



# GEOSEARCH LOGGING INC.

Scale 1:240 (5"=100') Imperial

Well Name: PIONEER PETE O. FEDERAL 14-18  
Location: SEC: 18, T33S - R65W-----LAS ANIMAS CO, COLORADO  
Licence Number: AFE: # 020072 Region: PURGATOIRE RIVER  
Spud Date: 06/03/2011 Drilling Completed: 06/04/2010  
Surface Coordinates: 693' FSL & 1,036'FWL  
SWSW SEC: 18, T 33S R 66W  
Bottom Hole  
Coordinates: VERTICAL HOLE  
Ground Elevation (ft): 7,014' K.B. Elevation (ft): 7,023'  
Logged Interval (ft): 274' To: 1,569' Total Depth (ft): 1,569' T.D.  
Formation: Raton basin, Vermejo, Trinidad  
Type of Drilling Fluid: AERATED WATER, (7ppg.)

Printed by MUD.LOG from WellSight Systems 1-800-447-1534 [www.WellSight.com](http://www.WellSight.com)

## OPERATOR

Company: PIONEER NATURAL RESOURCES USA INC..  
Address: 1401 17th ST. STE 1200  
DENVER, COLORADO 80202  
PHONE: (303) 675-2611 FAX: (303) 294-1251

## GEOLOGIST

Name: NEAL DANNEMILLER  
Company: PIONEER NATURAL RESOURCES USA INC..  
Address: 1401 17th ST. STE 1200  
DENVER, COLORADO 80202  
PHONE: (303) 675-2645

## DRILLING CONTRACTOR

PIONEER RIG #3  
FIELD #: 70830  
API # : 05-071-09483-00

## WELL SITE GEOLOGIST

WAYNE NIX Cell----(870) 826-6197  
BETTY NIX Cell----(870) 826-6196  
GEOSEARCH LOGGING INC.  
P.O. Box 6005  
Edmond, OK. 73083-60  
PHONE: (405) 340-5545  
FAX: (405) 348-8303


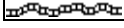
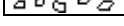







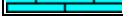

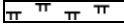

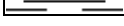
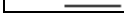



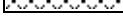
## COMPANY MAN

**RAMON GONZALES & BILL VIGIL**  
**PIONEER NATURAL RESOURCES USA INC..**  
 27000 HWY 12  
 TRINIDAD, COLORADO 81082  
 PHONE: (303) 675-2611








































































### Additional Comments:

2 Manned Logging Service  
 Start Logging: 06/03/2011  
 SET 8 5/8" SURFACE CASING  
 TO 250' ON THE 06/03/2011  
 (DRILLED ON AERATED WATER)  
 T.D. @ 1,569 ' on the 06/04/2011  
 RELEASED: 06/05/2011

























### ROCK TYPES

 Anhy  Bent  Brec  Cht	 Clyst  Coal  Congl  Dol	 Gyp  Igne  Lmst  Meta	 Mrlst  Salt  Shale  Shcol	 Shgy  Sltst  Ss  Till
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### ACCESSORIES

