

APPENDIX A  
MONITORING WELL CONSTRUCTION LOGS

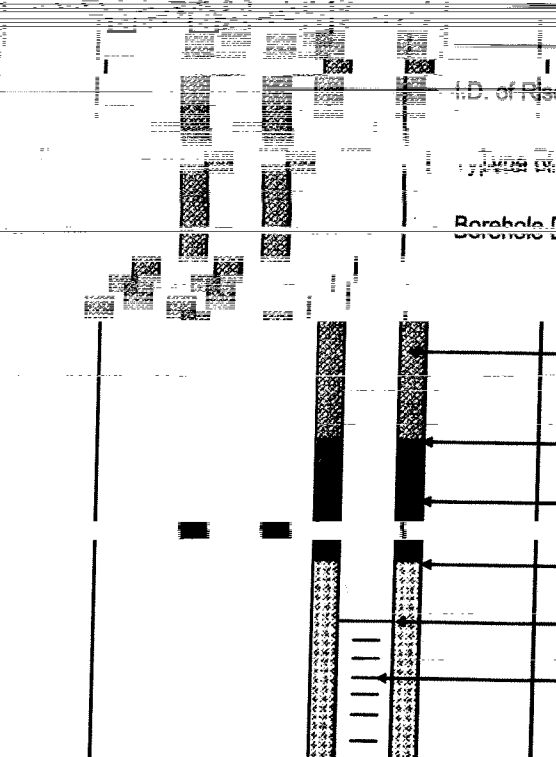


MONITORING WELL SHEET

PROJECT: Farmac, Inc. DRILLING CO.: ROMSONIC BORING No.: KS-25  
 PROJECT No.: 111625 DATE COMPLETED: 2-3-05  
 SITE: LIVERGAST DRILLING METHOD: ROMSONIC NORTHING: \_\_\_\_\_  
 GEOLOGIST: C. Gleaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_

Elevation / Depth of Top of Riser: 1  
 Elevation / Height of Top of Surface Casing: 1  
 I.D. of Surface Casing: 8"  
 Type of Surface Casing: Man hole  
 Type of Surface Seal: Concrete

Ground Elevation = Datum:



I.D. of Riser: 2" I.D. of Riser: 2"  
 Riser Material: PVC  
 Borehole Diameter: 8"

Type of Backfill: Portland Cement Type 1  
 Elevation / Depth of Seal: 1 192'  
 Type of Seal: 30/65 Sand  
 Elevation / Depth of Top of Filter Pack: 1 194'  
 Elevation / Depth of Top of Screen: 1 196'  
 Type of Screen: PVC  
 Slot Size x Length: .010 x

I.D. of Screen: 2"  
 Type of Filter Pack: 20/30 Sand  
 Elevation / Depth of Bottom of Screen: 1 206.0

Elevation / Depth of Bottom of Filter Pack: 1 206.5  
 Type of Backfill Below Screen: STANDARD  
 Elevation / Total Depth of Borehole: 1 206.5

Not to Scale



MONITORING WELL SHEET

PROJECT: Former ABC DRILLING Co.: Prosonic BORING No.: RS-24  
 PROJECT No.: N1675 DRILLER: F. Kraus DATE COMPLETED: 2-5-05  
 SITE: Tallevast DRILLING METHOD: Rotasonic NORTHING: \_\_\_\_\_  
 GEOLOGIST: C. Gleaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_

Elevation / Depth of Top of Riser: 1  
 Elevation / Height of Top of Surface Casing: 1  
 I.D. of Surface Casing: 8"  
 Type of Surface Casing: Man hole

Ground Elevation = Datum:

Type of Surface Seal: Concrete

I.D. of Riser: 2"  
 Type of Riser: PVC

Borehole Diameter: 8" 6"

Type of Backfill: Portland Cement Type 1

Elevation / Depth of Seal: 1227.6'

Type of Seal: 20/60 sand, 1/2" gravel

Elevation / Depth of Top of Filter Pack: 1226.6'

Elevation / Depth of Top of Screen: 1226.6'

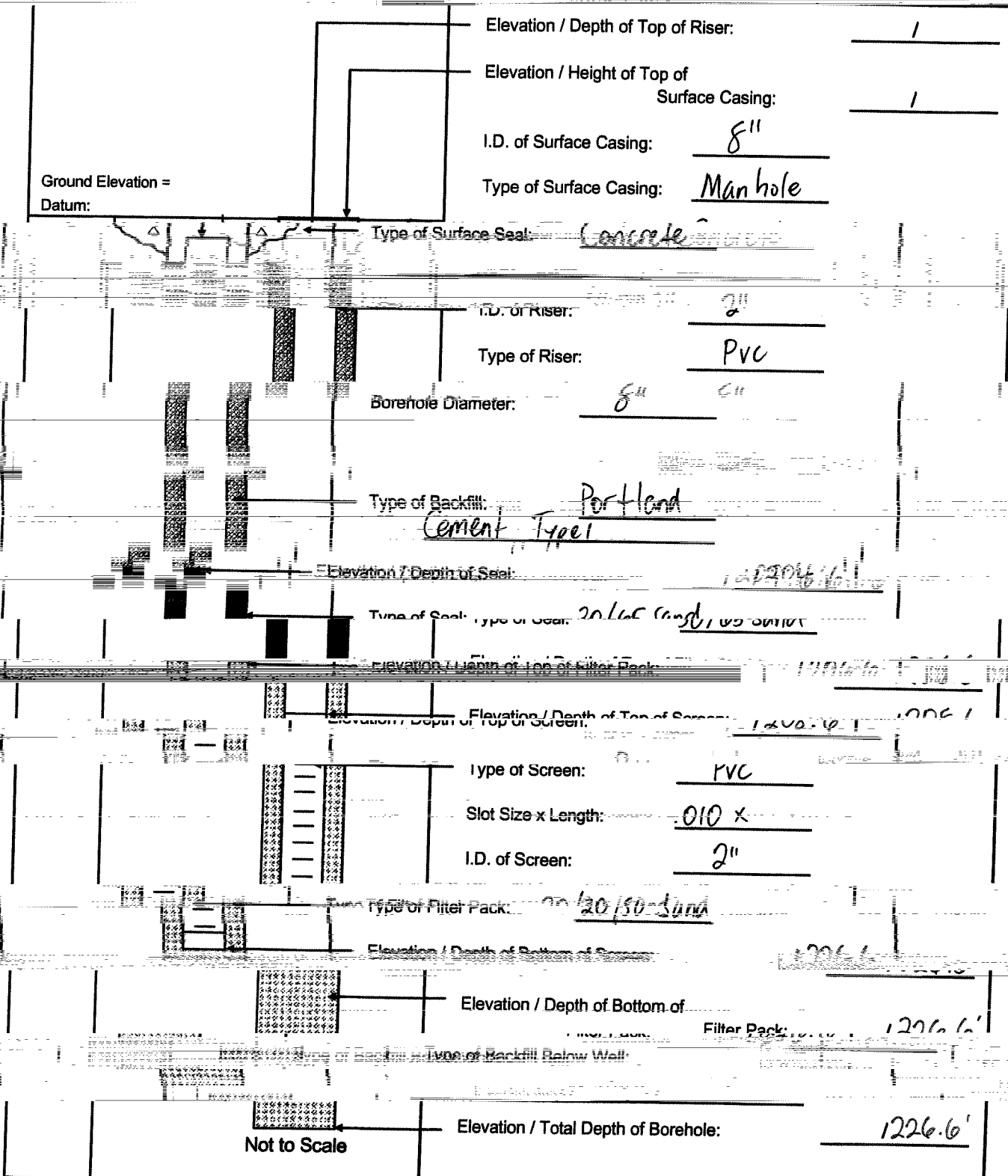
Type of Screen: PVC  
 Slot Size x Length: 010 x  
 I.D. of Screen: 2"

Type of Filter Pack: 20/50 Sand

Elevation / Depth of Bottom of Screen: 1226.6'

Elevation / Depth of Bottom of Filter Pack: 1226.6'  
 Type of Backfill Below Well: \_\_\_\_\_

Not to Scale Elevation / Total Depth of Borehole: 1226.6'

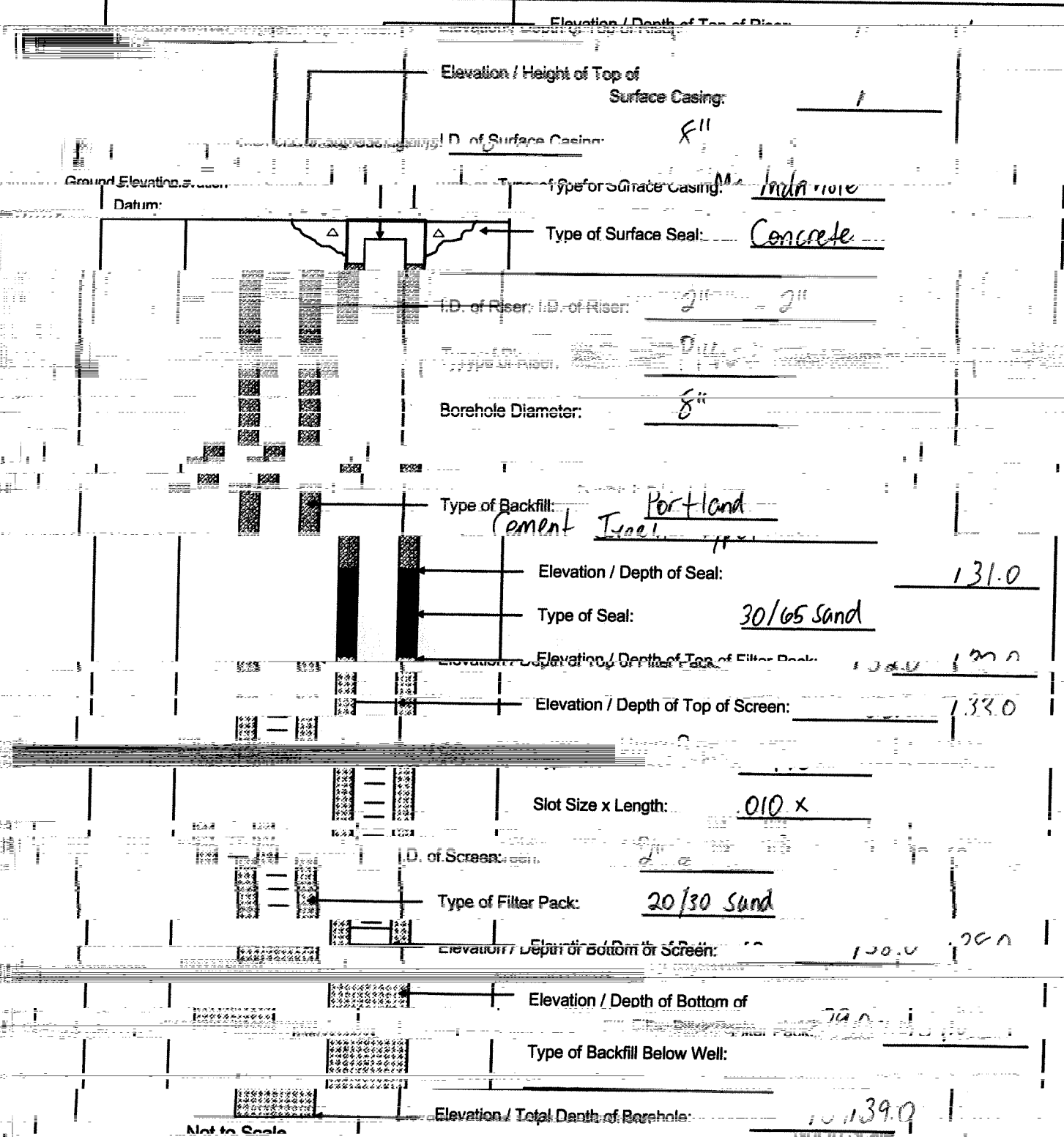


MOUNTAIN VIEW SPRING WELL SHEET  
 PROJECT: PROPERTY MDC DRILLING CO. DRILLING TROUSERS

BORING No.: VP-1021

DATE COMPLETED: 2-9-05

GEOLOGIST: C. Gleason DEV METHOD: Core + Pump FASTING:



Not to Scale





MONITORING WELL SHEET

PROJECT: Former ABC DRILLING Co. DRILLING Co.: Prinsen BORING No.: 05-27

PROJECT No.: N1075 DRILLER: V. Scott DATE COMPLETED: 2-6-05  
SITE: Tallevast DRILLING METHOD: Rotasonic NORTHING: \_\_\_\_\_  
GEOLOGIST: C. Gleaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_

Elevation / Depth of Top of Riser: 1

Elevation / Height of Top of Surface Casing: 1

I.D. of Surface Casing: 8"

Type of Surface Seal: Concrete

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 0

Type of Backfill: Portland Cement Type 1

Elevation / Depth of Seal: 120.5

Type of Seal: Surge Pump

Elevation / Depth of Top of Filter Pack: 122.5

Elevation / Depth of Top of Screen: 124.5

Type of Screen: PVC

Slot Size x Length: .010 x

I.D. of Screen: 2"

Type of Filter Pack: 20/30 Sand

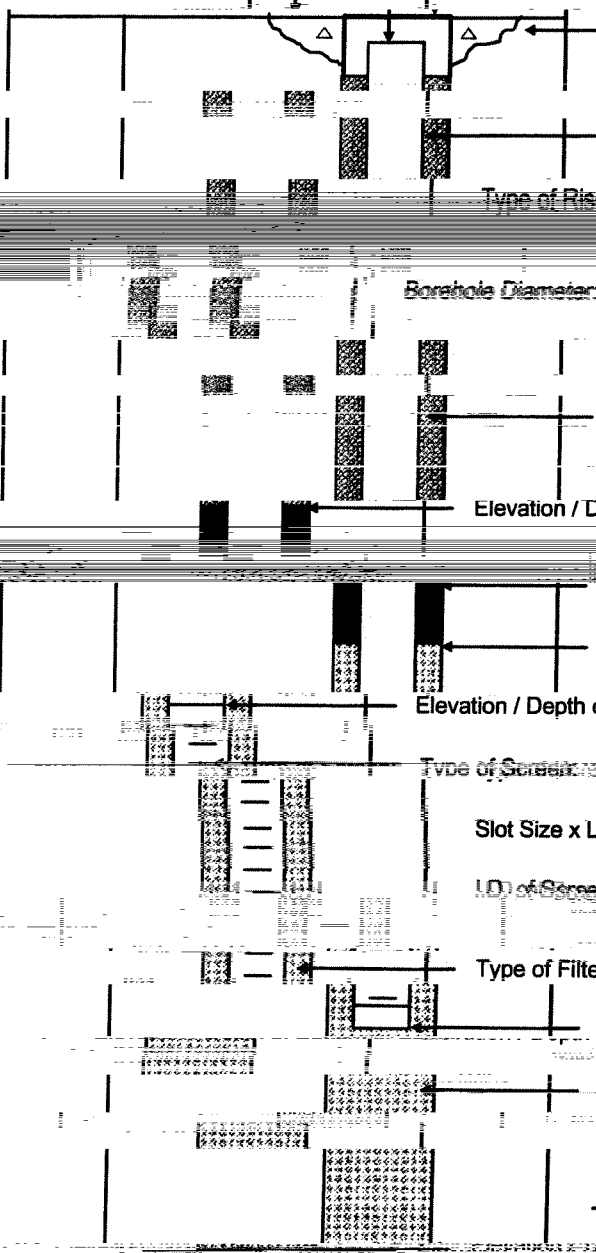
Elevation / Depth of Bottom of Screen: 129.5

Elevation / Depth of Bottom of Filter Pack: 130.5

Type of Backfill Below Well: \_\_\_\_\_

Elevation / Total Depth of Borehole: 130.0

Datum: \_\_\_\_\_



Not to Scale



Tetra Tech, Inc.

WELL No.:

TF-MW-101 LSAS

MONITORING WELL SHEET

PROJECT: PROJECT ADV DRILLING CO. DRILLING Co.: ROTASONIC BORING No.: VP-21  
 PROJECT No.: N1675 DRILLER: E. Kraus DATE COMPLETED: 07/05

SITE: Tallgrass DRILLING METHOD: Rotasonic NORTHING: \_\_\_\_\_  
 GEOLOGIST: C. Gleaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_

Elevation / Depth of Top of Riser: \_\_\_\_\_ / \_\_\_\_\_

Elevation / Height of Top of \_\_\_\_\_ Surface Casing: \_\_\_\_\_ / \_\_\_\_\_

I.D. of Surface Casing: 8"

Ground Elevation = \_\_\_\_\_ Datum: \_\_\_\_\_

Type of Surface Casing: man hole

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 8"

Type of Backfill: Portland Cement Type 1

Elevation / Depth of Seal: \_\_\_\_\_ / 148.7

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: \_\_\_\_\_ / 150.7

Elevation / Depth of Top of Screen: \_\_\_\_\_ / 152.7

Type of Screen: PVC

Slot Size x Length: .010 x

I.D. of Screen: 2"

Type of Filter Pack: 20/40 sand

Elevation / Depth of Bottom of Screen: \_\_\_\_\_ / 157.7

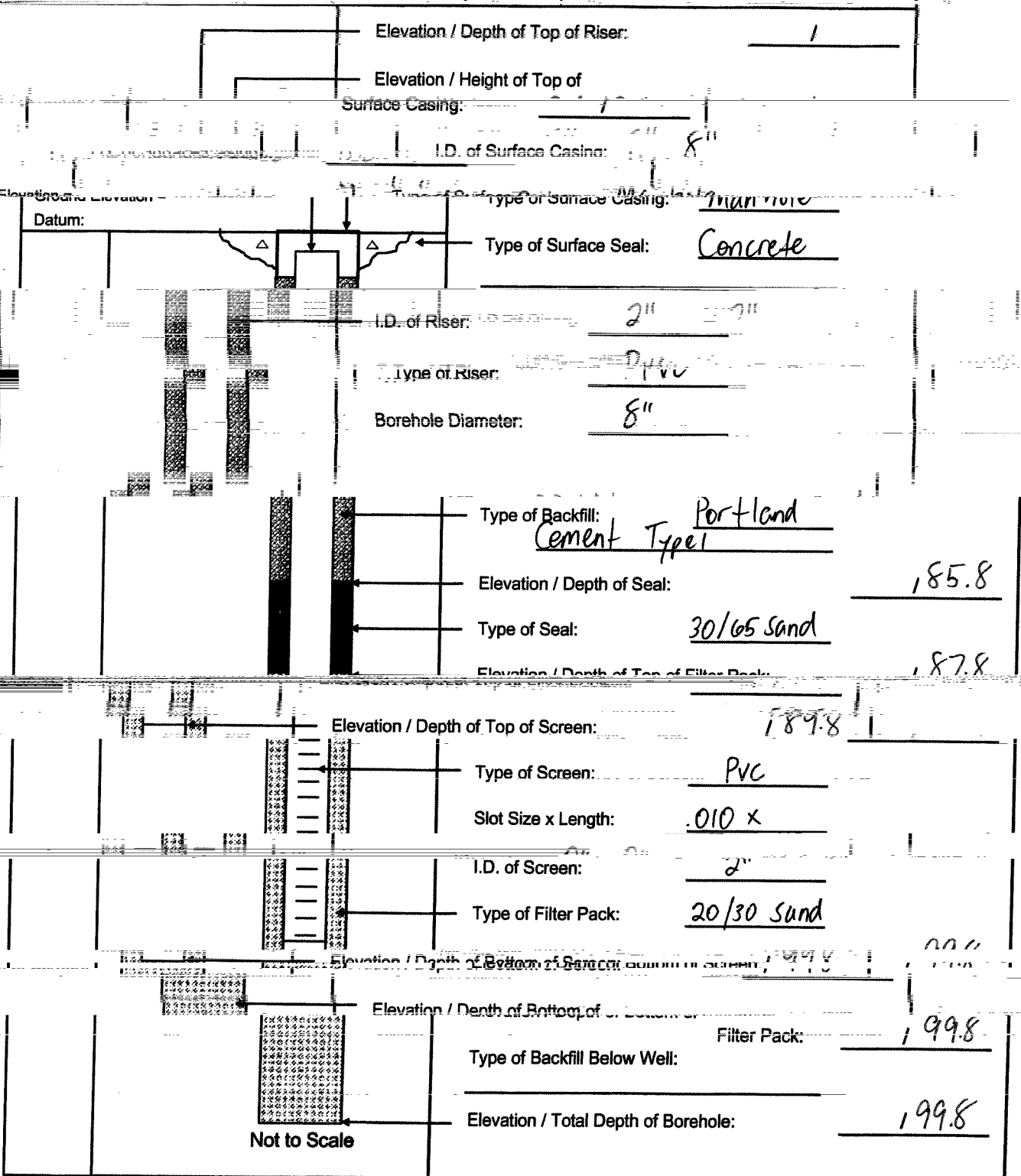
Filter Pack: 120 sand

Type of Backfill Below Well: \_\_\_\_\_

Elevation / Total Depth of Borehole: \_\_\_\_\_ / 158.0

Not to Scale

PROJECT: Former ABC DRILLING Co.: Prosonic BORING No.: RS-26  
 PROJECT NO.: N1075 DRILLER: V. SCOTT DATE COMPLETED: 2-8-06  
 SITE: Tallavast DRILLING METHOD: Rotasonic NORTHING: \_\_\_\_\_  
 GEOLOGIST: C. Gleaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_

