



PASON SYSTEMS USA CORP.

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COGCC

#045-10067

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OPERATOR: **WILLIAMS PRODUCTION RMT CO**
WELL: **RWF 442-20**
LOCATION: **SEC. 20, T6S, R94W**
COUNTY: **GARFIELD**
STATE: **COLORADO**
SPOT: **1494' FNL, 1129' FEL**
ELEVATION: **5442' GL, 5457' KB**
FIELD: **RULISON**

SPUD DATE: **JANUARY 01, 2005**
TD DATE: **JANUARY 14, 2005**
DATES LOGGED: **1/6/05 - 1/14/05**
DEPTHS LOGGED: **4200' - 7940'**
LOGGERS: **KIM LAUGHLIN & SCOTT FIELD**
DRILLING FLUID: **LSND MUD**
DRILLING RIG: **NABORS #909**

LOG TYPE: **MUD LOG**

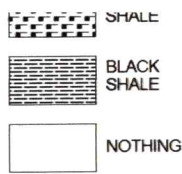
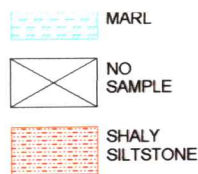
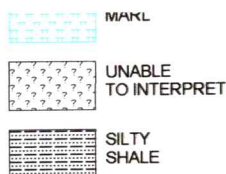
SCALE: **1:240 (5.0 INCH/100 FT)**

REMARKS:

Bottom Hole: 782' FSL 740' FWL

LITHOLOGIES

	SANDSTONE		SILTSTONE		SHALE		COAL		BENTONITE
	LIMESTONE		DOLOMITE		ANHYDRITE		CHERT		SALT
	CONGLOMERATE		TUFF		ALLUVIUM		METAMORPHIC		GLACIAL TILL
	DARK CHERT		WELDED TUFF		ARGILLACEOUS LIMESTONE		LIME MUDSTONE		CRYSTALLINE LIMESTONE
	LIME BOUNDSTONE		LIME GRAINSTONE		LIME PACKSTONE		LIME WACKESTONE		DOLOMITIC LIMESTONE
	CALCAREOUS DOLOMITE		ARGILLACEOUS DOLOMITE		DOLOMITIC MUDSTONE		CRYSTALLINE DOLOMITE		DOLOMITIC BOUNDSTONE
	DOLOMITIC GRAINSTONE		DOLOMITIC PACKSTONE		DOLOMITIC WACKESTONE		SHALY SANDSTONE		CLAYSTONE
	GRAY CLAYSTONE		COLORADO CLAYSTONE		VOLCANICS		BRIGHT COAL		INTERMEDIATE COAL
	DULL COAL		COALY SHALE		NON COAL		GRANITE		BRECCIA
	DOLOMITIC		CARBONACEOUS						



MODIFIERS

III	AHYDRITE STRINGERS	⌒	ALGAE, LAMINATED	⌒	ALGAE, NON-DESCRIPT	⌒	ALGAE, OOTOID	⌒	ALGAE, SKELETAL	✱	AMPHIPORA
//	ANHYDRITIC	-	ARGILLACEOUS	/	ARGILLITE GRAIN	▷	BELEMNITE	B	BENTONITE	^	BIOCLAST/ FRAGMENTAL
◇	BRACHIOPOD	⊗	BRECCIA	~	BRYOZOA	⊥	CALCAREOUS	■	CARBONACEOUS FLAKES	■	CEMENTING BITUMENOUS
⊙	CEPHALOPOD	▲	CHERT, DARK	△	CHERT, LIGHT	⊠	CHERT, TRIPOLITIC	■	COAL	⌒	CORAL
⊙	CRINOID	✱	CRYSTALS	II	DOLOMITE STRINGERS	⊥	DOLOMITIC	♡	ECHINOID	+	FELDSPAR
⊥	FERRUGINOUS	●	FERRUGINOUS GRAINS	II	FERRUGINOUS STRINGERS	∞	FISH REMAINS	⊗	FORAMINIFERA	F	FOSSILS
⌒	FRACTURES	△	GASTROPOD	~	GLAUCONITE	\\	GYPSIFEROUS	III	GYPSUM STRINGERS	■	HEAVY/DARK MINERALS
⌒	INTRACLASTS	K	KAOLIN	II	LIMESTONE STRINGERS	L	LIMONITE	II	MARLSTONE, CALCAREOUS	II	MARLSTONE, DOLOMITIC
~	MICACEOUS	⊙	NODULES	◇	OOLITES	⊙	OSTRACOD	⊙	PEBBLES	⊙	PELECYPOD
⊙	PELLETS	●	PHOSPHATE PELLETS	◇	PISOLITE	◇	PLANT REMAINS	P	PYRITE	■	SALT CAST/INFILL
⊙	SAND GRAINS	⊠	SANDSTONE STRINGERS	■	SANDY	⊙	SCAPHOPOD	—	SHALE LAMINAE	^	SILICEOUS
⊠	SILTSTONE STRINGERS	**	SILTY	II	SLICKENSLIDE	S	SPORES	III	STROMATOPOROID	⌒	STYLOLITE
∇	TUFFACEOUS										

POROSITY/SORTING/ROUNDNESS SYMBOLS

X	INTERCRYSTALLINE INTERGRANULAR	V	VUGGY	F	FRACTURE	⊙	INTEROOLITIC	P	PINPOINT	⌒	ORGANIC
O	MOLDIC	e	EARTHY	□	FENESTRAL						
A	ANGULAR	a	SUBANGULAR	R	ROUNDED	r	SUBROUNDED				
W	WELL	M	MEDIUM	P	POOR						

ENGINEERING SYMBOLS

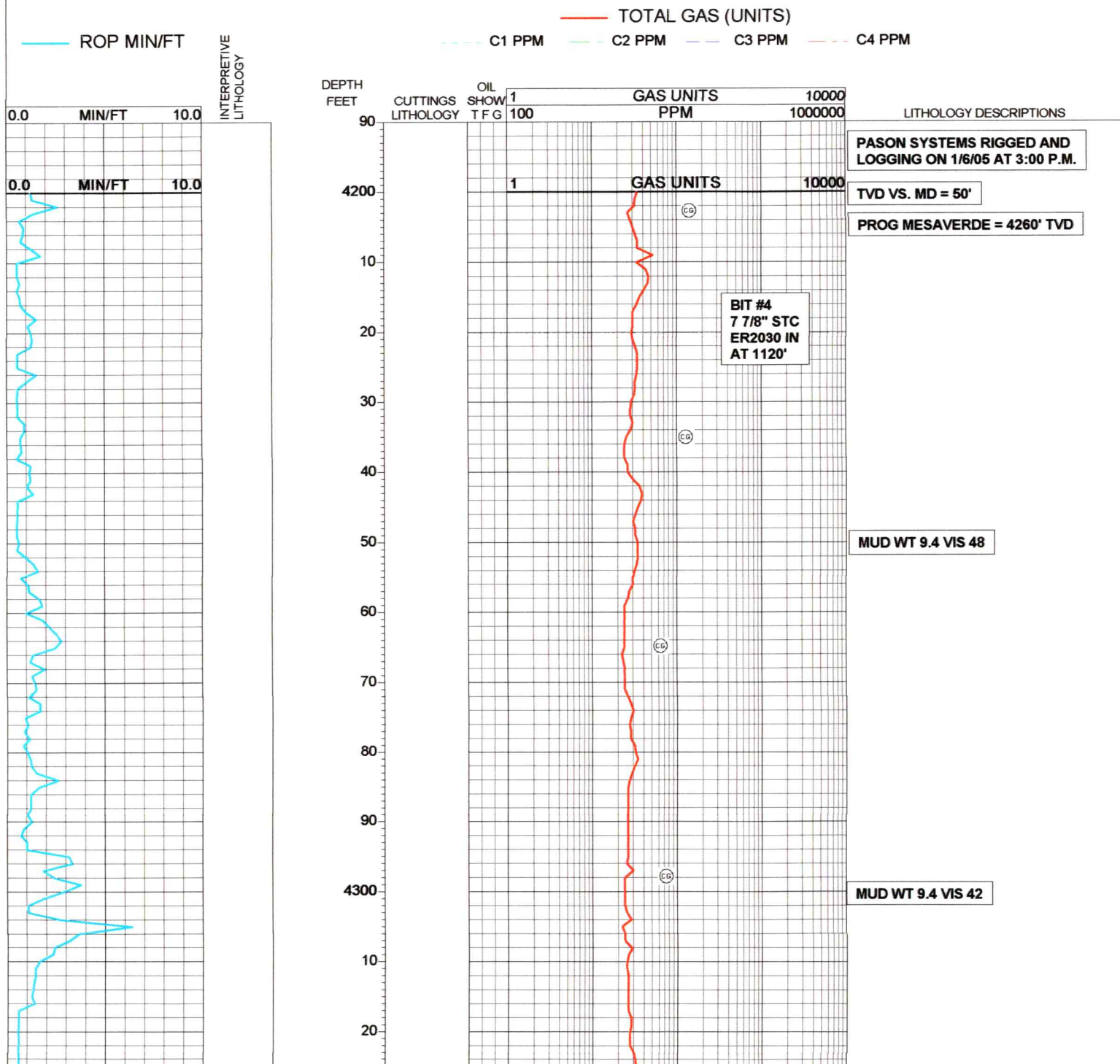
▲	BIT CHANGE	▲	LOST CIRCULATION	▲	CASING	▲	CASING	▲	SIDEWALL CORE	▲	SIDEWALL CORE
▷	WIRELINE TEST	◁	WIRELINE TEST	↑	GAS TO SURFACE	↑	OIL TO SURFACE	↑	WATER TO SURFACE	●	EVEN STAINING
⊙	SPOTTED STAINING	D	DEAD OIL	○	QUESTIONABLE	●	OIL SHOW	⊙	GAS SHOW	✱	OIL AND GAS SHOW
⊙	CONNECTION GAS	⊙	TRIP GAS	⊠	MIDNIGHT DEPTH	⊠	MIDNIGHT DEPTH	⊠	CONNECTION	—	OFF BOTTOM
⌒	NORMAL FAULT	⌒	REVERSE FAULT	⌒	OVERTURNED STRATA						