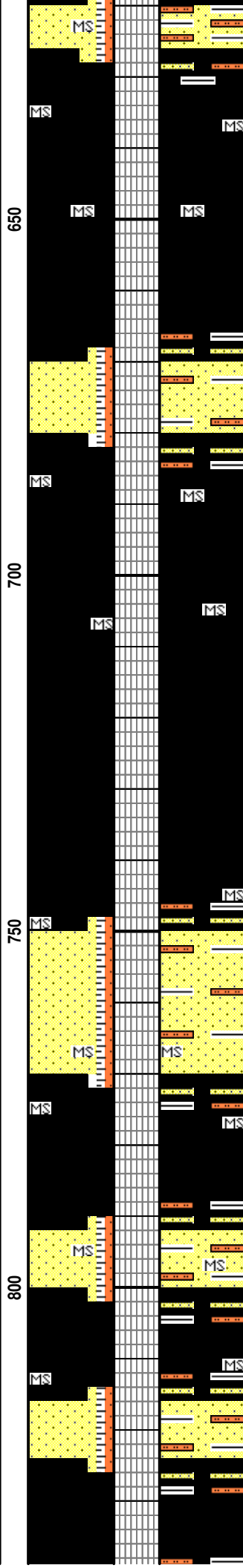
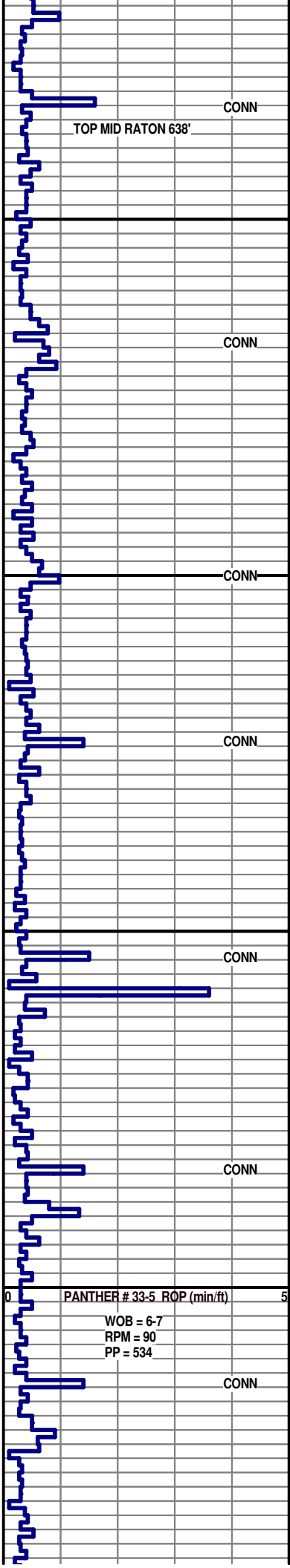
<b>FOSSIL</b>  Algae  Amph  Belm  Bioclst  Brach  Bryozoa  Cephal  Coral  Crin  Echin  Fish  Foram  Fossil  Gastro  Oolite	 Ostra  Pelec  Pellet  Pisolite  Plant  Strom  <b>MINERAL</b>  Anhy  Arggrn  Arg  Bent  Bit  Brecfrag  Calc  Carb	 Chtdk  Chtlt  Dol  Feldspar  Ferrpel  Ferr  Glau  Gyp  Hvymin  Kaol  Marl  Minxl  Nodule  Phos  Pyr  Salt	 Sandy  Silt  Sil  Sulphur  Tuff  <b>STRINGER</b>  Anhy  Arg  Bent  Coal  Dol  Gyp  Ls  Mrst  Sltstrg	 Ssstrg  <b>TEXTURE</b>  Boundst  Chalky  Cryxln  Earthy  Finexln  Grainst  Lithogr  Microxln  Mudst  Packst  Wackest
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### OTHER SYMBOLS

