Alluvial Aquifer Vibrating Wire Piezometers

December 2002

Prepared for U.S. Department of Energy Grand Junction Office Grand Junction, Colorado

Work Performed Under DOE Contract Number DE–AC13–02GJ79491 Task Order Number ST03–104

U.S. Department of Energy–Grand Junction Office

<u></u>	Calculation Cover Sheet
Calc. No. <u>N</u>	Moab-12-2002-03-08-00 Discipline: <u>Hydrogeology</u> Number of Sheets: <u>15</u>
Project:	Moab Ground Water
Site:	Moab, Utah
Feature:	Alluvial Aquifer Vibrating Wire Piezometers
Sources o	f Data: Field Investigations 2002
Sources o	of Formulae & References:
Geokon use	rs manual for 4500 piezometers.
McRae, J.B. manufacture pp 283-293.	. and T. Simmonds. 1991, "Long-term stability of vibrating wire instruments: one er's perspective," <i>Field Measurements in Geotechnics</i> , Serum (ed.) Balkema, Rotterdam,
Preliminar	ry Calc. Final Calc. Supersedes Calc. No
Rev. No.	Revision Calculation by Date Checked by Date Approved by Date

1.0 Problem Statement

Total hydraulic head in the alluvial aquifer beneath the Moab Project Site adjacent to the Colorado River is needed to predict ground water flow rate and estimate flow quantities. Vibrating wire pore pressure transducers or piezometers were installed at three "nest" locations near the Colorado River to determine the pressure component of the total head. Three piezometers were installed in a vertical profile at each nest location.

2.0 Method of Solution

- Define location of individual piezometers.
 - Determine the elevation of each installation and discuss potential errors of recorded installation depths.
 - Compute elevation head.
- Discuss operation of vibrating wire piezometers.
 - Method of reading pressure with a vibrating wire piezometers including temperature correction.
 - Data collection with Campbell Scientific CR10X data logger and AVW components
- Application of zero correction.
- Acquire pressure readings from piezometers.
- Discuss conversion of pressure readings to hydraulic head expressed in feet of fresh water.

3.0 Assumptions

- 1. Vibrating wire piezometers exhibit minimal zero drift with time (McRae, J.B. and T. Simmonds 1991).
- 2. Installation depth (elevation) of vibrating wire piezometers is accurately known.

4.0 Solution

Ground water flow is expressed by Darcy's Law, where discharge of a volume of water Q, is directly proportional to the cross-sectional area of flow A, and drop in total hydraulic head ΔH , and inversely proportional to the length of flow L:

$$Q \propto A \frac{\Delta H_t}{L}$$

Total hydraulic head is the sum of elevation head and pressure head, i.e. $(H_t = h_p + z)$, where

 H_t = total head (ft), h_p = pressure head (ft), z = elevation head (ft).

Elevation head expresses the gravitational force applied to the flow and is computed as a distance above a given datum. The datum used is the North American Vertical Datum 1988, (NAVD 88), horizontal positions specified with Moab 1983, Utah Central Zone, modified state plane coordinate system. Elevation head is computed by subtracting the piezometer installation depth from a surveyed ground surface elevation. Three piezometers are positioned in a vertical profile at each location, denoted as Moab 2, Moab 3, and Moab 4. Horizontal location of

piezometer nests is shown on Figure 1. Recorded piezometer installation depths are shown on copies of original logs of each boring which are provided in Attachment 1.

Installation depths were verified by measuring length of cable extending out of the ground at each piezometer nest location. These measured depths are subtracted from the supplied cable length to compute an apparent installation depth. Differences were found in a few instances between the recorded installation depth and the apparent installation depth. Table 1 summarizes both apparent and recorded installation depths.

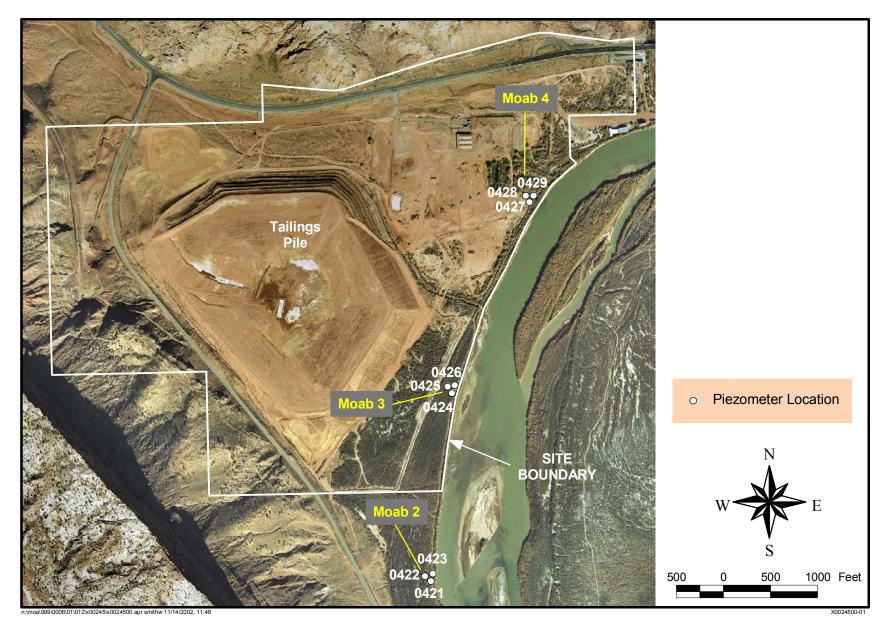
Piezometer Nest	Piezometer No.	Supplied Cable Length (ft)	Measured Cable Length (ft)	Apparent Installation Depth (ft)	Recorded Installation Depth (ft)
Moab 2	421	29	6.8	22.2	20
N6661845	422	69	30.0	39.0	50
E2185883	423	110	28.9	81.1	71
Moab 3	424	29	8.2	20.8	20
N6663845	425	69	11.3	57.7	55
E2186108	426	110	15.5	94.5	87
Moab 4	427	29	9.7	19.3	20
N6665870	428	69	22.6	46.4	55
E2186931	429	110	30.1	79.9	80

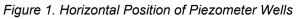
The actual installation is assumed to be the lesser of the apparent installation depth and the recorded installation depth because an apparent installation depth cannot be greater than the recorded depth. This is because the recorded depth is based on the depth of the hole drilled, which is determined by the length of drill steel used to advance the boring. However, the apparent depth can be greater than the recorded depth if slack cable was caught in the boring during backfilling operations. Thus, the actual installation depths are taken as the lesser between the recorded and apparent depth. Actual installation elevations used in this calculation are shown in Table 2 and on edited copies of boring logs provided in Attachment 2.

Table 2,	Elevation of Piezometers
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Piezometer Nest	Piezometer No.	Ground Elevation (NAVD 88, ft)	Actual Installation Depth (ft)	Piezometer Elevation (NAVD 88, ft)
Moab 2	421	3964.0	20	3944.0
N6661845	422	3964.0	39	3925.0
E2185883	423	3964.0	71	3893.0
Moab 3	424	3967.4	20	3947.4
N6663845	425	3967.4	55	3912.4
E2186108	426	3967.4	87	3880.4
Moab 4	427	3968.3	19.3	3949.0
N6665870	428	3968.3	46.4	3921.9
E2186931	429	3968.3	79.9	3888.4

Pressure heads are computed from pressure measurements taken by the vibrating wire sensor. Figure 2 shows the components of the vibrating wire sensor.





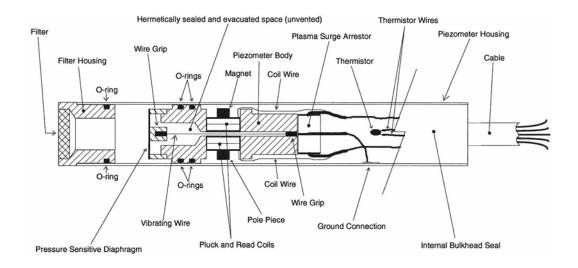


Figure 2 Geokon Series 4500 Vibrating Wire Piezometer

Fluid pressures are measured by monitoring the frequency of a vibrating wire that is attached to the pressure sensitive diaphragm. The diaphragm is open to fluid and is protected from sediment with a 50-micrometer filter. A magnetic coil plucks the wire at a specified frequency and time to excite the wire. The wire vibrates at a resonant frequency dictated by the tension in the diaphragm, which depends on the fluid pressure. An increase in fluid pressure on the diaphragm will decreases the wire tension and thus the frequency of the vibrating wire. Conversely, a decrease in fluid pressure will increase wire tension and increase the resonant frequency of the vibrating wire.

Vibration of the wire is a function of the temperature. The temperature of the piezometer instrument is measured via thermistors located within the instrument. This allows the pressure reading to be compensated for temperature affects.

The vibration frequency is converted to a pressure through an empirical calibration. An initial frequency at zero gauge pressure is measured at a known temperature and atmospheric condition. Subsequent frequency readings are computed based on this initial zero reading through calibration constants. Both initial readings and calibration coefficients are provided by the manufacturer. The manufacturer recommends updating initial readings at the site prior to installation to account for local conditions. This was not done at the time of installation for the nine piezometers listed here because of delays in shipment of all equipment. Therefore, to compensate for the manufacturer zero readings to site readings, all recorded frequencies are multiplied by an adjustment factor of 1.008, or increased by 0.8 percent. This factor is determined from other vibrating wire piezometers installed at different locations on the site.

Reading from the vibrating wire piezometers are recorded via a Campbell Scientific CR10X datalogger/controller and an electronic interface that applies a series of frequencies to the wire and transmits the resonant frequency back to the datalogger. Recorded frequencies are converted to pressures through calculation of the relationship between the frequency and pressure by the datalogger.

Pressure readings from all vibrating wire piezometer nests are shown on spreadsheets presented in Attachment 3.

Pressure readings are converted to feet of equivalent fresh water heads by:

$$h_p = p (lb/in^2) \times \left(\frac{144 in^2/ft^2}{\gamma lb/ft^3}\right)$$

where

 h_p = pressure head (ft)

p = the fluid pressure in pounds per square inch.

 γ = unit weight of fresh water (62.4 pounds per cubic foot).

Elevation head, pressure head and resulting total heads are computed on spreadsheets provided in Attachment 3.

5.0 Results

Figures 3, 4, and 5 present plots of total head with respect to time for installation locations Moab 2, Moab 3 and Moab 4, respectively. Shown on Figures 6, 7, and 8 are total head with respect to elevation for locations Moab 2, Moab 3 and Moab 4, respectively. Water flows from a higher total head to a lower total head. The former figures indicate the magnitude of fluctuation in total heads, while the later figures indicate direction of ground water flow in the vertical sense. Figures 9, 10, and 11 present plots of ground water temperatures with respect to elevation for locations Moab 2, Moab 3 and Moab 4, respectively.

Reviewing Figure 6 showing total head with respect to elevation at Moab 2 indicates an apparent sink at an approximate elevation of 3,925 ft, based on the reading from piezometer 422. This sink, or a lower total head at this elevation, indicates flow to this elevation. This may be due to vegetation affects. Tamarisk in the immediate region of this installation may be drawing water from this depth or the sink could be signifying deep flow into the underlying Paradox Formation salts.

Greater total head in the ground water compared to the river indicating that the river is gaining water from the ground water at this location (Moab 2). The temperature plot at this location indicates a higher temperature near the surface suggesting a possible influence of the river.

Horizontal flow, or smaller contribution of a vertical flow component at Moab 3 appears to exist. The plot of total head with respect to elevation shown on Figure 7 is more-or-less vertical indicating little tendency for vertical flow. A slightly higher total head than the river here also indicates a gaining river system. Higher water temperature toward the surface as shown on Figure 10 at Moab 3 also suggests the influence of the river.

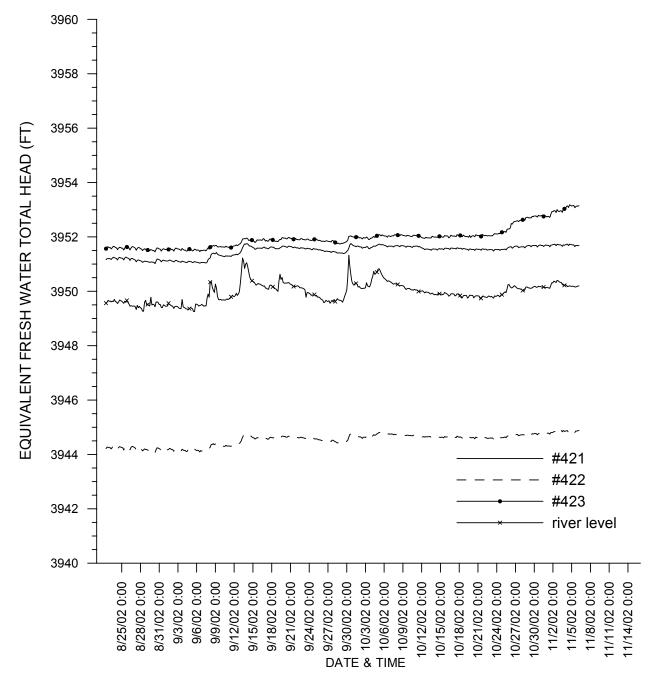


Figure 3. Moab 2, Vibrating Wire Piezometers

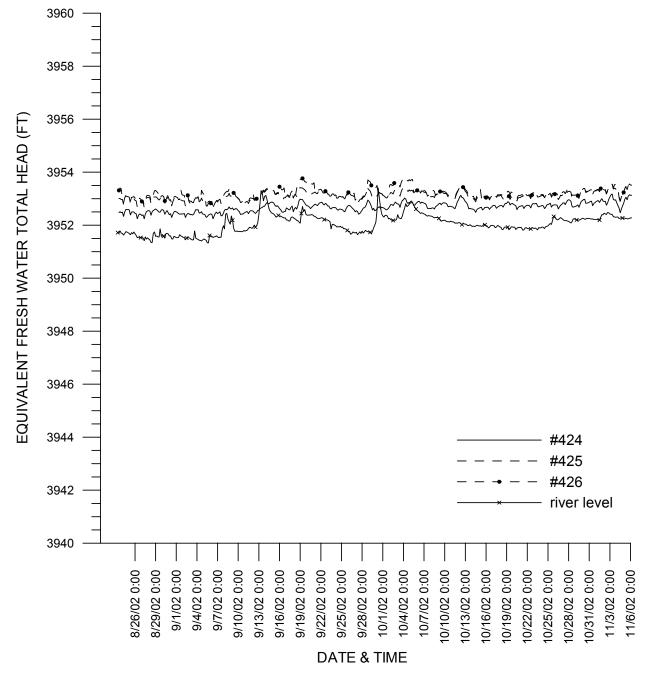


Figure 4. Moab 3, Vibrating Wire Piezometers

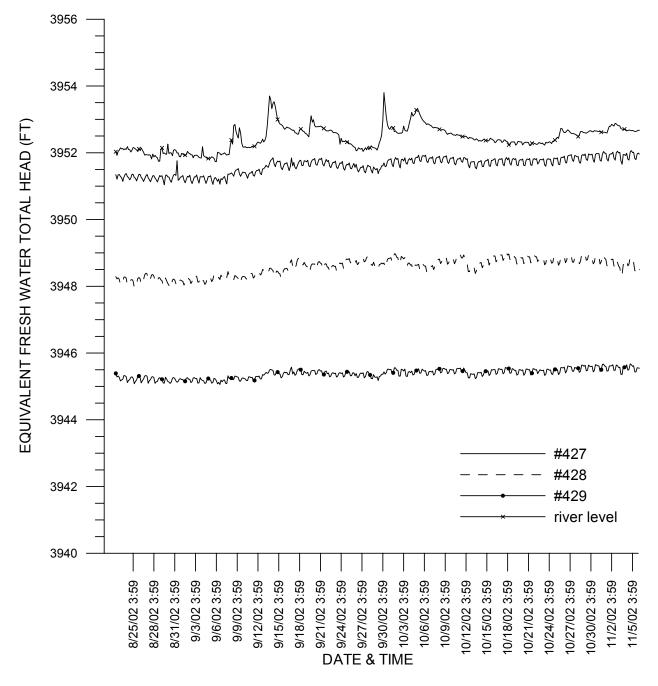
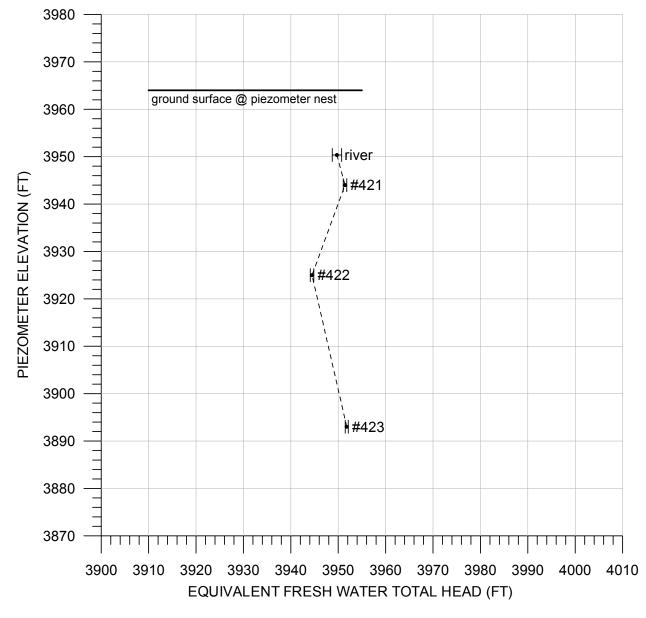
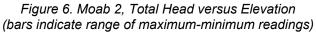
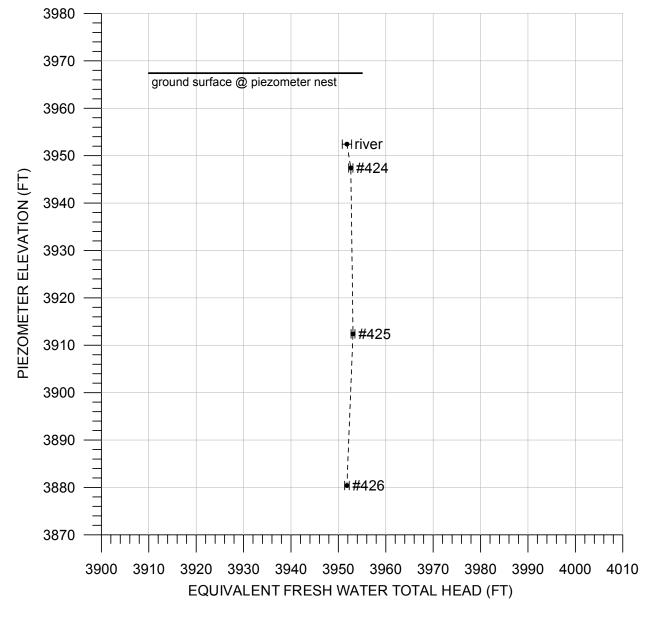
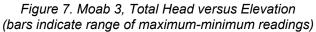


Figure 5. Moab 4, Vibrating Wire Piezometers









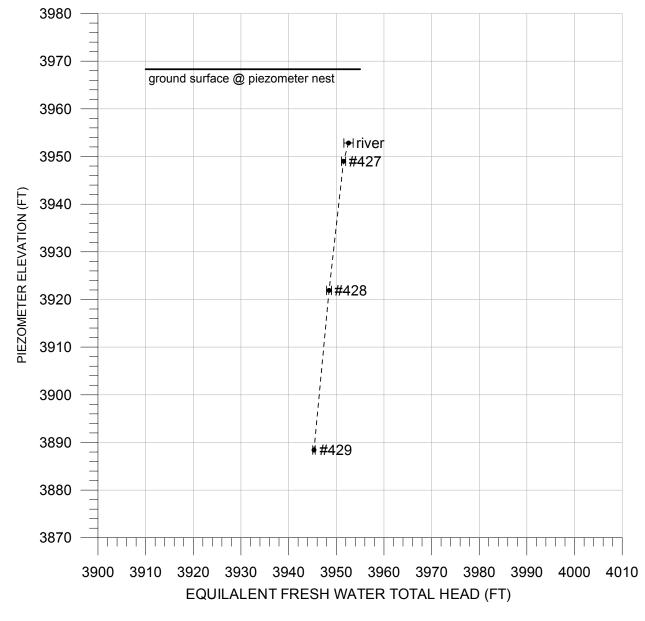


Figure 8. Moab 4, total Head versus Elevation (bars indicate range of maximum-minimum readings)

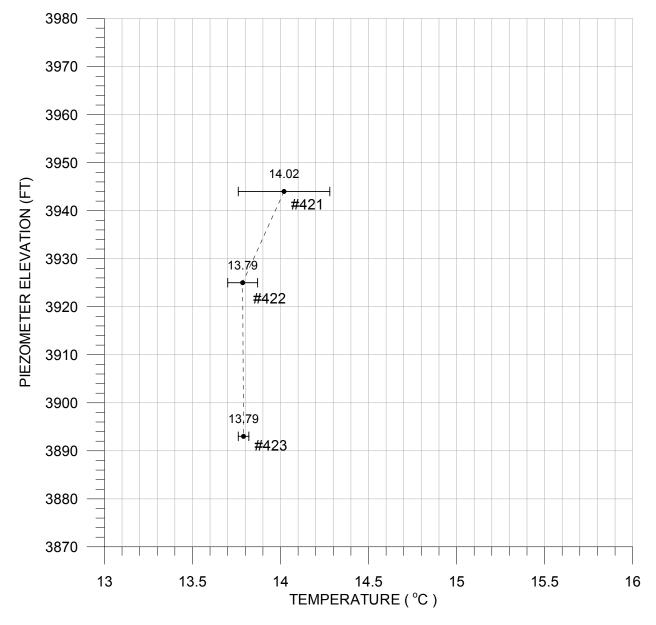


Figure 9. Moab 2, Ground Water Temperature versus Elevation

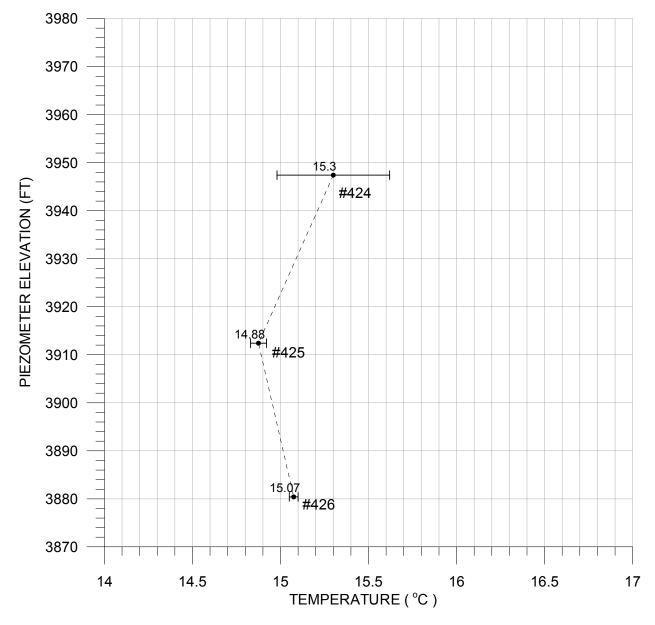


Figure 10. Moab 3, Ground Water Temperature versus Elevation

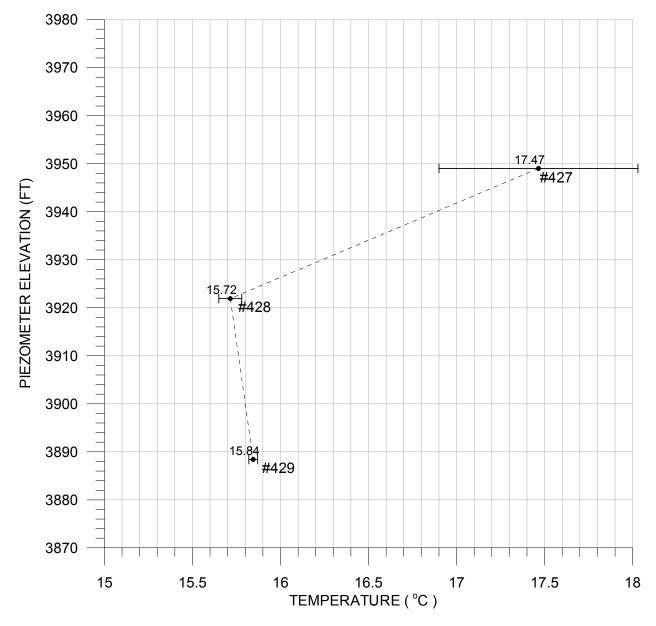


Figure 11. Moab 4, Ground Water Temperature versus Elevation

A loosing river condition is shown at Moab 4 on Figure 8. Total head for the river is slightly higher than the total heads of the piezometers. This head condition reveals a river recharging the ground water regime here. A decreasing trend in total head is evident through all piezometer installations supporting these recharging phenomena. Further support of a loosing river is provided by the temperature with respect to depth plot at this location. A dramatic decrease in ground water temperature, approximately 2° C occurs from an elevation of approximately 3,950 ft to 3,922 ft. This suggests a strong influence of river surface water.

6.0 Conclusions and Recommendations

Subsequent paragraphs discuss possible interpretations of the data presented. Total heads computed from the vibrating wire piezometers should be considered in the ground water flow model developed for the Moab Project Site. Since the heads vary with time, critical times of the year should be identified from these readings in conjunction with other head readings from openhole standpipes to determine critical conditions. Vibrating wire piezometers data can provide insight into trends of vertical flow as groundwater approaches the river.

Data from the vibrating wire piezometers indicate that for the times recorded,

- the Colorado River adjacent to the Moab Project Site is loosing water to the ground water regime at Moab 4, is in equilibrium with the ground water regime at Moab 3, and is gaining water from the ground water regime at Moab 2.
- flow beneath the Colorado River cannot be determined solely from vibrating wire piezometer data.

Errors introduced by an incorrect zero reading for wire frequencies will produce errors in calculated pressure output of less than 1 pound per square inch (psi); an equivalent 2.3 ft of fresh water. Errors in actual installation depth will produce errors in the total head calculation equal to the error in actual installation depth. After measuring the cable extending out of the ground at each piezometer location, major errors in installation depth have been removed. Thus, trends presented herein are correct and can be applied.

Attachment 1

Original Boring Logs at Moab 2, Moab 3, and Moab 4

MACTEC-ERS 2597 B 3/4 Road Grand Junction, Colorado 8150) 3	Borehole Summary Page 1 of 2
Facility MOAB	Site Mon	3 WELL NUMBER 421, 422, 4 423
Ground Elev. (Ft.) 3964.2 (est) Bit / Auger Size _ 7	(est.) (est.) (Location (N) 2185880 (E) 6663964,2
Drilling Contractor <u>CONETEC</u>		Hole Depth (Ft) 74 Well Depth (Ft) Piezometer depthes 71 50
Blank Well Casing Well Screen Sump/End Cap Lower Sand Pack Upper Sand Pack	Vol. (ft ³ / gal)	Interval (Ft.) Well Diameter to No. of Completions to Stick-Up Height (Ft) to Slot Size to Ito Ito Ito
Locking Cover Installed Y/N Drilling Method <u>Hollow</u> - sten Date Drilled <u>6-19-02</u> Dat Sampler(s) Driller : B	e Developed	Sampling Method Direct Push
Depth ^a Blows / PID Sample No.; (FT) 6* ppm Interval	WELL GRAPHIC CONSTRUCTION LOG	DESCRIPTION
		Required Information: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated); Unified Soil Classification.
0 5 - 5 - 5 -		0-7 ft Pale Bwn (104R 6/3) Silt (ML) Loose, dry 7-1117ft Light Yellow Bwn (104R 6/4) SILTY FINE SAND (SM), Loose, Moint
10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -		17-68 Burn (10 y R 4/3) Fine to Med Sand (SP) w/ out (254) gively
25 - Rellets - Ra-		Sample# 421-20 collected as water sample w/ hydro punch. Donsity, Sp. Cond, U, NH3, & Cl Sand grains are subanjalar. Geokom Wildon Wile Reportedon Model 4500 8-100 S/M 671/52 set @ 20 ft
30 - IZ - 35 - Aquingant - IZ -		
a - All depthe measured from ground level. Completed By Mark Kauts		11/3/98
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Borehole Summary MACTEC-ERS Borehole No. 421,422,423 Date 6-21-02 Page 2 of 2 2597 B 3/4 Road Grand Junction, Colorado 81503 DESCRIPTION Well Graphic PID Sample No.; Depth Blows/ Construction Log Income and (FT) 81 ppm - 1/4-inch TK30 Pel- Plug Bentonite Pellets 40. Ø ß 45 a sole partled Gaologian wher whe hermate - where \boxtimes 50 -\$/N \$7153 1 4 0003 +100-55. \boxtimes Sample 422-60 collected as water sample w/ hydropunch Analyzed for density, sp cond, 4, NH3t, CT 60 -M 65 -68 - 74 Dix Greenish Gray (Gley 1 4/1) Sandy Grave (GP) dense, saturated Y. 70-7 40 50/5 Ø 14 ft - Refused to gravel collected sample 423-73 as water sample w/ hydropunch Density, sp gravity, U, NH3t CI. NZ 45003 - 130 - SN - 671 S 16-30 sand backfill around piesometers All depths measured from ground level.

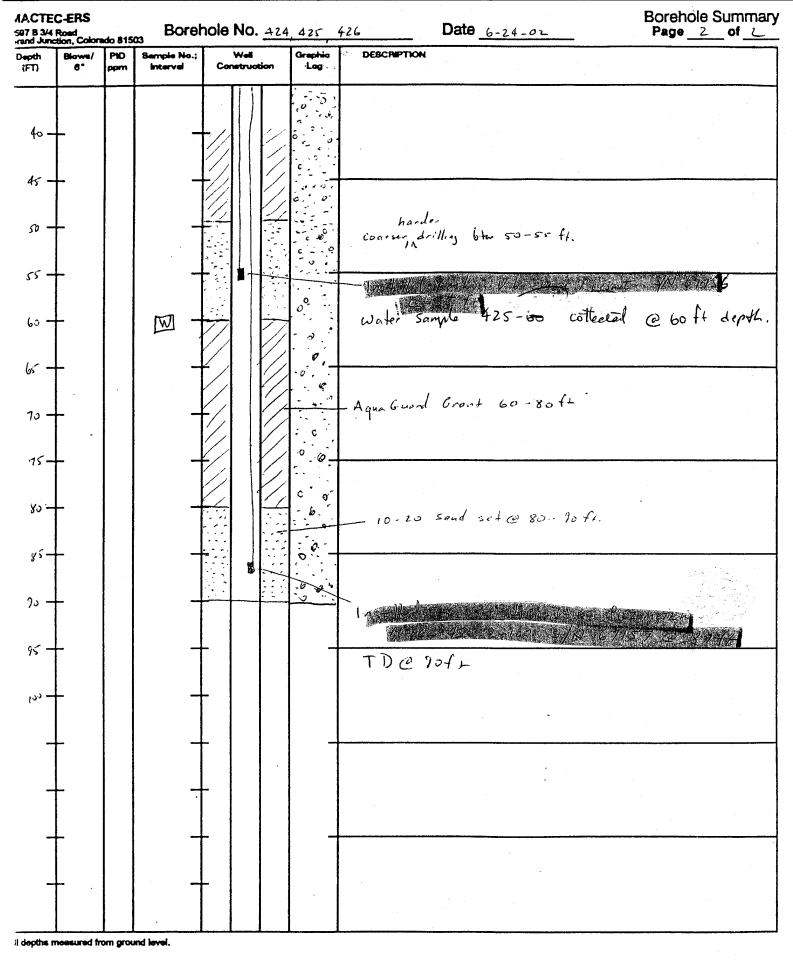
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Completed By Mark Kautsky

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MACTEC-ERS 2597 B 3/4 Road Grand Junction, Colorado 8150	3		Borehole Summary Page _ _ of
Facility <u>MOAB</u>	Site	IOAB	WELL NUMBER <u>424, 425, 476</u>
Ground Elev. (Ft.) <u>3967 (est)</u>	Bit / Auger Size		Location (N) 2186105 (est) (E) 666 3951 (est.)
Drilling Contractor CONETER			Hole Depth (Ft) Well Depth (Ft)
TYPE Surface Casing Blank Well Casing Well Screen Sump/End Cap Lower Sand Pack Upper Sand Pack Bentonite Seal Grout Concrete	Vol. (ft ³ / gal)	Interval (Ft.) to to to to to to to to to	Well Diameter No. of Completions Stick-Up Height (Ft) Slot Size Location Skotch HUNY 191 Tailing Pile
Locking Cover Installed Y / N Drilling Method Date Drilled Date Sampler(s)	Padlock No	Sampli	ing Method Auser cutture, $0-25$ ft.