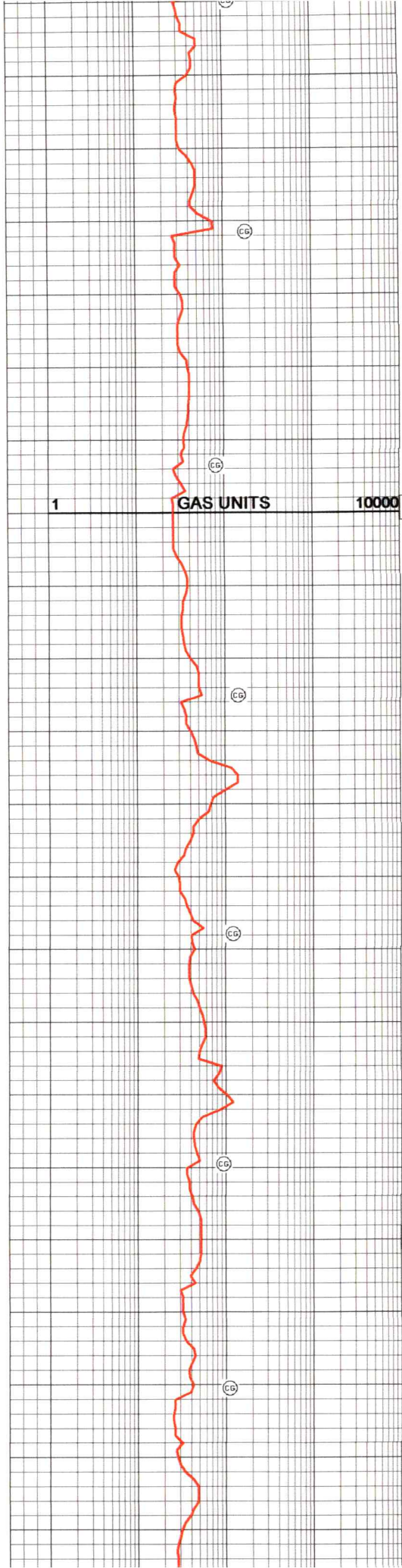
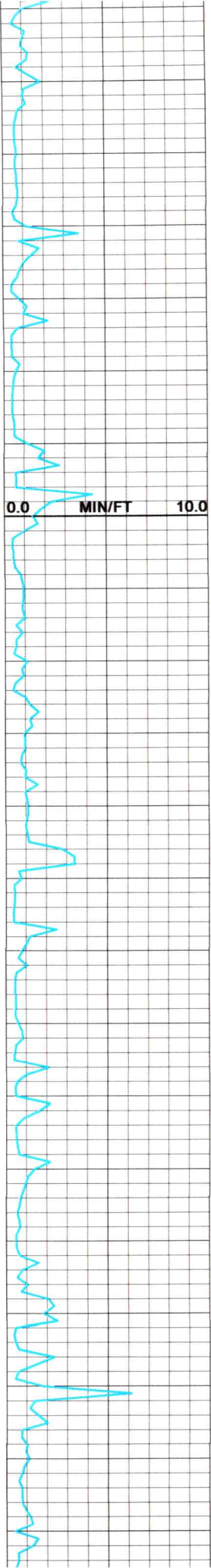
BAR SYMBOLS



ABBREVIATIONS

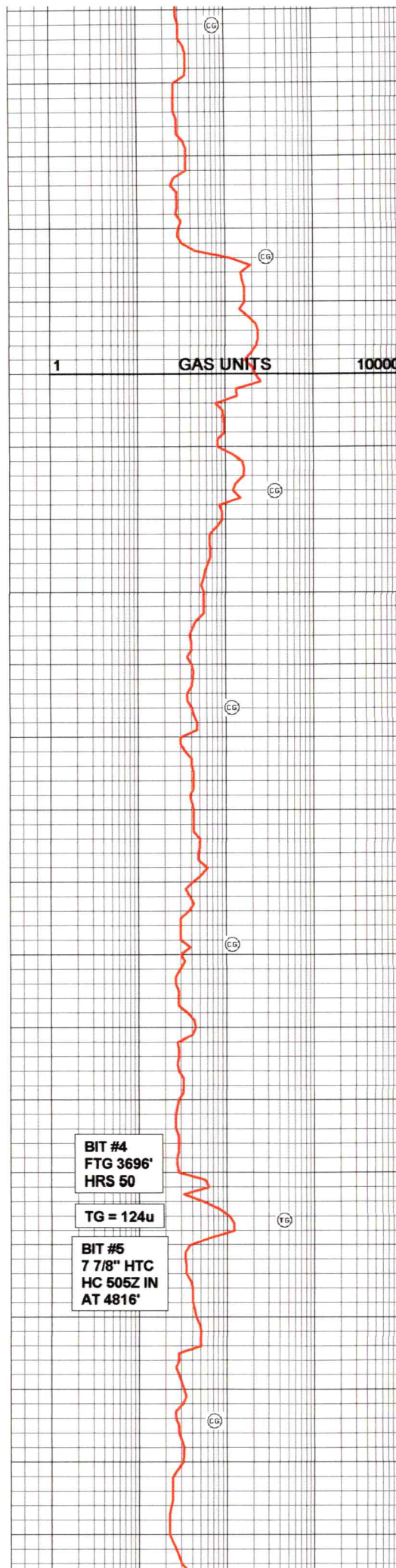
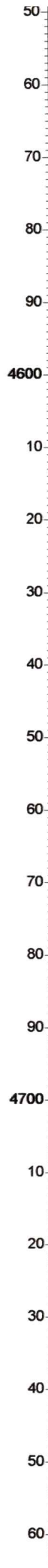
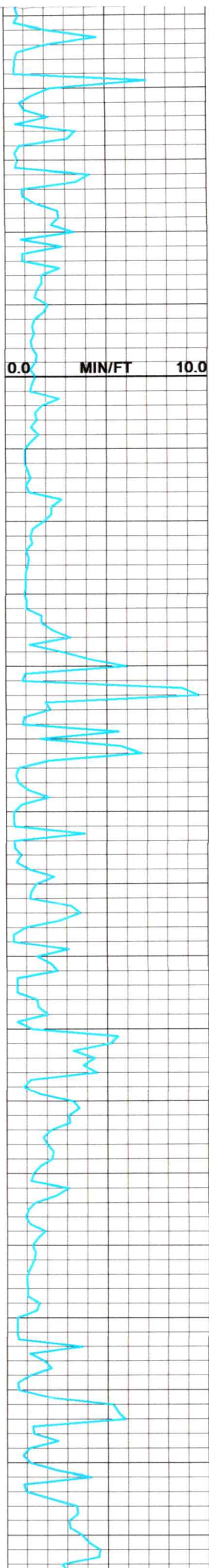
CB - CORE BIT	DST - DRILL STEM TEST	NR - NO RETURNS	RPM - REVOLUTIONS/MIN
CG - CONNECTION GAS	DTG - DOWNTIME GAS	NS - NO SAMPLE	RR - RE-RUN
CO - CIRCULATE OUT	LAT - LOGGED AFTER TRIP	PP - PUMP PRESSURE	SLM - STEEL LINE MEASURE
SPM - STROKES/MIN	TG - TRIP GAS	WOB - WEIGHT ON BIT	





