



M-30BH BORING GEOPHYSICS FIELD LOG SUMMARY

Borehole*

SITE*: North Anna DATE*: 9/15/09, 9/16/09
 CLIENT*: MACTEC JOB*: 9333
 AUTHOR*: C. Carter PAGE*: 1 OF 1

CONTACT: _____ PHONE: _____

BOREHOLE CONSTRUCTION: CASSED _____ UNCASSED _____
 DIAMETERS AND DEPTH RANGES: 3.78" 0 TO 102.7 ft; _____ TO _____
 BOREHOLE TOTAL DEPTH AS DRILLED*: 102.7 ft
 SURFACE CASING?: YES DEPTH TO BOTTOM OF CASING 44 ft; NO _____
 DEPTH TO BEDROCK: 45 ft
 BOREHOLE FLUID: WATER _____; FRESH WATER MUD ; SALT WATER MUD _____

LOGGING CREW: C. Carter, V. Gonzalez

cc
9/21/09

LOG TYPE*	FILE NAME*	DEPTH RANGE*	DATE*	TIMES*
ELOG	M30DHELOGTEST01	NA	9/15/09	3:05 - 3:07 pm
ELOG	M30DHELOGV01	200.45 - 39.55 ft	9/15/09	3:49 - 4:05 pm
P-S velocity	M30DHUSPDOWN01	14.0 - 57.0	9/15/09	
ELOG	M30DHELOGV02	75 - 39.85 ft	9/15/09	4:11 - 4:15
P-S velocity	M30DHUSPDOWN01	14.0 - 57.0m	9/15/09	4:52 - 5:40 pm
ATV	M30DHAUV01	200.2 - 40.2 ft	9/16/09	9:09 - 10:01 am
ATV	M30DHAUV02	55.4 - 41.8 ft	9/16/09	10:05 - 10:08 am
Caliper	M30DHICALTEST01	NA	9/16/09	10:40 - 10:42
Caliper	M30DHICALV01	200.1 - 33.2 ft	9/16/09	11:30 - 11:46
Caliper	M30DHICALTEST02	NA	9/16/09	12:00 - 12:01

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL

ACOUSTIC TELEVIEWER LOG FORM 1.1.pdf



M-306H ACOUSTIC TELEVIEWER FIELD LOG Rev 1.1

Borehole* GEOVISION HI-RES ACOUSTIC TELEVIEWER PROCEDURE V1.0

SITE*: North Anna DATE*: 9/16/09
CLIENT*: MACTEC JOB*: 9333
AUTHOR*: C. Carter PAGE 1 OF 2
REVIEWER: _____ (post field work)

CONTACT: _____ PHONE: Off Cell

CONTACT: _____ PHONE: Off Cell

DRILLER _____ PHONE: Off Cell
COMPANY: _____

GENERAL SITE CONDITIONS/LOCATION: _____

COUNTY: _____ RANGE: _____ TOWNSHIP: _____ SECTION: _____
BOREHOLE CONSTRUCTION: CASED _____ UNCASD
DIAMETERS AND DEPTH RANGES: 3.78" 0 TO 201.7 ft; _____ TO _____

BOREHOLE TOTAL DEPTH AS DRILLED*: 201.7 ft

SURFACE CASING?: YES DEPTH TO BOTTOM OF CASING 42 ft; NO _____
DEPTH TO BEDROCK: ~42 ft DEPTH TO WATER TABLE: NA
BOREHOLE FLUID: WATER ; FRESH WATER MUD _____; SALT WATER MUD _____;
OTHER: _____
DEPTH TO BOREHOLE FLUID: 25 ft TIME SINCE LAST CIRCULATION: NA

LOGGING CREW: C. Carter, V. Gonzalez
VEHICLE(S) USED AND MILEAGE: _____
MOBILIZED FROM: Fredricksburg DEPARTURE TIME: 6:15
ARRIVED ON SITE: 7:15
STANDBY TIME: NA CAUSE: _____

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL

ACOUSTIC TELEVIEWER LOG FORM 1.1.pdf



M-30DH ACOUSTIC TELEVIEWER FIELD LOG Rev 1.1

Borehole* GEOVISION HI-RES ACOUSTIC TELEVIEWER PROCEDURE V1.0

SITE*: North Anna DATE*: 9/16/09
 CLIENT*: MACTEC JOB*: 9333
 AUTHOR*: C. Carter PAGE 2 OF 2
 REVIEWER: _____ (post field work)