Depth ⁴ (FT)	Blows / 6"	PID ppm	Sampie No.; Interval	WELL CONSTRUCTION	GRAPHIC LOG	DESCRIPTION
•						Required Information: Typical name; Munsell color; percentage sand and gravel; sorting (poor to well); grain angularity; induration or plasticity; moisture content (moist to saturated); Unified Soil Classification.
0 5			× -			0-7f+ V. Pale Bwn (10+R 7/3) Fire V. Fine Sondy S. H(ML) Dry, loose 7-95 Brown (754R 5/3) Gravelly fine sand (SP) monst loose
15	-	1				10-20 sand 15-25 ft Grading to med sond below 15 ft Driller says gravel zone at 15 ft wet below 15 ft Uniter # 424-20 Collected A sample w/ direct push Goodoon Regenetic 62 155 (S/N) set @ 20 ft
15 –		-	× ×			Goolog Personata 67155 (S/R) set 6 25 ft 25-90 fi indifferentiated souls gravel & gravely sound betwee 25 ft. m
- جو مرب		-				- ARUAGUANO GRONT 25++ - 49+1.
•			m ground level. « Kautsky			11/3/98



completed By Mark Kantsky

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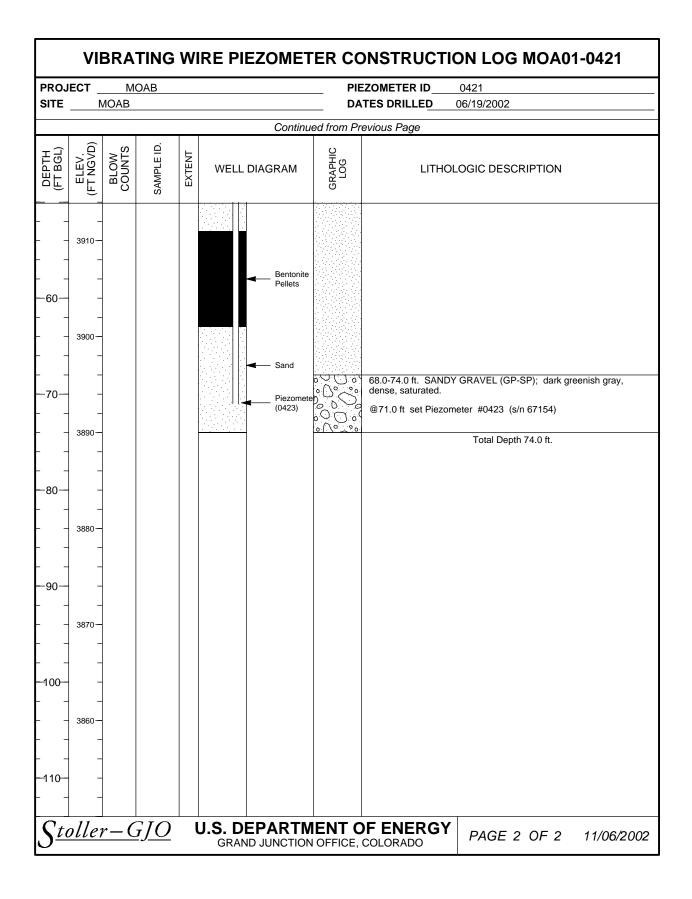
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cility _	Moab				Site <u>/</u>	1006		WELL NUMBER <u>427-428, 429</u>
ound l	Elev. (Ft.	1 <u>39</u>	68.6	Bit / Au	uger Siz	e <u> 8-</u>	inch Hollow Stem Aug.	$\begin{array}{c} \text{Well NUMBER} \underline{427 - 428}, \ 429 \\ est. \\ est. \\ est. \\ \text{Location (N)} \\ \underline{2186932} \text{(E)} \\ \underline{6663968} \\ \end{array}$
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illing N	Aethod _	Hall	on stimm t	tujo-			Sampling I	Method
	(s)		Date				Remarks Beg	an drilling @ 15:00 6-21-02 \$ 80 ft.
	Inst	n lled	btokon	V.brahy) Win	7,23,		7 80 (1)
epth [®] FT)	Blows / 6*	PID ppm	Sample No.; Interval	CONSTRU	_	RAPHIC LOG	DESCRIPTION	
							sand and gravel; sorting (Classification, Munsell color; percentage poor to well); grain angularity; induration ntent (moist to saturated).
0 -		·					Red (2.5 y 2 5/6) Fin 5-10 percent gr	e to med sand (SP) dry, loose w/ avel
iu —	-							
15-	-	-						tasts-below 15 ft, moist below 15 ft
20-	-	_	- 🕷 -				Water sample 427.	
<u>ک</u> خ –	-						- 4.	500-100 S/N 67158
30-	-	_				ين ري • •	Grovelly some beg No recovery	below 30 ft.
35-	-	-				°)))	,	
			n ground level rk Kaut			\	/erified By	11/3/98

Borehole Summary AACTEC-ERS Page 2 of 2 597 B 3/4 Road rand Junction, Colorado 81502 Borehole No. 427, 428 429 Date 622-02 DESCRIPTION Well Graphic Depth Blows/ PID Sample No.; 6" Interval Construction Log (FT) ppm 40 -- Bentonite Pellets. •) 9 45 l COLLS/N CTUS9 INSTATED 52-55 ft Driller reported cobbly 50 zone 70 55 . 2 Witer <u>*0</u> Sample 428-60 collected @ 60 ft. 0 60 - $\overline{\mathcal{M}}$ 1 0-0 65 -Aquaquark Gront 3 10 -75 -CET SE HA BEAK 1 Sumple Water 429 - 83 ć 11 M 80 -TD @ 80 fl 85 -90 95 -100-All depths measured from ground level. Verified By ____ Completed By Mark Kautsky

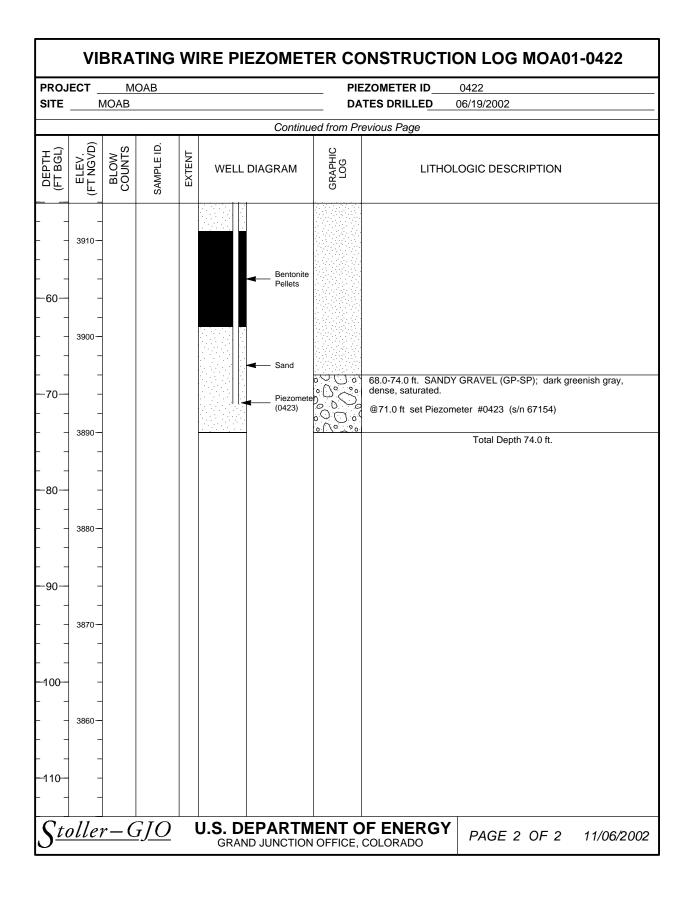
Attachment 2

Edited Boring Logs at Moab 2, Moab 3, and Moab 4

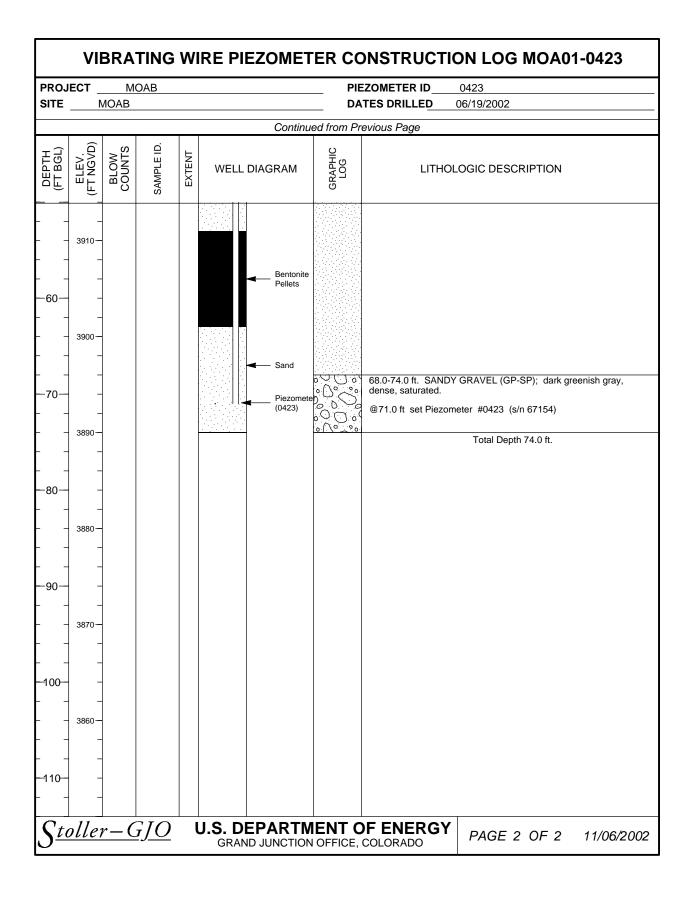
VIBRATING PROJECT MOAB LOCATION Moab, UT SITE MOAB PIEZOMETER ID 0421	NORTH COO EAST COOR	DRD. (FT) 6661845.01 DATE DRILLED 06/19/2002 RD. (FT) 2185883.08 SURFACE ELEV. (FT NGVD) 3964.00 I'H (FT) 74.00 BIT SIZE(S) (IN) 9.0		
PIEZOMETER INSTALLATION INTERVAL (FT) DRILLING METHOD HOLLOW STE START/END DEPTH: 20.0 to 20.0 20.0 WATER LEVEL (FT BGS) 11.8 on LOGGED BY Kautsky, M. PACK MATERIAL TYPE: Sand 19.0 to 25.0 REMARKS Locations 0421,0422, same borehole.				
DEPTH (FT BGL) ELEV. (FT NGVD) BLOW COUNTS SAMPLE ID.	WELL DIAGRAM	인 H 원 이 보이 LITHOLOGIC DESCRIPTION		
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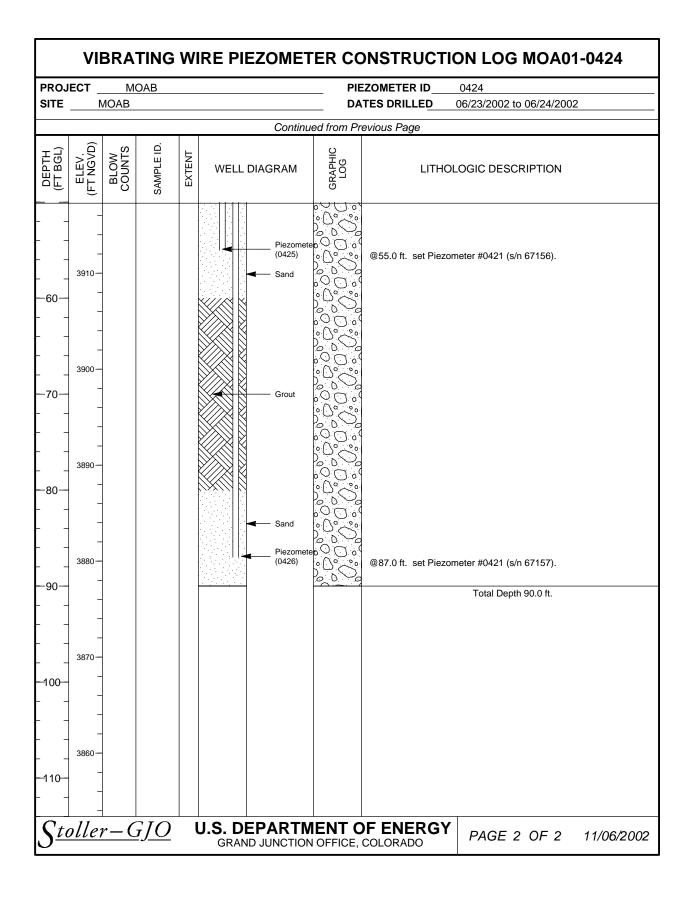
VIBRATING PROJECT MOAB LOCATION Moab, UT SITE MOAB PIEZOMETER ID 0422	NORTH COC EAST COOR	DATE DRILLED 06/19/2002 RD. (FT) 2185883.08 TH (FT) 74.00 DATE DRILLED 06/19/2002 SURFACE ELEV. (FT NGVD) 3964.00 BIT SIZE(S) (IN) 9.0
PIEZOMETER INSTA START/END DEPTH: PACK MATERIAL TYPE: Sa	39.0	EUGGED BY Kautsky, M. EEMARKS Locations 0421 0422 and 0423 in
DEPTH (FT BGL) ELEV. (FT NGVD) BLOW COUNTS SAMPLE ID.	WELL DIAGRAM	U HAVE U HOU U U U U U U U U U U U U U U U U U
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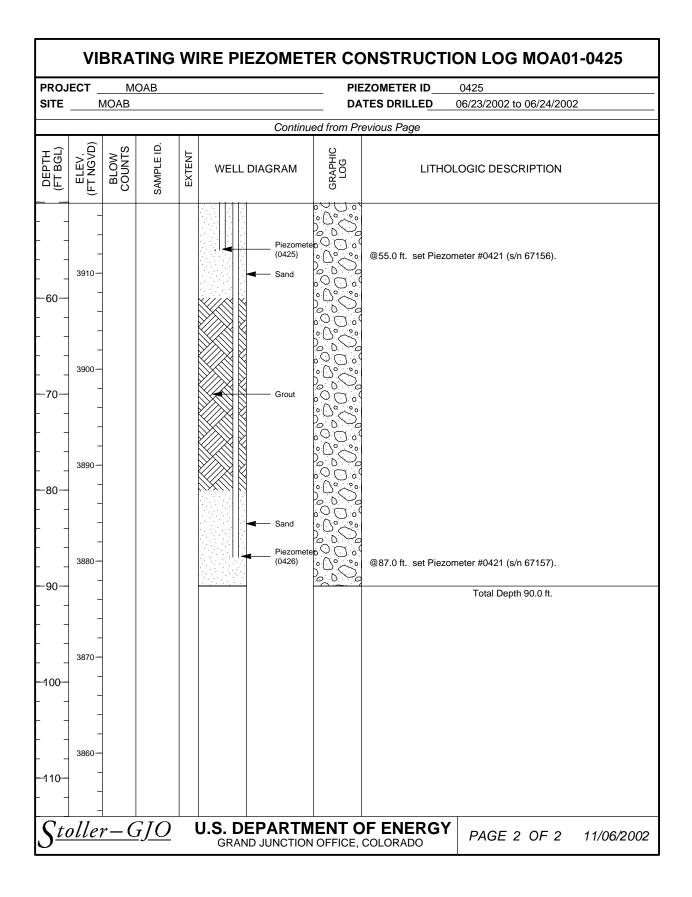
VIBRATING PROJECT MOAB LOCATION Moab, UT SITE MOAB PIEZOMETER ID 0423	NORTH C	METER CC COORD. (FT) <u>6</u> DORD. (FT) <u>21</u> EPTH (FT) <u>74.(</u>	SURFACE ELEV. (FT NGVD) 3964.00
<u>PIEZOMETER INSTA</u> START/END DEPTH: PACK MATERIAL TYPE: Sa		INTERVAL (FT) 71.0 to 71 63.0 to 74	.0 SAMPLING METHOD
DEPTH (FT BGL) ELEV. (FT NGVD) BLOW COUNTS SAMPLE ID.	WELL DIAGRA	GRAPHIC LOG	LITHOLOGIC DESCRIPTION
	Cav Mat Cav Mat Cav Cav Mat Cav Cav Mat Cav Cav Mat Pell Cav Cav Mat Pell Cav Cav Mat Pell Cav Cav Cav Mat Pell Cav Cav Cav Cav Cav Cav Cav Cav Cav Cav	nd ntonite lets uut ntonite lets vzomete 22)	 0-7.0 ft. SILT (ML); loose, dry, pale brown (10YR 6/3). 7.0-17.0 ft SILTY SAND (SM); loose, moist, light yellow brown (10YR 6/4). 17.0-68.0 ft. SAND (SP); medium sand with occasional gravel (~1%), loose, saturated below 15.0 ft. Sand grains are subangular. @ 20.0 ft. set Piezometer #0421 (s/n 67152). @ 39.0 ft. set Piezometer #0422 (s/n 67153).
<u>Stoller–GJO</u>	U.S. DEPAR GRAND JUNC	TION OFFICE,	



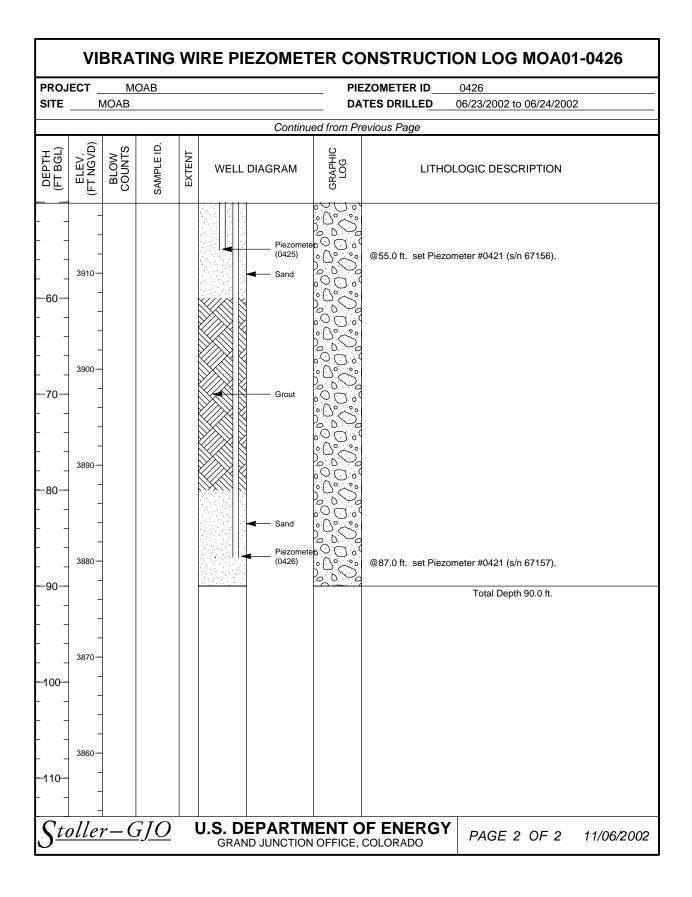
VIBRATING PROJECT MOAB LOCATION Moab, UT SITE MOAB	NORTH COORD. (FT) 6663844	SURFACE ELEV. (FT NGVD) 3967.40		
Indel Def HT (TT)				
DEPTH (FT BGL) ELEV. (FT NGVD) BLOW COUNTS SAMPLE ID.	WELL DIAGRAM	LITHOLOGIC DESCRIPTION		
	Piezometer (0424) Piezometer 0 2 2 5 0 9 Piezometer 0 2 2 5 0 9 Piezometer 0 2 0 0 2 5 0 9	.0 ft. SAND (SP); brown (7.5 YR 5/3), gravelly fine sand,		
<u>Stoller-GJO</u>	U.S. DEPARTMENT OF EI GRAND JUNCTION OFFICE, COLO			

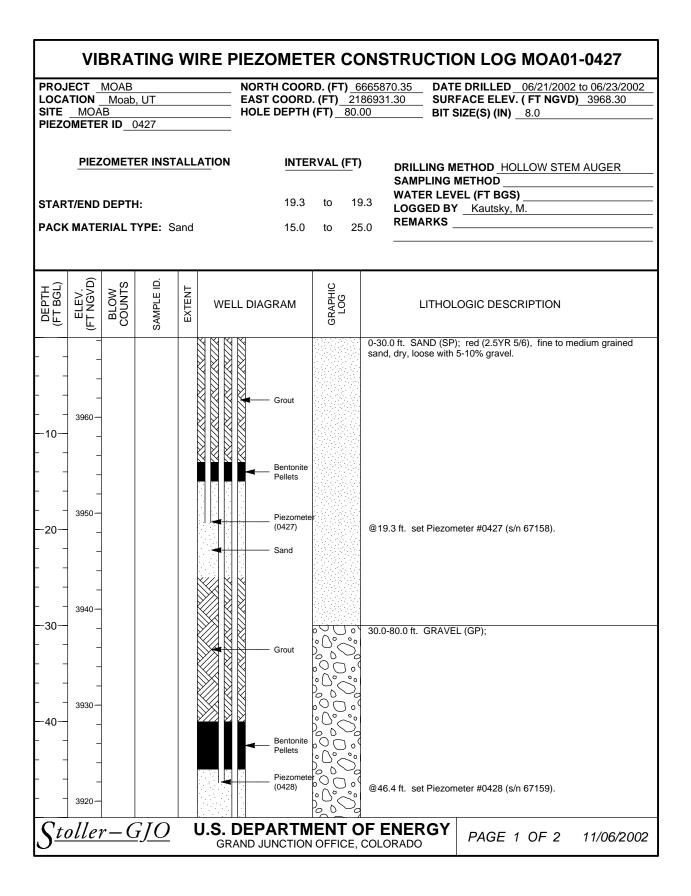


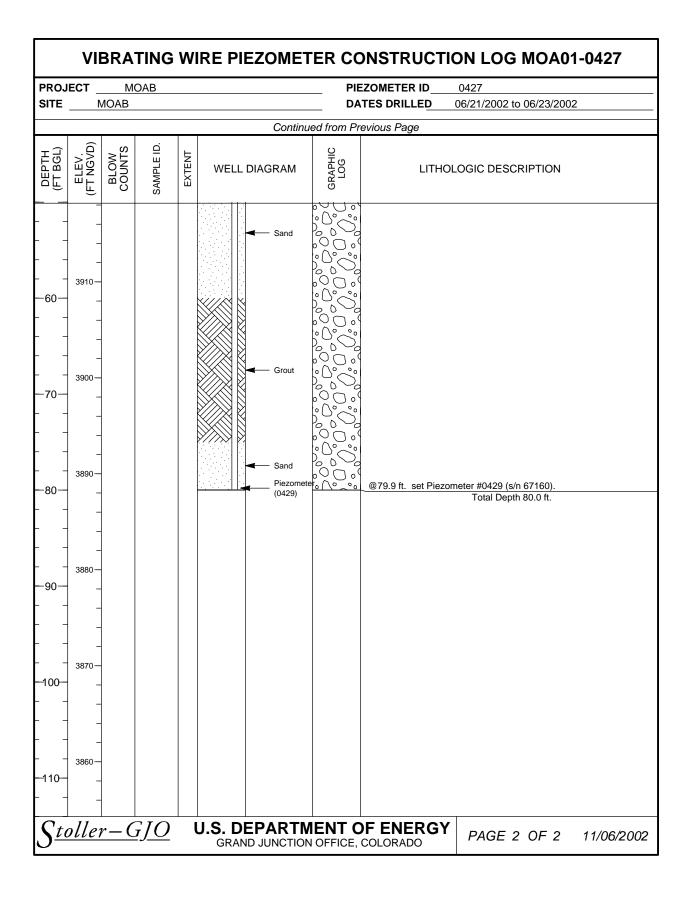
VIBRATING WIRE PIEZOMETER CONSTRUCTION LOG MOA01-0425				
PROJECT MOAB LOCATION Moab, UT SITE MOAB PIEZOMETER ID 0425	EAST COORI	RD. (FT) <u>66638</u> D. (FT) <u>218610</u> H (FT) <u>90.00</u>	7.88 SURFACE ELEV. (FT NGVD) 3967.40	
PIEZOMETER INST	ALLATION INTE	ERVAL (FT)	DRILLING METHOD HOLLOW STEM AUGER SAMPLING METHOD AUGER CUTTINGS WATER LEVEL (FT BGS)	
START/END DEPTH: PACK MATERIAL TYPE: S	55.0 and 50.0		LOGGED BY Kautsky, M. REMARKS	
DEPTH (FT BGL) ELEV. (FT NGVD) BLOW COUNTS SAMPLE ID.	WELL DIAGRAM	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	
	Piezomet C C C C C C C C C C C C C C C C C C C	tef @20 0.0.0 25.0	 D ft. SILT (ML); very pale brown (10YR 7/3), very fine sand, loose. 25.0 ft. SAND (SP); brown (7.5 YR 5/3), gravelly fine sand, it, loose. 0.0 ft. set Piezometer #0421 (s/n 67155). -90.0 ft. SANDY GRAVEL (GP-SP); undifferentiated sandy el and gravelly sand. 	
$\frac{1}{Stoller-GJO}$	U.S. DEPARTIN GRAND JUNCTION			

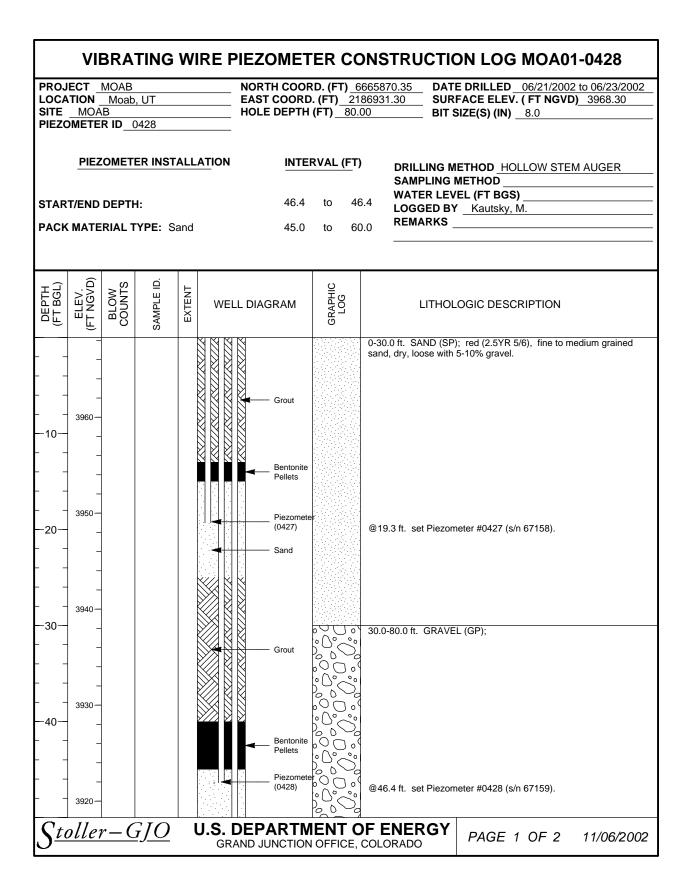


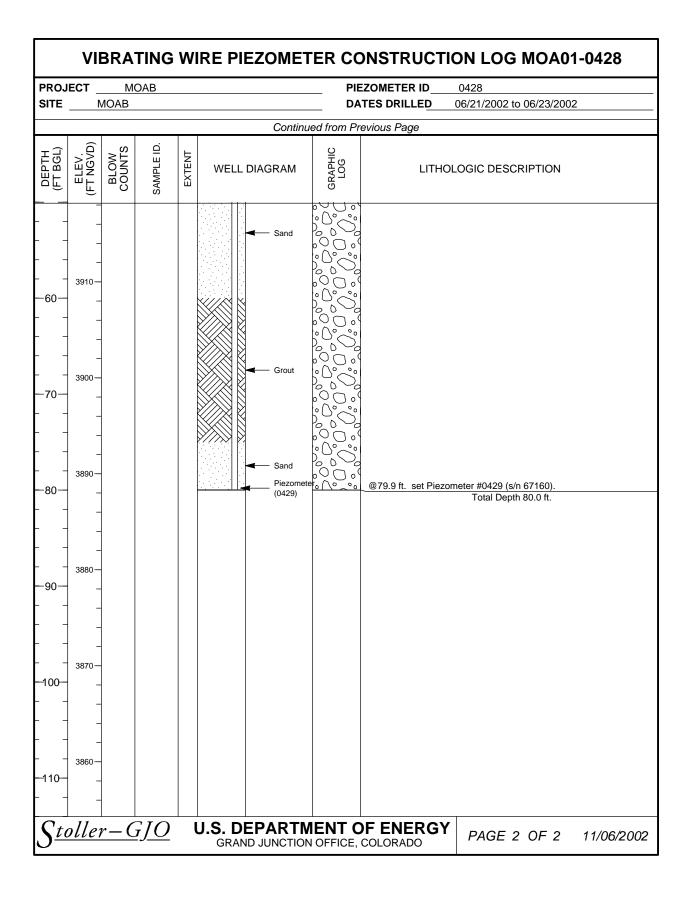
VIBRATING PROJECT MOAB LOCATION Moab, UT SITE MOAB PIEZOMETER ID 0426	NORTH COORD. (FT) 6663844.67 DATE DRILLED 06/23/2002 to 06/24/200 EAST COORD. (FT) 2186107.88 BURFACE ELEV. (FT NGVD) 3967.40 HOLE DEPTH (FT) 90.00 BIT SIZE(S) (IN) 8.0
<u>PIEZOMETER INST</u> START/END DEPTH: PACK MATERIAL TYPE: Si	Bit is a state of the stat
DEPTH (FT BGL) ELEV. (FT NGVD) BLOW COUNTS SAMPLE ID.	WELL DIAGRAM
10	Piezometer 0-7.0 ft. SILT (ML); very pale brown (10YR 7/3), very fine sand dry, loose. Natural Cave-in Material 7.0-25.0 ft. SAND (SP); brown (7.5 YR 5/3), gravelly fine sand, moist, loose. Piezometer (0424) @20.0 ft. set Piezometer #0421 (s/n 67155). Sand Sand Grout 0.0 0 ft. set Piezometer #0421 (s/n 67155). Grout 0.0 0 ft. set Piezometer #0421 (s/n 67155).
<u>Stoller–GJO</u>	U.S. DEPARTMENT OF ENERGY GRAND JUNCTION OFFICE, COLORADO PAGE 1 OF 2 11/06/200

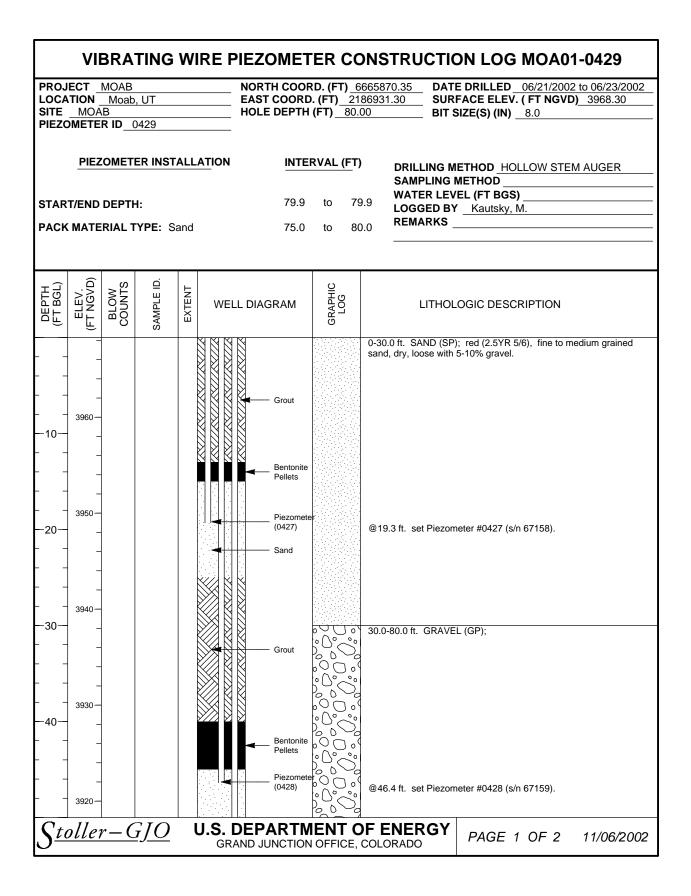


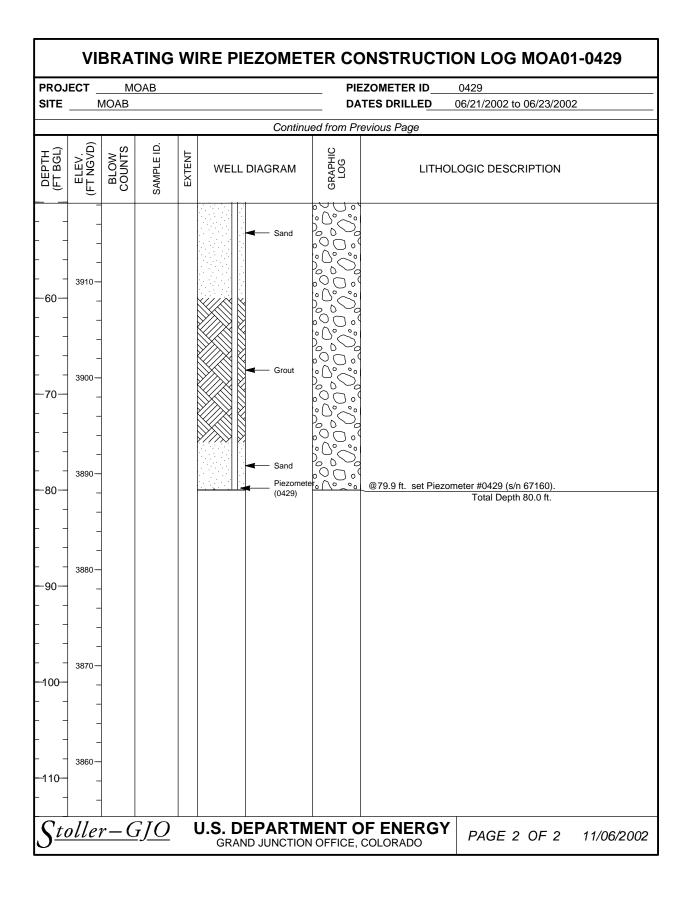












Attachment 3

Spreadsheet Output

Variables and column headings used in the following spreadsheets are defined below.

