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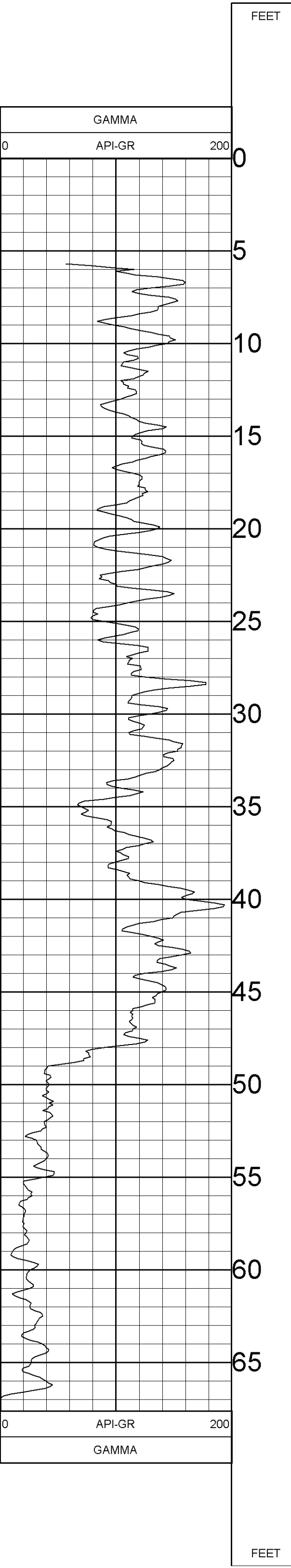
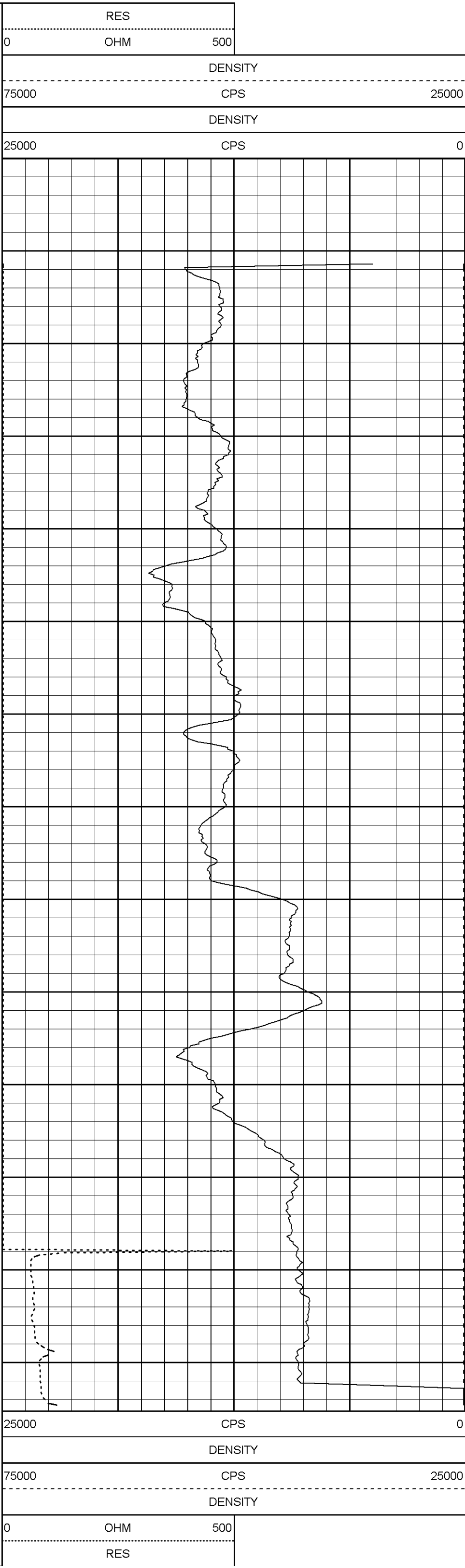
**GAMMA-GAMMA CPS**  
**SHMW-02C(CASED)**

COMPANY	GOLDER ASSOCIATES	OTHER SERVICES:
WELL	SHMW-02C(CASED)	N/A
FIELD	SOUTH HEART	N/A
COUNTY	STARK	N/A
STATE	NORTH DAKOTA	N/A

LOCATION	N/A
SECTION	:17
TOWNSHIP	:139N
RANGE	:98W
API NO.	N/A
UNIQUE WELL ID.	N/A

PERMANENT DATUM	GL	ELEVATION KB	N/A
LOG MEASURED FROM	GL	ELEVATION DF	N/A
DRL MEASURED FROM	GL	ELEVATION GL	:

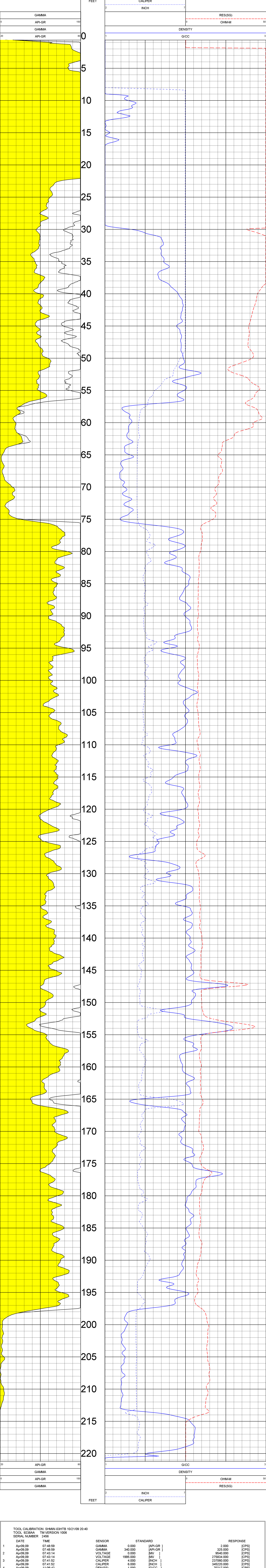
DATE	:10/19/06
DEPTH DRILLER	:70
BIT SIZE	:6
LOG TOP	:5.70
LOG BOTTOM	:67.50
CASING OD	:2
CASING BOTTOM	:67.5
CASING TYPE	PVC
BOREHOLE FLUID	WATER
RM TEMPERATURE	N/A
MUD RES	N/A
MUD WEIGHT	:0
WITNESSED BY	:D. LEPPERT
RECORDED BY	:B. MATAS
REMARKS 1	E=646086 N=5191701 SCREEN: 47.5 TO 67.5
REMARKS 2	NW/4 QUARTER OF SECTION



ALL SERVICES PROVIDED SUBJECT TO STANDARD TERMS AND CONDITIONS

**SOUTH HEART COAL LLC.**  
**SOUTH HEART**  
**SHMW-03HTB**  
**GAMMA-RES-DENSITY**

COMPANY	: SOUTH HEART COAL LLC	OTHER SERVICES	
WELL	: SHMW-03HTB	GAMMA-RES-DENSITY	
FIELD	: GAMMA-RES-DENSITY		
COUNTY	: ND		
STATE	: ND		
LOCATION	: NE1/4 NE1/4 NE1/4		
SECTION	: 15		
TOWNSHIP	: 138N		
RANGE	: 98W		
API NO.	: 12345678199999999		
UNIQUE WELL ID.			
PERMANENT DATUM	: GL	ELEVATION KB	
LOG MEASURED FROM	: GL	ELEVATION DF	
DRL MEASURED FROM	: GL	ELEVATION GL	
DATE	: 10/21/09	RIG NUMBER	
DEPTH DRILLER	: 224	LOGGER TD	
BIT SIZE	: 4.5	ARRIVAL TIME	
LOG TOP	: 0.80	DEPARTURE TIME	
LOG BOTTOM	: 221.10	CIRC STOPPED	: 0830
CASING OD			
CASING BOTTOM			
CASING TYPE			
BOREHOLE FLUID	: WATER		
RMT TEMPERATURE			
MUD RES	: 179		
MUD WEIGHT			
WITNESSED BY			
RECORDED BY	: SANFORD TAN		
REMARKS 1			
REMARKS 2			