WINCH: COMPROBE _____ SILVER OYO _____ OTHER _____
 MICROLOGGER* 5310 _____ 5772 9/16/09
 TELEVIEWER* ACOUSTIC #5174 OTHER 6641
 SHEAVE* COMPROBE _____ OYO 101 _____ 102 103 _____ RG _____

cc 9/16/09 PROBE TILT TEST* 93 BRUNTON TILT* 93
 PROBE TILT TEST* 14.32 ~~14.32~~ BRUNTON TILT* 2.81 ~~2.81~~ *cc 9/16/09 14*
 PROBE TILT TEST* 12.42 BRUNTON TILT* 13 AFTER LOG* yes
cc 9/16/09 PROBE AZIMUTH TEST* 288.70 BRUNTON AZIMUTH* 281
 PROBE AZIMUTH TEST* 154.39 ~~154.39~~ BRUNTON AZIMUTH* 14 ~~14~~ *cc 9/16/09*
 PROBE AZIMUTH TEST* 351.40 BRUNTON AZIMUTH* 350 AFTER LOG* yes

PROBE OFFSET*	1.44M(4.72FT)	} REF TO GROUND SURFACE
MINUS CASING STICK-UP*	<u>1.08</u>	
DEPTH REF. OFFSET AT START*	<u>3.64</u>	
DEPTH REF. OFFSET AT END*	<u>3.62</u>	
AFTER SURVEY DEPTH ERROR*	<u>.02</u>	

LOG NAME*	START DEPTH*	START TIME	END DEPTH*	END TIME
<u>M30DH AUUP01</u>	<u>200.2</u>	<u>9:09</u>	<u>40.2</u>	<u>10:07</u>
<u>M30DH AUUP02</u>	<u>55.4</u>	<u>10:05</u>	<u>41.8</u>	<u>10:08</u>

MAINTENANCE PERFORMED ON SITE*: NA (N/A if none)

DEVIATION FROM PROCEDURE (IF ANY) OR EQUIPMENT PROBLEMS OR FAILURES*(N/A if none)
NA

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL



CALIPER FIELD LOG REV 1.2.PDF

M-30DH
Borehole*

CALIPER FIELD LOG
Procedure ASTM D6167-97(2004)

SITE*: North Anna DATE*: 9/16/2009
CLIENT*: Mactec JOB*: 1333
AUTHOR*: V. Gonzalez PAGE: 1 OF 2

CONTACT: _____ PHONE: Off Cell

CONTACT: _____ PHONE: Off Cell

CONTACT: _____ PHONE: Off Cell

DRILLER _____ PHONE: Off Cell
COMPANY: _____

GENERAL SITE CONDITIONS/LOCATION: _____

COUNTY: _____ RANGE: _____ TOWNSHIP: _____ SECTION: _____

BOREHOLE CONSTRUCTION: CASED _____ UNCASD _____
DIAMETERS AND DEPTH RANGES: 3.75" 0 TO 201.7 ft ; _____ TO _____

BOREHOLE TOTAL DEPTH AS DRILLED*: 201.7 ft

SURFACE CASING?: YES x DEPTH TO BOTTOM OF CASING 42 FT; NO _____

DEPTH TO BEDROCK: 42 FT DEPTH TO WATER TABLE: NA

BOREHOLE FLUID: WATER x; FRESH WATER MUD _____; SALT WATER MUD _____;

OTHER: _____

DEPTH TO BOREHOLE FLUID: 25 FT TIME SINCE LAST CIRCULATION: N/A

LOGGING CREW: V. Gonzalez, C. Carter

VEHICLE(S) USED AND MILEAGE: _____

MOBILIZED FROM: Fredericksburg DEPARTURE TIME: 6:15

ARRIVED ON SITE: 7:15

STANDBY TIME: N/A CAUSE: _____

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL



CALIPER FIELD LOG REV 1.2.PDF

M-30DH

CALIPER FIELD LOG

Borehole*

Procedure ASTM D6167-97(2004)