Adj. $R_o \equiv$ Adjusted wire frequency zero reading (Hz). $R_1 \equiv$ Wire frequency reading (Hz). $G \equiv$ Linear gage factor (psi/digit). $T_o \equiv$ Zero temperature reading (°C). $T_1 \equiv$ Temperature reading (°C). $K \equiv$ Thermal factor (psi/°C).

Uncorrected PSI is the reading obtained from the data logger without a correction applied to account for atmospheric conditions.

Corrected PSI has the correction for atmospheric conditions applied.

Computed PSI are pressure readings computed from frequency readings and temperature readings using the coefficients listed above with the following formula:

 $PSI = ((R_0 - R_1) * G) + ((T_1 - T_0) * K)$

	IN COLL	
3964.0 ground surface @ piezometer nest	S.E.	
3964.0	σ	0
	_2	

#421		#43	22	#42		river			
piezo. elev.	3944.0	piezo. elev	3925.0	piezo, etev.	3893.0	bank elev.	3950.35		
Mean	3951,482	Mean	3944.538	Mean	3951.986	Mean	3949.957		
S.E.	0.00991	S.E.	0.010131	S.E.	0.019087	S.E.	0.016727		
σ	0.211151	đ	0.215872	σ	0.406689	σ	0.356413		
- σ ²	0 044585	d2	0.046601	σ^2	0.165396	σ^2	0.12703		
Range	0.740045	Range	0.821382	Range	1,732278	Range	2.069		
Minimum	3951.015	Minimum	3944.065	Minimum	3951.446	Minimum	3949.253		
Maximum	3951.755	Maximum	3944,886	Maximum	3953.178	Maximum	3951.322		
n	454	Count	454	Count	454	Count	151		
Colun	nn 1	Colu	mn1	Colur	nn1	Colu	mn1		
Calu		Colu	hund	Colur	nn1	Colu	mn1		
Colur	nn1	Colui	nn1	Colur	<u>nn1</u>	Colu			
Mean	3951,482	Mean	3944.538	Mean	3951,986	Mean	3949,957		
	3951,482 0.00991	Mean Standard E	3944.538 0.010131	Mean Standard Er	3951.986 0.019087	Mean Standard E	3949,957 0.016727		
Mean	3951,482	Mean Standard E Median	3944.538 0.010131 3944.616	Mean Standard Er Median	3951.986 0.019087 3951.946	Mean Standard E Median	3949.957 0.016727 3949.94		
Mean Standard Er	3951,482 0.00991	Mean Standard E	3944.538 0.010131	Mean Standard Er Median Mode	3951.986 0.019087 3951.946 3951.614	Mean Standard E Median Mode	3949,957 0.016727 3949,94 3950,265		
Mean Standard Er Median	3951,482 0.00991 3951,56 #N/A	Mean Standard E Median	3944.538 0.010131 3944.616 3944.611	Mean Standard Er Median	3951.986 0.019087 3951.946 3951.614	Mean Standard E Median	3949.957 0.016727 3949.94 3950.265		
Mean Standard Er Median Mode	3951,482 0.00991 3951,56 #N/A 0.211151	Mean Standard E Median Mode	3944.538 0.010131 3944.616 3944.611 0.215872	Mean Standard Er Median Mode	3951.986 0.019087 3951.946 3951.614 0.406689	Mean Standard E Median Mode Standard [Sample Va	3949,957 0.016727 3949.94 3950.265 0.356413 0.12703		
Mean Standard Er Median Mode Standard De	3951,482 0.00991 3951,56 #N/A 0.211151	Mean Standard E Median Mode Standard C	3944.538 0.010131 3944.616 3944.611 0.215872	Mean Standard Er Median Mode Standard Di	3951.986 0.019087 3951.946 3951.614 0.406689	Mean Standard E Median Mode Standard [3949.957 0.016727 3949.94 3950.265 0.356413 0.12703 0.466491		
Mean Standard Er Median Mode Standard De Sample Var Kurtosis	3951,482 0.00991 3951,56 #N/A 0.211151 0.044585	Mean Standard E Median Mode Standard C Sample Va	3944.538 0.010131 3944.616 3944.611 0.215872 0.046601	Mean Standard Er Median Mode Standard Dr Sample Var	3951,986 0.019087 3951,946 3951,614 0.406689 0.165396	Mean Standard E Median Mode Standard [Sample Va	3949.957 0.016727 3949.94 3950.265 0.356413 0.12703 0.466491		
Mean Standard Er Median Mode Standard De Sample Var Kurtosis Skewness	3951.482 0.00991 3951.56 #N/A 0.211151 0.044585 -0.67216	Mean Standard E Median Mode Standard C Sample Va Kurtosis	3944.538 0.010131 3944.616 3944.611 0.215872 0.046601 -0.86063	Mean Standard Er Median Mode Standard Dr Sample Var Kurtosis	3951,986 0.019087 3951,946 3951,614 0.406689 0.165396 1.08667	Mean Standard E Median Mode Standard [Sample Va Kurtosis	3949,957 0.016727 3949,94 3950.265 0.356413 0.12703 0.466491 0.445436		
Mean Standard Er Median Mode Standard De Sample Var Kurtosis	3951,482 0.00991 3951,56 #N/A 0.211151 0.044585 -0.67216 -0.86958	Mean Standard E Median Mode Standard C Sample Va Kurtosis Skewness	3944.538 0.010131 3944.616 3944.611 0.215872 0.046601 -0.86063 -0.63601	Mean Standard Ei Median Mode Standard Di Sample Var Kurtosis Skewness	3951,986 0,019087 3951,946 3951,614 0,406689 0,165396 1,08667 1,236178	Mean Standard E Median Mode Standard I Sample Va Kurtosis Skewness	3949.957 0.016727 3949.94 3950.265 0.356413 0.12703 0.466491 0.445436 2.069		
Mean Standard Er Median Mode Standard De Sample Var Kurtosis Skewness Range	3951.482 0.00991 3951.56 #N/A 0.211151 0.044585 -0.67216 -0.86958 0.740045	Mean Standard E Median Mode Standard C Sample Va Kurtosis Skewness Range	3944.538 0.010131 3944.616 3944.611 0.215872 0.046601 -0.86063 -0.63601 0.821362	Mean Standard Eu Median Mode Standard Dr Sample Var Kurtosis Skewness Range	3951.986 0.019087 3951.946 3951.614 0.406689 0.165396 1.08667 1.236178 1.732278	Mean Standard E Median Mode Standard E Sample Va Kurtosis Skewness Range	3949,957 0.016727 3949,94 3950.265 0.356413 0.12703 0.466491 0.445436 2.069 3949.253		
Mean Standard Er Median Mode Standard De Sample Var Kurtosis Skewness Range Minimum	3951.482 0.00991 3951.56 #N/A 0.211151 0.044585 -0.67216 -0.86958 0.740045 3951.015	Mean Standard E Median Mode Standard C Sample Va Kurtosis Skewness Range Minimum	3944.538 0.010131 3944.616 3944.611 0.215872 0.046601 -0.86063 -0.63601 0.821382 3944.065	Mean Standard Er Mode Standard Du Sample Var Kurtosis Skewness Range Minimum	3951,986 0,019087 3951,946 3951,614 0,406689 0,165396 1,08667 1,236178 1,732278 3951,446	Mean Standard E Median Mode Standard [Sample Va Kurtosis Skewness Range Minimum	3949.957 0.016727 3949.94 3950.265		

3955

MOAB 2 - VIBRATING WIRE PIEZOMETERS ground piezometer piezometer # elevation (ft) Adj. R. #421 3964.0 20.0 3944.0 8555 #422 3964.0 39.0 3925.0 7944 #423 3964.0 71.0 3893.0 8930 #423 3964.0 71.0 3893.0 8930 day of hour of decimal 6ecimal	3 0.02332 25.8 -0.01492	label reading elev. total head river 3950.35 3949.9 #421 3944.0 3951.4 #422 3925.0 3944.5 #423 3953.0 3951.9 #423 3893.0 3951.9 PRESSURE #422 4422	46 0.370 14.28 13.76 0.26 14.02 54 0.411 13.67 13.70 0.09 13.79 99 0.866 13.82 13.76 0.03 13.79		#421 #423 approxir	
vear day date date date date 2002 234 1000 234.67 #222002 120 2002 234 1000 234.67 #222002 120 2002 235 0 235.67 #232002 120 2002 235 100 235.67 #232002 120 2002 235 100 235.67 #232002 120 2002 236 400 236.17 #2472002 400 2002 236 400 236.16 #2442002 100 2002 236 1000 237.17 #2527002 400 2002 237 400 237.17 #2527002 400 2002 237 400 237.18 #257002 400 2002 238 100 237.18 #257002 400 2002 238 100 #27.1700 #26.00 400 2002 238	uncorrected PSI * total head (ft) uncorrected PSI * total head (ft) 0 1.560 3947.66 0 1.560 1.603 3947.76 0 1.560 1.601 3947.66 0 1.572 1.999 3847.76 0 1.555 1.613 3947.76 0 1.555 1.614 3947.76 0 1.555 1.614 3947.76 0 1.555 1.614 3947.76 0 1.564 1.611 3947.76 0 1.564 1.611 3947.76 0 1.607 1.612 3947.76 0 1.608 1.609 3947.71 0 1.614 1.607 3947.76 0 1.627 1.603 3947.76 0 1.577 1.619 3947.76 0 1.571 1.603 3947.76 0 1.571 1.583 3947.65 0 1.571 1.584 3.947.7	corrected PSI total head (f) uncorrected PS 6.857 3940.82 23.70 6.838 6.845 3940.86 23.68 6.625 6.873 3940.87 23.70 6.656 6.852 6.873 3940.86 23.70 6.655 6.852 3940.81 23.77 6.855 6.861 3940.90 23.67 6.835 6.862 3940.86 23.67 6.835 6.862 3940.86 23.67 6.847 6.847 3940.86 23.71 6.856 6.863 3940.86 23.77 6.857 6.863 3940.86 23.72 6.871 6.874 3940.86 23.77 6.851 6.874 3940.86 23.77 6.852 6.873 3940.87 23.66 6.874 3940.87 23.67 6.874 3940.87 23.67 6.875 3940.87 23.66 6.776 6.87 3940.87	PSI Orented PSI* total psd f0 psd f0 <t< td=""><td>#423 #124 #421 #422 #423 #124 computed PS1 correct. 75 13.81 33.31 8437.6 7593.7 7865.8 5492.6 3.10 71 13.79 93.99 8438.7 7594.5 7866.8 5497.1 3.08 75 13.8 27.28 8439.1 7595.7 7865.9 5426.5 3.09 74 13.79 14.23 8437.8 7593.9 7665.9 5427.5 3.11 73 13.81 33.59 8437.7 7593.3 7665.5 5475.9 3.12 74 13.79 14.33 8438.9 7595.7 7667.2 5382.1 3.00 74 13.79 13.33 8437.5 7594.1 7866.4 5417.1 3.10 73 13.79 13.33 8437.5 7594.1 7866.4 5417.1 3.10 74 13.79 13.39 8437.5 7594.1 7866.5 5463.9 3.13</td><td>BP11 B</td><td>vation vation</td></t<>	#423 #124 #421 #422 #423 #124 computed PS1 correct. 75 13.81 33.31 8437.6 7593.7 7865.8 5492.6 3.10 71 13.79 93.99 8438.7 7594.5 7866.8 5497.1 3.08 75 13.8 27.28 8439.1 7595.7 7865.9 5426.5 3.09 74 13.79 14.23 8437.8 7593.9 7665.9 5427.5 3.11 73 13.81 33.59 8437.7 7593.3 7665.5 5475.9 3.12 74 13.79 14.33 8438.9 7595.7 7667.2 5382.1 3.00 74 13.79 13.33 8437.5 7594.1 7866.4 5417.1 3.10 73 13.79 13.33 8437.5 7594.1 7866.4 5417.1 3.10 74 13.79 13.39 8437.5 7594.1 7866.5 5463.9 3.13	BP11 B	vation vation

day of hour of decimel	#421	PRESSURE #422	#423 #124	battary voltage	temperature °C #421 #422 #423 #	vibrating wire frequency #124 #421 #422 #423 #124	#421 computed PSi corrected PSi total hea	d (ft) computed PSI correct
year day date A line A line 2002 252 0 252.17 997202.41 2002 252 0 252.31 997202.41 2002 252 100 252.60 997202.41 2002 252 1600 255.71 997202.41 2002 253 0 253.10 9170202.41 2002 253 800 253.35 9170202.41 2002 253 800 254.00 9170202.41 2002 254 0 254.00 9170202.41 2002 254 100 254.67 91712022.11 2002 254 100 254.67 91712002.11 2002 254 100 254.67 91712002.11 2002 255 0 256.67 9172002.41 2002 256 100 256.67 9172002.41 2002 256 100 256.67 9172002.16 2002	00 1.671 1.681 3947.82 00 1.697 1.682 3947.82 00 1.732 1.663 3947.82 00 1.712 1.663 3947.82 00 1.672 1.663 3947.82 00 1.664 1.646 3947.82 00 1.655 1.638 3947.78 00 1.656 1.638 3947.78 00 1.656 1.638 3947.78 00 1.651 1.644 3947.79 00 1.651 1.644 3947.79 00 1.653 1.645 3947.83 00 1.652 1.643 3947.82 00 1.652 1.663 3947.82 00 1.652 1.665 3947.83 00 1.632 1.663 3947.84 00 1.649 1.772 3948.44 00 1.632 1.663 3947.84 00 1.649	<u>uncorrected PSI * total head (ff) unco</u> 6.946 6.931 3940.99 6.975 6.918 3940.99 6.975 6.918 3940.99 6.925 6.909 3940.99 6.915 6.907 3940.94 6.918 6.600 3940.92 6.908 6.900 3940.92 6.906 6.893 3940.91 6.871 6.909 3940.91 6.886 6.901 3940.93 6.888 6.997 3940.92 6.900 360.92 6.889 6.892 3940.91 6.888 6.91 3940.93 6.888 6.91 3940.92 6.888 6.91 3940.92 6.889 6.892 3940.90 6.888 6.91 3940.94 6.886 6.919 3940.94 6.886 6.919 3940.94 6.886 6.919 3940.94 6.886 6.919 3940.95 6.886 6.914 3940.96 6.886 6.919 3940.97 6.886 6.919 3940.97 6.886 6.919 3940.97 6.886 6.919 3940.97 6.886 6.919 3940.97 6.886 6.919 3940.97 6.886 6.914 3940.96 6.886 6.914 3940.96 6.886 6.914 3940.97 6.886 6.914 3940.97 6.896 6.927 3940.99 6.899 6.942 3941.02 6.916 6.955 3941.02 6.941 7.020 7.072 3941.31 7.000 7.063 3941.93 7.000 7.063 3941.93 7.000 7.053 3941.93 7.000 7.053 3941.93 7.000 7.053 3941.93 7.000 7.053 3941.93 7.000 7.053 3941.93 7.000 7.023 3941.24 7.060 7.024 3941.21 7.060 7.023 3941.23 7.010 7.022 3941.21 7.060 7.023 3941.24 7.060 7.023 3941.23 7.010 7.022 3941.21 7.060 7.023 3941.24 7.020 7.073 3941.24 7.020 7.073 3941.24 7.020 7.073 3941.24 7.040 7.023 3941.24 7.040 7.023 3941.24 7.040 7.023 3941.24 7.040 7.023 3941.24 7.041.25 7.070 7.022 3941.24 7.040 7.023 3941.24	Tectae (%) Corrected (%) (%) (%) (%) (%) (%) (%) (%) (%) (%)	1 2.79 12.89 1 2.73 12.81 1 2.74 12.83 1 2.76 12.83 1 2.76 12.89 1 2.77 12.86 1 2.77 12.86 1 2.77 12.86 1 2.77 12.86 1 2.77 12.86 1 2.71 12.89 1 2.72 12.89 1 2.72 12.89 1 2.72 12.89 1 2.66 13.21 1 2.68 13.24 1 3.21 13.22 1 2.68 13.44 1 3.21 13.42 1 3.12 13.42 1 3.12 13.42 1 3.12 13.52 1 2.64 13.98 1 2.64 13.98 1 2.64 13.98 1 2.64 13.98 1 2.64 12.86 1 3.07 13.92 1 2.64 12.86 1 2.65 12.77 1 2.66 12.77 <td>13.85 13.71 13.79 13.86 13.71 13.79 13.86 13.71 13.79 13.87 13.72 13.88 13.86 13.71 13.79 13.87 13.72 13.8 13.86 13.72 13.8 13.86 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.74 13.79 13.88 13.74 13.79 13.9 13.74 13.79 13.9 13.74 13.79 13.9 13.74 13.79 13.9</td> <td>2278 8434 75914 7665 8422 7589 7663 5468. 16.53 8431.5 7580.7 7662.4 551 13.43 8431.5 7580.8 7662.2 555 29.61 8432.3 7580.8 7662.5 5557.1 29.61 8432.3 7590.8 7662.5 5557.1 20.61 843.4 7551.5 7664.5 543.7 12.27 843.48 7551.5 7665.5 543.5 21.7 843.49 7551.6 7685.5 543.5 21.7 843.49 7551.6 7685.5 543.5 21.7 843.55 7552.5 7685.5 543.5 21.8 843.49 7551.6 7685.6 541.8 21.8 843.55 7552.5 7685.5 542.5 22.41 843.6 7591.3 7685.1 542.2 21.8 843.6 7591.3 7685.1 542.2 21.8 843.6 7591.3</td> <td>4 3.19 3.199 3 4 3.21 3.199 3 5 3.25 3.144 3 5 3.23 3.160 3 5 3.23 3.160 3 1 3.16 3.165 3 3 1.8 3.156 3 3 1.8 3.156 3 4 3.16 3.166 3 5 3.13 3.166 3 5 3.15 3.160 3 4 3.15 3.160 3 5 3.15 3.160 3 5 3.15 3.160 3 5 3.15 3.160 3 6 3.15 3.162 3 7 3.15 3.162 3 3 3.00 3.355 3 3 3.00 3.355 3 3 3.00 3.355 3<td>351 38 8 8 8 8 8 1 351 38 8 41 1 1 351 38 8 41 351 37 8 44 351 37 8 44 351 37 8 39 351 30 8 39 351 30 8 39 351 8 38 351 31 8 34 351 31 8 34 351 32 8 34 351 32 8 34 351 32 8 34 351 32 8 34 351 351 36 351 351 36 351 351 36 351 351 36 351 351 351 36 351 351 351 36 351 351 351 351 351 351 351 351 351 351 351 351</td></td>	13.85 13.71 13.79 13.86 13.71 13.79 13.86 13.71 13.79 13.87 13.72 13.88 13.86 13.71 13.79 13.87 13.72 13.8 13.86 13.72 13.8 13.86 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.71 13.79 13.88 13.74 13.79 13.88 13.74 13.79 13.9 13.74 13.79 13.9 13.74 13.79 13.9 13.74 13.79 13.9	2278 8434 75914 7665 8422 7589 7663 5468. 16.53 8431.5 7580.7 7662.4 551 13.43 8431.5 7580.8 7662.2 555 29.61 8432.3 7580.8 7662.5 5557.1 29.61 8432.3 7590.8 7662.5 5557.1 20.61 843.4 7551.5 7664.5 543.7 12.27 843.48 7551.5 7665.5 543.5 21.7 843.49 7551.6 7685.5 543.5 21.7 843.49 7551.6 7685.5 543.5 21.7 843.55 7552.5 7685.5 543.5 21.8 843.49 7551.6 7685.6 541.8 21.8 843.55 7552.5 7685.5 542.5 22.41 843.6 7591.3 7685.1 542.2 21.8 843.6 7591.3 7685.1 542.2 21.8 843.6 7591.3	4 3.19 3.199 3 4 3.21 3.199 3 5 3.25 3.144 3 5 3.23 3.160 3 5 3.23 3.160 3 1 3.16 3.165 3 3 1.8 3.156 3 3 1.8 3.156 3 4 3.16 3.166 3 5 3.13 3.166 3 5 3.15 3.160 3 4 3.15 3.160 3 5 3.15 3.160 3 5 3.15 3.160 3 5 3.15 3.160 3 6 3.15 3.162 3 7 3.15 3.162 3 3 3.00 3.355 3 3 3.00 3.355 3 3 3.00 3.355 3 <td>351 38 8 8 8 8 8 1 351 38 8 41 1 1 351 38 8 41 351 37 8 44 351 37 8 44 351 37 8 39 351 30 8 39 351 30 8 39 351 8 38 351 31 8 34 351 31 8 34 351 32 8 34 351 32 8 34 351 32 8 34 351 32 8 34 351 351 36 351 351 36 351 351 36 351 351 36 351 351 351 36 351 351 351 36 351 351 351 351 351 351 351 351 351 351 351 351</td>	351 38 8 8 8 8 8 1 351 38 8 41 1 1 351 38 8 41 351 37 8 44 351 37 8 44 351 37 8 39 351 30 8 39 351 30 8 39 351 8 38 351 31 8 34 351 31 8 34 351 32 8 34 351 32 8 34 351 32 8 34 351 32 8 34 351 351 36 351 351 36 351 351 36 351 351 36 351 351 351 36 351 351 351 36 351 351 351 351 351 351 351 351 351 351 351 351

.

422			123		proximate	
8.390	total head (ft) c 3944.36	computed PSI corre 25.41	cted PSI * tota 25.420	l head (ft) riv 3951.66	er elevation 3949.96	
8,400 8,412	3944.38 3944.41	25.45 25.46	25.431 25.429	3951.69 3951.68	3950.27 3950.11	
8.388 8.382	3944.36 3944.34	25.46 25.46	25.408 25.406	3951.63 3951.63	3949.81 3949.69	
8.378	3944.33	25.43	25.411	3951.64	3949.69 3949.70	
8.376 8.369	3944.33 3944.31	25.42 25.42	25.412 25.404	3951.64 3951.63	3949.68	
8.369 8.362	3944.31 3944.30	25.42 25.42	25.407 25.405	3951.63 3951.63	3949.68 3949.69	
8.362 8.378	3944.30 3944.33	25.42 25.38	25.402 25.418	3951.62 3951.66	3949.67 3949.68	
8.366 8.369	3944.31 3944.31	25.38 25.39	25.408 25.404	3951.63 3951.63	3949.72 3949.70	
8.365	3944.30	25.39	25.401	3951.62	3949.72 3949.73	
8.368 8.362	3944.31 3944.30	25.41 25.39	25.403 25.397	3951.62 3951.61	3949.80	
8.377 8.386	3944.33 3944.35	25.38 25.38	25.412 25.418	3951.64 3951.66	3949.84 3949.83	
8.382 8.390	3944.34 3944.36	25.40 25.40	25.422 25.427	3951.67 3951.68	3949.80 3949.84	
8.400 8.389	3944.38 3944.36	25.42 25.39	25.440 25.427	3951.71 3951.68	3949.93 3949.85	
8.396 8.411	3944.38 3944.41	25.38 25.41	25.438 25.451	3951.70 3951.73	3949.90 3950.00	
8.425 8.460	3944.44 3944.52	25.42 25.44	25.461 25.487	3951.76 3951.82	3950.33 3950.75	
8.507	3944.63	25.50	25.532	3951.92	3951.22	
8.536 8.548	3944.70 3944.73	25.51 25.48	25.538 25.538	3951.93 3951.93	3951.12 3950.84	
8.539 8.555	3944.70 3944.74	25.49 25.52	25.538 25.548	3951.93 3951.96	3951.00 3951.05	
8.551 8.529	3944.73 3944.68	25.53 25.55	25.537 25.510	3951.93 3951.87	3950.90 3950.70	
8.524 8.527	3944.67 3944.68	25.55 25.53	25.513 25.529	3951.88 3951.91	3950.52 3950.44	
8.511	3944.64	25.52	25.516	3951.88 3951.85	3950.39 3950.36	
8.500 8.496	3944.62 3944.61	25.55 25.55	25.503 25.498	3951.84	3950.34	
8.479 8.490	3944.57 3944.59	25.56 25.56	25.477 25.495	3951.79 3951.83	3950.28 3950.22	
8.503 8.496	3944.62 3944.61	25.52 25.50	25.519 25.515	3951.89 3951.88	3950.25 3950.29	
8.493 8.495	3944.60 3944.60	25.51 25.51	25.516 25.521	3951.88 3951.89	3950.27 3950.27	
8.487	3944.58	25.50 25.49	25.512	3951.87 3951.88	3950.23 3950.21	
8.493 8.511	3944.60 3944.64	25.44	25.516 25.540	3951.94	3950.19	
8.503 8.487	3944.62 3944.59	25.41 25.47	25.530 25.500	3951.91 3951.85	3950.20 3950.12	
8.489 8.475	3944.59 3944.56	25.45 25.44	25.511 25.498	3951.87 3951.84	3950.11 3950.08	
8.478 8.500	3944.56 3944.62	25.43 25.40	25.502 25.529	3951.85 3951.91	3950.08 3950.21	
8.506 8.503	3944.63 3944.62	25.38 25.38	25.532 25.525	3951.92 3951.90	3950.23 3950.21	
8.497	3944.61 3944.62	25.40	25.519 25.518	3951.89 3951.89	3950.16 3950.15	
8.500 8.478	3944.57	25.42 25.40	25.498	3951.84	3950.10	
8.473 8.477	3944.55 3944.56	25.41 25.45	25.497 25.499	3951.84 3951.84	3950.09 3950.04	
8.474 8.484	3944.56 3944.58	25.46 25.50	25.490 25.511	3951.82 3951.87	3950.00 3950.37	
8.497 8.507	3944.61 3944.63	25.54 25.53	25.528 25.523	3951.91 3951.90	3950.63 3950.44	
8.525 8.524	3944.67 3944.67	25.52 25.50	25.556 25.552	3951.97 3951.97	3950.51 3950.33	
8.520 8.519	3944.66 3944.66	25.51 25.51	25.545 25.549	3951.95 3951.96	3950.30 3950.30	
8.506 8.509		25.52 25.51	25.536 25.536	3951.93 3951.93	3950.30 3950.31	
8.525	3944.67	25.49	25.557	3951.98	3950.32	
8.521 8.516		25.49 25.50	25.555 25.544	3951.97 3951.95	3950.31 3950.26	
8.513 8.503		25.51 25.53	25.543 25.531	3951.95 3951.92	3950.25 3950.22	
8.501 8.516	3944.62 3944.65	25.53 25.51	25.529 25.548	3951.91 3951.96	3950.18 3950.18	
8.508 8.498		25.51 25.55	25.540 25.524	3951.94 3951.90	3950.17 3950.19	
8.504 8.496	3944.62	25.56 25.58	25.527 25.520	3951.91 3951.89	3950.20 3950.18	
8.500 8.510	3944.62	25.57 25.55	25.522 25.540	3951.90 3951.94	3950.13 3950.13	
8.504	3944.62	25.54	25.537	3951.93	3950.12 3950.11	
8.498 8.498	3944.61	25.55 25.55	25.524 25.526	3951.90 3951.91	3950.09	
8.487 8.491	3944.59	25.57 25.55	25.518 25.520	3951.89 3951.89	3950.05 3949.78	
8.501 8.490		25.52 25.51	25.534 25.530	3951.92 3951.92	3949.95 3949.95	
8.486 8.486		25.51 25.50	25.517 25.514	3951.88 3951.88	3949.92 3949.90	
8.474 8.476	3944.55	25.53 25.50	25.511 25.514	3951.87 3951.88	3949.85 3949.87	
8.493	3 3944.60	25.46	25.535	3951.93	3949.85 3949.88	
8.48 8.48	1 3944.57	25.45 25.45	25.529 25.520	3951.91 3951.89	3949.84	
8.483 8.476	5 3944.56		25.527 25.518	3951.91 3951.89	3949.85 3949.78	
8.46 8.46			25.509 25.512	3951.87 3951.87	3949.79 3949.77	
8.46 8.45	2 3944.53	25.43 25.46	25.506 25.492	3951.86 3951.83	3949.72 3949.69	
8.45 8.45	8 3944.52	25.44	25,500 25,497	3951.85 3951.84	3949.68 3949.58	
8.44	5 3944.49	25.43	25.491	3951.83	3949.58 3949.60 3949.67	
8.45 8.45	2 3944.50	25.38	25.503 25.504	3951.85 3951.86	3949.64	
8.44 8.45	0 3944.50	25.37	25.496 25.495	3951.84 3951.83	3949.63 3949.65	
8.44 8.44	9 3944.50	25.37	25.494 25.485	3951.83 3951.81		