TOOL CALIBRATION SHMW-03HTB 10/21/09 20:40  
 TOOL 9238AA TM VERSION 1006  
 SERIAL NUMBER 2456

DATE	TIME	SENSOR	STANDARD	RESPONSE
1	Apr09,09 07:48:59	GAMMA	0.000 [API-GR ]	2.000 [CPS]
2	Apr09,09 07:48:59	GAMMA	340.000 [API-GR ]	9540.000 [CPS]
3	Apr09,09 07:43:14	VOLTAGE	0.000 [MV ]	275834.000 [CPS]
4	Apr09,09 07:43:14	CALIPER	1995.000 [INCH ]	34520.000 [CPS]
5	Apr09,09 07:41:52	CALIPER	4.000 [INCH ]	70217.000 [CPS]
6	Apr09,09 07:41:52	CALIPER	6.000 [INCH ]	24085.000 [CPS]
7	Apr09,09 11:06:42	DEN(SS)	1.000 [G/CC ]	181400.000 [CPS]
8	Apr09,09 11:06:42	DEN(SS)	2.383 [G/CC ]	351815.000 [CPS]
9	Mar30,09 11:47:17	CALIPERL	4.000 [INCH ]	182.000 [CPS]
10	Mar30,09 11:47:17	CALIPERL	10.000 [INCH ]	26183.000 [CPS]
11	Apr09,09 07:43:22	CURRENT	0.000 [UA ]	
12	Apr09,09 07:43:22	CURRENT	285.400 [UA ]	
13	Mar30,09 07:46:56	X	Default [CPS]	
14	Mar30,09 07:46:56	Y	Default [CPS]	

**GAMMA-GAMMA CPS**  
**SHMW-04D(CASED)**

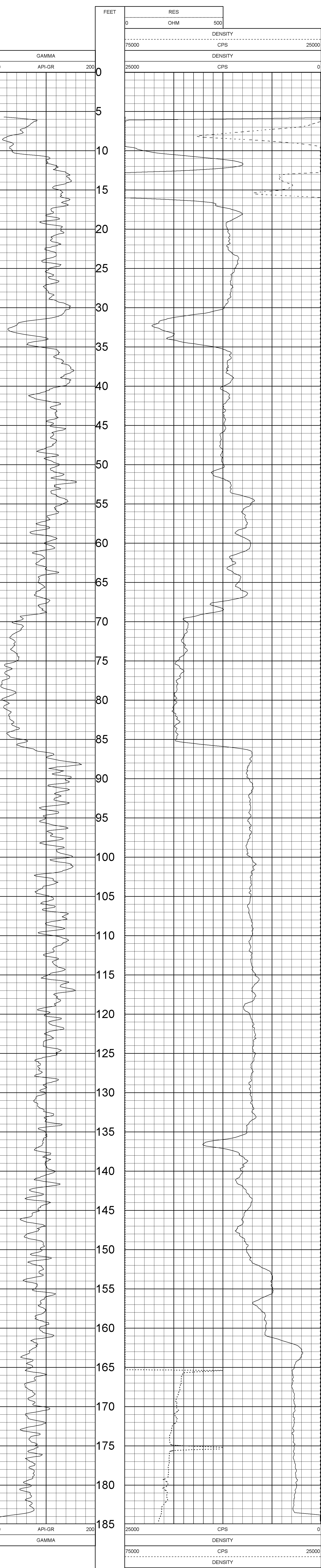
COMPANY	GOLDER ASSOCIATES	OTHER SERVICES:
WELL	SHMW-04D(CASED)	N/A
FIELD	SOUTH HEART	N/A
COUNTY	STARK	N/A
STATE	NORTH DAKOTA	N/A

LOCATION	N/A
SECTION	15
TOWNSHIP	139N
RANGE	98W
API NO.	N/A
UNIQUE WELL ID.	N/A

PERMANENT DATUM	GL	ELEVATION KB N/A
LOG MEASURED FROM	GL	ELEVATION DF N/A
DRI MEASURED FROM	GL	ELEVATION GL :

DATE	10/12/09
DEPTH DRILLER	255
BIT SIZE	6.0

LOG TOP	5.70
LOG BOTTOM	184.80
CASING OD	2
CASING BOTTOM	185
CASING TYPE	PVC
BOREHOLE FLUID	WATER
RM TEMPERATURE	N/A
MUD RES	N/A
MUD WEIGHT	0
WITNESSED BY	D. LEPPERT
RECORDED BY	B. MATAS
REMARKS 1	E-660032 N-5191010 SCREEN: 185-185
REMARKS 2	NW/4E QUARTER OF SECTION