SITE*: North Anna DATE*: 9/16/2009
 CLIENT*: Mactec JOB*: 9333
 AUTHOR*: V. Gonzalez PAGE: PAGE 2 OF 2

WINCH: _____ COMPROBE _____ SILVER OYO _____ RG _____ OTHER _____
 MICROLOGGER* 5310 5772 OTHER 6621 6621 12 9/16/09
 CALIPER PROBE* 5368 OTHER 6621
 SHEAVE* COMPROBE OYO 101 102 103 RG

PROBE OFFSET	2.08M(6.82 FT)	12 IN MAX
MINUS CASING STICK-UP*	<u>1.08 FT</u>	} REF TO GROUND SURFACE
DEPTH REF. OFFSET AT START*	<u>3.74 FT</u>	
DEPTH REF. OFFSET AT END*	<u>5.70 FT</u>	
AFTER SURVEY DEPTH ERROR*	<u>0.04 FT</u>	

LOG NAME*	START DEPTH*	START TIME*	END DEPTH*	END TIME*
<u>M30DHCALUP01</u>	<u>200.1</u>	<u>11:30</u>	<u>33.20 FT</u>	<u>11:46</u>
<u>M30DHCALTEST01</u>	<u>N/A</u>	<u>10:40</u>	<u>N/A</u>	<u>10:42</u>
<u>M30DHCALTEST02</u>	<u>N/A</u>	<u>12:00</u>	<u>N/A</u>	<u>12:01</u>

CALIBRATION PLATE S/N 201

FILE NAME	AS BUILT			PVC FITTING
	1.968 IN (50 MM)	3.937 IN (100 MM)	8.000 IN (203.2 MM)	4.504 IN (114.4 MM)
AS MEAS.* <u>M30DHCALTEST01</u>	<u>2.00</u>	<u>3.96</u>	<u>8.02</u>	<u>4.55</u>
AS MEAS.* <u>M30DHCALTEST02</u>	<u>2.00</u>	<u>3.95</u>	<u>8.03</u>	<u>4.56</u>
AS MEAS.				
AS MEAS.				
AS MEAS.				
AS MEAS.				

MAINTENANCE PERFORMED ON SITE*: N/A (N/A if none)

EQUIPMENT PROBLEMS OR FAILURES*: N/A (N/A if none)

SUGGESTIONS, ADDITIONS, CHANGES: _____

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL



M-3034 BORING GEOPHYSICS FIELD LOG SUMMARY

Borehole*

SITE*: North Anna DATE*: 9/17/09
 CLIENT*: MACTEC JOB*: 9333
 AUTHOR*: C. Carter PAGE*: 1 OF 1

CONTACT: _____ PHONE: _____

BOREHOLE CONSTRUCTION: CASED _____ UNCASD _____
 DIAMETERS AND DEPTH RANGES: 3.75" 0 TO 201.7 ft; _____ TO _____
 BOREHOLE TOTAL DEPTH AS DRILLED*: 201.7 ft
 SURFACE CASING?: YES X DEPTH TO BOTTOM OF CASING 7 ft; NO _____
 DEPTH TO BEDROCK: ~42 ft
 BOREHOLE FLUID: WATER _____; FRESH WATER MUD X; SALT WATER MUD _____

LOGGING CREW: C. Carter, V. Gonzalez

LOG TYPE*	FILE NAME*	DEPTH RANGE*	DATE*	TIMES*
ELOG	^{cc 9/17/09} M30DHLOGTEST02	NA	9/17/09	8:34 - 8:35am
ELOG	M30DHLOGUP03	65.4 - 34.7 ft	9/17/09	9:17 - 9:20am
P-S velocity	M30DHSUSPD02	2.5 - 16.0m	9/17/09	9:35 - 9:52am
ATV	M30DHAUUP03	45.9 - 5.9 ft	9/17/09	10:26 - 10:38am
Caliper	M30DHCALTEST03	NA	9/17/09	11:00 - 11:03am
Caliper	M30DHCALTEST04	NA	9/17/09	11:34 - 11:36am
Caliper	M30DHCALUP02	50.7 - 3.3 ft	9/17/09	11:20 - 11:26am

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL
 GEOVision Geophysical Services 1151 Pomona Road, Unit P, Corona, CA 92882 Ph (951) 549-1234 Fx (951) 549-1236