			#421 ncorrected PSI corrected PSI * total head (ft) uncorrected	PRESSURE #422 I PSI corrected PSI * total head (ft); uncorrected I		min max #421	temperature °C #422 #423 13.78 13.81	vibrating wire frequency #124 #421 #422 #423 #124 comm 29.46 8440.3 7596.4 7868.7 5179.8	#421 uted PSI corrected PSI to 3.03 3.232	tal head (ft) computed PSI 3951.46 8.26	#422 corrected PSI * total head (ft) com 8.461 3944.53	#423 approxim puted PSI_corrected PSI * total head (ft);river elev 25.31 25.510 3951.87 39
Dist Dist <th< td=""><td></td><td>270 200 270.83 9/27/2002 9/27/2002 9/2000 271 0 271.03 9/28/2002 4:00 271 400 271.17 9/28/2002 4:00 271 100 271.13 9/28/2002 4:00 271 1200 271.15 9/28/2002 4:00 271 1200 271.16 9/28/2002 1:00 271 1200 271.17 8/28/2002 1:00 272 0 272.17 9/28/2002 1:00 272 400 272.17 9/28/2002 1:00 272 800 272.30 9/28/2002 1:00 272 100 272.17 9/28/2002 1:00 272 100 272.50 9/28/2002 1:00 272 100 272.63 9/28/2002 1:00 273 100 273.17 9/30/2002 1:00 273 100 273.17 9/30/2002 1:00 <t< td=""><td></td><td></td><td>0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0</td><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td><td>24,06 8440.2 7596.5 7868.9 5171.1 21.9 8436.5 7555.2 7867.9 5234.9 18,73 8435.6 7555.4 7867.9 5234.9 21,9 8436.6 7553.4 7865.5 5362.2 23,81 8436.1 7593.7 7865.5 5362.2 26,85 8436.5 7553.3 7865.5 5362.2 26,85 8436.6 75593.3 7865.5 5362.2 26,85 8436.5 7553.3 7865.4 5408.5 12,08 8434.4 7591.7 7863.4 5426.8 12,08 8434.5 7592.7 7864.1 5408.5 10,19 843.4 7590.9 7883.5 5409.5 21,93 843.6 7592.1 7864.1 5375.3 11 8435.4 7592.1 7864.1 5375.3 14.8 8433.2 7580.5 7862.9 5378.6 4.848 8433.1 7583.7 7869.5 538</td><td>3.04 3.234 3.08 3.231 3.10 3.227 3.13 3.223 3.13 3.223 3.13 3.223 3.13 3.223 3.13 3.223 3.17 3.211 3.18 3.208 3.14 3.209 3.15 3.206 3.16 3.206 3.15 3.206 3.16 3.206 3.15 3.206 3.16 3.206 3.17 3.21 3.227 3.237 3.205 3.289 3.26 3.381 3.21 3.323 3.221 3.333 3.221 3.333 3.219 3.311 3.14 3.321</td><td>3951.46 8.29 3951.46 8.31 3951.40 8.34 3951.41 8.33 3951.41 8.33 3951.41 8.33 3951.41 8.33 3951.41 8.39 3951.41 8.39 3951.41 8.39 3951.40 8.39 3951.41 8.39 3951.40 8.39 3951.41 8.39 3951.42 8.36 3951.42 8.36 3951.42 8.36 3951.50 8.41 3951.50 8.47 3951.76 8.46 3951.78 8.43 3951.60 8.43 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 <td>8.445 3944.49 8.438 3944.47 8.428 3944.42 8.421 3944.42 8.422 3944.43 8.420 3944.43 8.421 3944.43 8.422 3944.43 8.424 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.42 8.417 3944.43 8.417 3944.42 8.417 3944.45 8.459 3944.45 8.510 3944.64 8.551 3944.64 8.553 3944.64 8.533 3944.68 8.522 3944.67 8.519 3944.68 8.513 3944.68</td><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td></td></t<></td></th<>		270 200 270.83 9/27/2002 9/27/2002 9/2000 271 0 271.03 9/28/2002 4:00 271 400 271.17 9/28/2002 4:00 271 100 271.13 9/28/2002 4:00 271 1200 271.15 9/28/2002 4:00 271 1200 271.16 9/28/2002 1:00 271 1200 271.17 8/28/2002 1:00 272 0 272.17 9/28/2002 1:00 272 400 272.17 9/28/2002 1:00 272 800 272.30 9/28/2002 1:00 272 100 272.17 9/28/2002 1:00 272 100 272.50 9/28/2002 1:00 272 100 272.63 9/28/2002 1:00 273 100 273.17 9/30/2002 1:00 273 100 273.17 9/30/2002 1:00 <t< td=""><td></td><td></td><td>0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0</td><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td><td>24,06 8440.2 7596.5 7868.9 5171.1 21.9 8436.5 7555.2 7867.9 5234.9 18,73 8435.6 7555.4 7867.9 5234.9 21,9 8436.6 7553.4 7865.5 5362.2 23,81 8436.1 7593.7 7865.5 5362.2 26,85 8436.5 7553.3 7865.5 5362.2 26,85 8436.6 75593.3 7865.5 5362.2 26,85 8436.5 7553.3 7865.4 5408.5 12,08 8434.4 7591.7 7863.4 5426.8 12,08 8434.5 7592.7 7864.1 5408.5 10,19 843.4 7590.9 7883.5 5409.5 21,93 843.6 7592.1 7864.1 5375.3 11 8435.4 7592.1 7864.1 5375.3 14.8 8433.2 7580.5 7862.9 5378.6 4.848 8433.1 7583.7 7869.5 538</td><td>3.04 3.234 3.08 3.231 3.10 3.227 3.13 3.223 3.13 3.223 3.13 3.223 3.13 3.223 3.13 3.223 3.17 3.211 3.18 3.208 3.14 3.209 3.15 3.206 3.16 3.206 3.15 3.206 3.16 3.206 3.15 3.206 3.16 3.206 3.17 3.21 3.227 3.237 3.205 3.289 3.26 3.381 3.21 3.323 3.221 3.333 3.221 3.333 3.219 3.311 3.14 3.321</td><td>3951.46 8.29 3951.46 8.31 3951.40 8.34 3951.41 8.33 3951.41 8.33 3951.41 8.33 3951.41 8.33 3951.41 8.39 3951.41 8.39 3951.41 8.39 3951.40 8.39 3951.41 8.39 3951.40 8.39 3951.41 8.39 3951.42 8.36 3951.42 8.36 3951.42 8.36 3951.50 8.41 3951.50 8.47 3951.76 8.46 3951.78 8.43 3951.60 8.43 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 <td>8.445 3944.49 8.438 3944.47 8.428 3944.42 8.421 3944.42 8.422 3944.43 8.420 3944.43 8.421 3944.43 8.422 3944.43 8.424 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.42 8.417 3944.43 8.417 3944.42 8.417 3944.45 8.459 3944.45 8.510 3944.64 8.551 3944.64 8.553 3944.64 8.533 3944.68 8.522 3944.67 8.519 3944.68 8.513 3944.68</td><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td></td></t<>			0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0 -0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	24,06 8440.2 7596.5 7868.9 5171.1 21.9 8436.5 7555.2 7867.9 5234.9 18,73 8435.6 7555.4 7867.9 5234.9 21,9 8436.6 7553.4 7865.5 5362.2 23,81 8436.1 7593.7 7865.5 5362.2 26,85 8436.5 7553.3 7865.5 5362.2 26,85 8436.6 75593.3 7865.5 5362.2 26,85 8436.5 7553.3 7865.4 5408.5 12,08 8434.4 7591.7 7863.4 5426.8 12,08 8434.5 7592.7 7864.1 5408.5 10,19 843.4 7590.9 7883.5 5409.5 21,93 843.6 7592.1 7864.1 5375.3 11 8435.4 7592.1 7864.1 5375.3 14.8 8433.2 7580.5 7862.9 5378.6 4.848 8433.1 7583.7 7869.5 538	3.04 3.234 3.08 3.231 3.10 3.227 3.13 3.223 3.13 3.223 3.13 3.223 3.13 3.223 3.13 3.223 3.17 3.211 3.18 3.208 3.14 3.209 3.15 3.206 3.16 3.206 3.15 3.206 3.16 3.206 3.15 3.206 3.16 3.206 3.17 3.21 3.227 3.237 3.205 3.289 3.26 3.381 3.21 3.323 3.221 3.333 3.221 3.333 3.219 3.311 3.14 3.321	3951.46 8.29 3951.46 8.31 3951.40 8.34 3951.41 8.33 3951.41 8.33 3951.41 8.33 3951.41 8.33 3951.41 8.39 3951.41 8.39 3951.41 8.39 3951.40 8.39 3951.41 8.39 3951.40 8.39 3951.41 8.39 3951.42 8.36 3951.42 8.36 3951.42 8.36 3951.50 8.41 3951.50 8.47 3951.76 8.46 3951.78 8.43 3951.60 8.43 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 3951.60 8.42 <td>8.445 3944.49 8.438 3944.47 8.428 3944.42 8.421 3944.42 8.422 3944.43 8.420 3944.43 8.421 3944.43 8.422 3944.43 8.424 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.42 8.417 3944.43 8.417 3944.42 8.417 3944.45 8.459 3944.45 8.510 3944.64 8.551 3944.64 8.553 3944.64 8.533 3944.68 8.522 3944.67 8.519 3944.68 8.513 3944.68</td> <td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td>	8.445 3944.49 8.438 3944.47 8.428 3944.42 8.421 3944.42 8.422 3944.43 8.420 3944.43 8.421 3944.43 8.422 3944.43 8.424 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.43 8.417 3944.42 8.417 3944.43 8.417 3944.42 8.417 3944.45 8.459 3944.45 8.510 3944.64 8.551 3944.64 8.553 3944.64 8.533 3944.68 8.522 3944.67 8.519 3944.68 8.513 3944.68	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
2 2 2 2 3 2 3 2 3	Image Image <t< td=""><td>274 2000 274 83 10/1/2002 20:00 275 0 275 00 10/2/2002 0:00 275 400 275 1,1 10/2/2002 4:00 275 800 275.33 10/2/2002 4:00 275 1200 275.60 10/2/2002 4:00 275 1500 275.61 10/2/2002 4:00 275 1600 275.67 10/2/2002 4:00 275 1600 275.61 10/2/2002 4:00 276 2000 275.63 10/2/2002 4:00 276 0 275.63 10/2/2002 4:00 276 400 276.76 10/3/2002 4:00 276 100 276.76 10/3/2002 4:00 276 1200 276.63 10/3/2002 4:00 276 1200 276.63 10/3/2002 4:00 277 200 277.31 10/4/2002 4:00 277 400 277.73 10/4/2002 4:00 277 1200 277.87 10/4/2002 4:00 277 1200<!--</td--><td></td><td></td><td></td><td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td><td>1 13.76 13.76 13.76 13.79 13.79 13.79 13.79 13.79 13.77 13.79 13.79 13.77 13.79 13.79 13.77 13.79 13.79 13.77 13.79 13.79 13.76 13.79 13.79 13.76 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.79 13.</td><td>12.35 6434 7591.1 7983.3 5523 8.27 8433.6 7590.5 7883.2 5272.9 7.96 8432.6 7599.7 7862.4 5272.9 7.96 8433.6 7590.4 7863.2 5272.9 7.144 8433.4 7590.4 7863.5 5228.2 21.31 8435.3 7592.1 7864.4 5250.4 12.51 8435.3 7592.1 7864.5 5268.1 9.21 8433.3 7590.2 7862.4 5361.3 8.22 8433.3 7590.1 7862.6 5278.9 6.846 8432.3 7589.7 7862.4 5354.7 10.01 8432.2 7589.1 7861.5 5376.5 1.95 8428.5 7584.7 7857.9 5444.9 1.95 8428.5 7584.7 7857.9 5444.9 1.96 8427.6 7583.6 7857.3 5499.5 1.97 8427.6 7583.6 7857.3 5499.5</td></td></t<> <td>$\begin{array}{c} 3.18 & 3.310 \\ 3.19 & 3.308 \\ 3.22 & 3.306 \\ 3.20 & 3.226 \\ 3.15 & 3.297 \\ 3.16 & 3.301 \\ 3.20 & 3.296 \\ 3.20 & 3.311 \\ 3.22 & 3.228 \\ 3.22 & 3.228 \\ 3.22 & 3.276 \\ 3.28 & 3.294 \\ 3.32 & 3.311 \\ 3.34 & 3.316 \\ 3.33 & 3.322 \\ 3.36 & 3.342 \\ 3.36 & 3.342 \\ 3.37 & 3.350 \\ \end{array}$</td> <td>3951 64 8.39 3951 63 8.40 3951 63 8.42 3951 63 8.42 3951 63 8.42 3951 63 8.42 3951 61 8.43 3951 64 8.33 3951 64 8.43 3951 64 8.43 3951 64 8.43 3951 64 8.43 3951 64 8.43 3951 64 8.43 3951 64 8.53 3951 66 8.57 3951 8.56 8.42 3951 8.56 8.56 3951 8.56 8.57 3951 8.56 8.57 3951 8.56 8.57 3951 8.56 8.56 3951 8.56 8.57 3951 8.56 8.56 3951 8.</td> <td>8.512 3944.64 8.514 3944.65 8.606 3944.63 8.606 3944.63 8.506 3944.63 8.510 3944.64 8.510 3944.62 8.519 3944.62 8.519 3944.65 8.483 3944.65 8.483 3944.65 8.643 3944.65 8.503 3944.64 8.530 3944.64 8.530 3944.64 8.538 3944.73 8.538 3944.73 8.559 3944.72 8.559 3944.75 8.559 3944.75</td> <td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td>	274 2000 274 83 10/1/2002 20:00 275 0 275 00 10/2/2002 0:00 275 400 275 1,1 10/2/2002 4:00 275 800 275.33 10/2/2002 4:00 275 1200 275.60 10/2/2002 4:00 275 1500 275.61 10/2/2002 4:00 275 1600 275.67 10/2/2002 4:00 275 1600 275.61 10/2/2002 4:00 276 2000 275.63 10/2/2002 4:00 276 0 275.63 10/2/2002 4:00 276 400 276.76 10/3/2002 4:00 276 100 276.76 10/3/2002 4:00 276 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25.57 25.585 3952.04 25.58 25.585 3952.04 25.55 25.561 3952.05 25.55 25.561 3952.06 25.55 25.666 3952.06 25.55 25.666 3952.05 25.56 25.677 3952.02 25.56 25.677 3952.02 25.56 25.677 3952.02 25.56 25.677 3952.02 25.56 25.675 3952.02 25.56 25.675 3952.02 25.57 25.684 3952.02 25.51 25.693 3952.02 25.51 25.694 3952.06 25.51 25.693 3952.06 25.51 25.694 3952.06 25.51 25.694 3952.06 25.51 25.694 3952.06 25.52 25.592 3952.06 25.52 <t< td=""></t<></td>	0 8.544 3944.72 8.542 3944.71 2 8.543 3944.71 2 8.539 3944.71 2 8.539 3944.70 3 8.533 3944.70 4 8.538 3944.70 5 8.538 3944.71 0 8.541 3944.71 0 8.538 3944.70 2 8.538 3944.70 2 8.532 3944.69 2 8.529 3944.69 3 8.540 3944.71 5 8.538 3944.70 5 8.538 3944.71 5 8.538 3944.71 5 8.538 3944.71 5 8.538 3944.71 5 8.537 3944.68 5 8.531 3944.68 5 8.531 3944.68 6 8.519 3944.68	25.54 25.598 3952.05 25.56 25.569 3952.05 25.57 25.585 3952.04 25.58 25.585 3952.04 25.55 25.561 3952.05 25.55 25.561 3952.06 25.55 25.666 3952.06 25.55 25.666 3952.05 25.56 25.677 3952.02 25.56 25.677 3952.02 25.56 25.677 3952.02 25.56 25.677 3952.02 25.56 25.675 3952.02 25.56 25.675 3952.02 25.57 25.684 3952.02 25.51 25.693 3952.02 25.51 25.694 3952.06 25.51 25.693 3952.06 25.51 25.694 3952.06 25.51 25.694 3952.06 25.51 25.694 3952.06 25.52 25.592 3952.06 25.52 <t< td=""></t<>

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	decimel date date & time ur	#421 ncorrected PSI _ corrected PSI * total head (ft)	#422 uncorrected PSL_corrected PSL [®] total	423 #124 acted PSI * total head (ft)	battary voltage min max	tempe #421 #422	erature °C #423		ng wire frequency 22 #423 #124 con		#421 cted PSI * tota		#422 nputed PSI corrected PS		mputed PSI corr	#423 rected PSI * total head (ft)
year day 289 1200 289 1600	289.50 10/16/2002 12:00 289.67 10/16/2002 16:00		anouneded not conected not (0(a)	0.06 0.004 0.012	12.51 13.83 13.05 13.37 12.8 13.04	14.12 13.8 14.13 13.8 14.14 13.8	2 13.79 3 13.8	20.75 8431.6 75 26.26 8433 75	587.5 7859.1 5429.5 588.9 7860.2 5353.1 588.9 7860.3 5332.8	3.24 3.21 3.21	3.267 3.289 3.288	3951.54 3951.59 3951.59	8.47 8.45 8.44 8.5 8.44 8.5	6 3944.61 9 3944.66	25.54 25.51 25.51	25.565 3952.00 25.595 3952.06 25.585 3952.04
289 2000 290 0 290 400	289.83 10/16/2002 20:00 290.00 10/17/2002 0:00 290.17 10/17/2002 4:00			0.012	12.64 12.8 12.64 12.8 12.55 12.65	14.14 13.8 14.14 13.8 14.14 13.8	1 13.79	0.363 8432.2 75	588.3 7859.9 5345.7 587.9 7859.5 5347.3	3.23 3.23	3.283 3.284	3951.58 3951.58	8.45 8.50 8.46 8.5	8 3944.63 4 3944.65	25.52 25.53	25.577 3952.02 25.582 3952.04
290 800	290.17 10/17/2002 4:00 290.33 10/17/2002 8:00 290.50 10/17/2002 12:00			0.048	12.51 12.56 12.51 13.83	14.14 13.8 14.12 13.8	1 13.78	-4.481 8431.5 75	587.5 7859.1 5365.7 588.6 7860.1 5385.9	3.24 3.22	3.281 3.273	3951.57 3951.55	8.47 8.50 8.44 8.50	0 3944.62	25.54 25.51	25.577 3952.02 25.571 3952.01
290 1200 290 1600 290 2000	290.50 10/17/2002 12:00 290.67 10/17/2002 16:00 290.83 10/17/2002 20:00			-0.032 -0.021	13.03 13.35 12.83 13.03	14.16 13.8 14.14 13.8	3 13.8	26.81 8434.3 75	590.2 7861.4 5299.4 590.2 7861.5 5290.8	3.17 3.18	3.293 3.288	3951.60 3951.59	8.41 8.5 8.41 8.5		25.48 25.48	25.602 3952.08 25.589 3952.05
290 2000 291 0 291 400	291.00 10/18/2002 0:00 291.17 10/18/2002 4:00			0.013	12.71 12.83 12.67 12.71	14.14 13.8 14.14 13.8		9.31 8432.9 75	589.1 7860.4 5336.3 589.1 7860.4 5326.4	3.21 3.20	3.282 3.287	3951.57 3951.58	8.43 8.5 8.43 8.5	5 3944.65	25.51 25.51	25.581 3952.03 25.590 3952.05
291 400 291 800 291 1200	291.33 10/18/2002 4:00 291.50 10/18/2002 12:00			0.026	12.64 12.68 12.63 13.59	14.14 13.8 14.12 13.8	1 13.79	5.793 8432.3 7	588.6 7859.9 5350.4 589.1 7860.4 5379.2	3.22 3.21	3.284 3.269	3951.58 3951.54	8.44 8.5 8.43 8.4	4 3944.60	25.52 25.51	25.580 3952.03 25.569 3952.01
291 1200 291 1600 291 2000	291.67 10/18/2002 12:00 291.63 10/18/2002 16:00 291.83 10/18/2002 20:00			-0.015 0.007	13.02 13.32 12.81 13.02	14.16 13.8 14.14 13.8	3 13.8	25.64 8434.1 8.57 8433.3 7	7590 7861 5323.4 589.5 7860.6 5326.8	3.18 3.20	3.281 3.279	3951.57 3951.57	8.41 8.5 8.42 8.5	3 3944.62	25.49 25.50	25.595 3952.07 25.582 3952.04
297 2000 292 0 292 400	292.00 10/19/2002 0:00 292.17 10/19/2002 4:00			0.04	12.65 12.81 12.56 12.66	14.14 13.8 14.14 13.8			588.3 7859.7 5364.8 587.5 7858.8 5383.5	3.23 3.24	3.275 3.271	3951.56 3951.55	8.45 8.4 8.47 8.5	0 3944.62	25.52 25.54	25.570 3952.01 25.576 3952.02
292 800 292 1200	292.33 10/19/2002 8:00 292.50 10/19/2002 12:00			0.082	12.52 12.57 12.52 13.8	14.14 13.8 14.15 13.8		20.6 8431.5 7	586,5 7857.9 5420.9 587.3 7858,6 5454.2	3.26 3.24	3.269 3.253	3951.54 3951.51	8.49 8.4 8.47 8.4	5 3944.58	25.57 25.55	25.571 3952.01 25.561 3951.99
292 1600 292 2000	292.67 10/19/2002 16:00 292.83 10/19/2002 20:00			0.028 0.035	13.02 13.37 12.8 13.02	14,16 13.8 14,14 13.8		7.14 8432.4 7	588.4 7859.4 5386.9 588.4 7860.5 5367.4	3.22 3.22	3.274 3.273	3951.56 3951.55	8.45 8.5 8.45 8.5	0 3944.62	25.53 25.50	25.590 3952.05 25.557 3951.98 25.579 3952.03
293 0 293 400	293.00 10/20/2002 0:00 293.17 10/20/2002 4:00			0.051 0.053	12.64 12.8 12.56 12.65	14.14 13.8 14.14 13.8	1 13.81	-1.929 8431.8 7	587.8 7858.9 5378.8 587.5 7858.5 5379	3.23 3.23	3.266 3.269	3951.54 3951.54	8.46 8.4 8.47 8.5	3 3944.62	25.54 25.55 25.57	25.586 3952.04 25.584 3952.04
293 800 293 1200	293.33 10/20/2002 8:00 293,50 10/20/2002 12:00			0.069 0.054	12.51 12.56 12.51 13.83	14.14 13.8 14.14 13.8	2 13.79	15.38 8432.5 7	586.9 7857.9 5400.1 588.3 7859.2 5410.2	3.25 3.22	3.267 3.251	3951.54 3951.50 3951.55	8.48 8.5 8.45 8.4 8.43 8.5	3 3944.58	25.54 25.52	25.569 3952.00 25.601 3952.08
293 1600 293 2000	293.67 10/20/2002 16:00 293.83 10/20/2002 20:00			0.005	13.02 13.45 12.82 13.03	14.15 13.8 14.14 13.8	1 13.81	7.3 8433.3 7	589.3 7859.9 .5349.6 589.3 7859.9 5331.6	3.19 3.20	3.273 3.274 3.266	3951.55 3951.55 3951.54	8.43 8.5 8.44 8.4	02 3944.62	25.52 25.53	25.594 3952.06 25.584 3952.04
294 0 294 400	294.00 10/21/2002 0:00 294.17 10/21/2002 4:00			0.032 0.038	12.65 12.82 12.55 12.66	14.14 13.8 14.14 13.8	1 13.79	-3.371 8432.4 7	588.7 7859.5 5348.4 588.2 7859 5352.8 587.5 7858.3 5377.8	3.21 3.22 3.24	3.200 3.270 3.267	3951.54 3951.55 3951.54	8.45 8.5 8.47 8.4	3944.62	25.54 25.56	25.589 3952.05 25.587 3952.05
294 800 294 1200	294.33 10/21/2002 8:00 294.50 10/21/2002 12:00			0.057 0.042	12.5 12.55 12.5 13.85	14.14 13.8 14.15 13.8	2 13.79	19.13 8432.9 7	587.5 7858.3 5377.8 588.8 7859.5 5398.3 589.9 7860.2 5332.1	3.24 3.21 3.18	3.253 3.276	3951.51 3951.56	8.44 8.4 8.41 8.5	34 3944.58	25.53 25.51	25.574 3952.02 25.607 3952.09
294 1600 294 2000	294.67 10/21/2002 16:00 294.83 10/21/2002 20:00			-0.008 0,004	13.01 13.4 12.8 13.02	14.16 13.8 14.14 13.8	13.81	7.59 8433.6 7	589.7 7860.1 5319.4 588.9 7859.7 5342.3	3.19 3.21	3.275 3.267	3951.56 3951.54	8.42 8.5 8.44 8.4)1 3944.62	25.51 25.52	25.597 3952.07 25.585 3952.04
295 0 295 400	295.00 10/22/2002 0:00 295.17 10/22/2002 4:00			0.026 0.028	12.65 12.8 12.6 12.66	14.14 13.8 14.14 13.8	13.79	6.03 8432.7 7	588.9 7859.7 5342.3 588.7 7859.4 5354.7 588.2 7858.8 5371.8	3.21 3.21 3.22	3.272 3.269	3951.55 3951.54	8.44 8.5 8.45 8.4	3944.62	25.53 25.55	25.590 3952.05 25.591 3952.06
295 800 295 1200	295.33 10/22/2002 8:00 295.50 10/22/2002 12:00			0.041 0.027	12.61 12.63 12.61 13.62 13.04 13.32	14.14 13.8 14.15 13.8 14.15 13.8	13.79	21.78 8433.4 7	589.2 7859.8 5380.2 589.4 7859.8 5366.5	3.20 3.20	3.256	3951.51 3951.53	8.43 8.4 8.42 8.4	39 3944.59	25.52 25.52	25.581 3952.03 25.587 3952.05
295 1600 295 2000	295.67 10/22/2002 16:00 295.83 10/22/2002 20:00			0.021 0.04 0.05	12.84 13.08	14.14 13.8	31 13.79	12.97 8432.6 7	588.5 7859 5384.1 7588 7858.8 5390	3.22 3.23	3.263 3.265	3951.53 3951.53	8.45 8.4 8.46 8.4	93 3944.60	25.54 25.55	25.587 3952.05 25.582 3952.04
296 0 296 400	296.00 10/23/2002 0:00 296.17 10/23/2002 4:00			0.054 0.071	12.73 12.84 12.65 12.73 12.58 12.65	14.17 13.8	31 13.81	5.53 8431.9 7	587.8 7858.5 5393.1 587.1 7857.8 5411.4	3.23 3.24	3.265 3.260	3951.53 3951.52	8.46 8.4 8.48 8.4	95 3944.60	25.55 25.57	25.585 3952.04 25.585 3952.04
296 800 296 1200	296.33 10/23/2002 8:00 296.50 10/23/2002 12:00			0.064	12.58 13.66 13.02 13.45	14.17 13.8	32 13.79	14.01 8432.5 7	588.2 7857.2 5423.1 589.2 7858.8 5355.4	3.22 3.19	3.240 3.265	3951.48 3951.53	8.45 8.4 8.43 8.5	76 3944.56	25.58 25.55	25.606 3952.09 25.619 3952.12
296 1600 296 2000	296.67 10/23/2002 16:00 296.83 10/23/2002 20:00			0.023		14.14 13.8	31 13.79	7.9 8433.1	7589 7858.6 5350.1 588.2 7857.8 5379.9	3.20 3.22	3.268 3.265	3951.54 3951.53	8.43 8.4 8.45 8.4		25.55 25.57	25.614 3952.11 25.614 3952.11
297 0 297 400	297.00 10/24/2002 0:00 297.17 10/24/2002 4:00			0.042 0.047 0.049	12.65 12.73 12.65 12.73 12.62 12.65		31 13.79	6.793 8432.2	7588 7857.7 5384.8 587.7 7857.2 5384	3.22 3.23	3.265 3.267	3951.53 3951.54	8.46 8.4 8.46 8.5		25.57 25.58	25.611 3952.10 25.621 3952.13
297 800 297 1200 297 1600	297.33 10/24/2002 8:00 297.50 10/24/2002 12:00			0.046	12.61 13.63 13.1 13.42	14.18 13.8	32 13.79	16.69 8432.8 7	588.5 7857.5 5400 589.7 7858.1 5333.6	3.21 3.18	3.251 3.266	3951.50 3951.54	8.45 8.4 8.42 8.5		25.58 25.56	25.617 3952.12 25.647 3952.18
297 2000	297.67 10/24/2002 16:00 297.83 10/24/2002 20:00 298.00 10/25/2002 0:00			0.027	12.84 13.31 12.71 12.84	14.17 13.0 14.17 13.0	81 13.79	7.72 8432.9 7	588.8 7857.3 5355.7 587.8 7857 5378.7	3.21 3.23	3.268 3.269	3951.54 3951.54	8.44 8.4 8.46 8.5	02 3944.62	25.58 25.59	25.641 3952.17 25.628 3952.14
298 0 298 400 298 800	298.00 10/25/2002 0:00 298.17 10/25/2002 4:00 298.33 10/25/2002 8:00			0.054	12.6 12.71	14.17 13.4	81 13.79	-0.235 8431.8 7	587.4 7855.9 5382.6 586.4 7855 5402.5	3.23 3.25	3.267 3.273	3951.54 3951.55	8.47 8. 8.49 8.	14 3944.65	25.61 25.63	25.647 3952.18 25.654 3952.20
298 1200 298 1600	298.50 10/25/2002 12:00 298.67 10/25/2002 16:00			0.054	12.54 13.79	14.17 13.4	B1 13.79	14.83 8432.1 7 19.24 8433 7	7587.6 7856.2 5409 7588.5 7856 5347.8	3.23 3.21	3.260 3.283	3951.52 3951.58	8.47 8.5 8.45 8.5	24 3944.67	25.61 25.61	25.640 3952.17 25.689 3952.28
298 2000 299 0	298.83 10/25/2002 20:00 299.00 10/26/2002 0:00			0.017 0.027		14.17 13. 14.17 13.			7587.9 7855.5 5339.5 7587.2 7855 5349.4	3.22 3.24	3.295 3.304	3951.60 3951.62	8.46 8. 8.48 8.	36 3944.70	25.62 25.63	25.693 3952.29 25.695 3952.30
299 400 299 800	299.17 10/26/2002 4:00 299.33 10/26/2002 8:00			0.02				3.488 8431.1 7	7587.2 7854.8 5333.9 7586.9 7851.3 5351.8	3.24 3.25	3.309 3.309	3951.64 3951.64	8.48 8.5		25.64 25.72	25.707 3952.32 25.780 3952.49
299 1200 299 1600	299.50 10/26/2002 12:00 299.67 10/26/2002 16:00			0.014		14,17 13. 14.18 13.		16.11 8433.7	7588.3 7852.3 5337.9 7589.4 7852.8 5287	3.21 3.19	3.286 3.302	3951.58 3951.62	8.45 8. 8.42 8.	39 3944.70	25.70 25.69	25.772 3952.47 25.801 3952.54 25.812 3952.57
299 2000 300 0	299.83 10/26/2002 20:00 300.00 10/27/2002 0:00			-0.015 -0.001		14.17 13. 14.17 13.		6.135 8431.9	7588.5 7851.8 5295.8 7587.8 7851.1 5309.2	3.21 3.23	3.315 3.320	3951.65 3951.66	8.46 8.		25.71 25.73	25.815 3952.57
300 400 300 800	300.17 10/27/2002 4:00 300.33 10/27/2002 8:00			0.01 0.02		14.17 13. 14.17 13.		5.898 8430.8	7587.2 7850.4 5326 7586.6 7849.5 5352.3	3.24 3.26	3.321 3.318	3951.66 3951.66	8.49 8.	53 3944.74 50 3944.73	25.74 25.76	25.820 3952.58 25.825 3952.60
300 1200 300 1600	300.50 10/27/2002 12:00 300.67 10/27/2002 16:00			0.036		14.17 13. 14.18 13.			7587 7849.7 5383.2 7587.5 7849.8 5357.9	3.24 3.23	3.295 3.303	3951.60 3951.62	8.47 8.	32 3944.69 38 3944.70	25.76 25.76	25.811 3952.56 25.827 3952.60 25.831 3952.61
300 2000 301 0	300.83 10/27/2002 20:00 301.00 10/28/2002 0:00			0.0			81 13.81	1.768 8430	7586.3 7848.7 5378.7 7585.5 7847.9 5390	3.26 3.28	3.308 3.309	3951.63 3951.64	8.52 8.	44 3944.72 47 3944.72	25.78 25.80	25.833 3952.61
301 400 301 800	301.17 10/28/2002 4:00 301.33 10/28/2002 8:00			0.052		14.17 13.	81 13.79	0.597 8430.3	7585.6 7847.8 5379.3 7585.9 7847.7 5370.8	3.27 3.27	3.308 3.312	3951.63 3951.64	8.51 8.	548 3944.73 548 3944.73 534 3944.69	25.80 25.81	25.840 3952.63 25.849 3952.65 25.832 3952.61
301 1200 301 1600	301.50 10/28/2002 12:00 301.67 10/28/2002 16:00			0.02	13.4 13.51	14,18 13.	82 13.79	15.91 8433.6	7587.4 7849.3 5358.4 7589.1 7850 5275.2	3.23 3.19	3.292 3.313	3951.60 3951.64	8.43 8.	54 3944.69 554 3944.74 557 3944.75	25.77 25.75 25.76	25.832 3952.61 25.875 3952.71 25.878 3952.72
301 2000 302 0	301.83 10/28/2002 20:00			-0.02 -0.01	12.76 12.89	14.17 13.	.81 13.79	5.478 8432.1	7588.7 7849.6 5274.2 7587.9 7848.9 5288.2 7588 7849.7 5270.8	3.21 3.23 3.22	3.324 3.328 3.330	3951.67 3951.68 3951.69	8.46 8.	561 3944.76 565 3944.77	25.78 25.76	25.868 3952.72 25.868 3952.69
302 400 302 800	302.17 10/29/2002 4:00 302.33 10/29/2002 8:00			-0.02 -0.00		14.17 13	.81 13.81	-0.912 8431.9	7587.6 7849 5284.8	3.23	3.330 3.328 3.310	3951.68 3951.68 3951.64	8.47 8.	563 3944.76 543 3944.71	25.78 25.77	25.860 3552.00 25.872 3952.71 25.869 3952.70
302 1200 302 1600	302.50 10/29/2002 12:00 302.67 10/29/2002 16:00			-0.0 -0.03	2 13.04 13.49	14.2 13	.82 13.82	11.94 8432.8	7588.5 7849.2 5310.1 7588.5 7849 5272.9 7587.5 7848 1 5308.9	3.21 3.21	3.329 3.329	3951.68 3951.68	8.45 8	565 3944.76 559 3944.75	25.78 25.80	25.895 3952.76 25.888 3952.74
302 2000 303 0	303.00 10/30/2002 0:00			-0.00 0.01	12.7 12.84	14.17 13	.81 13.79	2.133 8430.9	7587.5 7848.1 5308.9 7586.6 7846.8 5325.9 7586.1 7846.6 5329.5	3.24 3.26 3.26	3.329 3.330	3951.68 3951.68	8.49 8	563 3944.76 569 3944.77	25.83 25.83	25.902 3952.77 25.900 3952.77
303 400 303 800	303.17 10/30/2002 4:00 303.33 10/30/2002 8:00			0.0 0.03	1 12.53 12.6	14.2 13	.81 13.79	-3.45 8430	7585.7 7846.1 5346.7	3.28 3.25	3.330 3.305	3951.68 3951.63	8.51 8	564 3944.76 547 3944.72	25.85 25.83	25.898 3952.76 25.881 3952.73
303 1200 303 1600	303.50 10/30/2002 12:00 303.67 10/30/2002 16:00			0.03 -0.02	5 13.14 13.57	14.18 13	.82 13.79	16.39 8432.6	7586.5 7846.9 5367 7588.2 7848 5291.5 7587.4 7847.8 5303.1	3.23 3.21 3.24	3.327 3.335	3951.68 3951.70	8.45 8	565 3944.76 568 3944.77	25.80 25.80	25.912 3952.80 25.902 3952.77
303 2000 304 0	304.00 10/31/2002 0:00			-0.0 0.01	2 12.75 12.88	14.2 13	.81 13.79	5.556 8430.6	7586.3 7846.9 5329	3.24 3.26 3.27	3.338 3.330	3951.70 3951.68	8.50 8	572 3944.78 573 3944.78	25.83 25.85	25.901 3952.7 25.907 3952.7
304 400 304 800	304.33 10/31/2002 8:00			0.02	1 12.53 12.63	14.19 13	.81 13.81	-3.688 8429.7	7585.1 7845.5 5357	3.28	3.330 3.313	3951.69 3951.65	8.53 8	571 3944.78 555 3944.74	25.86 25.83	25.905 3952.7 25.894 3952.7
304 1200 304 1600	304.50 10/31/2002 12:00 304.67 10/31/2002 16:00			0.02	3 13.35 13.51	14.21 13	.82 13.79	16.95 8432.7	7586.6 7846.8 5357.2 7588.2 7849 5283.6 7587.7 7848.4 5287.6	3.25 3.21 3.23	3.313 3.329 3.339	3951.65 3951.68 3951.70	8.45 8	570 3944.78 574 3944.79	25.78 25.79	25.894 3952.7 25.901 3952.7
304 2000 305 0	305.00 11/1/2002 0:00			-0.02	4 12.76 12.89	9 14.2 13	.82 13.79 .81 13.81	9.07 8430.3	7586 7847 5353.6 7584 7845.8 5380.7	3.23 3.27 3.29	3.333 3.332	3951.69 3951.69	8.50 8	567 3944.77 573 3944.78	25.82 25.85	25.886 3952.7 25.893 3952.7
305 400 305 800	305.33 11/1/2002 8:00			0.04	6 12.59 12.60	3 14.2 13	.84 13.79 .81 13.81 .81 13.79	1.586 8428.6	7584.8 7845.8 5380.7 7584 7845 5404.9 7584.4 7845.4 5435.6	3.29 3.31 3.29	3.332 3.310	3951.69 3951.64	8,55 8	572 3944.78 557 3944.75	25.87 25.86	25.892 3952.7 25.878 3952.7
305 1200 305 1600	305.67 11/1/2002 16:00			0.07	1 13 13.4	3 14.21 13	1.81 13.79 1.82 13.79 1.84 13.81	15.69 8430	7585.1 7845 5376.4 7585 7843.1 5361.2	3.28 3.28 3.28	3.333 3.338	3951.69 3951.70	8.52 8	581 3944.80 581 3944.80	25.87 25.92	25.927 3952.8 25.970 3952.9
305 2000 306 0	306.00 11/2/2002 0:00			0.03 0.04 0.04	2 12.72 12.8	3 14.2 13	.84 13.81 1.84 13.81 1.84 13.79	5,767 8429.1	7585.7584.4 7842.7 5375.5 7583.9 7842 5374.6	3.30 3.30	3.344 3.347	3951.72 3951.72	8.54 8	586 3944.81 597 3944.84	25.92 25.94	25.970 3952.9 25.986 3952.9
306 400 306 800	306.33 11/2/2002 8:00			0.06	3 12.6 12.6	5 14.2 13	3.84 13.79 3.84 13.79 3.84 13.79	2.836 8428	7583 7841.2 5402.4 7583.5 7841.8 5435.6	3.33 3.33 3.32	3.349 3.325	3951.73 3951.67	8.57 8	598 3944.84 571 3944.78	25.96 25.95	25.985 3952.9 25.956 3952.9
306 1200 306 1600	306.67 11/2/2002 16:00			0.07 0.04	6 13.01 13.5	7 14.2 13	3.85 13.82	12.19 8428.7	7583.5 7841.8 5435.6 7583.6 7841.2 5392.9 7582.4 7840.7 5423.6	3.32 3.31 3.34	3.349 3.343	3951.07 3951.73 3951.72	8.56 8	.601 3944.85 .594 3944.83	25.96 25.97	26.001 3953.0 25.979 3952.9
306 2000 307 0	307.00 11/3/2002 0:00			0.00	7 12.66 12.7	9 14.2 13	3.84 13.79 3.81 13.79	-0.183 8425.3	7579.7 7838.7 5511.1	3.34 3.39 3.42	3.343 3.340 3.340	3951.72 3951.71 3951.71	8.65 8	.601 3944.85 .611 3944.87	26.02 26.06	25.970 3952.9 25.981 3952.9
307 400 307 800	307.17 11/3/2002 4:00 307.33 11/3/2002 8:00			· 0,16	6 12.53 12.6 2 12.49 12.5	3 14,19 13	3.84 13.78 3.81 13.81	-5.441 8422.9	7578 7837 5541.9 7576.3 7835.5 5598.3 7577.5 7836.7 5618.9	3.42 3.45 3.42	3.340 3.335 3.315	3951.71 3951.70 3951.65	8.73	.617 3944.89 .593 3944.83	26.00 26.10 26.07	25.982 3952.9 25.958 3952.9
307 1200 307 1600	307.67 11/3/2002 16:00			0.1 0.1	4 13.01 13.5	9 14.2 10	3.84 13.81 3.81 13.79 3.84 13.79	9:34 8426.3	7580.1 7837.8 5491.9 7580.4 7837.6 5483.1	3.42 3.37 3.37	3.339 3.334	3951.65 3951.71 3951.69	8.64	.615 3944.88 .602 3944.85	26.04 26.05	26.014 3953.0 26.014 3953.0
307 2000 308 0	308.00 11/4/2002 0:00			0.1 0.1	3 12.65 12.7	9 14.2 13	3.84 13.81	-3.503 8426.3	7580.6 7837.6 5467.4	3.37 3.37 3.34	3.340 3.348	3951.75 3951.71 3951.73	8.63	.602 3944.85 .612 3944.87	26.05 26.05	26.019 3953.0 26.054 3953.1
308 400	308.17 11/4/2002 4:00			0.0	9 12.55 12.6	5 14.19 13	3.84 13.78	-4.454 8427.4	7581.7 7837.6 5414.5	3.34	3.340	0001.10	0.00		20.00	

