

Covey

The Well Watchers

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

Well Name: FARIS #2-35

Well Id:

Location: Section 35 - Township 26S - Range 31 West

License Number: 15-0550-22522-00-00

Region: Finney County, KS.

Spud Date: 10 August 2019

Drilling Completed: 26 August 2019

Surface Coordinates:

2,245' FSL & 1,525' FEL

(NAD 83 LAT: 37.742536811 NAT 83 LONG: 100.675762827)

Bottom Hole

Coordinates:

Ground Elevation (ft): 2,810'

K.B. Elevation (ft): 2,816'

Logged Interval (ft): 2,500' To: 6,200' Total Depth (ft): 6,200'

Formation: Chase -----> Arbuckle

Type of Drilling Fluid: Displace @ 2,500' - Hydrogel/Starch & Displace @ 3,100' - Chemical, Low Solids.

Printed by WellSight Log Viewer from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: BENGALIA LAND AND CATTLE COMPANY

Address: P. O. Box 5210008
Tulsa, Oklahoma 741052
(918) 526-5523

POC: Calvin Hullum
David Hullum

GEOLOGIST

Company: COVEL - The Well Watchers

Address: 6548 Bedford Circle
Derby, Kansas 67037

Office: (316) 776-0367

Cell: (316) 217-4679

KB: 2,816'

FORMATION TOPS

GL: 2,810'

Formation	Rotary Sample Depth (Datum)	E-log Depth (Datum)
Chase Group _____	2,681' (+135') _____	2,668' (+148')
Council Grove _____	3,021' (-205') _____	3,006' (-190')
Foraker _____	3,285' (-469') _____	3,268' (-452')
Wabaunsee _____	3,396' (-580') _____	3,386' (-540')
Stotler _____	3,514' (-698') _____	3,500' (-684')
Topeka _____	3,779' (-963') _____	3,762' (-946')
Heebner Shale _____	4,096' (-1,280') _____	4,080' (-1,264')
Lansing _____	4,172' (-1,356') _____	4,158' (-1,342')
Stark Shale _____	4,533' (-1,717') _____	4,516' (-1,700')
B / KC _____	4,650' (-1,834') _____	4,634' (-1,818')
Marmaton _____	4,669' (-1,853') _____	4,652' (-1,836')
Cherokee Shale _____	4,803' (-1,987') _____	4,784' (-1,968')
Morrow Shale _____	4,992' (-2,176') _____	4,974' (-2,158')
Miss _____	NC _____	5,028' (-2,212')
Viola _____	5,896' (-3,080') _____	5,872' (-3,056')
Simpson _____	NC _____	6,056' (-3,240')
Arbuckle _____	6,086' (-3,262') _____	6,058' (-3,242')

RTD: 6,200'

LTD: 6,180'

ATD: 6,204'

Float:

Rotary Sample Depth is 2' high - 17' low to E-log Depth.

E-Loggers:

Allied Horizontal Wireline Services ____
Oklahoma City, Oklahoma

2019

DAILY DRILLING - AUGUST

2019

12 1/4" Hole (Surface)

7-7/8" Hole (Vertical)

7-7/8" Hole (Vertical)

11 -- 7am@500'.
 12 -- 7am@1,771'.
 Drilled to 1,822' @8:57pm.
 Ran 8-5/8" (23#) casing.
 Set @ 1,822'.
 600 sx A-Serv Lite
 (3% CC, 1/4# Polyflakes) +
 200 sx Class C
 (2% CC, 1/4# Polyflakes)
 [Basic Energy Services]
 Plug down @ 6pm.
 WOC.

Under Surface @ 7:30pm.
 Drill to 1,898' @8:15pm.
 Work on Mud Pump.
 Resume Drilling @ 10:35pm.
 14 -- 7am@2,320'. Drill to 2,562'
 @4:51pm. Displace @2,494'
 (Starch/Gal). Add Steel Pits.
 Saved mud. Transfer saved
 mud to steel pits. Add Pre-Mix
 to system.
 15 -- Resumed drilling @ 12:26am.
 7am@2,713'.
 Work on Pump @2,841'. Aired up
 Mud. Resumed Drilling @4:10pm.
 Drill to 2,912'. Electrical power
 problem effecting Pick-up Pump.
 Resumed Drilling @9:24pm.
 16 -- Displace @3,092' (Chemical).
 7am@3,092'.
 17 -- 7am@3,624'.
 18 -- 7am@4,124'.

BIT TRIP @4,261'. 7am@4,261'.
 Resumed Drilling @8:11am.
 20 -- 7am@4,365'.
 21 -- 7am@4,885'.
 22 -- Drill to 5,068' @5:11am.
 BIT TRIP @5,068'.
 7am@5,068'. Bit Damaged -
 Center gone on all 3 cones.
 T/I with magnetic. Recoverd 1/3+.
 Repeatedly break Circ on T/I.
 Circ & 'Ticke' bottom.
 Resumed drilling @9:48pm.
 23 -- 7am@5,200'.
 24 -- 7am@5,531'.
 25 -- 7am@5,885'.
 26 -- 7am@6,175'.
 RTD (6,200') @8:28am.
 E-Log on Bottom(6pm) ...
 Allied Horizontal Wireline

HOLE DEVIATION (455' - 6,200' MD)

12-1/4" Surface Hole

DEPTH / TVD	INCLINATION	AZIMUTH	NORTH	SOUTH	EAST	WEST	DOGLEG deg/100'
455 /	-- 0.75						
954 /	-- 0.75						
1,822 /	-- 0.75 (Surface Casing)						

7-7/8" Vertical Hole

2,305 /	-- 0.75
2,840 /	-- 0.50
4,186 /	-- Bull's eye (Lansing)
5,068 /	-- 0.75 (Bit Trip)
6,200 /	-- 1.50 (RTD)

Board: NA
 Strap: NA
 Diff: NA

CONTRACTOR

Duke Drilling Co, Inc. — Rig # 4

100 South Main, Suite 410
Wichita, Kansas 67202
Office: (316) 237-1331

Duke #4 - (620) 793-0833

Toolpusher: Hector Torres (620) 793-0834

Pump: IDECO 550
6" x 15" @ 57 SPM.
875 - 900+ PSI @ Standpipe.

Drill Pipe: 4" XH. (14#/ft - new)

Drill Collars: 6-1/8" x 2-1/4" — 538'. (87#ft)
Dry Collar Weight: 46,806#
(@ 8.7 ppg / Buoyancy Factor 0.8675)
Buoyancy Collar Weight: 40,604#
Design Factor: 15% held back to keep
drill string straight, therefore:
available WOB is 34,514#

Depth: 1,750' - 4,230' = 28M - 30M WOB (uncorrected) @ 65 - 75 RPM
= 33.2M - 35.6M (corrected)

4,230' - 4,261' = 38W WOB (uncorrected) @ 65 - 75 RPM, per toolpusher.
= 44.2M WOB (corrected).

This exceeds available buoyancy weight of drill collars.

4,261' - 4,612' = 30M WOB (uncorrected) @ 65 - 75 RPM = 35.6M WOB (corrected)

This just exceeds calculated WOB of drill collars but not buoyancy weight.

4,612' - 4,970' = 34M WOB (uncorrected) @ 65 - 75 RPM = 39.6M WOB (corrected)

This almost exceeds available buoyancy weight of drill collars.

4,970' - RTD' = 30M-32M WOB (uncorrected) @ 65 - 75 RPM = 35.6M WOB (corrected)

This just exceeds calculated WOB of drill collars but not buoyancy weight.

Buoyancy weight of Drill Collars is all the weight available to pull down on Drill Pipe (to keep it straight and not bang on well bore) and push down (available Weight on Bit).

When buoyancy weight is exceeded: the top of the collars are "in orbit" and not directly over the bit, as well as, several stands of Drill Pipe are in compression (i.e. nothing is keeping the string straight) and is bad for rock sample quality.

Check Weight Indicator @ 3,155'.

Calculated String Weight (85,901#) -vs- Observed WI (70,000#).

WI weighing 18.5% light -vs- Calculated String Weight.

WOB of 20M# on WI = 23.7M# Actual WOB.

WOB of 28M# on WI = 33.2M# Actual WOB.

Check Weight Indicator@4,217.
 Calculated String Weight (97,871#)-vs- Observed WI (82,000#).
 WI is weighing 16.4% light, therefore 1# showing = 1.164# actual on bit.

WI weighing 16.4% light -vs- Calculated String Weight.
 WOB of 38M# on WI = 44.2M# Actual WOB.
 This uses all collar weight and 6+ stands of DP.
 Therefore collars 'in orbit' and DP is beating wellbore.