ELOG FIELD LOG REV 1.1a



M-30DH ELOG FIELD LOG

Borehole*

SITE*: North Anna DATE*: 9/17/09
CLIENT*: MACTEC JOB*: 9333
AUTHOR*: C. Carter PAGE: 1 OF 2

CONTACT: _____ PHONE: Off Cell
CONTACT: _____ PHONE: Off Cell
CONTACT: _____ PHONE: Off Cell
CONTACT: _____ PHONE: Off Cell
COMPANY: _____

GENERAL SITE CONDITIONS/LOCATION: _____

COUNTY: _____ RANGE: _____ TOWNSHIP: _____ SECTION: _____
BOREHOLE CONSTRUCTION: CASED _____ UNCASD
DIAMETERS AND DEPTH RANGES: 3.78" 0 TO 201.7ft; _____ TO _____

BOREHOLE TOTAL DEPTH AS DRILLED*: 201.7ft

SURFACE CASING?: YES DEPTH TO BOTTOM OF CASING 7ft; NO _____
DEPTH TO BEDROCK: 42ft DEPTH TO WATER TABLE: ~25ft
BOREHOLE FLUID: WATER _____; FRESH WATER MUD ; SALT WATER MUD _____

OTHER: _____
DEPTH TO BOREHOLE FLUID: ~2ft TIME SINCE LAST CIRCULATION: 9am

LOGGING CREW: C. Carter V. Gonzalez
VEHICLE(S) USED AND MILEAGE: _____
MOBILIZED FROM: Fredricksburg DEPARTURE TIME: 6:15am
ARRIVED ON SITE: 7am
STANDBY TIME: N/A CAUSE: _____

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL

ELOG FIELD LOG REV 1.1a



M-300H ELOG FIELD LOG
 Borehole*

SITE*: North Anna DATE*: 9/17/09
 CLIENT*: MACTEC JOB*: 9333
 AUTHOR*: C. Cortez PAGE: PAGE 2 OF 2

WINCH: _____ COMPROBE _____ SILVER OYO _____ RG _____ OTHER _____
 MICROLOGGER* 5310 5772 OTHER _____
 ELOG PROBE* 5490 OTHER _____
 SHEAVE* COMPROBE OYO 101 102 103 RG

PROBE LENGTH	2.50M(8.20 FT)	} REF TO GROUND SURFACE
PLUS YOKE 10.0M (32.8 FT)*	32.8	
MINUS CASING STICK-UP*	-3.35	
DEPTH REF. OFFSET AT START*	37.65	
DEPTH REF. OFFSET AT END*	37.75	
AFTER SURVEY DEPTH ERROR*	.10	

LOG NAME*	START DEPTH*	START TIME	END DEPTH*	END TIME
M30DHELOGTEST02	NA	8:34	NA	8:35am
M30DHELOGUP03	65.4 ft	9:17	34.7 ft	9:20am

MAINTENANCE PERFORMED ON SITE*: NA (N/A if none)
 EQUIPMENT PROBLEMS OR FAILURES*: NA (N/A if none)
 SUGGESTIONS, ADDITIONS, CHANGES: _____

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL

P-S FIELD LOG REV V1.4



M-300H P-S SUSPENSION VELOCITY FIELD LOG REV 1.4

Borehole CORRESPONDING P-S SUSPENSION PROCEDURE REV 1.4.

SITE*: North Anna DATE*: 9/17/09
CLIENT*: MACTEC JOB*: 9333
AUTHOR*: Carter PAGE 1 OF * 3

CONTACT: _____ PHONE: Off Cell _____
CONTACT: _____ PHONE: Off Cell _____
CONTACT: _____ PHONE: Off Cell _____
CONTACT: _____ PHONE: Off Cell _____

DIRECTIONS TO SITE: _____

GENERAL SITE CONDITIONS/LOCATION: _____

COUNTY: _____ RANGE: _____ TOWNSHIP: _____ SECTION: _____
BOREHOLE CONSTRUCTION*: CASED _____ UNCASD
DIAMETERS AND DEPTH RANGES*: 3.78" 0 TO 201.75'; _____ TO _____
BOREHOLE TOTAL DEPTH AS DRILLED*: 201.75'
SURFACE CASING?: yes DEPTH TO BOTTOM OF CASING 7'; NO _____
DEPTH TO BEDROCK: 42' DEPTH TO WATER TABLE: ~25'
BOREHOLE FLUID: WATER _____; FRESH WATER MUD ; SALT WATER MUD; _____
OTHER: _____
DEPTH TO BOREHOLE FLUID*: ~5' TIME SINCE LAST CIRCULATION: 9am