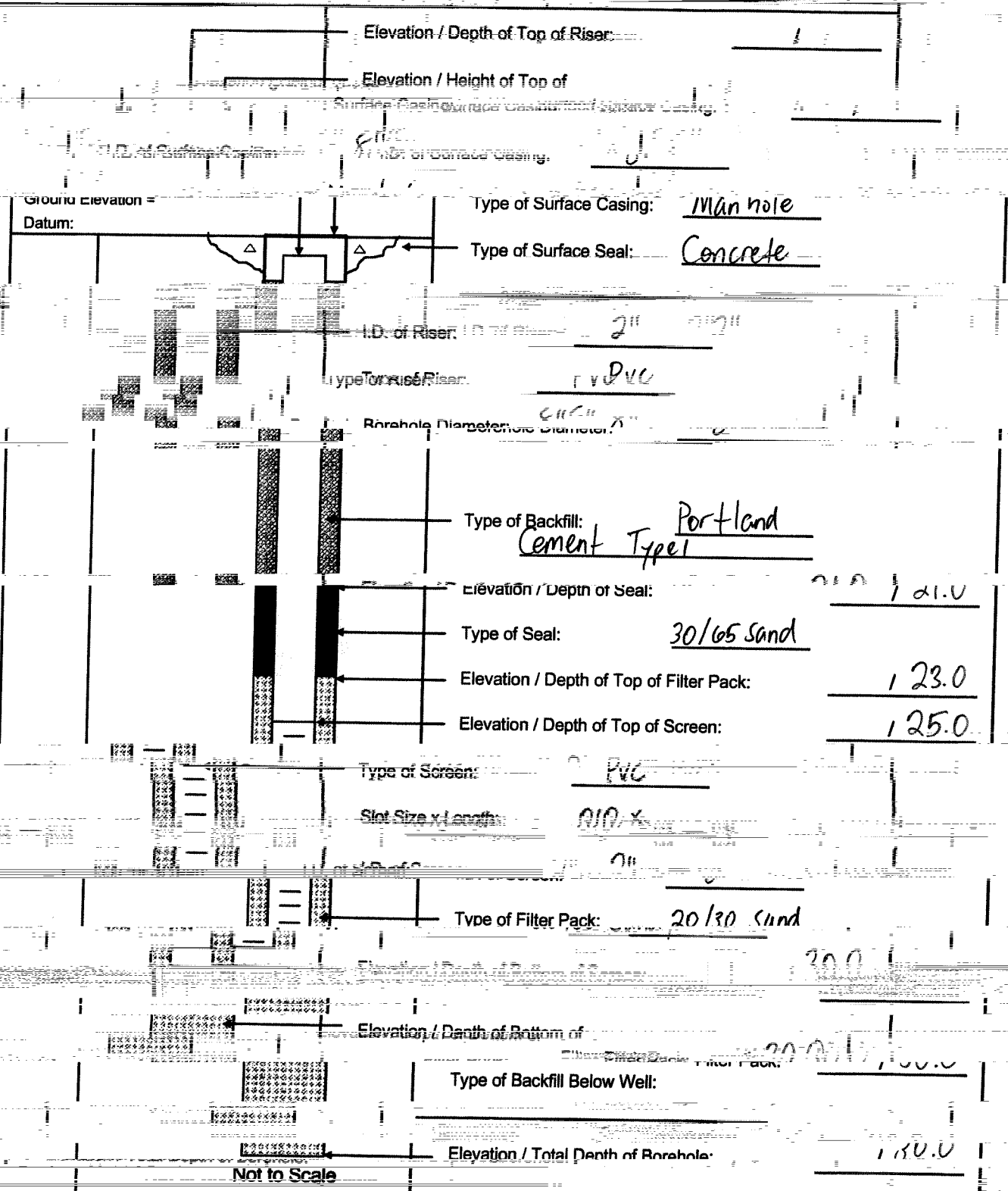






MONITORING WELL SHEET

PROJECT: Former ABC DRILLING Co.: Ponsomv BOPING No.: 05 01  
 PROJECT No.: N1075 DRILLER: N. Gamache DATE COMPLETED: 2-8-05  
 GEOLOGIST: C. Giersten DEV. METHOD: Shale + Sand EASTING: \_\_\_\_\_



Elevation / Depth of Top of Riser: \_\_\_\_\_

Elevation / Height of Top of \_\_\_\_\_

Ground Elevation = Datum: \_\_\_\_\_

Type of Surface Casing: Man hole

Type of Surface Seal: Concrete

I.D. of Riser: 2" ID

Type of Riser: PVC

Borehole Diameter: 2"

Type of Backfill: Portland Cement Type 1

Elevation / Depth of Seal: 21.0

Type of Seal: 30/65 sand

Elevation / Depth of Top of Filter Pack: 23.0

Elevation / Depth of Top of Screen: 25.0

Type of Screen: PVC

Slot Size x Length: 1/8" x 1/4"

Type of Filter Pack: 20/30 sand

Elevation / Depth of Bottom of \_\_\_\_\_

Type of Backfill Below Well: \_\_\_\_\_

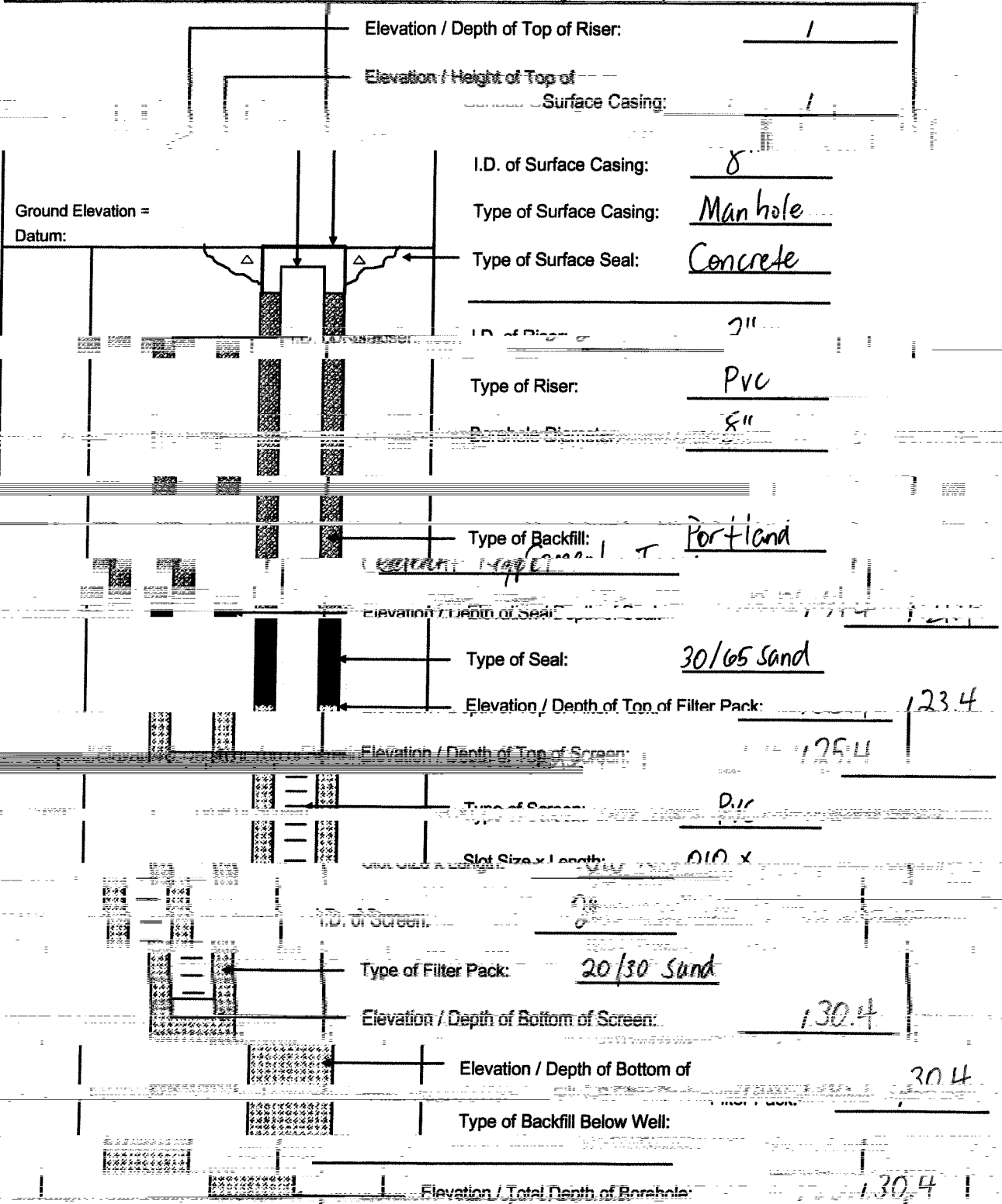
Elevation / Total Depth of Borehole: 30.0

Not to Scale



### MONITORING WELL SHEET

PROJECT: <u>Emerg. Acc.</u>	DRILLING CO.: <u>Dorconk</u>	BORING NO.: <u>110.101</u>
PROJECT NO.: <u>111675</u>	DRILLED BY: <u>E. V. Williams</u>	DATE COMPLETED: <u>2-9-05</u>
SITE: <u>1.1.1.1.1.1</u>	DRILLING METHOD: <u>KODOSONIC</u>	NORTHING: _____
GEOLOGIST: <u>C. Gleaton</u>	DEV. METHOD: <u>Surge + Pump</u>	EASTING: _____

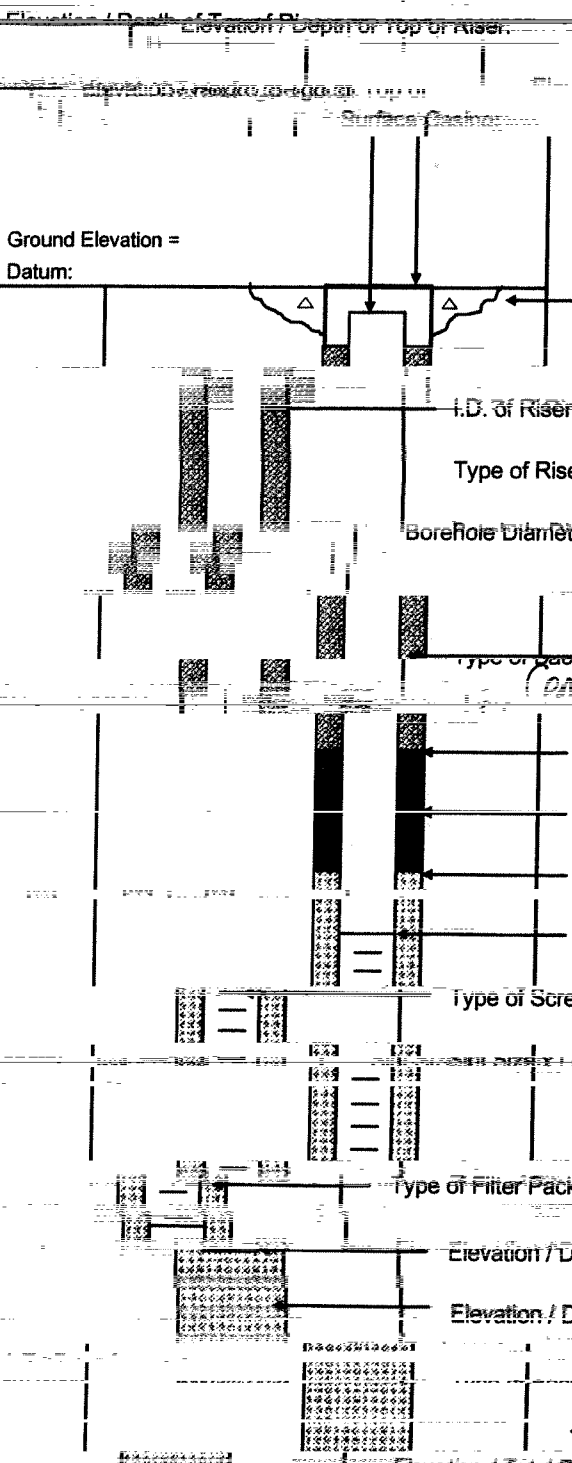


Not to Scale



MONITORING WELL SHEET

PROJECT: Former ARC DRILLING Co.: Dorconk BORING No.: 10-106  
 PROJECT No.: N1075 DRILLER: V. Scott DATE COMPLETED: 2-9-05  
 SITE: Laneview DRILLING METHOD: Rotasonic NORTHING: \_\_\_\_\_  
 GEOLOGIST: C. Gleaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



I.D. of Surface Casing: 8"  
 Type of Surface Casing: Man hole  
 Type of Surface Seal: Concrete  
 I.D. of Riser: 2"  
 Type of Riser: PVC  
 Borehole Diameter: 5"  
 Type of Backfill: Portland Cement  
 Elevation / Depth of Seal: 139.8  
 Type of Seal: 30/65 Sand  
 Elevation / Depth of Top of Filter Pack: 140.8  
 Elevation / Depth of Top of Screen: 141.8  
 Type of Screen: PVC  
 I.D. of Screen: 2"  
 Type of Filter Pack: 20/30 Sand  
 Elevation / Depth of Bottom of Screen: 146.0  
 Elevation / Depth of Bottom of Filter Pack: 146.0  
 Type of Backfill Below Well: \_\_\_\_\_  
 Elevation / Total Depth of Borehole: 176.0

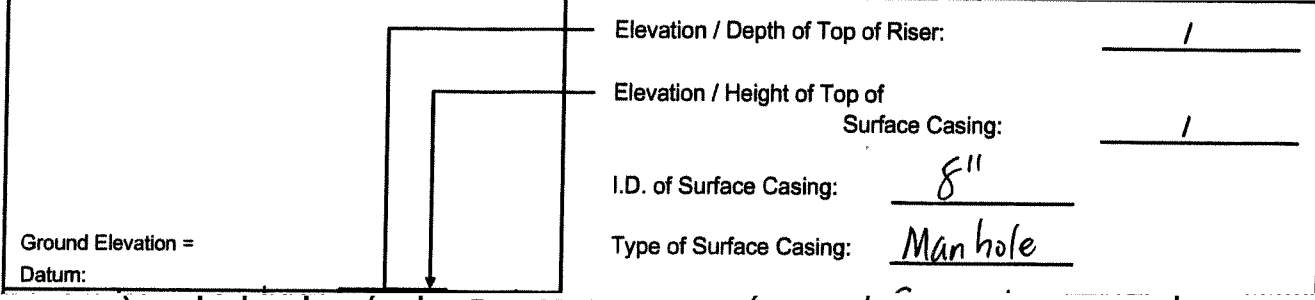
Not to Scale

PROJECT: Former ABC DRILLING Co.: Prosonic BORING No.: \_\_\_\_\_

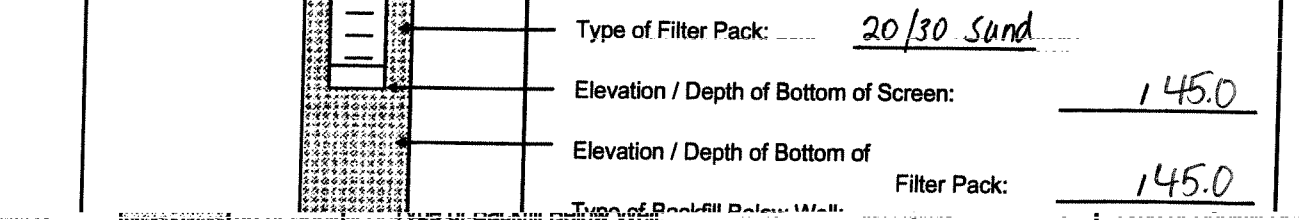
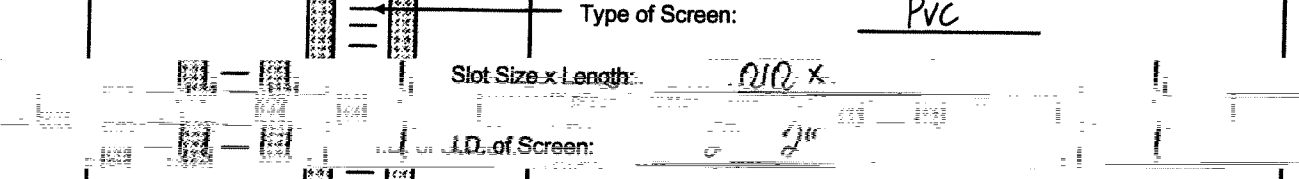
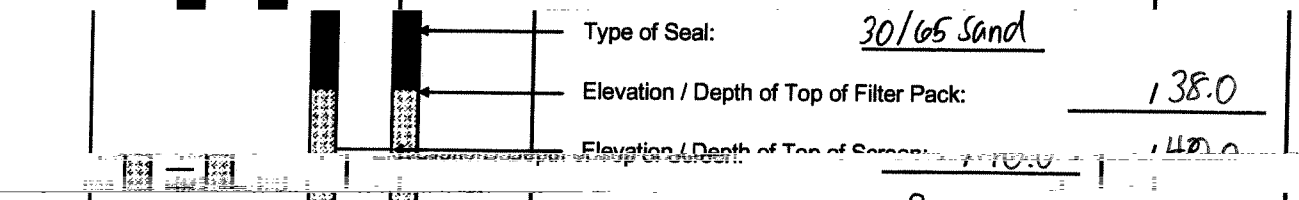
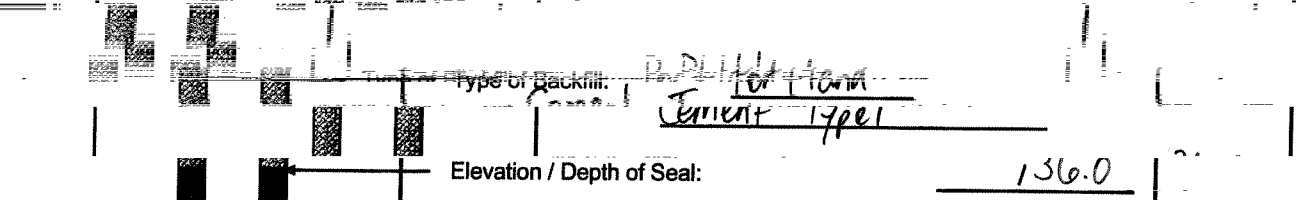
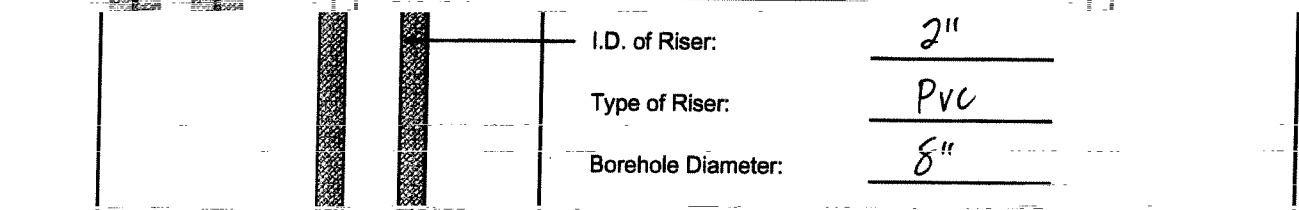
PROJECT No.: N1075 DRILLER: F. Kraus DATE COMPLETED: 3-16-05

SITE: Tallevast DRILLING METHOD: Kotosonic NORTHING: \_\_\_\_\_

GEOLOGIST: C. Gleaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



Type of Surface Seal: Concrete



Elevation / Total Depth of Borehole: 145.0

Not to Scale



MONITORING WELL SHEET

PROJECT No.: N1075 DRILLER: F. KRAUS DATE COMPLETED: 4-4-05

SITE: Tallentest DRILLING METHOD: Rotasonic NORTHING: \_\_\_\_\_

GEOLOGIST: C. Gierhan DEV. METHOD: Surf + Pump FASTING: \_\_\_\_\_

Elevation / Depth of Top of Riser: 1

Ground Elevation =  
Datum:

I.D. of Surface Casing: 8"

Type of Surface Casing: Man hole

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 6"

Type of Packin: Cement Type 1

Elevation / Depth of Seal: 119.0

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 119.0

Elevation / Depth of Top of Screen: 121.0

Type of Screen: PVC

Slot Size & Length: 0.10" x 2"

I.D. of Screen: 2"

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 126.0

Elevation / Depth of Bottom of Filter Pack: 126.0

Type of Backfill Below Well:

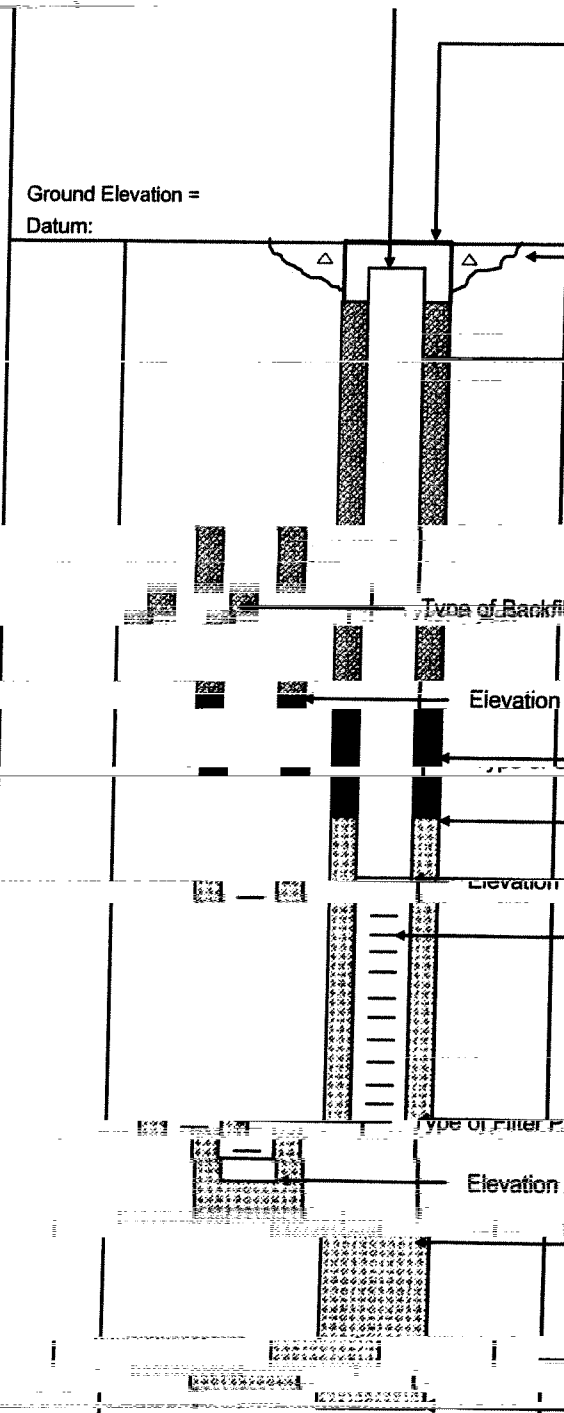
Elevation / Total Depth of Borehole: 126.0

Not to Scale



MONITORING WELL SHEET

PROJECT: Former ARC DRILLING Co.: Dynacore BOHING No.: \_\_\_\_\_  
 PROJECT No.: N1075 DRILLER: \_\_\_\_\_ DATE COMPLETED: 3-15-05  
 SITE: Tallervast DRILLING METHOD: Rotasonic NORTHING: \_\_\_\_\_  
 GEOLOGIST: C. Gieaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



Ground Elevation = Datum:

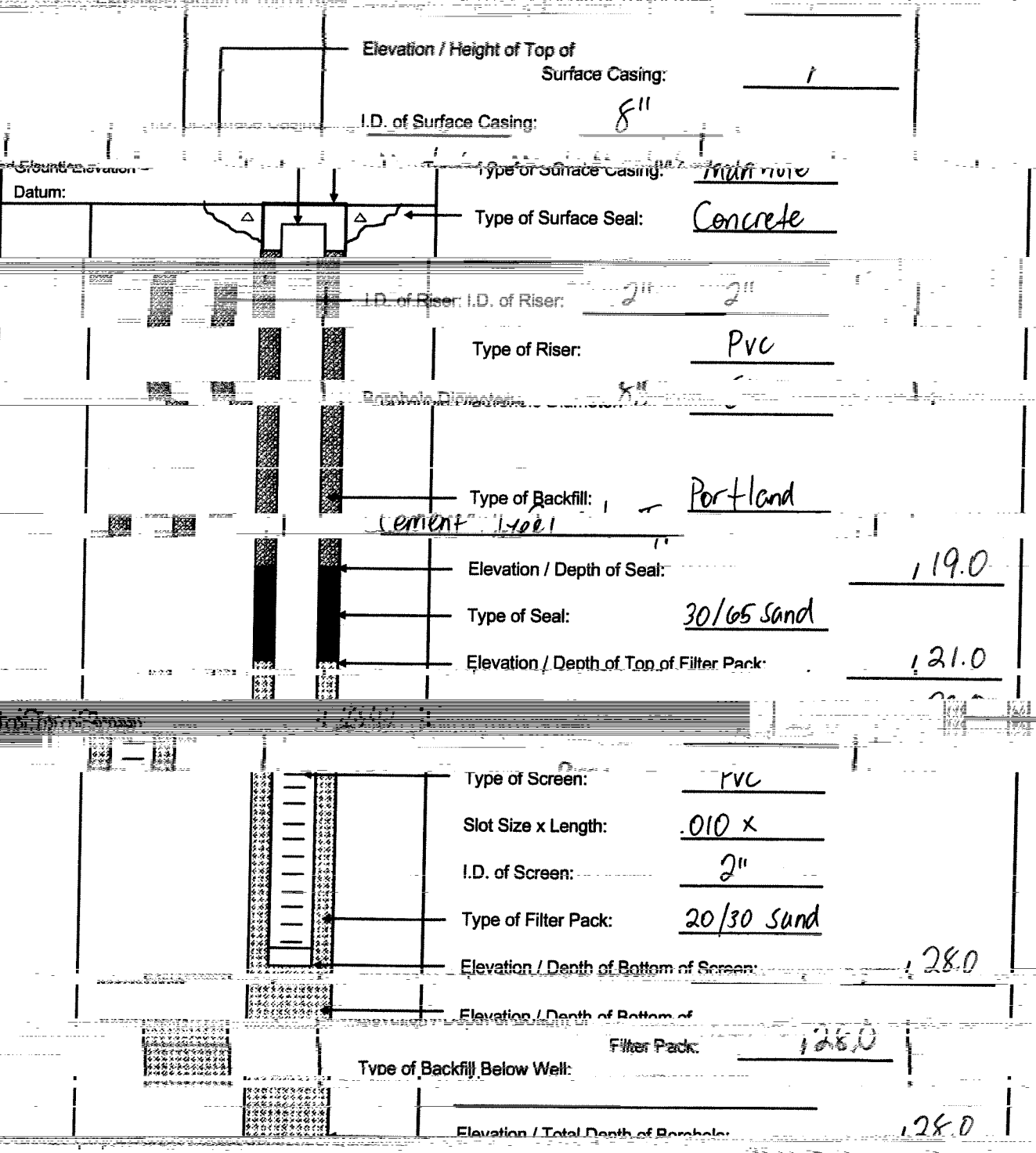
Elevation / Height of Top of Surface Casing: 1  
 I.D. of Surface Casing: 8"  
 Type of Surface Casing: Man hole  
 Type of Surface Seal: Concrete  
 I.D. of Riser: 2"  
 Type of Riser: PVC  
 Borehole Diameter: 8"  
 Type of Backfill: Portland Cement Type 1  
 Elevation / Depth of Seal: 114.0  
 Type of Seal: 30/60 sand  
 Elevation / Depth of Top of Filter Pack: 121.0  
 Elevation / Depth of top of Screen: 122.0  
 Type of Screen: PVC  
 Slot Size x Length: .010 x  
 I.D. of Screen: 2"  
 Type of Filter Pack: 30/60 sand  
 Elevation / Depth of Bottom of Screen: 128.0  
 Elevation / Depth of Bottom of Filter Pack: 128.0  
 Type of Backfill Below Well: \_\_\_\_\_  
 Elevation / Total Depth of Borehole: 130.0

Not to Scale



MONITORING WELL SHEET

PROJECT: Former ABC DRILLING Co.: Princeton BORING No.: \_\_\_\_\_  
 PROJECT No.: N1075 DRILLER: F. Kraus DATE COMPLETED: 3-15-05  
 SITE: Tailrace DRILLING METHOD: Dobson NORTHING: \_\_\_\_\_  
 GEOLOGIST: C. Gleaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



Elevation / Height of Top of Surface Casing: 1

I.D. of Surface Casing: 8"

Type of Surface Casing: Metal

Type of Surface Seal: Concrete

I.D. of Riser: 2" I.D. of Riser: 2"

Type of Riser: Pvc

Type of Backfill: Cement Grout Portland

Elevation / Depth of Seal: 119.0

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 121.0

Type of Screen: Pvc

Slot Size x Length: .010 x

I.D. of Screen: 2"

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 128.0

Elevation / Depth of Bottom of Filter Pack: 128.0

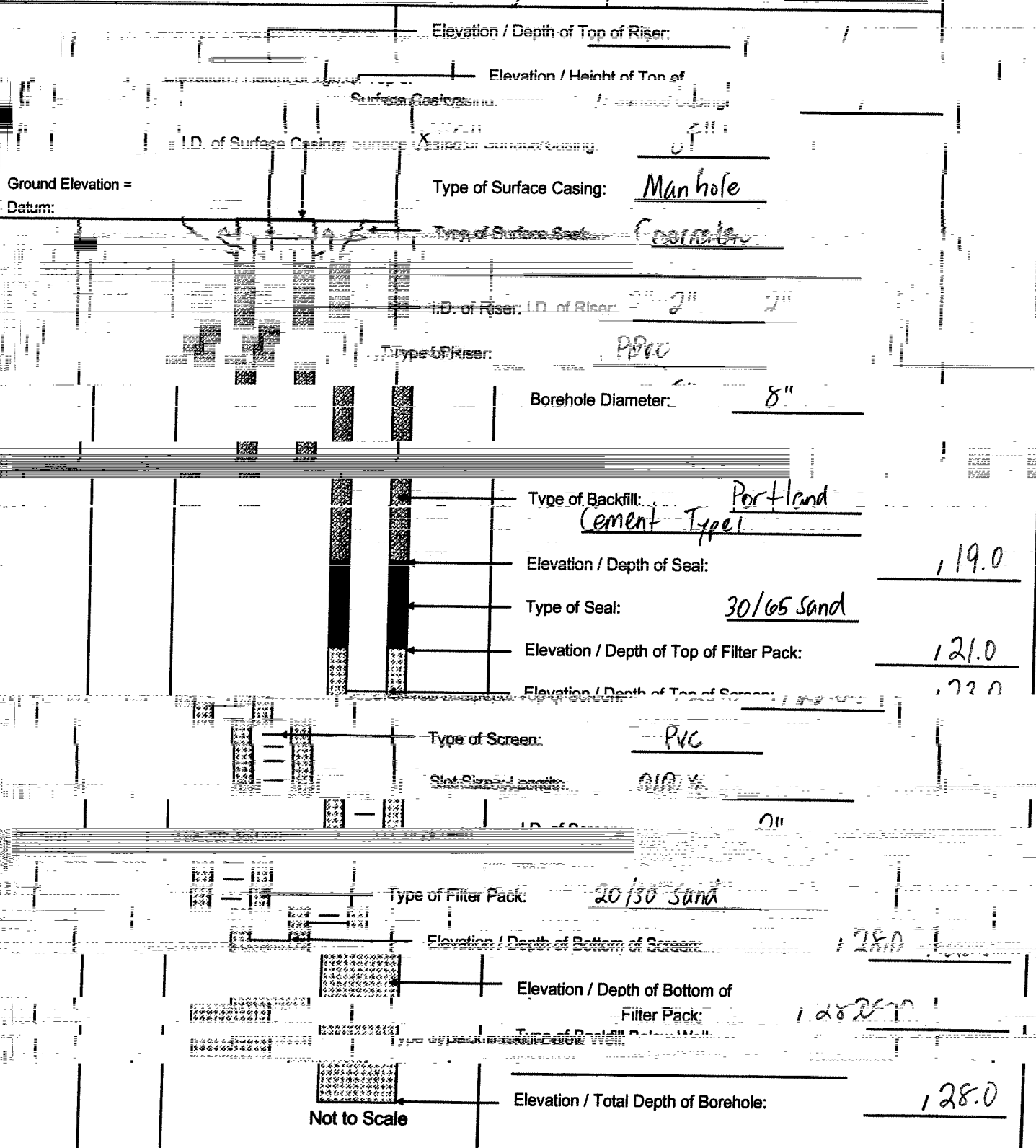
Type of Backfill Below Well: \_\_\_\_\_

Elevation / Total Depth of Borehole: 128.0



MONITORING WELL SHEET

PROJECT: Former ABC DRILLING Co.: Prosonic BORING No.: \_\_\_\_\_  
 PROJECT No.: N1675 DRILLER: V. Smith DATE COMPLETED: 2-15-05  
 SITE: Tallervast DRILLING METHOD: Rotasonic NORTHING: \_\_\_\_\_  
 GEOLOGIST: C. Greater DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_

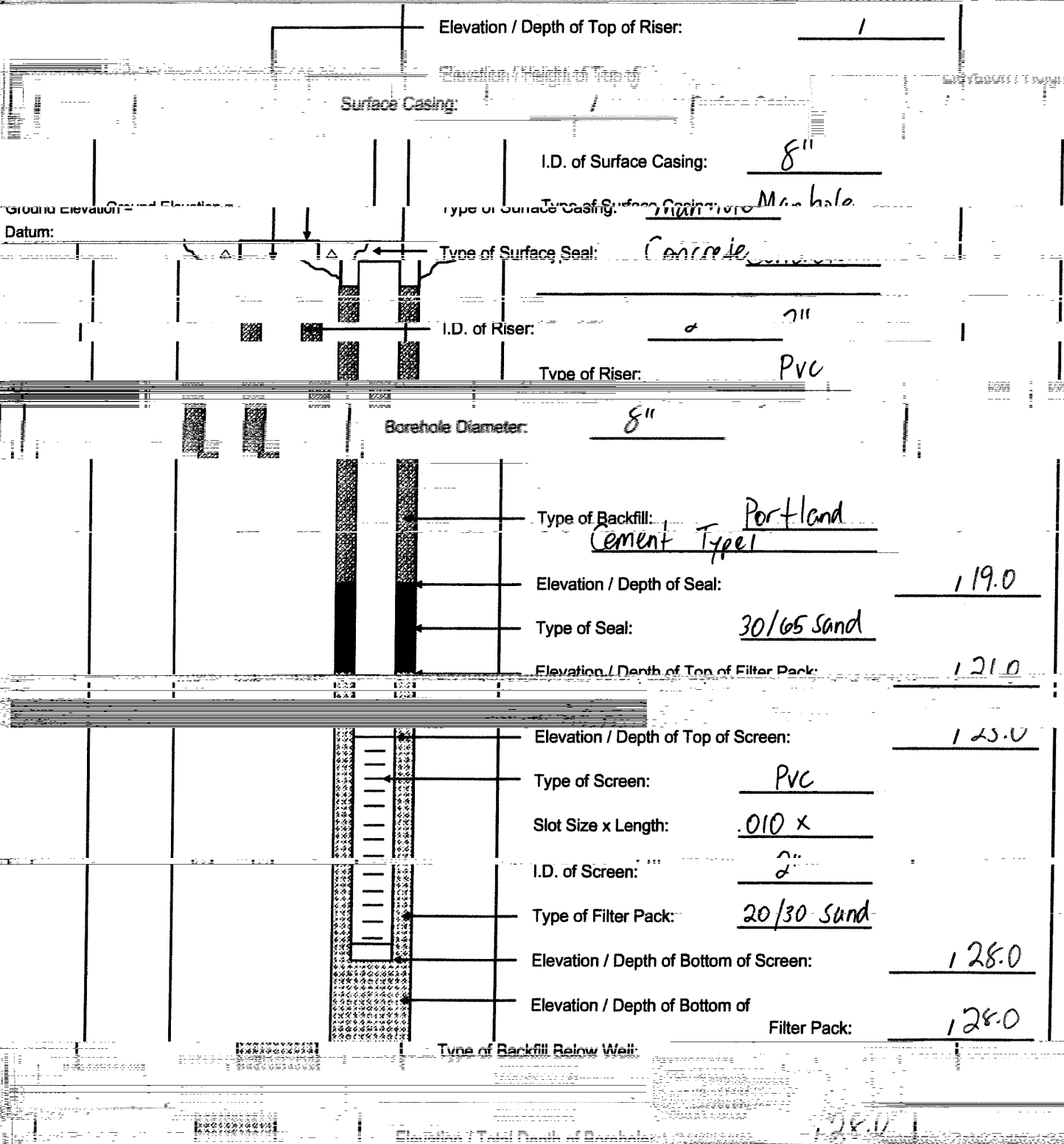






MONITORING WELL SHEET

PROJECT: Exxon AR DRILLING CONTRACTOR: Proconic BORING NO. \_\_\_\_\_  
 PROJECT No.: N1075 DRILLER: F. Kraus DATE COMPLETED: 3-15-05  
 SITE: LATERAL DRILLING METHOD: ROTARSONIC NORTHING: \_\_\_\_\_  
 GEOLOGIST: C. Gleaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



Elevation / Depth of Top of Riser: 1

Elevation / Height of Top of \_\_\_\_\_

Surface Casing: 1

I.D. of Surface Casing: 8"

Type of Surface Casing: Min hole

Ground Elevation \_\_\_\_\_ Datum: \_\_\_\_\_

Type of Surface Seal: Concrete

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 8"

Type of Backfill: Portland Cement Type 1

Elevation / Depth of Seal: 119.0

Type of Seal: 30/65 sand

Elevation / Depth of Top of Filter Pack: 121.0

Elevation / Depth of Top of Screen: 125.0

Type of Screen: PVC

Slot Size x Length: .010 x

I.D. of Screen: 2"

Type of Filter Pack: 20/30 sand

Elevation / Depth of Bottom of Screen: 128.0

Elevation / Depth of Bottom of Filter Pack: 128.0

Type of Backfill Reinv Well: \_\_\_\_\_

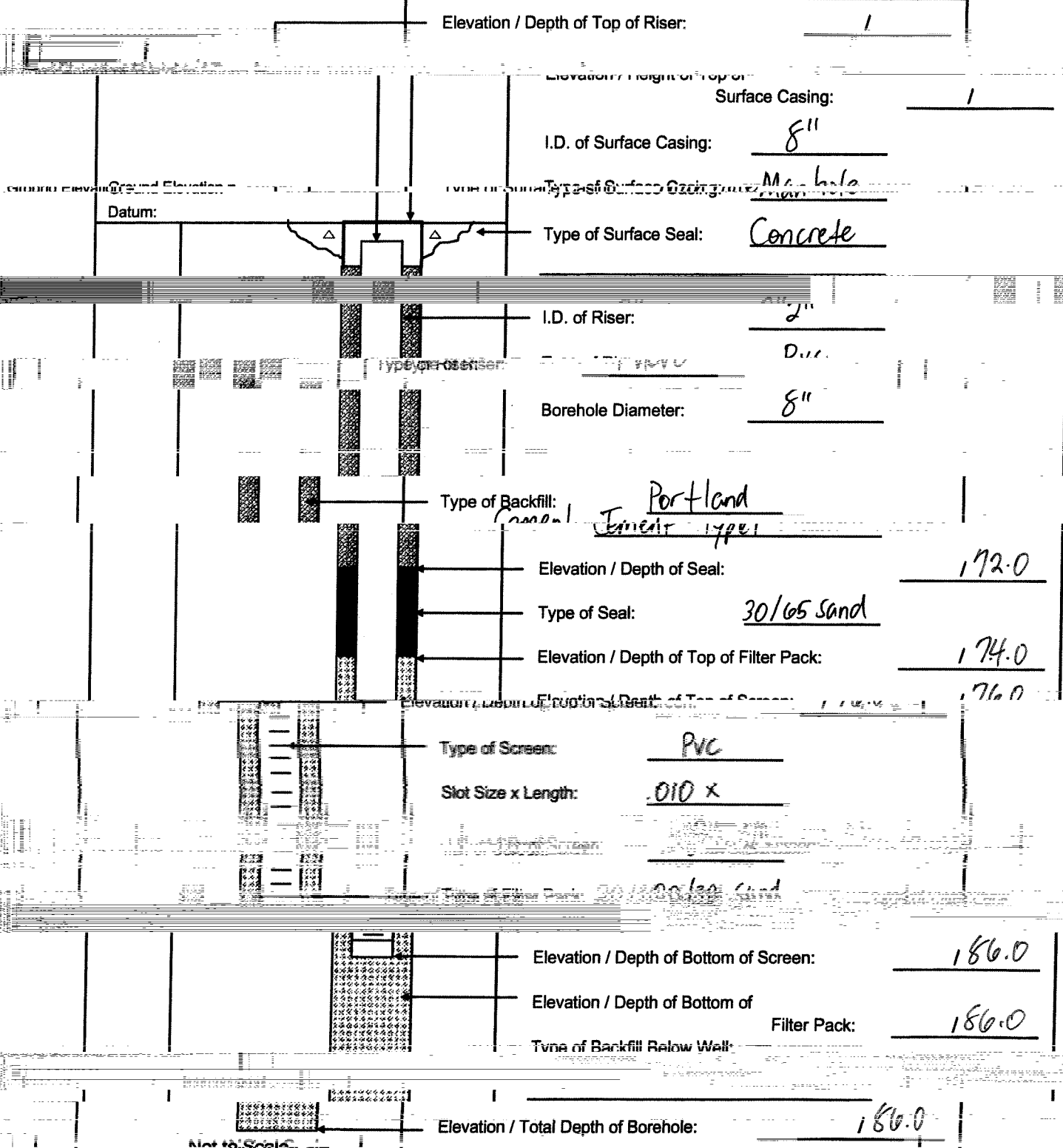
Elevation / Total Depth of Borehole: 128.0