BIT RECORD

DATE	SIZE	TYPE (ADC)	JET SIZE	DEPTH IN / OUT	CUM. FT.	HOURS	ROP (#/hr)
SURFACE —							
10 Aug 2019	12-1/4"	SMITH TDS-CPS	15's	0' / 1,822'	1,822	26.25	69.4
VERTICAL —							
13 Aug 2019	7-7/8"	SMITH F271R (572)	14's	1,822' / 4,261'	2,439	82.00	29.7
19 Aug 2019	7-7/8"	SMITH F271R (572) Used	SMITH 14's	4,261' / 5,068'	807	59.50	13.6
22 Aug 2019	7-7/8"	FH24Y (571)	14's	5,068' / 6,200'	1,132	71.75	15.8

ROCK TYPES

POROSITY

	Earthy
	Fenest
	Fracture
	Inter
	Moldic
	Organic
	Pinpoint
	Vuggy

	Lmst 2
	Lmst
	Meta
	Mrlst
	Salt
	Shale 3
	Shale 3
	Shale
	Shcol
	Shov

	Chtlt
	Dol
	Feldspar
	Ferrpel
	Ferr
	Glau
	Gyp
	Hvymin
	Kaol
	Marl

STRINGER

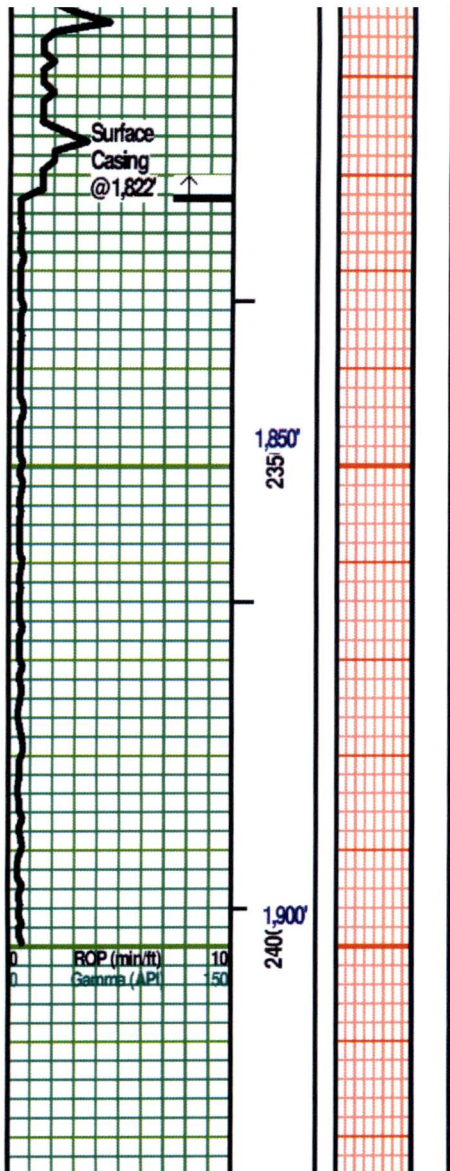
	Dol ls
	Silty dol
	Anhy
	Arg
	Bent
	Coal
	Dol
	Gyp
	ls

	Anhy		Ss		Bent		Brec		Cht		Clyst		Coal		Granite wash		Congl		Dol 1mst		Silty dol		Calc dol		Dol 2		Dol		Gyp		Igne
	Nodule		Phos		Pyr		Salt		Sandy		Silt		Sil		Sulphur		Tuff		Copper		Ooliticastic		Ooloid		Oolite		Sucrosic		Dark specks		
	Calc dol		Siltstrg		Ssstrg		Chalk		New symbol		SHOW		Oil		Spotted		Ques		Dead		Gas		Oil/gas		Bed contact						

	FOSSIL		Algae		Amph		Belm		Bioclst		Brach		Bryozoa		Cephal		Coral		Spore		Crin		Echin		Fish		Foram		Fossil		Gastro		Onlite
	Pisolite		Plant		Strom		MINERAL		Mica		Anhy		Arggrn		Arg		Bent		Bit		Brecfrag		Calc		Carb		Chtdk		Chttt		Dol		
	Glauc		Gyp		Hvymin		Kaol		Marl		Minxl		Nodule		Phos		Pyr		Salt		Sandy		Silt		Sil		Sulphur		Tuff		Copper		Ooliticastic
	Dark specks		STRINGER		Dol ls		Silty dol		Anhy		Arg		Bent		Coal		Dol		Gyp		LS		Mrst		Calc dol		Siltstrg		Ssstrg		Chalk		

ACCESSORIES

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



Surface Casing set @ 1,822'

~ Hole Dev: 0.75 deg @ 1,822'

Extractor was positioned in the sample box for mud gases sampling

This geolog uses plotted drilling time, available rotary drilling samples and the gas curves to produce this work product.

Non-representative drilling time, rotary rock samples and/or drilling practices does effect the accuracy of any geolog.

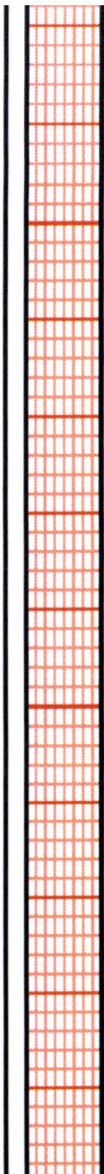
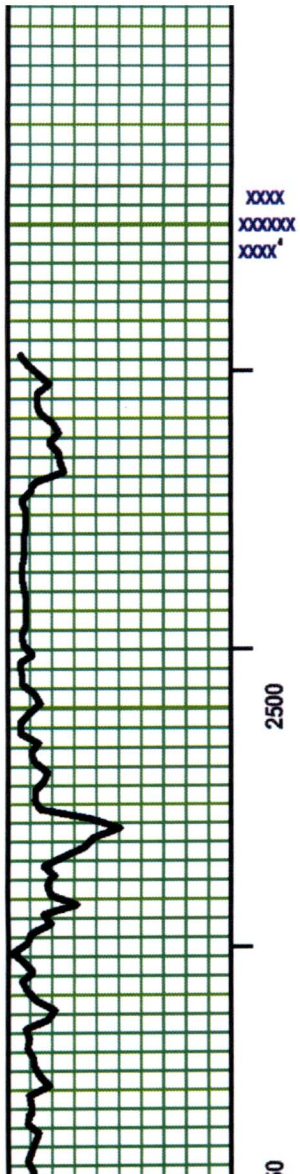
Rotary Samples were collected from the rig's sample box.

Earth pits started well; then, Steel pits were used.

100 units = 1% Gel

TG, C1-C5

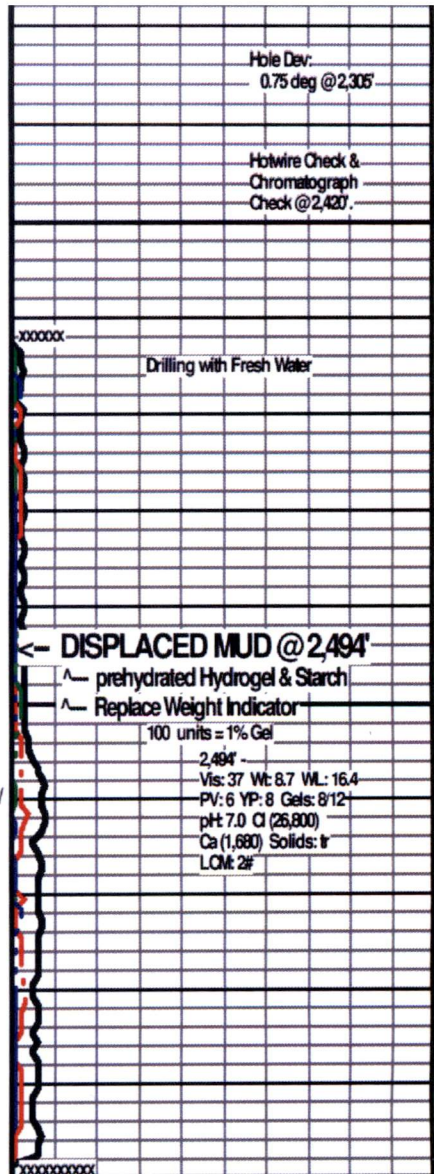
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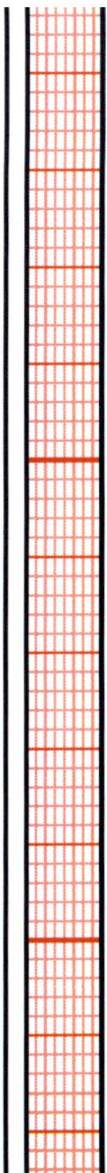
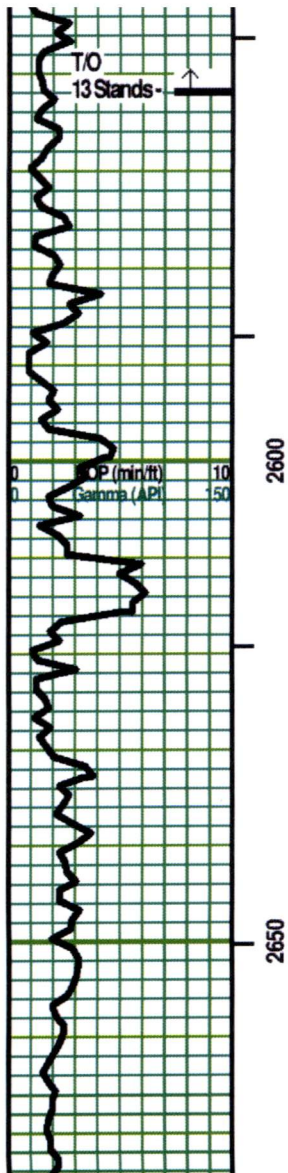


Interbedded and Intermixed:

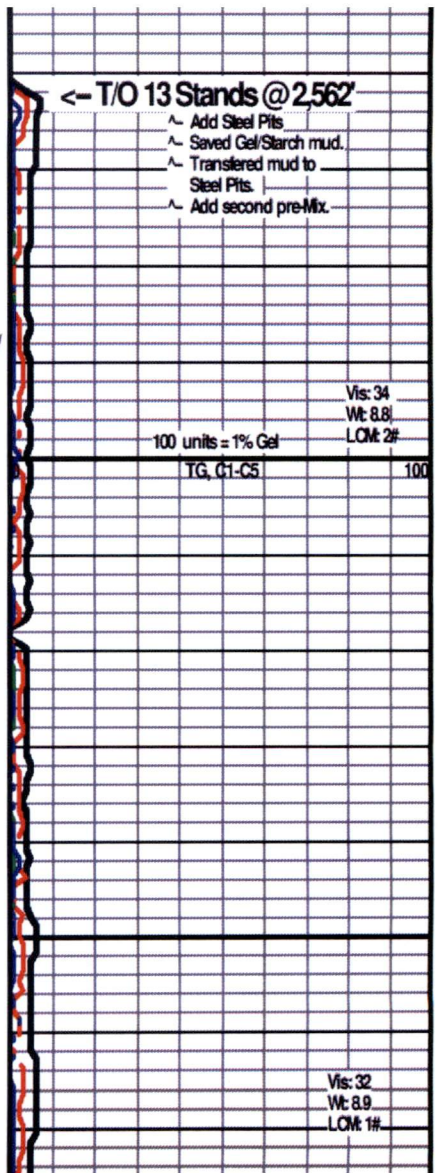
SH - Pale Gray / Lt Gray, Pale greenish Gray. (Uphole reddish brown Sh & Siltstone.) Massive/ some lam's. No/ some Reddish Brown. soft.