MUD WT 9.5 VIS 42

MUD WT 9.4 VIS 41



MUD WT 9.5 VIS 43

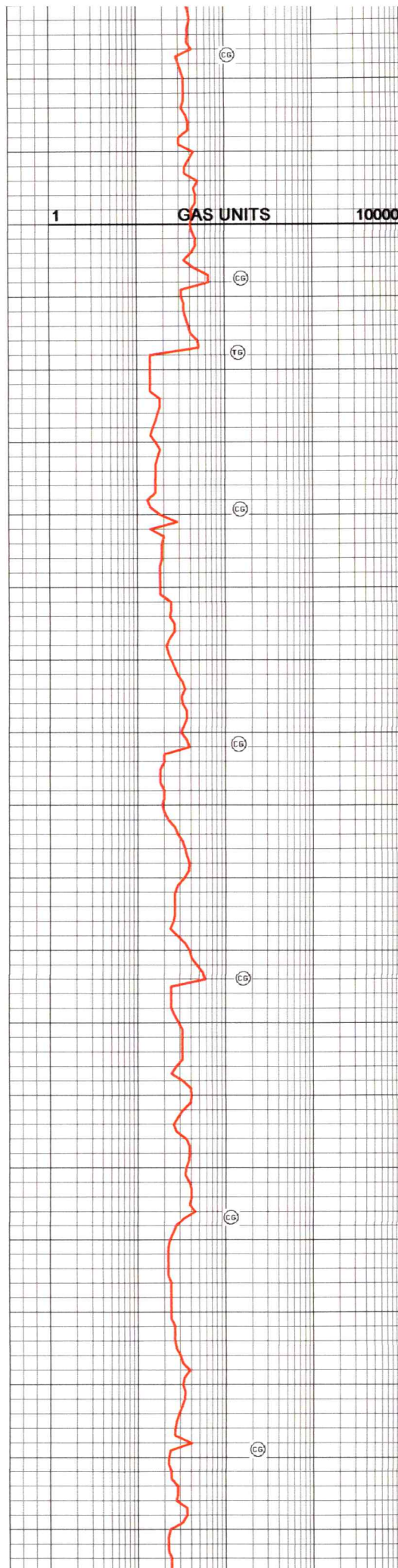
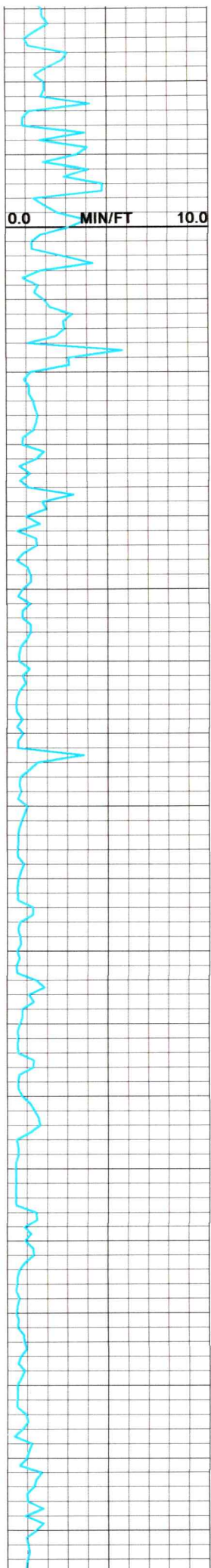
MUD WT 9.6 VIS 45

TOOH FOR BIT #5 AT 4816'

BIT #4
FTG 3696'
HRS 50

TG = 124u

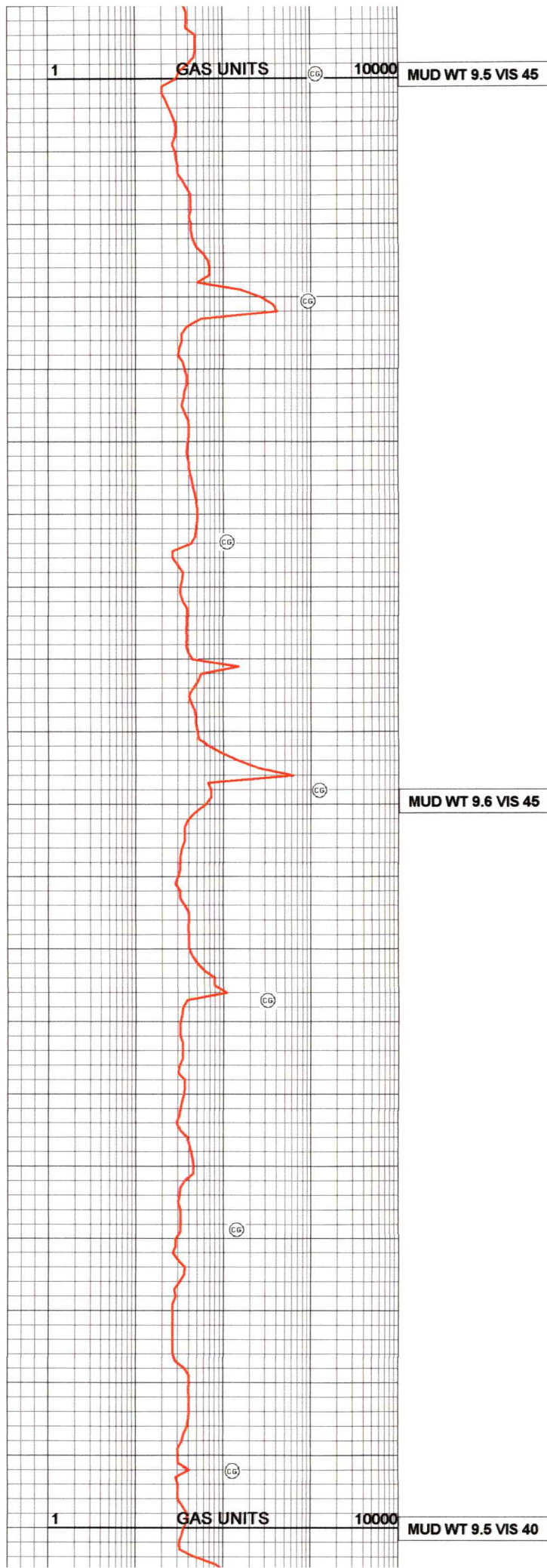
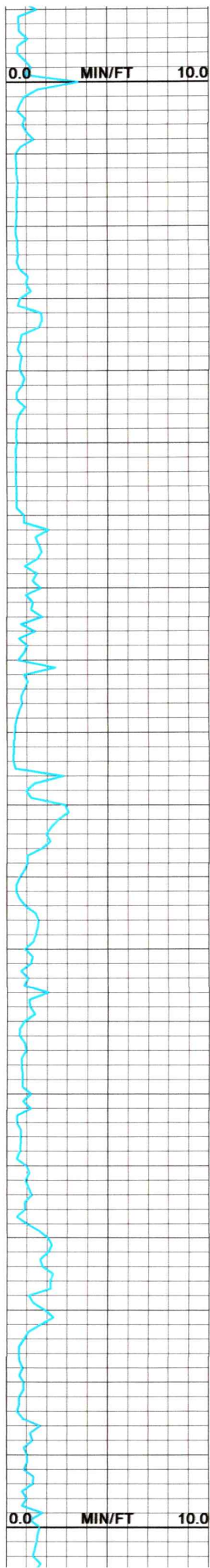
BIT #5
7 7/8" HTC
HC 505Z IN
AT 4816'