Not to Scale



MONITORING WELL SHEET

PROJECT: PROJECT: APOLINA AOR DRILLING CO.: PROCON BORING NO.: 1  
 PROJECT NO.: N1075 DRILLER: N. GANACHE DATE COMPLETED: 3-16-05  
 SITE: Tallevast DRILLING METHOD: Rotary NORTHING: \_\_\_\_\_  
 GEOLOGIST: C. Gieaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



Elevation / Depth of Top of Riser: 1

Elevation / Height of Top of Surface Casing: 1

I.D. of Surface Casing: 8"

Type of Surface Casing: Man hole

Type of Surface Seal: Concrete

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 8"

Type of Backfill: Portland Cement type 1

Elevation / Depth of Seal: 172.0

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 174.0

Elevation / Depth of Top of Screen: 186.0

Type of Screen: PVC

Slot Size x Length: .010 x

Elevation / Depth of Bottom of Screen: 186.0

Elevation / Depth of Bottom of Filter Pack: 186.0

Type of Backfill Below Well: \_\_\_\_\_

Elevation / Total Depth of Borehole: 186.0

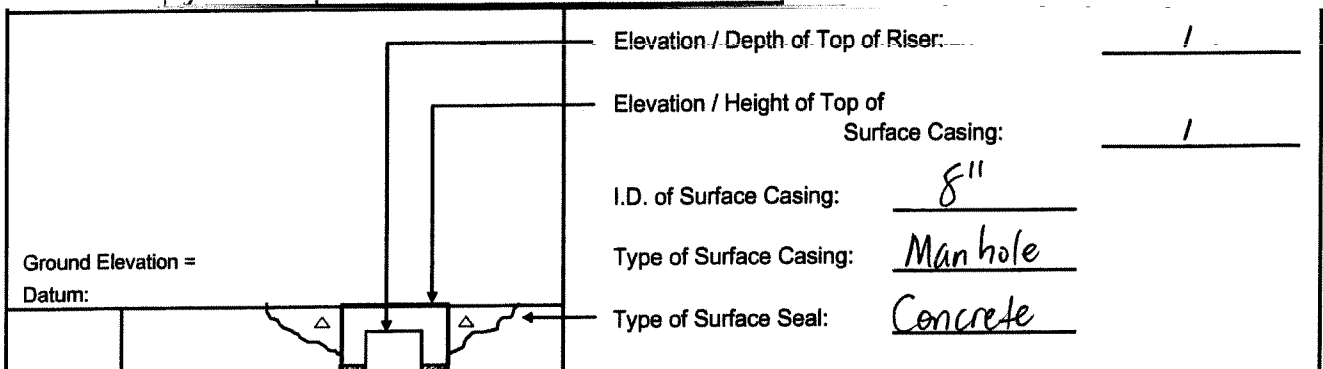
Not to Scale



### MONITORING WELL SHEET

PROJECT: Former ARC DRILLING Co.: Prosonic BORING No.: \_\_\_\_\_  
 PROJECT No.: N1075 DRILLER: V. SCOTT DATE COMPLETED: 3-15-05

SITE: Followed DRILLING METHOD: Rotary  
 GEOLOGIST: C. Gleaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



Elevation / Depth of Top of Riser: 1  
 Elevation / Height of Top of Surface Casing: 1  
 I.D. of Surface Casing: 8"  
 Type of Surface Casing: Man hole  
 Type of Surface Seal: Concrete

Ground Elevation = Datum:

I.D. of Riser: 2"

Borehole Diameter: 8"

Type of Backfill: Portland

Elevation / Depth of Seal: \_\_\_\_\_

Type of Seal: 30/60 Sand

Elevation / Depth of Top of Filter Pack: 136.0

Elevation / Depth of Top of Screen: 137.0

Type of Screen: PVC

Slot Size x Length: .010 x

I.D. of Screen: 2"

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 142.0

Elevation / Depth of Bottom of Filter Pack: 142.0

Type of Backfill Below Well: \_\_\_\_\_

Elevation / Total Depth of Borehole: 172.0

Not to Scale



WELL NO.: NY-1111-1111-1111

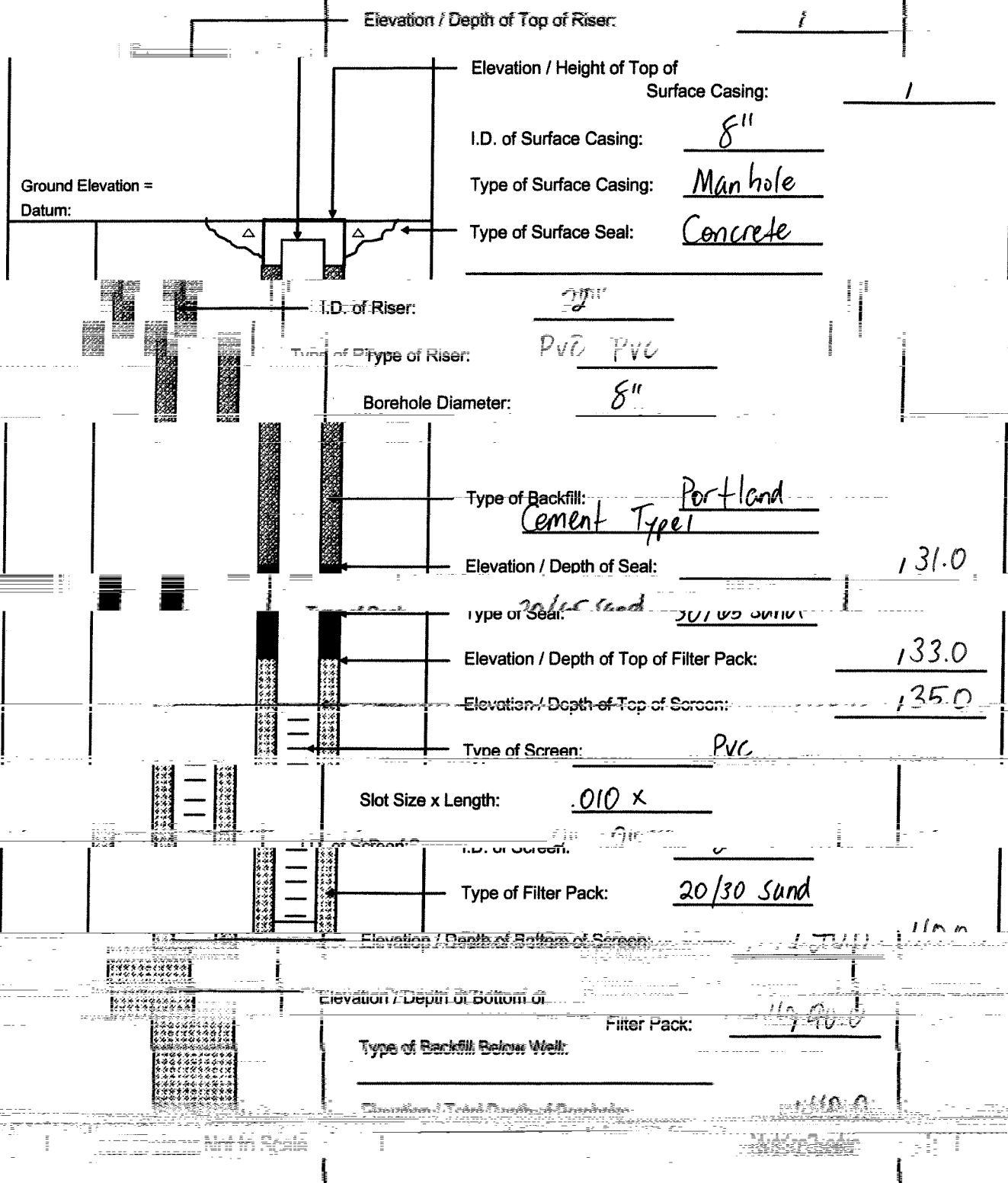
### MONITORING WELL SHEET

PROJECT: Former ABC DRILLING Co.: Prosonic BORING No.: \_\_\_\_\_

PROJECT No.: NID/15 DRILLER: V. SWATI DATE COMPLETED: 4-4-03

SITE: Tallavast DRILLING METHOD: Rotasonic NORTHING: \_\_\_\_\_

GEOLOGIST: C. Gleaton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



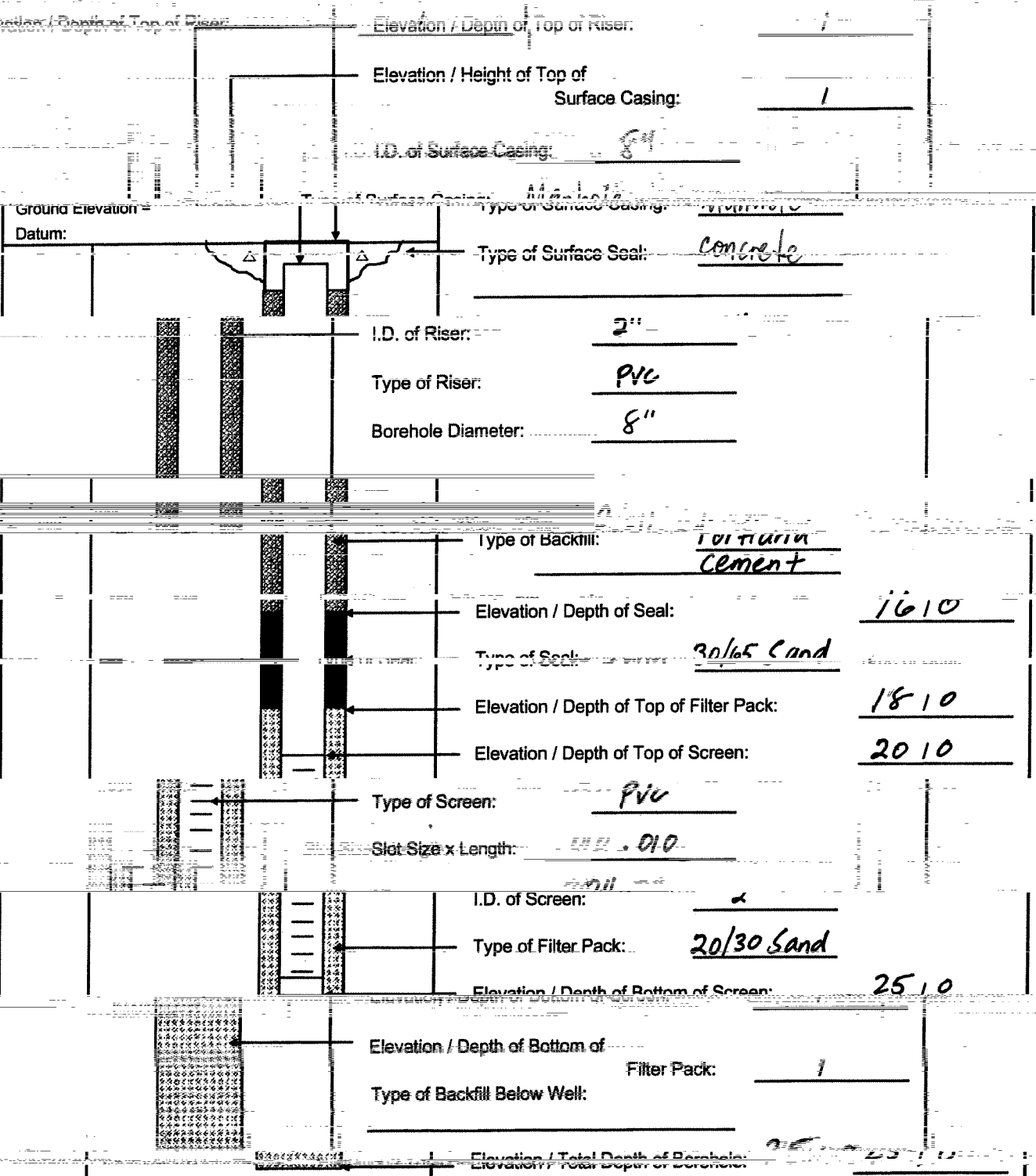


Tetra Tech, Inc.

WELL No.: TT-MW-115 USAS

### MONITORING WELL SHEET

PROJECT: <u>France Ave</u>	DRILLING Co.: <u>Dynacore</u>	BORING No.:
PROJECT No.: <u>N1075</u>	DRILLER: <u>Matt Ruf</u>	DATE COMPLETED: <u>5-23-05</u>
SITE:	DRILLING METHOD: <u>Sonic</u>	NORTHING:
GEOLOGIST: <u>S. McGuire</u>	DEV. METHOD: <u>Surge + Pump</u>	EASTING:



Elevation / Depth of Top of Riser: \_\_\_\_\_

Elevation / Height of Top of Surface Casing: \_\_\_\_\_

I.D. of Surface Casing: 8"

Ground Elevation Datum:

Type of Surface Casing: Aluminum

Type of Surface Seal: Concrete

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 8"

Type of Backfill: Portland Cement

Elevation / Depth of Seal: 1610

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 1810

Elevation / Depth of Top of Screen: 2010

Type of Screen: PVC

Slot Size x Length: .010

I.D. of Screen: 2

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 2510

Elevation / Depth of Bottom of Filter Pack: \_\_\_\_\_

Type of Backfill Below Well: \_\_\_\_\_

Elevation / Total Depth of Borehole: 2510

Not to Scale



Tetra Tech, Inc.

WELL No.: TT-MW-116 USAS

MONITORING WELL SHEET

PROJECT: Former ABC DRILLING Co.: Prosonic BORING No.: \_\_\_\_\_  
PROJECT No.: N1075 DRILLER: Matt Ruf DATE COMPLETED: 5.23.05

SITE: \_\_\_\_\_ DRILLING METHOD: Sonic NORTHING: \_\_\_\_\_  
GEOLOGIST: S. McGuire DEV. METHOD: P Surge + Pump EASTING: \_\_\_\_\_

Elevation / Depth of Top of Riser: 1

Surface Casing: 1

I.D. of Surface Casing: 8"

Ground Elevation = \_\_\_\_\_  
Datum: \_\_\_\_\_

Type of Surface Casing: Manhole

Type of Surface Seal: concrete

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 8"

Type of Backfill: Portland cement

Elevation / Depth of Seal: 1710

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 1910

Elevation / Depth of Top of Screen: 2110

Type of Screen: PVC

Slot Size x Length: .D10

I.D. of Screen: 2"

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 2610

Elevation / Depth of Bottom of Filter Pack: 1

Type of Backfill Below Well: \_\_\_\_\_

Elevation / Total Depth of Borehole: 2610

Not to Scale

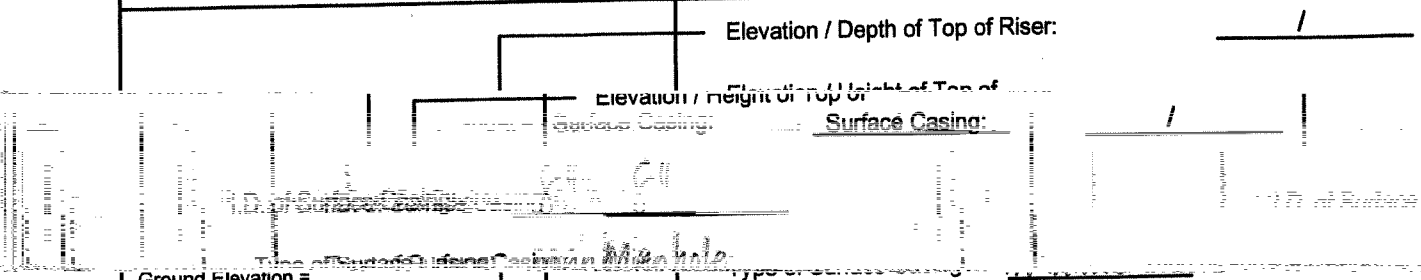


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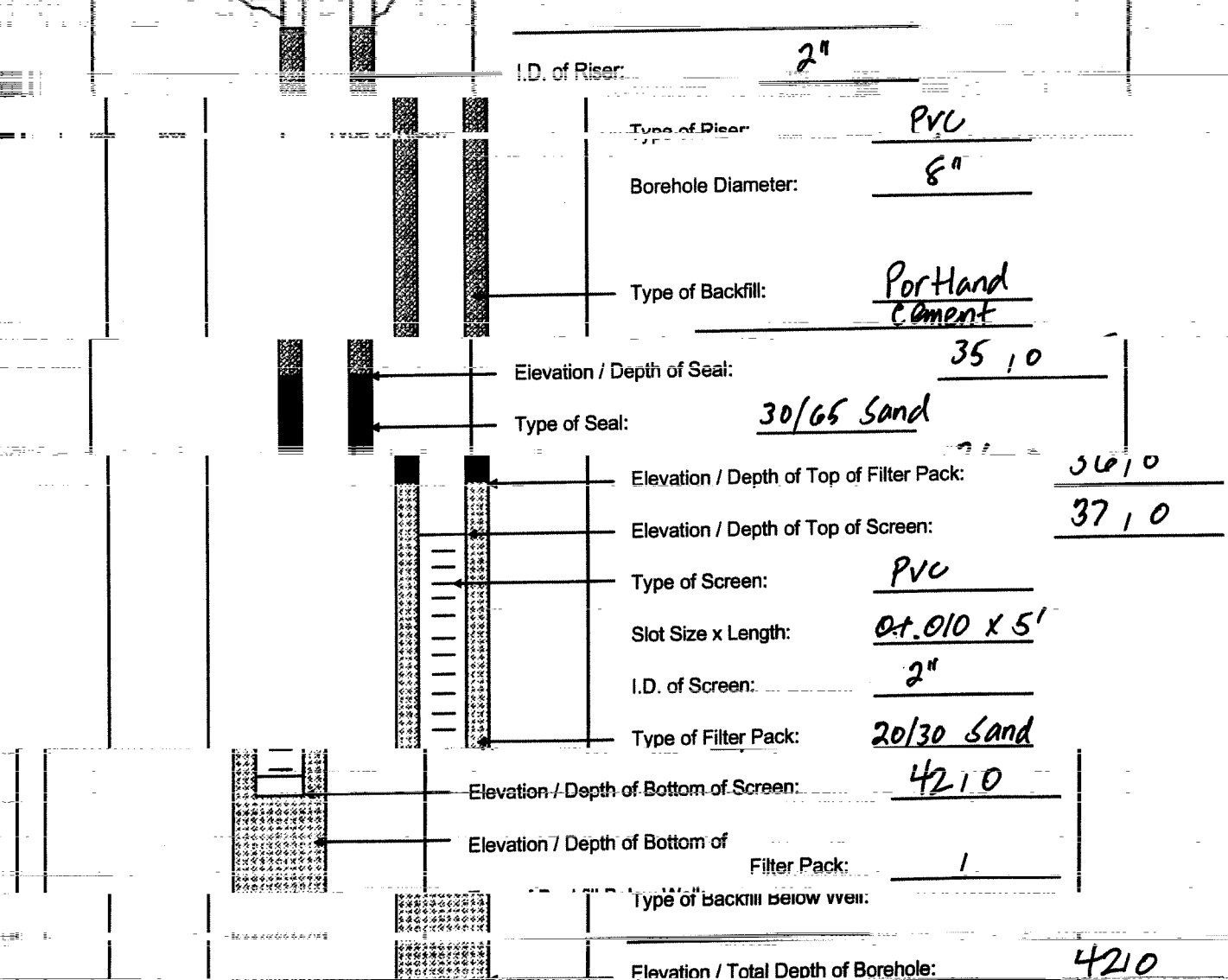
WELL No.: TT-MW-117 LSAS

### MONITORING WELL SHEET

PROJECT: FOCUS AREA DRILLING Co.: Pro Sonic BORING No.: \_\_\_\_\_  
 PROJECT No.: N1075 DRILLER: Matt Ruf DATE COMPLETED: 5.24-05  
 SITE: \_\_\_\_\_ DRILLING METHOD: Roto sonic NORTHING: \_\_\_\_\_  
 GEOLOGIST: C. McGuire DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