PRESSURE #421 #422 #423 prrected PSI corrected PSI total head (ft); uncorrected PSI corrected PSI total head (ft); battary voltage min max 12.48 12.56 12.48 12.56 12.48 12.56 13.04 13.57 12.79 13.04 12.63 12.84 12.61 12.64 12.64 12.62 12.44 12.52 12.44 14.01 13.01 13.58 12.77 13.01 12.6 12.77 12.5 12.61
 #421

 ted PSI
 corrected PSI*

 3.34
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 day of year 308 308 308 309 309 309 309 309 309 309 310 310 temperature [®]C <u>#422</u> <u>#423</u> 13.84 13.78 13.84 13.79 13.84 13.79 13.84 13.81 13.83 13.76 13.83 13.76 13.84 13.79 13.84 13.81 13.84 13.81 13.83 13.81 /ibrating wire #422 7582 7583.9 7585 7584.2 7580.9 7579.3 7579.4 7579.2 7578.2 7576.6 7575.5 #124 0.073 0.06 0.013 0.039 0.086 0.111 0.139 0.162 0.142 0.166 0.199 0.219 # computed PSI correct 8.60 8.55 8.55 8.55 8.55 8.62 8.66 8.66 8.66 8.66 8.69 8.72 8.72 #423 7837.6 7839.2 7839.4 7838.6 7837.1 7835.8 7834.5 7835.7 835.7 835.7 833.7 7832.4 7831.2 hour of decime
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 11/15/2002.10:00
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 11/15/2002.2:00

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 head (ft) 3951.73 3951.68 3951.73 3951.72 3951.71 3951.71 3951.64 3951.68 3951.68 3951.68 3951.68
 #124
 #421

 -7.45
 B427.5

 11.13
 8429.1

 12.73
 B430

 -1.121
 B429.1

 -8.546
 6427.3

 -10.38
 8425.4

 -10.38
 8425.4

 -1.32
 8425.4

 -6.762
 8422.4

 -9.03
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 day 800 1200 1600 2000 0 400 800 1200 1600 2000 0 0 400 #421 14.19 14.2 14.21 14.22 14.22 14.22 14.22 14.22 14.22 14.23 14.22 14.22 14.22 14.22 #124 | 5398.9 5412.1 5342.7 5358.8 5421.5 5454.6 5495.4 5569.7 5542.1 5552.8 5594.6 5620.5

#422			#423		approximate
ected PSI *	total head (ft)	computed PSI	corrected PSI *	total head (ft)	river elevation
8.611	3944.87	26.05	26.060	3953.14	3950.17
8.580	3944.80	26.01	26.035	3953.08	3950.19
8,601	3944.85	26.00	26.077	3953.18	3950.20
8.594	3944.83	26.02	26.070	3953.16	3950.19
8.593	3944.83	26.06	26,058	3953.13	3950.18
8.599	3944.84	26.09	26.065	3953.15	3950,19
8.608	3944.86	26.12	26.067	3953.16	3950.17
8.583	3944.81	26.11	26.032	3953.07	3950.16
8.607	3944.86	26.11	26.052	3953.12	3950.16
8.607	3944.86	26.14	26.059	3953.14	3950.18
8.611	3944.87	26.17	26.056	3953.13	3950.20
8.617	3944.88	26.20	26.065	3953.15	3950.19

#4	24	#4:	25	#4	26	riv	river			
piezo, elev	3947.4	piezo, elev	3912.4	piezo, elev	3880.4	bank elev.	3952.43			
Mean	3952.042	Mean	3953.13	Mean	3953.186	Mean	3952.042			
S.E.	0.016856	S.E.	0.007482	S.E.	0.010039	S.E.	0.016856			
σ	0.356769	đ	0.158359	σ	0.212491	σ	0,356769			
σ^2	0.127284	σ²	0.025077	σ^2	0.045152	σ^2	0.127284			
Range	2.069	Range	0.863578	Range	1.157451	Range	2.069			
Minimum	3951,333	Minimum	3952,687	Minimum	3952.671	Minimum	3951.333			
Maximum	3953.402	Maximum	3953.551	Maximum	3953.828	Maximum	3953.402			
л	448	n	448	n	448	Count	448			
Меал	3952.042	Mean	3953.13	Mean	3953.186	Mean	3952.042			
		Standard E	0.007482	Standard E		Standard E				
Standard E		Median	3953.132	Median	3953,143	Median	3952.029			
Median	3952.029 3952.345	Mode	3952,923	Mode	3953.081	Mode	3952.345			
Mode Standard [0.356769	Standard E		Standard E		Standard E				
Sample Va		Sample Va		Sample Va		Sample Va				
Kurtosis	0.467974		-0.158226	Kurtosis	0.244608	Kurtosis	0.467974			
	0.423657	Skewness		Skewness	0.602155	Skewness	0.423657			
Skewness						_	2.069			
Skewness Ranne	2.069		0.863578	Range	1.157451	Range	2.069			
Range		Range Minimum		Range Minimum	1.157451 3952.671	Range Minimum	3951.333			
	2.069	Range	0.863578							
Range Minimum	2.069 3951.333	Range Minimum	0.863578 3952.687	Minimum	3952.671	Minimum	3951.333			

MOAB 3 - VIBRATING WIRE PIEZOMETERS

MOAB 3 - 1	/IBRATING V	VIRE PIEZO	METERS						label re	ading elev.	total head	1/2 range		max temp m	in temo fer	πp.Δ/2 av	a temp							
niezomete	ground elevation (ft)		piezometer	Adj. R.	G	т	к	river #424		3952.43 3947.4	3952.04 3952.04	1.034 1.034		15.62	14.98	0.32	15.30							
#424 #425	3967.4 3967.4	20.0 55.0	3947.4 3912.4	9127	0.02371	26.0 25.8	-0.02244	#425 #425	5	3912.4 3880.4	3953.13 3952.04	0.432 0.579		14.92 15.10	14.83 15.05	0.045 0.025	14.88 15.08							
#426	3967.4	87.0	3880.4	9400	0.02354	25.4	-0.02469																	
				1				PRE	SSURE									1				*101		
year	day of year	hour of day	decimel date	date & time	uncorrected PSI of	#424 corrected PSI * to	tal head (ft); u	ncorrected PSI con	#425 rected PSI * to	tal head (ft) u	incorrected PSI co	#426 rrected PSI * to	otal head (ft)	battary vo min	max	#424		#426 #424		#426		#424 orrected PSI * te		#42 omputed PSI_correcte 17.65
2002 2002	235 235	1200 1600	235.50 235.67	8/23/2002 12:00 8/23/2002 16:00	0.616 0.584	0.540	3948.82 3948.65	16.07 16.05	16.006	3949.48 3949.34	30.08 30.04	29.996	3949.82 3949.62	13.14 13.08	13.45 13.14	14.99 14.98	14.88 14.9	15.08 9041 15.09 9042 15.08 9042	.8 8214.1	8066.7	2.28 2.24 2.25	2.200 2.214	3952.65 3952.48 3952.51	17.64 17.63
2002 2002	235 236	2000 0	235.83 236.00		0.589 0.597	0.555 0.537	3948.68 3948.64	16.05 16.05	16.016 15.990	3949.36 3949.30	30.07 30.08	30.036 30.020	3949.71 3949.68	12.84 12.72	13.09 12.84	14.99 15.01	14.88 14.9	15.1 9042	.2 8214.1	8065	2.26 2.27	2.197	3952.47 3952.49	17.64 17.65
2002 2002	236 236	400 800	236.17 236.33		0.613 0.572	0.547 0.479	3948.66 3948.51	16.06 16	15.994 15.907	3949.31 3949.11	29.93 29.88	29.864 29.787	3949.32 3949.14	12.65 12.59	12.72 13.62	15.01 15	14.92 14.92 14.88	15.09 9041 15.09 9043 15.08 9041	.3 8216.2	8073.5	2.23 2.28	2.138 2.205	3952.33 3952.49	17.59 17.65
2002 2002	236 236	1200 1600	236.50 236.67	8/24/2002 16:00	0.622 0.608	0.546 0.590	3948.66 3948.76	16.07 16.07	15.994 16.052	3949.31 3949.44	29.95 29.93	29.874 29.912	3949.34 3949.43	13.12 13.06 12.82	13.61 13.13 13.08	14.99 15.01 14.99	14.88 14.9 14.91	15.06 9041 15.06 9041 15.08 9041	.7 8213.5	8071.3	2.20 2.27 2.27	2.251 2.251 2.251	3952.59 3952.59	17.65 17.65
2002 2002	236 237	2000	236.83 237.00	8/25/2002 0:00	0.613 0.632	0.592	3948.77 3948.77	16.07 16.08	16.049 16.040 16.030	3949.44 3949.42 3949.39	29.93 29.95 29.96	29.909 29.910 29.900	3949.42 3949.42 3949.40	12.68	12.82	15.01	14.92 14.92	15.09 9040 15.09 9040	.8 8212.9	8070.4	2.29	2.250 2.242	3952.59 3952.57	17.67 17.68
2002 2002	237 237	400 800 1200	237.17 237.33 237.50	8/25/2002 8:00	0.643 0.594 0.631	0,583 0,500 0,549	3948.75 3948.55 3948.67	16.09 16.02 16.08	15.926 15.998	3949.35 3949.15 3949.32	29.91 29.96	29.816 29.878	3949.21 3949.35	12.56 13.17	13.7	15.03 14.99	14.92 14.88	15.09 9042 15.08 9040	2.3 8215.4	8072	2.25 2.29	2.160 2.209	3952.39 3952.50	17.61 17.66
2002 2002 2002	237 237 237	1600 2000	237.67 237.83	8/25/2002 16:00	0.604	0.549 0.547	3948.67 3948.66	16.07 16.06	16.015 16.004	3949.36 3949.33	29.94 29.95	29.885 29.894	3949.37 3949.39	13.04 12.83	13.17 13.08	15.01 15.02	14.9 14.88	15.06 904 ⁻ 15.08 904 ⁻			2.26 2.26	2.209 2.208	3952.50 3952.50	17.65 17.65
2002 2002 2002	238 238	0	238.00 238.17		0.613	0.527	3948.62 3948.60	16.07 16.07	15.984 15.976	3949.29 3949.27	29.96 29.96	29.874 29.866	3949.34 3949.32	12.7 12.61	12.83 12.7	15.01 15.03	14.9 14.92	15.1 904 15.09 904	.4 8213.5	8070.2	2.27 2.28	2.185 2.182	3952.44 3952.43	17.65 17.65
2002 2002	238 238	800	238.33 238.50	8/26/2002 8:00	0.561 0.589	0.439 0.493	3948.41 3948.54	15.99 16.05	15.868 15.954	3949.02 3949.22	30.01 29.92	29.888 29.824	3949.37 3949.22	12.58 13.12	13.63 13.61	15.03 15.02	14.92 14.88	15.09 904 15.08 904	2.5 8214.4	8071.7	2.22 2.25	2.099 2.154	3952.24 3952.37	17.58 17.63
2002 2002	238 238		238.67 238.83		0.554 0.543	0.517 0.511	3948.59 3948.58	16.03 16.01	15.993 15.978	3949.31 3949.27	29.9 29.88	29.863 29.848	3949.31 3949.28	13.04 12.83	13.13 13.07	15.01 15.02	14.9 14.88	15.06 90 15.08 904	1.5 8216	8073.3	2.21	2.178 2.170	3952.43 3952.41 3952.36	17.61 17.60 17.59
2002 2002	239 239	0 400	239.00 239.17		0.545 0.559	0.491 0.503	3948.53 3948.56	16 16.01	15.946 15.954	3949.20 3949.22	29.87 29.88	29.816 29.824	3949.21 3949.22	12.73 12.65	12.83 12.74	15.02 15.04	14.91 14.9	15.08 904 15.09 904	3.8 8215.9	8073.7	2.20 2.22 2.18	2.151 2.163 2.099	3952.30 3952.39 3952.24	17.60 17.53
2002 2002	239 239	1200	239.33 239.50	8/27/2002 12:00	0.517	0.440 0.513	3948.42 3948.58	15.95 16.01	15.873 15.970	3949.03 3949.25	29.83 29.88	29.753 29.840 29.898	3949.06 3949.26 3949.40	12.6 13.12 13.06	13.61 13.6 13.13	15.03 15.02 15.04	14.92 14.88 14.9	15.09 904 15.08 904 15.06 904	1.1 8216.1	8073.5	2.18 2.21 2.19	2.172	3952.41 3952.51	17.59
2002	239 239	2000	239.67 239.83	8/27/2002 20:00	0.534	0.552 0.569 0.573	3948.67 3948.71 3948.72	16 16 16.01	16.018 16.032 16.030	3949.36 3949.40 3949.39	29.88 29.88 29.89	29.898 29.912 29.910	3949.43 3949.42	12.84	13.11	15.02 15.04	14.88	15.08 904 15.09 904	4.8 8216.6	8073.4	2.20 2.21	2.227	3952.54 3952.55	17.58 17.59
2002 2002 2002	240 240 240	400	240.00 240.17 240.33	8/28/2002 4:00	0.553 0.567 0.531	0.567 0.497	3948.71 3948.55	16.02 15.96	16.020 15.926	3949.37 3949.15	29.9 29.85	29.900 29.816	3949.40 3949.21	12.63	12.71	15.03 15.03	14.92 14.92	15.09 904		8072.5	2.23 2.19	2.226 2.156	3952.54 3952.38	17.60 17.54
2002 2002 2002	240 240 240	1200	240.50 240.67	8/28/2002 12:00	0.571	0.554 0.574	3948.68 3948.72	16.02 16.01	16.003 16.030	3949.33 3949.39	29.91 29.9	29.893 29.920	3949.38 3949.45	13.17 13.11	13.59 13.17	15.05 15.03	14.88 14.89		44 8215.8	8072.5	2.23 2.21	2.213 2.234	3952.51 3952.56	17.60 17.60
2002	240 241		240.83 241.00		0.568 0.604	0.588 0.600	3948.76 3948.78	16.02 16.04	16.040 16.036	3949.42 3949.41	29.97 30	29.990 29.996	3949.61 3949.62	12.85 12.75	13.12 12.85	15.05 15.05	14.88 14.88	15.08 904 15.08 904	1.9 8214.6	8068.5	2.23 2.26	2.248 2.259	3952.59 3952.61 3952.58	17.60 17.63 17.64
2002 2002	241 241	800	241.17 241.33	8/29/2002 8:00	0.605 0.623	0.584 0.566	3948.75 3948.71	16.05 16.06	16.029 16.003	3949.39 3949.33	30 30.01	29.979 29.953	3949.58 3949.52	12.71	12.75	15.05 15.05	14.91 14.91 14.88	15.08 904 15.08 904 15.08 904	1.1 8213.8	8067.9	2.27 2.28 2.26	2.245 2.225 2.207	3952.56 3952.54 3952.49	17.65 17.62
2002 2002		1600	241.50 241.67	8/29/2002 16:00	0.596	0.547 0.548	3948.66 3948.66	16.04 16.02 16.06	15.991 16.006 16.036	3949.30 3949.34 3949.41	29.9 29.89 29.93	29.851 29.876 29.906	3949.29 3949.34 3949.41	12.69 13.13 12.78	13.36 13.21 13.16	15.05 15.05 15.07	14.88 14.88 14.9	15.08 904 15.08 904 15.07 904	3.7 8215.5	5 8073.1	2.22 2.27	2.207	3952.49 3952.58	17.61 17.64
2002 2002 2002	242	0	241.83 242.00 242.17	8/30/2002 0:00	0.607 0.64 0.643	0.583 0.587 0.576	3948.75 3948.75 3948.73	16.08 16.09	16.027 16.023	3949.39 3949.39 3949.38	29.96 29.96 29.96	29.907 29.893	3949.42 3949.38	12.70 12.7 12.64	12.78	15.06 15.06	14.9 14.9	15.06 904 15.09 904	0.3 8212.9	9 8070	2.30 2.30	2.248 2.237	3952.59 3952.56	17.67 17.67
2002 2002 2002	242	800	242.17 242.33 242.50	8/30/2002 8:00	0.601	0.513 0.546	3948.58 3948.66	16.02 16.07	15.932 15.985	3949.17 3949.29	29.91 29.96	29.822 29.875	3949.22 3949.34	12.6 13.28	13.58 13.57	15.06 15.05	14.89 14.88	15.09 90 15.08 904	042 8215.4 0.7 8213.3		2.26 2.29	2.173 2.207	3952.41 3952.49	17.61 17.66
2002	242	1600	242.67	8/30/2002 16:00	0.604	0.574 0.537	3948.72 3948.64	16.07 16.07	16.040 16.000	3949.42 3949.32	29.97 29.96	29.940 29.890	3949.49 3949.38	13.13 12.86	13.28 13.14	15.05 15.08	14.88 14.88	15.08 904 15.08 904	1.7 8213.0	6 8070.2	2.26 2.27	2.233 2.198	3952.55 3952.47	17.66 17.65
2002	243	; O	243.00 243.17	8/31/2002 0:00	0.617	0.505 0.521	3948.57 3948.60	16.07 16.08	15.958 15.969	3949.23 3949.25	29.95 29.95	29.838 29.839	3949.26 3949.26	12.73 12.64	12.87 12.73	15.07 15.06	14.9 14.89	15.09 904 15.09 904	0.7 8212.9	9 8070.3		2.165 2.181	3952.40 3952.43	17.66 17.67
2002 2002	243	1200	243.33 243.50	8/31/2002 12:00	0.593	0.460 0.508	3948.46 3948.57	16.02 16.07	15.887 15.952	3949.06 3949.21	29.91 29.95	29.777 29.832	3949.12 3949.24	12.6 13.2	13.58 13.57	15.06 15.08	14.89 14.88	15.09 904 15.08 904 15.09 904		2 8070.4		2.121 2.168 2.209	3952.29 3952.40 3952.50	17.61 17.66 17.65
2002 2002	243	2000	243.67 243.83	8/31/2002 20:00	0.615	0.550 0.562	3948.67 3948.70	16.07 16.07	16.011 16.017	3949.35 3949.36 3949.34	29.95 29.95 29.96	29.891 29.897 29.887	3949.38 3949.39 3949.37	13.1 12.84 12.71	13.2 13.13 12.84	15.06 15.08 15.07	14.89 14.88 14.9	15.08 904	1.4 8213. 041 821	4 8070.4		2.222	3952.53 3952.50	17.66 17.66
2002	244	400	244.00 244.17 244.33	9/1/2002 4:00		0.551 0.541 0.522	3948.67 3948.65 3948.60	16.08 16.08 16.09	16.007 15.991 15.968	3949.30 3949.25	29.97 29.96	29.881 29.838	3949.36 3949.26	12.67	12.71	15.09 15.1	14.9 14.9		0.7 8212.	8 8069.8	2.29	2.202 2.183	3952.48 3952.44	17.67 17.67
2002 2002 2002	244	1200	244.50 244.67	9/1/2002 12:00	0.619	0.512 0.512 0.517	3948.58 3948.59	16.07 16.06	15.963 15.987	3949.24 3949.29	29.95 30.07	29.843 29.997	3949.27 3949.62	12.77 13.08	13.39 13.16	15.08 15.09	14.88 14.9		1.2 8213. 2.4 8213.	8 8065.3		2.172 2.178	3952,41 3952,43	17.66 17.65
2002	244	1 2000	244.83	9/1/2002 20:00	0.591	0.517 0.517	3948,59 3948,59	16.05 16.06	15.976 15.970	3949.27 3949.25	30 30.01	29.926 29.920	3949.46 3949.45	12.84 12.71	13.1 12.84	15.08 15.09	14.88 14.9	15.07 904	2.4 8214. 1.7 8213.	8 8068.1	2.25	2.177 2.177	3952.42 3952.42	17.64 17.65
200	24	5 400	245.17 245.33	9/2/2002 4:00	0.62	0.526 0.460	3948.61 3948.46	16.07 16	15.976 15.884	3949.27 3949.06	30.01 29.94	29.916 29.824	3949.44 3949.22	12.63 12.58	12.71 13.63	15.09 15.09	14.89 14.89	15.09 9	1.2 8213. 043 8216.	4 8070.8	2.28 2.24	2.185 2.120	3952.44 3952.29	17.65 17.59 17.64
200 200	2 24	5 1600	245.50 245.67	9/2/2002 16:00	0.574	0.502 0.526	3948.56 3948.61	16.05 16.04	15.953 15.992	3949.21 3949.30	29.99 29.96	29.893 29.912	3949.38 3949.43	13.16 13.06	13.62 13.17	15.08	14.88 14.87 14.88	15.06 904	2.1 8214. 3.1 8214. 3.5 8215.	6 8070	2.23	2.161 2.186 2.181	3952.39 3952.44 3952.43	17.63 17.61
200 200	2 24	6 0	245.83 246.00	9/3/2002 0:00	0 0.576	0.522	3948.60 3948.57	16.03 16.04	15.987 15.969	3949.29 3949.25	29.86 29.86 29.87	29.817 29.789 29.797	3949.21 3949.14 3949.16	12.82 12.69 12.61	13.09 12.82 12.69	15.1 15.09 15.09	14.00 14.9 14.89	15.09 9	043 8214. 12.7 8214.	.8 8074.5		2.165	3952.40 3952.41	17.62 17.63
200 200	2 24	6 800	246.17 246.33 246.50	9/3/2002 8:00	0 0.603	0.511 0.500 0.509	3948.58 3948.55 3948.57	16.04 16.05 16.02	15.967 15.947 15.941	3949.25 3949.20 3949.19	29.88 29.86	29.777 29.781	3949.12 3949.13	12.61 12.63	12.63 13.45	15.09 15.1	14.89 14.88	15.09 904	1.9 8214. 2.5 8215.	.4 8073.5	5 2.26	2.160 2.169	3952.38 3952.41	17.63 17.61
200 200 200	2 24	6 1600	246.6	7 9/3/2002 16:00	0 0.569	0.547	3948.66 3948.76	16.03 16.06	16.008 16.044	3949.34 3949.42	29.87 29.89	29.848 29.874	3949.28 3949.34	13.14 12.84	13.32 13.36	15.11 15.1	14.88 14.88	15.08 904	43.3 8215. 41.8 821	.1 8074	4 2.23	2.207 2.249	3952.49 3952.59	17.62 17.64
200	2 24	70	247.00	9/4/2002 0:0	0 0.618	0.583	3948.75 3948.76	16.06 16.07	16.025 16.029	3949.38 3949.39	29.9 29.93	29,865 29,889	3949.32 3949.37	12.74 12.65	12.84 12.74	15.12 15.12	14.9 14.89	15.09 90-	1.2 8213. 0.8 8213	.2 8071.2	2 2.29	2.243 2.247	3952.58 3952.59	17.65 17.66
200 200	2 24	7 800	247.3	3 9/4/2002 8:0	0 0.605	0.532	3948.63 3948.64	16.03 16.06	15.957 15.976	3949.22 3949.27	29.91	29.817 29.826	3949.21 3949.23	12.6 13.24	13.34 13.59	15.12 15.1	14.89 14.88	15.08 90	41.8 8215 41.2 8213	.9 8072.1	1 2.28	2.191 2.195	3952.46 3952.47	17.62 17.64 17.64
200 200			247.8	3 9/4/2002 20:0	0 0.585		3948.68 3948.59	16.05 16.04	16.012 15.971	3949.35 3949.26	30.02	30.002 29.951	3949.64 3949.52	13.09 12.84	13.24 13.1	15.12 15.1	14.87 14.88	15.08 90	42.3 8214 42.6 8214	.5 8067.4	4 2.25	2.214 2.177 2.170	3952.51 3952.42 3952.41	17.63 17.64
200 200		8 400	248.1	7 9/5/2002 4:0	0.6		3948.58 3948.57	16.05 16.05	15.961 15.955	3949.23 3949.22	30.02 30.03	29.931 29.935	3949.47 3949.48	12.69 12.67	12.84 12.69	15.12 15.13	14.9 14.9	15.07 9	1042 8214 1042 8214 42.7 8215	.1 8067.1	1 2.26	2.170 2.164 2.122	3952.39 3952.30	17.64 17.64 17.61
200 200	2 24	8 1200	248.5	0 9/5/2002 12:0	0.587	0.473	3948.47 3948.49	16.03 16.04	15.909 15.926	3949.11 3949.15		29.739 29.736 20.782	3949.03 3949.02	12.64 13.16		15.12 15.1 15.1	14.9 14.88 . 14.87	15.08 90	42.7 8213 42.5 8214 43.9 8215	.9 8074.	7 2.25	2.122 2.134 2.156	3952.30 3952.32	17.62
200 200	2 24	8 2000	248.8	3 9/5/2002 20:0	0 0.555		3948.54 3948.58 3948.60	16.02 16.01 16.03	15.962 15.966 15.966	3949.24 3949.24 3949.24	29.84	29.782 29.796 29.786	3949.13 3949.16 3949.14	13.06 12.85 12.75	13.1	15.12 15.13 15.13	14.88 14.88	15.08 90	43.9 8215 43.9 8215 42.7 8215	.9 8075.	3 2.21	2.170	3952.41 3952.43	17.60
200	2 24	9 400	249.1	7 9/6/2002 4:0	0.58	0.511	3948.60 3948.58 3948.41		15.966 15.961 15.887	3949.24 3949.23 3949.06	29.85	29.786 29.781 29.717	3949.14 3949.13 3948.98	12.68	12.76	15.12 15.15	14.87 14.87	15.07 90	42.8 8215 44.9 8217	.1 8074.	6 2.24	2.172		17.62
200 200 200	2 24	9 1200	249.5	0 9/6/2002 12:0	0.557	0.485	3948.41 3948.52 3948.62	15.99	15.918 15.978	3949.13	29.83	29.758 29.798		13.17 12.98	13.38	15.13 15.13	14.88 14.88	15.08 90	43.8 8216 44.5 8216	.9 8075.	6 2.22 5 2.20	2.145 2.188	3952.35 3952.45	17.57 17.58
200 200 200	2 24	9 2000	249.8	3 9/6/2002 20:0	0 0.574	0.549	3948.67 3948.60	16.01	15.985 15.967		29.85	29.825 29.807	3949.23 3949.19		13.19	15.16 15.15	14.88 14.87	15.08 90 15.07	43.1 82 [.] 9043 8215	16 8074. 5.4 8074.	.8 2.23 4 2.24	2.208 2.182	3952.49 3952.44	. 17.61
200 200 200	2 25	50 400	250.1	7 9/7/2002 4:0	0.577	0.533	3948.63 3948.68	16.03	15.986	3949.29 3949.32	29.86 29.86	29.816 29.830	3949.21 3949.24	12.69 12.67	12.74 12.72	15.15 15.15	14.87 14.87	15.07 90	42.9 8215 42.7 8215	5.2 8074. 5.2 8074.	.3 2.24	2.193 2.212		17.61
200		50 1200					3948.53		15.926			29.836	3949.25	12.74	13.38	15.16	14.88	15.08	9044 8216	5,8 8072.	.7 2.21	2.147	3952.36	17.58