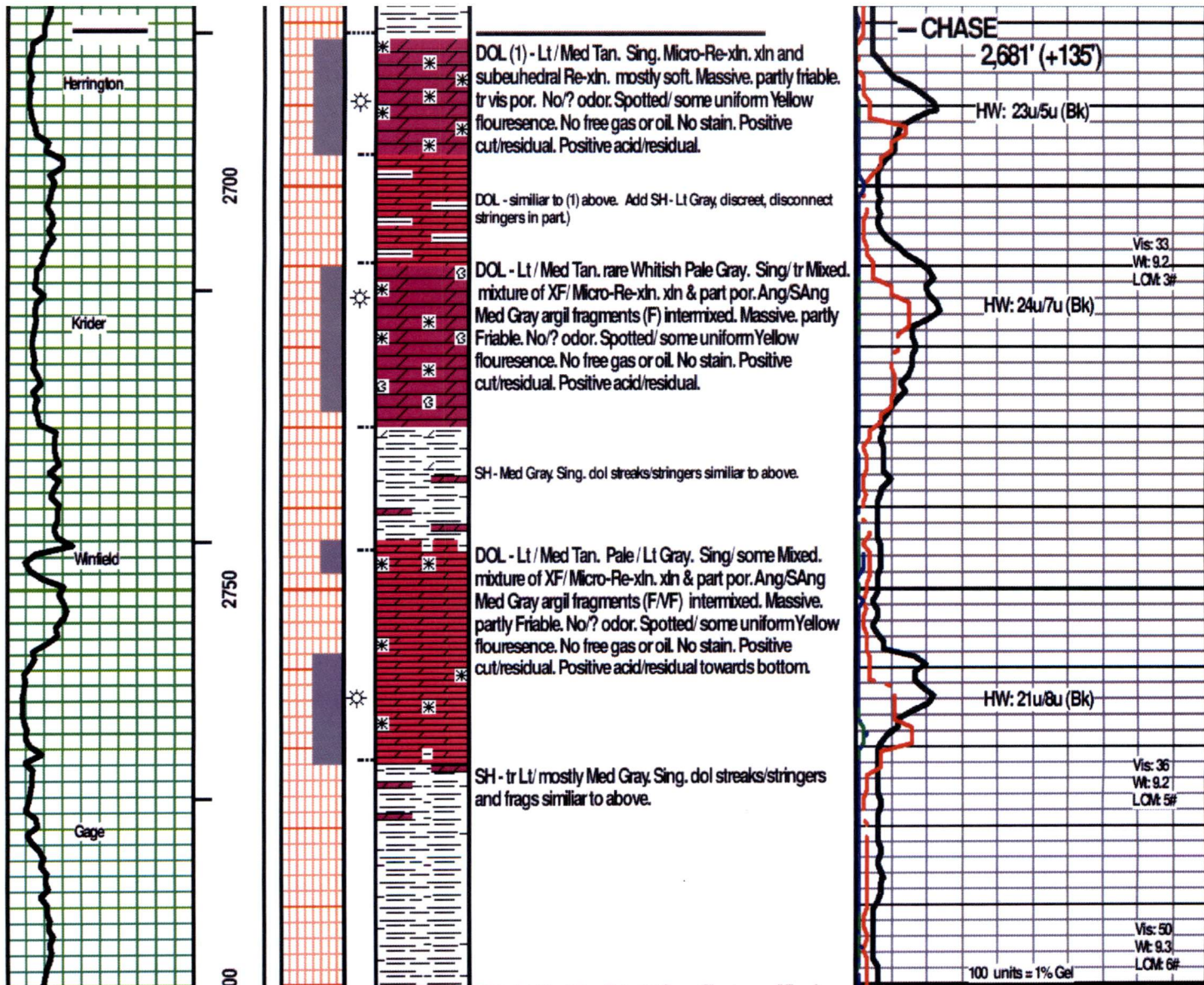
AnH - Off Whitish Gray / Off White / Lt Gray. Mix/Mot/ some Sing. misc gray inclusions in part. Opaque to tr semi-transparent.

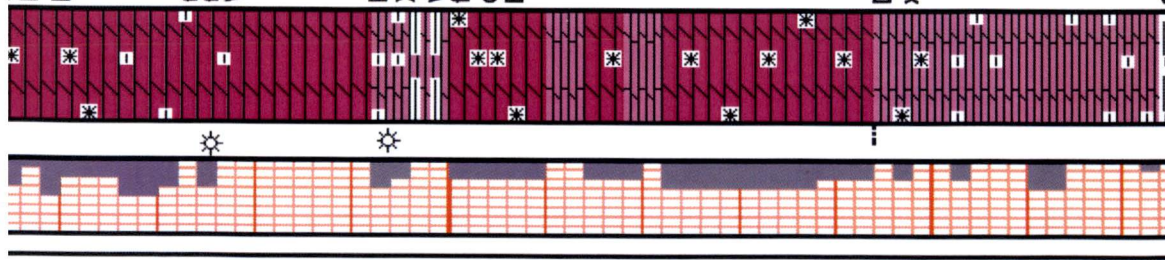
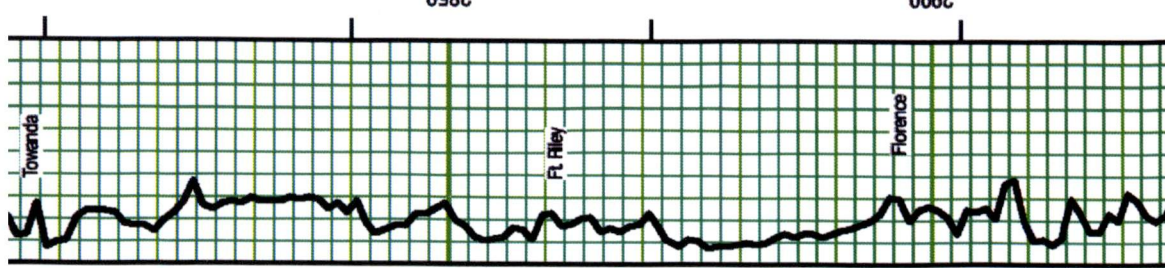




Interbedded and Intermixed:
 AnH - Off Whitish Gray / Off White / Lt Gray. Mix/Mot/
 some Sing. misc gray inclusions in part. Opaque to tr
 semi-transparent.
 SH - Pale Gray / Lt Gray, Pale greenish Gray. (Uphole
 reddish brown Sh & Siltstone.) Massive/ some lam's. No/
 some Reddish Brown. soft.
 few/trpcs: Dol - Pale Gray/Tannish Gray. Sing.
 Crypto-xln. xln por. some clear/ semi transparent AnH
 veining.