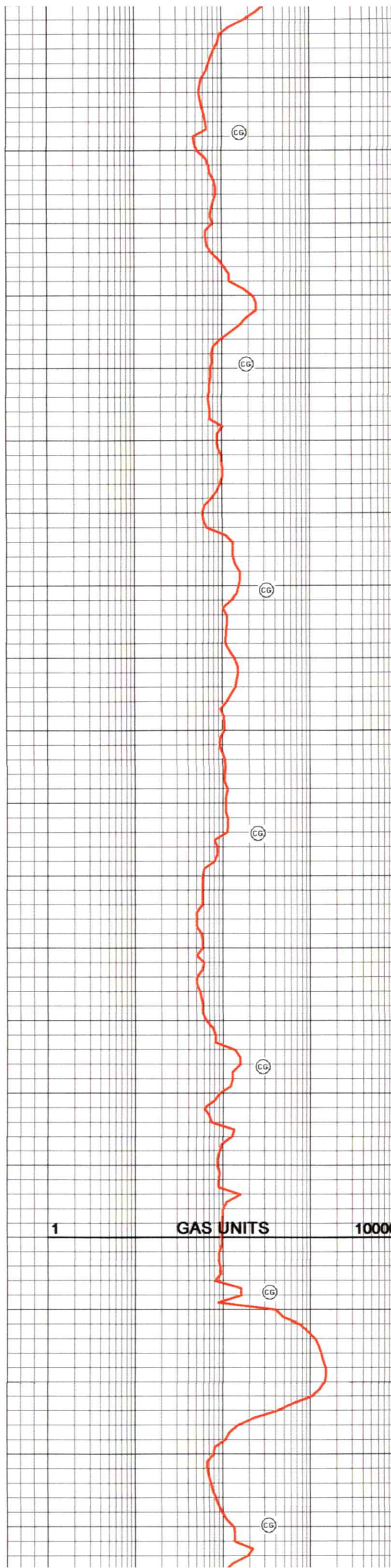
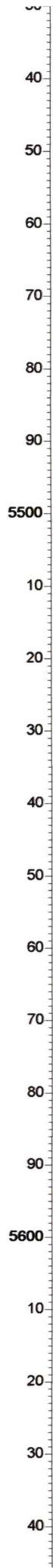
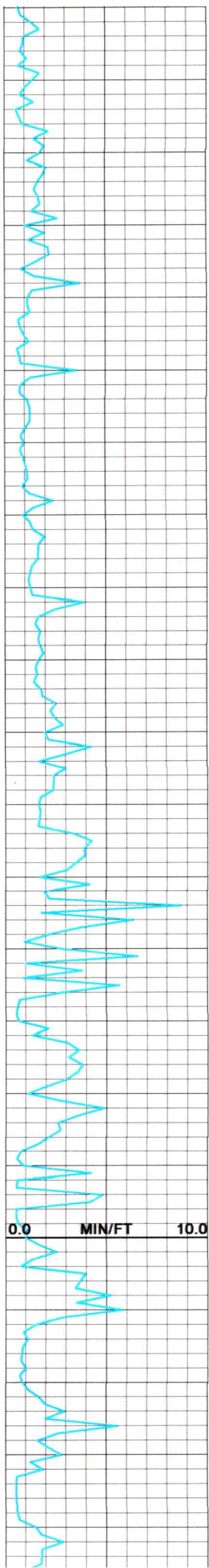


MUD WT 9.5 VIS 45

TOOH, LAY DOWN DIRECTIONAL TOOLS

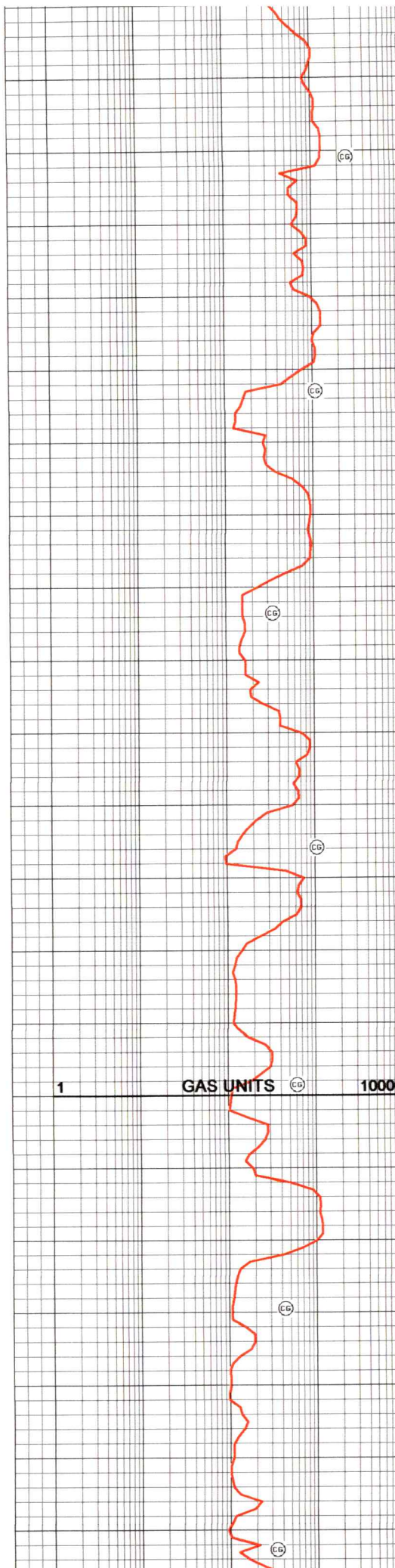
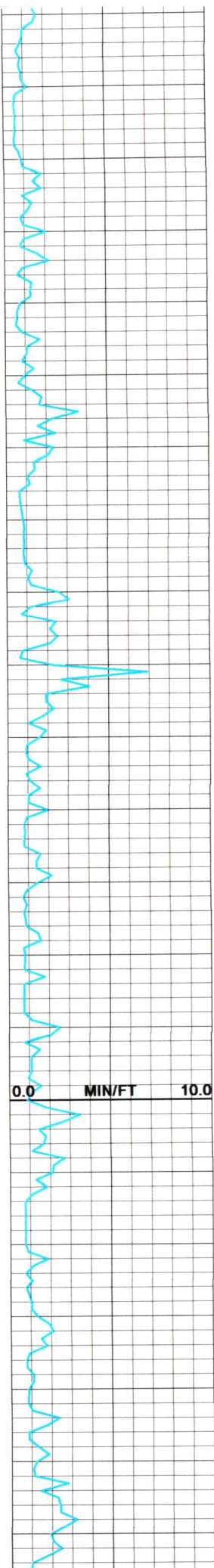
MUD WT 9.5 VIS 45





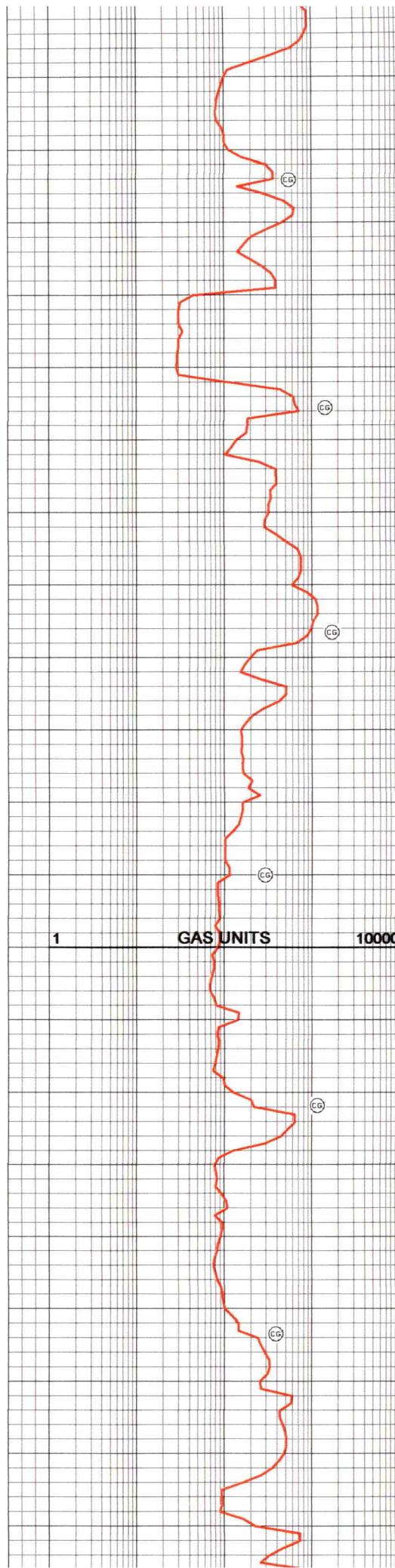
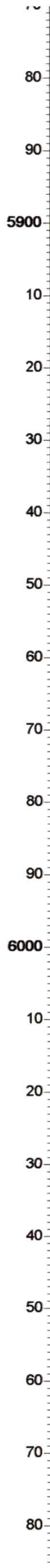
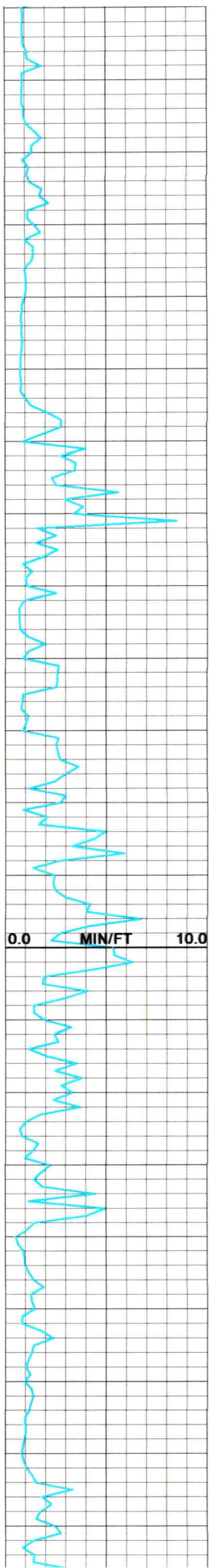
MUD WT 10.4 VIS 56