<b>INTERVALS</b>  Core  Dst  Slide  <b>EVENTS</b>  Rft	 Sidewall  <b>POROSITY TYPE</b>  Earthy  Fenest  Fracture  Inter	 Moldic  Organic  Pinpoint  Vuggy  <b>SORTING</b>  Well	 Moderate  Poor  <b>ROUNDING</b>  Rounded  Subrnd  Subang	 Angular  <b>OIL SHOWS</b>  Even  Spotted  Ques  Dead
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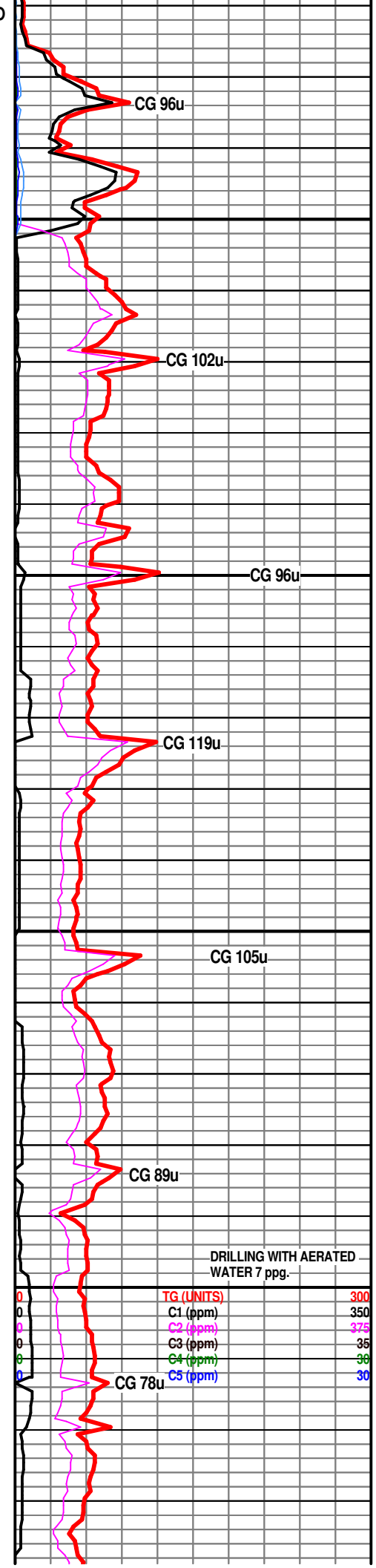


POR, SL/ ARG IP, NO FLUOR, NO CUT, WITH MINOR TRS OF MDSTN & SLTSTN STRGRS, WITH THICK COAL BEDS

SH: SME-BLK, MED-DK GY, FRM-OCC SFT, BLKY-PLTY, SME/CRSE IP, SLKY TEX, DULL LSTR, CARB, SS: OFF WH-LT GY, NO VIS STN, VF-F GRN, TT, SBANG-SBRND, PRLY SRTD, SILTY IP, SL/CALC IP, NO VIS POR, SL/ ARG IP, NO FLUOR, SL-RING CUT, WITH MINOR TRS OF MDSTN & SLTSTN STRGRS, WITH THIN TO THICK COAL BEDS

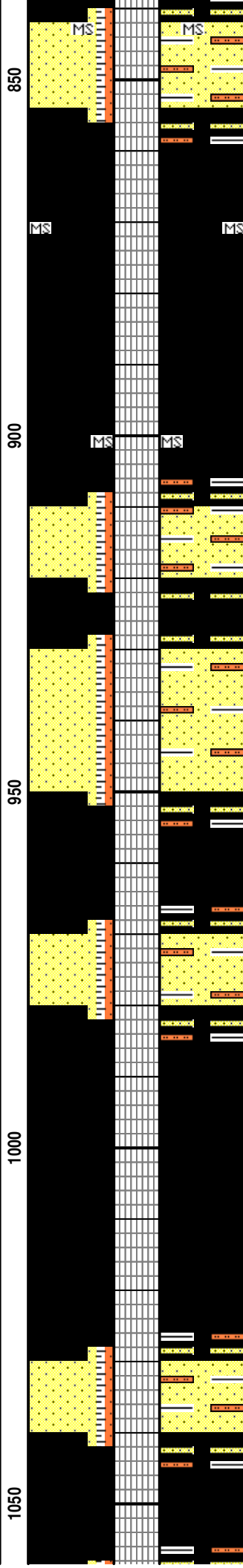
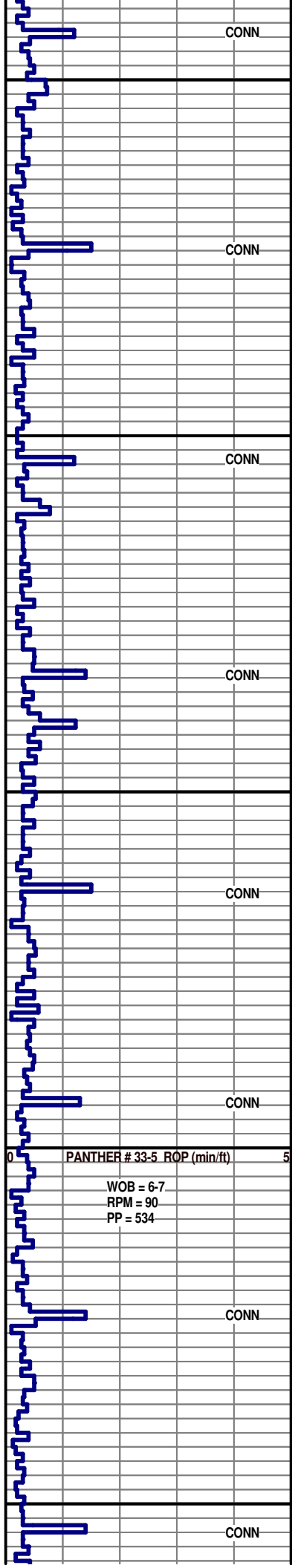
SH: SME-BLK, MED-DK GY, FRM-OCC SFT, BLKY-PLTY, SME/CRSE IP, SLKY TEX, DULL LSTR, CARB, SS: OFF WH-LT GY, NO VIS STN, VF-F GRN, TT, SBANG-SBRND, PRLY SRTD, SILTY IP, SL/CALC IP, NO VIS POR, SL/ ARG IP, NO FLUOR, SL-RING CUT, WITH MINOR TRS OF MDSTN & SLTSTN STRGRS, WITH THIN TO THICK COAL BEDS

