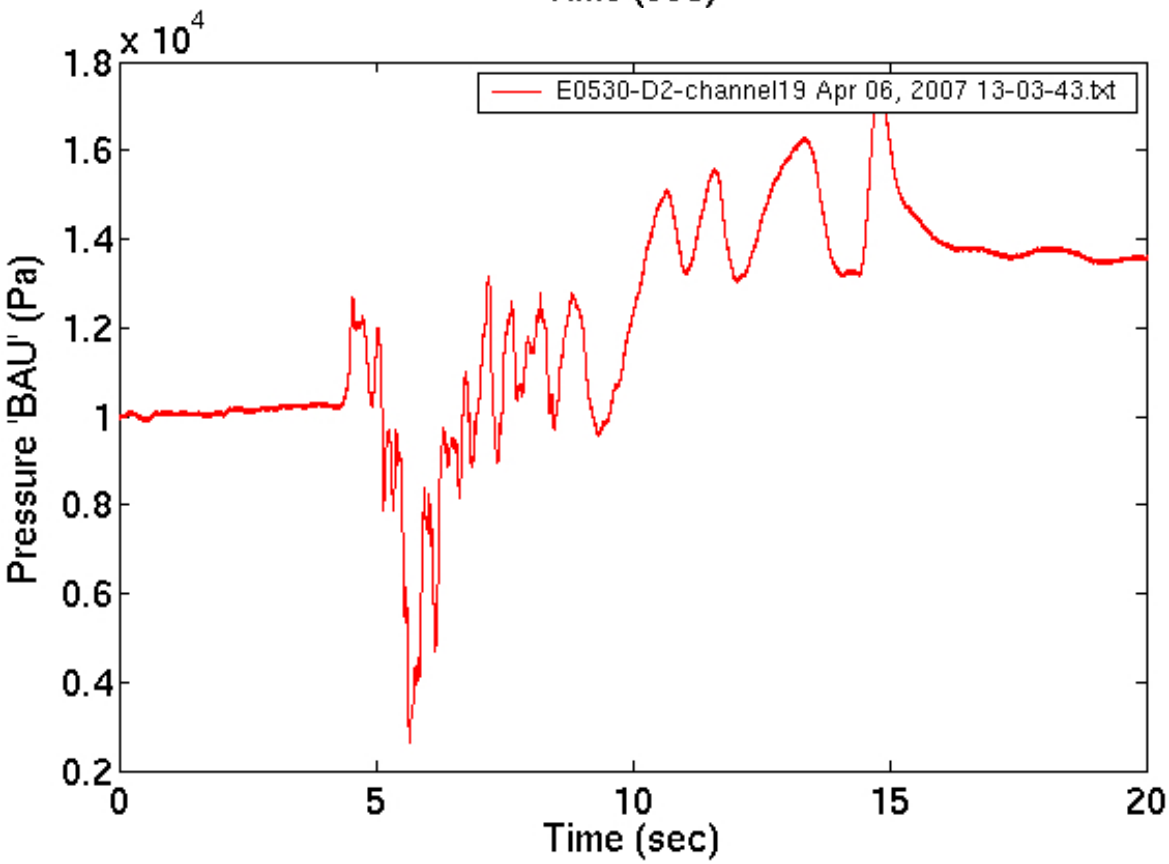

x 10^4
E0530-D2-channel14 Apr 06, 2007 13-03-43.txt
Pressure 'TD' (Pa)
-1
-1.2
-1.4
-1.6
-1.8
-2
-2.2
-2.4
-2.6
0
5
10
15
20
Time (sec)

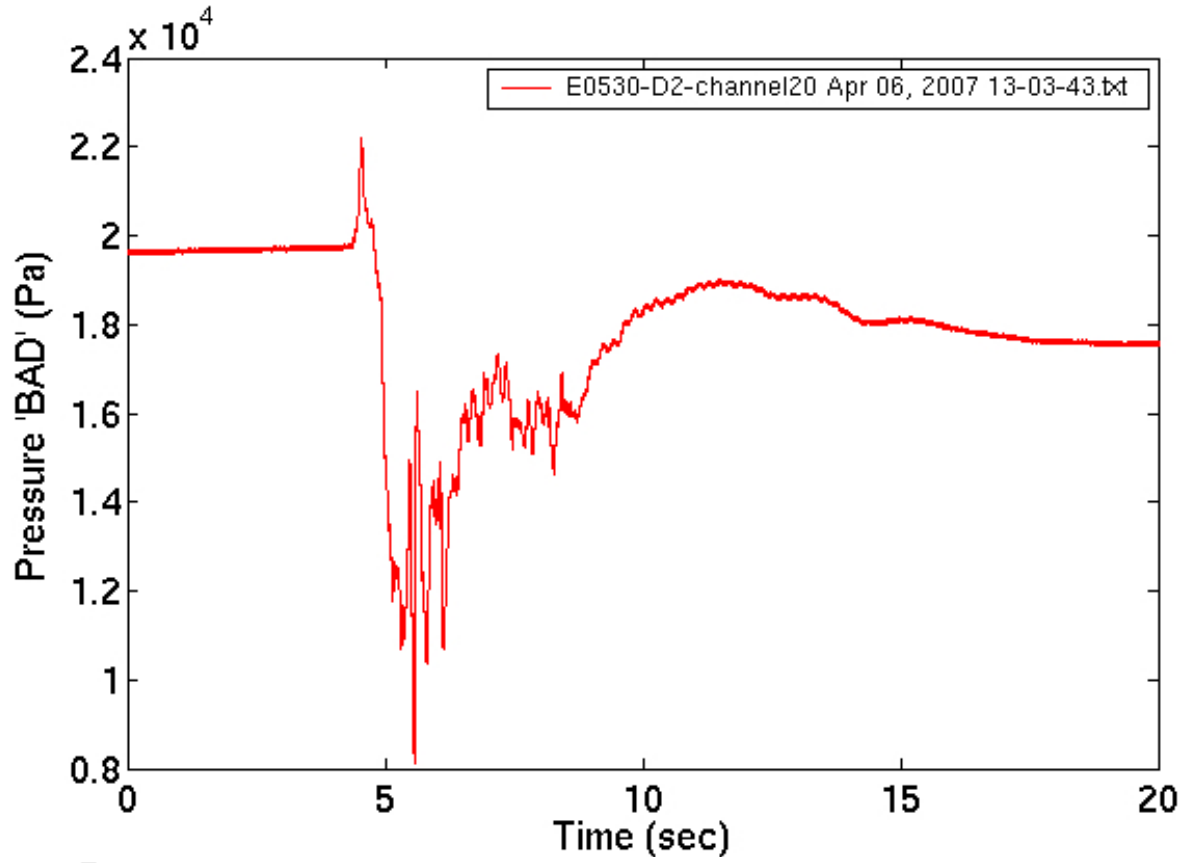

x 10^4
E0530-D2-channel15 Apr 06, 2007 13-03-43.txt
Pressure 'MA' (Pa)
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
0
5
10
15
20
Time (sec)

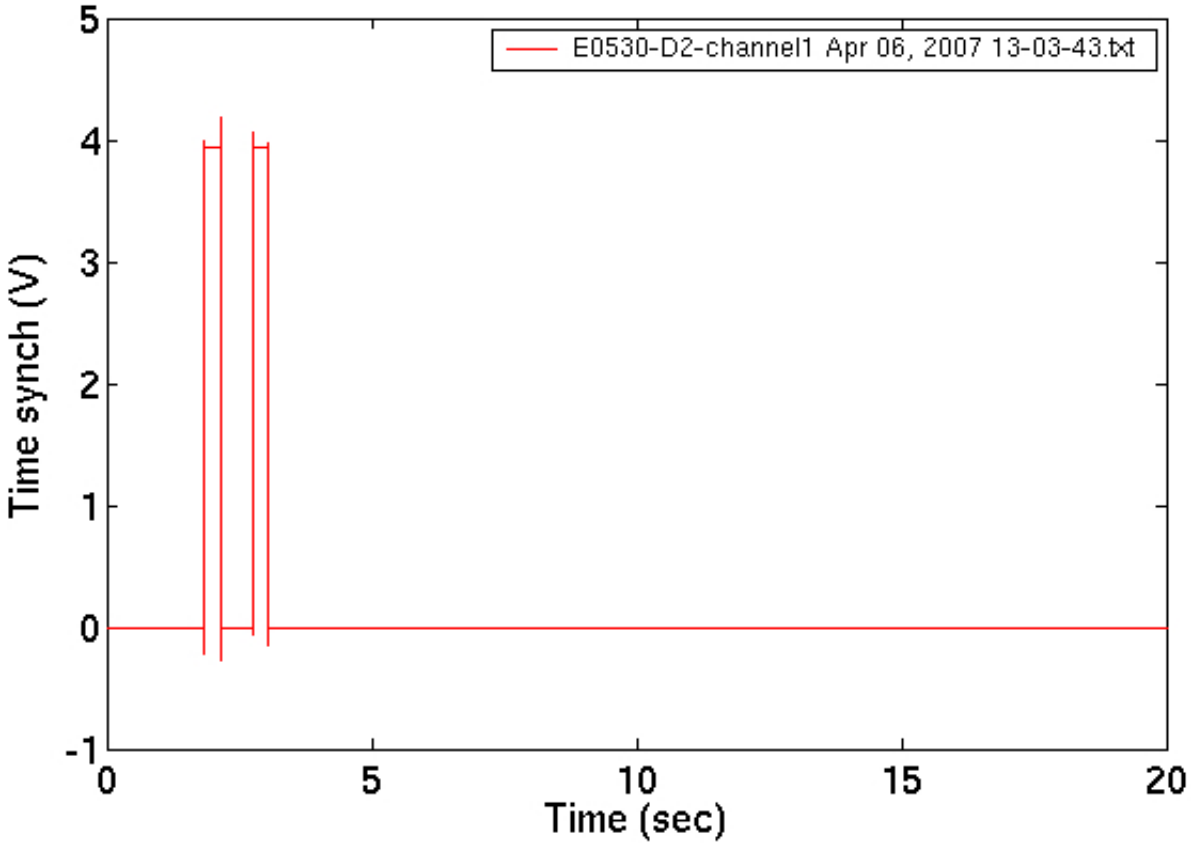

x 10^4
E0530-D2-channel16 Apr 06, 2007 13-03-43.txt
Pressure 'MT' (Pa)
Time (sec)
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0
5
10
15
20

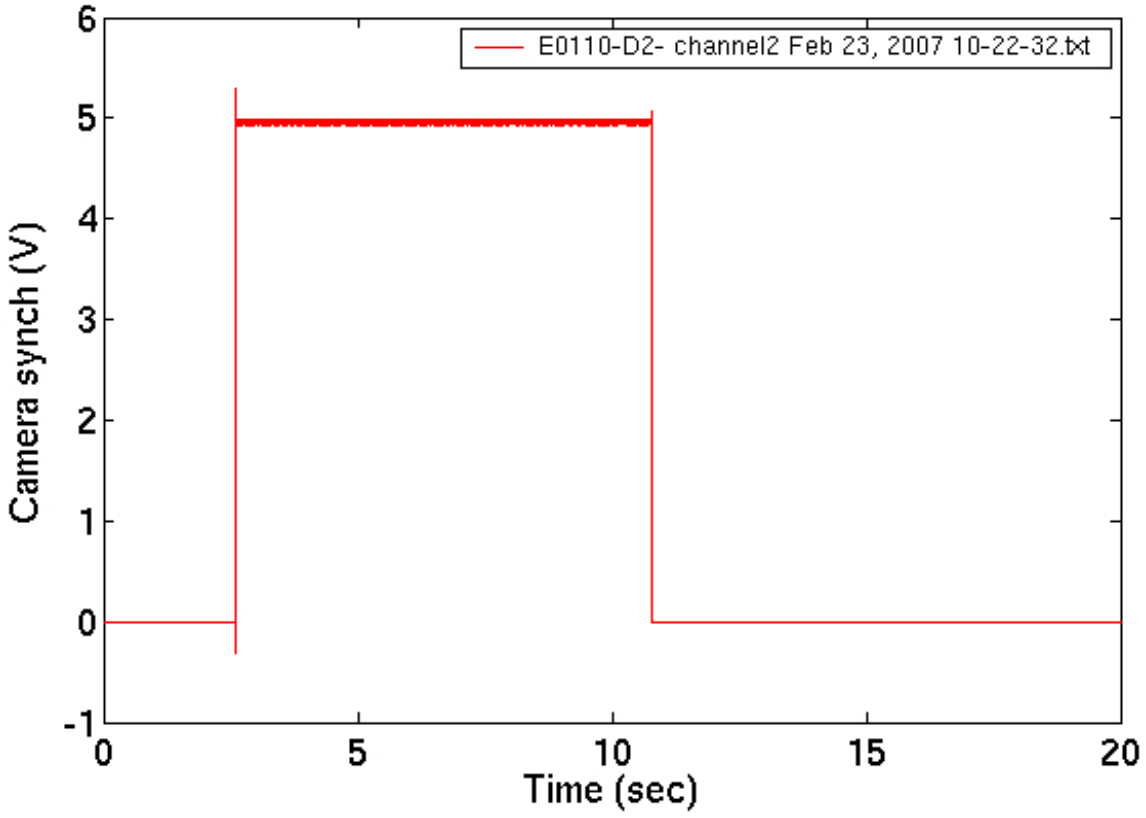

x 10^4
E0530-D2-channel17 Apr 06, 2007 13-03-43.txt
Pressure 'MD' (Pa)
Time (sec)
3.5
3
2.5
2
1.5
1
0
5
10
15
20

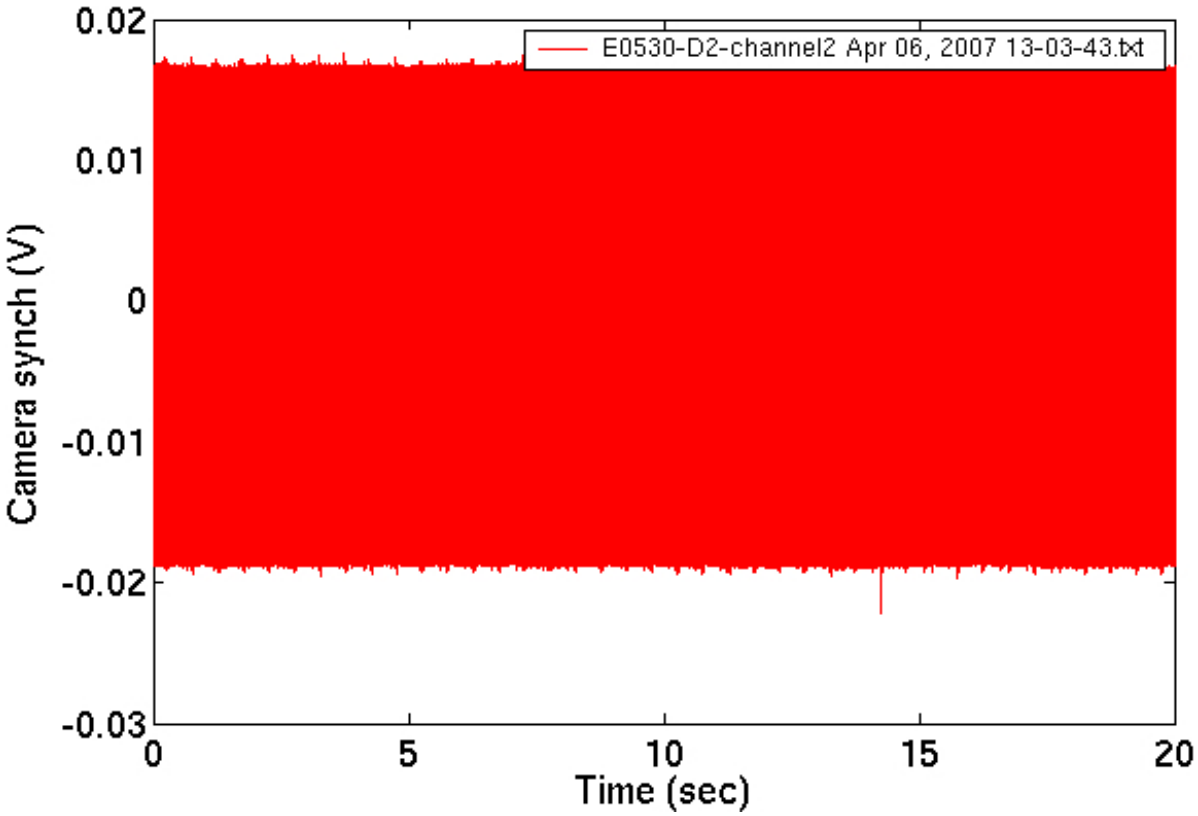

x 10^4
E0530-D2-channel18 Apr 06, 2007 13-03-43.txt
Pressure 'BT' (Pa)
Time (sec)
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
0
5
10
15
20

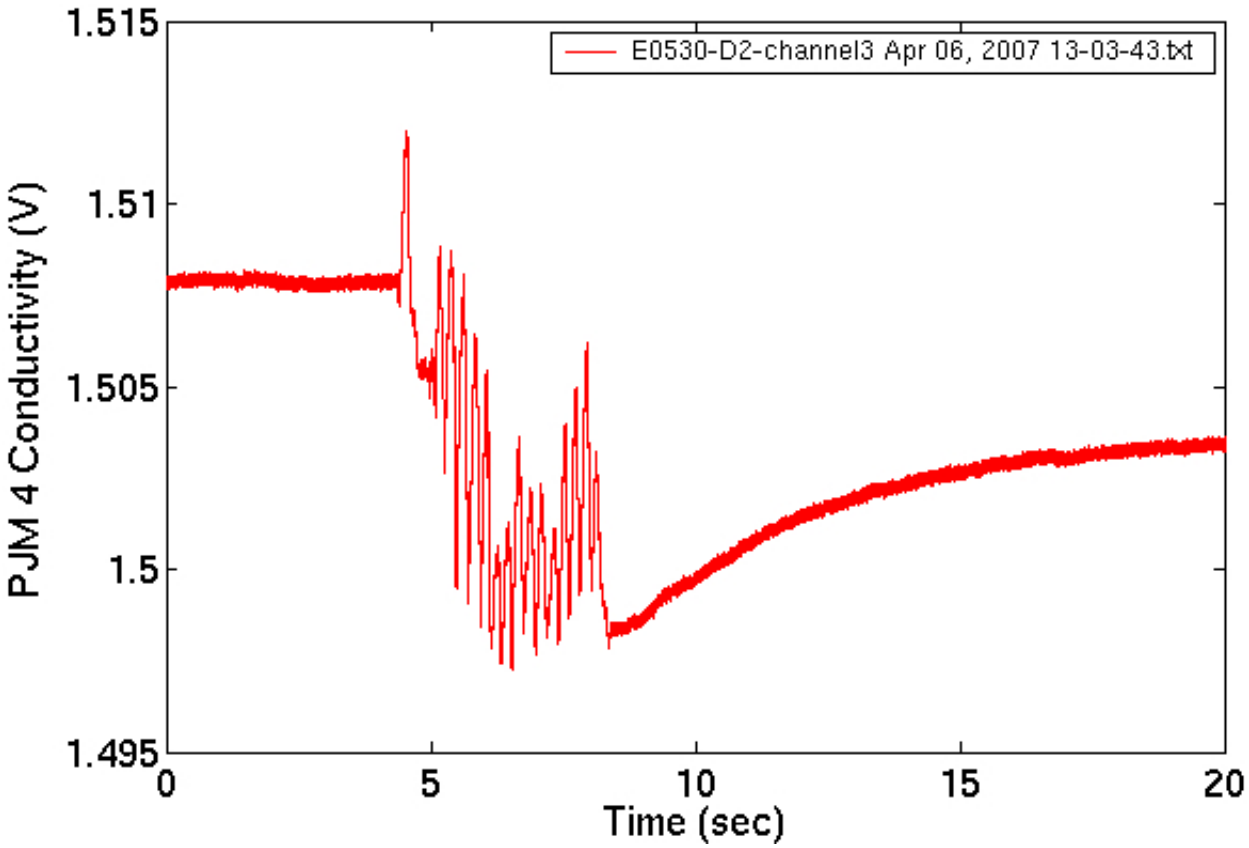

x 10^4
E0530-D2-channel19 Apr 06, 2007 13-03-43.txt
Pressure 'BAU' (Pa)
Time (sec)
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
5
10
15
20


x 10^4
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
Pressure 'BAD' (Pa)
E0530-D2-channel20 Apr 06, 2007 13-03-43.txt
0
5
10
15
20
Time (sec)