**GAMMA-GAMMA CPS**  
**SHMW-05D(CASED)**

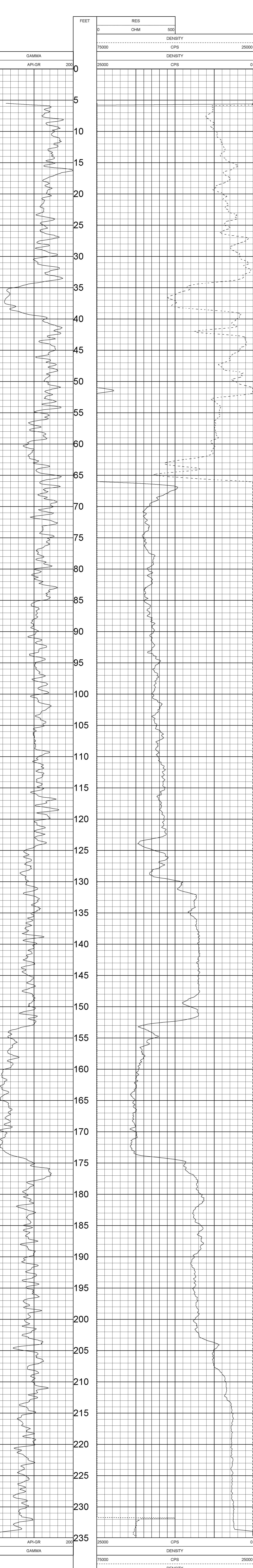
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COMPANY	GOLDER ASSOCIATES	OTHER SERVICES:	N/A
WELL	SHMW-05D(CASED)		N/A
FIELD	SOUTH HEART		N/A
COUNTY	STARK		N/A
STATE	NORTH DAKOTA		

LOCATION	N/A
SECTION	17
TOWNSHIP	139N
RANGE	98W
API NO.	N/A
UNIQUE WELL ID	N/A

PERMANENT DATUM	GL	ELEVATION FB N/A
LOG MEASURED FROM	GL	ELEVATION DF N/A
DRL MEASURED FROM	GL	ELEVATION GJ :
DATE	10/13/08	
DEPTH DRILLER	250	
BIT SIZE	8.0	

LOG TOP	5.50
LOG BOTTOM	234.80
CASING OD	2
CASING BOTTOM	235
CASING TYPE	PVC
BOREHOLE FLUID	WATER
RM TEMPERATURE	N/A
MUD RES	N/A
MUD WEIGHT	0
WITNESSED BY	D. LEPPERT
RECORDED BY	B. MATIAS
REMARKS 1	E=646105 N=5189987 SCREEN: 215-235
REMARKS 2	SWSW QUARTER OF SECTION

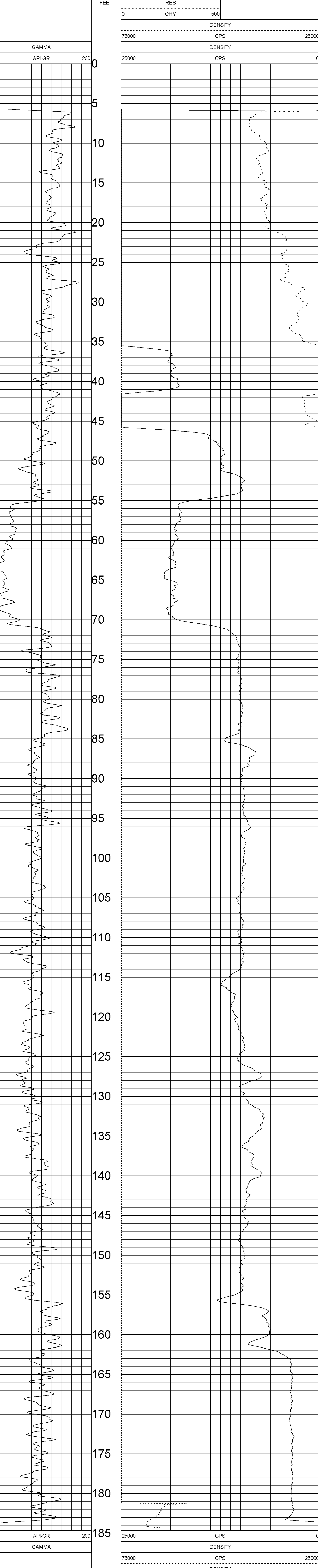


**GAMMA-GAMMA CPS**  
**SHMW-06D(CASED)**

COMPANY	GOLDER ASSOCIATES	OTHER SERVICES:
WELL	SHMW-06D(CASED)	N/A
FIELD	SOUTH HEART	N/A
COUNTY	STARK	N/A
STATE	NORTH DAKOTA	N/A

LOCATION	N/A	
SECTION	21	
TOWNSHIP	139N	
RANGE	98W	
API NO.	N/A	
UNIQUE WELL ID.	N/A	
PERMANENT DATUM	GL	ELEVATION KB N/A
LOG MEASURED FROM	GL	ELEVATION DF N/A
DRL MEASURED FROM	GL	ELEVATION GL :
DATE	10/13/09	
DEPTH DRILLER	252	
BIT SIZE	6.0	