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL

GEOVision Geophysical Services 1124 Olympic Drive, Corona, CA 92881 Ph (951) 549-1234 Fx (951) 549-1236

P-S FIELD LOG REV V1.4



M-30BH P-S SUSPENSION VELOCITY FIELD LOG REV 1.4

Borehole CORRESPONDING P-S SUSPENSION PROCEDURE REV 1.4.

SITE*: North Anna DATE*: 9/17/09
 CLIENT*: MACTEC JOB*: 9333
 AUTHOR*: C. Carter PAGE 2 OF * 3

LOGGING CREW*: C. Carter, V. Gonzalez
 MOBILIZED FROM: Fredricksburg DEPARTURE TIME: 6:15
 ARRIVED ON SITE: 7am
 STANDBY TIME: _____ CAUSE: _____
 LOGGING STARTED: 9:35am LOGGING COMPLETED: 9:52am

BATTERIES CHANGED BEFORE LOGGING: YES _____; NO ; STORED WITH NEW _____
 WINCH _____ COMPROBE GREY OYO RG OTH _____
 INSTRUMENT* OYO 12004 15014 19029 RG 160023 160024
 RECEIVER S/N* 12008 20042 26066 11001 23053 30086
 ISOLATION TUBE S/N* 300083 24053 28068 28072 2M _____
 SHEAVE* COMPROBE OYO 101 102 103 RG
 MICROLOGGER* 5310 5772 NOT APPLICABLE (OYO)
 PROBE OFFSET* OYO 2.0M RG 2.5M
 MINUS CASING STICK-UP* 1.02 m
 DEPTH REF. OFFSET AT START* 1.48 m
 DEPTH REF. OFFSET AT END* 1.49 m } REF TO GROUND SURFACE
 AFTER SURVEY DEPTH ERROR* .01 m } 11/3/09

LOG NAME*	START DEPTH*	START TIME	END DEPTH*	END TIME
<u>M30BH5USPDOWN02</u>	<u>2.5m</u>	<u>9:35am</u>	<u>16m</u>	<u>9:52am</u>

MAINTENANCE PERFORMED ON SITE*: NA (N/A if none)

EQUIPMENT PROBLEMS OR FAILURES*: NA (N/A if none)

DEVIATIONS FROM TEST PLAN*: NA (N/A if none)

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL

P-S FIELD LOG REV 1.4

M-300H **GEOVISION SUSPENSION LOGGING FIELD NOTES**

SITE*: North Anna DATE*: 9/17/09
 CLIENT*: MACTEC JOB*: 9333
 AUTHOR*: C. Carter PAGE* 3 OF 3

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL

DEPTH METERS	DEPTH FEET	UNFILTERED FILE NO*	FILTERED FILE NO* (if any)	COMMENTS CASING, WATER, ROCK, ETC
0.5	1.64			
1.0	3.28			
1.5	4.92			
2.0	6.56			
2.5	8.20	200		9:35
3.0	9.84	201		
3.5	11.48	202		
4.0	13.12	203		
4.5	14.76	204		
5.0	16.40	205		
5.5	18.04	206		
6.0	19.69	207		
6.5	21.33	208		
7.0	22.97	209		
7.5	24.61	210		
8.0	26.25	211		
8.5	27.89	212		
9.0	29.53	213		
9.5	31.17	214		
10.0	32.81	215		
10.5	34.45	216		
11.0	36.09	217		
11.5	37.73	218		
12.0	39.37	219		
12.5	41.01	220		
13.0	42.65	221		
13.5	44.29	222		
14.0	45.93	223		
14.5	47.57	224		
15.0	49.21	225		
15.5	50.85	226		
16.0	52.49	227		9:52
16.5	54.13			
17.0	55.77			
17.5	57.41			
18.0	59.06			
18.5	60.70			
19.0	62.34			
19.5	63.98			
20.0	65.62			