MUD WT 10.4 VIS 56



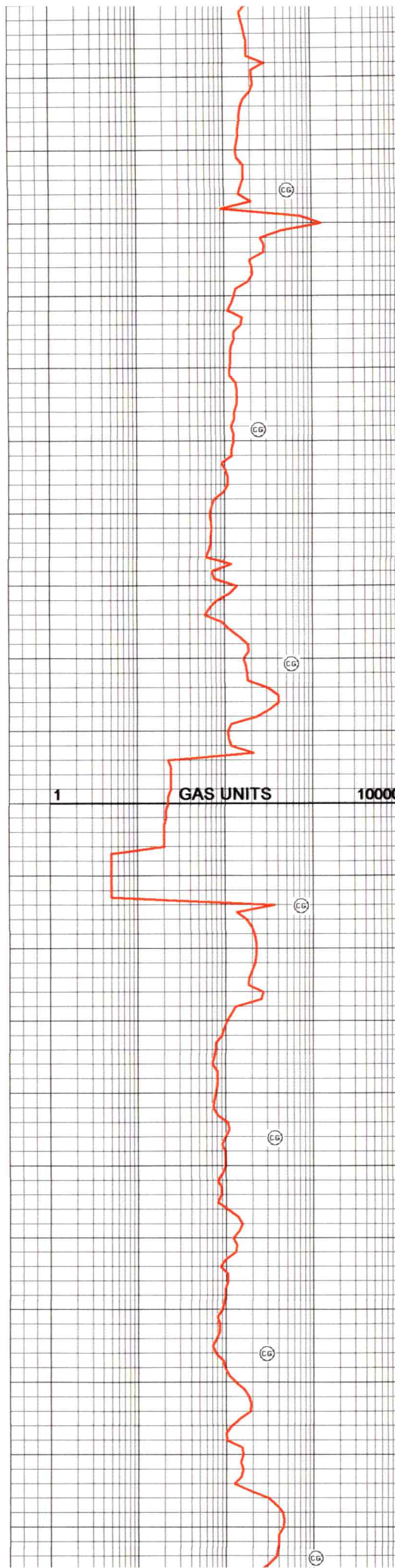
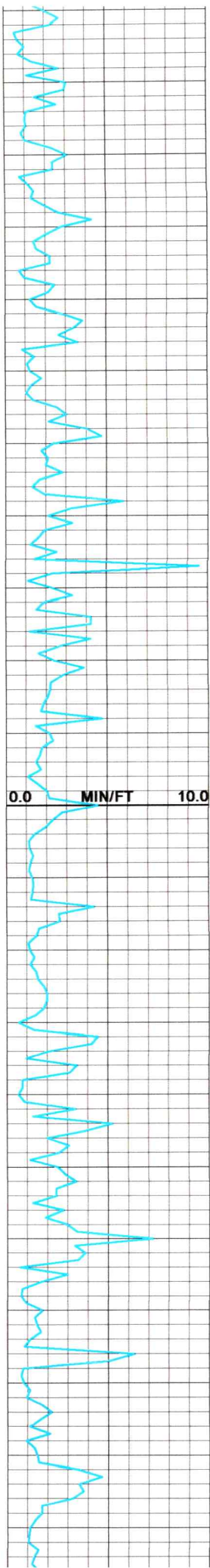
MUD WT 10.8 VIS 53

1 GAS UNITS 10000 MUD WT 10.9 VIS 47



MUD WT 10.9 VIS 47

MUD WT 10.9 VIS 48

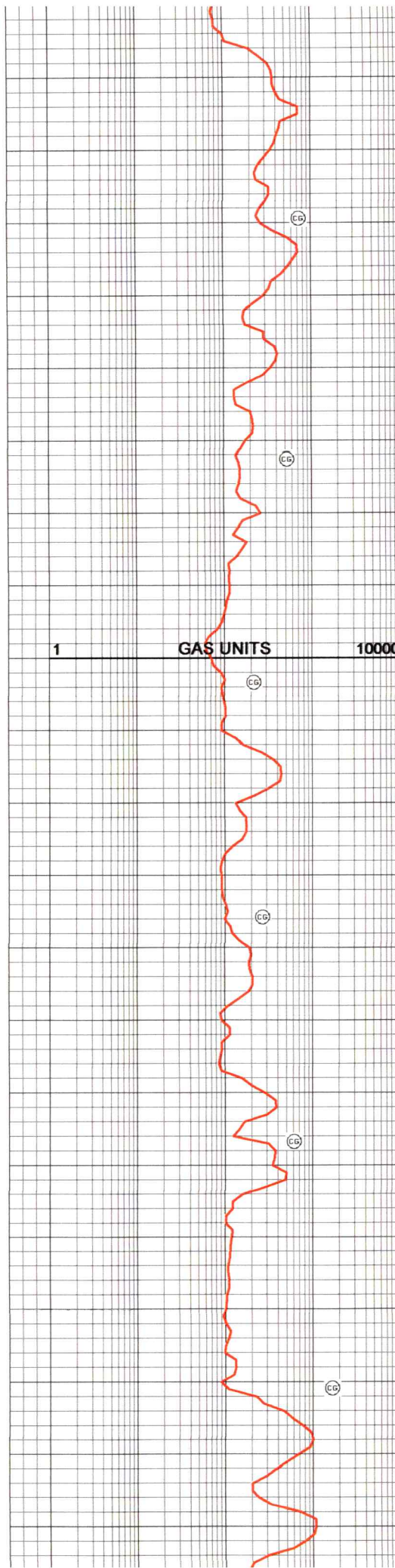
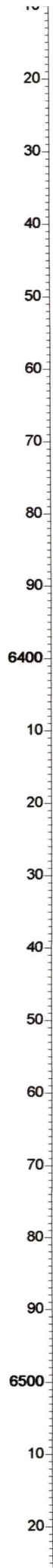
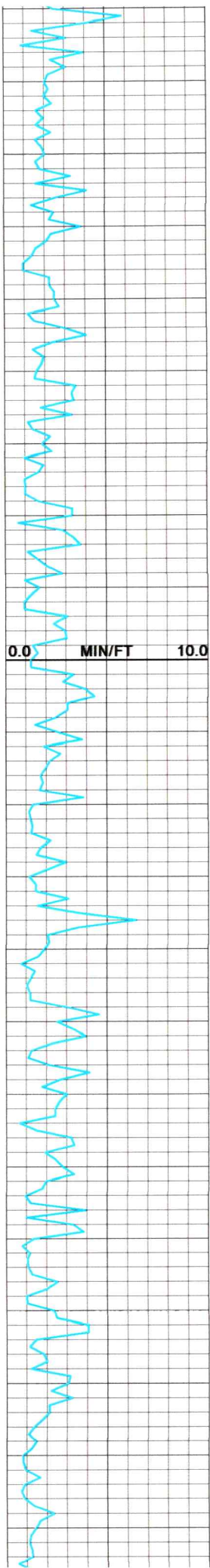