SH: SME-BLK, MED-DK GY, FRM-OCC SFT, BLKY-PLTY, SME/CRSE IP, SLKY TEX, DULL LSTR, CARB, SS: OFF WH-LT GY, NO VIS STN, VF-F GRN, TT, SBANG-SBRND, PRLY SRTD, SILTY IP, SL/CALC IP, NO VIS POR, SL/ ARG IP, NO FLUOR, SL-RING CUT, WITH MINOR TRS OF MDSTN & SLTSTN STRGRS, WITH THIN TO THICK COAL BEDS



DRILLING WITH AERATED WATER 7 ppg.

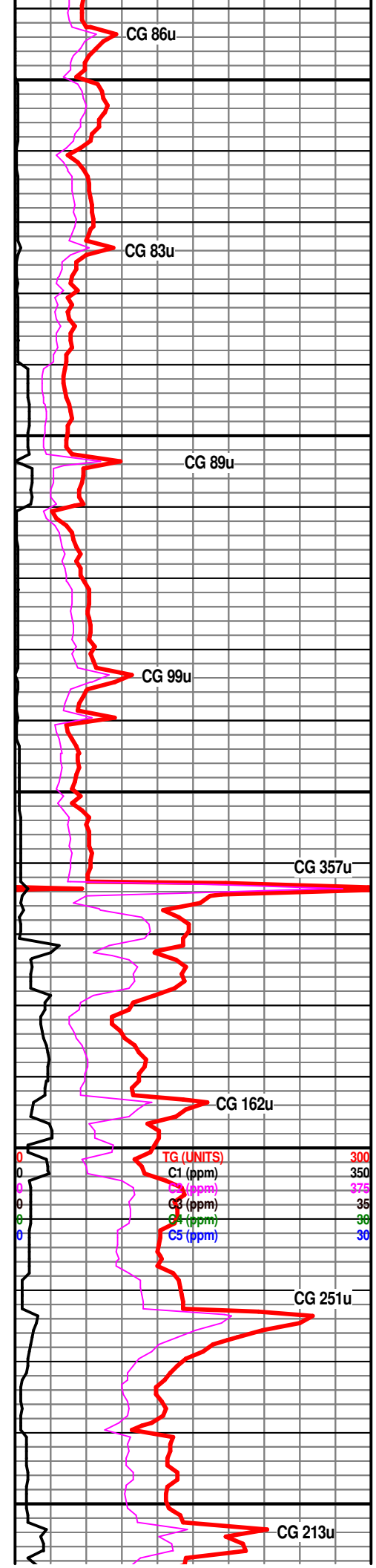
TG (UNITS)	300
C1 (ppm)	350
C2 (ppm)	375
C3 (ppm)	35
C4 (ppm)	30
C5 (ppm)	30