5
4
3
2
1
0
-1
Time synch (V)
E0530-D2-channel1 Apr 06, 2007 13-03-43.txt
0
5
10
15
20
Time (sec)

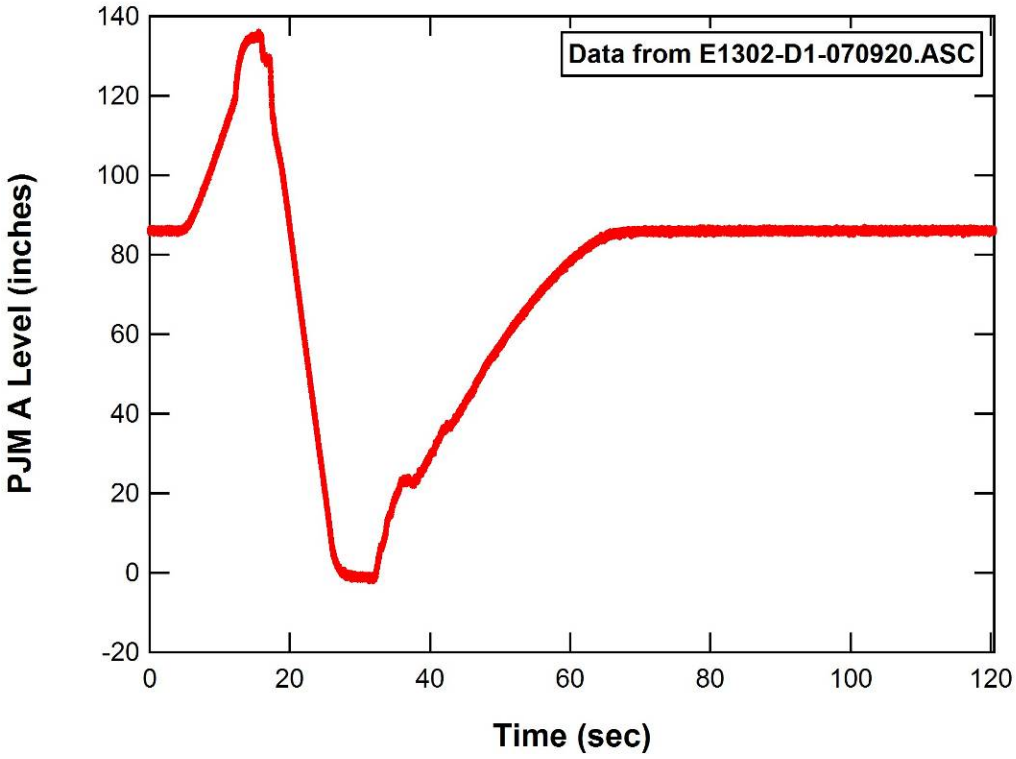

E0110-D2- channel2 Feb 23, 2007 10-22-32.txt
Camera synch (V)
Time (sec)
6
5
4
3
2
1
0
-1
0
5
10
15
20

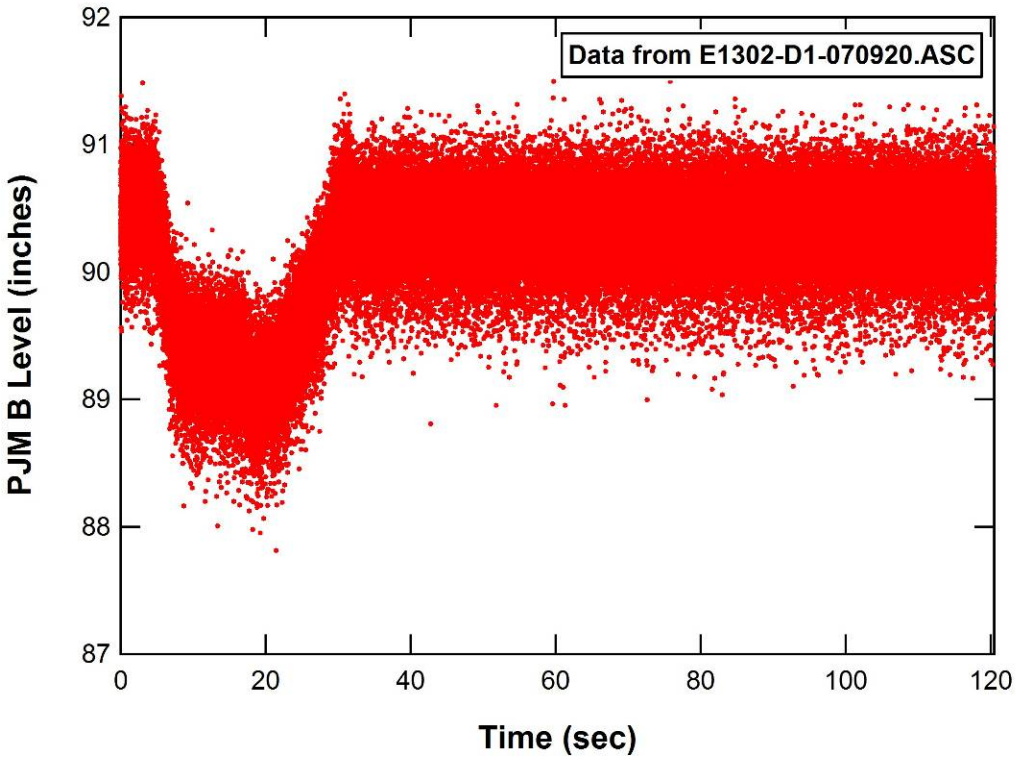

E0530-D2-channel2 Apr 06, 2007 13-03-43.txt
Camera synch (V)
Time (sec)
0.02
0.01
0
-0.01
-0.02
-0.03
0
5
10
15
20

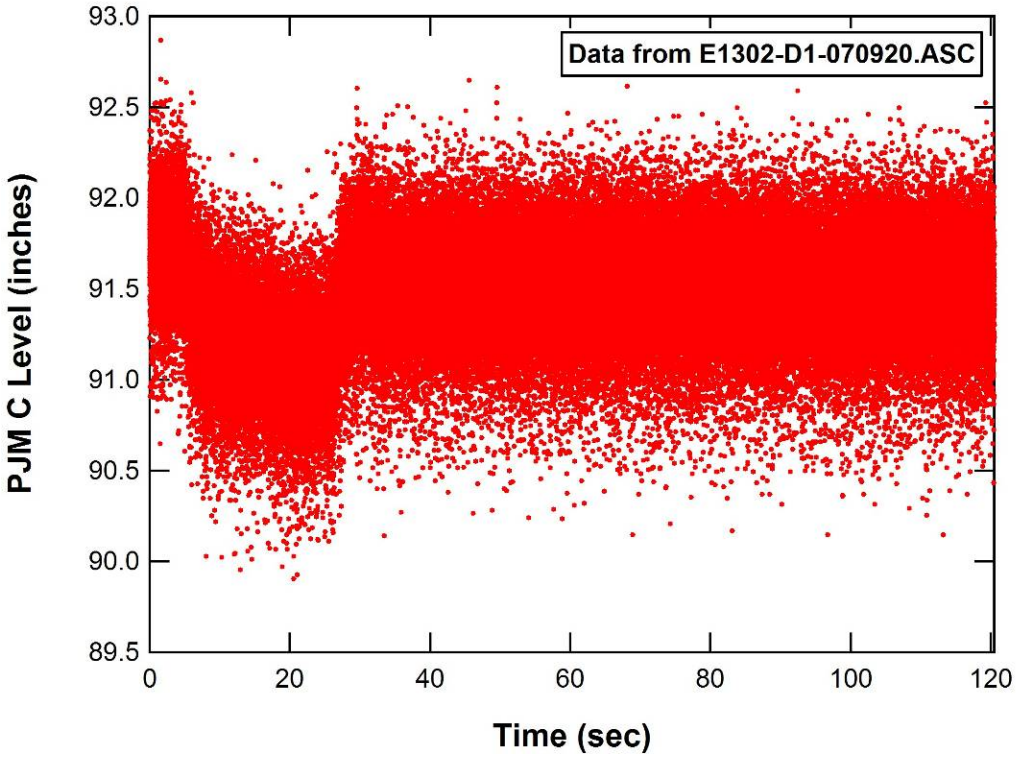

E0530-D2-channel3 Apr 06, 2007 13-03-43.txt
PJM 4 Conductivity (V)
1.515
1.51
1.505
1.5
1.495
0
5
10
15
20
Time (sec)

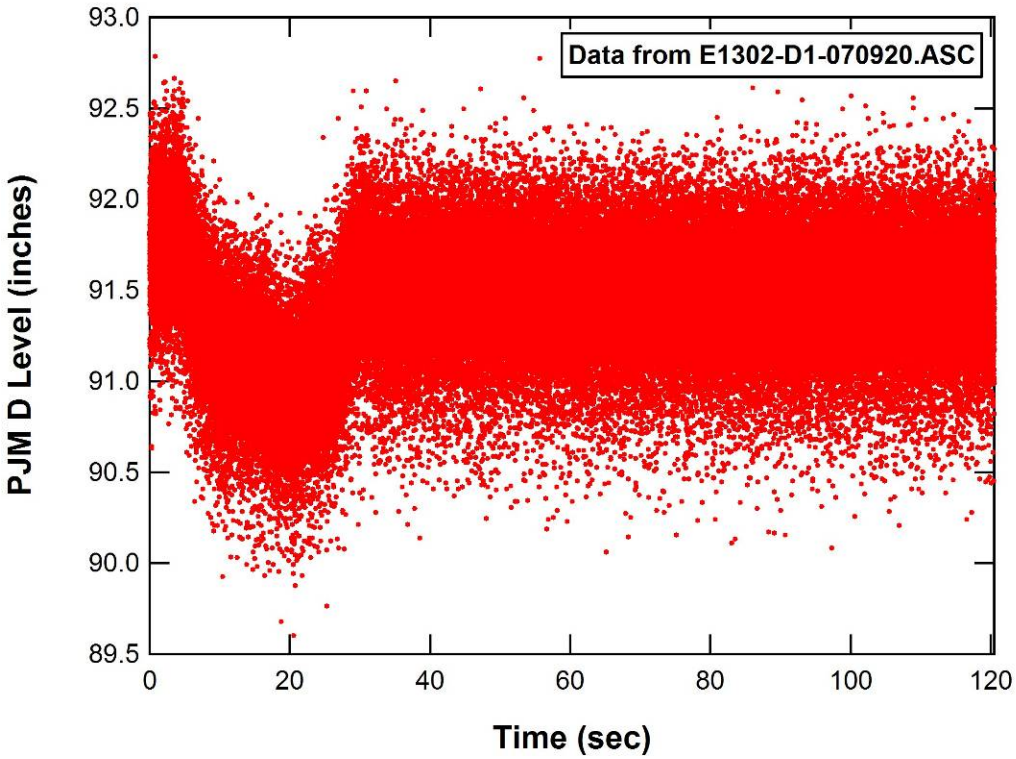
Appendix E

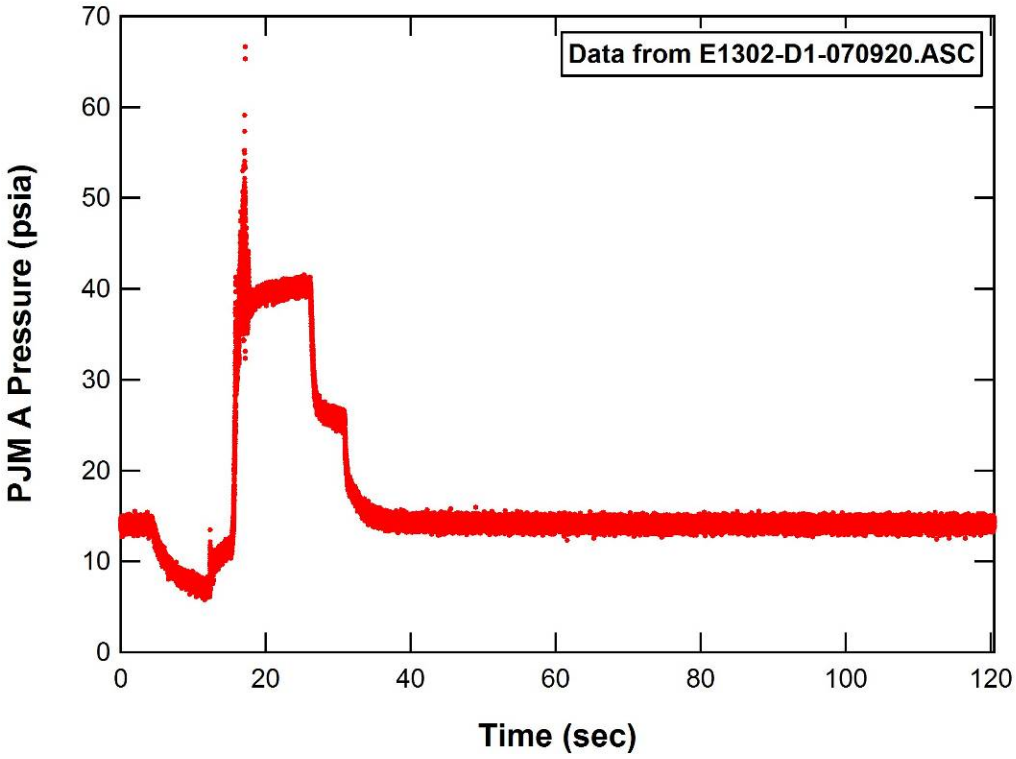
Example 4-PJM Data

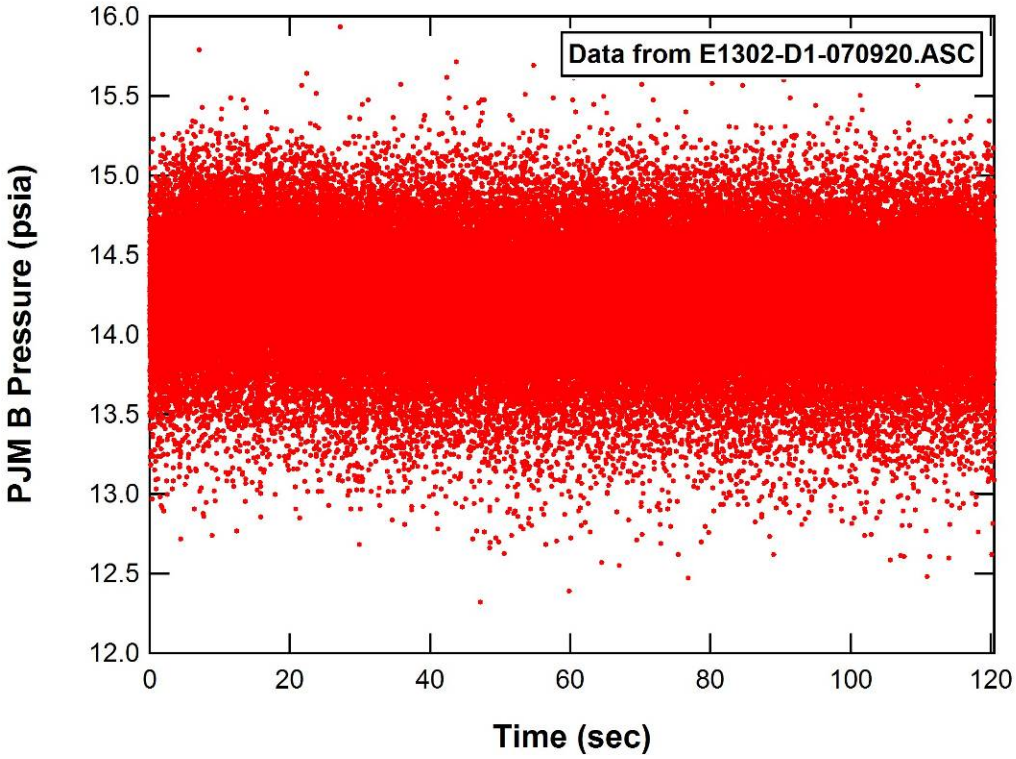

Data from E1302-D1-070920.ASC
PJM A Level (inches)
Time (sec)
140
120
100
80
60
40
20
0
-20
0
20
40
60
80
100
120

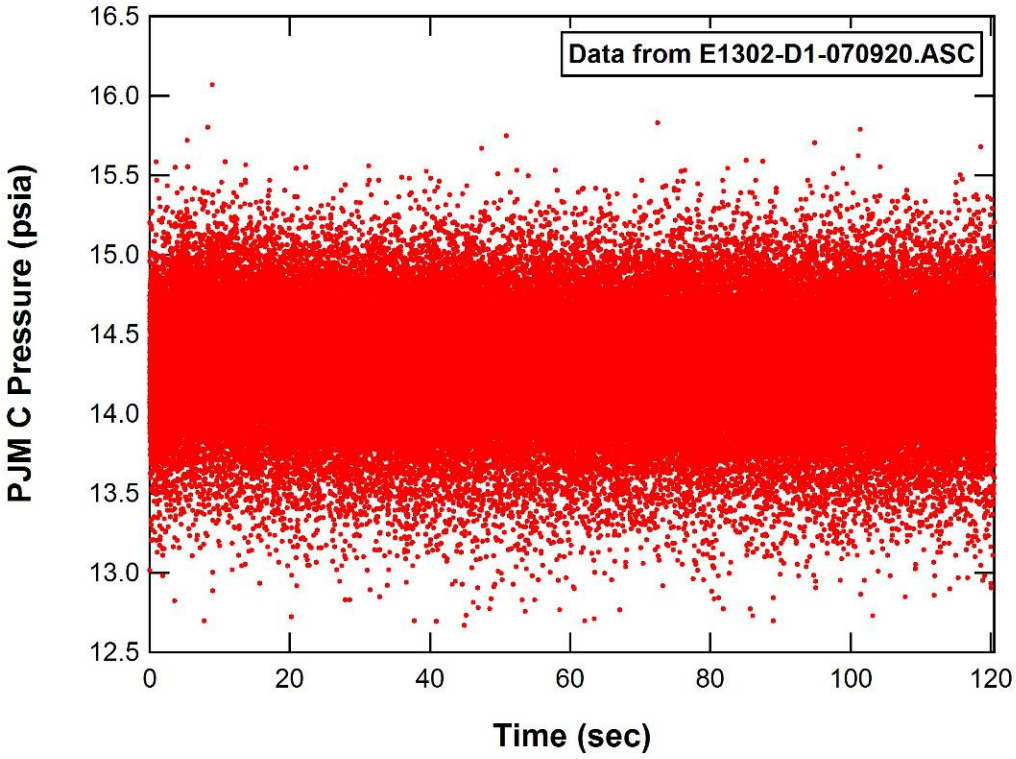

Data from E1302-D1-070920.ASC
PJM B Level (inches)
Time (sec)
92
91
90
89
88
87
0
20
40
60
80
100
120