MUD WT 10.9+ VIS 55

MUD WT 11.2 VIS 45

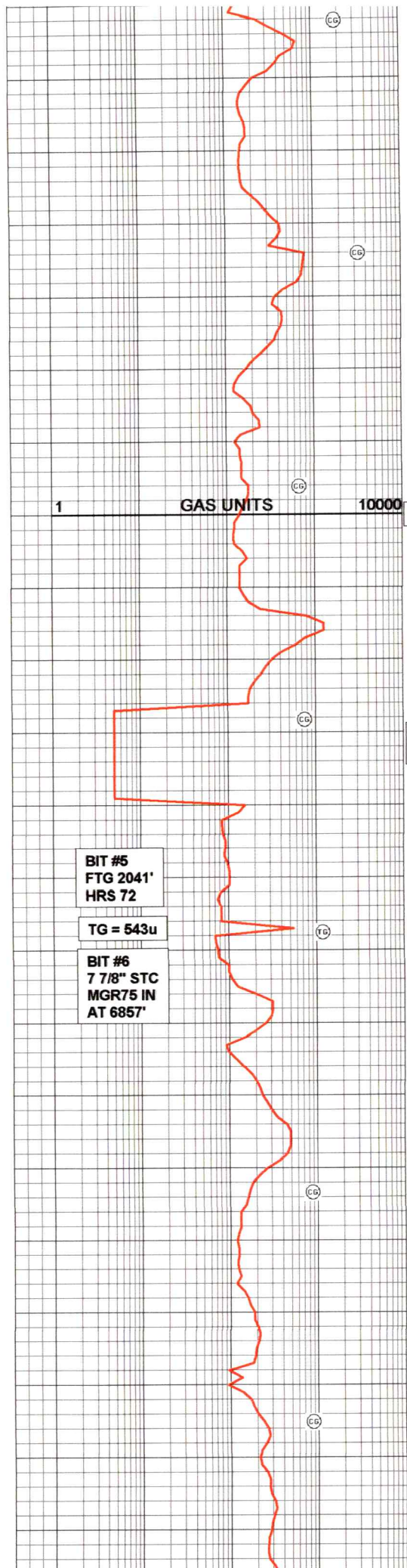
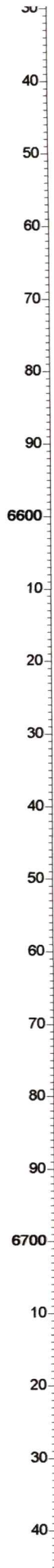
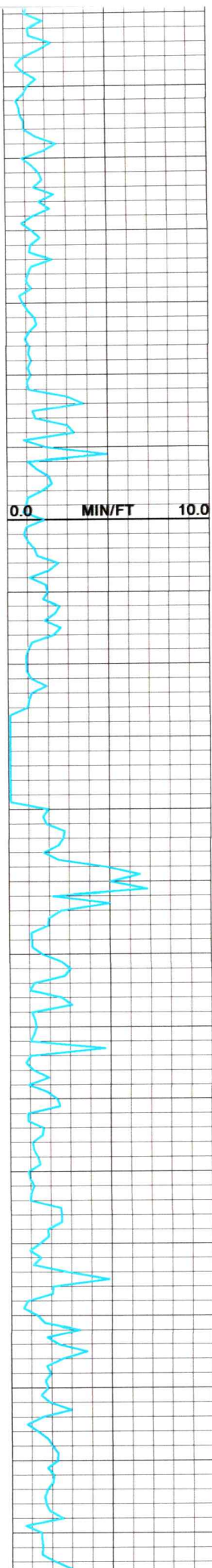
LOST RETURNS

MUD WT 11.4+ VIS 51



MUD WT 11.5 VIS 46

MUD WT 11.5 VIS 46



MUD WT 11.9 VIS 55

MULTIPLE DEPTH CHANGES.
13' OF UNEXPLAINED GAP.

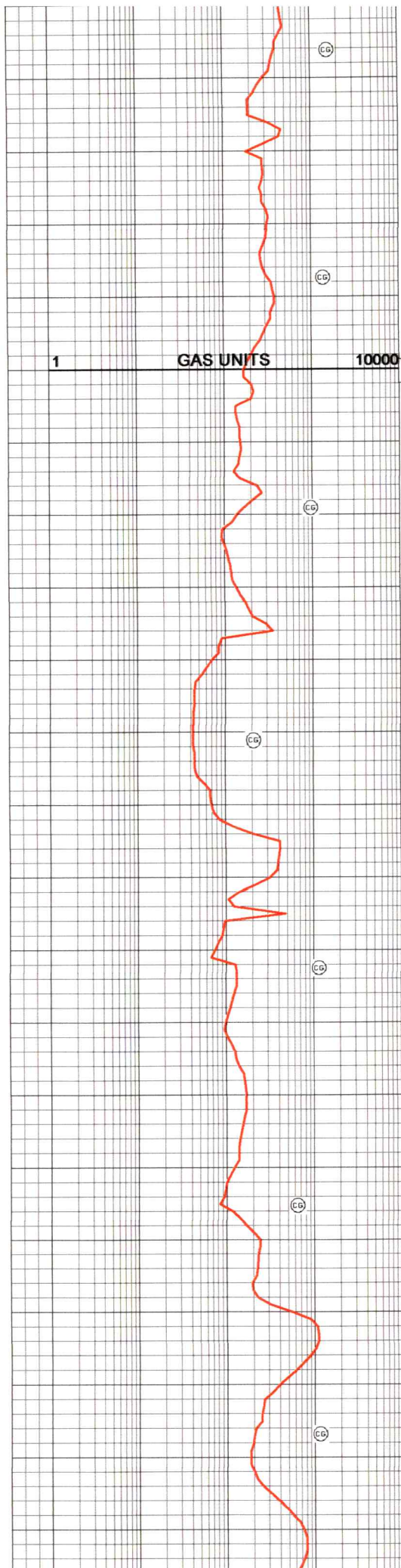
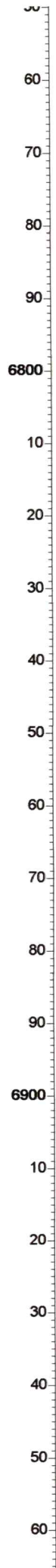
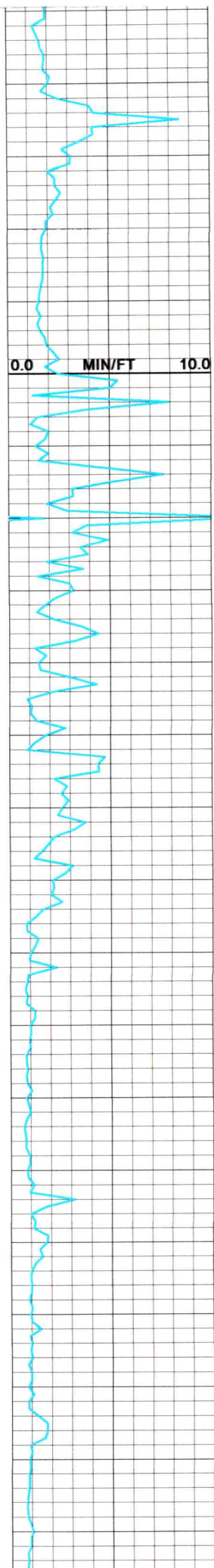
TOOH FOR BIT #6 AT 6857'