Ground Elevation = \_\_\_\_\_ Datum: \_\_\_\_\_



Elevation / Total Depth of Borehole: 4210

Not to Scale

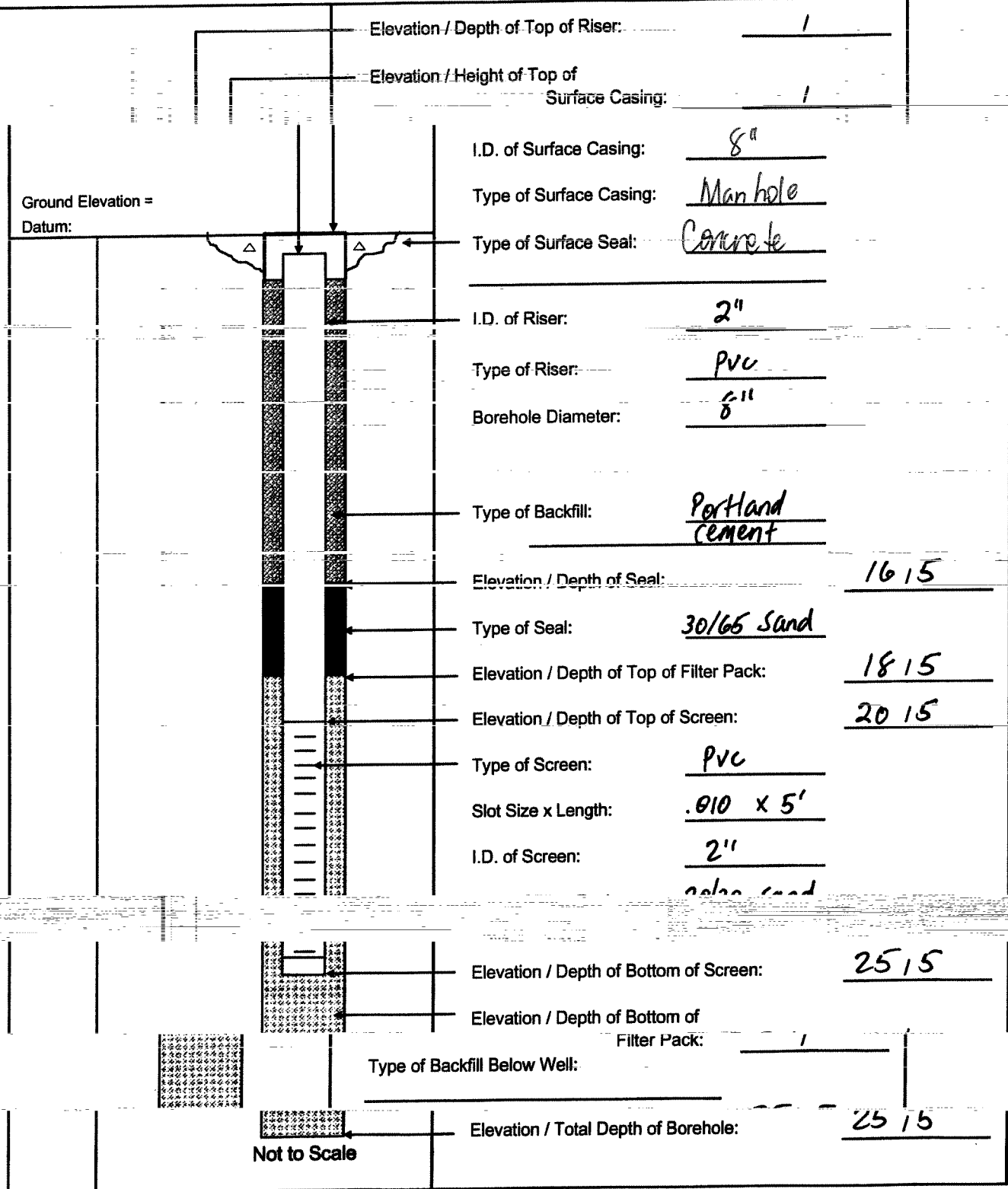


Tetra Tech, Inc.

WELL No.: TT-MW-1184SAS

### MONITORING WELL SHEET

PROJECT: Former ASU DRILLING CO.: Thompson Drilling BOREHOLE No.: \_\_\_\_\_  
 PROJECT No.: N1075 DRILLER: Matt Ruf DATE COMPLETED: 5-24-05  
 SITE: \_\_\_\_\_ DRILLING METHOD: Rotosonic NORTHING: \_\_\_\_\_  
 GEOLOGIST: S. McGuire DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



Elevation / Depth of Top of Riser: 1

Elevation / Height of Top of Surface Casing: 1

Ground Elevation = Datum:

I.D. of Surface Casing: 8"

Type of Surface Casing: Man hole

Type of Surface Seal: Concrete

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 8"

Type of Backfill: Portland cement

Elevation / Depth of Seal: 1615

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 1815

Elevation / Depth of Top of Screen: 2015

Type of Screen: PVC

Slot Size x Length: .010 x 5'

I.D. of Screen: 2"

Elevation / Depth of Bottom of Screen: 2515

Elevation / Depth of Bottom of Filter Pack: 1

Type of Backfill Below Well: \_\_\_\_\_

Elevation / Total Depth of Borehole: 2515

Not to Scale





Tetra Tech, Inc.

WELL No.: TT-MW-119LSAS

### MONITORING WELL SHEET

PROJECT: Former ABC DRILLING Co.: ProSonic BORING No.: \_\_\_\_\_

SITE: \_\_\_\_\_ DRILLING METHOD: Rotosonic NORTHING: \_\_\_\_\_

GEOLOGIST: C. McGuire DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_

Elevation / Depth of Top of Riser: \_\_\_\_\_

Elevation / Height of Top of Surface Casing: 1

I.D. of Surface Casing: 8"

Type of Surface Casing: Manhole

Ground Elevation Datum: \_\_\_\_\_

Type of Surface Seal: Concrete

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 8"

Type of Backfill: Portland Cement

Elevation / Depth of Seal: 2910

Type of Seal: 30/65 sand

Elevation / Depth of Top of Filter Pack: 3010

Elevation / Depth of Top of Screen: 3110

Type of Screen: PVC

Slot Size x Length: .010 x 5'

I.D. of Screen: \_\_\_\_\_

Type of Filter Pack: 20/30 sand

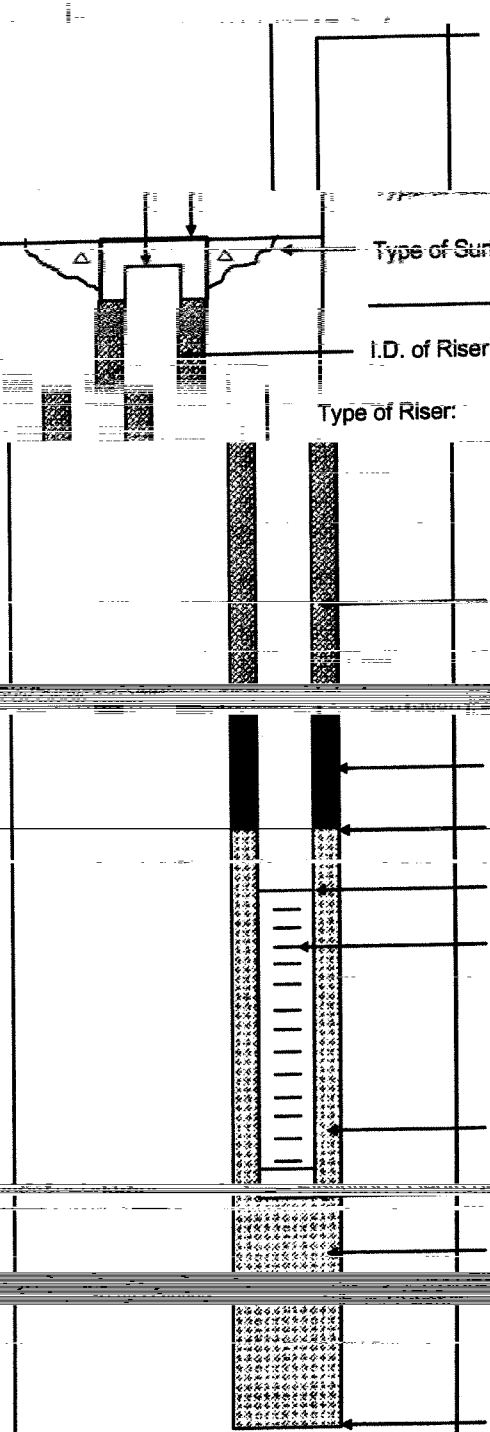
Elevation / Depth of Bottom of Screen: 3610

Elevation / Depth of Bottom of \_\_\_\_\_

Type of Backfill Below Well: \_\_\_\_\_

Elevation / Total Depth of Borehole: 3610

Not to Scale



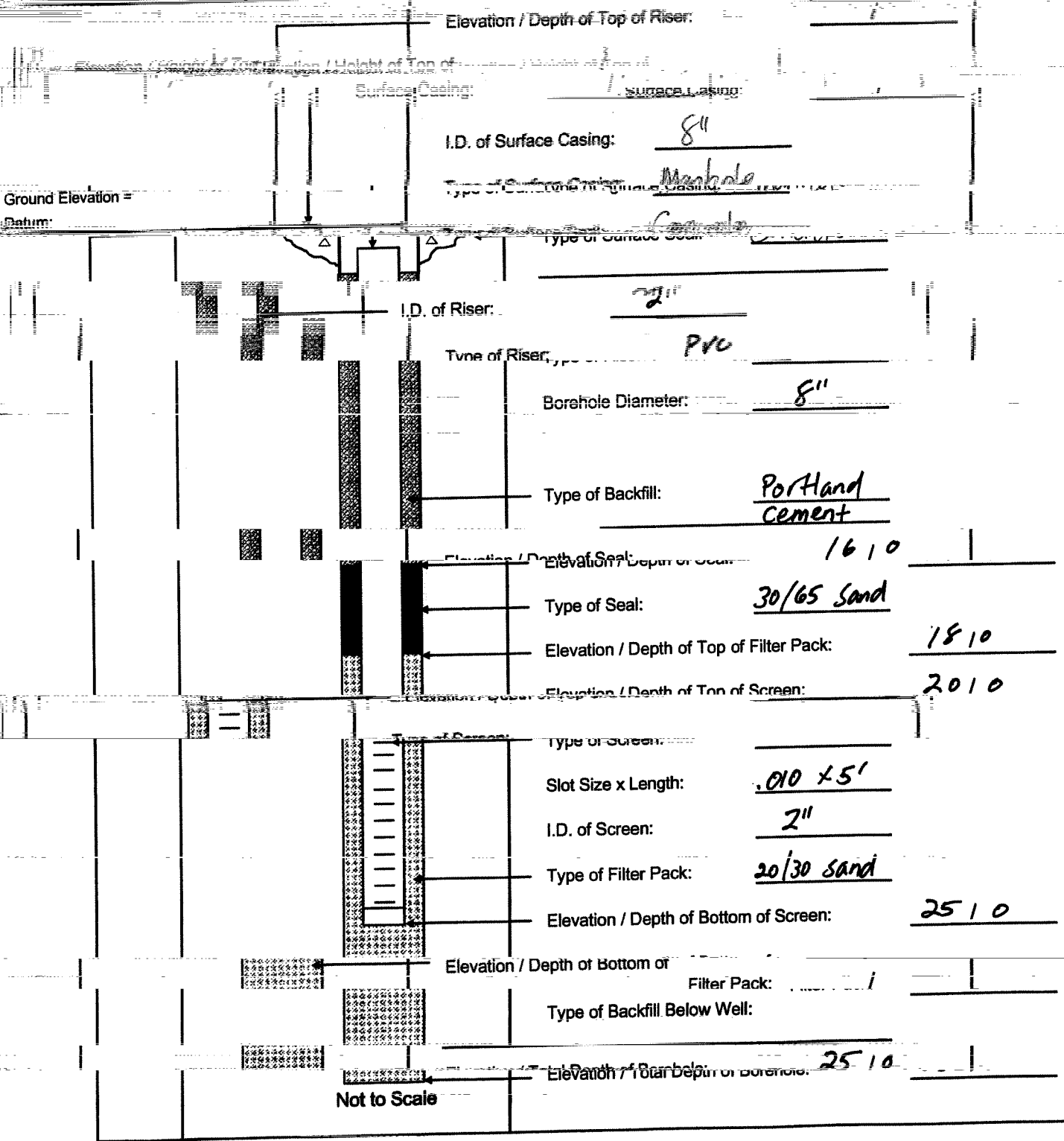


Tetra Tech, Inc.

WELL No.: TT-MW-120 USAS

### MONITORING WELL SHEET

PROJECT: Boone Ave. Building BORING No.: \_\_\_\_\_  
 PROJECT No.: 111075 DRILLER: Matt Ruf DATE COMPLETED: 5.24.05  
 SITE: \_\_\_\_\_ DRILLING METHOD: Koto Sonic NORTHING: \_\_\_\_\_  
 GEOLOGIST: Tom White



Not to Scale



Tetra Tech, Inc.

WELL No.: TT-MW-121 USAS

### MONITORING WELL SHEET

PROJECT: ARC DRILLING Co.: PROSONIC BUREAU NO.:

PROJECT NO.: N 1075 DRILLING METHOD: Koto Sonic NORTHING:

SITE: McGuire DEV. METHOD: Surface + Pump EASTING:

Elevation / Depth of Top of Riser: 1  
Surface Casing: 1  
I.D. of Surface Casing: 4"

Ground Elevation = 1410  
Datum: Concrete  
Type of Surface Casing: 1/2" x 1/2" PVC  
Type of Surface Seal: Concrete

I.D. of Riser: 2"  
Type of Riser: PVC

Borehole Diameter: 6.5"  
Type of Backfill: Redwood  
1/2" x 1/2" CONCRETE

Elevation / Depth of Seal: 1410  
Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 1610  
Elevation / Depth of Top of Screen: 1810

Type of Screen: PVC  
Slot Size x Length: .010 x 5'  
I.D. of Screen: 2"

Type of Filter Pack: 20/30 sand

Elevation / Depth of Bottom of Screen: 2210  
Elevation / Depth of Bottom of Filter Pack: 1

Type of Backfill Below Well:  
Elevation / Total Depth of Borehole: 2310

Not to Scale

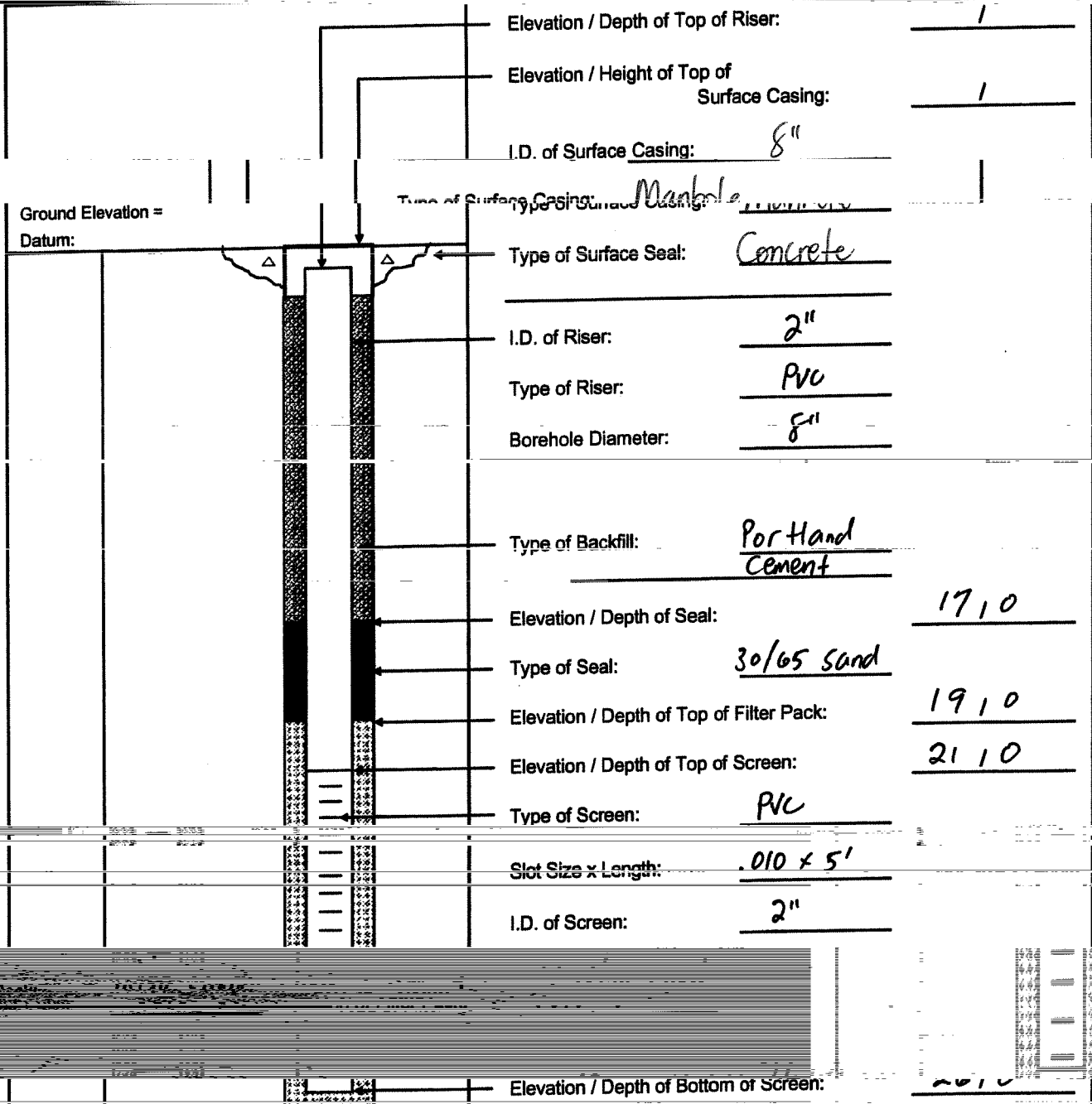


Tetra Tech, Inc.