3910	3967.4 ground surface @ piezometer nest
3955	3967.4

	425	1		#426		approximate
correc	ted PSI ^a tota			corrected PSI * to		
		3953.13	31.69		3953.52	3951.72
	17.595	3953.00	31.64	31.596 31.635	3953.31 3953.40	3951.70 3951.79
	17.596 17.579	3953.01 3952.97	31.67 31.68	31.620	3953.40	3951.79
	17.581	3952.97	31.53	31.464	3953.01	3951.69
	17,497	3952.78	31.48	31.387	3952.83	3951.63
	17.575	3952.96	31.55	31.471	3953.02	3951.68
	17.635	3953.10	31.53	31.515	3953.13	3951.76
	17.631	3953.09	31.53	31.511	3953.12	3951.75
	17.626	3953.07 3953.06	31.55 31.57	31.513 31.505	3953.12 3953.10	3951.72 3951.68
	17.617 17.514	3952.82	31.57	31.422	3952.91	3951.64
	17.583	3952.98	31.57	31.483	3953.05	3951.72
	17.600	3953.02	31.54	31.485	3953.06	3951.67
	17.593	3953.00	31.55	31.495	3953.08	3951.74
	17.567 17.558	3952.94 3952.92	31.56 31.56	31.472 31.464	3953.03 3953.01	3951.68 3951.62
	17.459	3952.69	31.61	31,488	3953.06	3951.53
	17.536	3952.87	31.52	31.427	3952.92	3951.55
	17.576	3952.96	31.50	31.468	3953.02	3951.54
	17.564	3952.93	31.49	31.453	3952.98	3951.53
	17.536 17.541	3952.87 3952.88	31.47 31.48	31.415 31.420	3952.90 3952.91	3951.54 3951.52
	17.458	3952.69	31.43	31.356	3952.76	3951.41
	17.553	3952.91	31.48	31.441	3952.96	3951.56
	17.604	3953.02	31.49	31.504	3953.10	3951.47
	17.614	3953.05	31.48	31.515	3953.13	3951.52
	17.613 17.604	3953.04 3953.02	31.49	31.514 31.504	3953.13 3953.10	3951.48 3951.45
	17.510	3953.02	31.50 31.45	31.420	3952.91	3951.35
	17.588	3952.99	31.51	31.497	3953.08	3951.35
	17.620	3953.06	31.50	31.524	3953.15	3951.69
	17.620	3953.06	31.57	31.590	3953.30	3951.75
	17.624 17.615	3953.07 3953.05	31.60 31.60	31.594 31.575	3953.31 3953.27	3951.58 3951.60
	17.588	3952.99	31.61	31.555	3953.22	3951.56
	17.572	3952.95	31.50	31.450	3952.98	3951.55
	17.593	3953.00	31.49	31.476	3953.04	3951.86
	17.619	3953.06	31.53	31.504	3953.10	3951.58
	17.613 17.604	3953.05 3953.02	31.56 31.56	31.510 31.496	3953.12 3953.08	3951.60 3951.59
	17.521	3952.83	31.50	31.423	3952.91	3951.55
	17.573	3952.95	31.56	31.476	3953.04	3951.68
	17.625	3953.07	31.57	31.540	3953,18	3951.69
	17.581	3952.97	31.56	31.488	3953.07	
	17.545 17.556	3952.89 3952.91	31.55 31.56	31.434 31.445	3952.94 3952.96	3951.59 3951.60
	17.478	3952.73	31.50	31.376	3952.81	3951.49
	17.542	3952.88	31.55	31.436	3952.94	3951.48
	17.594	3953.00	31.55	31.487	3953.06	3951.58
	17.602	3953.02	31.55	31.501	3953.09	
	17.591 17.580	3952.99 3952.97	31.56 31.57	31.488 31.479	3953.06 3953.04	3951.53 3951.53
	17.549	3952.90	31.57	31.444	3952.96	3951.54
	17,548	3952.90	31.55	31.447	3952.97	3951.64
	17.573	3952.95	31.67	31.600	3953.32	
	17.563	3952.93	31.60	31.524 31.518	3953.15 3953.13	
	17.556 17.559	3952.91 3952.92	31.61 31.61	31.513	3953.13	
	17.470	3952.72	31.54	31,428	3952.93	
	17.540	3952.88	31.59	31.492	3953.07	3951.52
	17.580	3952.97		31.515	3953.13	
	17.571 17.552	3952.95 3952.90	31.46 31.46	31.416 31.386	3952.90 3952.83	
	17.552	3952.91	31.40	31.403	3952.87	
	17.529	3952.85	31.48	31.377	3952.81	
	17.528	3952.85	31.46	31.383	3952.82	
	17.594	3953.00	31.47	31.447	3952.97	
	17.626	3953.07	31.49	31.477	3953.04	3951.51
	17.613 17.619	3953.05 3953.06			3953.01 3953.08	
	17.543	3952.88			3952.91	
	17.560	3952.92			3952.93	
	17.602	3953.02			3953.32	
	17,561	3952.93			3953.22	
	17.550 17.544	3952.90 3952.89			3953.16 3953.18	
	17.490	3952.76			3952.72	
	17.507	3952.80	31.45	31.338	3952.72	2 3951.34
	17.547	3952.89			3952.82	
	17.554	3952.91			3952.85	
	17.548 17.548	3952.89 3952.89			3952.83 3952.83	
	17.471	3952.72			3952.67	
	17.503	3952.79	31.43		3952.77	7 3951.56
	17.565	3952.94			3952.86	
•	17.571	3952.95 3952.92			3952.92 3952.88	
	17.557 17.570	3952.92			3952.80	
	17.584	3952.98			3952.9	4 3951.55
1	17.513	3952.82	31.50	31.435	3952.9	4] 3951.54

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day of hour of	decimel	#424	PRESSURE #425	#426	battary voltage	temperature °C	vibrating wire frequency	#424	bood (f) computed DDI	#425	#426 huted PSL corrected PS	approximate
day of year hour of year 2002 267 800 2002 267 1200 2002 267 1200 2002 267 1600 2002 267 2000 2002 268 400 2002 268 800 2002 268 1600 2002 268 1600 2002 268 1600 2002 269 0 2002 269 100 2002 269 100 2002 269 100 2002 269 100 2002 269 100 2002 269 100 2002 269 2000 2002 269 200 2002 269 200 2002 270 0 2002 270 0 2002 270 800 2002 270	date date & time 267.33 9724/2002 8:00 267.50 9724/2002 12:00 267.67 9724/2002 10:00 267.67 9724/2002 10:00 267.68 9724/2002 10:00 268.00 9725/2002 0:00 268.17 9725/2002 10:00 268.50 9725/2002 10:00 268.51 9725/2002 10:00 268.53 9725/2002 10:00 268.54 9725/2002 10:00 269.05 9725/2002 10:00 269.53 9726/2002 10:00 269.56 9726/2002 10:00 269.58 9726/2002 10:00 269.58 9726/2002 10:00 269.58 9726/2002 10:00 269.58 9726/2002 10:00 269.58 9726/2002 10:00 270.00 9027/2002 0:00 270.01 9127/2002 0:00	uncorrected PSI corrected PSI ^a total hear				temperature ⁹ C #424 #425 15.31 14.89 15.3 14.88 15.31 14.86 15.33 14.88 15.32 14.87 15.33 14.88 15.33 14.88 15.33 14.88 15.33 14.88 15.32 14.87 15.32 14.87 15.32 14.87 15.33 14.88 15.33 14.88 15.33 14.88 15.33 14.86 15.34 14.86 15.34 14.86	vibrating wire frequency #426 #424 #425 #426 com 15.09 9036.4 8209.9 8067.5 50.6 9037.8 8210.6 8068.4 15.08 9039.1 8211.3 8069.1 50.6 9039.2 8211.7 8069.5 15.08 9039.1 8211.7 8069.5 50.5 50.9 9038.8 8211.4 8069.5 50.5 50.6 9039.2 8211.7 8069.5 50.5 50.6 9040.5 8213.4 8071.2 50.8 904.1 8213.9 8071.8 50.5 50.6 904.1 8213.9 8071.8 50.6 20.7 50.68 904.1 8213.5 8069.2 15.07 9039.2 8212.1 8069.2 15.07 9039.2 8213.5 8070.8 15.08 904.0 8213.5 8070.8 15.08 904.1 8213.5 8070.8 15.08 904.1 8213.5 8070.8 15.08 904.1 8213.5 8070.8 15.08 9041.9 8214.5 8070.8	puted PSI corrected PSI * total 2.39 2.253 2.36 2.253 2.32 2.252 2.32 2.252 2.32 2.252 2.32 2.252 2.32 2.245 2.32 2.245 2.32 2.242 2.99 2.212 2.28 2.261 2.33 2.315 2.32 2.317 2.33 2.304 2.29 2.262 2.29 2.263 2.26 2.262 2.29 2.212 2.30 2.317 2.33 2.304 2.29 2.263 2.26 2.262 2.26 2.264 2.26 2.262 2.26 2.262 2.26 2.262 2.26 2.262 2.26 2.262 2.26 2.231 2.26 2.231 2	3952.80 17.74 3952.60 17.72 3952.60 17.70 3952.61 17.69 3952.53 17.69 3952.54 17.69 3952.55 17.69 3952.51 17.69 3952.52 17.69 3952.61 17.69 3952.75 17.69 3952.76 17.69 3952.77 17.68 3952.62 17.64 3952.63 17.63 3952.65 17.63 3952.55 17.63 3952.55 17.63 3952.55 17.63 3952.55 17.63 3952.55 17.63	#425 prected PSI * total head (ff) com 17.601 3953.02 17.603 3953.02 17.633 3953.02 17.632 3953.09 17.622 3953.09 17.622 3953.07 17.618 3953.06 17.650 3952.99 17.577 3952.96 17.656 3953.14 17.656 3953.14 17.656 3953.14 17.658 3953.15 17.659 3953.15 17.659 3953.11 17.643 3953.11 17.622 3953.02 17.659 3953.11 17.643 3953.11 17.652 3953.02 17.652 3953.02 17.654 3952.97 17.602 3953.02 17.585 3952.98		* total head (ft) rver elevation 87 3953.06 3951.93 84 3953.05 3951.95 12 3953.12 3951.93 11 3953.12 3951.95 90 3953.07 3951.95 91 3953.03 3951.85 73 3953.03 3951.86 57 3952.99 3951.87 06 3953.21 3951.86 64 3953.22 3951.87 053 3953.24 3951.77 73 3953.21 3951.66 634 3953.21 3951.68 355 3953.17 3951.68 345 3953.21 3951.66 34 3953.21 3951.68 355 3953.21 3951.68 355 3953.21 3951.75 351 3953.21 3951.75 351 3953.21 3951.75 351 3952.94 3951.71 395 3952.94
2002 270 1200 2002 270 1600 2002 271 000 2002 271 000 2002 271 400 2002 271 800 2002 271 1200 2002 271 1200 2002 271 1200 2002 271 1200 2002 271 1600 2002 272 400 2002 272 1600 2002 272 1600 2002 273 00 2002 273 100 2002 273 100 2002 273 1200 2002 273 1200 2002 273 1200 2002 273 1200 2002 273 1200 2002 273 1200 2002 273 100 2002	270.67 9/27/2002 16:00 270.83 9/27/2002 20:00 271.00 9/28/2002 0:00 271.17 9/28/2002 1:00 271.50 9/28/2002 1:00 271.51 9/28/2002 1:00 271.63 9/28/2002 1:00 271.63 9/28/2002 1:00 271.63 9/28/2002 1:00 272.00 9/29/2002 0:00 272.17 9/29/2002 1:00 272.50 9/29/2002 1:00 272.53 9/29/2002 1:00 272.63 9/29/2002 1:00 272.63 9/29/2002 1:00 273.50 9/30/2002 0:00 273.30 9/30/2002 0:00 273.33 9/30/2002 1:00 273.67 9/30/2002 1:00 273.67 9/30/2002 1:00 273.63 9/30/2002 1:00 273.64 9/30/2002 1:00 273.65 9/30/2002 1:00 273.64 9/30/2002 1:00 273.65 9/30/2002 1:00 273.64 9/30/2002 1:00 273.65 9/30/2002 1:00 274.00 1/0/12002 0:00				$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15.36 14.88 15.33 14.85 15.36 14.88 15.35 14.87 15.36 14.88 15.35 14.87 15.36 14.88 15.35 14.87 15.36 14.85 15.36 14.85 15.36 14.87 15.37 14.87 15.38 14.88 15.37 14.86 15.37 14.86 15.37 14.86 15.37 14.86 15.37 14.86 15.38 14.88 15.38 14.88 15.38 14.88 15.38 14.88 15.38 14.88 15.38 14.85 15.38 14.85 15.38 14.85 15.38 14.85 15.33 14.86 15.33 14.87 15.33 14.86 15.34 14.85 15.35 <td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td> <td>2.20 2.172 2.17 2.185 2.18 2.211 2.21 2.238 2.22 2.273 2.24 2.279 2.24 2.296 2.24 2.347 2.29 2.404 2.31 2.303 2.26 2.243 2.27 2.269 2.30 2.303 2.32 2.384 2.31 2.303 2.32 2.265 2.34 2.283 2.30 2.265 2.30 2.267 2.30 2.267 2.30 2.267 2.30 2.265 2.31 2.288 2.32 2.261 2.31 2.288 2.32 2.274</td> <td>3952.41 17.57 3952.41 17.55 3952.50 17.55 3952.66 17.60 3952.82 17.60 3952.82 17.61 3952.82 17.61 3952.82 17.63 3952.82 17.64 3952.82 17.65 3952.82 17.66 3952.82 17.66 3952.55 17.65 3952.55 17.63 3952.64 17.63 3952.57 17.68 3952.63 17.71 3952.64 17.73 3952.65 17.72 3952.65 17.73 3952.65 17.73 3952.65 17.71 3952.68 17.70 3952.68 17.70 3952.66 17.70 3952.66 17.70 3952.66 17.70 3952.66 17.70 3952.66 17.70 3952.66 17.70 3952.66 1</td> <td>17.578 3952.96 17.589 3952.99 17.606 3953.03 17.638 3953.10 17.635 3953.10 17.650 3953.13 17.720 3953.29 17.761 3953.33 17.773 3953.29 17.667 3953.29 17.673 3953.39 17.674 3953.39 17.675 3953.29 17.667 3953.17 17.610 3953.04 17.612 3953.02 17.613 3953.02 17.610 3953.02 17.611 3953.02 17.612 3953.12 17.668 3953.11 17.668 3953.12 17.679 3953.20 17.679 3953.20 17.679 3953.20 17.663 3953.15 17.653 3953.15</td> <td>31.41 31.4 31.40 31.4 31.42 31.4 31.45 31.4 31.46 31.4 31.66 31.1 31.68 31.1 31.66 31.1 31.68 31.1 31.68 31.1 31.68 31.1 31.65 31.1 31.65 31.1 31.65 31.1 31.66 31.1 31.63 31.1 31.64 31.1 31.56 31.1 31.56 31.1 31.56 31.1 31.55 31.1</td> <td>33 3952.94 3951.75 38 3952.95 3951.69 138 3952.96 3951.76 186 3953.06 3951.77 191 3953.07 3951.75 328 3953.16 3951.75 328 3953.17 3951.75 328 3953.71 3951.75 329 3953.71 3951.75 328 3953.71 3951.75 329 3953.71 3951.75 328 3953.71 3951.73 378 3953.50 3951.76 3953.50 3951.76 3951.76 3953.42 3951.77 3953.50 3953.50 3951.90 3953 3953.50 3952.97 3953.18 3953.50 3952.57 3953.42 3953.28 3953.42 3952.67 50 3953.21 3952.67 50 3953.13 3952.34 50 3953.13 3952.34 518 3953.1</td>	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2.20 2.172 2.17 2.185 2.18 2.211 2.21 2.238 2.22 2.273 2.24 2.279 2.24 2.296 2.24 2.347 2.29 2.404 2.31 2.303 2.26 2.243 2.27 2.269 2.30 2.303 2.32 2.384 2.31 2.303 2.32 2.265 2.34 2.283 2.30 2.265 2.30 2.267 2.30 2.267 2.30 2.267 2.30 2.265 2.31 2.288 2.32 2.261 2.31 2.288 2.32 2.274	3952.41 17.57 3952.41 17.55 3952.50 17.55 3952.66 17.60 3952.82 17.60 3952.82 17.61 3952.82 17.61 3952.82 17.63 3952.82 17.64 3952.82 17.65 3952.82 17.66 3952.82 17.66 3952.55 17.65 3952.55 17.63 3952.64 17.63 3952.57 17.68 3952.63 17.71 3952.64 17.73 3952.65 17.72 3952.65 17.73 3952.65 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<td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td> <td>$\begin{array}{c} 15.37 & 14.87 \\ 15.37 & 14.87 \\ 15.38 & 14.88 \\ 15.38 & 14.88 \\ 15.38 & 14.88 \\ 15.38 & 14.87 \\ 15.37 & 14.87 \\ 15.4 & 14.86 \\ 15.3 & 14.87 \\ 15.4 & 14.86 \\ 15.4 & 14.87 \\ 15.4 & 14.87 \\ 15.4 & 14.87 \\ 15.4 & 14.87 \\ 15.4 & 14.86 \\ 15.4 &$</td> <td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td> <td>2.32 2.243 2.33 2.252 2.25 2.271 2.28 2.300 2.31 2.331 2.32 2.252 2.25 2.271 2.32 2.329 2.28 2.314 2.32 2.324 2.33 2.335 2.34 2.353 2.35 2.337 2.36 2.397 2.40 2.403 2.41 2.433 2.39 2.344 2.39 2.348 2.42 2.468 2.44 2.352 2.45 2.362 2.44 2.352 2.45 2.362 2.44 2.352 2.45 2.362 2.44 2.352 2.45 2.362 2.44 2.323 2.45 2.362 2.44 2.323 2.45 2.366 2.44 2.363 <!--</td--><td>3952,61 17,69 3952,66 17,65 3952,66 17,65 3952,66 17,65 3952,78 17,67 3952,78 17,67 3952,74 17,63 3952,74 17,63 3952,74 17,66 3952,74 17,67 3952,78 17,67 3952,79 17,76 3952,81 17,67 3952,82 17,67 3952,83 17,64 3952,83 17,64 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14.86 \\ 15.3 & 14.87 \\ 15.4 & 14.86 \\ 15.4 & 14.87 \\ 15.4 & 14.87 \\ 15.4 & 14.87 \\ 15.4 & 14.87 \\ 15.4 & 14.86 \\ 15.4 & $	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2.32 2.243 2.33 2.252 2.25 2.271 2.28 2.300 2.31 2.331 2.32 2.252 2.25 2.271 2.32 2.329 2.28 2.314 2.32 2.324 2.33 2.335 2.34 2.353 2.35 2.337 2.36 2.397 2.40 2.403 2.41 2.433 2.39 2.344 2.39 2.348 2.42 2.468 2.44 2.352 2.45 2.362 2.44 2.352 2.45 2.362 2.44 2.352 2.45 2.362 2.44 2.352 2.45 2.362 2.44 2.323 2.45 2.362 2.44 2.323 2.45 2.366 2.44 2.363 </td <td>3952,61 17,69 3952,66 17,65 3952,66 17,65 3952,66 17,65 3952,78 17,67 3952,78 17,67 3952,74 17,63 3952,74 17,63 3952,74 17,66 3952,74 17,67 3952,78 17,67 3952,79 17,76 3952,81 17,67 3952,82 17,67 3952,83 17,64 3952,83 17,64 3952,83 17,64 3952,83 17,67 3952,80 17,70 3952,81 17,70 3952,82 17,71 3952,82 17,73 3952,85 17,73 3952,85 17,73 3952,85 17,83 3952,76 17,79 3952,85 17,83 3952,85 17,83 3952,85 17,83 3952,85 17,83 3952,86</td> <td>17.636 3953.10 17.621 3953.06 17.643 3953.11 17.667 3953.15 17.667 3953.11 17.667 3953.12 17.668 3953.23 17.668 3953.24 17.670 3953.28 17.719 3953.26 17.713 3953.24 17.635 3953.24 17.635 3953.24 17.635 3953.24 17.635 3953.24 17.635 3953.24 17.751 3953.36 17.753 3953.34 17.754 3953.32 17.712 3953.32 17.713 3953.32 17.714 3953.32 17.733 3953.32 17.743 3953.22 17.734 3953.22 17.732 3953.32 17.733 3953.32 17.734 3953.22 17.733 3953.32 17.734 3953.32</td> <td>$\begin{array}{cccccccccccccccccccccccccccccccccccc$</td> <td>490 3953.07 3952.37 470 3953.02 3952.37 470 3953.02 3952.37 471 3953.02 3952.37 472 3953.05 3952.37 473 3953.54 3952.24 680 3953.54 3952.21 678 3953.54 3952.18 673 3953.59 3952.19 713 3953.56 3952.19 713 3953.56 3952.22 715 3953.59 3952.40 703 3953.56 3952.26 651 3953.44 3952.26 719 3953.60 3952.24 765 3953.70 3952.71 778 3953.70 3952.26 778 3953.70 3952.70 784 3953.67 3952.70 7749 3953.72 3952.71 7749 3953.72 3952.71 7749 3953.25 3952.81 772 3953.26</td>	3952,61 17,69 3952,66 17,65 3952,66 17,65 3952,66 17,65 3952,78 17,67 3952,78 17,67 3952,74 17,63 3952,74 17,63 3952,74 17,66 3952,74 17,67 3952,78 17,67 3952,79 17,76 3952,81 17,67 3952,82 17,67 3952,83 17,64 3952,83 17,64 3952,83 17,64 3952,83 17,67 3952,80 17,70 3952,81 17,70 3952,82 17,71 3952,82 17,73 3952,85 17,73 3952,85 17,73 3952,85 17,83 3952,76 17,79 3952,85 17,83 3952,85 17,83 3952,85 17,83 3952,85 17,83 3952,86	17.636 3953.10 17.621 3953.06 17.643 3953.11 17.667 3953.15 17.667 3953.11 17.667 3953.12 17.668 3953.23 17.668 3953.24 17.670 3953.28 17.719 3953.26 17.713 3953.24 17.635 3953.24 17.635 3953.24 17.635 3953.24 17.635 3953.24 17.635 3953.24 17.751 3953.36 17.753 3953.34 17.754 3953.32 17.712 3953.32 17.713 3953.32 17.714 3953.32 17.733 3953.32 17.743 3953.22 17.734 3953.22 17.732 3953.32 17.733 3953.32 17.734 3953.22 17.733 3953.32 17.734 3953.32	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	490 3953.07 3952.37 470 3953.02 3952.37 470 3953.02 3952.37 471 3953.02 3952.37 472 3953.05 3952.37 473 3953.54 3952.24 680 3953.54 3952.21 678 3953.54 3952.18 673 3953.59 3952.19 713 3953.56 3952.19 713 3953.56 3952.22 715 3953.59 3952.40 703 3953.56 3952.26 651 3953.44 3952.26 719 3953.60 3952.24 765 3953.70 3952.71 778 3953.70 3952.26 778 3953.70 3952.70 784 3953.67 3952.70 7749 3953.72 3952.71 7749 3953.72 3952.71 7749 3953.25 3952.81 772 3953.26
2002 280 120 2002 280 160 2002 280 200 2002 281 40 2002 281 40 2002 281 120 2002 281 120 2002 281 120 2002 281 160 2002 281 160 2002 281 160 2002 281 200	0 280.50 10/7/2002 15:0 0 280.67 10/7/2002 16:0 0 280.83 10/7/2002 16:0 0 281.00 10/8/2002 20:0 0 281.00 10/8/2002 46:0 0 281.33 10/8/2002 16:0 0 281.50 10/8/2002 16:0 0 281.67 10/8/2002 16:0 0 281.63 10/8/2002 16:0 0 281.71 10/9/2002 16:0 0 282.17 10/9/2002 10:0 0 282.50 10/9/2002 12:0 0 282.50 10/9/2002 12:0 0 282.57 10/9/2002 12:0 0 282.50 10/9/2002 12:0 0 282.51 10/9/2002 12:0 0 283.33 10/10/2002 12:0 0 283.33 10/10/2002 4:0 00 283.33 10/10/2002 4:0 00 283.33 10/10/2002 8:0 00 283.50 10/10/2002 8:0 00 283.50 1	Ind Ind Ind Ind Ind Ind Ind Ind			12.61 13.81 13.24 13.39 12.83 13.26 12.68 12.68 12.58 12.68 12.59 13.26 12.51 12.68 12.52 13.36 12.62 13.79 13.22 13.36 12.67 12.62 12.57 12.67 12.61 13.84 13.21 13.37 12.63 12.68 12.64 13.24 12.65 12.68 12.65 12.68 12.62 12.68 12.63 13.24 12.64 13.35 12.65 12.68 12.65 12.57 12.68 12.35 13.24 13.37 12.64 13.85 13.21 13.37 12.87 13.27	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3 15.08 9033.8 8207.5 8065. 5 15.08 9035.5 8208.1 8065.8 7 15.09 9034.6 8207.7 8065.5 7 15.09 9034.6 8207.7 8065.8 7 15.09 9034.4 8207.7 8065.5 5 15.09 9034.4 8207.7 8065.5 5 15.08 9036.1 8209.7 8068.5 5 15.08 9036.1 8209.7 8068.5 5 15.06 9036.7 8209.7 8068.5 5 15.08 9037.2 8207.7 8068.5 6 15.09 9034.4 8207.9 8068.2 6 15.09 9034.1 8207.9 8068.2 5 15.08 9035.8 8209.6 8068.2 5 15.08 9035.8 8209.8 8068.4 7 15.07 9035.3 8208.8 8068.2 5 15.08	$\begin{array}{ccccc} 2.45 & 2.269 \\ 2.41 & 2.264 \\ 2.41 & 2.267 \\ 2.43 & 2.276 \\ 2.44 & 2.276 \\ 2.39 & 2.257 \\ 2.37 & 2.293 \\ 2.38 & 2.308 \\ 2.40 & 2.325 \\ 2.42 & 2.345 \\ 2.44 & 2.352 \\ 2.40 & 2.327 \\ 2.38 & 2.352 \\ 2.39 & 2.361 \\ 2.41 & 2.357 \\ 2.42 & 2.353 \\ 2.43 & 2.335 \\ 2.39 & 2.394 \\ 2.35 & 2.302 \\ 2.36 & 2.304 \\ \end{array}$	3952.64 17.79 3952.62 17.78 3952.63 17.78 3952.65 17.79 3952.65 17.79 3952.66 17.79 3952.61 17.79 3952.61 17.73 3952.61 17.73 3952.61 17.73 3952.81 17.74 3952.83 17.74 3952.83 17.74 3952.84 17.76 3952.85 17.77 3952.84 17.76 3952.85 17.77 3952.80 17.73 3952.81 17.77 3952.82 17.77 3952.82 17.77 3952.82 17.77 3952.79 17.77 3952.71 17.71 3952.72 17.71	17.629 3953.08 17.611 3953.04 17.611 3953.16 17.671 3953.16 17.678 3953.20 17.695 3953.21 17.695 3953.23 17.695 3953.24 17.695 3953.28 17.717 3953.28 17.705 3953.24 17.696 3953.24 17.676 3953.24 17.676 3953.11 17.668 3953.11 17.668 3953.17	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	503 3953.10 3952.34 519 3953.14 3952.35 506 3953.11 3952.35 507 3953.13 3952.35 508 3953.11 3952.35 592 3953.32 3952.33 597 3953.22 3952.23 514 3953.16 3952.29 538 3953.16 3952.29 1539 3953.16 3952.29 1538 3953.17 3952.26 1577 3953.27 3952.19 1533 3953.17 3952.15 1575 3953.28 3952.18 1549 3953.21 3952.18 1549 3953.12 3952.18 1549 3953.12 3952.18 1549 3953.13 3952.11 1529 3953.16 3952.12 1546 3953.13 3952.15 1548 3953.13 3952.15 1.486 3953.13 3952.13 1.517 3953.1