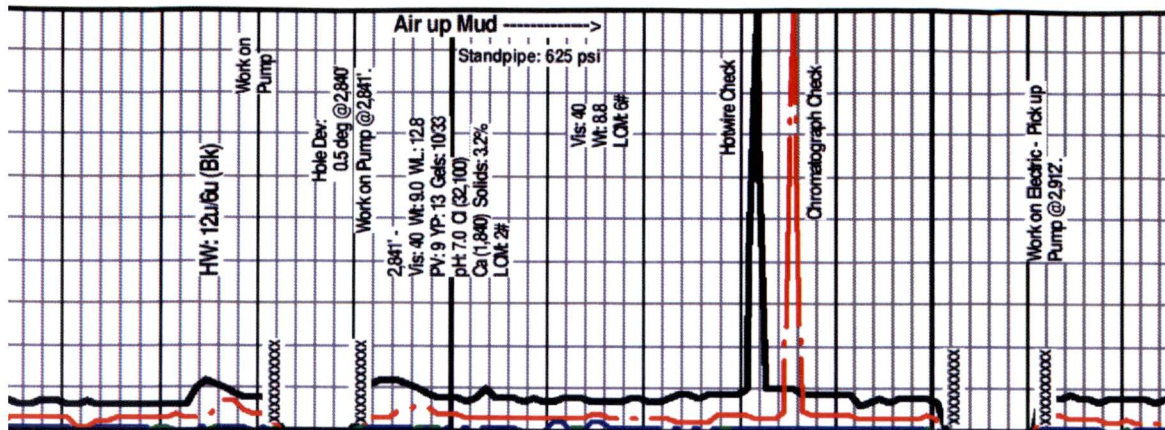


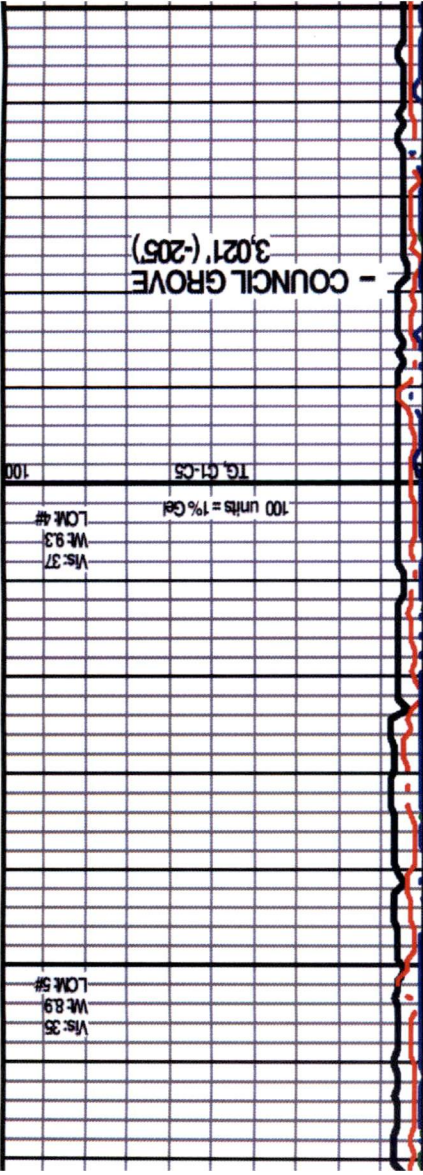
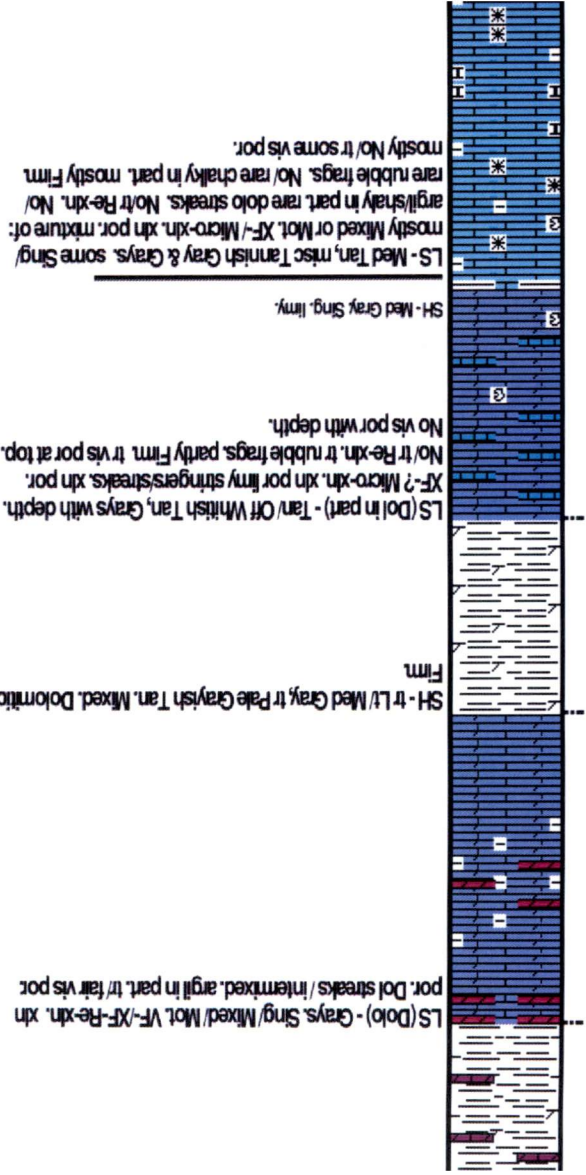
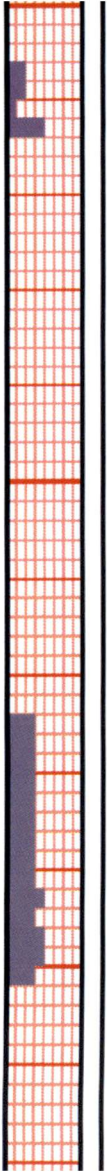
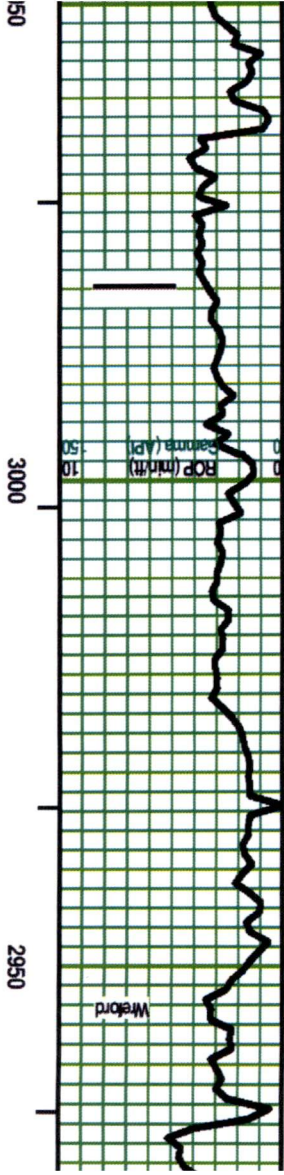
Med Gray argil fragments (F/VF) intermixed. Massive, partly Friable.

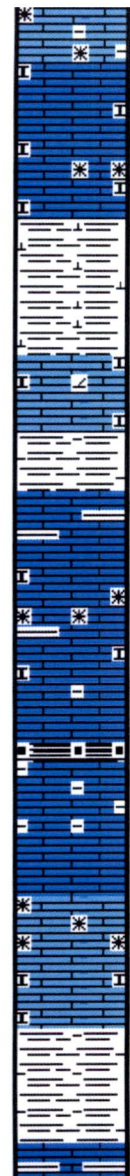
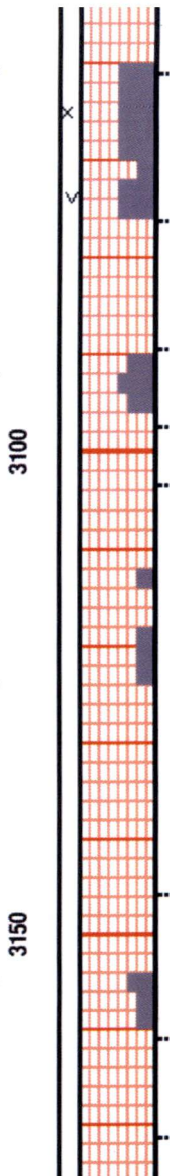
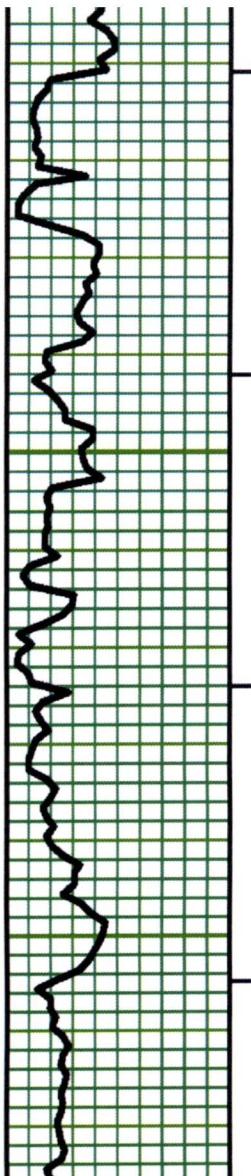
few pos with depth: No? odor. Spotted/ some uniform Yellow fluorescence. No free gas or oil. No stain. Weak Positive cut/residual. Weak Positive acid/residual towards bottom.

DOL (tr Calc in part) - some Lt/ mostly Med Gray. XF-VF-Re-xln, xln por. shaly in part, part Friable. No/tr vis por. At top: ? odor. Spotted/ some uniform Yellow fluorescence. No free gas or oil. No stain. Weak Positive cut/residual. Weak Positive acid/residual towards bottom.

Dol (tr calc) - Tans. Grays with depth, XF-Micro-Re-xln, xln por. argil in part, partly Firm, No/tr vis por.







LS- Whitish Tan/ Lt Grayish Tan. Sing/ tr Mot. XF/XF-xln. xln & rare minute vuggy por. tr chalky. No/tr Re-xln. tr vis por.

SH- Lt/ Med Gray, Off Tannish Gray. Sing. Hi calc. mostly Firm.

LS- Tan. Sing. XF-xln. xln por. rare dol. chalky. tr vis por.

SH- Med Gray. Sing. Limy. Firm.

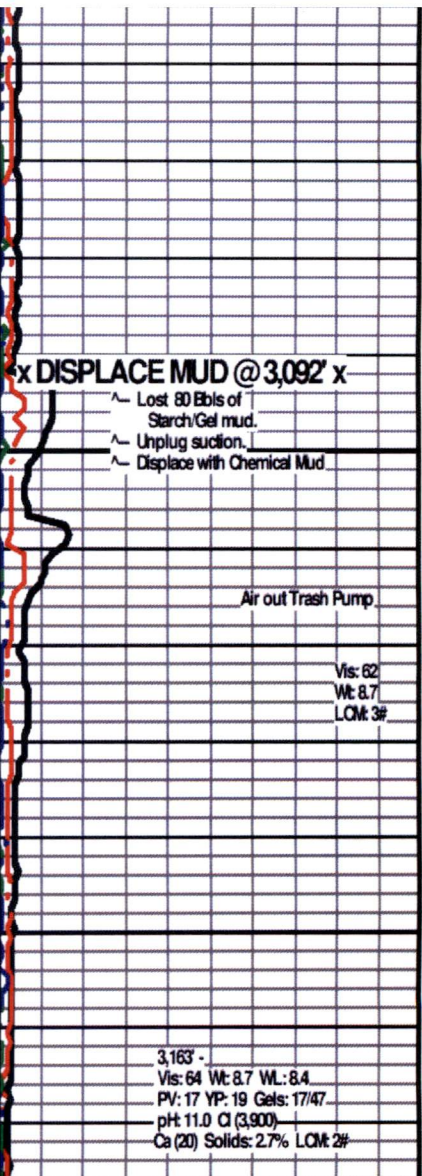
LS- Tan/ Off Whitish Tan. Sing/ tr Mot at top. Grays with depth. Mixed. XF-/ Micro-xln. xln por. mostly No/ rare Re-xln. chalky in part. argil/shaly with depth. Friable. tr vis por.