ACOUSTIC TELEVIEWER LOG FORM 1.1.pdf



M-300H ACOUSTIC TELEVIEWER FIELD LOG Rev 1.1

Borehole* GEOVISION HI-RES ACOUSTIC TELEVIEWER PROCEDURE V1.0

SITE*: North Anna DATE*: 9/17/09
CLIENT*: MACTEC JOB*: 9333
AUTHOR*: C. Carter PAGE 1 OF 2
REVIEWER: _____ (post field work)

CONTACT: _____ PHONE: Off Cell

CONTACT: _____ PHONE: Off Cell

DRILLER _____ PHONE: Off Cell

COMPANY: _____

GENERAL SITE CONDITIONS/LOCATION: _____

COUNTY: _____ RANGE: _____ TOWNSHIP: _____ SECTION: _____

BOREHOLE CONSTRUCTION: CASED _____ UNCASD X
DIAMETERS AND DEPTH RANGES: 3.78" 0 TO 201.7 ft; _____ TO _____

BOREHOLE TOTAL DEPTH AS DRILLED*: 201.7 ft

SURFACE CASING?: YES X DEPTH TO BOTTOM OF CASING 7 ft; NO _____
DEPTH TO BEDROCK: ~42 ft DEPTH TO WATER TABLE: ~25 ft
BOREHOLE FLUID: WATER _____; FRESH WATER MUD X; SALT WATER MUD _____;
OTHER: _____
DEPTH TO BOREHOLE FLUID: 5 ft TIME SINCE LAST CIRCULATION: 9am

LOGGING CREW: C. Carter, V. Gonzalez
VEHICLE(S) USED AND MILEAGE: _____
MOBILIZED FROM: Fredricksburg DEPARTURE TIME: 6:15 am
ARRIVED ON SITE: 7am
STANDBY TIME: NA CAUSE: _____

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL

ACOUSTIC TELEVIEWER LOG FORM 1.1.pdf



M-30D#A ACOUSTIC TELEVIEWER FIELD LOG Rev 1.1

Borehole* GEOVISION HI-RES ACOUSTIC TELEVIEWER PROCEDURE V1.0

SITE*: North Anna DATE*: 9/17/09
 CLIENT*: MACTEC JOB*: 9333
 AUTHOR*: C. Carter PAGE 2 OF 2
 REVIEWER: _____ (post field work)

WINCH: COMPROBE _____ SILVER OYO _____ OTHER _____
 MICROLOGGER* 5310 _____ 5772
 TELEVIEWER* ACOUSTIC #5174 _____ OTHER 6641
 SHEAVE* COMPROBE _____ OYO 101 _____ 102 103 _____ RG _____

PROBE TILT TEST* 91.47 BRUNTON TILT* 91
 PROBE TILT TEST* 17.38 BRUNTON TILT* 17
 PROBE TILT TEST* 52.40 BRUNTON TILT* 52 AFTER LOG* yes
 PROBE AZIMUTH TEST* 315.30 BRUNTON AZIMUTH* 310
 PROBE AZIMUTH TEST* 249.50 BRUNTON AZIMUTH* 247
 PROBE AZIMUTH TEST* 312.40 BRUNTON AZIMUTH* 305 AFTER LOG* yes

PROBE OFFSET*	1.44M(4.72FT)	} REF TO GROUND SURFACE
MINUS CASING STICK-UP*	<u>3.35</u>	
DEPTH REF. OFFSET AT START*	<u>1.37</u>	
DEPTH REF. OFFSET AT END*	<u>1.37</u>	
AFTER SURVEY DEPTH ERROR*	<u>0</u>	

LOG NAME*	START DEPTH*	START TIME	END DEPTH*	END TIME
<u>M30D#A00P03</u>	<u>45.9 ft</u>	<u>10:26am</u>	<u>5.9 ft</u>	<u>10:38am</u>

MAINTENANCE PERFORMED ON SITE*: NA (N/A if none)

DEVIATION FROM PROCEDURE (IF ANY) OR EQUIPMENT PROBLEMS OR FAILURES*(N/A if none)
NA

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL



CALIPER FIELD LOG REV 1.2.PDF

M-30DH
Borehole*

CALIPER FIELD LOG

Procedure ASTM D6167-97(2004)