day		decimel	#424	PRESSURE #425 (ft): uncorrected PSI ^a total head (ft)	#426	battary voltage min max	temperature °C #424 #425 #426	vibrating wire frequency #424 #425 #426 comp	#424 puted PSI_corrected PSI [®] total head (ft); con	#425 pouted PSI corrected PSI * total head (ft) comp	#426 approximate uted PSI corrected PSI * total head (ft) river elevation
<u>year ye</u> 2002 2002	ar day 284 0 284 400	date date & time 284.00 10/11/2002 0:00 284.17 10/11/2002 4:00				12.77 12.87 12.71 12.77	15.46 14.88 15.07 15.47 14.88 15.08	9037.3 8210.7 8069.8 9037.3 8210.7 8070	2.36 2.296 3952.70 2.36 2.291 3952.69 2.37 2.274 3952.65	17.72 17.650 3953.13 17.72 17.645 3953.12 17.72 17.626 3953.08	31.57 31.501 3953.09 3952.13 31.56 31.491 3953.07 3952.13 31.57 31.479 3953.04 3952.11
2002 2002 2002	284 800 284 1200 284 1600	284.33 10/11/2002 8:00 284.50 10/11/2002 12:00 284.67 10/11/2002 16:00				12.68 12.72 12.68 13.39 13.22 13.28	15.46 14.87 15.07 15.47 14.85 15.08 15.47 14.85 15.08	9038.4 8211.9 8071.1	2.34 2.263 3952.62 2.33 2.316 3952.74	17.69 17.617 3953.05 17.69 17.672 3953.18	31.54 31.463 3953.01 3952.07 31.53 31.521 3953.14 3952.09
2002 2002	284 2000 285 0	284.83 10/11/2002 20:00 285.00 10/12/2002 0:00				12.85 13.28 12.74 12.85 12.6 12.74	15.47 14.88 15.08 15.46 14.87 15.06 15.48 14.86 15.09	9035 8209.2 8067.9	2.38 2.376 3952.88 2.42 2.407 3952.95 2.46 2.453 3953.06	17.72 17.714 3953.28 17.75 17.741 3953.34 17.79 17.782 3953.44	31.57 31.569 3953.25 3952.08 31.61 31.602 3953.33 3952.09 31.65 31.642 3953.42 3952.10
2002 2002 2002	285 400 285 800 285 1200	285.17 10/12/2002 4:00 285.33 10/12/2002 8:00 285.50 10/12/2002 12:00	1			12.6 12.74 12.52 12.6 12.56 13.89	15.46 14.86 15.09 15.48 14.86 15.09 15.47 14.88 15.07	9031.6 8206.2 8064.9	2.40 2.433 3333.00 2.50 2.482 3953.13 2.47 2.445 3953.04	17.82 17.805 3953.49 17.79 17.769 3953.40	31.68 31.667 3953.48 3952.06 31.65 31.630 3953.39 3952.02
2002	285 1600 285 2000	285.67 10/12/2002 16:00 285.83 10/12/2002 20:00				13.28 13.4 12.84 13.35	15.47 14.85 15.08 15.46 14.87 15.07	9032.7 8206.7 8063.9	2.45 2.442 3953.04 2.47 2.412 3952.97 2.49 2.377 3952.89	17.79 17.786 3953.44 17.81 17.750 3953.36 17.83 17.712 3953.27	31.65 31.648 3953.43 3952.06 31.71 31.647 3953.43 3952.05 31.73 31.609 3953.34 3952.04
2002 2002 2002	286 0 286 400 286 800	286.00 10/13/2002 0:00 286.17 10/13/2002 4:00 286.33 10/13/2002 8:00				12.7 12.85 12.53 12.7 12.46 12.62	15.48 14.86 15.09 15.48 14.89 15.09 15.45 14.86 15.05	9030.9 8205.1 8062.3	2.49 2.377 3952.89 2.51 2.364 3952.85 2.52 2.323 3952.76	17.85 17.695 3953.23 17.85 17.695 3953.23	31.74 31.593 3953.31 3952.03 31.76 31.558 3953.23 3951.98
2002 2002	286 1200 286 1600	286.50 10/13/2002 12:00 286.67 10/13/2002 16:00				12.64 14.02 13.29 13.46	15.49 14.87 15.07 15.47 14.85 15.08	3 9034.3 8207.7 8064.4	2.47 2.260 3952.62 2.43 2.269 3952.64 2.44 2.269 3952.64	17.80 17.591 3953.00 17.79 17.622 3953.07 17.79 17.609 3953.04	31.71 31.500 3953.09 3951.99 31.69 31.530 3953.16 3952.02 31.70 31.520 3953.14 3951.99
2002 2002 2002	286 2000 287 0 287 400	286.83 10/13/2002 20:00 287.00 10/14/2002 0:00 287.17 10/14/2002 4:00				12.83 13.32 12.63 12.83 12.51 12.63	15.49 14.87 15.06 15.48 14.86 15.09 15.45 14.86 15.09	9 9033.1 8207.1 8064.2	2.44 2.261 3952.62 2.46 2.258 3952.61 2.47 2.252 3952.60	17.80 17.597 3953.01 17.81 17.595 3953.00	31.70 31.495 3953.08 3951.95 31.71 31.501 3953.09 3951.97
2002 2002 2002	287 800 287 1200	287.33 10/14/2002 8:00 287.50 10/14/2002 12:00				12.47 12.56 12.58 13.97	15.51 14.89 15.09 15.49 14.85 15.07	9 9032.9 8207 8064.8 7 9035.2 8209.2 8066.1	2.47 2.238 3952.56 2.41 2.202 3952.48	17.80 17.573 3952.95 17.75 17.543 3952.88 17.75 17.603 3953.02	31.69 31.456 3952.99 3951.95 31.66 31.445 3952.97 3951.96 31.65 31.507 3953.11 3952.00
2002 2002 2002	287 1600 287 2000 288 0	287.67 10/14/2002 16:00 287.83 10/14/2002 20:00 288.00 10/15/2002 0:00		x		13.29 13.44 12.83 13.39 12.65 12.83	15.5 14.85 15.08 15.48 14.87 15.08 15.51 14.86 15.09	6 9035.6 8209.2 8065.8	2.39 2.248 3952.59 2.40 2.263 3952.62 2.42 2.272 3952.64	17.75 17.612 3953.04 17.76 17.615 3953.05	31.66 31.522 3953.14 3951.99 31.68 31.527 3953.15 3951.97
2002	288 400 288 800	288.17 10/15/2002 4:00 288.33 10/15/2002 8:00				12.53 12.66 12.48 12.54	15.51 14.86 15.09 15.5 14.86 15.08	9 9034.5 8208.3 8061.5 8 9034 8208.1 8066.9	2.43 2.282 3952.67 2.44 2.285 3952.67 2.38 2.242 3952.57	17.77 17.626 3953.08 17.78 17.622 3953.07 17.72 17.585 3952.98	31.76 31.616 3953.36 3951.98 31.64 31.480 3953.05 3951.95 31.58 31.440 3952.95 3951.97
2002 2002 2002	288 1200 288 1600 288 2000	288.50 10/15/2002 12:00 288.67 10/15/2002 16:00 288.83 10/15/2002 20:00	D			12.52 13.99 13.28 13.47 12.8 13.3	15.49 14.87 15.07 15.5 14.85 15.08 15.51 14.86 15.08	8 9037.7 8210.8 8069.7	2.38 2.242 3952.57 2.35 2.260 3952.62 2.38 2.285 3952.67	17.72 17.623 3953.07 17.73 17.636 3953.10	31.57 31.477 3953.04 3952.04 31.59 31.498 3953.09 3952.01
2002 2002 2002	289 0 289 400	289.00 10/16/2002 0:00 289.17 10/16/2002 4:00	D .			12.61 12.8 12.51 12.62	15.51 14.86 15.09 15.51 14.86 15.09	9 9036 8209.6 8068.7	2.39 2.282 3952.67 2.39 2.290 3952.68 2.40 2.282 3952.67	17.74 17.632 3953.09 17.74 17.640 3953.11 17.74 17.625 3953.07	31.58 31.478 3953.04 3951.99 31.59 31.490 3953.07 3951.97 31.60 31.481 3953.05 3951.90
2002 2002 2002	289 800 289 1200 289 1600	289.33 10/16/2002 8:00 289.50 10/16/2002 12:00 289.67 10/16/2002 16:00	0			12.48 12.52 12.5 13.97 13.26 13.43	15.51 14.89 15.08 15.49 14.85 15.00 15.5 14.85 15.00	7 9037.9 8211.8 8071.1	2.40 2.282 3952.67 2.35 2.250 3952.59 2.32 2.279 3952.66	17.69 17.595 3953.00 17.69 17.643 3953.11	31.54 31.439 3952.95 3951.93 31.53 31.487 3953.06 3951.98
2002 2002	289 2000 290 0	289.83 10/16/2002 20:00 290.00 10/17/2002 0:00	0			12.8 13.29 12.63 12.81	15.51 14.86 15.00 15.51 14.86 15.00	9 9037.2 8211.1 8070.9	2.34 2.291 3952.69 2.36 2.316 3952.74 2.37 2.316 3952.74	17.70 17.645 3953.12 17.71 17.660 3953.15 17.72 17.667 3953.17	31.55 31.497 3953.09 3951.99 31.54 31.493 3953.08 3951.98 31.56 31.507 3953.11 3951.98
2002 2002 2002	290 400 290 800 290 1200	290.17 10/17/2002 4:00 290.33 10/17/2002 8:00 290.50 10/17/2002 12:00	0			12.52 12.64 12.48 12.53 12.49 13.97	15.51 14.86 15.09 15.5 14.89 15.00 15.52 14.85 15.00	8 9036.4 8210.3 8069.7	2.37 2.310 3352.74 2.38 2.311 3952.73 2.33 2.269 3952.64	17.73 17.653 3953.14 17.67 17.615 3953.05	31.57 31.497 3953.09 3951.91 31.52 31.461 3953.00 3951.93
2002 2002	290 1600 290 2000	290.67 10/17/2002 16:00 290.83 10/17/2002 20:00	0			13.24 13.4 12.85 13.35	15.5 14.85 15.0 15.52 14.87 15.0 15.51 14.86 15.0	7 9039.4 8212.8 8071.9	2.29 2.290 3952.68 2.31 2.300 3952.71 2.34 2.312 3952.74	17.66 17.657 3953.15 17.67 17.657 3953.15 17.69 17.657 3953.15	31.51 31.505 3953.10 3951.99 31.52 31.507 3953.11 3951.98 31.54 31.506 3953.11 3951.93
2002 2002 2002	291 0 291 400 291 800	291.00 10/18/2002 0:00 291.17 10/18/2002 4:00 291.33 10/18/2002 8:00	0			12.71 12.85 12.63 12.71 12.59 12.63	15.51 14.86 15.0 15.51 14.87 15.0 15.51 14.86 15.0	6 9038 8211.7 8070.5	2.35 2.313 3952.74 2.36 2.314 3952.74	17.69 17.662 3953.16 17.70 17.654 3953.14	31.55 31.519 3953.14 3951.93 31.53 31.484 3953.06 3951.84
2002 2002	291 1200 291 1600	291.50 10/18/2002 12:0 291.67 10/18/2002 16:0	0			12.59 13.73 13.27 13.39	15.52 14.85 15.0 15.52 14.85 15.0 15.51 14.87 15.0	8 9040.1 8213.5 8073.4	2.32 2.289 3952.68 2.30 2.328 3952.77 2.33 2.350 3952.82	17.66 17.631 3953.09 17.65 17.686 3953.21 17.67 17.695 3953.23	31,49 31,455 3952,99 3951,84 31,48 31,515 3953,13 3951,92 31,45 31,474 3953,03 3951,93
2002 2002 2002	291 2000 292 0 292 400	291.83 10/18/2002 20:0 292.00 10/19/2002 0:0 292.17 10/19/2002 4:0	o ·			12.81 13.3 12.64 12.81 12.53 12.65	15.51 14.87 15.0 15.51 14.86 15.0 15.54 14.86 15.0	9 9037.3 8211.5 8073.5	2.36 2.349 3952.82 2.38 2.376 3952.88	17.70 17.687 3953.22 17.72 17.714 3953.28	31.48 31.467 3953.02 3951.92 31.51 31.502 3953.10 3951.93
2002 2002	292 800 292 1200	292.33 10/19/2002 8:0 292.50 10/19/2002 12:0	0			12.49 12.54 12.5 13.95	15.53 14.86 15.0 15.52 14.85 15.0 15.52 14.85 15.0	7 9037.9 8212 8073.8	2.40 2.371 3952.87 2.35 2.323 3952.76 2.33 2.344 3952.81	17.74 17.710 3953.27 17.69 17.663 3953.16 17.69 17.701 3953.25	31.53 31.501 3953.10 3951.83 31.47 31.449 3952.97 3951.87 31.47 31.489 3953.07 3951.94
2002 2002 2002	292 1600 292 2000 293 0	292.67 10/19/2002 16:0 292.83 10/19/2002 20:0 293.00 10/20/2002 0:0	0			13.26 13.44 12.8 13.29 12.63 12.8	15.52 14.65 15.0 15.51 14.87 15.0 15.54 14.86 15.0	6 9037.6 8211.4 8073.1 9 9036.8 8210.8 8070.9	2.36 2.348 3952.82 2.37 2.333 3952.78	17.70 17.695 3953.23 17.72 17.676 3953.19	31.49 31.484 3953.05 3951.93 31.54 31.502 3953.10 3951.93
2002 2002	293 400 293 800	293.17 10/20/2002 4:0 293.33 10/20/2002 8:0	0			12.52 12.63 12.48 12.53 12.53 13.95	15.54 14.86 15.0 15.53 14.86 15.0 15.52 14.87 15.0	9 9036 8210 8069.6	2.38 2.324 3952.76 2.39 2.311 3952.73 2.32 2.248 3952.59	17.72 17.669 3953.17 17.73 17.652 3953.14 17.67 17.593 3953.00	31.56 31.507 3953.11 3951.93 31.57 31.490 3953.07 3951.84 31.50 31.424 3952.92 3951.88
2002 2002 2002	293 1200 293 1600 293 2000	293.50 10/20/2002 12:0 293.67 10/20/2002 16:0 293.83 10/20/2002 20:0	0			12.55 13.95 13.3 13.53 12.83 13.39	15.52 14.87 15.0 15.52 14.85 15.0 15.54 14.87 15.0	08 9039.5 8212.9 8072.7 06 9038.5 8212.2 8072.1	2.31 2.282 3952.67 2.33 2.298 3952.70	17.67 17.640 3953.11 17.68 17.648 3953.13	31.50 31.471 3953.03 3951.92 31.51 31.479 3953.04 3951.91
2002 2002	294 0 294 400	294.00 10/21/2002 0:0 294.17 10/21/2002 4:0	0			12.67 12.84 12.54 12.67 12.48 12.54	15.54 14.86 15.0 15.51 14.84 15.0 15.53 14.89 15.0	6 9037.2 8211 8070.7	2.35 2.303 3952.72 2.36 2.312 3952.73 2.38 2.312 3952.73	17.70 17.646 3953.12 17.71 17.659 3953.15 17.72 17.655 3953.14	31.53 31.479 3953.04 3951.91 31.55 31.494 3953.08 3951.91 31.57 31.496 3953.08 3951.82
2002 2002 2002	294 800 294 1200 294 1600	294.33 10/21/2002 8:0 294.50 10/21/2002 12:0 294.67 10/21/2002 16:0	0			12.49 13.99 13.28 13.49	15.54 14.84 15.0 15.52 14.85 15.0	07 9039.1 8213.1 8072.8 08 9039.9 8213.2 8072.4	2.32 2.265 3952.63 2.30 2.295 3952.70	17.66 17.609 3953.04 17.66 17.656 3953.14	31.50 31.443 3952.96 3951.82 31.51 31.502 3953.10 3951.89
2002 2002	294 2000 295 0	294.83 10/21/2002 20:0 295.00 10/22/2002 0:0	00			12.8 13.3 12.63 12.8 12.56 12.63	15.54 14.87 15.0 15.54 14.86 15.0 15.54 14.86 15.0	9 9037.7 8211.8 8070.9	2.32 2.312 3952.73 2.35 2.320 3952.75 2.36 2.319 3952.75	17.68 17.667 3953.17 17.69 17.661 3953.16 17.70 17.664 3953.16	31.54 31.528 3953.16 3951.91 31.54 31.510 3953.11 3951.88 31.55 31.514 3953.12 3951.87
2002 2002 2002	295 400 295 800 295 1200	295.17 10/22/2002 4:0 295.33 10/22/2002 8:0 295.50 10/22/2002 12:0	0			12.57 12.6 12.58 13.69	15.54 14.86 15.0 15.55 14.85 15.0	09 9037 8211.1 8070.3 08 9039.1 8213 8072.5	2.37 2.312 3952.73 2.32 2.277 3952.65	17.71 17.652 3953.14 17.67 17.623 3953.07	31.56 31.499 3953.09 3951.85 31.50 31.462 3953.00 3951.86 31.51 31.519 3953.14 3951.91
2002 2002	295 1600 295 2000 296 0	295.67 10/22/2002 16:0 295.83 10/22/2002 20:0 296.00 10/23/2002 0:0	0			13.21 13.37 12.82 13.39 12.7 12.82	15.55 14.88 15.0 15.54 14.87 15.0 15.54 14.86 15.0	06 9037.7 8211.6 8070.9	2.32 2.327 3952.77 2.35 2.348 3952.82 2.37 2.340 3952.80	17.67 17.675 3953.19 17.70 17.693 3953.23 17.71 17.683 3953.21	31.51 31.519 3953.14 3951.91 31.54 31.538 3953.18 3951.90 31.56 31.530 3953.16 3951.87
2002 2002 2002	296 400 296 800	296.17 10/23/2002 4:0 296.33 10/23/2002 8:0				12.61 12.7 12.55 12.62	15.54 14.86 15.0 15.54 14.86 15.0	09 9036.7 8210.7 8069.8 09 9036.1 8210.2 8069.2	2.38 2.348 3952.82 2.39 2.349 3952.82 2.39 2.349 3952.82	17.72 17.690 3953.22 17.73 17.689 3953.22 17.67 17.645 3953.12	31.57 31.539 3953.18 3951.89 31.58 31.541 3953.19 3951.86 31.51 31.487 3953.06 3951.83
2002 2002 2002	296 1200 296 1600 296 2000		00			12.55 13.77 13.34 13.53 12.82 13.36	15.54 14.87 15.0 15.55 14.85 15.0 15.54 14.86 15.0	08 9039.3 8212.8 8072.2	2.33 2.304 3952.72 2.31 2.293 3952.69 2.34 2.303 3952.71	17.67 17.649 3953.12 17.67 17.649 3953.13 17.69 17.650 3953.13	31.51 31.490 3953.07 3951.91 31.54 31.498 3953.09 3951.89
2002 2002 2002	297 0 297 400	297.00 10/24/2002 0:0 297.17 10/24/2002 4:0	00 00			12.72 12.82 12.63 12.73	15.54 14.87 15.0 15.54 14.86 15.0	06 9037.5 8211.2 8070.4 06 9036.9 8210.7 8069.8	2.36 2.307 3952.72 2.37 2.317 3952.75 2.38 2.307 3952.72	17.71 17.656 3953.15 17.72 17.664 3953.16 17.73 17.656 3953.15	31.55 31.504 3953.10 3951.90 31.57 31.514 3953.13 3951.93 31.58 31.507 3953.11 3951.92
2002 2002 2002	297 800 297 1200 297 1600	297.33 10/24/2002 8:0 297.50 10/24/2002 12:0 297.67 10/24/2002 16:0	00			12.58 12.63 12.59 13.69 13.41 13.5	15.56 14.86 15.0 15.54 14.87 15.0 15.55 14.85 15.0	07 9038.7 8212.7 8071.9	2.38 2.307 3952.72 2.33 2.264 3952.63 2.30 2.287 3952.68	17.67 17.608 3953.03 17.66 17.643 3953.12	31.52 31.455 3952.99 3951.87 31.49 31.477 3953.04 3951.95
2002 2002	297 2000 298 0	297.83 10/24/2002 20:0 298.00 10/25/2002 0:0	00 00			12.83 13.46 12.7 12.83	15.56 14.86 15. 15.56 14.86 15.	09 9036.8 8210.8 8070	2.35 2.326 3952.77 2.37 2.331 3952.78 2.39 2.340 3952.80	17.69 17.670 3953.18 17.72 17.674 3953.19 17.73 17.683 3953.21	31.54 31.519 3953.14 3951.96 31.56 31.521 3953.14 3951.98 31.58 31.532 3953.17 3952.02
2002 2002 2002	298 400 298 800 298 1200	298.33 10/25/2002 8:0	00			12.57 12.7 12.51 12.58 12.51 13.9	15.57 14.86 15. 15.56 14.86 15. 15.54 14.84 15.	09 9035.6 8209.5 8068.5	2.39 2.340 3952.80 2.40 2.352 3952.83 2.34 2.289 3952.68	17.75 17.697 3953.24 17.69 17.640 3953.11	31.60 31.549 3953.21 3952.06 31.53 31.484 3953.06 3952.03
2002 2002	298 1600 298 2000	298.67 10/25/2002 16:	00			13.39 13.56 12.84 13.47	15.55 14.85 15. 15.57 14.87 15.	06 9037.7 8211 8070	2.32 2.319 3952.75 2.35 2.324 3952.76	17.68 17.680 3953.20 17.71 17.684 3953.21 17.73 17.680 3953.20	31.52 31.519 3953.14 3952.18 31.56 31.536 3953.18 3952.33 31.58 31.535 3953.17 3952.32
2002 2002 2002	299 0 299 400 299 800	299.17 10/26/2002 4:	00			12.72 12.84 12.6 12.72 12.56 12.61	15.56 14.86 15. 15.56 14.86 15. 15.56 14.86 15.	09 9036.6 8210 8070.2	2.37 2.326 3952.77 2.38 2.324 3952.76 2.39 2.319 3952.75	17.73 17.680 3953.20 17.74 17.671 3953.18	31.56 31.504 3953.10 3952.25 31.58 31.509 3953.11 3952.20
2002 2002	299 1200 299 1600	299.50 10/26/2002 12: 299.67 10/26/2002 16:	00 00			12.56 13.68 13.46 13.6	15.57 14.87 15. 15.54 14.87 15.	06 9039.3 8212.8 8072.7 .07 9039.9 8213 8073.4	2.31 2.259 3952.61 2.30 2.291 3952.69	17.67 17.615 3953.05 17.66 17.656 3953.14 17.70 17.680 3953.20	31.50 31.446 3952.97 3952.21 31.48 31.474 3953.03 3952.25 31.54 31.518 3953.13 3952.29
2002 2002	299 2000 300 0	300.00 10/27/2002 0:	00			12.86 13.51 12.75 12.86 12.65 12.76	15.57 14.87 15. 15.57 14.86 15. 15.56 14.86 15.	.09 9037.3 8211 8071.2	2.33 2.318 3952.75 2.36 2.334 3952.79 2.38 2.355 3952.84	17.71 17.684 3953.21 17.72 17.705 3953.26	31.53 31.508 3953.11 3952.26 31.55 31.531 3953.16 3952.21
2002 2002 2002	300 400 300 800 300 1200	300.33 10/27/2002 8:	00			12.65 12.66 12.6 13.68	15.56 14.86 15.	.09 9036.1 8209.9 8070 .07 9038 8212 8072.3	2.39 2.361 3952.85 2.34 2.330 3952.78	17.74 17.707 3953.26 17.69 17.674 3953.19	31.56 31.534 3953.17 3952.18 31.51 31.495 3953.08 3952.17

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				ł		PRESSURE	· · · · · · · · · · · · · · · · · · ·		. 1			1								#105	,		#100		
	lay of I vear	nour of day	decimel date	data 8 time	#424 uncorrected PSL corrected PSL ^a total head (#	#425	#426 uncorrected PSI corrected PSI a total head (ft)	battary vo min	oltage max	tem #424	perature °C #425	#426	vibratir #424	ng wire freque #425		computed PSI co	#424 mected PSI ^a to	otal head (ff) o	omputed PSI co	#425 rrected PSI * tot	al head (ft)	omputed PSI corr	#426 ected PSI ^a tot	approxi river ele (ft)	
 2002	300	1600		10/27/2002 16:00	unconfected PSI confected PSI total field (it	; unconected For conected For total nead (it)	and the second of the second o	13.4	13.52	15.57	14.85	15.07	9038.3	8212.1	8072.3	2.34	2.364	3952.86	17.69	17.713	3953.28	31.51	31.536	3953.18 39	952.17
2002	300	2000		10/27/2002 20:00				12.82	13.49	15.57	14.87	15.06	9036.3		8070.2	2.38	2.400	3952.94	17.73	17.744 17.749	3953.35 3953.36	31.56 31.58	31.574 31.578		952.16 952.15
2002 2002	301 301	0 400		10/28/2002 0:00 10/28/2002 4:00				12.68 12.56	12.83 12.68	15.56 15.56	14.86 14.86	15.09 15.09	9035.3 9035.1	8209.4 8209	8069,4 8068,8	2.41 2.41	2.409 2.403	3952.96 3952.95	17.75 17.76	17.749	3953.35	31.50	31.581		952.15
2002	301	800		10/28/2002 8:00				12.53	12.57	15.56	14.86	15.09	9035.2		8068.8	2.41	2.384	3952.90	17.75	17.728	3953.31	31.59	31.564	3953.24 39	952.08
2002	301	1200		10/28/2002 12:00				12.53	13.83	15.57	14.87	15.06	9038.4		8072.6	2.33	2.299	3952.70	17.68	17.647	3953.12	31.50	31.466		952.14
2002	301	1600		10/28/2002 16:00				13.44 12.86	13.58 13.48	15.57 15.57	14.85 14.87	15.07 15.06	9039.6 9038.4		8072.7 8071.7	2.31 2.33	2.288 2.295	3952.68 3952.70	17.67 17.69	17.652 17.650	3953.14 3953.13	31.50 31.52	31.482 31.483		952.23 952.24
2002 2002	301 302	2000 0		10/28/2002 20:00 10/29/2002 0:00				12.80	13.46	15.57	14.86	15.06	9038.4		8071.1	2.35	2.295	3952.70	17.05	17.653	3953.14	31.54	31.482		952.22
2002	302	400		10/29/2002 4:00				12.61	12.74	15.59	14.86	15.09	9037.3		8070.7	2.36	2.308	3952.73	17.71	17.661	3953.16	31.55	31.494	3953.08 39	952.20
2002	302	800		10/29/2002 8:00				12.53	12.61	15.59	14.86	15.09	9036.9		8070.4	2.37	2.325	3952.77	17.72	17.675	3953.19	31.55	31.508		952.20
2002	302	1200		10/29/2002 12:00				12.53 13.51	13.88 13.57	15.57 15.57	14.87 14.87	15.07 15.07	9039.4 9039.9		8073.2 8072.6	2.31 2.30	2.287 2.334	3952.68 3952.79	17.66 17.66	17.636 17.691	3953.10 3953.22	31.49 31.50	31.464 31.537		952.19 952.21
2002 2002	302 302	1600 2000		10/29/2002 16:00 10/29/2002 20:00				12.84	13.62	15.57	14.86	15.07	9037.5		8069.9	2.36	2.385	3952.90	17.70	17.733	3953.32	31.57	31.595		952.23
2002	303	0		10/30/2002 0:00		,		12.71	12.84	15.59	14.86	15.09	9036.5	8210.4	8068,5	2.38	2.393	3952.92	17.72	17.739	3953.34	31.60	31.612		952.26
2002	303	400		10/30/2002 4:00				12.59	12.71	15.59	14.86	15.09	9035.9		8068	2.39	2.415	3952.97	17.74	17.762	3953.39	31.61	31.631		952.26
2002	303	800		10/30/2002 8:00				12.51 12.51	12.6 13.94	15.59 15.57	14.86 14.87	15.09 15.06	9035.3 9038.2		8067.4 8070.5	2.41 2.34	2.417 2.349	3952.98 3952.82	17.75 17.69	17.762 17.698	3953.39 3953.24	31.62 31.55	31.633 31.562		952.23 952.23
2002 2002	303 303	1200 1600		10/30/2002 12:00 10/30/2002 16:00				13.43	13.65	15.58	14.85	15.00	9038.9		8071.1	2.34	2.355	3952.83	17.68	17.716	3953,28	31.54	31,569		952.27
2002	303	2000		10/30/2002 20:00				12.86	13.51	15.57	14.87	15.06	9037.5		8069.3	2.36	2.359	3952.84	17.71	17.714	3953.28	31.58	31.583		952.25
2002	304	0	304.00	10/31/2002 0:00				12.74	12.86	15.59	14.87	15.09	9036.4		8068.3	2.38	2.368	3952.86	17.73	17.715	3953.28	31.60	31.589		952.25
2002	304 304	400 800		10/31/2002 4:00 10/31/2002 8:00				12.59 12.5	12.74 12.6	15.59 15.59	14.86 14.86	15.09 15.08	9035.5 9034.8		8067.4 8066.8	2.40 2.42	2.383 2.386	3952.90 3952.91	17.75 17.76	17.728 17.730	3953.31 3953.32	31.62 31.64	31.604 31.604		952.24 952.23
2002 2002	304	1200		10/31/2002 12:00				12.5	13.96	15.57	14.87	15.00	9038		8070	2.34	2.312	3952.74	17.70	17.665	3953.17	31.56	31,531		952.24
2002	304	1600		10/31/2002 16:00				13.42	13.58	15.58	14.85	15.07	9038.9	8212.1	8070.4	2.32	2.348	3952.82	17.69	17.711	3953.27	31.55	31.579		952.22
2002	304	2000		10/31/2002 20:00				12.85	13.45	15.6	14.87	15.07	9037.7		8069.2	2.35	2.361	3952.85	17.71	17.721	3953.29	31.58	31.592		952.22
2002	305 305	0 400		11/1/2002 0:00				12.74 12.62	12.86 12.74	15.59 15.59	14.87 14.86	15.06 15.06	9036.1 9034.9	8210 8208.8	8068.1 8066.8	2.39 2.42	2.377 2.390	3952.89 3952.92	17.73 17.76	17.722 17.735	3953.30 3953.33	31.61 31.64	31.596 31.612		952.22 952.22
2002 2002	305	400 800		11/1/2002 4:00				12.62	12.74	15.59	14.86	15.00	9034.5		8066.2	2.44	2.395	3952.93	17.78	17.734	3953.33	31.65	31.611		952.20
2002	305	1200		11/1/2002 12:00				12.57	13.76	15.6	14.87	15.07	9036.2		8068.6	2.39	2.364	3952.86	17.73	17,707	3953.26	31.60	31.574		952.19
2002	305	1600		11/1/2002 16:00				13.44	13.55	15.58	14.85	15.07	9036.8		8068.6	2.37	2.402	3952.94	17.73	17.758	3953.38	31.60	31.626		952.31
2002	305 306	2000 0	305.83 306.00	11/1/2002 20:00				12.84 12.74	13.53 12.84	15.59 15.59	14.86 14.86	15.06 15.06	9035.4 9035		8066.9 8066.4	2.41 2.41	2.428 2.391	3953.00 3952.92	17.76 17.77	17.782	3953.44 3953.35	31.64 31.65	31.659 31.624		952.40 952.39
2002 2002	306	400	306.17					12.64	12.74	15.59	14.87	15.09	9034.5		8065.7	2.43	2.381	3952.89	17.78	17.736	3953.33	31.66	31.618		952.45
2002	306	800	306.33					12.57	12.64	15.59	14.86	15.09	9033.5		8065	2.45	2.384	3952.90	17.80	17.732	3953.32	31.68	31.614		952.43
2002	306	1200		11/2/2002 12:00				12.56	13.71	15.59	14.86	15.06	9036		8067.9	2.39 2.39	2.320 2.358	3952.75 3952.84	17.74 17.75	17.670 17.717	3953.18 3953.28	31.61 31.62	31.542 31.593		952.40 952.48
2002 2002	306 306	1600 2000	306.67	11/2/2002 16:00 11/2/2002 20:00				13.51 12.78	13.63 13.52	15.6 15.59	14.87 14.86	15.07 15.09	9036.1 9033.6		8067.4 8065.1	2.39	2.350	3952.04	17.80	17,763	3953.39	31.68	31.645		952.40
2002	307	2000	307.00					12.68	12.78	15.59	14.86	15.09			8063.6	2.50	2.456	3953.07	17.83	17.791	3953.46	31.71	31.671	3953.49 39	952.43
2002	307	400	307.17					12.52	12.69	15.59	14.89	15.08	9030		8062	2.53	2.490	3953.15	17.87	17.826	3953.54	31.75	31.708		952.41
2002	307	800	307.33					12.48	12.52	15.59 15.59	14.86 14.87	15.09 15.06			8061.1 8064	2.57 2.49	2.504 2.415	3953.18 3952.97	17.89 17.83	17.832 17.750	3953.55 3953.36	31.77 31.70	31.709 31.627		952.41 952.32
2002 2002	307 307	1200 1600		11/3/2002 12:00 11/3/2002 16:00				12.48 13.58	13.98 13,69	15.6	14.87	15.06			8062.7	2.45	2,404	3952.95	17.81	17.764	3953.39	31.74	31.689		952.31
2002	307	2000		11/3/2002 20:00				12.81	13.64	15.59	14.86	15.09			8061.1	2.49	2.407	3952.96	17.84	17.757	3953.38	31.77	31.691	3953.53 39	952.30
2002	308	0	308.00					12.66	12.82	15.59	14.86	15.09			8060.9	2.50	2.359	3952.84	17.84	17.705	3953.26	31.78	31.640		1952.31 1952.30
2002	308 308	400 800	308.17 308.33					12.55 12.46	12.67 12.56	15.62 15.58	14.86 14.83	15.08 15.05			8061 8064.9	2.48 2.48	2.315 2.277	3952.74 3952.65	17.84 17.83	17.669 17.632	3953.18 3953.09	31.77 31.68	31.609 31.484		952.30
2002 2002	308	1200	308.50					12.40	14.1	15.59	14.86	15.06			8068.4	2.39	2.198	3952.47	17.75	17.552	3952.90	31.60	31.405		952.27
2002	308	1600	308.67	11/4/2002 16:00		• • • •		13.5	13.64	15.6	14.87	15.07			8068.7	2.37	2.256	3952.61	17.73	17.620	3953.06	31.59	31.480		8952.28
2002	308	2000		11/4/2002 20:00				12.79	13.53	15.59	14.86	15.09			8066.5	2.42 2.47	2.305 2.354	3952.72 3952.83	17.78 17.81	17.656 17.695	3953.15 3953.23	31.65 31.68	31.526 31.563		952.27 952.26
2002 2002	309 309	0 400	309.00 309.17					12.62 12.48	12.79 12.62	15.61 15.61	14.86 14.86	15.08 15.08			8065.2 8063.9	2.47	2.354	3952.03	17.84	17,756	3953.38	31.71	31.628		952.20 952.27
2002	309	800	309.33					12.41	12.49	15.61	14.88	15.08				2.52	2.451	3953.06	17.86	17.787	3953.45	31.73	31.662		3952.25
2002	309	1200	309.50	11/5/2002 12:00				12.42	14.17	15.59	14.87	15.06			8065.5	2.47	2.409	3952.96	17.80	17.743	3953.34	31.67	31.609		3952.24
2002	309	1600		11/5/2002 16:00				13.45	13.65	15.6	14.85	15.07			8064.6 8062.5	2.48 2.53	2.468 2.491	3953.10 3953.15	17.82 17.87	17.806 17.826	3953.49 3953.54	31.69 31.74	31.677 31.700		3952.24 3952.26
2002 2002	309 310	2000 0	309.83 310.00	11/5/2002 20:00 11/6/2002 0:00				12.77 12.61	13.46 12.78	15.62 15.61	14.86 14.86	15.09 15.08			8062.5	2.53	2.491	3953.15	17.89	17.809	3953.54	31.74	31.682		3952.28
2002	310	400	310.00					12.48	12.61	15.61	14.86	15.08				2.59	2,484	3953.13	17.92	17.809	3953.50	31.79	31.683		3952.27
																			1. A.						

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#427		#428		#429		riv	er
						bank elev.	3952.83
Mean	3951.615	Mean	3948.577	Mean	3945.382	Mean	3952.435
S.E.	0.011598	S.E.	0.012522	S.E.	0.006636	S.E.	0.016824
σ	0.246842	đ	0.266508	a	0.141238	σ	0.358082
σ ²	0.060931	σ^2	0.071027	o ²	0.019948	σ^2 .	0.128223
Range	1.02449	Range	1.069093	Range	0.615399	Range	2.069
Minimum	3951.041	Minimum	3947.951	Minimum	3945.059	Minimum	3951.733
Maximum	3952.065	Maximum	3949.02	Maximum	3945.675	Maximum	3953.802
Count	453	Count	324	Count	453	Count	453
Column1		Column1		Column1	Column1		
Mean	3951.615	Mean	3948.577	Mean	3945.382	Mean	3952.435
Standard Error	0.011598	Standard Error	0.012522	Standard Error	0.006636	Standard E	
Median	3951.671	Median	3948.641	Median	3945.395	Median	3952,418
Mode	#N/A	Mode	3948.479	Mode	3945.209	Mode	3952.745
Standard Deviation	0.246842	Standard Deviation	0.266508	Standard Deviation	0.141238	Standard E	
Sample Variance	0.060931	Sample Variance	0.071027	Sample Variance	0.019948	Sample Va	0.128223
Kurtosis	-0.851585	Kurtosis	-0.951112	Kurtosis	-0,729871	Kurtosis	0.431094
Skewness	-0.472948	Skewness	-0.463051	Skewness	-0.209258	Skewness	0.445774
Range	1.02449	Range	1.069093	Range	0.615399	Range	2.069
Minimum	3951.041	Minimum	3947.951	Minimum	3945.059	Minimum	3951.733
Maximum	3952.065	Maximum	3949.02	Maximum	3945.675	Maximum	3953,802
Sum	1790082	Sum	1788705	Sum	1787258	Sum	1790453
Count	453	Count	453	Count	453	Count	453

a correction applied for changes in atmospheric pressure

MOAB 4 - VIBRATING V	VIRE PIEZOMETERS
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3910	3968.3	ground surface @ piezometer nest
2055	2069.2	