MUD WT 11.9 VIS 55

BIT #5
FTG 2041'
HRS 72

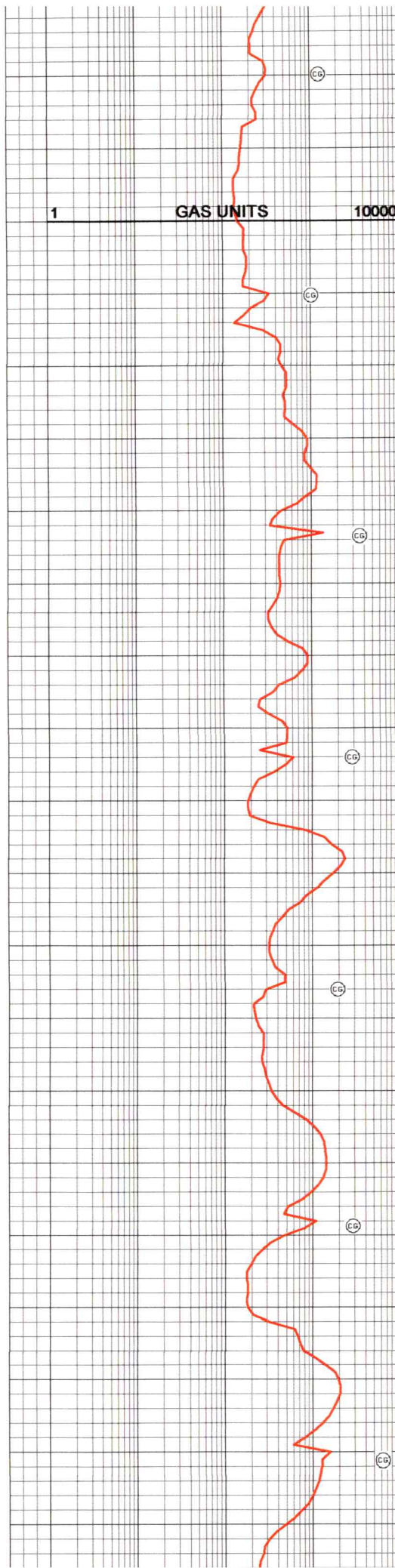
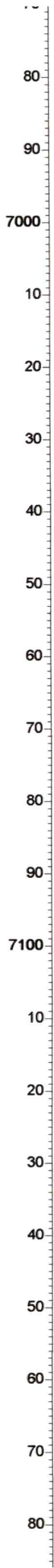
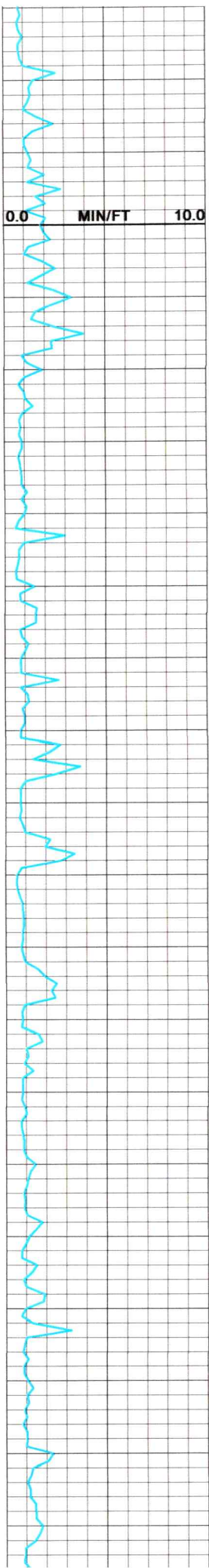
TG = 543u

BIT #6
7 7/8" STC
MGR75 IN
AT 6857'



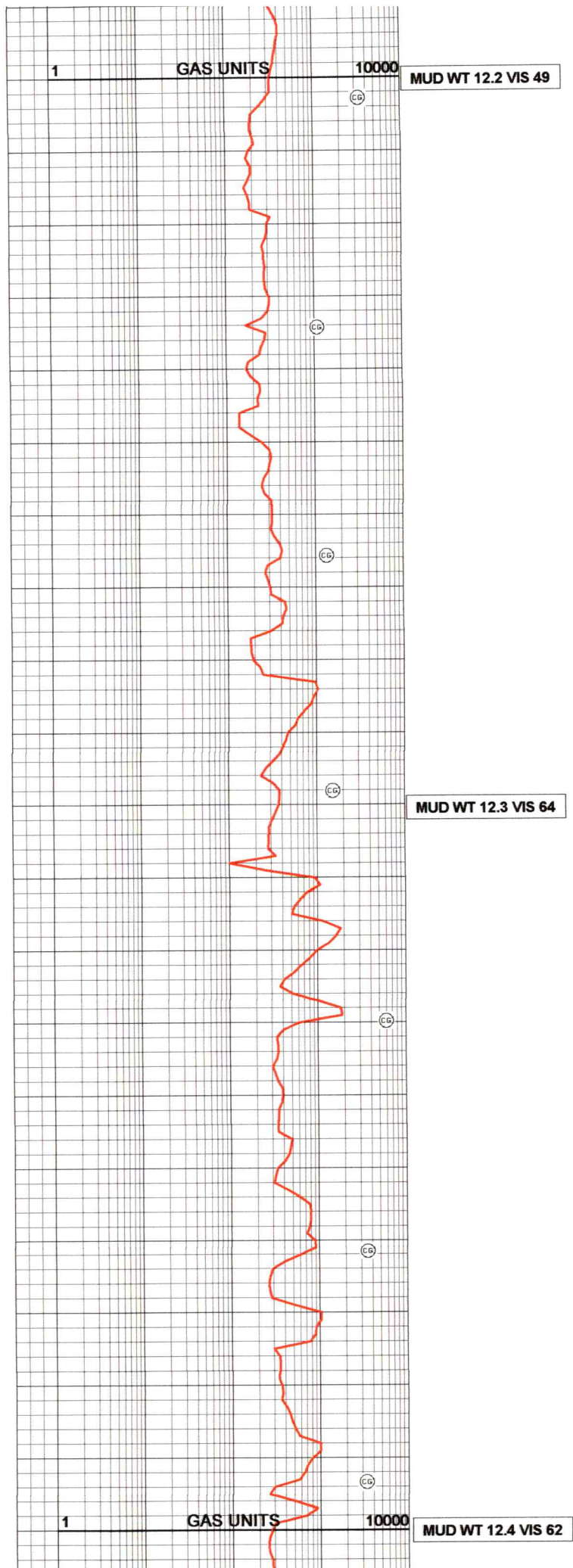
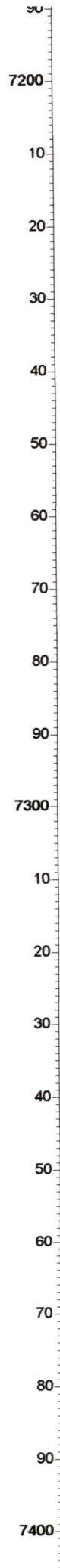
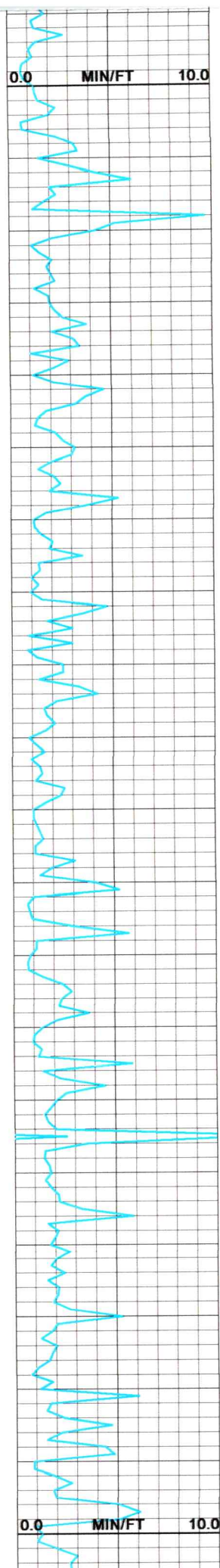
MUD WT 12.0 VIS 60