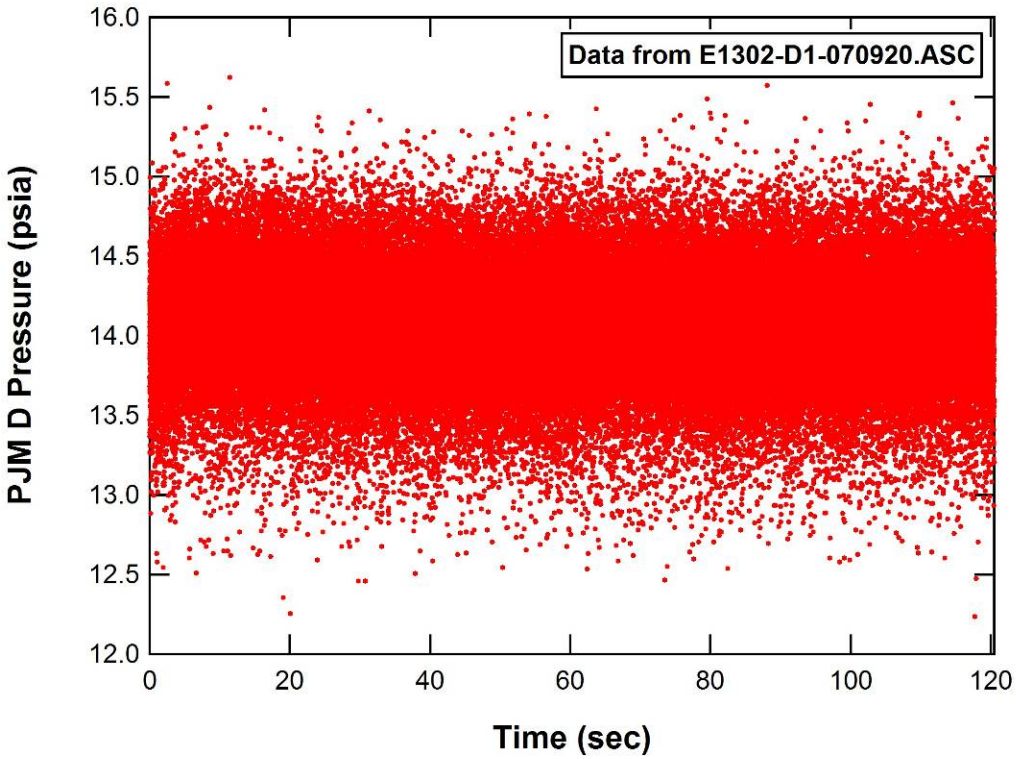

Data from E1302-D1-070920.ASC
PJM C Level (inches)
93.0
92.5
92.0
91.5
91.0
90.5
90.0
89.5
0
20
40
60
80
100
120
Time (sec)

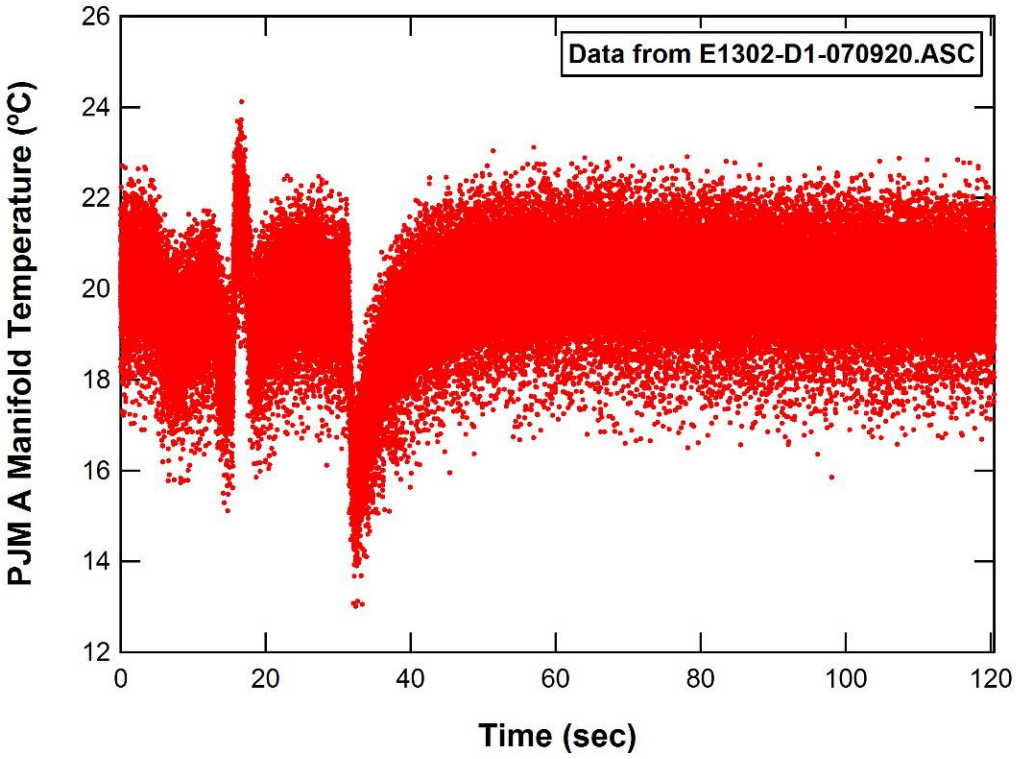

Data from E1302-D1-070920.ASC
PJM D Level (inches)
93.0
92.5
92.0
91.5
91.0
90.5
90.0
89.5
0
20
40
60
80
100
120
Time (sec)

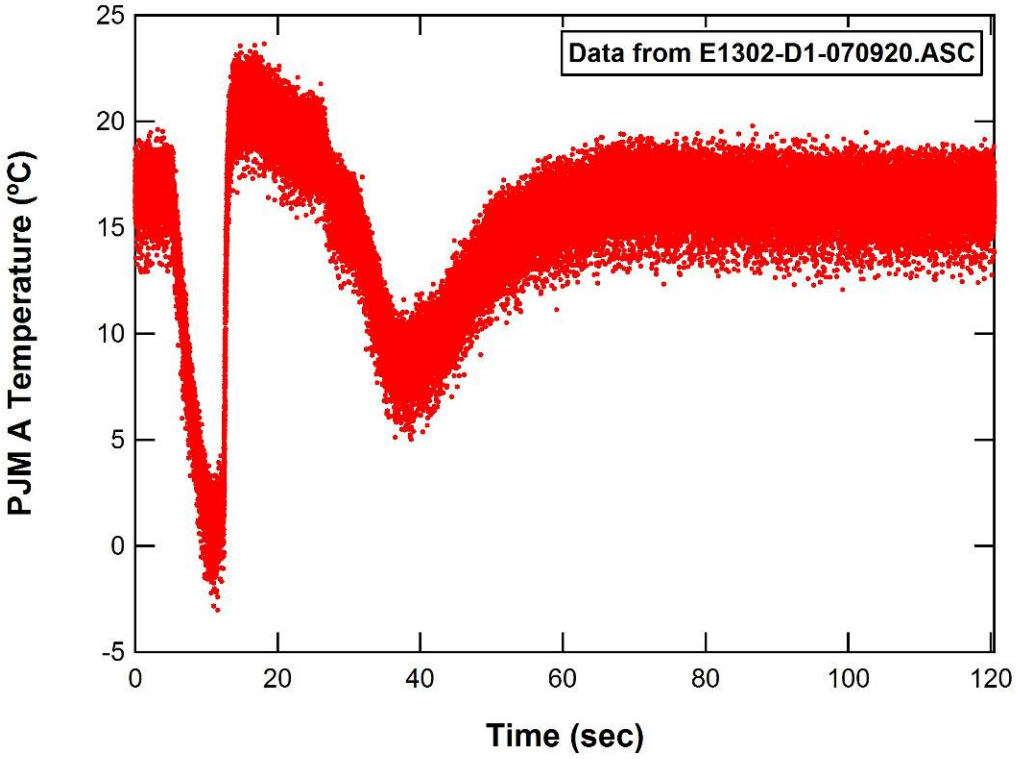

Data from E1302-D1-070920.ASC
PJM A Pressure (psia)
Time (sec)
0
10
20
30
40
50
60
70
0
20
40
60
80
100
120

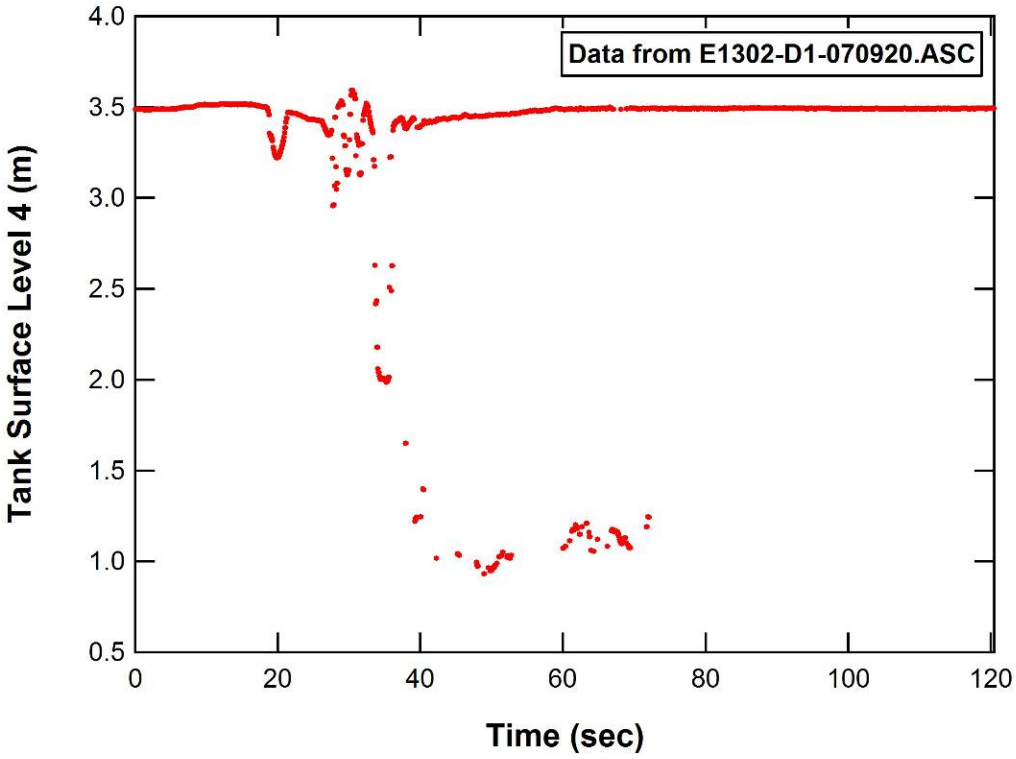

Data from E1302-D1-070920.ASC
PJM B Pressure (psia)
Time (sec)
12.0
12.5
13.0
13.5
14.0
14.5
15.0
15.5
16.0
0
20
40
60
80
100
120

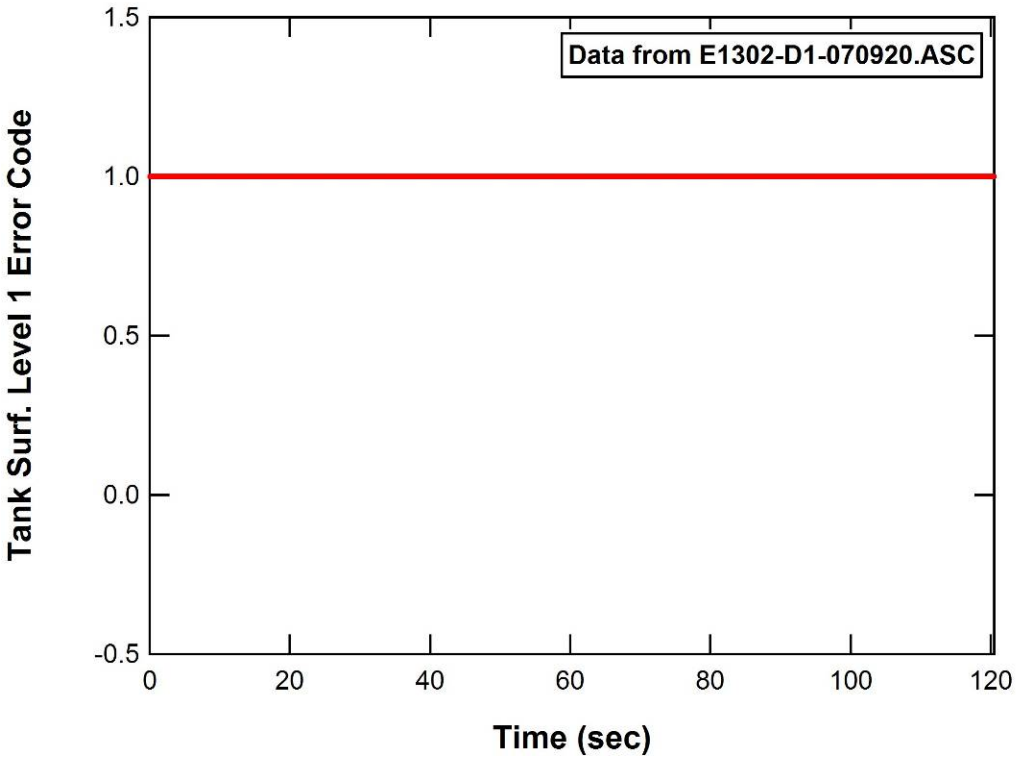

Data from E1302-D1-070920.ASC
PJM C Pressure (psia)
16.5
16.0
15.5
15.0
14.5
14.0
13.5
13.0
12.5
0
20
40
60
80
100
120
Time (sec)

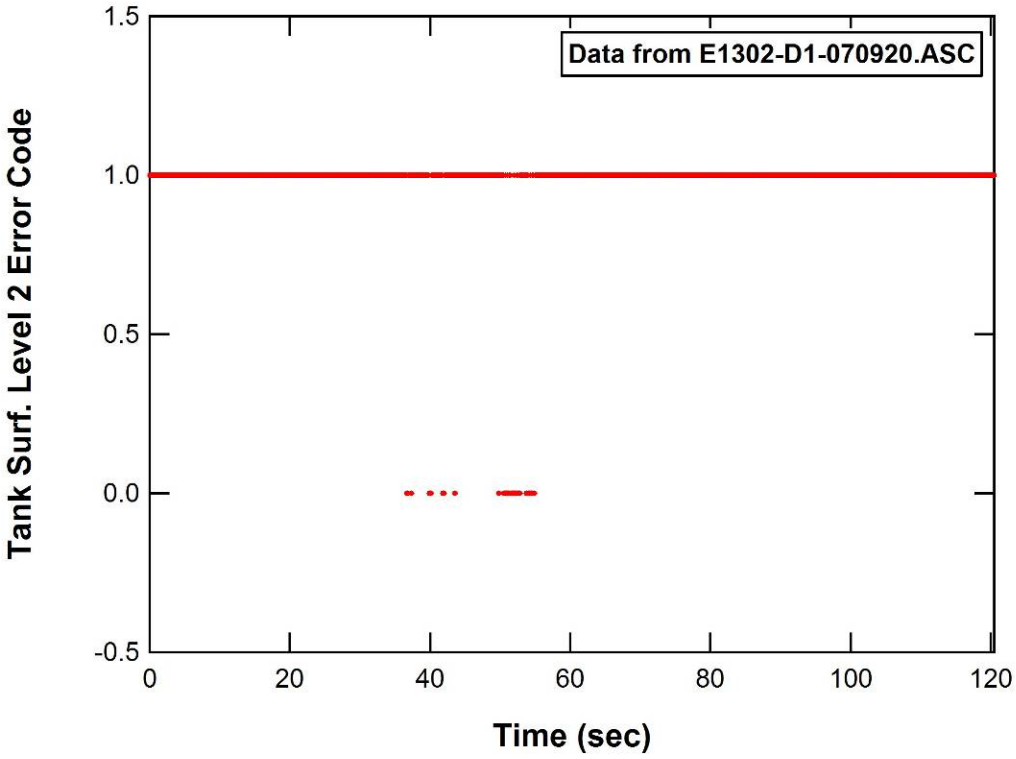

Data from E1302-D1-070920.ASC
PJM D Pressure (psia)
16.0
15.5
15.0
14.5
14.0
13.5
13.0
12.5
12.0
0
20
40
60
80
100
120
Time (sec)

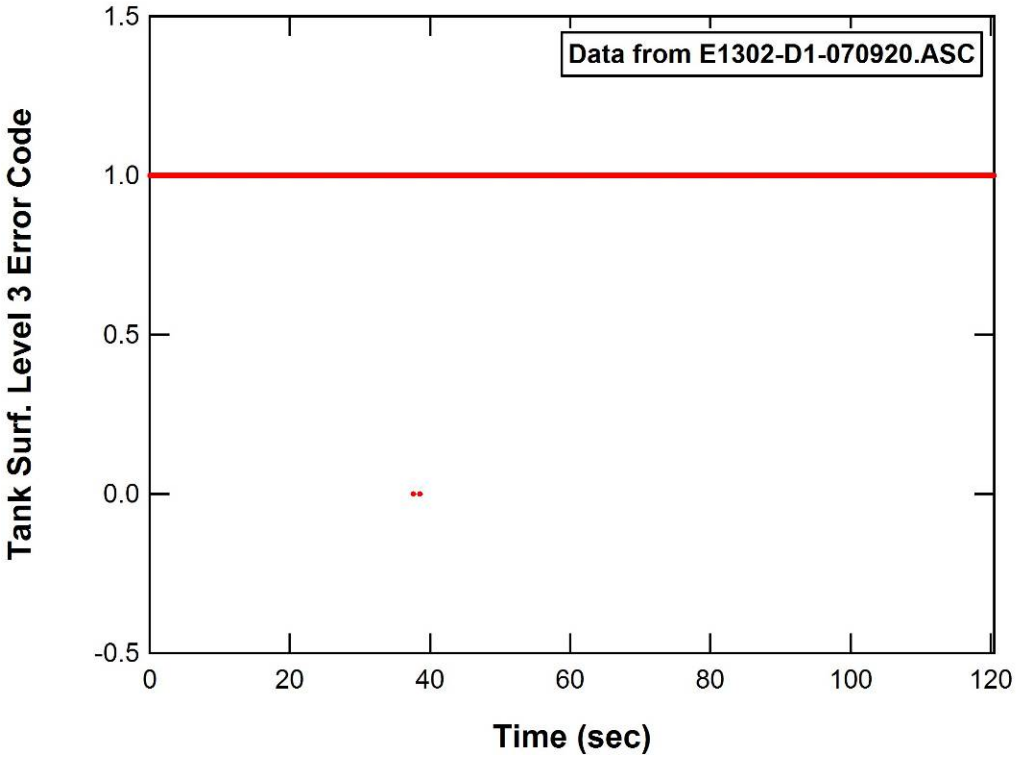

Data from E1302-D1-070920.ASC
PJM A Manifold Temperature (ºC)
Time (sec)
26
24
22
20
18
16
14
12
0
20
40
60
80
100
120