Add few pcs: SH- Black. Sing. tr fissile.

LS- Tan. Sing. Micro-xln. xln por. No tr Re-xln. Chalky with depth. mostly Firm. No/ tr vis por.

SH- Med Gray. Sing. some limy streaks. partly Friable. Massive.

LS- Tans/ Grays. Mot/ Mixed. XF-/ Micro-xln. xln por. No/ tr Re-xln. argil/shaly in part (stratified) to chalky



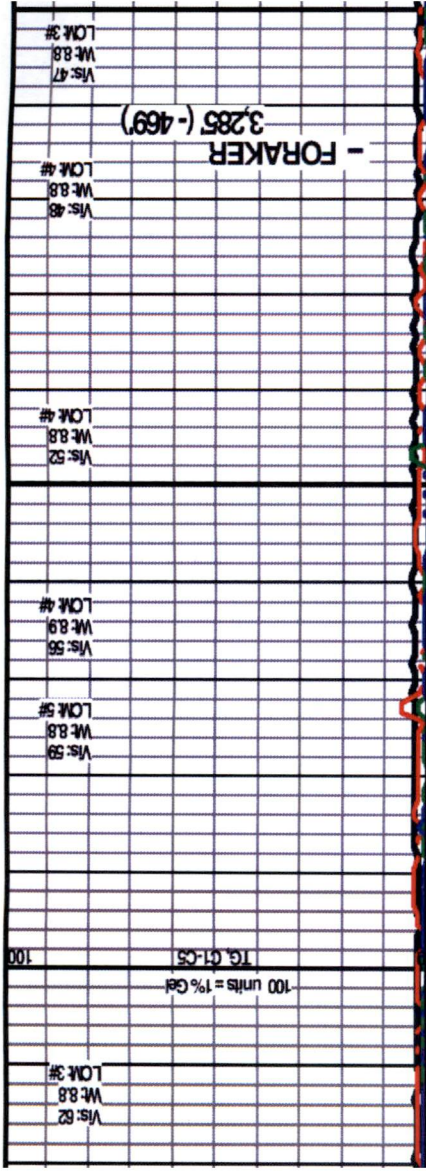
DISPLACE MUD @ 3,092' x

- ^ Lost 80 Ebls of Starch/Gel mud.
- ^ Unplug suction.
- ^ Displace with Chemical Mud

Air out Trash Pump

Vis: 62
Wt: 8.7
LOM: 3#

3,163' -
Vis: 64 Wt: 8.7 WL: 8.4
PV: 17 YP: 19 Gels: 17/47
pH: 11.0 Cl (3,900)
Ca (20) Solids: 2.7% LOM: 2#

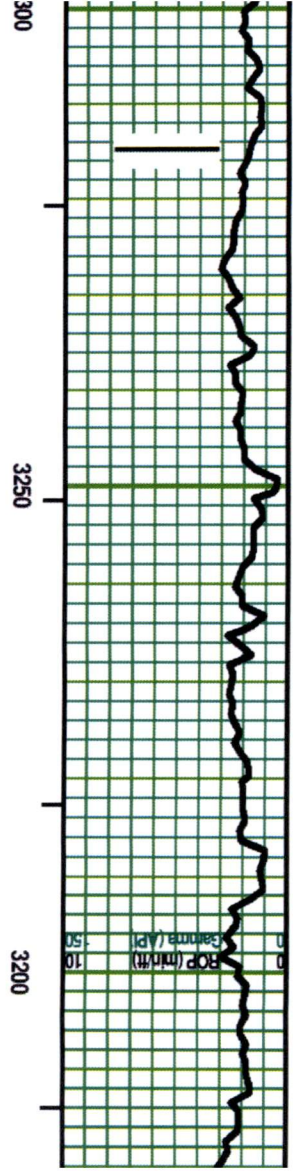
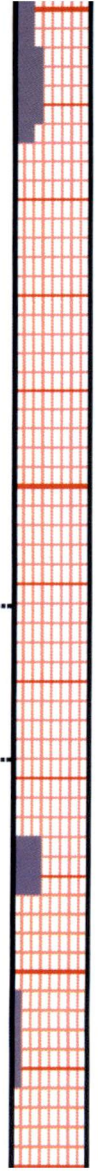


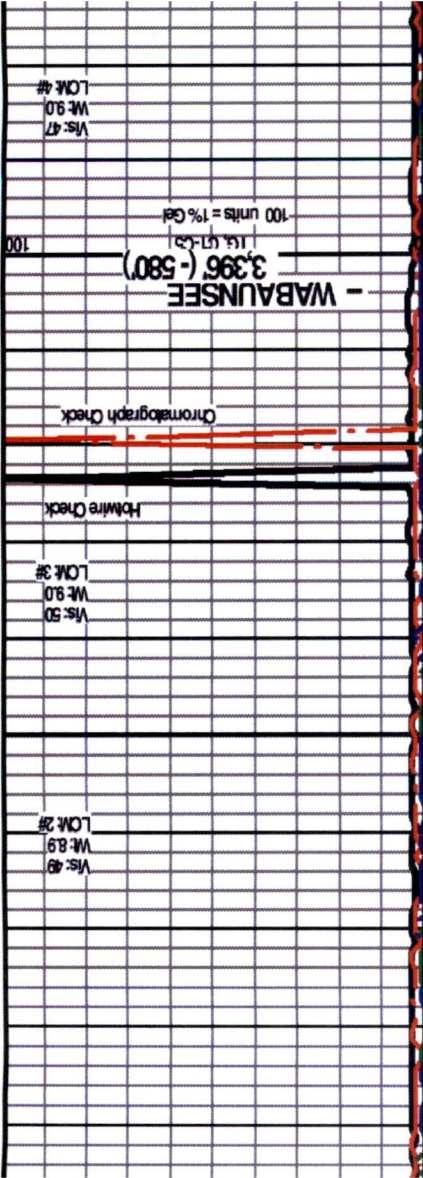
LS - Tans, tr some Grays, tr Sing/ mostly Mixed or Mottled, VF-/XF-xln, xln & tr sucrosic por, No/ tr Re-xln, partly Friable, tr vis por.

LS - L/ Med Tan, tr Off White Tan, Grays with depth, Sing/ Mod/ tr Mixed, VF-/XF-xln, xln por, No/ tr Re-xn, argill/ shaly (lams, flecks and frags) in part with depth, mostly No/ rare fossil frags, mostly firm, No/ tr vis por.

SH - Med Gray Sing, No/ some limy, Firm.

Add few pcs: SH - Black, Sing, tr fissile.



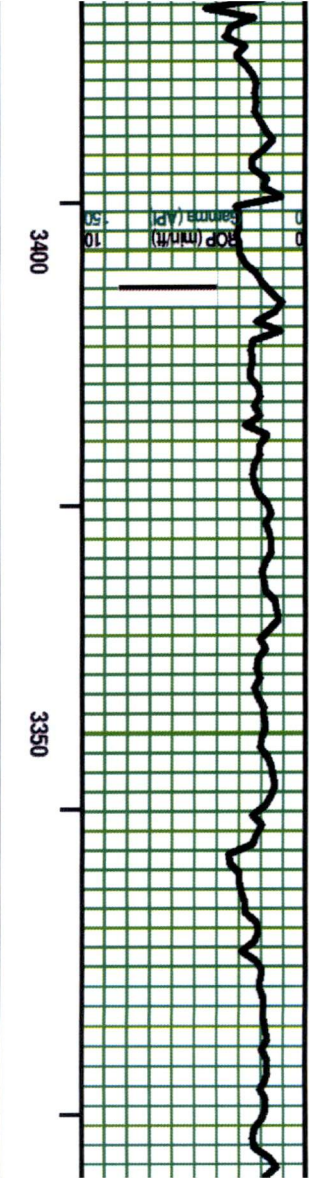
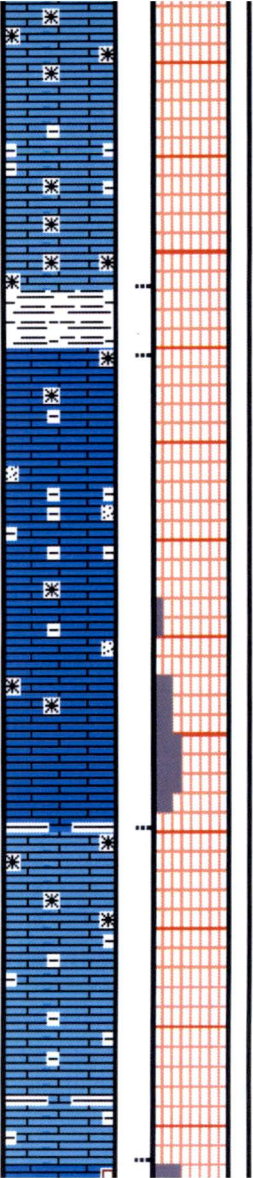