SH: SME-BLK, MED-DK GY, FRM-OCC SFT, BLKY-PLTY, SME/CRSE IP, SLKY TEX, DULL LSTR, CARB, SS: OFF WH-LT GY, NO VIS STN, VF-F GRN, TT, SBANG-SBRND, PRLY SRTD, SILTY IP, SL/CALC IP, NO VIS POR, SL/ ARG IP, NO FLUOR, SL-RING CUT, WITH MINOR TRS OF MDSTN & SLTSTN STRGRS, WITH THIN TO THICK COAL BEDS

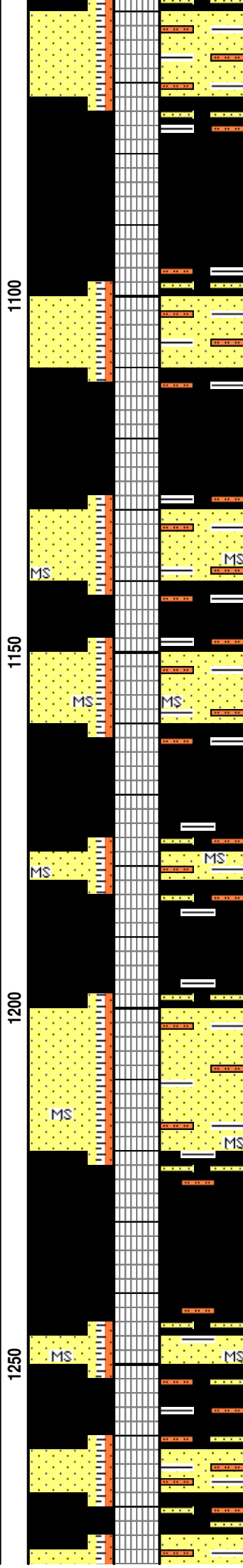
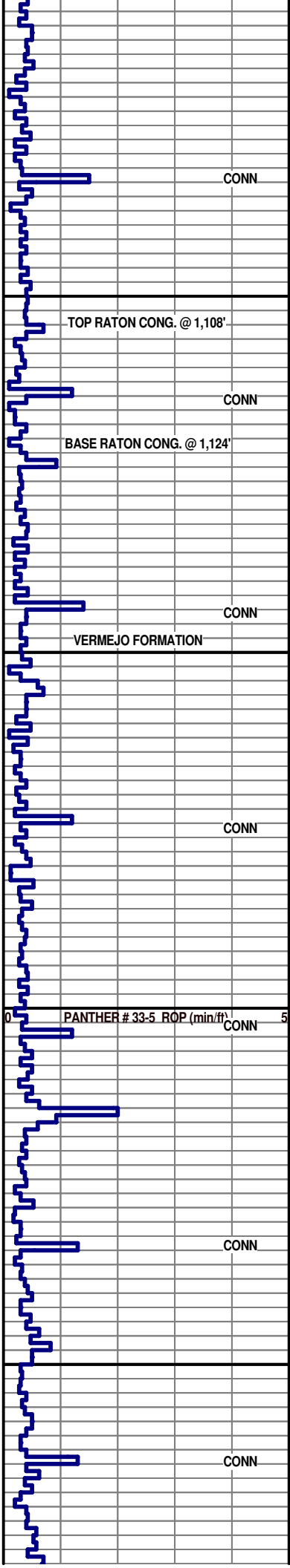
SH: SME-BLK, MED-DK GY, FRM-OCC SFT, BLKY-PLTY, SME/CRSE IP, SLKY TEX, DULL LSTR, CARB, SS: OFF WH-LT GY, NO VIS STN, VF-F GRN, TT, SBANG-SBRND, PRLY SRTD, SILTY IP, SL/CALC IP, NO VIS POR, SL/ ARG IP, NO FLUOR, SL-RING CUT, WITH MINOR TRS OF MDSTN & SLTSTN STRGRS, WITH THIN TO THICK COAL BEDS