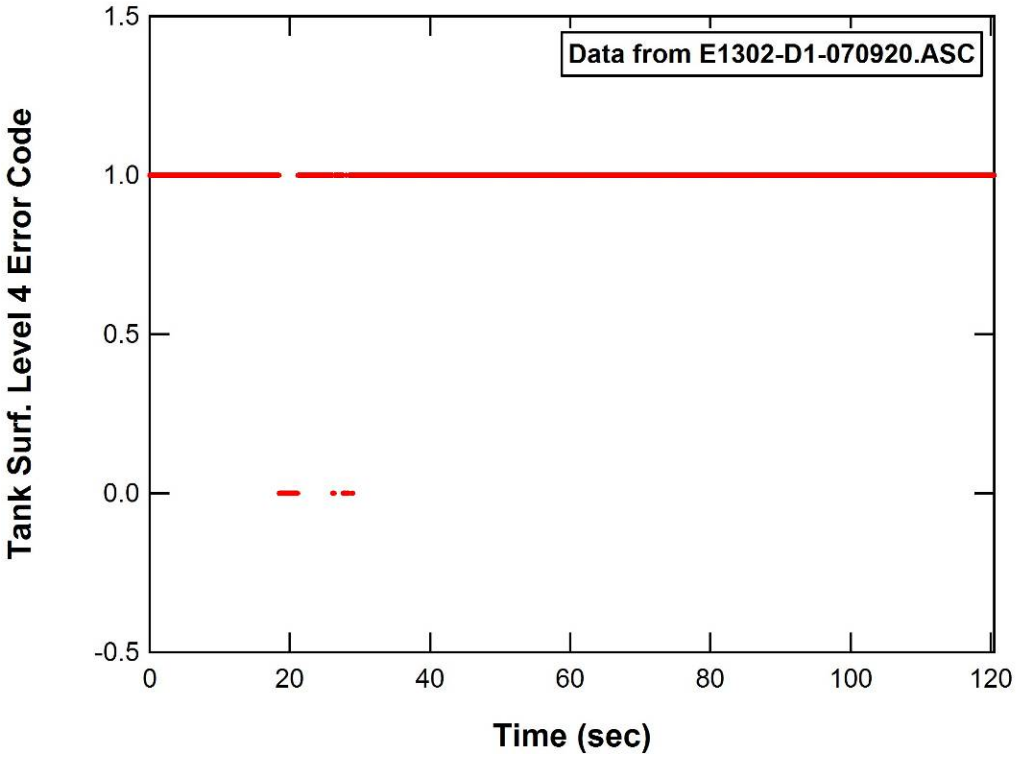

Data from E1302-D1-070920.ASC
PJM A Temperature (ºC)
Time (sec)
25
20
15
10
5
0
-5
0
20
40
60
80
100
120

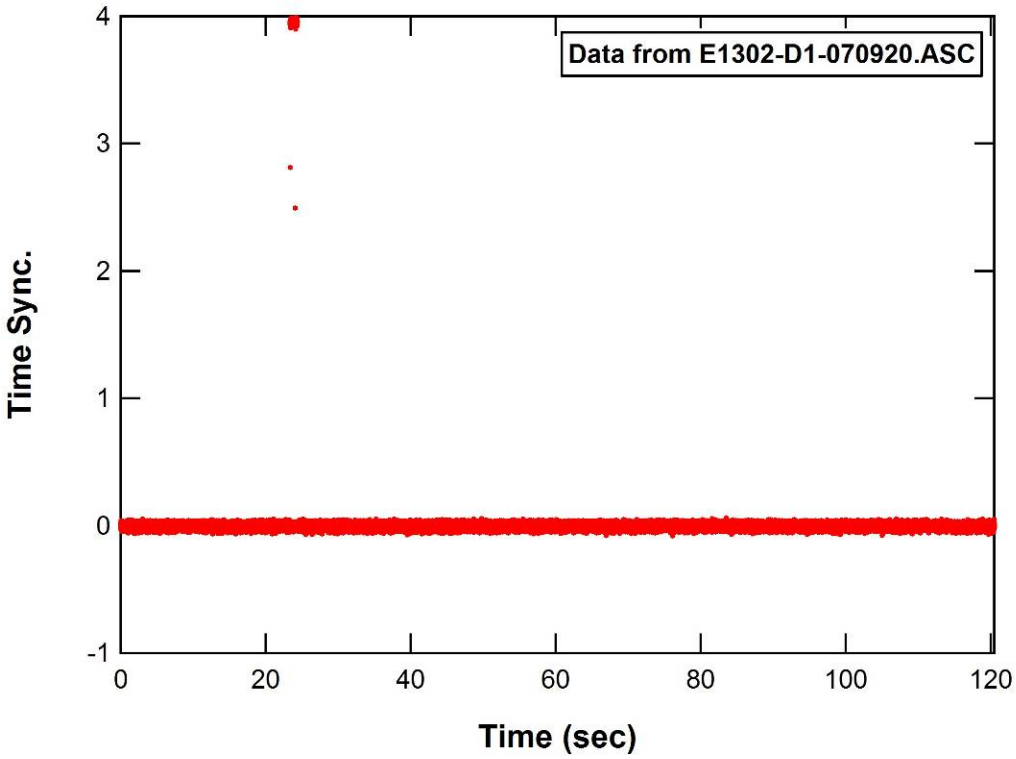

Data from E1302-D1-070920.ASC
Tank Surface Level 4 (m)
Time (sec)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0
20
40
60
80
100
120

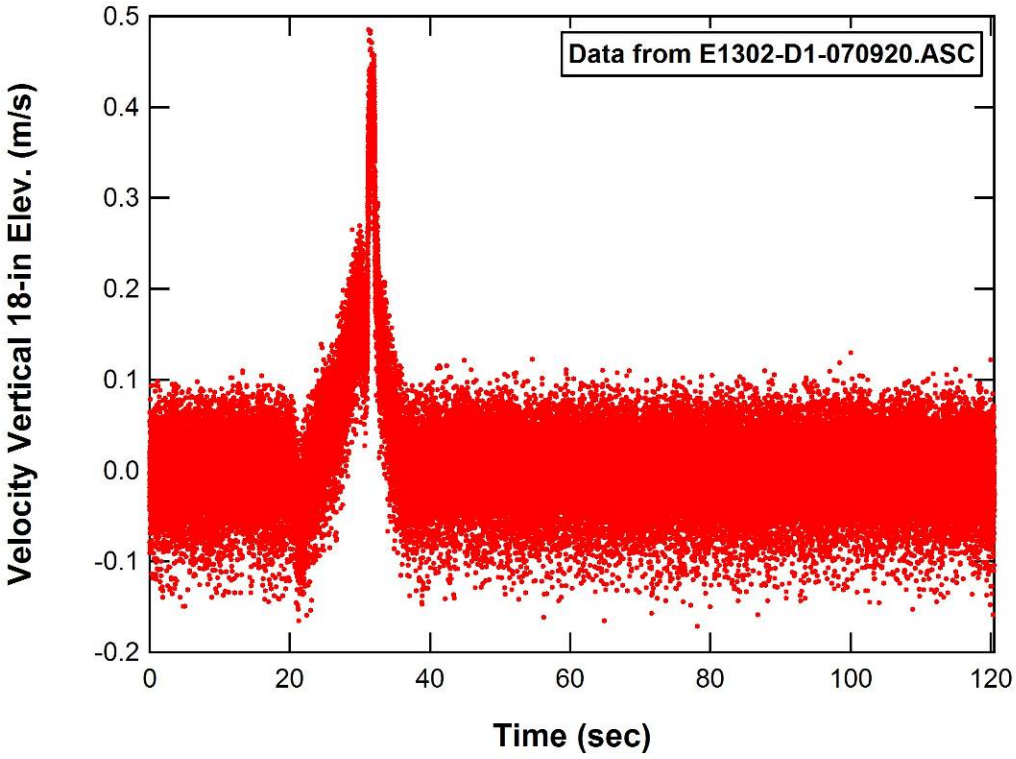

Data from E1302-D1-070920.ASC
Tank Surf. Level 1 Error Code
Time (sec)
1.5
1.0
0.5
0.0
-0.5
0
20
40
60
80
100
120

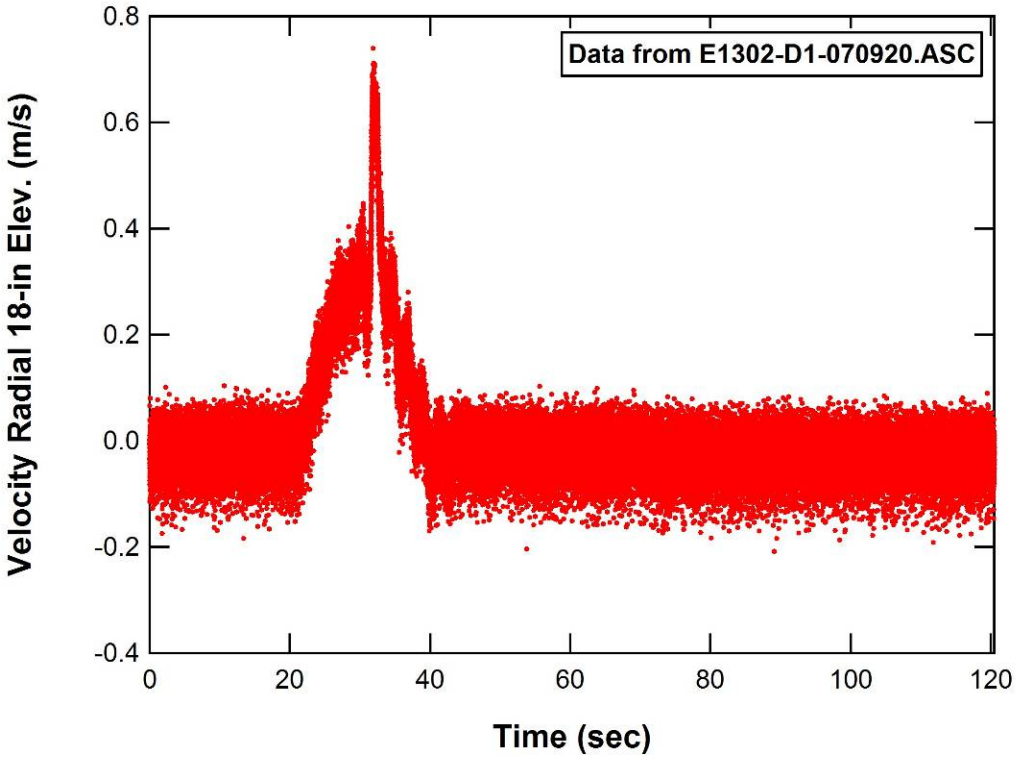

Data from E1302-D1-070920.ASC
Tank Surf. Level 2 Error Code
1.5
1.0
0.5
0.0
-0.5
0
20
40
60
80
100
120
Time (sec)

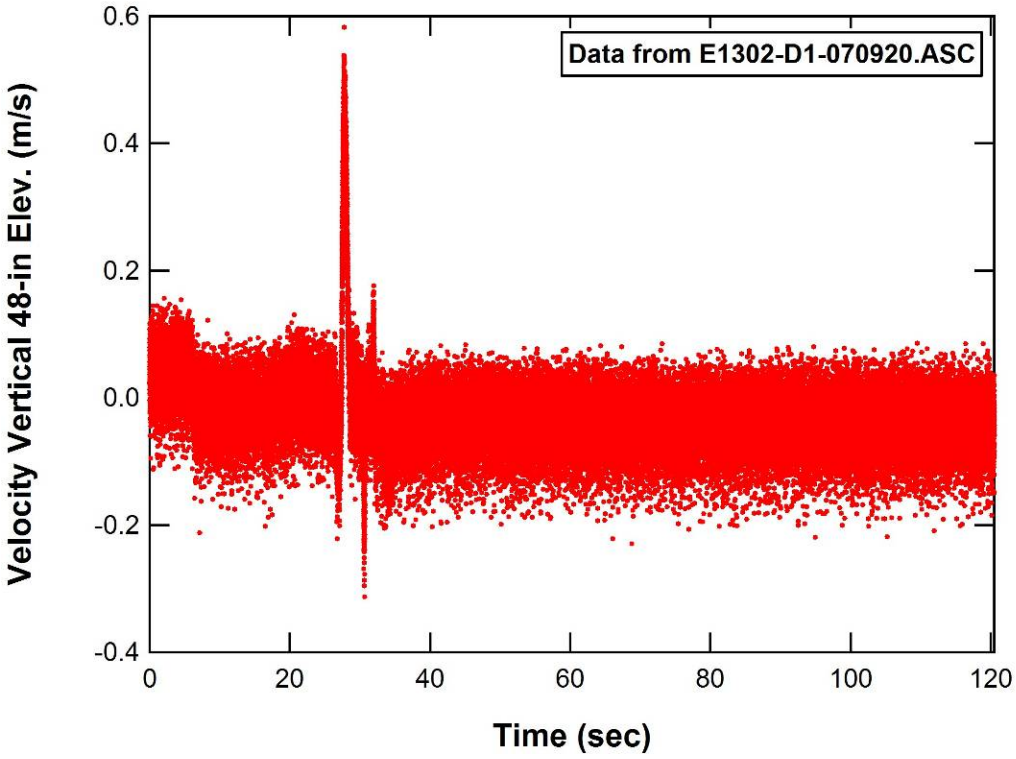

Data from E1302-D1-070920.ASC
Tank Surf. Level 3 Error Code
1.5
1.0
0.5
0.0
-0.5
0
20
40
60
80
100
120
Time (sec)

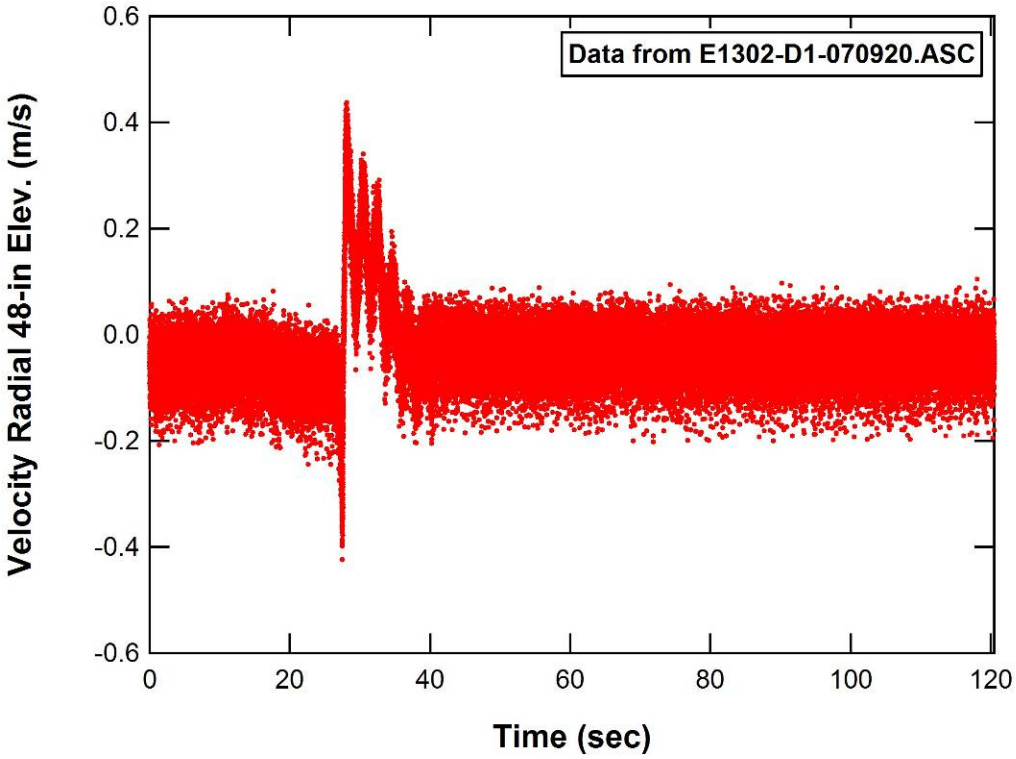

Data from E1302-D1-070920.ASC
Tank Surf. Level 4 Error Code
1.5
1.0
0.5
0.0
-0.5
0
20
40
60
80
100
120
Time (sec)

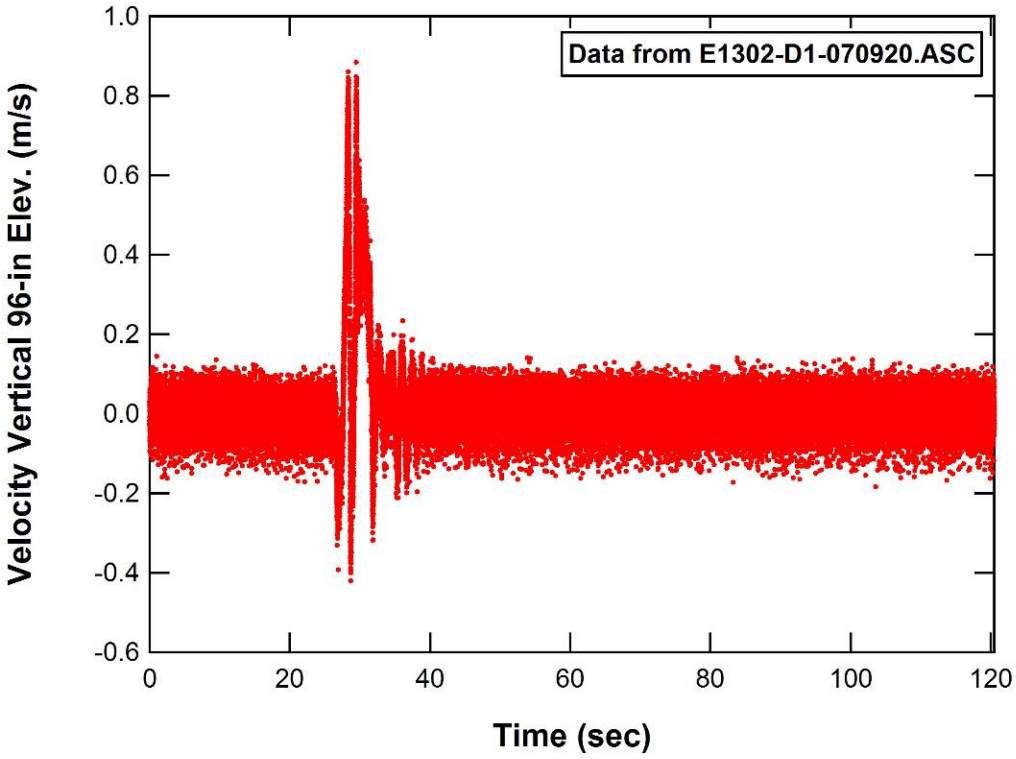

Data from E1302-D1-070920.ASC
Time Sync.
4
3
2
1
0
-1
0
20
40
60
80
100
120
Time (sec)