LOG TOP	5.70
LOG BOTTOM	184.50
CASING OD	2
CASING BOTTOM	185
CASING TYPE	PVC
BOREHOLE FLUID	WATER
RM TEMPERATURE	N/A
MUD RES	N/A
MUD WEIGHT	0
WITNESSED BY	J. LEPPERT
RECORDED BY	B. MATAS
REMARKS 1	E-649323 N-5189462 SCREEN: 185-185
REMARKS 2	SENE QUARTER OF SECTION



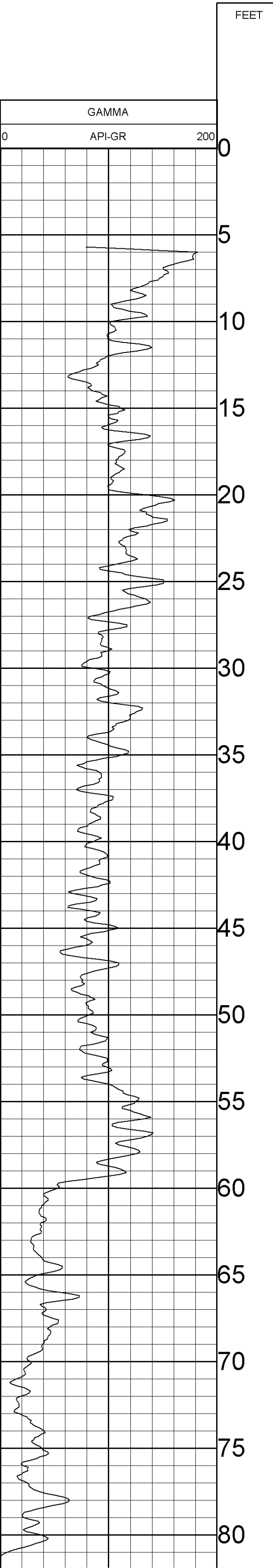
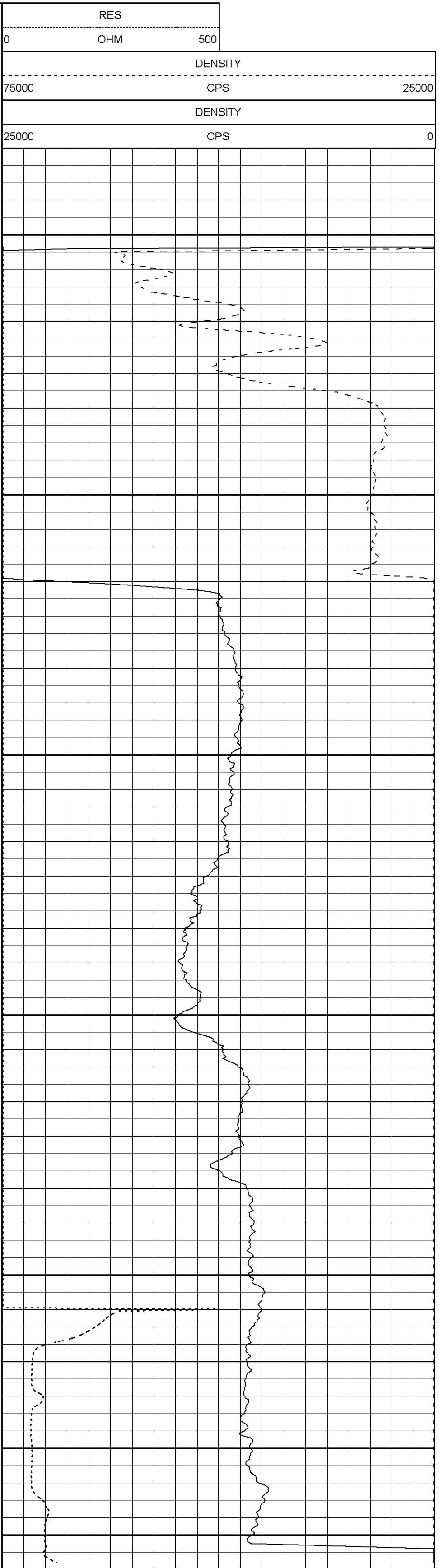
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**GAMMA-GAMMA CPS**  
**SHMW-07C(CASED)**