SH: SME-BLK, MED-DK GY, FRM-OCC SFT, BLKY-PLTY, SME/CRSE IP, SLKY TEX, DULL LSTR, CARB, SS: OFF WH-LT GY, NO VIS STN, VF-F GRN, TT, SBANG-SBRND, PRLY SRTD, SILTY IP, SL/CALC IP, NO VIS POR, SL/ ARG IP, NO FLUOR, SL-RING CUT, WITH MINOR TRS OF MDSTN & SLTSTN STRGRS, WITH THIN TO THICK COAL BEDS



TG (UNITS)	300
C1 (ppm)	350
C2 (ppm)	375
C3 (ppm)	35
C4 (ppm)	30
C5 (ppm)	30

PANTHER # 33-5 ROP (min/ft) 5  
 WOB = 6-7  
 RPM = 90  
 PP = 534

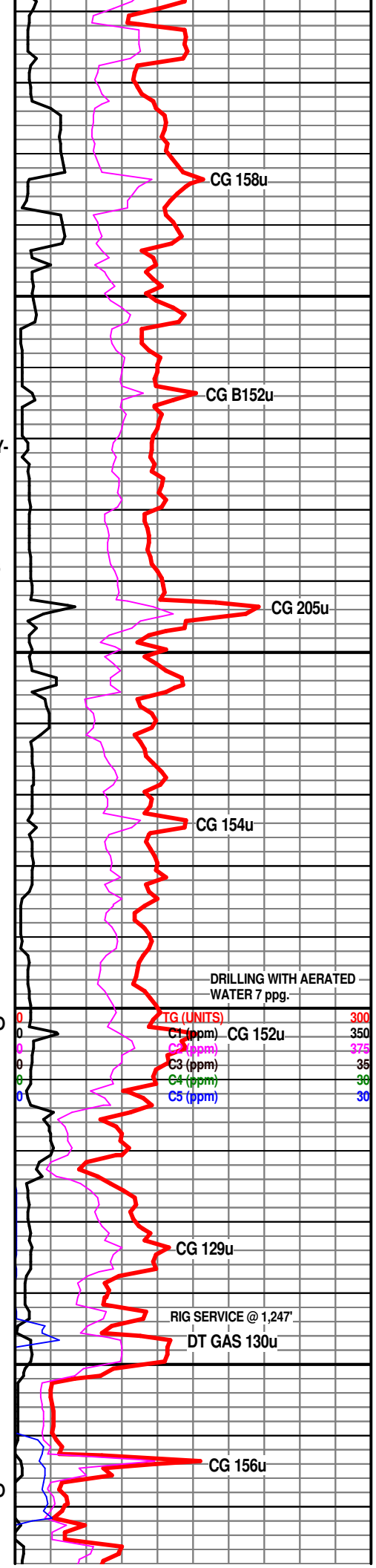


SH: SME-BLK, MED-DK GY, FRM-OCC SFT, BLKY-PLTY, SME/CRSE IP, SLKY TEX, DULL LSTR, CARB, SS: OFF WH-LT GY, NO VIS STN, VF-F GRN, TT, SBANG-SBRND, PRLY SRTD, SILTY IP, SL/CALC IP, NO VIS POR, SL/ ARG IP, NO FLUOR, SL-RING CUT, WITH MINOR TRS OF MDSTN & SLTSTN STRGRS, WITH THIN TO THICK COAL BEDS