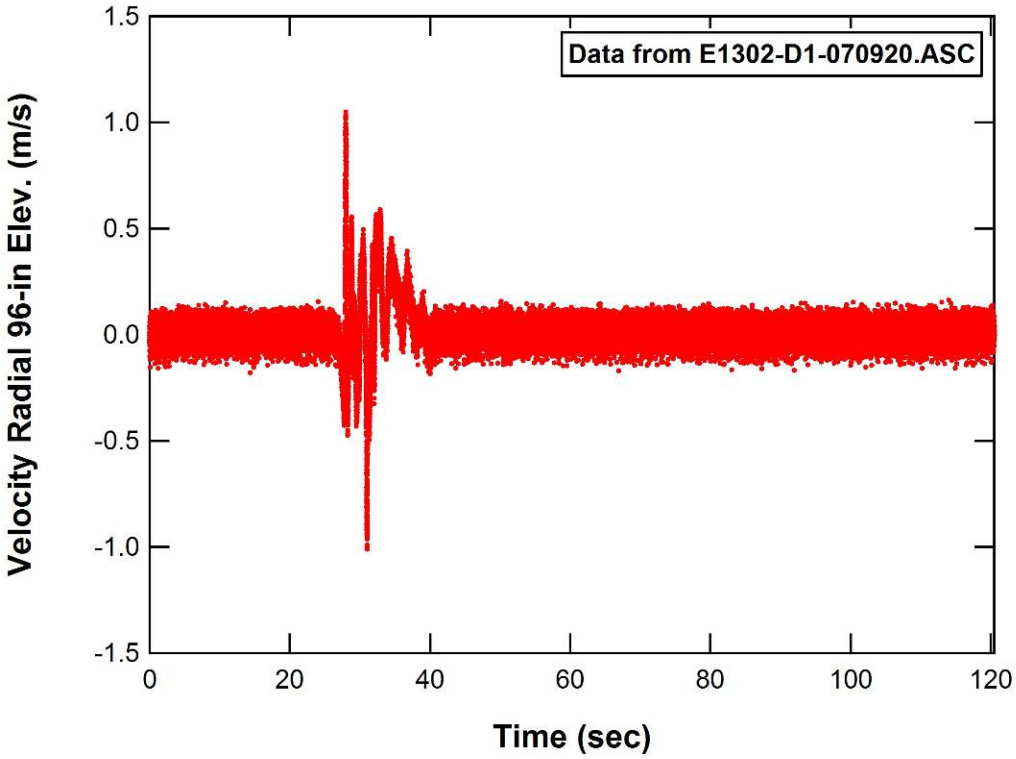

Data from E1302-D1-070920.ASC
Velocity Vertical 18-in Elev. (m/s)
0.5
0.4
0.3
0.2
0.1
0.0
-0.1
-0.2
0
20
40
60
80
100
120
Time (sec)

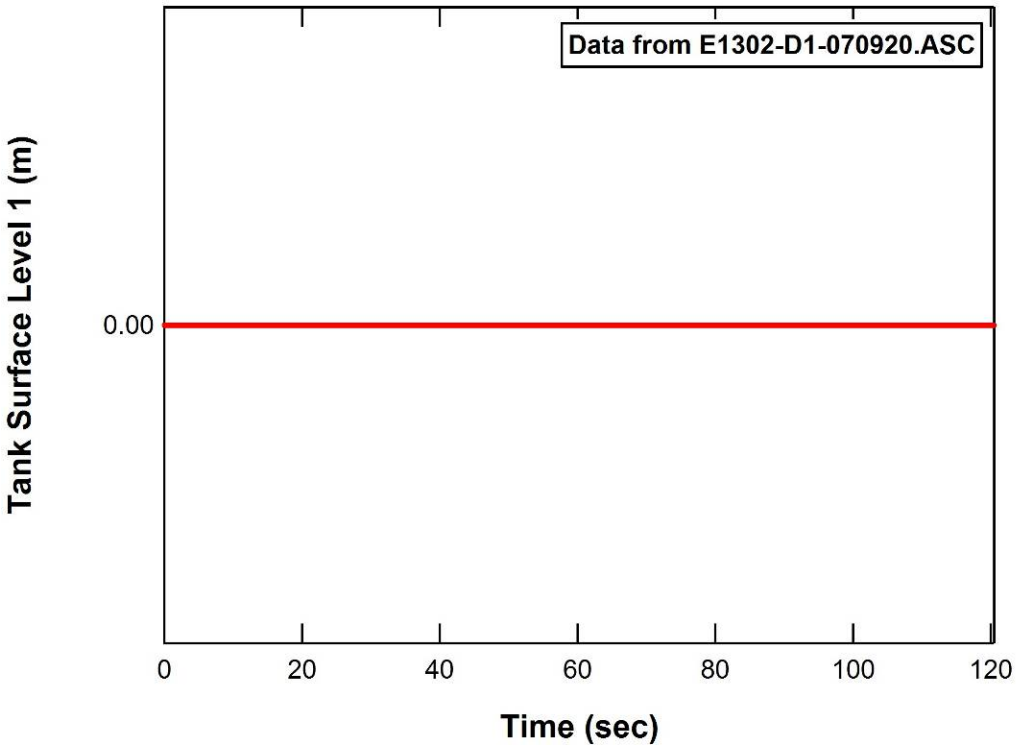

Data from E1302-D1-070920.ASC
Velocity Radial 18-in Elev. (m/s)
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
0
20
40
60
80
100
120
Time (sec)

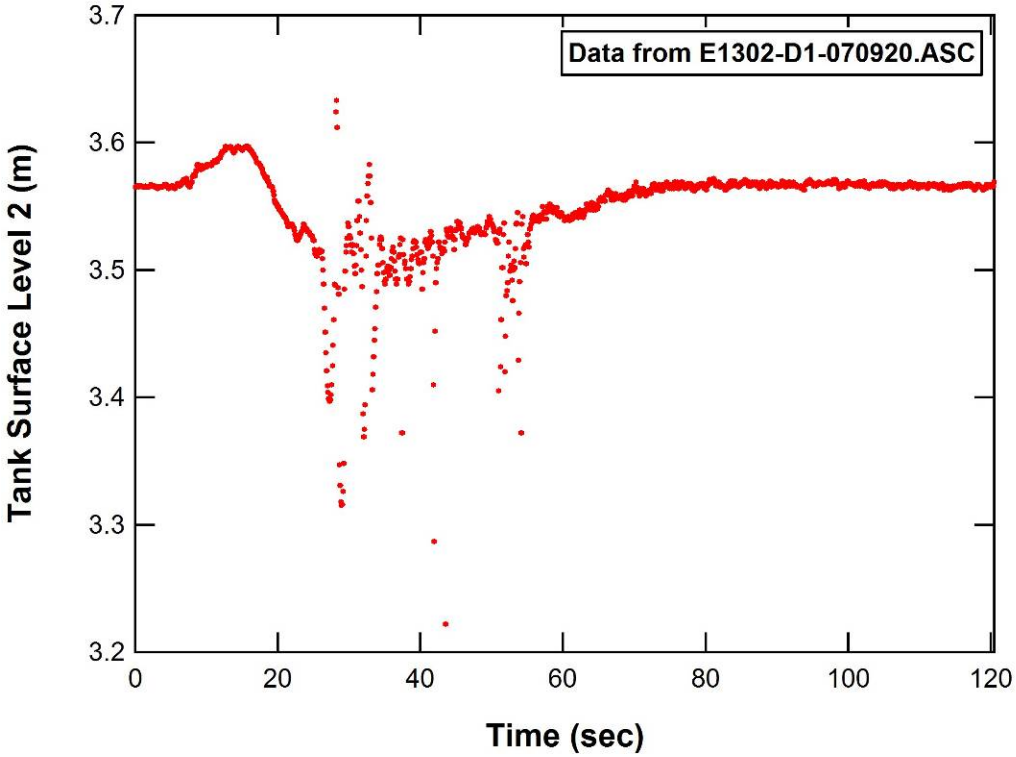

Data from E1302-D1-070920.ASC
Velocity Vertical 48-in Elev. (m/s)
0.6
0.4
0.2
0.0
-0.2
-0.4
0
20
40
60
80
100
120
Time (sec)

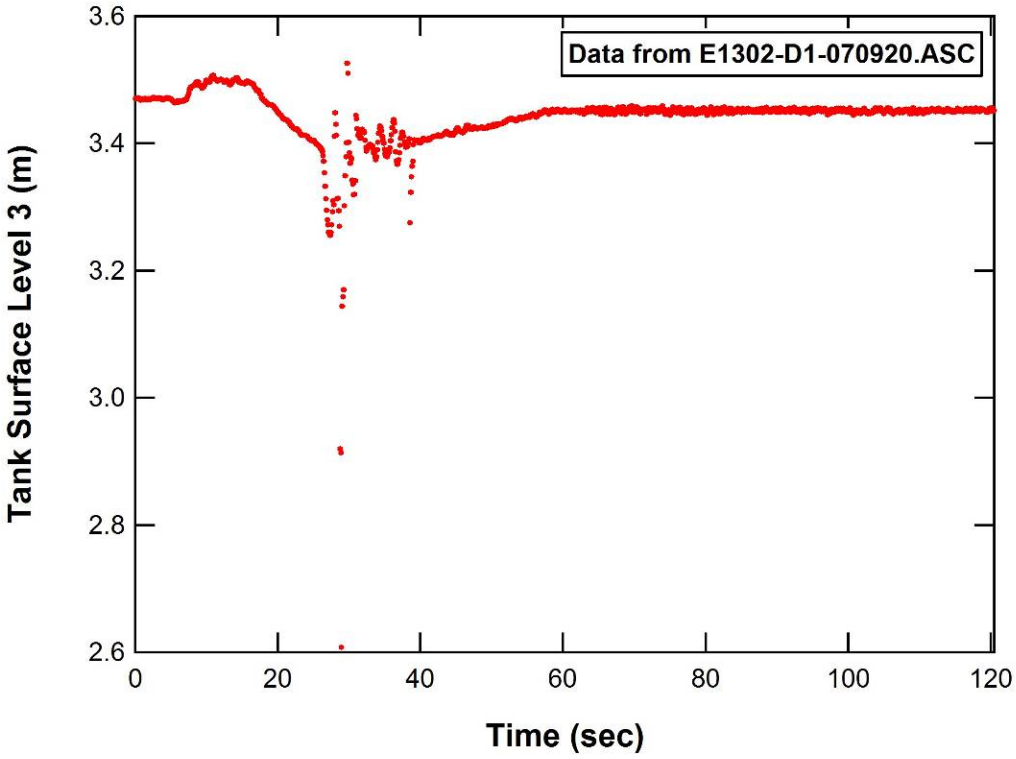

Data from E1302-D1-070920.ASC
Velocity Radial 48-in Elev. (m/s)
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
0
20
40
60
80
100
120
Time (sec)

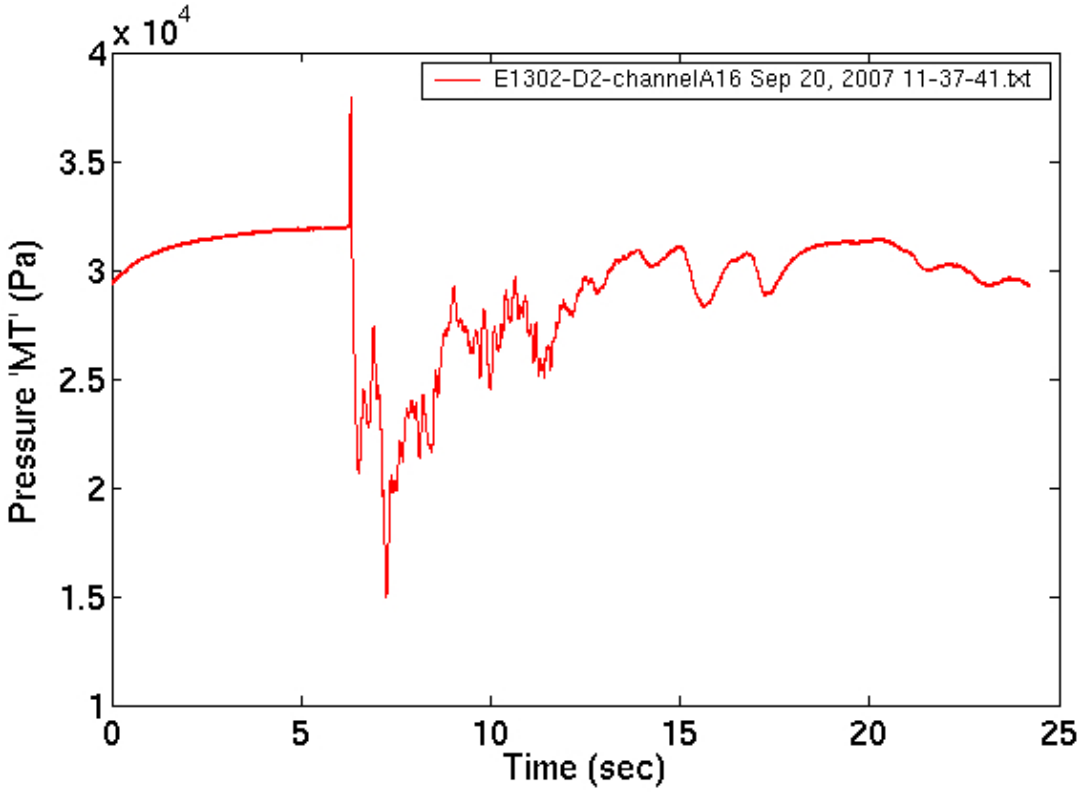

Data from E1302-D1-070920.ASC
Velocity Vertical 96-in Elev. (m/s)
1.0
0.8
0.6
0.4
0.2
0.0
-0.2
-0.4
-0.6
0
20
40
60
80
100
120
Time (sec)

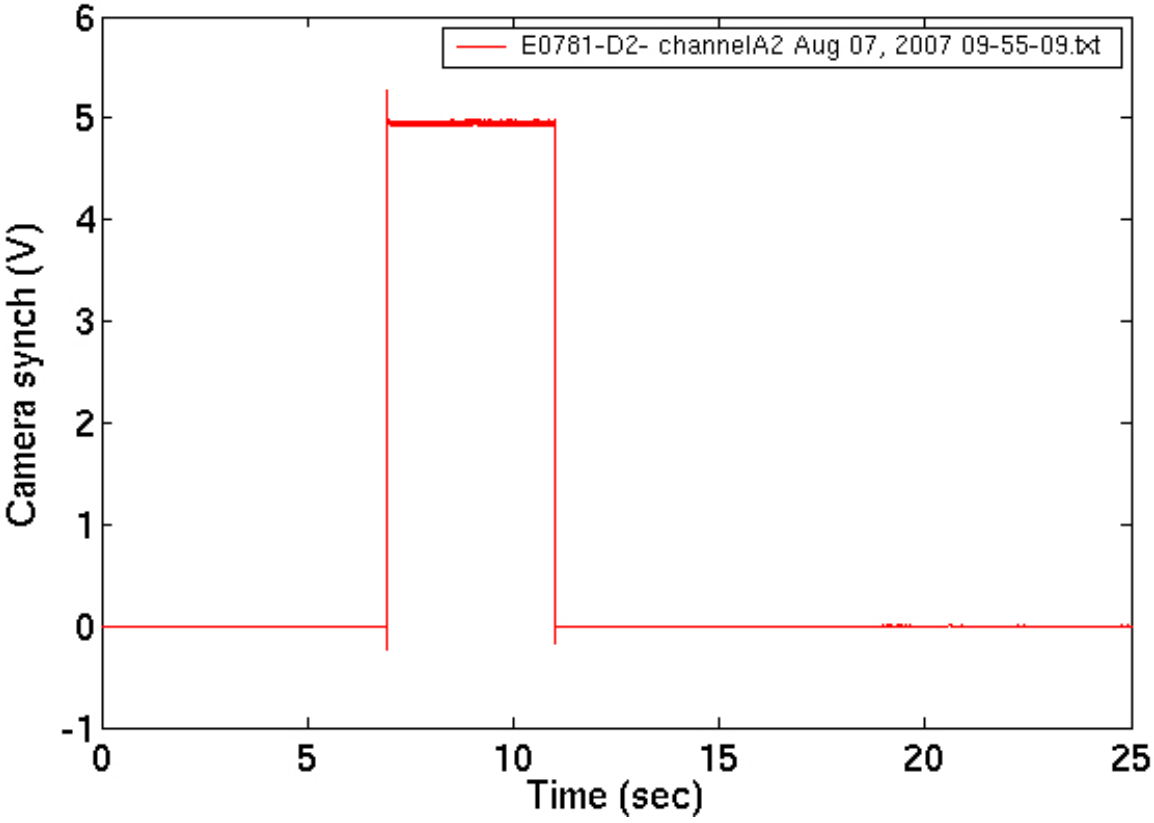

Data from E1302-D1-070920.ASC
Velocity Radial 96-in Elev. (m/s)
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
0
20
40
60
80
100
120
Time (sec)

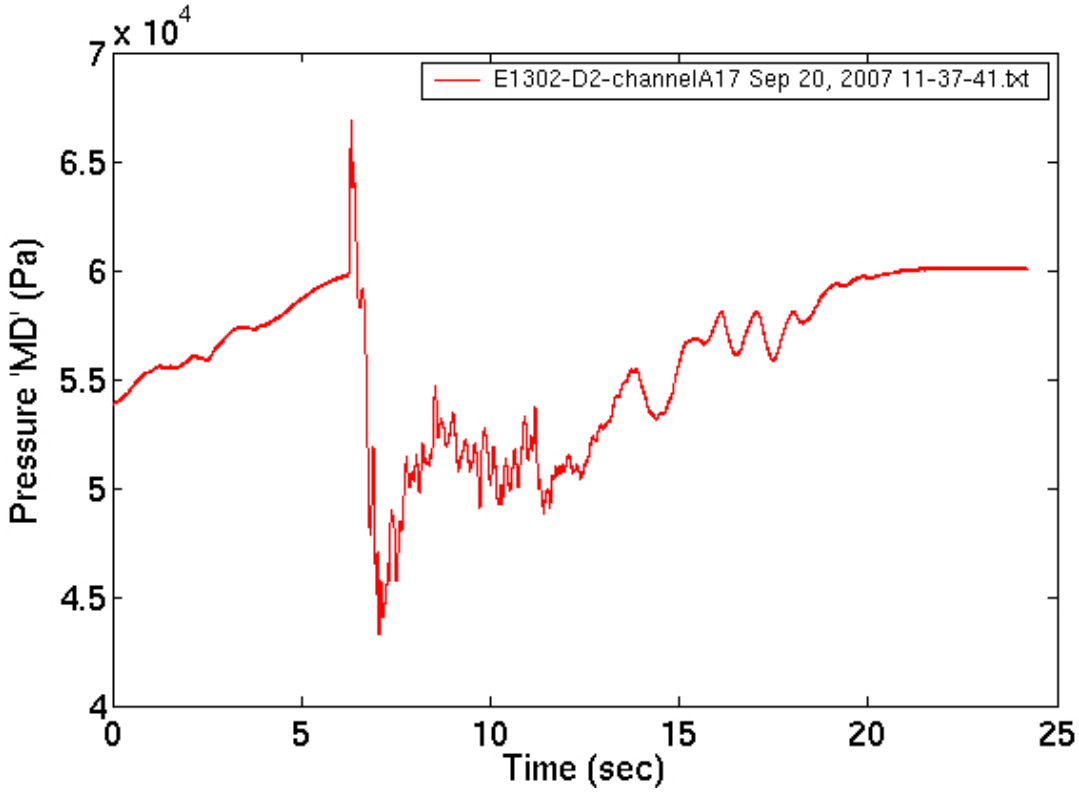

Data from E1302-D1-070920.ASC
Tank Surface Level 1 (m)
0.00
0
20
40
60
80
100
120
Time (sec)