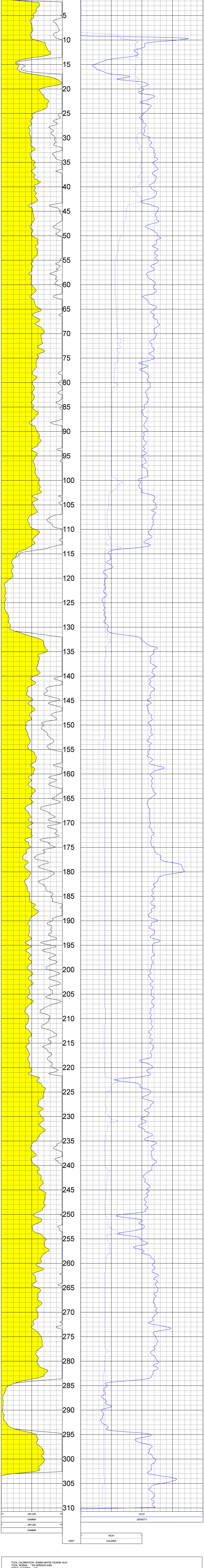
COMPANY	GOLDER ASSOCIATES	OTHER SERVICES:	
WELL	SHMW-07C(CASED)	N/A	
FIELD	SOUTH HEART	N/A	
COUNTY	STARK	N/A	
STATE	NORTH DAKOTA	N/A	
LOCATION	N/A		
SECTION	24		
TOWNSHIP	139N		
RANGE	98W		
API NO.	N/A		
UNIQUE WELL ID.	N/A		
PERMANENT DATUM	GL	ELEVATION KB	N/A
LOG MEASURED FROM	GL	ELEVATION DF	N/A
DRL MEASURED FROM	GL	ELEVATION GL	:
DATE	10/29/06		
DEPTH DRILLER	85		
BIT SIZE	8		
LOG TOP	5.70		
LOG BOTTOM	81.80		
CASING OD	4		
CASING BOTTOM	82		
CASING TYPE	PVC		
BOREHOLE FLUID	WATER		
RM TEMPERATURE	N/A		
MUD RES	N/A		
MUD WEIGHT	0		
WITNESSED BY	J. ELLIOTT		
RECORDED BY	B. MATAS		
REMARKS 1	E=652699 N=5189368 SCREEN: 62 TO 82		
REMARKS 2	NWSW QUARTER OF SECTION		



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COMPANY	: SOUTH HEART COAL LLC.	OTHER SERVICES:
WELL	: SHMW-08HTB	
FIELD	: GAMMA-RES-DENSITY	
COUNTY	: STARK	
STATE	: MD	
LOCATION	: SHW14MW14/NM14	
SECTION	: 21	
TOWNSHIP	: 13N	
RANGE	: 9W	
API NO.	:	
UNIQUE WELL ID	:	
PERMANENT DATALOG	: GL	ELEVATION (B)
LOG MEASURED FROM	: GL	ELEVATION (F)
DRL MEASURED FROM	: GL	ELEVATION (GL)
DATE	: 10/26/09	RIG NUMBER
DEPTH DRILLER	: 314	LOGGER ID
BIT SIZE	: 3-3/4	ARRIVAL TIME
LOG TOP	: 1.69	DEPARTURE TIME
LOG BOTTOM	: 310.89	CIRC STOPPED
CASING OD	:	
CASING BOTTOM	:	
CASING TYPE	:	
BOREHOLE FLUID	: WATER	
RM TEMPERATURE	:	
MUD RES	:	
MUD WEIGHT	:	
WITNESSED BY	: Memo Steve	
RECORDED BY	:	
REMARKS 1	:	
REMARKS 2	:	



DATE	TIME	SENSOR	STANDARD	RESPONSE
Jul31,07	13:27:35	GAMMA	Default [CPS]	Default [CPS]
Jul31,07	13:27:35	GAMMA	Default [CPS]	Default [CPS]
May06,09	19:34:47	DENSITY	1.106 [G/CC ]	3762.000 [CPS]
May06,09	19:34:47	DENSITY	2.612 [G/CC ]	827.640 [CPS]
Aug21,07	09:16:04	RES(MG)	43.800 [CHMM ]	6500.000 [CPS]
Aug21,07	09:16:04	RES(MG)	2000.000 [CHMM ]	101680.000 [CPS]
May06,09	19:49:47	CALIPER	3.000 [INCH ]	301.000 [CPS]
May06,09	19:49:47	CALIPER	7.000 [INCH ]	1945.000 [CPS]
Jul31,07	13:27:35	DENSITYH	Default [CPS]	Default [CPS]
Jul31,07	13:27:35	DENSITYH	Default [CPS]	Default [CPS]
Jul31,07	13:27:35	CALIPERL	Default [CPS]	Default [CPS]
Jul31,07	13:27:35	CALIPERL	Default [CPS]	Default [CPS]