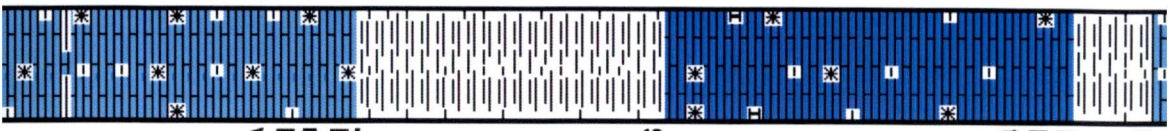
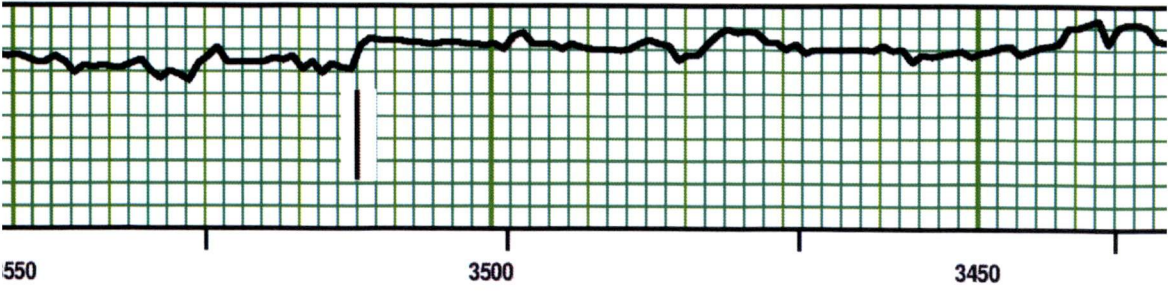
L5 - Grays/ some Graysh Tan to Med Tan, tr Sing/ mostly
 Mixed or Mottled, VF-/XF-xln, xln por, No/ tr Re-xln, argill
 in part, some shale interbedding, partly Firm, tr vis por.

L5 - Lt/ Med Tan, some Tannish Pale to Lt Gray, tr Med
 Gray, tr Sing/ some Mixed and Mot, VF-/XF-/ some
 Micro-xln, xln por, some 'grainy' texture pcs, No/ tr argill
 in part, partly Friable, No/ mostly tr to fair vis por.

L5 - Interbedded Med Tan and Lt/ tr Med Gray or
 Tannish Gray, Sing/ tr Mot, Micro-xln at top, tr VF-/ mostly
 XF-xln, xln por, argill in part, No/ some Re-xln, partly Firm,
 mostly No/ tr vis por.

S4 - Med Gray, Sing, tr platy, tr calc.



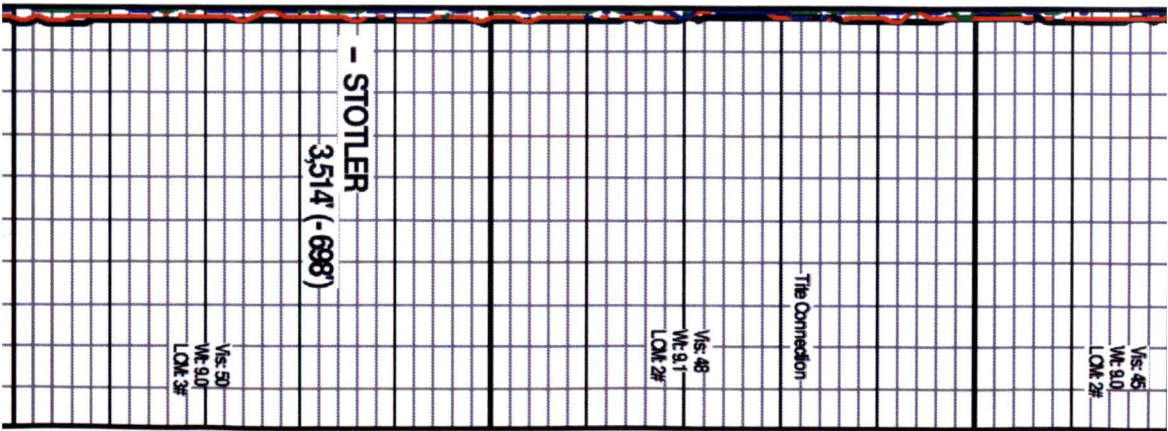


SH - Dark Gray, Sing. soft.

LS - Tans, some Tannish Gray, Sing/ Mixed, XF-/
Micro-xln, xln por. No/ tr Re-xln, argill in part, mostly No/
tr chalky in part. Massive, No/ tr vis por.

SH - Med/ Dark Gray, Sing, Massive, tr platy.

LS - Lt/ Med Tan, Grayish Tan, Tannish Gray, tr Sing/
mostly Mot or Mixed, XF-/ Micro-xln, xln por. No/ tr
Re-xln, argill shaly in part. No/ rare fossil frag, Firm, No/ tr
vis por.



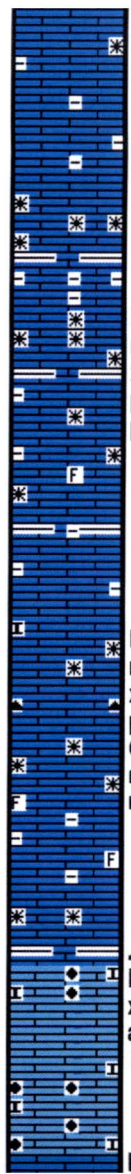
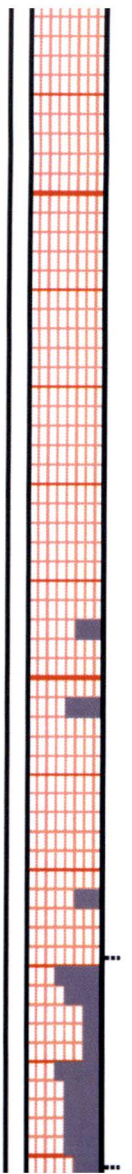
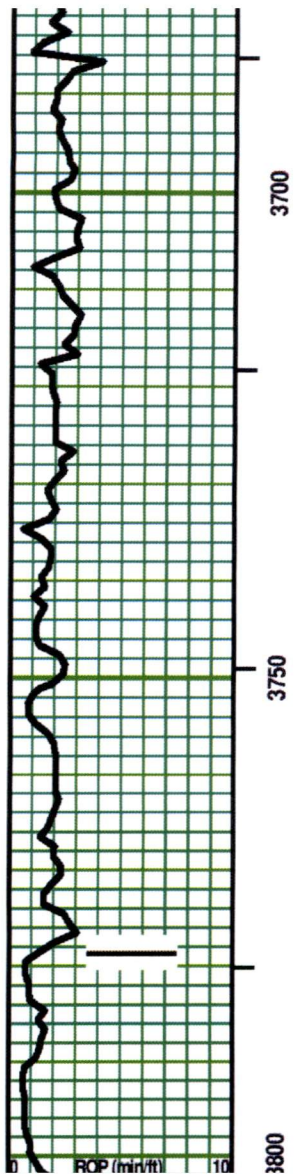
Vis. 46
WE 9.0
LOK 2#

The Connection

Vis. 48
WE 9.1
LOK 2#

- STOTLER
3,514' (- 698')

Vis. 50
WE 9.07
LOK 3#

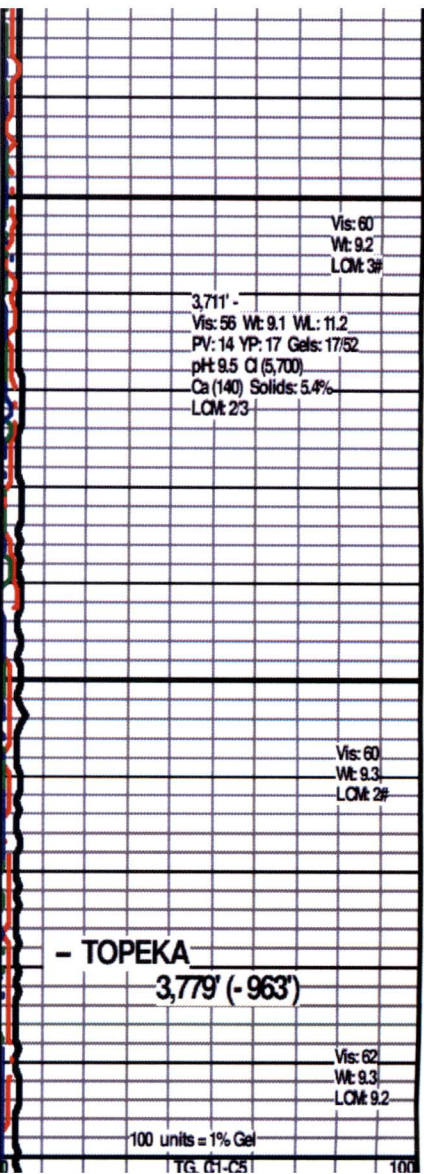


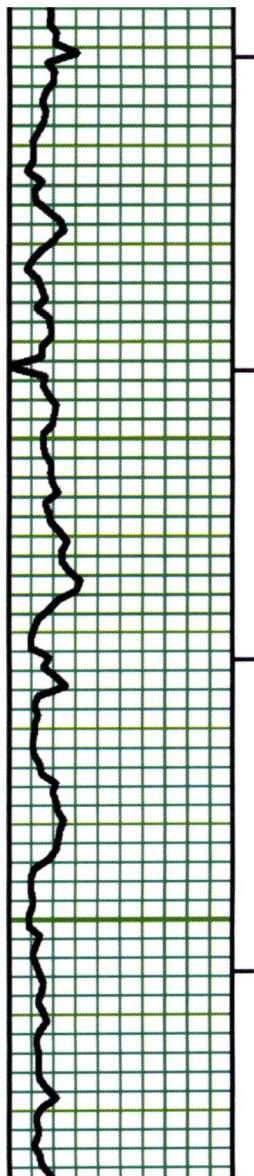
LS - Pale/ Lt / Med Gray. some Grayish Tan. tr Sing/
 mostly interbedded Mixed. mostly Micro-/ some XF-xdn.
 xin por. Re-xdn at top. argil/shaly or shale interbedded in
 part. No/ tr fossil frags. rare/ tr chalky in part. Firm at top.
 partly Friable with depth. mixture of No / tr vis por.