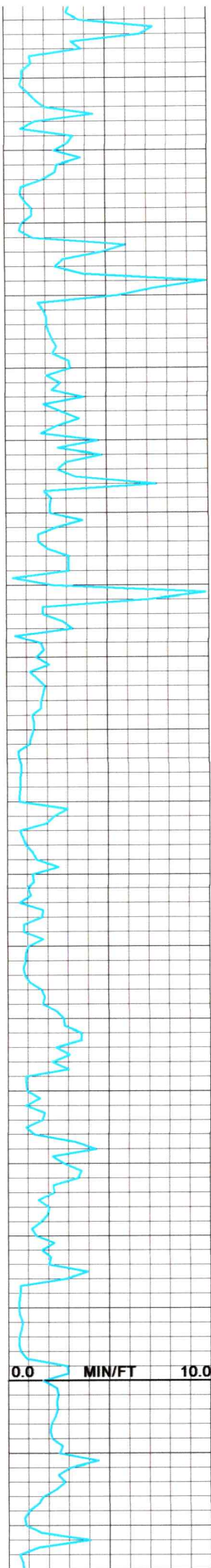
MUD WT 12.0 VIS 50



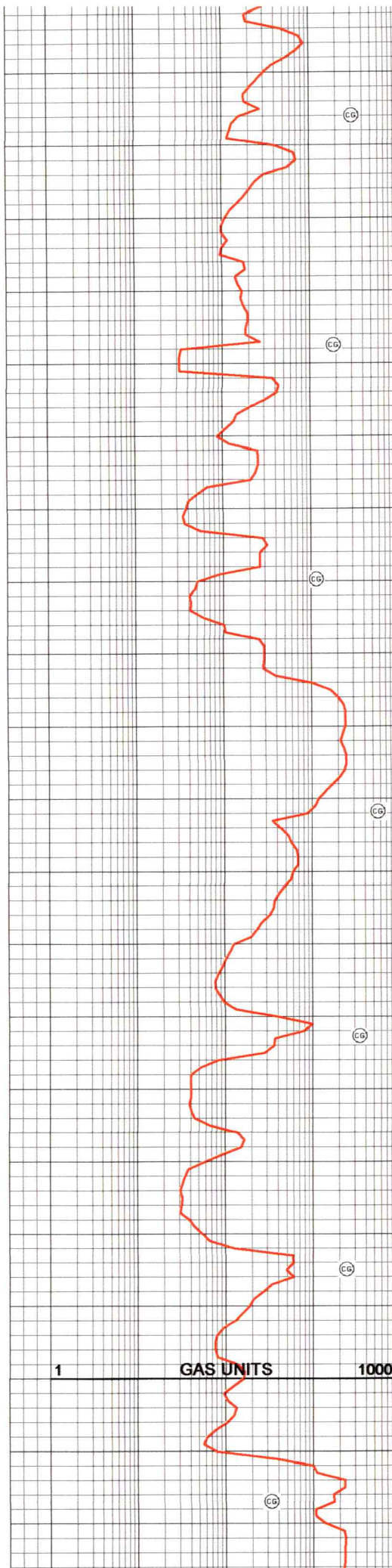
MUD WT 12.0 VIS 55

MUD WT 12.1 VIS 55



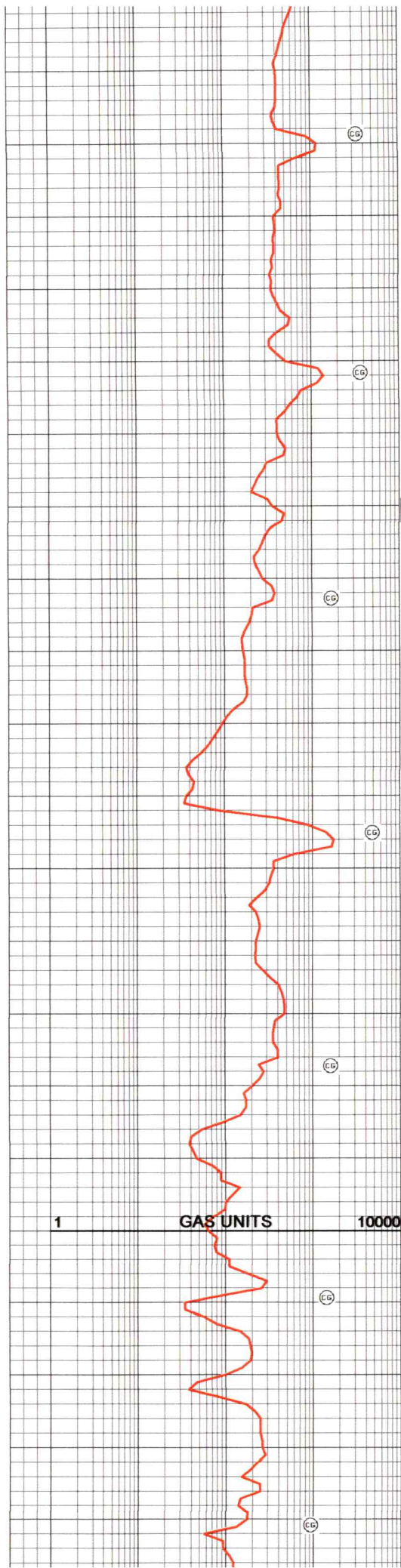
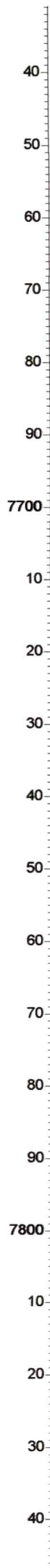
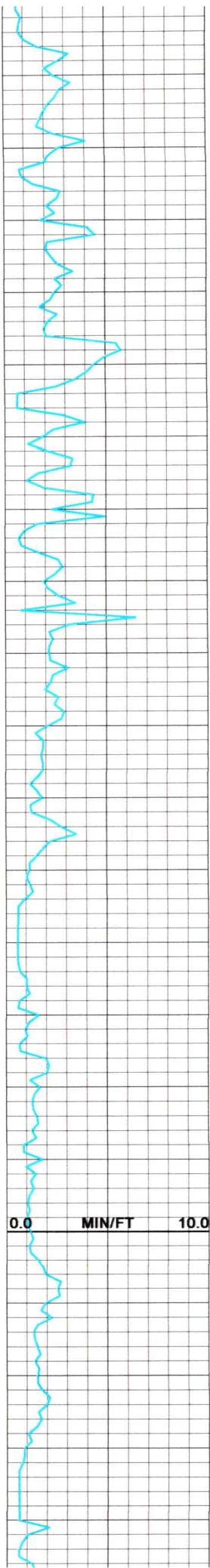


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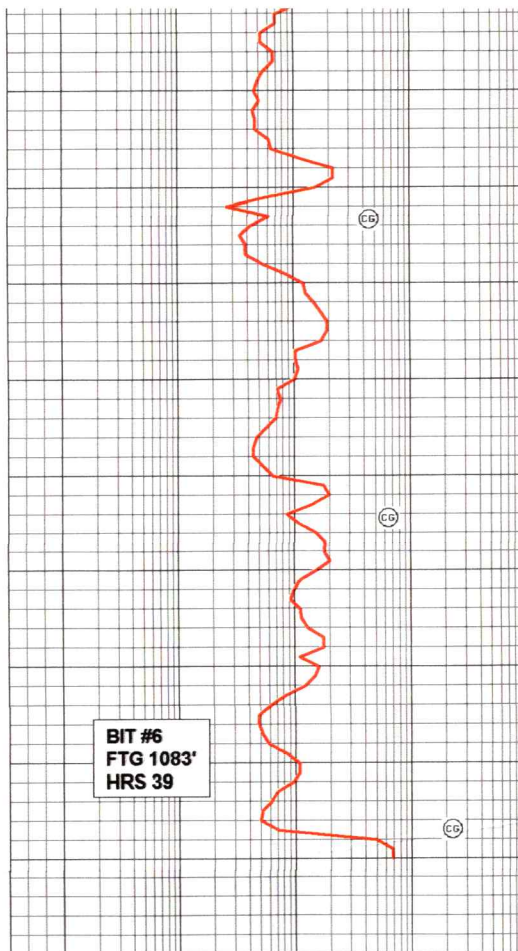
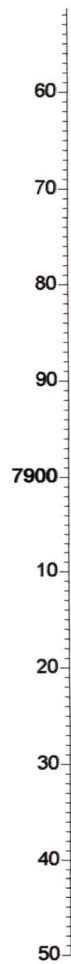
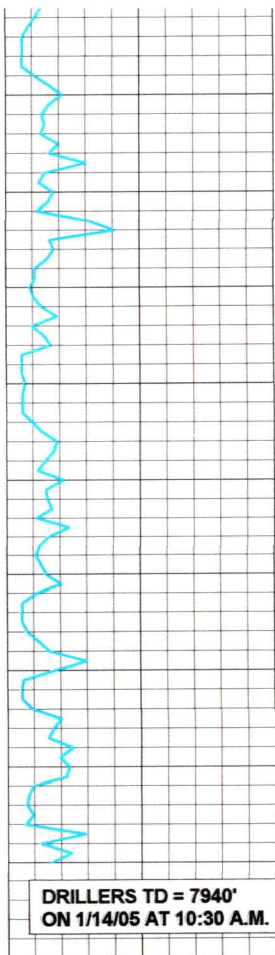
MUD WT 12.4 VIS 65

MUD WT 12.5 VIS 65



MUD WT 12.5 VIS 69

MUD WT 12.5 VIS 52



PASON SYSTEMS RELEASED
ON 1/14/05 AT 12:00 P.M.