TOOL CALIBRATION SHMW-08HTB 10/26/09 16:51  
 TOOL 9030AA TM VERSION 3200  
 SERIAL NUMBER 445

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**GAMMA-GAMMA CPS**  
**SHMW-10D(CASED)**

COMPANY: GOLDER ASSOCIATES  
WELL: SHMW-10D(CASED)  
FIELD: SOUTH HEART  
COUNTY: STARK  
STATE: NORTH DAKOTA

OTHER SERVICES:  
N/A  
N/A  
N/A

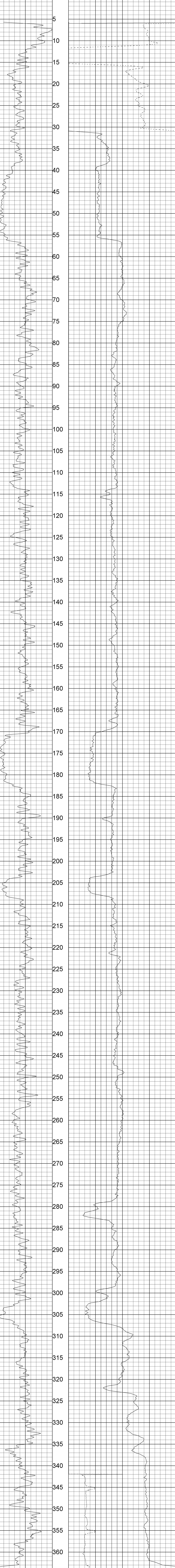
LOCATION: N/A  
SECTION: 23  
TOWNSHIP: 138N  
RANGE: 98W  
API NO.: N/A  
UNIQUE WELL ID: N/A

PERMANENT DATUM: G3  
LOG MEASURED FROM: GL  
ELEVATION OF: N/A  
ELEVATION OF: N/A  
ELEVATION OF: N/A  
DATE: 10/14/05  
DEPT. DRILLER: 400

LOG TOP: 3.70  
LOG BOTTOM: 364.10  
CASING OD: 4  
CASING BOTTOM: 365

CASING TYPE: PVC  
BOREHOLE FLUID: WATER  
MUD RES: N/A  
MUD WEIGHT: 0  
WITNESSED BY: D. LEPPERT  
RECORDED BY: B. MATIAS  
REMARKS 1: E-561312 N-515897 SCREEN, 335-365  
REMARKS 2: 5839V QUARTER OF SECTION

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**GAMMA-GAMMA CPS**  
**SHMW-12D(CASED)**

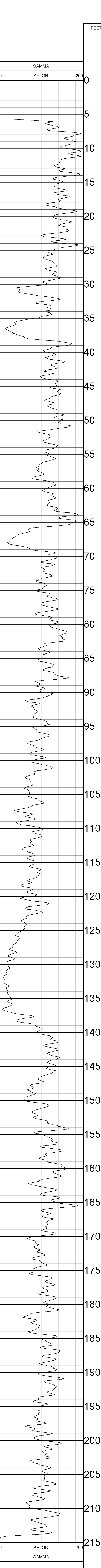
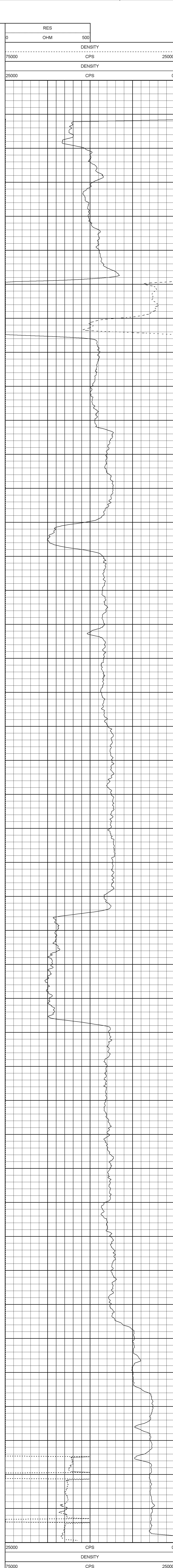
COMPANY	GOLDER ASSOCIATES	OTHER SERVICES:	N/A
WELL	SHMW-12D(CASED)		N/A
FIELD	SOUTH HEART		N/A
COUNTY	STARK		N/A
STATE	NORTH DAKOTA		N/A