LS - Pale/ Lt / Med Gray. some Grayish Tan. tr Sing/
 mostly interbedded Mixed. mostly Micro-/ some XF-xdn.
 xin por. Re-xdn at top. argil/shaly or shale interbedded in
 part. No/ tr fossil frags. rare chalky in part. [Add: Chert -
 Off White/Grays/ Tans/ tr Orange. Opaque. fossil frags &
 misc inclusions.] Firm at top. partly Friable with depth.
 mixture of No / tr vis por.

LS - Tans/ Grays/ Brown. Sing/ some Mot. XF-/ Micro-xdn.
 xin & part por. Re-xdn in part. some fossil frags.
 argil/shaly in part. some Coloids/ subchalky. mostly Firm.
 mostly Fair vis por.

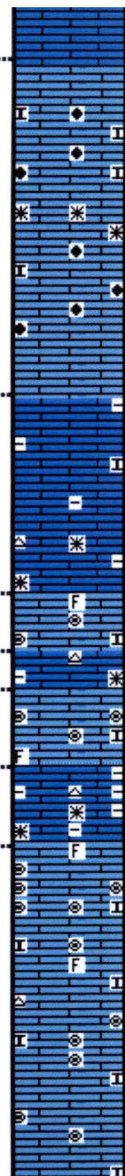
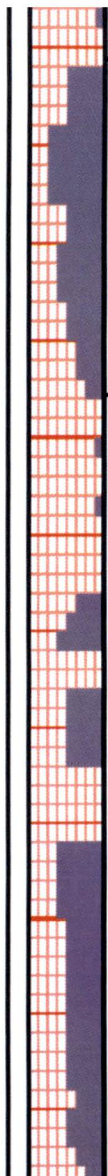
LS - Lt Tan/ Lt Gray. Mot/Mixed. Micro-xdn. xin & rare part





3850

3900



LS - Tans/ Off White/ Pale Grayish Tan/ tr Lt Brown. Sing/ Mixed. XF- /Micro-xdn. xdn & part por. Subchalky. some Micro-Oolites (Off White/ tr Whitish Tan). Friable. Fair vis por.

Interbedded SH & LS:

Interbedded SH & LS:

SH - mostly Med/ tr Dark Gray/ Black. Sing. Soft. Massive. rare minute, pyrite, carb.

LS - Grays/ some Tans/ rare Lt Brown. Sing/ Tr Mot/ rare Mixed. XF- /Micro-xdn. xdn por. some argil/shaly in part. partly Firm. No/ tr vis por.

LS - Tans/ Grays/ tr Lt Brown. Sing/ Mot. XF/ Micro-xdn/ rare Crypto-xdn. xdn & part por. some fossil frags. argil/shaly in part (some streaks). few pcs: VF, Coloids in subchalky matrix. [tr Chert - Clear/ Gray/ Brown. Mot. Semi-transparent. misc inclusions. No tripolitic.] mostly Firm. No/ tr vis por.