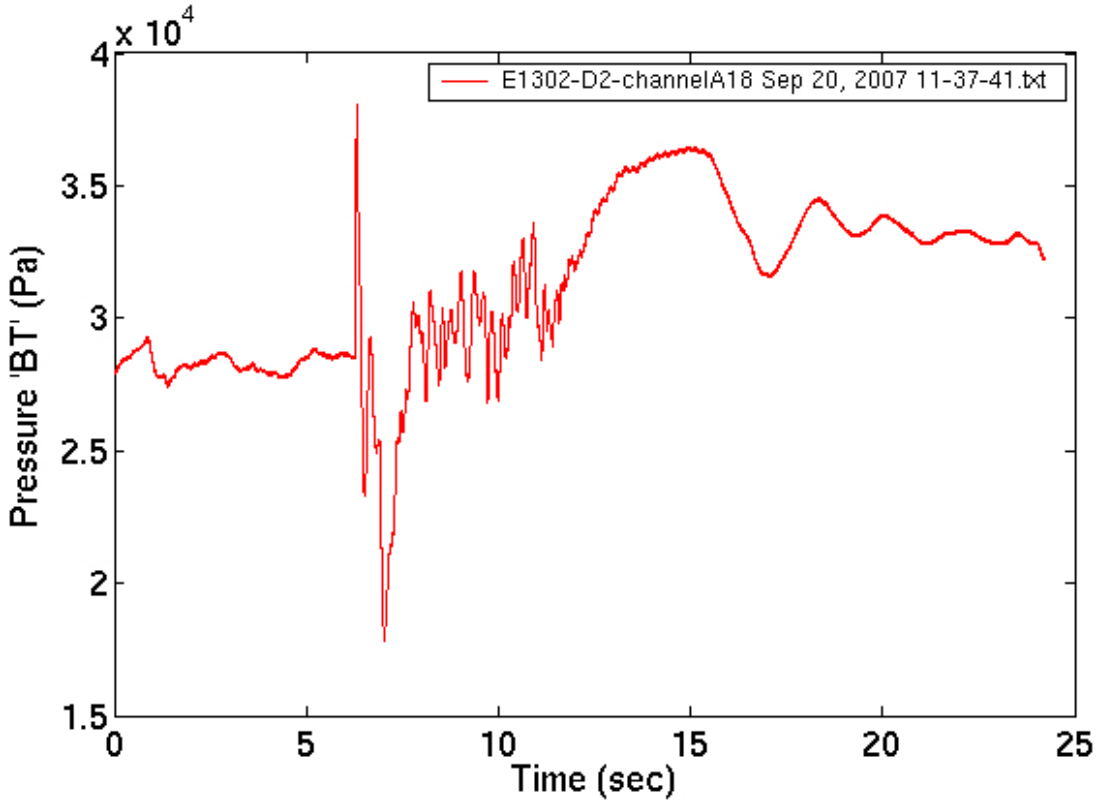

Data from E1302-D1-070920.ASC
Tank Surface Level 2 (m)
3.7
3.6
3.5
3.4
3.3
3.2
0
20
40
60
80
100
120
Time (sec)

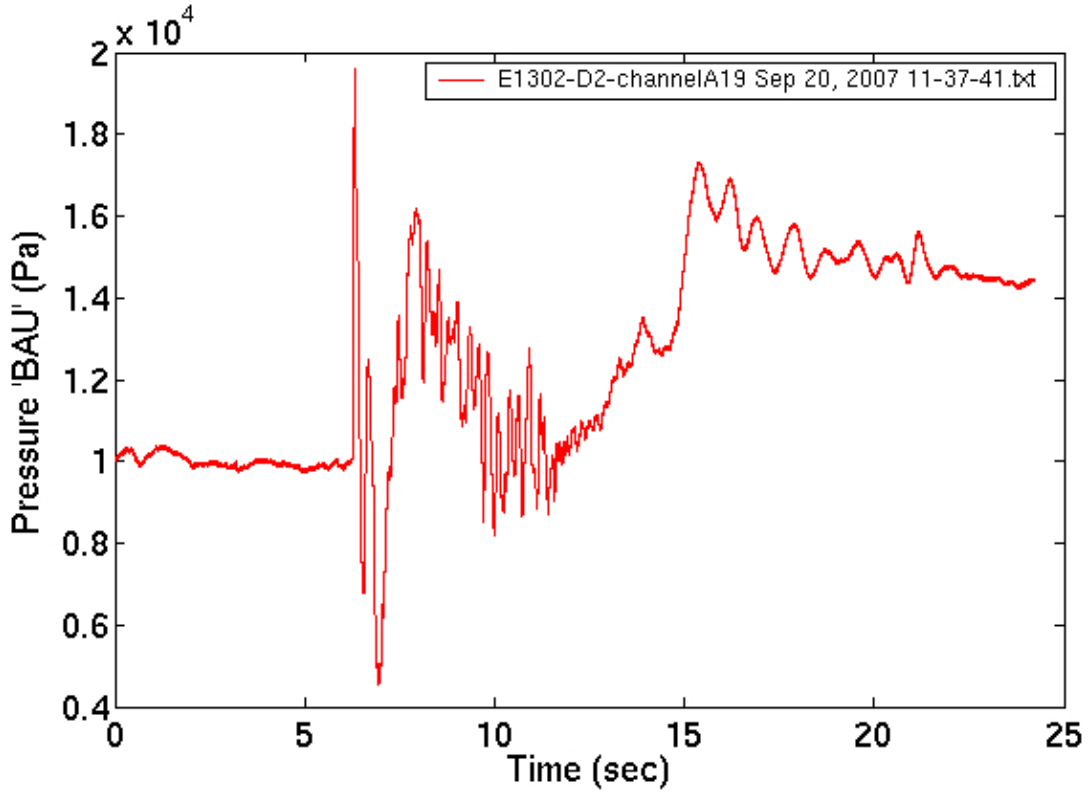

Data from E1302-D1-070920.ASC
Tank Surface Level 3 (m)
Time (sec)
3.6
3.4
3.2
3.0
2.8
2.6
0
20
40
60
80
100
120

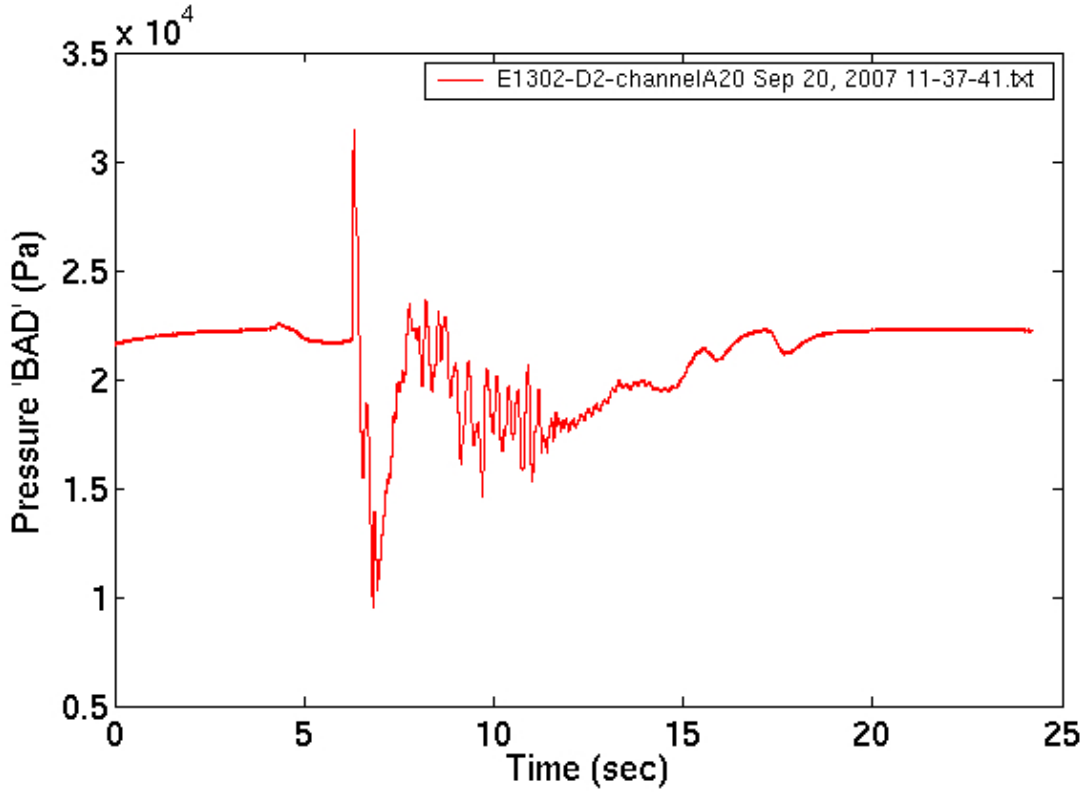

x 10^4
E1302-D2-channelA16 Sep 20, 2007 11-37-41.txt
Pressure 'MT' (Pa)
Time (sec)
4
3.5
3
2.5
2
1.5
1
0
5
10
15
20
25

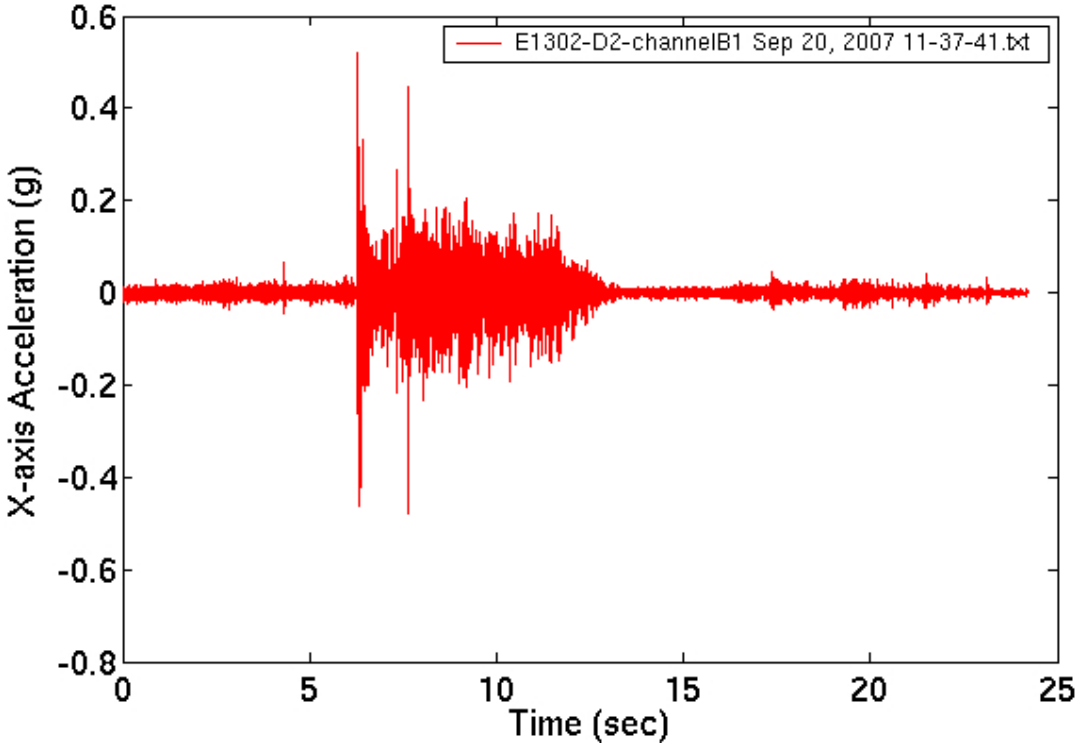

E0781-D2- channelA2 Aug 07, 2007 09-55-09.txt
Camera synch (V)
Time (sec)
6
5
4
3
2
1
0
-1
0
5
10
15
20
25

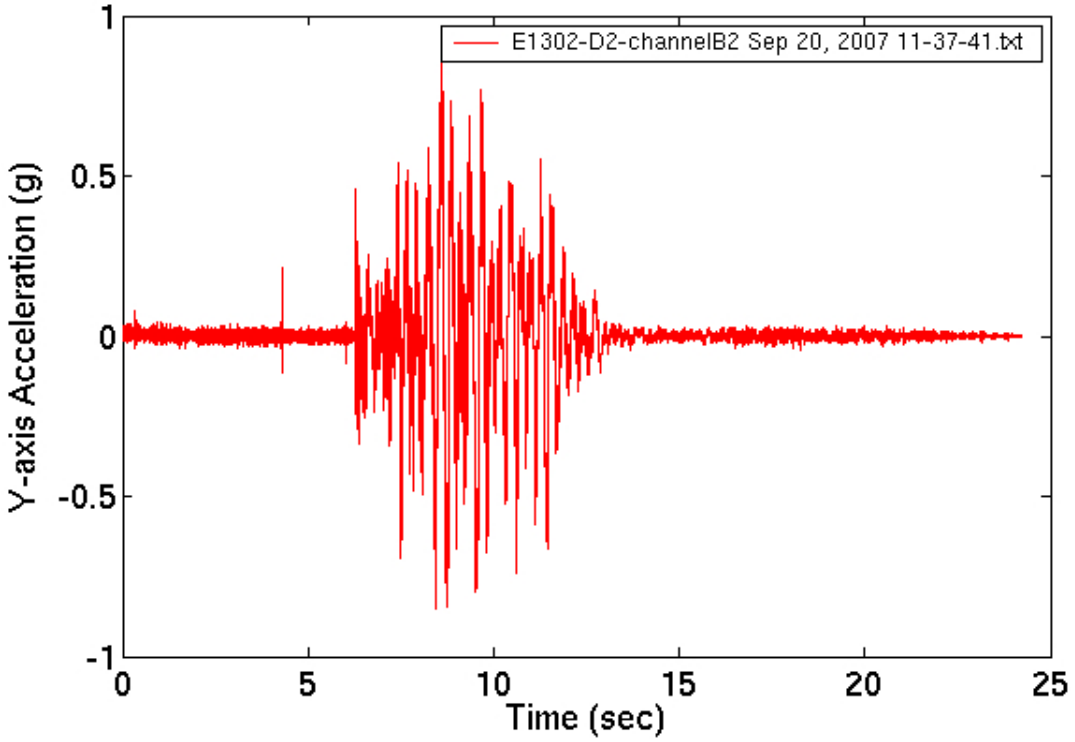

x 10^4
E1302-D2-channelA17 Sep 20, 2007 11-37-41.txt
Pressure 'MD' (Pa)
Time (sec)
7
6.5
6
5.5
5
4.5
4
0
5
10
15
20
25

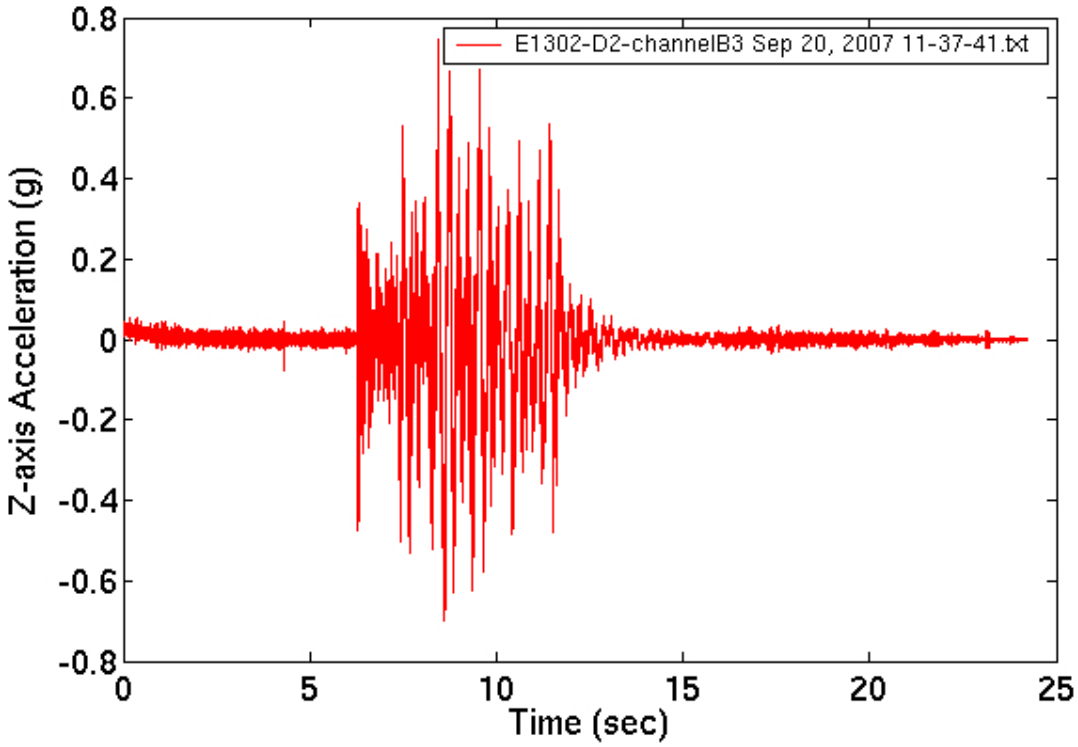

x 10^4
E1302-D2-channelA18 Sep 20, 2007 11-37-41.txt
Pressure 'BT' (Pa)
Time (sec)
4
3.5
3
2.5
2
1.5
0
5
10
15
20
25