LOCATION	N/A
SECTION	27
TOWNSHIP	139N
RANGE	98W
API NO.	N/A
UNIQUE WELL ID.	N/A

PERMANENT DATUM	-GL	ELEVATION KB N/A
LOG MEASURED FROM	GL	ELEVATION DF N/A
DRL MEASURED FROM	GL	ELEVATION GL:

DATE	10/16/09
DEPTH DRILLER	290
BIT SIZE	6

LOG TOP	5.70
LOG BOTTOM	214.90
CASING OD	2
CASING BOTTOM	215
CASING TYPE	PVC
BOREHOLE FLUID	WATER
RM TEMPERATURE	N/A
MUD RES	N/A
MUD WEIGHT	0
WITNESSED BY	D. LEPPERT
RECORDED BY	B. MATAS
REMARKS 1	E=650998 N=5187471 SCREEN: 195 - 215
REMARKS 2	SENE QUARTER OF SECTION



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**GAMMA-GAMMA CPS**  
**SHMW-13C(CASED)**

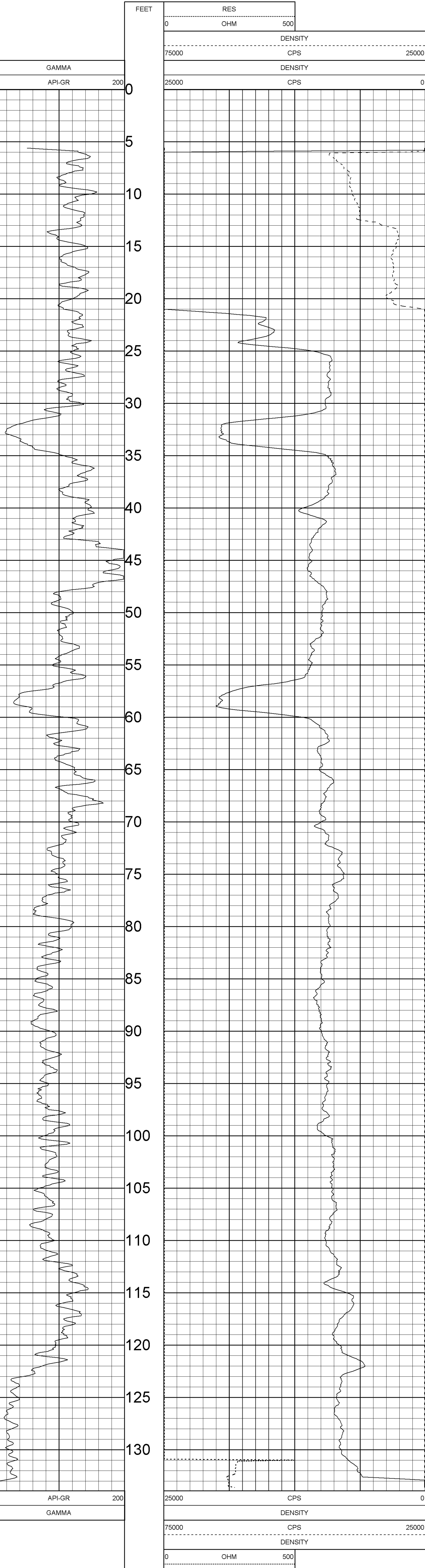
COMPANY :GOLDER ASSOCIATES  
 WELL :SHMW-13C(CASED)  
 FIELD :SOUTH HEART  
 COUNTY :STARK  
 STATE :NORTH DAKOTA

OTHER SERVICES:  
 N/A  
 N/A  
 N/A

LOCATION :N/A  
 SECTION :34  
 TOWNSHIP :139N  
 RANGE :98W  
 API NO. :N/A  
 UNIQUE WELL ID. :N/A

PERMANENT DATUM :GL  
 LOG MEASURED FROM :GL  
 DRL MEASURED FROM :GL  
 DATE :10/29/08  
 DEPTH DRILLER :134  
 BIT SIZE :9

LOG TOP :5.60  
 LOG BOTTOM :133.80  
 CASING OD :2  
 CASING BOTTOM :134  
 CASING TYPE :PVC  
 BOREHOLE FLUID :WATER  
 RM TEMPERATURE :N/A  
 MUD RES :N/A  
 MUD WEIGHT :0  
 WITNESSED BY :  
 RECORDED BY :B. MATIAS  
 REMARKS 1 :E=649781 N=5185246 SCREEN: 124 TO 134  
 REMARKS 2 :SM/SE QUARTER OF SECTION



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