SITE*: North Anna DATE*: 9/17/2009
CLIENT*: Mactec JOB*: 9333
AUTHOR*: V. Gonzalez PAGE: 1 OF 2

CONTACT: _____ PHONE: Off Cell

CONTACT: _____ PHONE: Off Cell

CONTACT: _____ PHONE: Off Cell

DRILLER _____ PHONE: Off Cell
COMPANY: _____

GENERAL SITE CONDITIONS/LOCATION: _____

COUNTY: _____ RANGE: _____ TOWNSHIP: _____ SECTION: _____
BOREHOLE CONSTRUCTION: CASED _____ UNCASD _____
DIAMETERS AND DEPTH RANGES: 3.78" 0 TO 206.7 FT; _____ TO _____

BOREHOLE TOTAL DEPTH AS DRILLED*: 201.7

SURFACE CASING?: YES x DEPTH TO BOTTOM OF CASING 7.64; NO _____
DEPTH TO BEDROCK: 42.5ft DEPTH TO WATER TABLE: N/A
BOREHOLE FLUID: WATER _____; FRESH WATER MUD x; SALT WATER MUD _____;
OTHER: _____
DEPTH TO BOREHOLE FLUID: N/A TIME SINCE LAST CIRCULATION: N/A

LOGGING CREW: V. Gonzalez, C. Carter
VEHICLE(S) USED AND MILEAGE: _____
MOBILIZED FROM: Fredericksburg, VA DEPARTURE TIME: 6:15
ARRIVED ON SITE: 7:15
STANDBY TIME: N/A CAUSE: _____

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL



CALIPER FIELD LOG REV 1.2.PDF

M-3AD/H
Borehole*

CALIPER FIELD LOG
Procedure ASTM D6167-97(2004)

SITE*: North Anna DATE*: 9/17/09
CLIENT*: Mactec JOB*: 9333
AUTHOR*: V.Gon PAGE: PAGE 2 OF 2

WINCH: _____ COMPROBE _____ SILVER OYO _____ RG _____ OTHER _____
MICROLOGGER* 5310 5772 OTHER _____
CALIPER PROBE* 5368 OTHER 6621
SHEAVE* COMPROBE OYO 101 102 103 RG

PROBE OFFSET	2.08M(6.82 FT)	12 IN MAX
MINUS CASING STICK-UP*	<u>3.35</u>	} REF TO GROUND SURFACE
DEPTH REF. OFFSET AT START*	<u>3.47</u>	
DEPTH REF. OFFSET AT END*	<u>3.45</u>	
AFTER SURVEY DEPTH ERROR*	<u>0.02</u>	

LOG NAME*	START DEPTH*	START TIME*	END DEPTH*	END TIME*
<u>M30DH CAL TEST 03</u>	<u>N/A</u>	<u>11:00</u>	<u>N/A</u>	<u>11:03</u>
<u>M30DH CAL WP 02</u>	<u>50.7 FT</u>	<u>11:20</u>	<u>3.3</u>	<u>11:26</u>
<u>M30DH CAL TEST 04</u>	<u>N/A</u>	<u>11:34</u>	<u>N/A</u>	<u>11:36</u>

CALIBRATION PLATE S/N 201	FILE NAME	AS BUILT			PVC FITTING
		1.968 IN (50 MM)	3.937 IN (100 MM)	8.000 IN (203.2 MM)	4.504 IN (114.4 MM)
AS MEAS.*	<u>M30DH CAL TEST 03</u>	<u>1.96</u>	<u>3.92</u>	<u>7.99</u>	<u>4.51</u>
AS MEAS.*	<u>M30DH CAL TEST 04</u>	<u>1.95</u>	<u>3.92</u>	<u>8.00</u>	<u>4.52</u>
AS MEAS.					
AS MEAS.					
AS MEAS.					
AS MEAS.					

MAINTENANCE PERFORMED ON SITE*: N/A (N/A if none)

EQUIPMENT PROBLEMS OR FAILURES*: N/A (N/A if none)

SUGGESTIONS, ADDITIONS, CHANGES: _____

ITEMS WITH * MUST BE COMPLETED. OTHER INFORMATION IS OPTIONAL