2002 2002 2002 2002 2002 2002 2002 200
266 40 266 80
249.83 9/6/2002 20:00 250.00 9/7/2002 4:00 250.17 9/7/2002 1:00 250.57 9/7/2002 1:00 250.58 9/7/2002 1:00 250.50 9/7/2002 1:00 250.51 9/7/2002 1:00 251.50 9/8/2002 1:00 251.51 9/8/2002 1:00 251.53 9/8/2002 1:00 252.63 9/8/2002 1:00 252.71 9/8/2002 1:00 252.73 9/9/2002 1:00 252.74 9/9/2002 1:00 252.75 9/9/2002 1:00 253.73 9/10/2002 1:00 253.74 9/10/2002 1:00 253.75 9/10/2002 1:00 253.76 9/10/2002 1:00 254.77 9/11/2002 1:00 254.78 9/11/2002 1:00 254.79 9/11/2002 1:00 254.70 9/11/2002 1:00 254.71 9/11/2002 1:00 254.73 9/11/2002 1:00 254.74 9/11/2002 1:00 255.75 9/12/2002 1:00 255.76
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-0.734 3947.31 -0.661 3947.47 -0.679 3947.43 -0.650 3947.50 -0.634 3947.54 -0.688 3947.41 -0.731 3947.31 -0.602 3947.61 -0.600 3947.62 -0.632 3947.62 -0.632 3947.64 -0.666 3947.66 -0.632 3947.62 -0.633 3947.63 -0.552 3947.73 -0.546 3947.76 -0.537 3947.65 -0.552 3947.65 -0.582 3947.66 -0.616 3947.66 -0.616 3947.66 -0.616 3947.66 -0.658 3947.66 -0.558 3947.66 -0.558 3947.66 -0.557 3947.65 -0.558 3947.76 -0.557 3947.76 -0.557 3947.76 -0.557 3947.76 -0.557 3947.76 -0.557 3947.76 -0.557 3947.76 -0.557 3947.76 -0.558 3947.76 -0.557 3947.76 -0.558 3947.75 -0.558 3947.76 -0.558 3947.76 -0.557 3947.75 -0.558 3947.76 -0.557 3947.75 -0.558 3947.75 -0.558 3947.75 -0.558 3947.75 -0.558 3947.75 -0.558 3947.75 -0.557 3947.75 -0.558 3947.75 -0.557 3947.75 -0.557 3947.78 -0.642 3947.75 -0.557 3947.83 -0.457 3947.95 -0.454 3947.75 -0.454 3947.75 -0.557 3947.83 -0.455 3947.95 -0.455 3947.95 -0.557 3947.83 -0.455 3947.95 -0.455
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9.686 3944.25 9.741 3944.38 9.739 3944.34 9.730 3944.34 9.712 3944.34 9.713 3944.43 9.710 3944.43 9.735 3944.44 9.735 3944.43 9.702 3944.43 9.735 3944.24 9.735 3944.24 9.735 3944.24 9.737 3944.43 9.703 3944.24 9.733 3944.34 9.763 3944.24 9.734 3944.34 9.703 3944.34 9.704 3944.42 9.715 3944.32 9.715 3944.32 9.715 3944.32 9.715 3944.42 9.713 3944.42 9.714 3944.44 9.778 3944.44 9.778 3944.44 9.778 3944.44 9.788 3944.45 9.789 3944.45 9.780 3944.44 <td< td=""></td<>
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11.398 3948.20 11.455 3948.33 11.455 3948.23 11.456 3948.24 11.457 3948.23 11.424 3948.26 11.500 3948.43 11.424 3948.26 11.421 3948.27 11.437 3948.26 11.351 3948.71 11.351 3948.71 11.351 3948.73 11.437 3948.23 11.439 3948.33 11.439 3948.23 11.352 3948.13 11.423 3948.23 11.352 3948.21 11.436 3948.29 11.423 3948.20 11.424 3948.21 11.436 3948.21 11.436 3948.21 11.443 3948.22 11.443 3948.22 11.443 3948.42 11.476 3948.33 11.476 3948.43 11.517 3948.44
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.46 .	11.398	3948.20	24.62	24,552	3945.06	3951.98	
.48	11.455	3948.33	24.64	24.607	3945.19	3951.94	
.49	11.432	3948.28	24.64	24.586	3945.14	3951.96	
.50 .49	11.456	3948.34 3948.34	24.65 24.65	24.607 24.610	3945.19 3945.19	3951.97 3952.00	
.49	11.457 11.412	3948.23	24.61	24.566	3945.09	3951.96	
.46	11.424	3948.26	24.60	24.564	3945.09	3951.93	
.49	11.500	3948.44	24.66	24.664	3945.32	3951.95	
.50 .51	11.455 11.437	3948.33 3948.29	24.68 24.70	24.631 24.628	3945.24 3945.23	3951.94 3952.23	
.50	11.417	3948.25	24.72	24.635	3945.25	3952.38	
.48	11.385	3948.17	24.71	24.617	3945.21	3952.26	
.48	11.393	3948.19	24.71	24.617	3945.21	3952.82	
.51 .52	11.451 11.439	3948.33 3948.30	24.72 24.73	24.662 24.656	3945.31 3945.30	3952.85 3952.63	
.52	11.424	3948.26	24.75	24,651	3945.29	3952.52	
.53	11.410	3948.23	24.76	24.645	3945.27	3952.44	
.50	11.352	3948.10	24.74	24.596	3945.16	3952.75	
.50 .53	11.366 11.423	3948.13 3948.26	24.73 24.73	24.594 24.630	3945.16 3945.24	3952.59 3952.29	
.53	11.439	3948.30	24.73	24.638	3945.26	3952.17	
.54	11.436	3948.29	24.73	24.628	3945.23	3952.17	
1.52	11.428	3948.27	24.72	24.625	3945.23	3952.18 3952.16	
1.51 1.52	11.403 11.419	3948.21 3948.25	24.71 24.70	24.604 24.603	3945.18 3945.18	3952.16	
1.53	11.484	3948.40	24.70	24.652	3945.29	3952.17	
1.54	11.482	3948.40	24.71	24.649	3945.28	3952.15	
1.55	11.476	3948.38	24.71 24.72	24.641 24.645	3945.26 3945.27	3952.16 3952.20	
1.55 1.51	11.474 11.416	3948.38 3948.24	24.69	24.594	3945.16	3952.18	
1.52	11.433	3948.28	24.69	24.604	3945.18	3952.20	
1.54	11.491	3948.42	24.71	24.653	3945.29	3952.21	
1.55 1.56	11.497 11.496	3948.43 3948.43	24.71 24.71	24.657 24.652	3945.30 3945.29	3952.28 3952.32	
1.56	11.501	3948.44	24.72	24.662	3945.31	3952.31	
1.52	11.457	3948.34	24.69	24.624	3945.22	3952.28	
1.52	11.470	3948.37	24.68	24.624	3945.23	3952.32 3952.41	
1.55 1.56	11.528 11.517	3948.50 3948.48	24.71 24.72	24.680 24.674	3945.35 3945.34	3952.41	
1.57	11.521	3948.49	24.74	24.690	3945.38	3952.38	
1.56	11.517	3948.48	24.75	24.709	3945.42	3952.48	
1.54	11.478	3948.39	24.76	24.698	3945.39 3945.40	3952.81 3953.23	
1.55 1.57	11.487 11.544	3948.41 3948.54	24.76 24.77	24.702 24,739	3945.40	3953.23	
1.58	11.546	3948.54	24.78	24.747	3945.51	3953.60	
1.59	11.530	3948.51	24.80	24.740	3945.49	3953.32	
1.60	11.514	3948.47	24.82 24.80	24.734 24.676	3945.48 3945.34	3953.48 3953.53	
1.56 1.57	11.438 11.449	3948.30 3948.32	24.80	24.676	3945.34	3953.38	
1.59	11.507	3948.45	24.80	24.713	3945.43	3953.18	
1.60	11.505	3948.45	24.81	24.712	3945.43	3953.00	
1.61	11.480 11.471	3948.39 3948.37	24.82 24.83	24.691 24.689	3945.38 3945.37	3952.92 3952.87	
1.61 1.58	11.409	3948.23	24.81	24.638	3945.26	3952.84	
1.59	11.441	3948.30	24.80	24.653	3945.29	3952.82	•
1.61	11.513	3948.47	24.79	24.698	3945.40	3952.76	
1.61	11.539 11.536	3948.53 3948.52	24.79 24.79	24.712 24.702	3945.43 3945.41	3952.70 3952.73	
1.62 1.62	11.545	3948.54	24.78	24.709	3945.42	3952.77	
1.59	11.511	3948.46	24.76	24.678	3945.35	3952.75	
11.60	11.541	3948.53	24.74	24.681	3945.36	3952.75 3952.71	
11.61 11.62	11.627 11.653	3948.73 3948.79	24.72 24.74	24.740 24.777	3945.49 3945.58	3952.69	
11.62	11.569	3948.60	24.74	24.689	3945.37	3952.67	
11.62	11.597	3948.66	24.74	24.716	3945.44	3952.68	
11.58	11.548	3948.55 3948.62	24.70 24.70	24.670 24.686	3945.33 3945.37	3952.60 3952.59	
11.59 11.61	11.579 11.651	3948.79	24.70	24.737	3945.48	3952.56	
11.61	11.674	3948.84	24.69	24.754	3945.52	3952.56	
11.62	11.677	3948.85	24.70 24.71	24.756	3945.53	3952.69 3952.71	
11.62 11.58	11.656 11.589	3948.80 3948.64	24.71 24.67	24.743 24.679	3945.50 3945.35	3952.69	
11.58	11.588	3948.64	24.67	24.678	3945.35	3952.64	
11.62	11.620	3948.72	24.72	24.724	3945.46	3952.63	
11.62	11.589	3948.64	24.74	24.706 24.698	3945.41 3945.40	3952.58 3952.57	
11.63 11.64	11.567 11.561	3948.59 3948.58	24.76 24.78	24.090	3945.42	3952.52	
11.59	11.492	3948.42	24.77	24.663	3945.31	3952.48	
11.61	11.515	3948,47	24.77	24.678	3945.35	3952.85	
11.63	11.583	3948.63 3948.67	24.77	24.727 24.735	3945.46 3945.48	3953.11 3952.92	
11.64 11.65	11.600 11.597	3948.66	24.77 24.78	24.733	3945.47	3952.99	
11.65	11.599	3948.67	24.78	24.733	3945.48	3952.81	
11.61	11.535	3948.52	24.75	24.681	3945.36	3952.78	
11.62	11.561	3948.58 3948.72	24.75	24.695 24.737	3945.39 3945.49	3952.78 3952.78	
11.64 11.65	11.622 11.632	3946.72	24.76 24.76	24.745	3945.50	3952.79	
11.66	11.611	3948.69	24.77	24.727	3945.46	3952.80	
11.66	11.603	3948.68	24.79	24.729	3945.47	3952.79	
11.62 11.63	11.532 11.548	3948.51 3948.55	24.76 24.77	24.676 24.681	3945.34 3945.36	3952.74 3952.73	
11.65	11.602	3948.55	24.77	24.001	3945.45	3952.70	
11.66	11.600	3948.67	24.78	24.726	3945.46	3952.66	
11.67	11.559	3948.57	24.80	24.692	3945.38	3952.66	
11.67	11.554 11.491	3948.56 3948.42	24.82 24.79	24.701 24.650	3945.40 3945.28	3952.65 3952.67	
11.64 11.64	11.491 11.510	3948.42	24.79	24.650	3945.20	3952.68	
11.66	11.567	3948.59	24.79	24.698	3945.40	3952.66	
11.67	11.581	3948.63	24.79	24.705	3945.41	3952.61	
11.68 11.68	11.567 11.570	3948.59 3948.60	24.80 24.81	24.692 24.699	3945.38 3945.40	3952.61 3952.60	
11.64	11.508	3948.46	24.01	24.648	3945.28	3952.59	
11.65	11.535	3948.52	24.78	24.661	3945.31	3952.57	

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11.596	3948.66	24.77	24.698	3945.40	3952.53
11.613	3948.70	24.77	24.706	3945.41	3952.26
11.602	3948.67 3948.69	24.77 24.78	24.693 24.704	3945.38 3945.41	3952.43 3952.33
11.611 11.544	3948.54	24.75	24.648	3945.28	3952.35
11.579	3948.62	24.74	24.662	3945.31	3952.33
11.652	3948.79	24.73	24.713	3945.43 3945.44	3952.36 3952.32
11.664 11.658	3948.82 3948.80	24.73 24.72	24.716 24.705	3945.41	3952.32
11.669	3948.83	24.72	24.716	3945.44	3952.26
11.614	3948.70	24.69	24.664	3945.32	3952.27
11.628	3948.73	24.68	24.666	3945.32	3952.25 3952.20
11.661 11.656	3948.81 3948.80	24.70 24.71	24.703 24.702	3945.41 3945.41	3952.20
11.619	3948.71	24.72	24.665	3945.32	3952.16
11.645	3948.77	24.72	24.694	3945.39	3952.06 3952.08
11.591 11.606	3948.65 3948.68	24.69 24.68	24.643 24.646	3945.27 3945.28	3952.06
11.660	3948.81	24.67	24,686	3945.37	3952.12
11.677	3948.85	24.67	24.701	3945.40	3952.11
11.670	3948.83 3948.85	24.66 24.66	24.692 24.703	3945.38 3945.41	3952.13 3952.04
11.679 11.626	3948.73	24.60	24.638	3945.26	3952.10
11.640	3948.76	24.60	24.655	3945.30	3952.15
11.684	3948.86	24.60	24.709	3945.42	3952.09 3952.18
11.695 11.672	3948.89 3948.84	24.61 24.63	24.721 24.697	3945.45 3945.39	3952.10
11.646	3948.78	24.63	24.676	3945.34	3952.15
11.591	3948.65	24.62	24.628	3945.23	3952.21
11.580 11.622	3948.62 3948.72	24.64 24.68	24.626 24.679	3945.23 3945.35	3952.17 3952.15
11.577	3948.62	24.70	24.650	3945.28	3952.14
11.570	3948.60	24.71	24.643	3945.27	3952.13
11.576 11.533	3948.61 3948.52	24.70 24.66	24.652 24.604	3945.29 3945.18	3952.08 3952.17
11.591	3948.65	24.68	24.656	3945.30	3952.30
11.598	3948.66	24.69	24.662	3945.31	3952.39
11.611	3948.70	24.71 24.73	24.685 24.683	3945.37 3945.36	3952.53 3952.97
11.602 11.612	3948.67 3948.70	24.75	24,005	3945.44	3953.80
11.555	3948.56	24.74	24.686	3945.37	3953.42
11.587	3948.64	24.74	24.706	3945.41 3945.51	3953.07 3952.84
11.659 11.670	3948.81 3948.83	24.73 24.73	24.750 24.750	3945.51	3952.04
11.674	3948.84	24.73	24.743	3945.50	3952.70
11.681	3948.86	24.73	24.748	3945.51	3952.77
11.628 11.654	3948.73 3948.79	24.68 24.67	24.695 24.703	3945.39 3945.41	3952.77 3952.75
11.731	3948.97	24.67	24.769	3945.56	3952.64
11.727	3948.96	24.68	24.766	3945.55	3952.66
11.687 11.680	3948.87 3948.85	24.70 24.71	24.737 24.737	3945.49 3945.49	3952.61 3952.58
11.603	3948.68	24.66	24.659	3945.31	3952.58
11.609	3948.69	24.66	24.661	3945.31	3952.59
11.698 11.683	3948.90 3948.86	24.69 24.71	24.750 24.743	3945.52 3945.50	3952.59 3952.62
11.666	3948.82	24.72	24.728	3945.46	3952.80
11.683	3948.86	24.73	24.751	3945.52	3952.68
11.596	3948.66	24.66 24.68	24.663 24.654	3945.32 3945.29	3952.66 3952.64
11.576 11.613	3948.61 3948.70	24.65	24.034	3945.43	3952.75
11.607	3948.69	24.78	24.719	3945.44	3952.91
11.584	3948.63 3948.64	24.80	24.706	3945.41 3945.46	3953.03 3953.21
11.588 11.520	3948.49	24.82 24.78	24.725 24.676	3945.34	3953.10
11.529	3948.50	24.79	24.681	3945.36	3953.14
11.586	3948.64	24.82	24.734	3945.48 3945.47	3953.18 3953.28
11.582 11.586	3948.63 3948.64	24.83 24.85	24.732 24.739	3945.47	3953.20
11.597	3948.66	24.86	24.755	3945.53	3953.25
11.526	3948.50	24.82	24.697	3945.39	3953.15
11.543 11.605	3948.54 3948.68	24.82 24.84	24.702 24.750	3945.40 3945.52	3953.08 3953.01
11.591	3948.65	24.85	24.737	3945.48	3952.96
11.575	3948.61	24.87	24.726	3945.46 3945.47	3952.93 3952.89
11.571 11.496	3948.60 3948.43	24.88 24.85	24.732 24.670	3945.33	3952.89
11.507	3948.45	24.85	24.671	3945.33	3952.87
11.570	3948.60	24.86	24.719	3945.44	3952.85
11.575 11.567	3948.61 3948.59	24.87 24.88	24.722 24.714	3945.45 3945.43	3952.82 3952.81
11.579	3948.62	24.88	24.727	3945.46	3952.76
11.526	3948.50	24.84	24.674	3945.34	3952.74
11.564 11.647	3948.59 3948.78	24.82 24.82	24.690 24.747	3945.38 3945.51	3952.76 3952.75
11.657	3948.80	24.82	24.750	3945.51	3952.75
11.654	3948.79	24.82	24.743	3945.50	3952.73
11.664	3948.82	24.83	24.755	3945.53 3945.41	3952.70 3952.68
11.605 11.630	3948.68 3948.74	24.79 24.79	24.703 24.713	3945.41	3952.69
11.694	3948.89	24.78	24.759	3945.54	3952.69
11.698	3948.90	24.79	24.761	3945.54	3952.69 3952.66
11.683 11.674	3948.86 3948.84	24.80 24.82	24.748 24.750	3945.51 3945.52	3952.66 3952.59
11.597	3948.66	24.79	24.693	3945.38	3952.55
11.615	3948.70	24.79	24.701	3945.40	3952.58
11.677 11.679	3948.85 3948.85	24.79 24.80	24.747 24.747	3945.51 3945.51	3952.58 3952.59
11.679	3948.85	24.80	24.747	3945.51	3952.55
11.671	3948.83	24.82	24.745	3945.50	3952.53
11.603	3948.68	24.78	24.688 24.701	3945.37 3945.40	3952.53 3952.52
11.632 11.709	3948.74 3948.92	24.78 24.77	24.701	3945.53	3952.52
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9052.7 9052.7 9052.6 9054.2 9055.1 9052.8 9052.3 9052.3 9052.3 9052.3 9052.3 9055.1 9051.6 9051.3 9051.7 9051.7 9051.7 9051.7 9051.2 9051.2 9051.2 9051.2 9051.2 9051.2 9051.2 9051.2 9051.3 9051.2 9051.2 9051.3 9051.2 9051.3 9052.1 9051.3 9052.1 9051.3 9052.1 9053.4 9052.2 9051.9 9052.3 9052.3 9052.3 9052.4 9052.4 9052.5 9053.4 9052.5 9053.4 9052.5 9053.4 9052.5 9053.4 9052.5 9055.1 9055.1 9055.1 9055.1 9055.1 9055.1 9055.1 9055.1 9055.1 9055.1 9055.1 9055.1 9055.1 9055.1 9055.1 9055.1 9055.5 9055.1 9055.5 9055.1 9055.5 9055.1 9055.5 9055.1 9055.5 9055.1 9055.5 90 7579.1 7579.1 7579.7 7578.0 7578.0 7576.0 7576.5 7576.5 7575.5 7575.5 7575.5 7575.5 7575.5 7575.5 7575.5 7575.5 7575.5 7575.5 7575.5 7575.5 7575.5 7575.5 7575.5 7577.3 7577.2 7576.9 7576.6 7578.3 7578.3 7578.3 7578.5 7579.6 7579.6 7579.6 7579.6 7579.6 7579.6 7579.5 7578.1 7579.9 7578.9 7578.5 7578.1 7579.5 7578.5 7578.5 7579.5 7578.5 7578.5 7579.5 7578.5 7579.5 7578.5 7579.5 7578.5 7579.5 7578.5 7579.5 7578.5 7579.5 7578.5 7579.5 7578.5 7578.5 7579.5 7578.5 7578.5 7579.5 7578.5 7579.5 7578.5 7579.5 7578.5 7579.5 75 1.222 1.219 1.235 1.389 1.766 1.235 1.231 1.238 1.231 1.238 1.211 1.233 1.105 1.774 1.185 1.101 1.185 1.181 1.102 1.185 1.187 1.185 1.187 1.185 1.187 1.185 1.187 1.185 1.187 1.185 1.199 1.121 1.178 1.199 1.121 1.178 1.125 1.202 1.212 1.224 1.145 1.206 1.214 1.226 1.226 1.214 1.226 1.226 1.214 1.226 1.226 1.226 1.214 1.226 9951.82 9951.82 9951.83 9951.74 9951.85 9951.85 9951.85 9951.83 9951.83 9951.63 9951.63 9951.63 9951.63 9951.73 9951.73 9951.74 9951.52 9951.74 9951.74 9951.74 9951.73 9951.74 9951.73 9951.73 9951.73 9951.73 9951.60 9951.61 3951.61 3951.63 9951.61 3951.63 9951.63 9951.63 9951.64 3951.77 9951.83 9951.64 9951.83 9951.64 9951.83 9951.64 9951.83 9951.64 9951.83 9951.64 9951.83 9951.65 9951.63 9951.63 9951.63 9951.83 9951.63 9951.63 9951.63 9951.63 9951.83 9951.64 9951.77 9951.83 9951.65 9951.61 9951.62 9951.62 9951.62 9951.63 9951.63 9951.63 9951.63 9951.63 9951.64 9951.77 9951.80 9951.83 9951.64 9951.77 9951.80 9951.81 3951.62 9951.62 9951.62 9951.63 395 $\begin{array}{l} 15.71\\ 15.71\\ 15.71\\ 15.70\\ 15.72\\ 15.72\\ 15.72\\ 15.72\\ 15.72\\ 15.72\\ 15.72\\ 15.72\\ 15.72\\ 15.72\\ 15.72\\ 15.71\\ 15.72\\ 15.72\\ 15.71\\ 15.72\\ 15.71\\ 15.72\\ 15.71\\ 15.72\\ 15.71\\ 15.72\\ 15.71\\ 15.72\\ 15.71\\ 15.72\\ 15.72\\ 15.71\\ 15.72\\ 15.72\\ 15.71\\ 15.72\\ 15.72\\ 15.71\\ 15.72\\ 15.72\\ 15.71\\ 15.72\\ 15.72\\ 15.71\\ 15.72\\ 15.72\\ 15.71\\ 15.72\\ 15.73\\ 15.72\\ 15.71\\ 15.72\\ 15.74\\ 15.75\\ 15.74\\ 15.75\\ 15.74\\ 15.75\\ 15.74\\ 15.75\\ 15.74\\ 15.75\\ 15.74\\ 15.75\\ 15.74\\ 15.75\\ 15.74\\ 15.75\\ 15.74\\ 15.75\\ 15.74\\ 15.75\\ 15.74\\ 15.76\\ 15$ 15.85 15.85 15.85 15.83 15.83 15.83 15.83 15.83 15.85 15.83 15.85 15.83 15.85 15.83 15.85 15.83 15.85 9019 9018.9 9018.5 9020.4 9018.4 9016.7 9012.4 9014.7 9014.3 9015.4 9013.9 9014.2 9013.9 9014.2 9014.2 9014.2 9014.2 9015.6 9014.2 9015.6 9014.4 9015.8 9015.6 9014.7 9015.8 9015.8 9015.8 9015.8 9016.3 9017.7 9017.1 9016.3 9018.3 9017.9 9017.4 9020.6 9019.7 9019.4 9019.4 9019.4 9019.9 9018.5 9020.9 9019.4 9019.9 9017.1 9017.9 9018.1 9017.4 9020.4 9018.5 9020.4 9017.4 9017.7 9017.9 9018.9 9018.9 9018.9 9018.9 9018.9 9017.7 9017.7 9017.9 9017.7 9017.9 9018.9 9018.9 9018.9 9018.9 9017.7 9017.7 9017.7 9017.9 9017.7 9017.9 9018.9 9018.9 9018.9 9018.9 9018.9 9017.9 9017.9 9017.7 9017.9 9018.9 9018 12.75 12.71 12.66 12.66 12.66 12.67 12.71 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.72 12.55 12.72 12.84 12.77 12.85 12.72 12.85 12.77 12.85 12.77 12.85 12.77 12.85 12.55 12.88 12.76 12.71 13.41 13.3 13.29 12.86 12.75 13.61 13.43 13.42 12.55 13.44 13.28 12.66 13.94 13.45 13.28 13.45 13.28 13.45 13.28 13.45 13.28 13.45 13.28 13.45 13.28 13.29 12.86 13.37 13.28 12.86 13.37 13.84 12.68 13.75 13.89 13.44 12.68 13.71 13.81 12.86 13.71 13.81 12.86 13.74 13.89 13.28 12.81 13.29 13.29 13.29 13.29 13.29 13.29 13.29 13.29 13.29 13.29 13.29 13.29 13.29 13.29 13.29 12.86 13.75 13.91 13.81 12.86 12.71 13.92 13.89 13.28 12.81 12.81 12.85 13.74 13.92 13.89 13.28 12.81 13.81 12.81 12.81 13.81 12.81 13.81 12.81 13.81 12.81 13.81 12.81 13.81 12.81 13.81 12.81 13.81 12.81 13.81 12.81 13.81 12.81 13.81 12.81 13.81 12.81 13.81 1 17.89 17.99 17.99 17.99 17.99 17.93 17.92 17.92 17.92 17.92 17.92 17.92 17.94 17.95 17.96 17.95 17.96 17.95 17.96 17.95 17.96 17.95 17.96 17.95 17.96 17.95 17.96 17.95 17.96 17.95 17.96 17.95 17.96 17.95 17.96 17.95 17.96 17.95 17.96 17.96 17.96 17.99 17.99 17.99 17.98 17.99 17.98 17.99 17.98 17.99 17.98 17.99 17.98 17.99 17.98 17.99 17.98 17.99 17.98 17.99 17.98 17.99 17.99 17.98 17.99 17.99 17.98 18.01

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11.723	3948.95	24.77	24.761	3945.54	3952.53
11.718 11.727	3948.94 3948.96	24.77 24.77	24.756 24.765	3945.53 3945.55	3952.53 3952.51
11.678	3948.85	24.74	24.727	3945.46 3945.46	3952.47 3952.49
11.679 11.717	3948.85 3948.94	24.75 24.77	24.725 24.766	3945.55	3952.48
11.667	3948.82 3948.72	24.79 24.82	24.735 24.706	3945.48 3945.41	3952.49 3952.50
11.623 11.595	3948.66	24.85	24.703	3945.41	3952.46
11.499 11.502	3948.44 3948.44	24.84 24.84	24.638 24.638	3945.26 3945.26	3952.42 3952.46
11.572	3948.60	24.86	24.692	3945.38	3952.45
11.565 11.551	3948.59 3948.56	24.87 24.89	24.687 24.682	3945.37 3945.36	3952.44 3952.43
11.549	3948.55	24.90	24.691	3945.38	3952.38 3952.39
11.477 11.511	3948.38 3948.46	24.86 24.85	24.628 24.639	3945.23 3945.26	3952.42
11.601 11.613	3948.67 3948.70	24.85 24.85	24.706 24.707	3945.41 3945.42	3952.39 3952.35
11.611	3948.69	24.85	24.703	3945.41	3952.37
11.619 11.552	3948.71 3948.56	24.86 24.81	24.710 24.656	3945.42 3945.30	3952.35 3952.36
11.584	3948.63	24.81	24.675	3945.34	3952.40
11.651 11.660	3948.79 3948.81	24.81 24.81	24.722 24.724	3945.45 3945.45	3952.39 3952.37
11.654	3948.79	24.82 24.83	24.718 24.726	3945.44 3945.46	3952.38 3952.35
11.662 11.586	3948.81 3948.64	24.79	24.667	3945.32	3952.37
11.623 11.697	3948.72 3948.89	24.79 24.79	24.689 24.744	3945.38 3945.50	3952.44 3952.41
11.698	3948.90	24.79	24.740	3945.49	3952.39
11.704 11.702	3948.91 3948.90	24.79 24.80	24.746 24.744	3945.51 3945.50	3952.37 3952.30
11.628	3948.73	24.76	24.682 24.698	3945.36 3945.39	3952.33 3952.38
11.654 11.728	3948.79 3948.96	24.76 24.76	24.098	3945.53	3952.39
11.727 11.717	3948.96 3948.94	24.77 24.77	24.753 24.746	3945.52 3945.51	3952.38 3952.38
11.715	3948.93	24.78	24.749	3945.51	3952.31
11.646 11.672	3948.77 3948.83	24.74 24.74	24.690 24.705	3945.38 3945.41	3952.33 3952.39
11.752	3949.02	24.74	24.772	3945.57	3952.38 3952.33
11.745 11.716	3949.00 3948.94	24.75 24.76	24.769 24.742	3945.56 3945.50	3952.33
11.730 11.658	3948.97 3948.80	24.76 24.72	24.759 24.697	3945.54 3945.39	3952.24 3952.24
11.664	3948.82	24.73	24.701	3945.40	3952.32
11.727 11.715	3948.96 3948.93	24.74 24.76	24.758 24.751	3945.53 3945.52	3952.33 3952.32
11.689	3948.87	24.77	24.735	3945.48 3945.48	3952.33 3952.23
11.678 11.597	3948.85 3948.66	24.79 24.76	24.736 24.673	3945.34	3952.27
11.617 11.686	3948.71 3948.87	24.76 24.77	24.687 24.744	3945.37 3945.50	3952.34 3952.33
11.689	3948.88	24.78	24.743	3945.50	3952.33
11.677 11.680	3948.85 3948.85	24.78 24.79	24.734 24.742	3945.48 3945.50	3952.33 3952.24
11.603	3948.68	24.74	24.671	3945.33	3952.28 3952.32
11.635 11.704	3948.75 3948.91	24.75 24.76	24.694 24.753	3945.39 3945.52	3952.32
11.705 11.691	3948.91 3948.88	24.76 24.77	24.750 24.740	3945.52 3945.49	3952.31 3952.31
11.690	3948.88	24.78	24.744	3945.50	3952.22
11.614 11.642	3948.70 3948.77	24.73 24.74	24.676 24.698	3945.34 3945.40	3952.22 3952.29
11.713	3948.93	24.75	24.758	3945.53 3945.52	3952.31 3952.28
11.711 11.693	3948.92 3948.88	24.76 24.77	24.754 24.739	3945.49	3952.27
11.691 11.631	3948.88 3948.74	24.77 24.73	24.745 24.692	3945.50 3945.38	3952.25 3952.26
11.664	3948.82	24.75	24.721	3945.45	3952.31
11.684 11.672	3948.86 3948.84	24.77 24.77	24.744 24.733	3945.50 3945.48	3952.30 3952.27
11.667 11.667	3948.82 3948.82	24.78 24.79	24.732 24.738	3945.47 3945.49	3952.29 3952.26
11.588	3948.64	24.74	24,669	3945.33	3952.23
11.610 11.689	3948.69 3948.87	24.75 24.76	24.684 . 24.750	3945.36 3945.51	3952.31 3952.29
11.684	3948.86	24.77	24.749	3945.51	3952.30 3952.33
11.670 11.670	3948.83 3948.83	24.78 24.79	24.738 24.740	3945.49 3945.49	3952.32
11.610	3948.69 3948.71	24.74 24.73	24.689 24.682	3945.37 3945.36	3952.27 3952.35
11.616 11.695	3948.89	24.76	24.761	3945.54	3952.36
11.677 11.664	3948.85 3948.82	24.78 24.78	24.748 24.738	3945.51 3945.49	3952.38 3952.42
11.662	3948.81	24.80	24.746	3945.51	3952.46
11.584 11.613	3948.63 3948.70	24.75 24.76	24.680 24.701	3945.35 3945.40	3952.43 3952.58
11.688	3948.87	24.78 24.79	24.771 24.770	3945.56 3945.56	3952.73 3952.72
11.687 11.682	3948.87 3948.86	24.79 24.79	24.765	3945.55	3952.65
11.694	3948.89 3948.71	24.80 24.73	24.777 24.701	3945.58 3945.40	3952.60 3952.61
11.616 11.645	3948.77	24.74	24.724	3945.46	3952.65
11.720 11.714	3948.95 3948.93	24.77 24.77	24.792 24.788	3945.61 3945.60	3952.69 3952.66
11.705	3948.91	24.78	24.783	3945.59	3952.61
11.699 11.625	3948.90 - 3948.73	24.79 24.75	24.782 24.726	3945.59 3945.46	3952.58 3952.57
11.621	3948.72 3948.84	24.76 24.79	24.722 24.774	3945.45 3945.57	3952.57 3952.56
11.676 11.662	3948.84 3948.81	24.79	24.774	3945.55	3952.55

11.73 11.73 11.73 11.73 11.73 11.73 11.70 11.72 11.74 11.75 11.76 11.71 11.72 11.73 11.69 11.71 11.72 11.73 11.69 11.71 11.72 11.73 11.69 11.71 11.72

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11.662	3948.81	24.81	24.763	3945.54	3952.48
11.602	3948.67	24.75	24.708	3945.42	3952.54
11.635	3948,75	24.75	24.726	3945.46	3952.63
11.724	3948.96	24.77	24.802	3945.64	3952.64
11,726	3948,96	24.77	24.802	3945.63	3952.62
11,716	3948.94	24.78	24.789	3945.61	3952.60
11.728	3948.96	24.78	24.801	3945.63	3952.60
11.648	3948.78	24.72	24.729	3945.47	3952.59
11.655	3948.80	24.73	24.735	3945.48	3952.61
11.719	3948.94	24.77	24.804	3945.64	3952.63
11.698	3948.89	24.79	24.788	3945.60	3952.66
11.685	3948.87	24.80	24.786	3945.60	3952.66
11.687	3948.87	24.81	24.790	3945.61	3952.63
11.601	3948.67	24.75	24.716	3945.44	3952.63
11.620	3948,71	24.76	24.731	3945.47	3952.67
11.709	3948.92	24.78	24.810	3945.65	3952.65
11,702	3948,90	24.79	24,802	3945.64	3952.65
11.687	3948.87	24.81	24,795	3945.62	3952.64
11.680	3948,85	24.82	24,792	3945.61	3952.63
11.598	3948.67	24,76	24.722	3945.45	3952.64
11.630	3948.74	24,77	24,743	3945.50	3952.62
11.714	3948.93	24.78	24.812	3945.66	3952.62
11.712	3948.93	24.79	24.815	3945.67	3952.62
11.673	3948.84	24.81	24.791	3945.61	3952.62
11.658	3948.80	24.83	24,786	3945.60	3952.60
11.575	3948.61	24.79	24,724	3945.45	3952.59
11.581	3948.63	24.80	24,729	3945.47	3952.71
11.656	3948.80	24.82	24,791	3945.61	3952.80
11.661	3948.81	24.83	24,794	3945.62	3952.79
11.657	3948.80	24.84	24.795	3945.62	3952.85
11.662	3948.81	24.85	24,809	3945.65	3952.83
11.574	3948,61	24.80	24,734	3945.48	3952.80
11.571	3948.60	24.81	24,737	3945.48	3952.88
11.646	3948,78	24.85	24.803	3945.64	3952.87
11.620	3948.71	24.88	24.796	3945.62	3952.83
11.573	3948.61	24.91	24.772	3945.57	3952.81
11.554	3948.56	24,94	24.775	3945.57	3952.81
11.444	3948.31	24.88	24.684	3945.36	3952.72
11.462	3948.35	24.88	24,683	3945,36	3952.71
11.590	3948.65	24.90	24.783	3945.59	3952.70
11.594	3948.65	24.89	24.775	3945.57	3952.71
11,604	3948.68	24.89	24.776	3945.58	3952.70
11.647	3948.78	24.89	24,808	3945.65	3952.65
11.576	3948.61	24.81	24,737	3945.48	3952.67
11.598	3948.66	24.81	24.747	3945.51	3952.68
11.689	3948.87	24,83	24.819	3945.67	3952.67
11.671	3948.83	24.85	24,810	3945.65	3952.66
11.632	3948.74	24.87	24.788	3945.60	3952.67
11.617	3948.71	24.90	24.793	3945.61	3952.65
11.512	3948.47	24.85	24.715	3945.44	3952.64
11.508	3948.46	24.88	24.715	3945.43	3952.64
11.566	3948.59	24.00	24.769	3945.56	3952.66
11.500	3948.56	24.93	24.768	3945.56	3952.68
11.529	3948.51	24.96	24.762	3945.54	3952.67
11.323	0040.011	24.00			