WELL No.: TT-MW-122 USAS

### MONITORING WELL SHEET

PROJECT: <u>Former ABC</u>	DRILLING Co.: <u>Pro Sonic</u>	BORING No.:
PROJECT No.: <u>N1075</u>	DRILLER: <u>Matt Ruff</u>	DATE COMPLETED: <u>5-25-05</u>
SITE:	DRILLING METHOD: <u>Robo Sonic</u>	NORTHING:
GEOLOGIST: <u>S. McGuire</u>	DEV. METHOD: <u>Surge + Pump</u>	EASTING:



2610



WELL No.: 17-MW-125-100

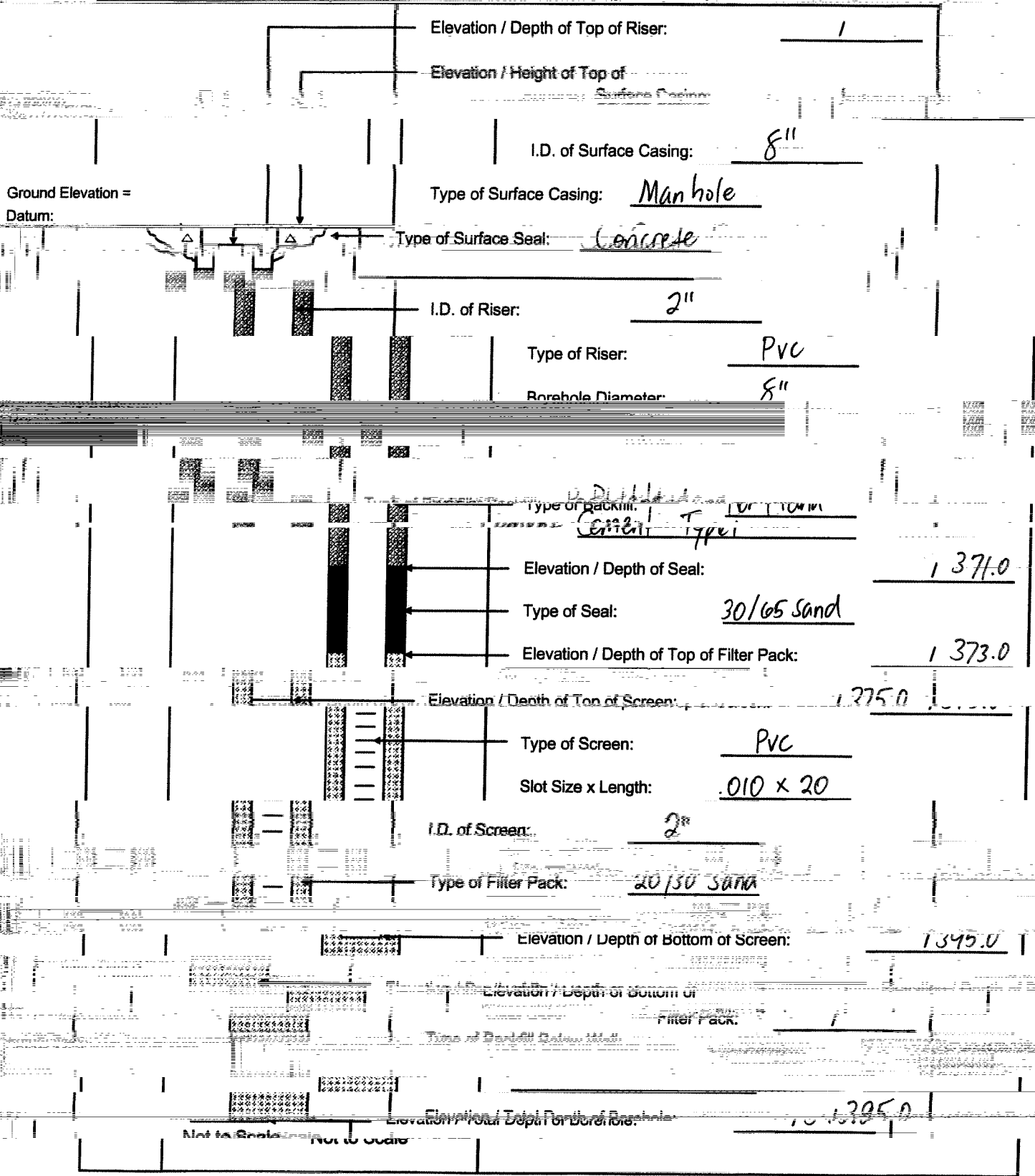
### MONITORING WELL SHEET

PROJECT: Orange Ave, 120 DRILLING CO.: Dracoma BORING NO.: 17-MW-125-100

PROJECT No.: N1675 DRILLER: F. Kraus DATE COMPLETED: 6-20-05

SITE: Tallavast DRILLING METHOD: Rotasonic NORTHING: \_\_\_\_\_

GEOLOGIST: C. Grafton DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



Elevation / Depth of Top of Riser: 1

Elevation / Height of Top of Surface Casing: \_\_\_\_\_

I.D. of Surface Casing: 8"

Type of Surface Casing: Man hole

Ground Elevation = Datum:

Type of Surface Seal: Concrete

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 8"

Type of Packin.: Gravel

Elevation / Depth of Seal: 1371.0

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 1373.0

Elevation / Depth of Top of Screen: 1375.0

Type of Screen: PVC

Slot Size x Length: .010 x 20

I.D. of Screen: 2"

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 1395.0

Elevation / Depth of Bottom of Filter Pack: 1395.0

Elevation / Depth of Bottom of Well: 1395.0

Not to Scale



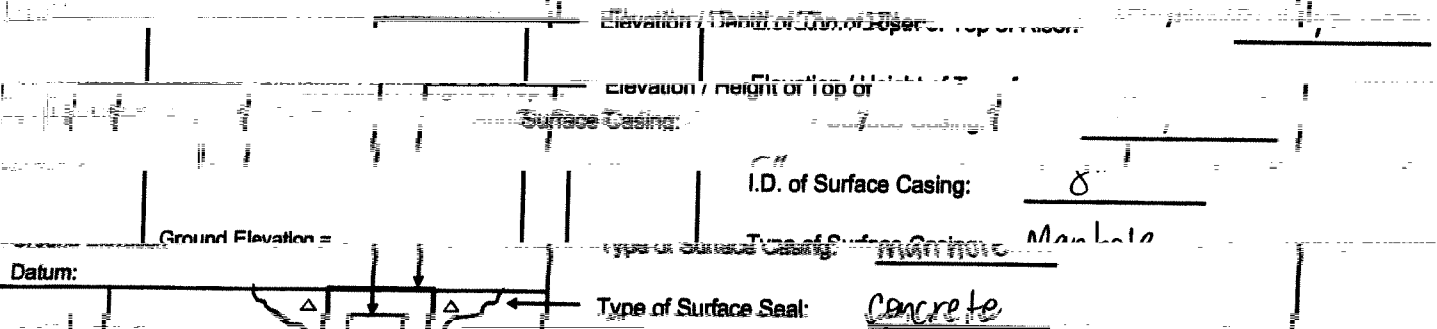
Tetra Tech, Inc.

WELL No.:

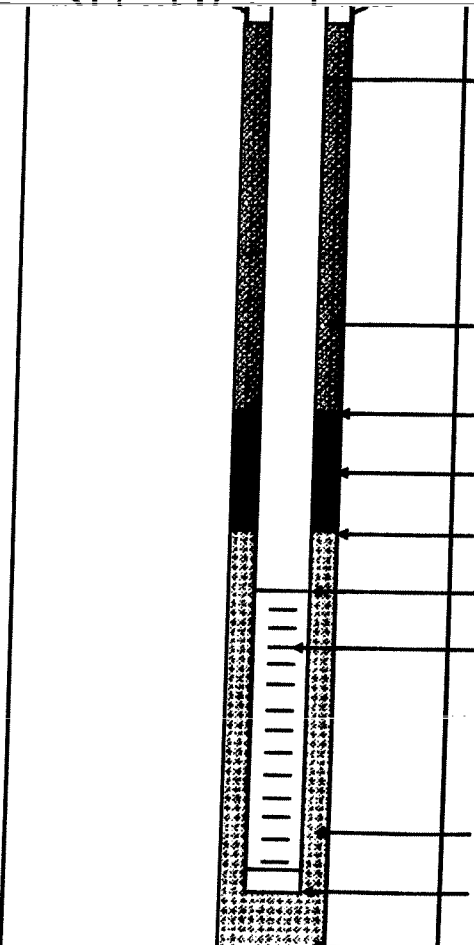
TT-MW-124-IAS

**MONITORING WELL SHEET**

PROJECT: Former ABC DRILLING Co.: Prosonic BORING No.:  
 PROJECT No.: N1075 DRILLER: F. Kraus DATE COMPLETED: 7-20-05  
 SITE: Tallevast DRILLING METHOD: Dr/Conc MDTLING:  
 SURFACE: in situ DEV. METHOD: Surge + Pump EASTING:



I.D. of Riser: 2"  
 Type of Riser: PVC  
 Borehole Diameter: 8"  
 Type of Backfill: Portland Cement Type I  
 Elevation / Depth of Seal: 1 118'  
 Type of Seal: 30/65 Sand  
 Elevation / Depth of Top of Filter Pack: 1 120'  
 Elevation / Depth of Top of Screen: 1 122'  
 Type of Screen: PVC  
 Slot Size x Length: .010 x 15  
 I.D. of Screen: 2"  
 Type of Filter Pack: 20/30 Sand  
 Elevation / Depth of Bottom of Screen: 1 137'



Type of Backfill Below Well:

Not to Scale



Tetra Tech, Inc.

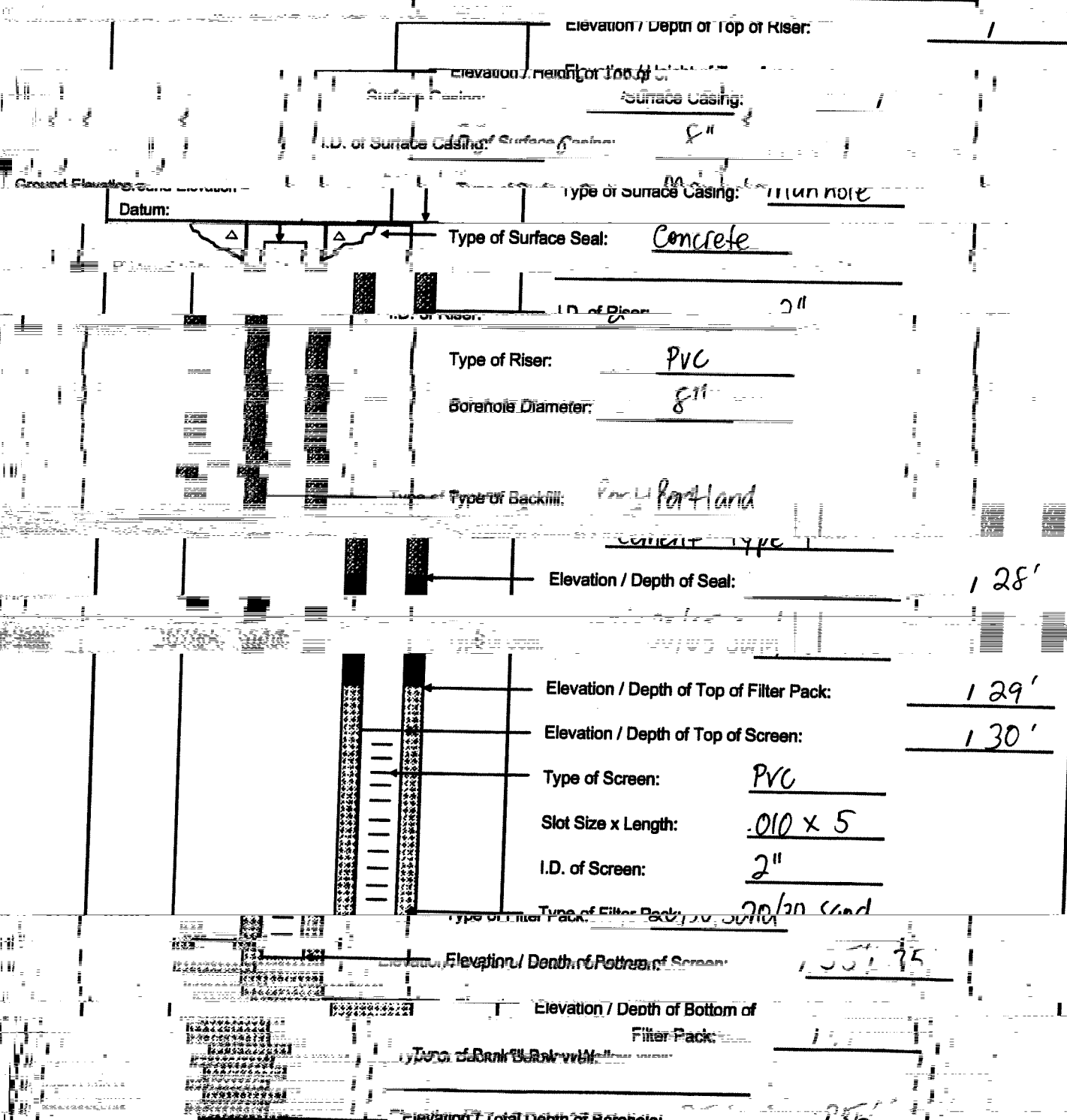
WELL No.:

TT-MW-125-LSAS

### MONITORING WELL SHEET

PROJECT: Former ABC DRILLING Co.: Prosonic BORING No.: \_\_\_\_\_  
 PROJECT NO.: N1015 DRILLER: F. Kraus DATE COMPLETED: 7-21-05  
 SITE: Tallgrass DRILLING METHOD: Rotary \_\_\_\_\_

GEOLOGIST: S. McGuire DEV. METHOD: Surge + Pump EASTING: \_\_\_\_\_



Elevation / Depth of Top of Riser: \_\_\_\_\_

Elevation / Depth of Top of Surface Casing: \_\_\_\_\_

I.D. of Surface Casing: 8"

Type of Surface Casing: iron pipe

Datum: \_\_\_\_\_

Type of Surface Seal: Concrete

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 8"

Type of Backfill: Portland

Elevation / Depth of Seal: 128'

Elevation / Depth of Top of Filter Pack: 129'

Elevation / Depth of Top of Screen: 130'

Type of Screen: PVC

Slot Size x Length: 010 x 5

I.D. of Screen: 2"

Type of Filter Pack: 20/40 sand

Elevation / Depth of Bottom of Screen: 131.75'

Elevation / Depth of Bottom of Filter Pack: \_\_\_\_\_

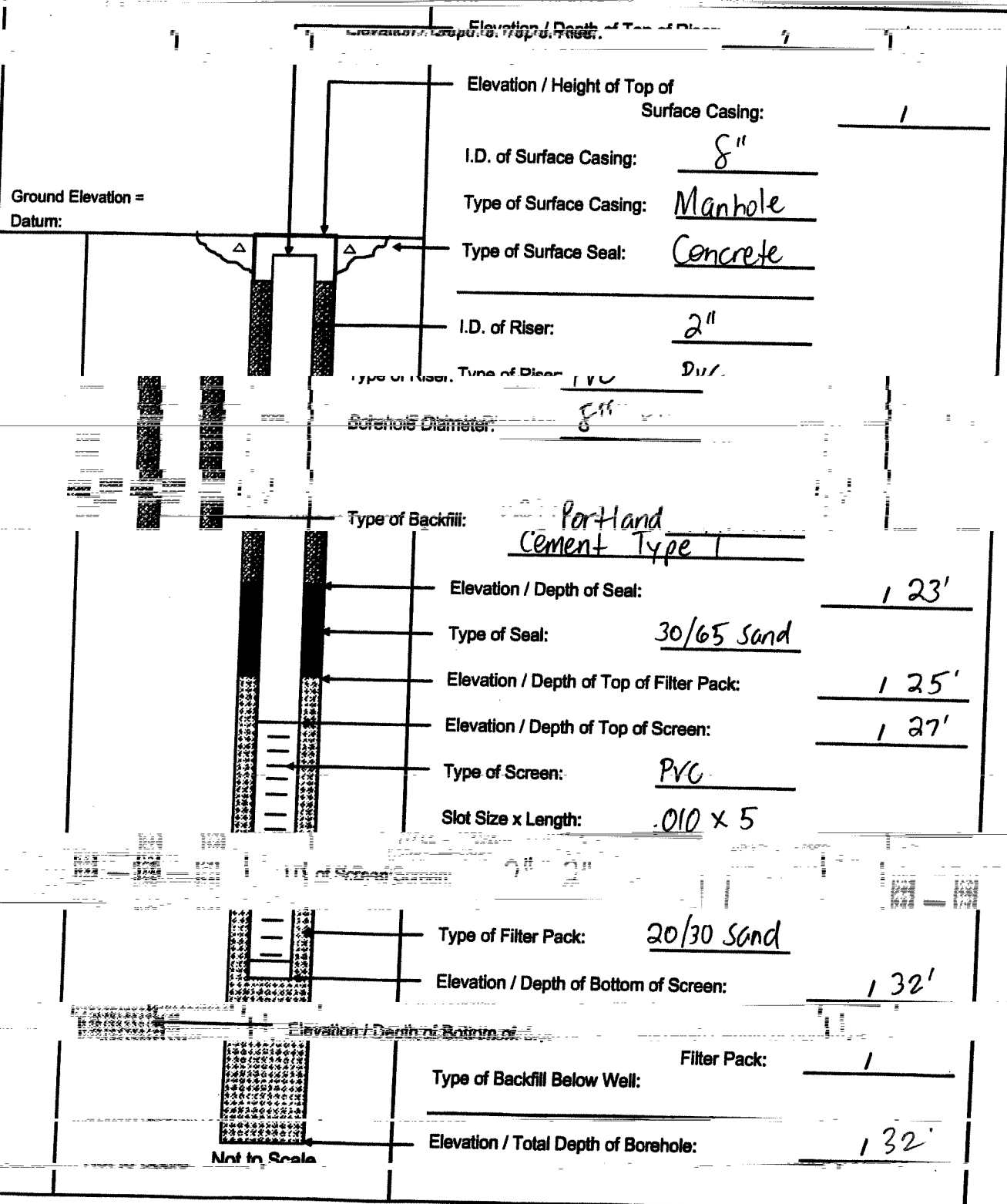
Type of Backfill: \_\_\_\_\_

Elevation / Total Depth of Borehole: 125'

NOT TO SCALE

**MONITORING MONITORING WELL SHEET**

PROJECT: Former ABC DRILLING Co.: Prosonic BORING No.: \_\_\_\_\_  
 PROJECT No.: N1075 DRILLER: F. Kraus DATE COMPLETED: 7-20-05  
 SITE: Tollway DRILLING METHOD: Rotary  
 GEOLOGIST: S. McGuire DEV. METHOD: Grub + Pump EASTING: \_\_\_\_\_



Elevation / Height of Top of Surface Casing: 1

I.D. of Surface Casing: 8"

Type of Surface Casing: Manhole

Type of Surface Seal: Concrete

I.D. of Riser: 2"

Type of Riser: PVC

Borehole Diameter: 8"

Type of Backfill: Portland Cement Type 1

Elevation / Depth of Seal: 1 23'

Type of Seal: 30/65 Sand

Elevation / Depth of Top of Filter Pack: 1 25'

Elevation / Depth of Top of Screen: 1 27'

Type of Screen: PVC

Slot Size x Length: .010 x 5

Type of Filter Pack: 20/30 Sand

Elevation / Depth of Bottom of Screen: 1 32'

Type of Backfill Below Well: Filter Pack

Elevation / Total Depth of Borehole: 1 32'

Not to Scale



**APPENDIX B**

**SITE SPECIFIC LEACHABILITY TESTING LABORATORY ANALYTICAL REPORTS**

## FDEP UCL Calculator Version 1.0

Goodness-of-fit test results

### Shapiro-Francia Results (Adjust for Censoring)

SF for Normal Distribution	0.9423
SF for LogNormal Distribution	0.8792
Shapiro-Francia critical value for $p < 0.05$	NA

Test stat > critical value indicates a reasonable fit

### Shapiro-Wilk's Test Results for All Data (BDL replaced with 1/2 DL)

SW test statistic for Normal Distribution	0.924
SW test statistic for LogNormal Distribution	0.861
Shapiro-Wilk's critical value for $p < 0.05$	0.887

Test stat > critical value indicates a reasonable fit

**Based on the results of the Shapiro-Wilk's test**

**FDEP UCL Calculator Version 1.0**

**8/4/05**

**Summary Statistics for**

Number of Samples	16
Number of Censored Data	0
Minimum	0.1
Maximum	0.9
Mean	0.45625
Median	0.5
Standard Deviation	0.263233
Variance	0.069292
Coefficient of Variation	0.576949
Skewness	0.07

**95% UCL (Assuming Normal Data)**

Student's-t	0.571615
-------------	----------

**95% UCL (Adjusted for Skewness)**

Adjusted-CLT	0.565735
Modified-t	0.571807

**95% Non-parametric UCL**

CLT	0.564505
Jackknife	NA
Standard Bootstrap	0.546523
Bootstrap-t	0.55432
Chebyshev (Mean, Std)	0.743108

**Summary Statistics for ln()**

Minimum	-2.302585
Maximum	-0.105361
Mean	-1.006897
Standard Deviation	0.763262
Variance	0.582569

**Goodness-of-Fit Results**

Distribution Recommended	Normal
Distribution Used	Normal

**Estimates Assuming Lognormal Distribution**

MLE Mean	0.488892
MLE Standard Deviation	0.434711
MLE Median	0.365351
MLE Coefficient of Variation	0.889175

MVUE Estimate of Mean	0.478048
MVUE Estimate of Std. Dev.	0.394
MVUE Estimate of SE	0.097223
MVUE Coefficient of Variation	0.824186

**UCL Assuming Lognormal Distribution**

95% H-UCL	0.791623
95% Chebyshev (MVUE) UCL	0.901834
99% Chebyshev (MVUE) UCL	1.445408

<b>FDEP Recommended UCL to Use:</b>
0.571615

**FDEP UCL Calculator Version 0.97**

**8/4/05**

*Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.*

<b>Summary Statistics for BAP (1)</b>	
Number of Samples	16
Number of Censored Data	10
Minimum	0.2
Maximum	0.3
Mean	0.2
Median	0.2
Standard Deviation	0.05164
Variance	
Coefficient of Variation	0.258199
Skewness	1.86E-07

<b>95% UCL (Assuming Normal Data)</b>	
Student's-t	NA

<b>95% UCL (Adjusted for Skewness)</b>	
Adjusted-CLT	NA
Modified-t	NA

<b>95% Non-parametric UCL</b>	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

<b>95% Bounding Method UCL</b>	
Bounding (Max)	0.268318
Bounding (1/2 DL)	0.215829

<b>Summary Statistics for</b>	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

<b>Goodness-of-Fit Results</b>	
Distribution Recommended	NA
Distribution Used	Neither

<b>Estimates Assuming Lognormal Distribution</b>	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA

MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

<b>UCL Assuming Lognormal Distribution</b>	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

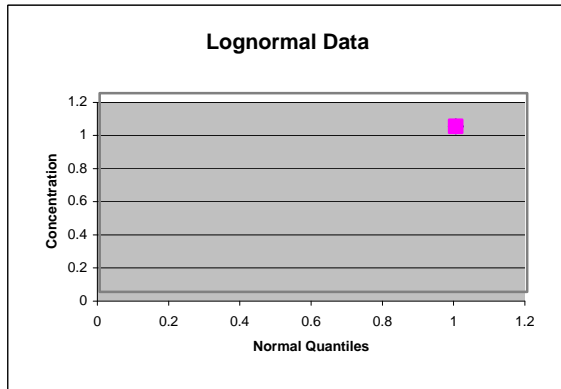
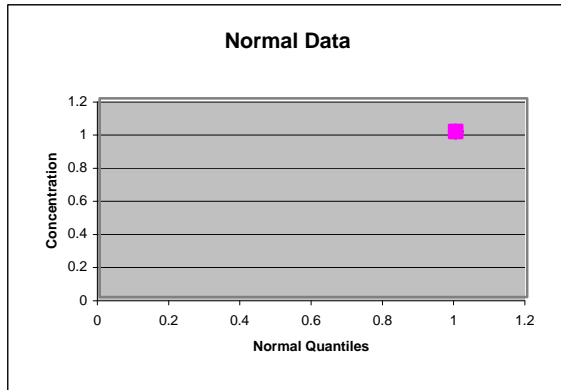
<b>FDEP Recommended UCL to Use:</b>	
	0.268318

PROUCL      NA

Note: These estimates are valid ONLY if samples are random and representative.