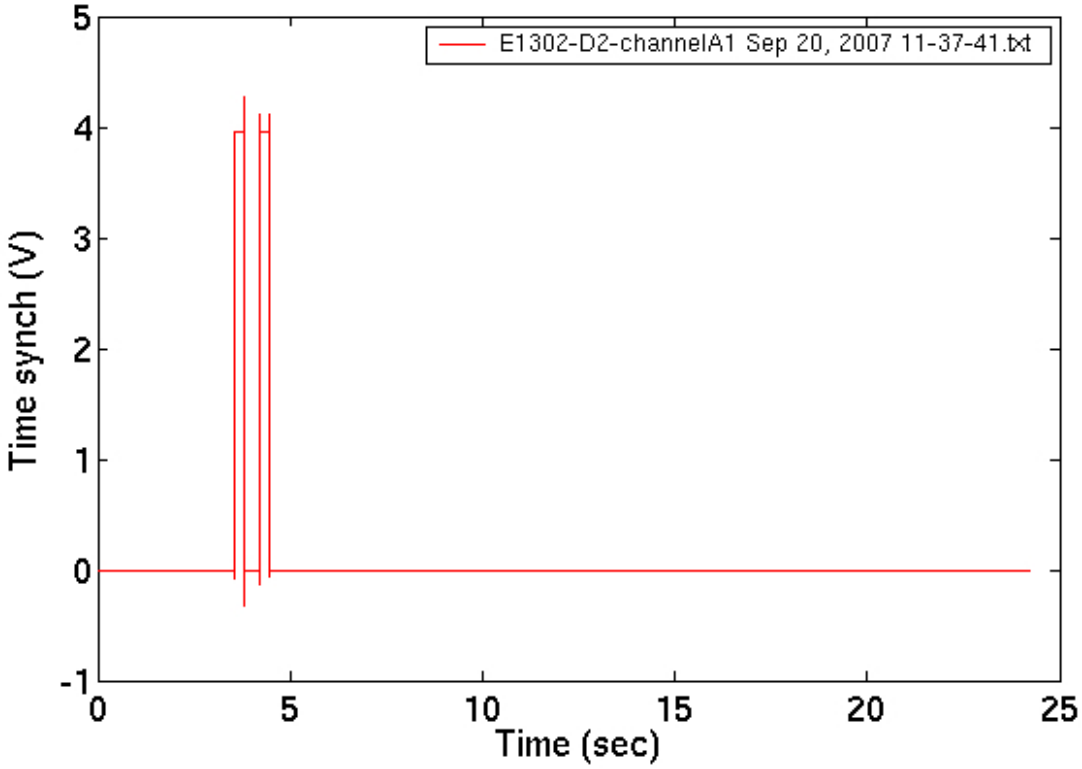

x 10^4
E1302-D2-channelA19 Sep 20, 2007 11-37-41.txt
Pressure 'BAU' (Pa)
Time (sec)
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0
5
10
15
20
25

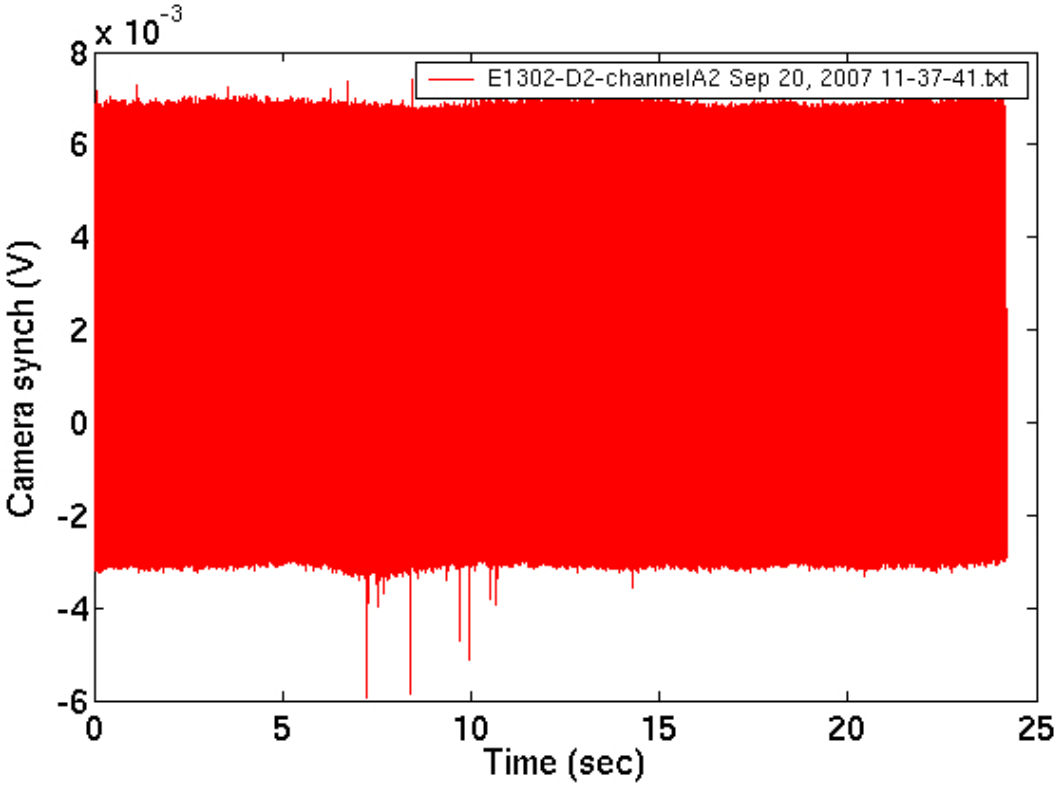

x 10^4
E1302-D2-channelA20 Sep 20, 2007 11-37-41.txt
Pressure 'BAD' (Pa)
Time (sec)

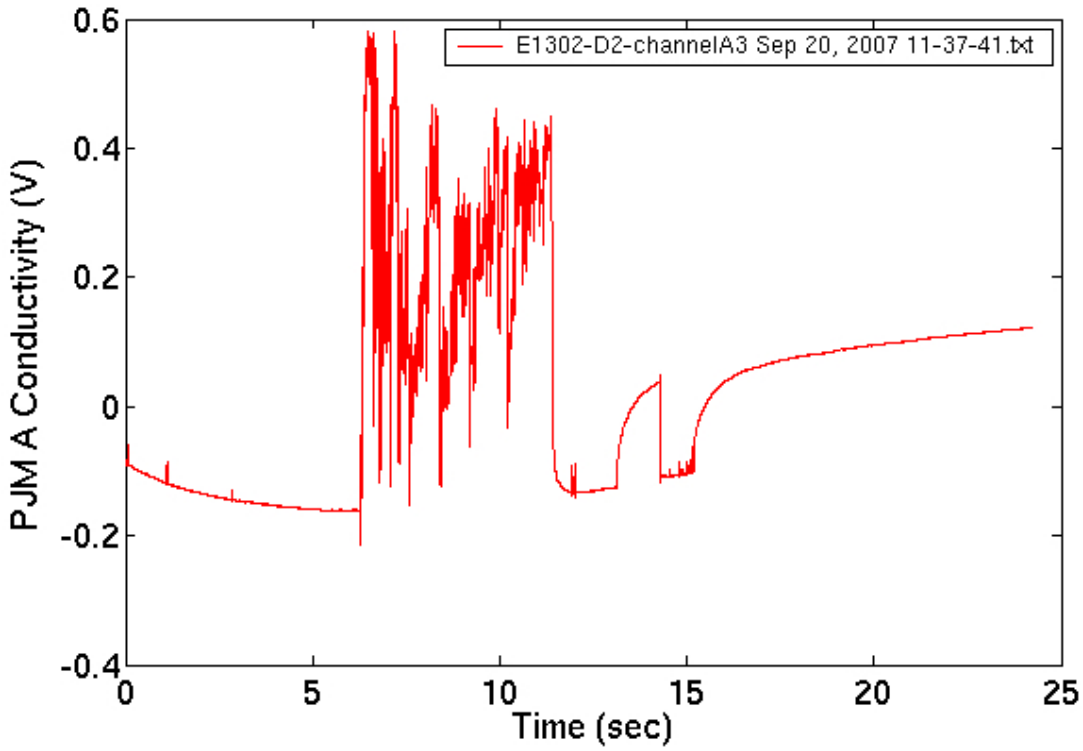

E1302-D2-channelB1 Sep 20, 2007 11-37-41.txt
X-axis Acceleration (g)
Time (sec)

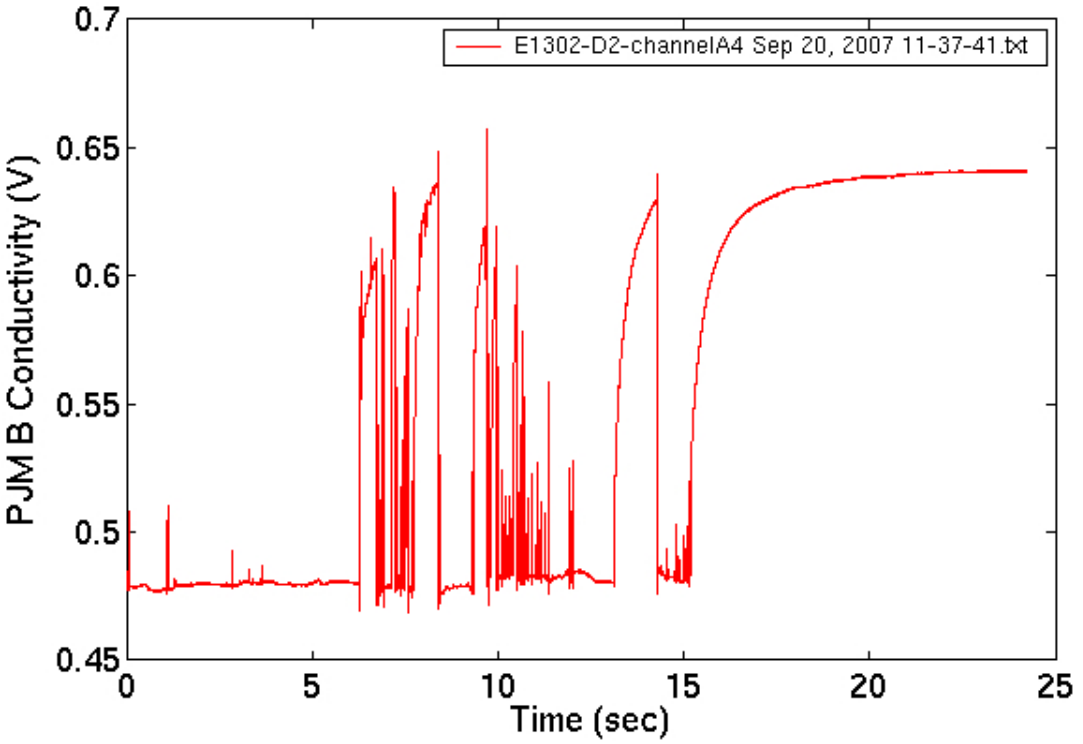

E1302-D2-channelB2 Sep 20, 2007 11-37-41.txt
Y-axis Acceleration (g)
1
0.5
0
-0.5
-1
0
5
10
15
20
25
Time (sec)

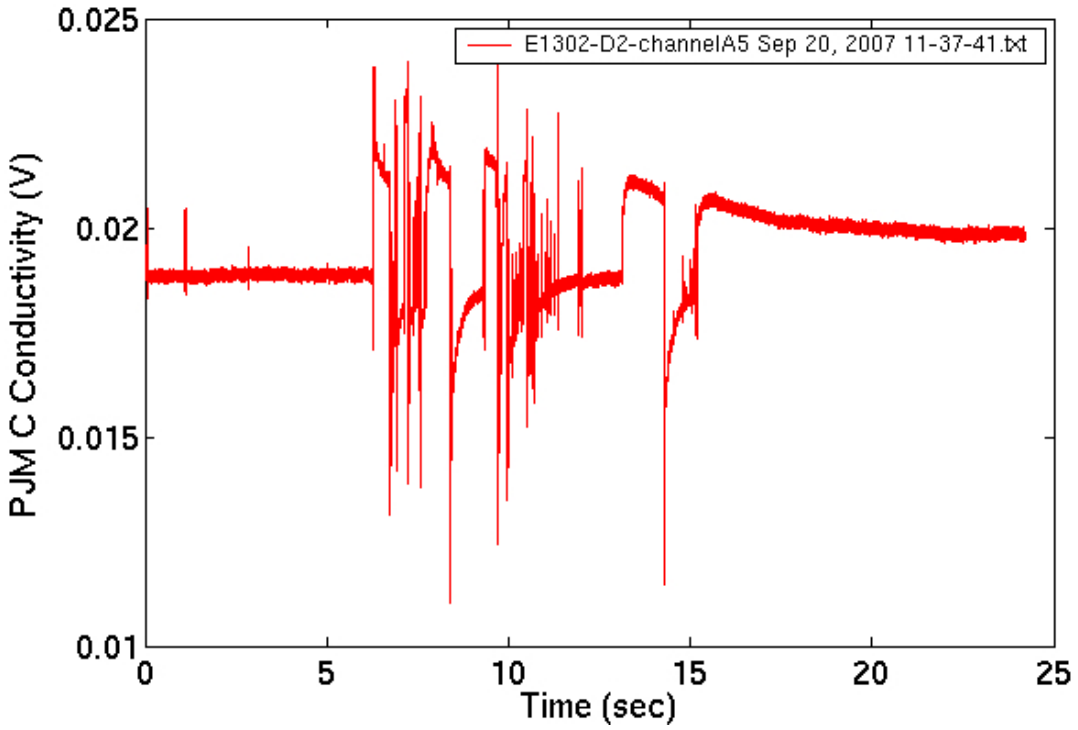

E1302-D2-channelB3 Sep 20, 2007 11-37-41.txt
Z-axis Acceleration (g)
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
0
5
10
15
20
25
Time (sec)

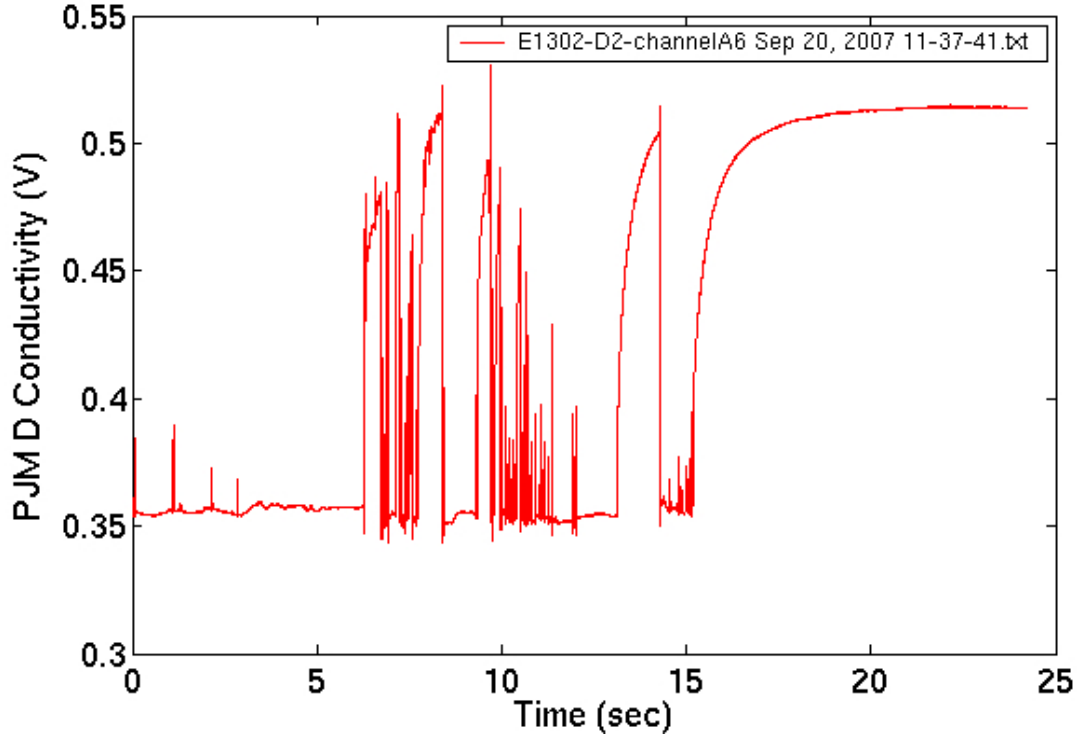

E1302-D2-channelA1 Sep 20, 2007 11-37-41.txt
Time synch (V)
Time (sec)
5
4
3
2
1
0
-1
0
5
10
15
20
25

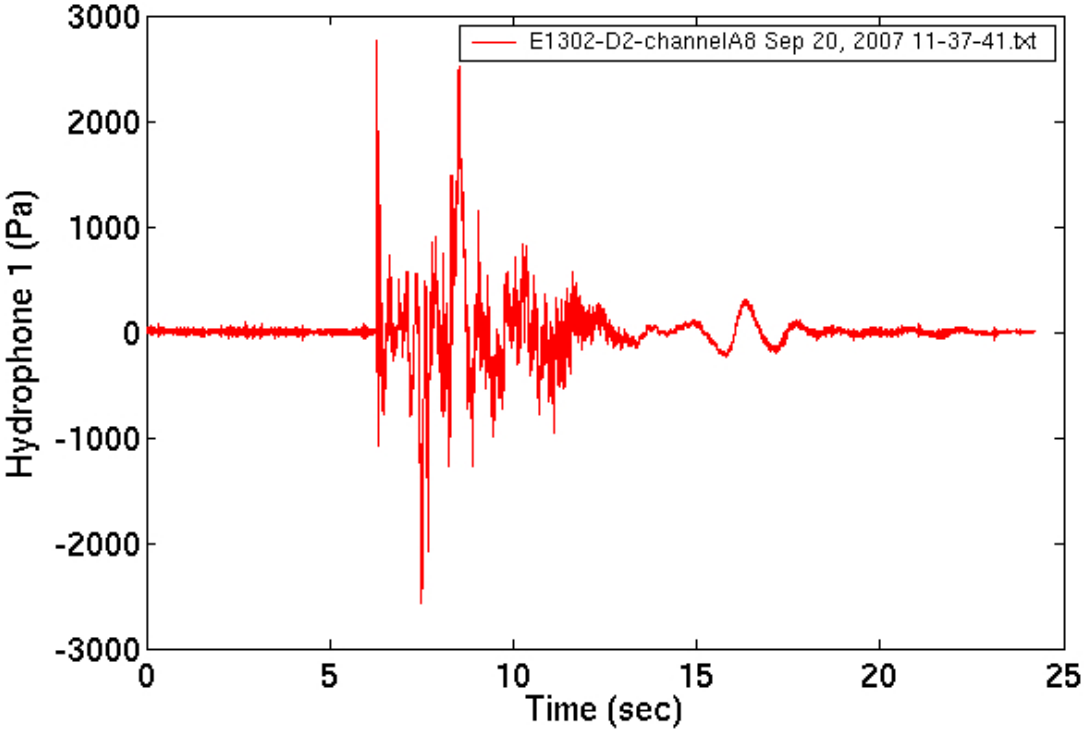

x 10^-3
E1302-D2-channelA2 Sep 20, 2007 11-37-41.txt
Camera synch (V)
Time (sec)
8
6
4
2
0
-2
-4
-6
0
5
10
15
20
25