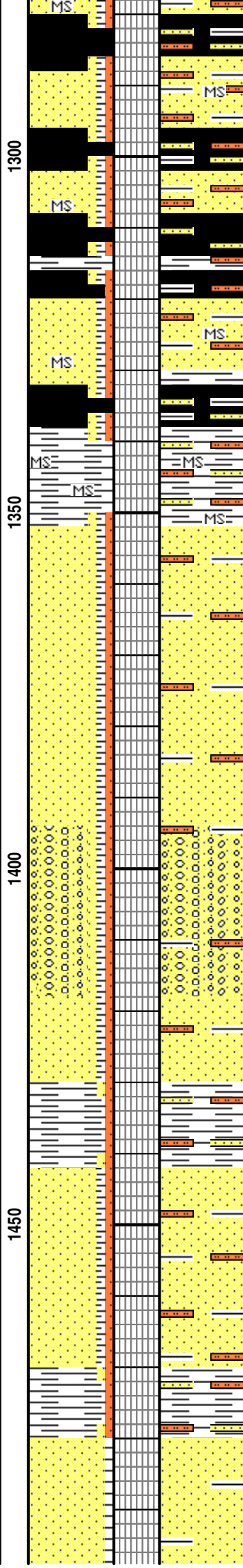
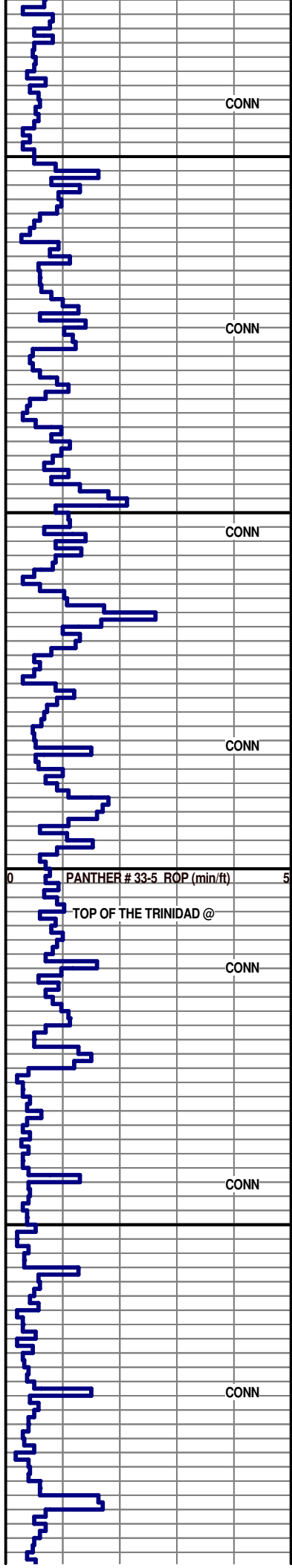
SH: GY-DK GY BL IP, BRIT-VHD, CARB SPLTY-PLTY-AMOR, SLTY-SBSM TXT, RTHY LSTR, SL/CALC IP, SS: OFF WH-LT-GY, SBANG-SBANG IP, VF-F GR, SL/HD, SL/ARG IP W/CRSE-CONGLOMERATIC IP, TT CMT, SL-V CALC MTRX, TRS SLTSTN STRGRS, COAL BEDS MOSTLY THIN AND DISCONTINUOUS

SH: SME-BLK, MED-DK GY, FRM-OCC SFT, BLKY-PLTY, SME/CRSE IP, SLKY TEX, DULL LSTR SS: OFF WH-LT GY, NO VIS STN, F - MED GRN, TT, SBANG-SBRND, PRLY SRTD, SILTY IP, SL/CALC IP, NO VIS POR, SL/ ARG IP, NO FLUOR, NO CUT, WITH MINOR TRS OF MDSTN & SLTSTN STRGRS, EXTENSIVE-THICK COAL BEDS

SH: SME-BLK, MED-DK GY, FRM-OCC SFT, BLKY-PLTY, SME/CRSE IP, SLKY TEX, DULL LSTR SS: OFF WH-LT GY, NO VIS STN, F - MED GRN, TT, SBANG-SBRND, PRLY SRTD, SILTY IP, SL/CALC IP, NO VIS POR, SL/ ARG IP, NO FLUOR, NO CUT, WITH MINOR TRS OF MDSTN & SLTSTN STRGRS, EXTENSIVE-THICK COAL BEDS