## FDEP UCL Calculator Version 0.97

Goodness-of-fit test results



### Shapiro-Francia Results (Adjust for Censoring)

SF for Normal Distribution	0
SF for LogNormal Distribution	0
Shapiro-Francia critical value for $p < 0.05$	0.944005

Test stat > critical value indicates a reasonable fit

### Shapiro-Wilk's Test Results for All Data (BDL replaced with 1/2 DL)

SW test statistic for Normal Distribution	0.647
SW test statistic for LogNormal Distribution	0.679
Shapiro-Wilk's critical value for $p < 0.05$	0.947

Test stat > critical value indicates a reasonable fit

**Based on the results of the Shapiro-Francia test  
Distribution is best described as: Neither**

Neither

## FDEP UCL Calculator Version 0.97

	<b>BAP (ALL)</b>
Number of Samples	48
Number of Censored Data	28
Minimum	0.1
Maximum	0.9
Mean	0.23125
Median	0.1
Standard Deviation	0.223279
Variance	0.049854
Coefficient of Variation	0.965533
Skewness	1.671146

### 95% UCL (Assuming Normal Data)

Student's-t	0.285326
-------------	----------

### 95% UCL (Adjusted for Skewness)

Adjusted-CLT	0.292572
Modified-t	0.286621

### 95% Non-parametric UCL

CLT	0.284264
Jackknife	NA
Standard Bootstrap	0.283178
Bootstrap-t	0.311606
Chebyshev (Mean, Std)	0.37173

	<b>ln(BAP (ALL))</b>
Minimum	-2.30259
Maximum	-0.10536
Mean	-1.79603
Standard Deviation	0.753116
Variance	0.567184

### Goodness-of-Fit Results

Distribution Recommended	Neither
Distribution Used	Neither

### Estimates Assuming Lognormal Distribution

MLE Mean	0.220372
MLE Standard Deviation	0.192531
MLE Median	0.165956
MLE Coefficient of Variation	0.873668

MVUE Estimate of Mean	0.216542
MVUE Estimate of Std. Dev.	0.177942
MVUE Estimate of SE	0.039235
MVUE Coefficient of Variation	0.821743

### UCL Assuming Lognormal Distribution

95% H-UCL	0.277591
95% Chebyshev (MVUE) UCL	0.387563
99% Chebyshev (MVUE) UCL	0.606927

### FDEP Recommended UCL to Use:

0.37173

PROUCL NA

**FDEP UCL Calculator Version 0.97**

Goodness-of-fit test results

**Summary Statistics for AS (6")**

Number of Samples	16
Number of Censored Data	9
Minimum	0.52
Maximum	4
Mean	1.031875
Median	0.635
Standard Deviation	0.928599
Variance	0.862296
Coefficient of Variation	0.899914
Skewness	2.635718

**95% UCL (Assuming Normal Data)**

Student's-t	1.438845
-------------	----------

**95% UCL (Adjusted for Skewness)**

Adjusted-CLT	1.577237
Modified-t	1.46434

**95% Non-parametric UCL**

CLT	1.413761
Jackknife	NA
Standard Bootstrap	1.34508
Bootstrap-t	2.24447
Chebyshev (Mean, Std)	2.043816

**Summary Statistics for ln(AS (6"))**

Minimum	-0.65393
Maximum	1.386294
Mean	-0.19034
Standard Deviation	0.60601
Variance	0.367248

**Goodness-of-Fit Results**

Distribution Recommended	Neither
Distribution Used	Neither

**Estimates Assuming Lognormal Distribution**

MLE Mean	0.993305
MLE Standard Deviation	0.661691
MLE Median	0.826677
MLE Coefficient of Variation	0.66615

MVUE Estimate of Mean	0.964715
MVUE Estimate of Std. Dev.	0.589757
MVUE Estimate of SE	0.222311
MVUE Coefficient of Variation	0.611327

**UCL Assuming Lognormal Distribution**

95% H-UCL	1.410769
95% Chebyshev (MVUE) UCL	1.933747
99% Chebyshev (MVUE) UCL	3.176688

**FDEP Recommended UCL to Use:**

2.043816

PROUCL NA

Note: These estimates are valid ONLY if samples are random and representative.



## FDEP UCL Calculator Version 0.97

8/4/05

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

Summary Statistics for AS (1)	
Number of Samples	16
Number of Censored Data	12
Minimum	1.14
Maximum	11
Mean	1.93625
Median	1.06
Standard Deviation	2.665518
Variance	
Coefficient of Variation	1.376639
Skewness	3.13239

### 95% UCL (Assuming Normal Data)

Student's-t	NA
-------------	----

### 95% UCL (Adjusted for Skewness)

Adjusted-CLT	NA
Modified-t	NA

### 95% Non-parametric UCL

CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

### 95% Bounding Method UCL

Bounding (Max)	4.840931
Bounding (1/2 DL)	4.589151

Summary Statistics for	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

### Goodness-of-Fit Results

Distribution Recommended	NA
Distribution Used	Neither

### Estimates Assuming Lognormal Distribution

MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA

MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

### UCL Assuming Lognormal Distribution

95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

### FDEP Recommended UCL to Use:

4.840931

PROUCL NA

Note: These estimates are valid ONLY if samples are random and representative.

## FDEP UCL Calculator Version 0.97

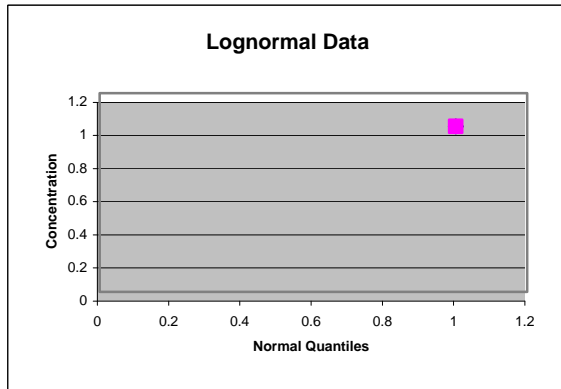
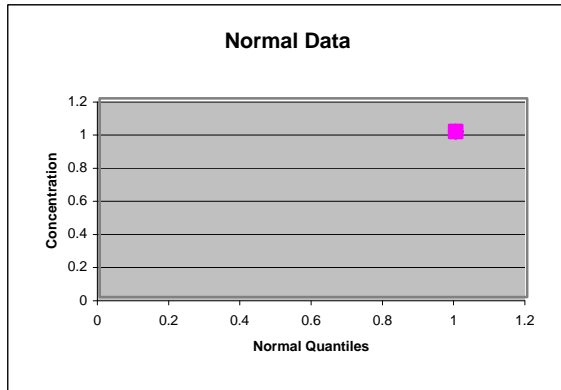
*Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.*

**AS (ALL)\_**

Number of Sampl3trw\_

## FDEP UCL Calculator Version 0.97

Goodness-of-fit test results



### Shapiro-Francia Results (Adjust for Censoring)

SF for Normal Distribution	0
SF for LogNormal Distribution	0
Shapiro-Francia critical value for $p < 0.05$	0.939527

Test stat > critical value indicates a reasonable fit

### Shapiro-Wilk's Test Results for All Data (BDL replaced with 1/2 DL)

SW test statistic for Normal Distribution	0.713
SW test statistic for LogNormal Distribution	0.907
Shapiro-Wilk's critical value for $p < 0.05$	0.887

Test stat > critical value indicates a reasonable fit

**Based on the results of the Shapiro-Francia test  
Distribution is best described as: Neither**

Neither

**Summary Statistics for CR (6")**

Number of Samples	16
Number of Censored Data	3
Minimum	1
Maximum	53
Mean	10.48125
Median	3.85
Standard Deviation	14.3383
Variance	205.587
Coefficient of Variation	1.367996
Skewness	2.089267

**95% UCL (Assuming Normal Data)**

Student's-t	16.76519
-------------	----------

**95% UCL (Adjusted for Skewness)**

Adjusted-CLT	18.37874
Modified-t	17.07724

**95% Non-parametric UCL**

CLT	16.37788
Jackknife	NA
Standard Bootstrap	16.42995
Bootstrap-t	20.33046
Chebyshev (Mean, Std)	26.10642

**Summary Statistics for ln(CR (6"))**

Minimum	0
Maximum	3.970292
Mean	1.530861
Standard Deviation	1.335742
Variance	1.784206

**Goodness-of-Fit Results**

Distribution Recommended	Neither
Distribution Used	Neither

**Estimates Assuming Lognormal Distribution**

MLE Mean	11.27924
MLE Standard Deviation	25.10701
MLE Median	4.622153
MLE Coefficient of Variation	2.225949

MVUE Estimate of Mean	10.09025
MVUE Estimate of Std. Dev.	16.05107
MVUE Estimate of SE	4.129582
MVUE Coefficient of Variation	1.59075

**UCL Assuming Lognormal Distribution**

95% H-UCL	36.05504
95% Chebyshev (MVUE) UCL	28.09069
99% Chebyshev (MVUE) UCL	51.17918

**FDEP Recommended UCL to Use:**

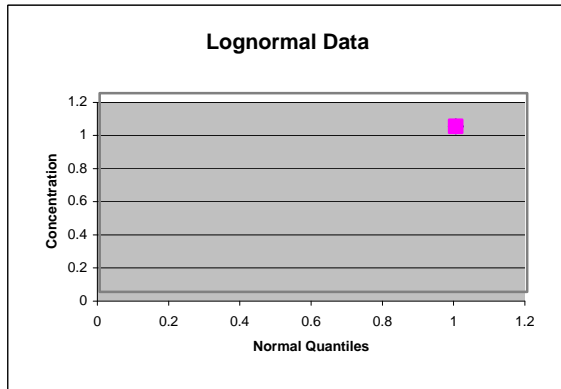
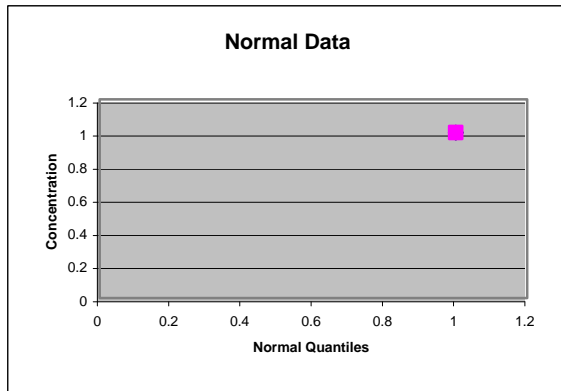
26.10642

PROUCL NA

Note: These estimates are valid ONLY if samples are random and representative.

## FDEP UCL Calculator Version 0.97

Goodness-of-fit test results



### Shapiro-Francia Results (Adjust for Censoring)

SF for Normal Distribution	0
SF for LogNormal Distribution	0
Shapiro-Francia critical value for $p < 0.05$	0.928832

Test stat > critical value indicates a reasonable fit

### Shapiro-Wilk's Test Results for All Data (BDL replaced with 1/2 DL)

SW test statistic for Normal Distribution	0.585
SW test statistic for LogNormal Distribution	0.801
Shapiro-Wilk's critical value for $p < 0.05$	0.887

Test stat > critical value indicates a reasonable fit

**Based on the results of the Shapiro-Francia test  
Distribution is best described as: Neither**

Neither

**Summary Statistics for CR (1)**

Number of Samples	16
Number of Censored Data	5
Minimum	1.1
Maximum	42
Mean	6.61875
Median	1.6
Standard Deviation	10.94661
Variance	119.8283
Coefficient of Variation	1.653879
Skewness	2.656261

**95% UCL (Assuming Normal Data)**

Student's-t	11.41624
-------------	----------

**95% UCL (Adjusted for Skewness)**

Adjusted-CLT	13.06266
Modified-t	11.71913

**95% Non-parametric UCL**

CLT	11.12054
Jackknife	NA
Standard Bootstrap	10.27004
Bootstrap-t	34.39937
Chebyshev (Mean, Std)	18.54782

**Summary Statistics for ln(CR (1))**

Minimum	0.09531
Maximum	3.73767
Mean	1.049951
Standard Deviation	1.203027
Variance	1.447274

**Goodness-of-Fit Results**

Distribution Recommended	Neither
Distribution Used	Neither

**Estimates Assuming Lognormal Distribution**

MLE Mean	5.891955
MLE Standard Deviation	10.62434
MLE Median	2.857511
MLE Coefficient of Variation	1.803194

MVUE Estimate of Mean	5.342241
MVUE Estimate of Std. Dev.	7.21412
MVUE Estimate of SE	2.074776
MVUE Coefficient of Variation	1.350392

**UCL Assuming Lognormal Distribution**

95% H-UCL	15.60803
95% Chebyshev (MVUE) UCL	14.38598
99% Chebyshev (MVUE) UCL	25.98605

**FDEP Recommended UCL to Use:**

18.54782

PROUCL NA

Note: These estimates are valid ONLY if samples are random and representative.

**FDEP UCL Calculator Version 0.97**

Goodness-of-fit test results

## FDEP UCL Calculator Version 0.97

	<b>CR(2)</b>		<b>ln(CR(2))</b>
Number of Samples	16	Minimum	0.09531
Number of Censored Data	7	Maximum	2.772589
Minimum	1.1	Mean	0.692255
Maximum	0.692255		



## FDEP UCL Calculator Version 0.97

Goodness-of-fit test results



### Shapiro-Francia Results (Adjust for Censoring)

SF for Normal Distribution	0
SF for LogNormal Distribution	0
Shapiro-Francia critical value for $p < 0.05$	0.964816

Test stat > critical value indicates a reasonable fit

### Shapiro-Wilk's Test Results for All Data (BDL replaced with 1/2 DL)

SW test statistic for Normal Distribution	0.585
SW test statistic for LogNormal Distribution	0.820
Shapiro-Wilk's critical value for $p < 0.05$	0.947

Test stat > critical value indicates a reasonable fit

**Based on the results of the Shapiro-Francia test  
Distribution is best described as: Neither**

Neither

## FDEP UCL Calculator Version 0.97

	<b>CR (ALL)</b>		<b>ln(CR (ALL))</b>
Number of Samples	48	Minimum	0
Number of Censored Data	15	Maximum	3.970292
Minimum	1	Mean	1.091022
Maximum	53	Standard Deviation	1.160345
Mean	6.677083	Variance	1.346401
Median	1.95		
Standard Deviation	10.86349	<b>Goodness-of-Fit Results</b>	
Variance	118.0154		

APPENDIX C  
FL-UCL DATA SHEETS FOR ON-SITE SOIL

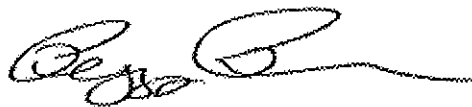
## ANALYTICAL REPORT

Job Number: 660-1190.1

Job Description: Former ABC

For:

Tetra Tech NUS Inc  
5421 Beaumont Center Blvd  
Suite 660  
Tampa, FL 33634



---

Peggy Penner  
Project Manager II  
ppenner@stl-inc.com

04/27/2005

DOH Certification #: E84282

These test results meet all the requirements of NELAP. All questions regarding this test report should be directed to the STL Project Manager who signed this test report. The estimated uncertainty associated with these

METHOD SUMMARY

Client: Tetra Tech NIS Inc

Job Number: 660 4100 4

Description	Method	Preparation Method
Matrix: Solid		
Inductively Coupled Plasma - Atomic Emission Spectrometry	SW846 6010B	
Synthetic Precipitation Leaching Procedure -East (Metals)		SW846 1312
Acid Digestion of Aqueous Samples and Extracts for Total Metals/Asbestos		SW846 6010A

REFERENCES

SW846 - "Test Methods For Evaluating Solid Waste - Physical/Chemical Methods" - Third Edition - November 1986

SAMPLE SUMMARY

Client: Tetra Tech NUS Inc

Job Number: 660-1190.1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
660-1190-1	HA-006SPLP	Solid	04/06/2005 0735	04/06/2005 1445
660-1190-2	HA-007SPLP	Solid	04/06/2005 0727	04/06/2005 1445

## SAMPLE RESULTS

---

Analytical Data

Client: Tetra Tech NUS Inc

Job Number: 660-1190.1

Client Sample ID: HA-006SPLP

Lab Sample ID: 660-1190-1

Date Sampled: 04/06/2005 0715

Client Matrix: Solid

Date Received: 04/06/2005 1115

Method: 6010B Analysis Batch: 660-5440  
Preparation: 6010B Prep Batch: 660-5449  
Dilution: 1.0  
Date Analyzed: 04/25/2005 1303  
Date Prepared: 04/22/2005 1751

Results: 0.00074 0.00074 0.00074



Client Sample ID: HA-007SPLP

Lab Sample ID: 660-1190-2

Date Sampled: 04/06/2005 0727

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry-SPLP East

Method: 6010B Analysis Batch: 660-5440

Preparation: 6010B Prep Batch: 660-5240

Dilution: 1.0

Date Analyzed: 04/25/2005 1328

Initial Weight/Volume:

Date Prepared: 04/21/2005 1319

Final Weight/Volume:

Beryllium	0.0022		0.00074	0.0040
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DATA REPORTING QUALIFIERS

Client: Tetra Tech NIS Inc

Job Number: 660-1190-1

Lab Section

Qualifier

Description

Metals

U

Indicates that the compound was analyzed for but not detected.

I

The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

# **QUALITY CONTROL RESULTS**

Client: Tetra Tech NUS Inc

Job Number: 660-1190.1

## QC Association Summary

Lab Sample ID	Client Sample ID	Client Matrix	Method	Prep Batch
<b>Metals</b>				
<b>Prep Batch: 660-5240</b>				
660-1190-A-2-B *E	HA-007SPLP	Solid	6010B	
<b>Prep Batch: 660-5449</b>				
LCS 660-5449/2-A	Lab Control Spike	Solid	6010B	
LCS 660-5449/3-A	Lab Control Spike Duplicate	Solid	6010B	
660-1190-A-1-B *E	HA-006SPLP	Solid	6010B	
<b>Analysis Batch:660-5440</b>				
660-1190-A-2-B *E	HA-007SPLP	Solid	6010B	660-5240
<b>Analysis Batch:660-5440</b>				
LCS 660-5449/2-A	Lab Control Spike	Solid	6010B	660-5449
LCS 660-5449/3-A	Lab Control Spike Duplicate	Solid	6010B	660-5449
660-1190-A-1-B *E	HA-006SPLP	Solid	6010B	660-5449

Quality Control Results

Client: ~~State Dept. of Health~~

Reference: ~~660-5449~~

**6010B Inductively Coupled Plasma - Atomic Emission Spectrometry-SPLP East**

**Laboratory Control Sample/ Control Duplicate - Batch: 660-5449**

LCS Lab ID: LCS 660-5449/2-A

Date Analyzed: 04/25/2005 1227

Dilution: 1.0

LCSD Lab ID: LCSD 660-5449/3-A

Date Analyzed: 04/25/2005 1233

Dilution: 1.0

Matrix: Solid

	% Recovery		Recovery	RPD
Beryllium	106	107	75 - 125	1 - 20

Calculations are performed before rounding to avoid round-off errors in calculated results.