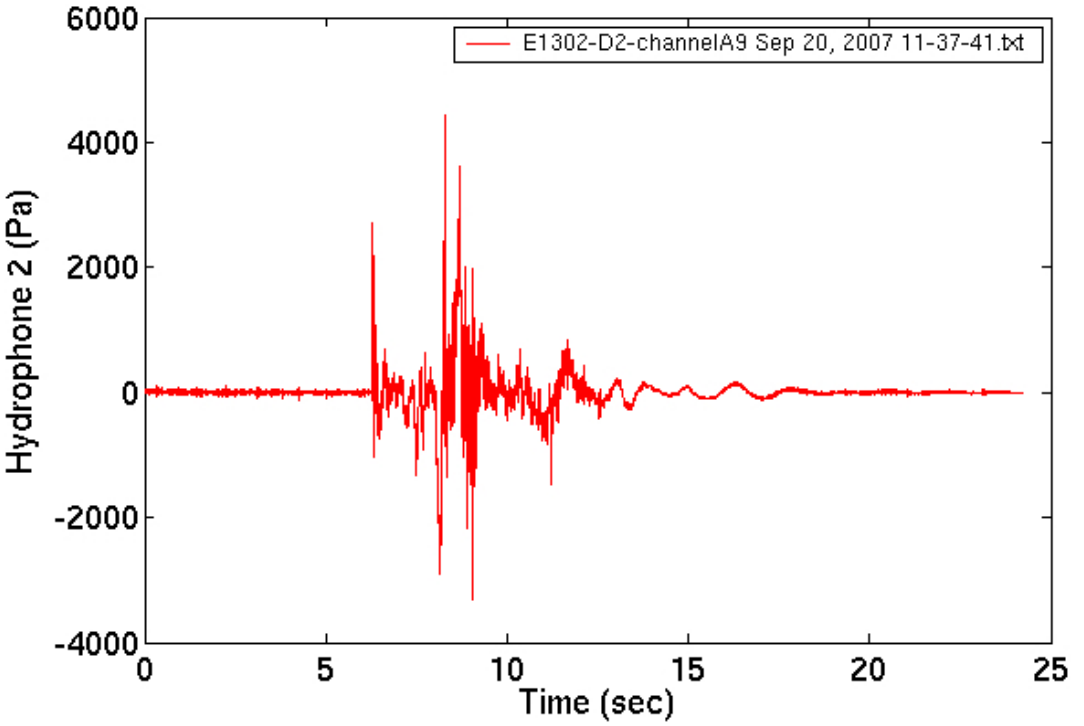

E1302-D2-channelA3 Sep 20, 2007 11-37-41.txt
PJM A Conductivity (V)
0.6
0.4
0.2
0
-0.2
-0.4
0
5
10
15
20
25
Time (sec)

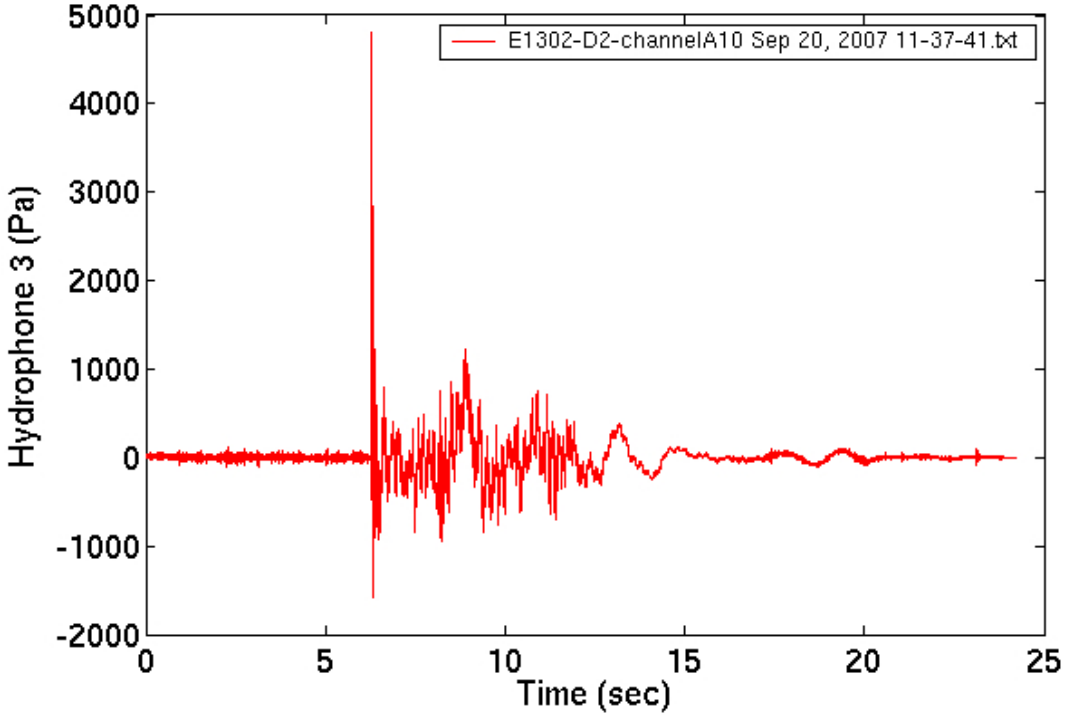

E1302-D2-channelA4 Sep 20, 2007 11-37-41.txt
PJM B Conductivity (V)
0.7
0.65
0.6
0.55
0.5
0.45
0
5
10
15
20
25
Time (sec)

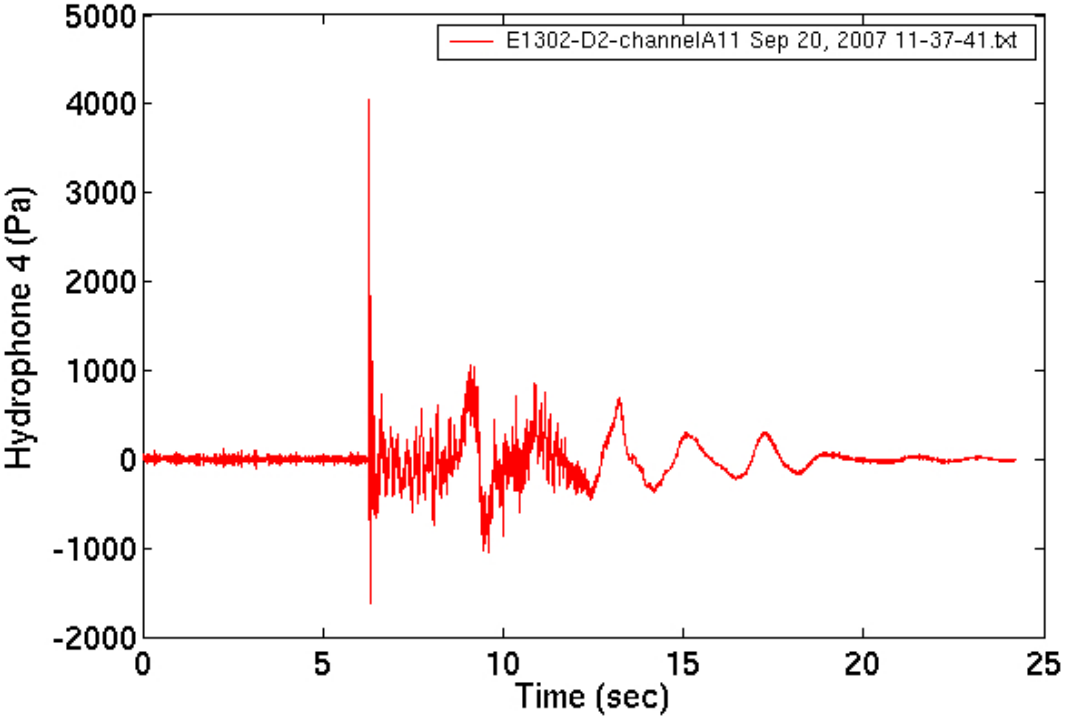

E1302-D2-channelA5 Sep 20, 2007 11-37-41.txt
PJM C Conductivity (V)
0.025
0.02
0.015
0.01
0
5
10
15
20
25
Time (sec)

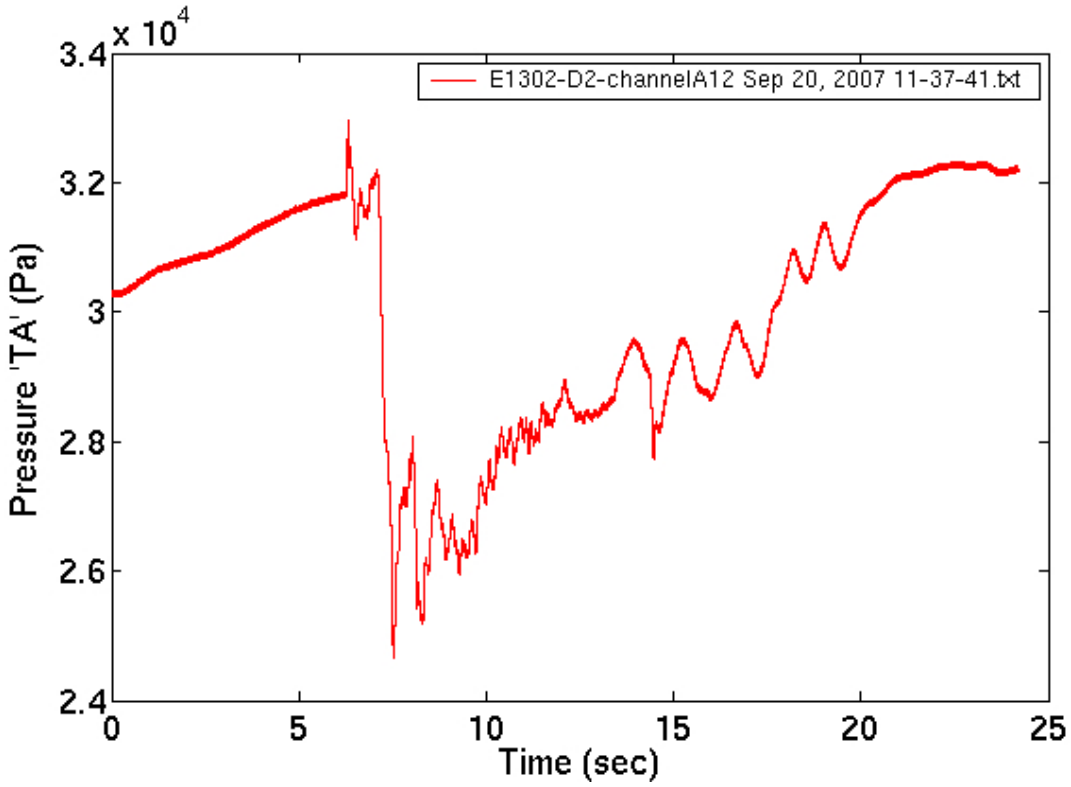

E1302-D2-channelA6 Sep 20, 2007 11-37-41.txt
PJM D Conductivity (V)
0.55
0.5
0.45
0.4
0.35
0.3
0
5
10
15
20
25
Time (sec)

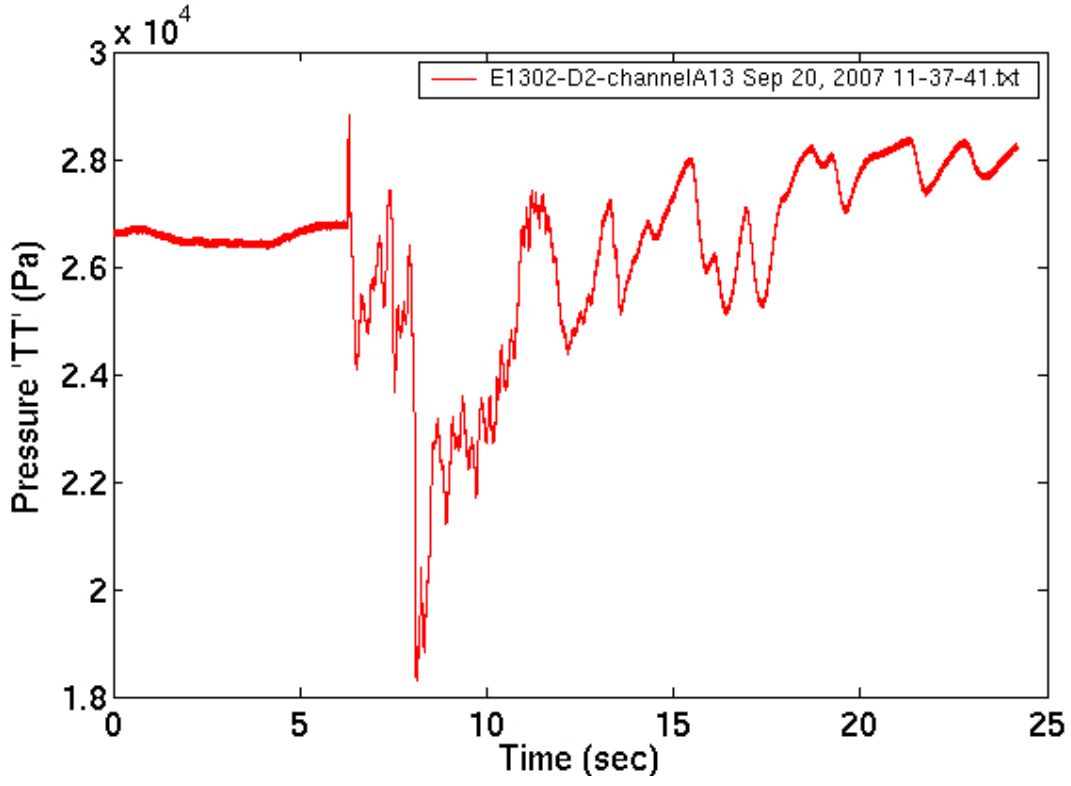

E1302-D2-channelA8 Sep 20, 2007 11-37-41.txt
Hydrophone 1 (Pa)
3000
2000
1000
0
-1000
-2000
-3000
0
5
10
15
20
25
Time (sec)

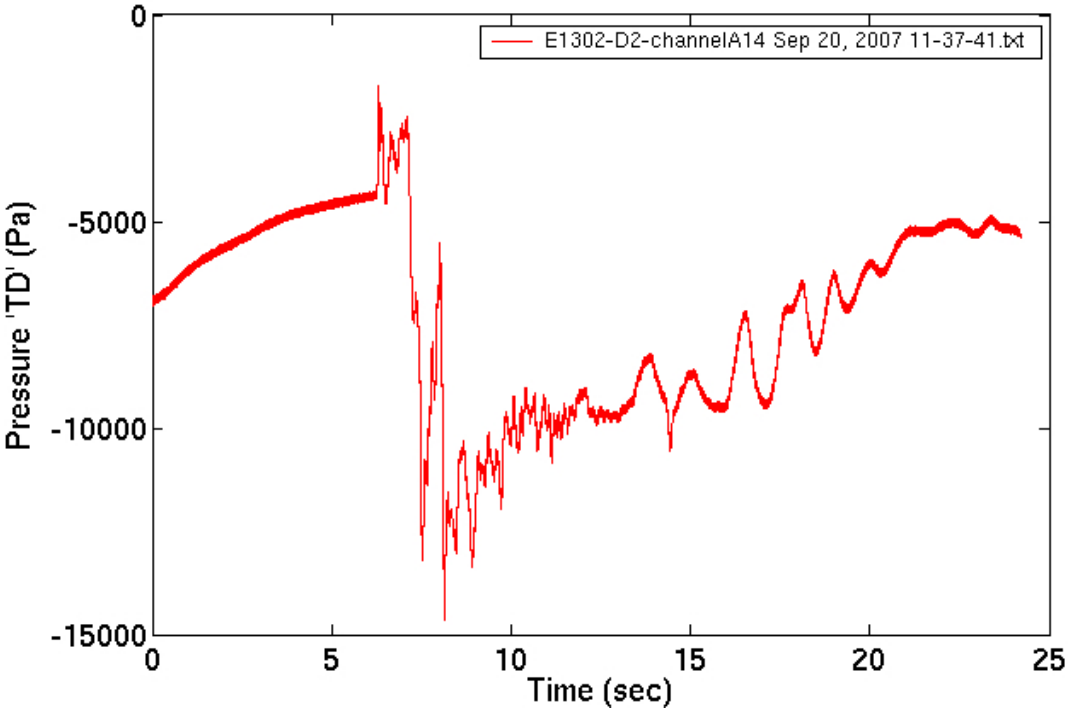

E1302-D2-channelA9 Sep 20, 2007 11-37-41.txt
Hydrophone 2 (Pa)
6000
4000
2000
0
-2000
-4000
0
5
10
15
20
25
Time (sec)

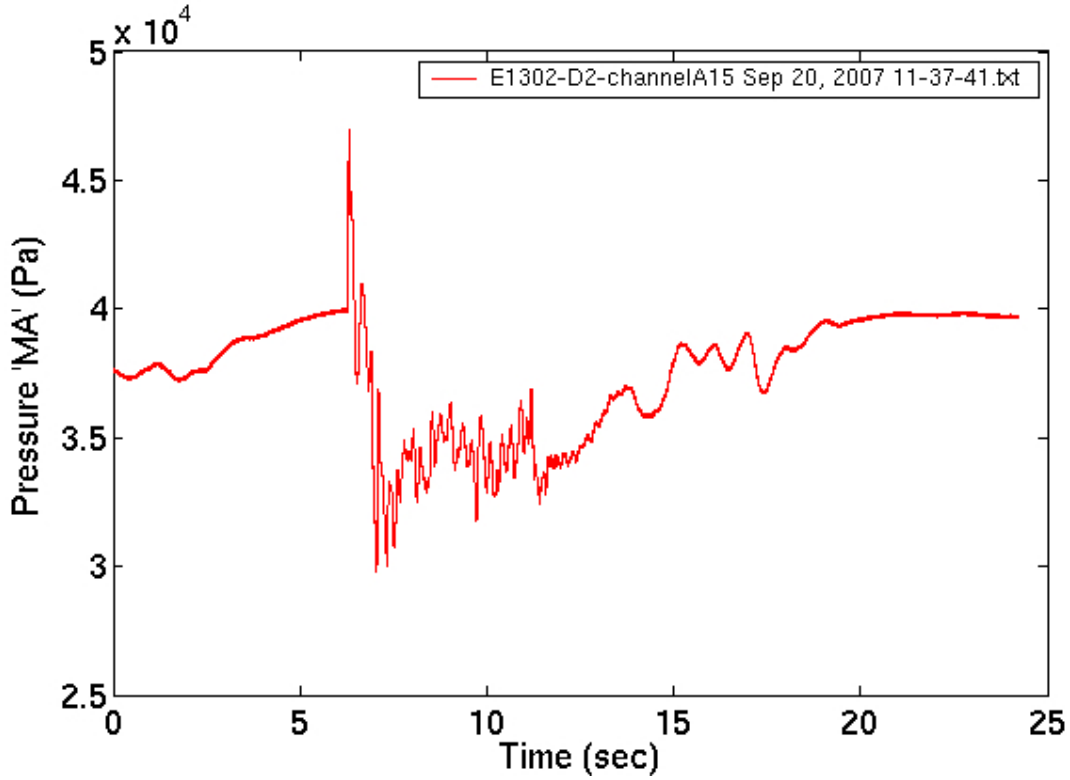

E1302-D2-channelA10 Sep 20, 2007 11-37-41.txt
Hydrophone 3 (Pa)
5000
4000
3000
2000
1000
0
-1000
-2000
0
5
10
15
20
25
Time (sec)


E1302-D2-channelA11 Sep 20, 2007 11-37-41.txt
Hydrophone 4 (Pa)
5000
4000
3000
2000
1000
0
-1000
-2000
0
5
10
15
20
25
Time (sec)


x 10^4
E1302-D2-channelA12 Sep 20, 2007 11-37-41.txt
Pressure 'TA' (Pa)
Time (sec)
3.4
3.2
3
2.8
2.6
2.4
0
5
10
15
20
25


x 10^4
E1302-D2-channelA13 Sep 20, 2007 11-37-41.txt
Pressure 'TT' (Pa)
Time (sec)
3
2.8
2.6
2.4
2.2
2
1.8
0
5
10
15
20
25


E1302-D2-channelA14 Sep 20, 2007 11-37-41.txt
Pressure 'TD' (Pa)
0
-5000
-10000
-15000
0
5
10
15
20
25
Time (sec)


x 10^4
E1302-D2-channelA15 Sep 20, 2007 11-37-41.txt
Pressure 'MA' (Pa)
5
4.5
4
3.5
3
2.5
0
5
10
15
20
25
Time (sec)

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