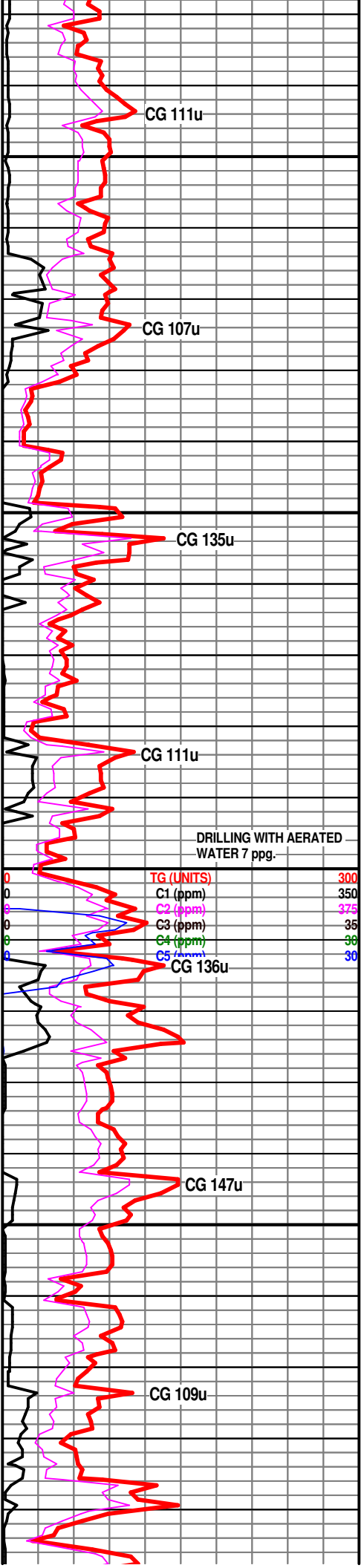
TG (UNITS)	300
C1 (ppm) CG 152u	350
C2 (ppm)	375
C3 (ppm)	35
C4 (ppm)	36
C5 (ppm)	30



SH: SME-BLK, MED-DK GY, FRM-OCC SFT, BLKY-PLTY, SL/CARB, SME/CRSE IP, SLKY TEX, DULL LSTR SS: OFF WH-LT GY, NO VIS STN, F - MED GRN, TT, SBANG-SBRND, PRLY SRTD, SILTY IP, SL/CALC IP, NO VIS POR, SL/ ARG IP, NO FLUOR, NO CUT, WITH MINOR TRS OF MDSTN & SLTSTN STRGRS, COAL BEDS MOSTLY THIN AND DISCONTINUOUS,

SH: SME-BLK, MED-DK GY, FRM-OCC SFT, BLKY-PLTY, SL/CARB, SME/CRSE IP, SLKY TEX, DULL LSTR SS: OFF WH-LT GY, NO VIS STN, F - MED GRN, TT, SBANG-SBRND, PRLY SRTD, SILTY IP, WITH CRSE-CONGLOMERATIC IP SL/CALC IP, NO VIS POR, SL/ ARG IP, NO FLUOR, NO CUT, WITH MINOR TRS OF SLTSTN STRGRS, COAL BEDS MOSTLY THIN AND DISCONTINUOUS/BUT ARE PRESENT

SS: WH-GY-LT TAN, F-MED GR, W/SL-CRSE-CONGLOMERATIC IP, SEDIMENT CONTAINS NO OPALINE SILICA MATRIX, SL-V CALC MTRX, SBANG- SBRND IP, SL/V-HD IP, TRS SLTSTN STRGRS, COAL BEDS MOSTLY THIN AND DISCONTINUOUS, BLADE-SHAPED FOSSIL, SILICA CEMENT-OPHIOMORPHA



TG (UNITS)	300
C1 (ppm)	350
C2 (ppm)	375
C3 (ppm)	35
C4 (ppm)	30
C5 (ppm)	30