<b>Invoice/Credit No.</b>	66031027	<b>Invoice Date</b>	April 27, 2005
<b>Terms</b>	Net 60 Days		

**Bill to:**  
Tetra Tech NUS, Inc  
Attn: Accounts Payable  
5421 Beaumont Center Blvd., Ste 660  
Tampa, FL 33634

**Ship to:**  
Tetra Tech NUS Inc  
5421 Beaumont Center Blvd  
Suite 660  
Tampa, FL 33634

P.O. Number      W.O. Number      Contract Number      Work Ordered by

70151 0020000  
1A131 AUBU/117

Job Description	Site Name	SDG Number	Invoice Contact
Former ABC			Mr. Paul Calligan

11170-1	1312_E_M - SFLF East Symneuc Precipitation Leaching Procedure -East (Metale)	2.00	40.00	80.00
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APPENDIX D  
FL-UCL DATA SHEETS FOR OFF-SITE SOIL



FL-UCL DATA SHEETS FOR ARSENIC IN OFF-SITE SOIL

## FDEP UCL Calculator Version 0.97

*Note: Results reflect censored parameter estimations based on distributional assumptions.*

### **SAMPLES 72 - 76**

Number of Samples	15	Minimum	<b>ln()</b> -0.63488
Number of Censored Data	5	Maximum	0.587787
Minimum Non-censored	0.560.567 Tw (NotMn()) Tj		

**FDEP UCL Calculator Version 0.97**

**8/4/05**

*Note: Results reflect censored parameter estimations based on distributional assumptions.*

**SAMPLES 77 - 81**

**Censor Estimated Statistics for**

Number of Samples	15
Number of Censored Data	5
Minimum Non-censored	0.66
Maximum	26
Mean	NA
Median	NA
Standard Deviation	NA
Variance	NA
Coefficient of Variation	NA
Skewness	NA

**95% UCL (Assuming Normal Data)**

Student's-t	NA
-------------	----

**95% UCL (Adjusted for Skewness)**

Adjusted-CLT	NA
Modified-t	NA

**95% Non-parametric UCL**

CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	10.66378

**Censor Estimated Statistics for ln()**

Minimum	-0.63488
Maximum	3.258096
Mean	0.140842
Standard Deviation	1.502588
Variance	2.257772
Fit	0.982395

**Goodness-of-Fit Results**

Distribution Recommended	Lognormal
Distribution Used	Lognormal

**Estimates Assuming Lognormal Distribution**

MLE Mean	3.559885
MLE Standard Deviation	10.4164
MLE Median	1.151243
MLE Coefficient of Variation	2.926049
MVUE Estimate of Mean	2.940438
MVUE Estimate of Std. Dev.	5.083501
MVUE Estimate of SE	1.475364
MVUE Coefficient of Variation	1.728825

**UCL Assuming Lognormal Distribution**

95% H-UCL	16.06863
95% Chebyshev (MVUE) UCL	9.371402
99% Chebyshev (MVUE) UCL	17.62016

**FDEP Recommended UCL to Use:**

9.371402

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

## FDEP UCL Calculator Version 0.97

*Note: Results reflect censored parameter estimations based on distributional assumptions.*

### **SAMPLES 57 - 61**

Number of Samples	15	Minimum	<b>ln()</b> -0.65393
Number of Censored Data	8	Maximum	2.302585
Minimum Non-censored	0.71	Mean	

SAMPLES 47 - 51

<b>Summary Statistics for</b>	
Number of Samples	15
Number of Censored Data	7
Minimum	0.52
Maximum	0.99
Mean	0.638667
Median	0.6
Standard Deviation	0.15702
Variance	0.024655
Coefficient of Variation	0.245856
Skewness	1.500084

<b>95% UCL (Assuming Normal Data)</b>	
Student's-t	0.710074

<b>95% UCL (Adjusted for Skewness)</b>	
Adjusted-CLT	0.72214
Modified-t	0.712691

<b>95% Non-parametric UCL</b>	
CLT	0.705359
Jackknife	NA
Standard Bootstrap	0.70288
Bootstrap-t	0.731364
Chebyshev (Mean, Std)	0.815391

<b>Summary Statistics for ln()</b>	
Minimum	-0.65393
Maximum	-0.01005
Mean	-0.47259
Standard Deviation	0.219413
Variance	0.048142

<b>Goodness-of-Fit Results</b>	
Distribution Recommended	Neither
Distribution Used	Neither

<b>Estimates Assuming Lognormal Distribution</b>	
MLE Mean	0.638572
MLE Standard Deviation	0.141815
MLE Median	0.623385
MLE Coefficient of Variation	0.222081

MVUE Estimate of Mean	0.636622
MVUE Estimate of Std. Dev.	0.140007
MVUE Estimate of SE	0.049496
MVUE Coefficient of Variation	0.219922

<b>UCL Assuming Lognormal Distribution</b>	
95% H-UCL	0.713441
95% Chebyshev (MVUE) UCL	0.852372
99% Chebyshev (MVUE) UCL	1.129105

<b>FDEP Recommended UCL to Use:</b>	
	0.815391

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

## **FDEP UCL Calculator Version 0.97**

*Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.*

### **SAMPLES 17 - 21**

Number of Samples	15	Minimum
-------------------	----	---------

SAMPLES (87 - 91) + (92 - 96)

<b>Summary Statistics for</b>	
Number of Samples	30
Number of Censored Data	13
Minimum	0.52
Maximum	8.6
Mean	1.053333
Median	0.6
Standard Deviation	1.457952
Variance	2.125623
Coefficient of Variation	1.384131
Skewness	5.100799

<b>95% UCL (Assuming Normal Data)</b>	
Student's-t	1.505614

<b>95% UCL (Adjusted for Skewness)</b>	
Adjusted-CLT	1.756121
Modified-t	1.546929

<b>95% Non-parametric UCL</b>	
CLT	1.491207
Jackknife	NA
Standard Bootstrap	1.488892
Bootstrap-t	2.650078
Chebyshev (Mean, Std)	2.213631

<b>Summary Statistics for ln()</b>	
Minimum	-0.65393
Maximum	2.151762
Mean	-0.21742
Standard Deviation	0.572354
Variance	0.327589

<b>Goodness-of-Fit Results</b>	
Distribution Recommended	Neither
Distribution Used	Neither

<b>Estimates Assuming Lognormal Distribution</b>	
MLE Mean	0.947788
MLE Standard Deviation	0.590083
MLE Median	0.804593
MLE Coefficient of Variation	0.62259

MVUE Estimate of Mean	0.937486
MVUE Estimate of Std. Dev.	0.561841
MVUE Estimate of SE	0.135632
MVUE Coefficient of Variation	0.599306

<b>UCL Assuming Lognormal Distribution</b>	
95% H-UCL	1.175586
95% Chebyshev (MVUE) UCL	1.528692
99% Chebyshev (MVUE) UCL	2.287009

<b>FDEP Recommended UCL to Use:</b>	
	2.213631

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

## FDEP UCL Calculator Version 0.97

**SAMPLES (32 - 36) + (37 - 41)**

Number of Samples	30	Minimum	<b>ln()</b> -0.67334
Number of Censored Data	19	Maximum	0.693147
Minimum	0.51	Mean	-0.51207
Maximum	2	Standard Deviation	0.293618
Mean	0.634	Variance	0.086211
Median	0.54		
Standard Deviation	0.295689	<b>Goodness-of-Fit Results</b>	
Variance	0.087432	Distribution Recommended	Neither
Coefficient of Variation	0.466386	Distribution Used	Neither
Skewness	3.927584		Skewness



**FDEP UCL Calculator Version 0.97**

**8/4/05**

*Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.*

**SAMPLES 42 - 46**

<b>Summary Statistics for</b>	
Number of Samples	15
Number of Censored Data	9
Minimum	1.1
Maximum	1.5
Mean	1.014667
Median	1.08
Standard Deviation	0.320131
Variance	
Coefficient of Variation	0.315504
Skewness	-1.67021

<b>95% UCL (Assuming Normal Data)</b>	
Student's-t	NA

<b>95% UCL (Adjusted for Skewness)</b>	
Adjusted-CLT	NA
Modified-t	NA

<b>95% Non-parametric UCL</b>	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

<b>95% Bounding Method UCL</b>	
Bounding (Max)	1.408757
Bounding (1/2 DL)	1.060884

<b>Summary Statistics for</b>	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

<b>Goodness-of-Fit Results</b>	
Distribution Recommended	NA
Distribution Used	Neither

<b>Estimates Assuming Lognormal Distribution</b>	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA

MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

<b>UCL Assuming Lognormal Distribution</b>	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

<b>FDEP Recommended UCL to Use:</b>	
	1.408757

PROUCL 2.1      NA

Note: These estimates are valid ONLY if samples are random and representative.

**FDEP UCL Calculator Version 0.97**

**8/4/05**

*Note: Results reflect censored parameter estimations based on distributional assumptions.*

**SAMPLES (107 - 111 + 13) + (147 - 151 + 12) + (112 - 116)**

**Censor Estimated Statistics for**

Number of Samples	36
Number of Censored Data	21
Minimum Non-censored	0.68
Maximum	4.9
Mean	NA
Median	NA
Standard Deviation	NA
Variance	NA
Coefficient of Variation	NA
Skewness	NA

**95% UCL (Assuming Normal Data)**

Student's-t	NA
-------------	----

**95% UCL (Adjusted for Skewness)**

Adjusted-CLT	NA
Modified-t	NA

**95% Non-parametric UCL**

CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	1.852859

**Censor Estimated Statistics for ln()**

Minimum	-0.65393
Maximum	1.589235
Mean	-0.26131
Standard Deviation	0.817216
Variance	0.667842
Fit	0.960234

**Goodness-of-Fit Results**

Distribution Recommended	Lognormal
Distribution Used	Lognormal

**Estimates Assuming Lognormal Distribution**

MLE Mean	1.07531
MLE Standard Deviation	1.048096
MLE Median	0.770041
MLE Coefficient of Variation	0.974692
MVUE Estimate of Mean	1.045548
MVUE Estimate of Std. Dev.	0.92825
MVUE Estimate of SE	0.235863
MVUE Coefficient of Variation	0.887812

**UCL Assuming Lognormal Distribution**

95% H-UCL	1.46114
95% Chebyshev (MVUE) UCL	2.073652
99% Chebyshev (MVUE) UCL	3.392362

**FDEP Recommended UCL to Use:**

1.46114

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

**FDEP UCL Calculator Version 0.97**

**8/4/05**

*Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.*

**SAMPLES 127 - 131 + 14**

<b>Summary Statistics for</b>	
Number of Samples	18
Number of Censored Data	12
Minimum	1.08
Maximum	9.9
Mean	1.477778
Median	1.06
Standard Deviation	2.110095
Variance	
Coefficient of Variation	1.427884
Skewness	4.186511

<b>95% UCL (Assuming Normal Data)</b>	
Student's-t	NA

<b>95% UCL (Adjusted for Skewness)</b>	
Adjusted-CLT	NA
Modified-t	NA

<b>95% Non-parametric UCL</b>	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

<b>95% Bounding Method UCL</b>	
Bounding (Max)	3.645694
Bounding (1/2 DL)	3.371145

<b>Summary Statistics for</b>	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

<b>Goodness-of-Fit Results</b>	
Distribution Recommended	NA
Distribution Used	Neither

<b>Estimates Assuming Lognormal Distribution</b>	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA

MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

<b>UCL Assuming Lognormal Distribution</b>	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

<b>FDEP Recommended UCL to Use:</b>	
	3.645694

PROUCL 2.1      NA

Note: These estimates are valid ONLY if samples are random and representative.

## FDEP UCL Calculator Version 0.97

Note: Results reflect censored parameter estimations based on distributional assumptions.

### SAMPLES 117 - 121

		<b>ln()</b>	
Number of Samples	15	Minimum	-0.65393
Number of Censored Data	6	Maximum	1.589235
Minimum Non-censored	0.63	Mean	-0.19181
Maximum	4.9	Standard Deviation	0.879209
Mean	NA	Variance	0.773009
Median	NA	Fit	0.970216
Standard Deviation	NA	<b>Goodness-of-Fit Results</b>	
Variance	NA	Distribution Recommended	Lognormal
Coefficient of Variation	NA	Distribution Used	Lognormal
Skewness	NA		

### 95% UCL (Assuming Normal Data)

### Estimates Assuming Lognormal Distribution

Student's-t Tc 0.04    2.88 0 TD 0.854849CL (AssumW n BT 56.64 499.08 T q 303.224 705.72 46.92 10.92 re 48 on Tw '64 2

# FDEP UCL Calculator Version 0.97

SAMPLES 122 - 126

Number of Samples	14
Number of Censored Data	6
Minimum	0.52
Maximum	2.1
Mean	0.994286
Median	0.71
Standard Deviation	0.595738
Variance	0.354903
Coefficient of Variation	0.599161
Skewness	1.09409

### 95% UCL (Assuming Normal Data)

Student's-t	1.276249
-------------	----------

### 95% UCL (Adjusted for Skewness)

Adjusted-CLT	1.305952
Modified-t	1.284009

### 95% Non-parametric UCL

CLT	1.256199
Jackknife	Distribution Used

	<b>ln()</b>
Minimum	-0.65393
Maximum	0.741937
Mean	-0.15028
Standard Deviation	0.536365
Variance	0.287687

### Goodness-of-Fit Results

Distribution Recommended	Neither
Distribution Used	Neither

### Estimates Assuming Lognormal Distribution

MLE Mean	0.993587
MLE Standard Deviation	0.573654
MLE Median	0.860469
MLE Coefficient of Variation	0.577356

MVUE Estimate of Mean	0.974216
MVUE Estimate of Std. Dev.	0.529433
MVUE Estimate of SE	0.18681
MVUE Coefficient of Variation	0.543445

Neite94mT0 TD 0.Tj 147.96 0 TD -0.0011 Tc 0 Tw (Neithe



**FL-UCL DATA SHEETS FOR BAP IN OFF-SITE SOIL**

**FDEP UCL Calculator Version 0.97**

**8/4/05**

*Note: Results reflect censored parameter estimations based on distributional assumptions.*

**SAMPLES 62 - 66**

**Censor Estimated Statistics for**

Number of Samples	15
Number of Censored Data	6
Minimum Non-censored	0.09
Maximum	0.95
Mean	0.250283
Median	0.22
Standard Deviation	0.391029
Variance	0.152904
Coefficient of Variation	1.56235
Skewness	1.062372
Fit	0.973317

**95% UCL (Assuming Normal Data)**

Student's-t	0.42811
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**95% UCL (Adjusted for Skewness)**

Adjusted-CLT	0.439098
Modified-t	0.431655

**95% Non-parametric UCL**

CLT	0.416367
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	0.651152

**Censor Estimated Statistics for ln()**

Minimum	-2.79688
Maximum	-0.05129
Mean	0.250283
Standard Deviation	0.391029
Variance	0.152904

**Goodness-of-Fit Results**

Distribution Recommended	Normal
Distribution Used	Normal

**Estimates Assuming Lognormal Distribution**

MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA
MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

**UCL Assuming Lognormal Distribution**

95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

**FDEP Recommended UCL to Use:**

0.42811

PROUCL 2.1      NA

Note: These estimates are valid ONLY if samples are random and representative.



## FDEP UCL Calculator Version 0.97

**SAMPLES 67 - 71**

Number of Samples	15	Minimum	<b>ln()</b> -2.76462
Number of Censored Data	4	Maximum	0.530628
Minimum	0.063	Mean	-1.96703
Maximum	1.7		

## FDEP UCL Calculator Version 0.97

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

### SAMPLES 27 -31

Number of Samples	15	Minimum	NA
Number of Censored Data	10	Maximum	NA
Minimum	0.134	Mean	NA
Maximum	0.39	Standard Deviation	NA
Mean	0.146733	Variance	NA
Median	0.13		
Standard Deviation	0.068574	<b>Goodness-of-Fit Results</b>	
Variance		Distribution Recommended	NA
Coefficient of Variation	0.467336	Distribution Used	Neither
Skewness	3.622402		
		<b>Estimates Assuming Lognormal Distribution</b>	
<b>95% UCL (Assuming Normal Data)</b>		MLE Mean	NA
Student's-t	NA	MLE Standard Deviation	NA
		MLE Median	NA
<b>95% UCL (Adjusted for Skewness)</b>		MLE Coefficient of Variation	NA
Adjusted-CLT	NA		
Modified-t	NA	MVUE Estimate of Mean	NA
		MVUE Estimate of Std. Dev.	NA
<b>95% Non-parametric UCL</b>		MVUE Estimate of SE	NA
CLT	NA		

**FDEP UCL Calculator Version 0.97**

**8/4/05**

Note: Bounding estimates are worst case 95% UCLs based on the Chebyshev (mean, std) method.

**SAMPLES 97 - 101 + 7**

<b>Summary Statistics for</b>	
Number of Samples	18
Number of Censored Data	14
Minimum	0.152
Maximum	0.35
Mean	0.146778
Median	0.13
Standard Deviation	0.05764
Variance	
Coefficient of Variation	0.392705
Skewness	2.877788

<b>95% UCL (Assuming Normal Data)</b>	
Student's-t	NA

<b>95% UCL (Adjusted for Skewness)</b>	
Adjusted-CLT	NA
Modified-t	NA

<b>95% Non-parametric UCL</b>	
CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	NA

<b>95% Bounding Method UCL</b>	
Bounding (Max)	0.209652
Bounding (1/2 DL)	0.169696

<b>Summary Statistics for</b>	
Minimum	NA
Maximum	NA
Mean	NA
Standard Deviation	NA
Variance	NA

<b>Goodness-of-Fit Results</b>	
Distribution Recommended	NA
Distribution Used	Neither

<b>Estimates Assuming Lognormal Distribution</b>	
MLE Mean	NA
MLE Standard Deviation	NA
MLE Median	NA
MLE Coefficient of Variation	NA

MVUE Estimate of Mean	NA
MVUE Estimate of Std. Dev.	NA
MVUE Estimate of SE	NA
MVUE Coefficient of Variation	NA

<b>UCL Assuming Lognormal Distribution</b>	
95% H-UCL	NA
95% Chebyshev (MVUE) UCL	NA
99% Chebyshev (MVUE) UCL	NA

<b>FDEP Recommended UCL to Use:</b>	
	0.209652

PROUCL 2.1      NA

Note: These estimates are valid ONLY if samples are random and representative.

**FDEP UCL Calculator Version 0.97**

8/4/05

*Note: Results reflect censored parameter estimations based on distributional assumptions.***SAMPLES 142 - 146 + 11****Censor Estimated Statistics for**

Number of Samples	18
Number of Censored Data	8
Minimum Non-censored	0.086
Maximum	1
Mean	NA
Median	NA
Standard Deviation	NA
Variance	NA
Coefficient of Variation	NA
Skewness	NA

**95% UCL (Assuming Normal Data)**

Student's-t	NA
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**95% UCL (Adjusted for Skewness)**

Adjusted-CLT	NA
Modified-t	NA

**95% Non-parametric UCL**

CLT	NA
Jackknife	NA
Standard Bootstrap	NA
Bootstrap-t	NA
Chebyshev (Mean, Std)	0.483386

**Censor Estimated Statistics for ln()**

Minimum	-2.74887
Maximum	0
Mean	-2.06353
Standard Deviation	1.118124
Variance	1.250201
Fit	0.968322

**Goodness-of-Fit Results**

Distribution Recommended	Lognormal
Distribution Used	Lognormal

**Estimates Assuming Lognormal Distribution**

MLE Mean	0.2373
MLE Standard Deviation	0.374531
MLE Median	0.127005
MLE Coefficient of Variation	1.578304
MVUE Estimate of Mean	0.217227
MVUE Estimate of Std. Dev.	0.264759
MVUE Estimate of SE	0.080905
MVUE Coefficient of Variation	1.21881

**UCL Assuming Lognormal Distribution**

95% H-UCL	0.521133
95% Chebyshev (MVUE) UCL	0.569883
99% Chebyshev (MVUE) UCL	1.022222

**FDEP Recommended UCL to Use:**

0.521133

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.

**FDEP UCL Calculator Version 0.97**

**FL-UCL DATA SHEETS FOR LEAD IN OFF-SITE SOIL**

SAMPLES 132 - 136

**Summary Statistics for**

Number of Samples	15
Number of Censored Data	1
Minimum	1.1
Maximum	570
Mean	124.8733
Median	47
Standard Deviation	152.3404
Variance	23207.6
Coefficient of Variation	1.21996
Skewness	1.920156

**95% UCL (Assuming Normal Data)**

Student's-t	194.1529
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**95% UCL (Adjusted for Skewness)**

Adjusted-CLT	210.4184
Modified-t	197.4031

**95% Non-parametric UCL**

CLT	189.578
Jackknife	NA
Standard Bootstrap	189.2695
Bootstrap-t	236.5858
Chebyshev (Mean, Std)	296.3308

**Summary Statistics for ln()**

Minimum	0.09531
Maximum	6.345636
Mean	3.71537
Standard Deviation	2.012103
Variance	4.048558

**Goodness-of-Fit Results**

Distribution Recommended	Neither
Distribution Used	Neither

**Estimates Assuming Lognormal Distribution**

MLE Mean	310.9553
MLE Standard Deviation	2333.506
MLE Median	41.07378
MLE Coefficient of Variation	7.504316
MVUE Estimate of Mean	223.702
MVUE Estimate of Std. Dev.	656.2903
MVUE Estimate of SE	135.8061
MVUE Coefficient of Variation	2.93377

**UCL Assuming Lognormal Distribution**

95% H-UCL	4023.826
95% Chebyshev (MVUE) UCL	815.6672
99% Chebyshev (MVUE) UCL	1574.959

**FDEP Recommended UCL to Use:**

296.3308

PROUCL 2.1 NA

Note: These estimates are valid ONLY if samples are random and representative.