Vis: 60
Wt: 9.3
LOM: 1#

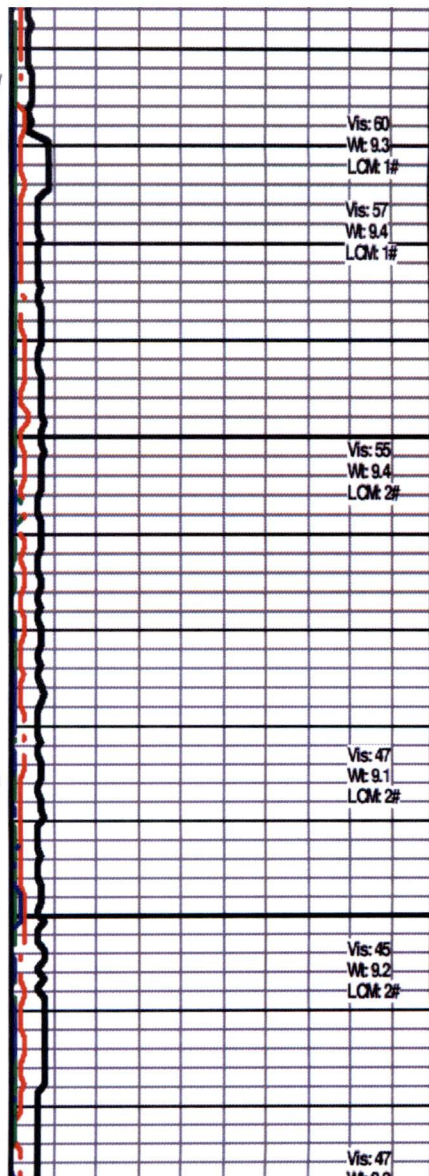
Vis: 57
Wt: 9.4
LOM: 1#

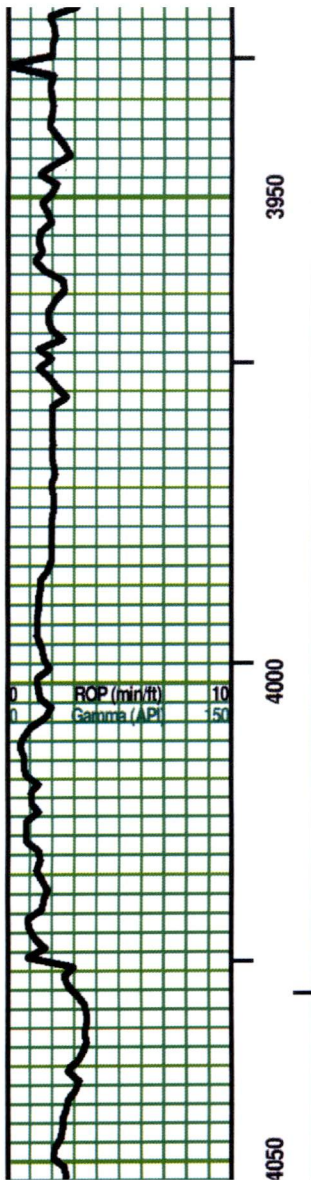
Vis: 55
Wt: 9.4
LOM: 2#

Vis: 47
Wt: 9.1
LOM: 2#

Vis: 45
Wt: 9.2
LOM: 2#

Vis: 47
Wt: 9.2
LOM: 2#



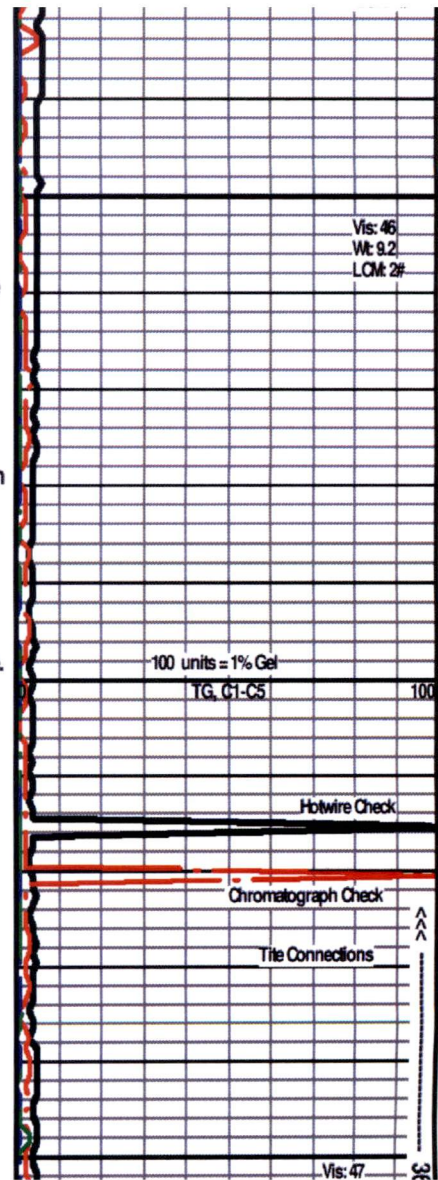


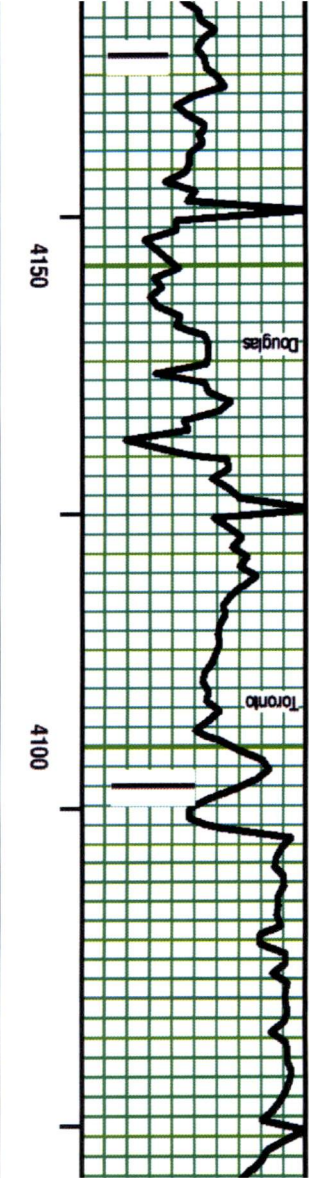
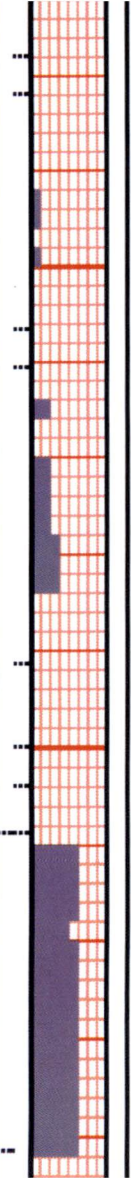
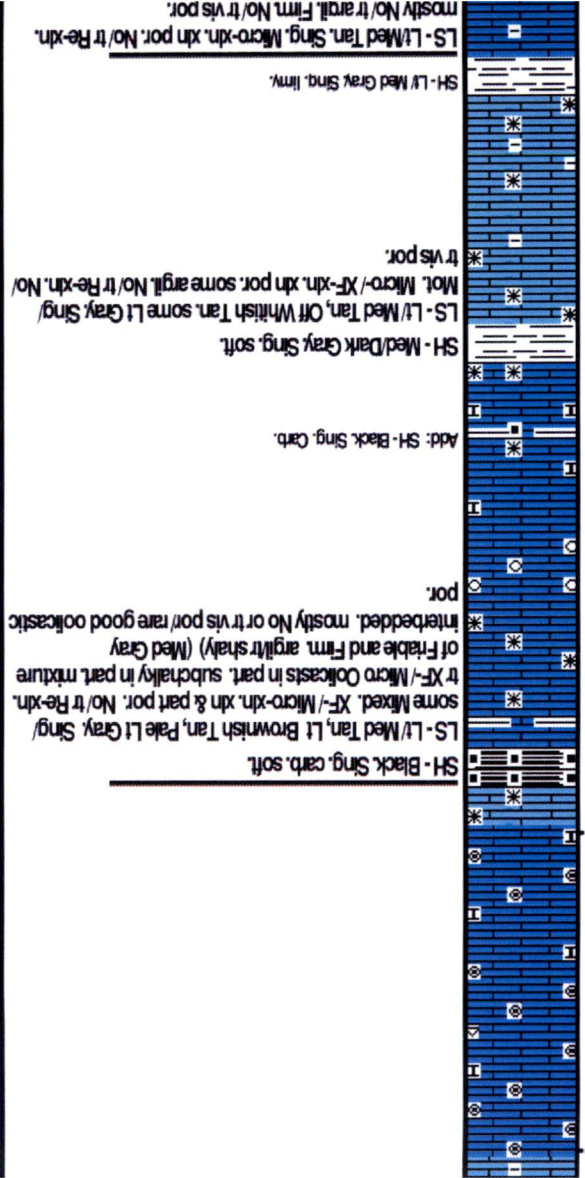
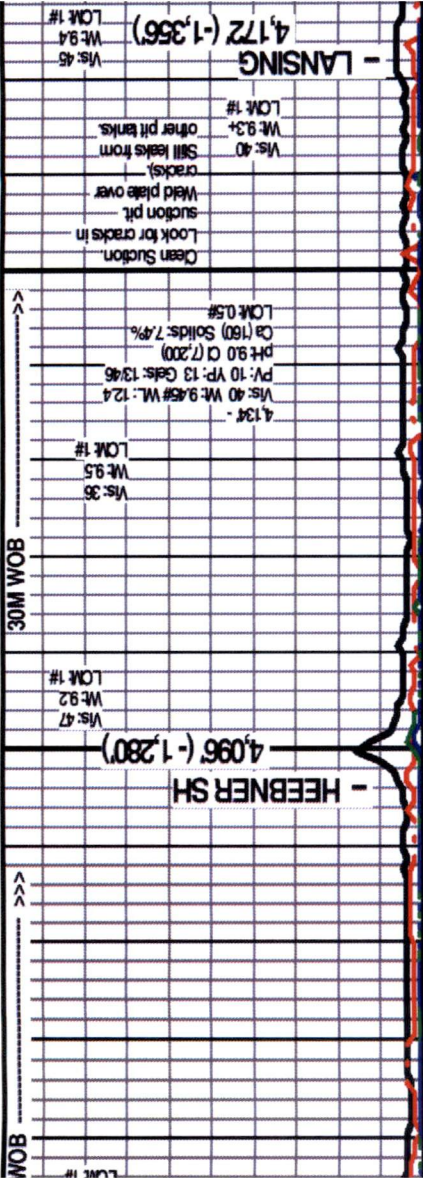
Interbedded LS & SH:

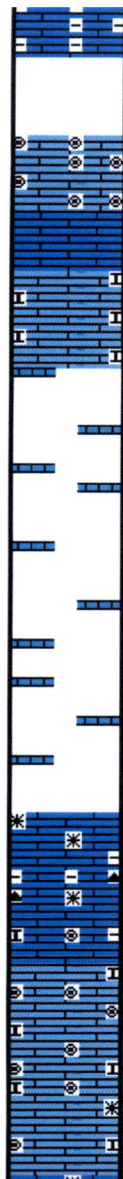
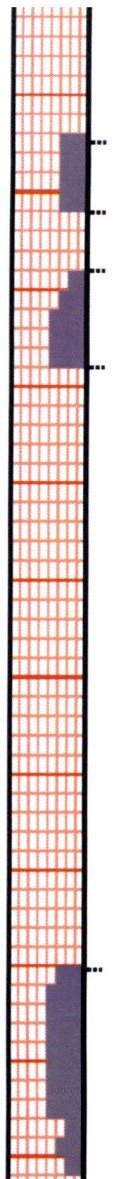
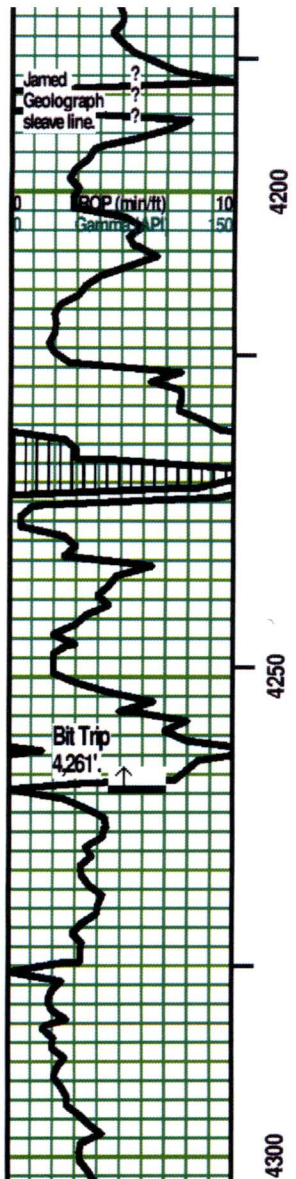
LS - Grays/ some Tans/ rare Lt Brown. Sing/ Tr Mot/ rare Mixed. XF-/ Micro-xdn. xdn por. some argil/shaly in part. partly Firm. No/ tr vis por.

LS - Tans/ Grays/ tr Lt Brown. Sing/ Mot. XF/ Micro-xdn/ rare Crypto-xdn. xdn & part por. some fossil frags. argil/shaly in part (some streaks). few pcs: VF, Ooloids in subchalky matrix. [tr Chert - Clear/ Gray/ Brown. Mot. Semi-transparent. misc inclusions. No tripolitic.] mostly Firm. No/ tr vis por.

SH - mostly Med/ tr Dark Gray/ Black. Sing. Soft. Massive. rare minute, pyrite, carb.







?

few pcs: LS - Micro-Oolites in semi-transparent Matrix. Friable. Good vis por.

LS - Lt/Med Tan. Sing. Micro-xln. xln por. No/ tr Re-xln. Firm. No/ tr vis por.

LS - Off White with Med Tan, irregular blotches. Mixed. Micro-xln. xln por. Chalk. Friable. No/ rare tr vis por.

LS - Lt/Med Tan. Sing. Micro-xln. xln por. No/ tr Re-xln. Firm. No/ tr vis por.

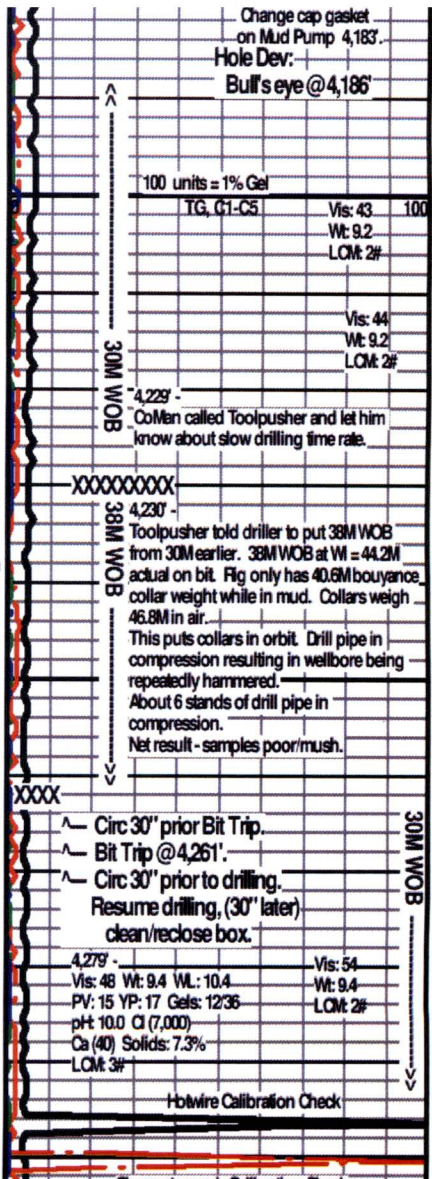
LS - Off White with Med Tan, irregular blotches. Mixed. Micro-xln. xln por. Chalk. Friable. No/ rare tr vis por.

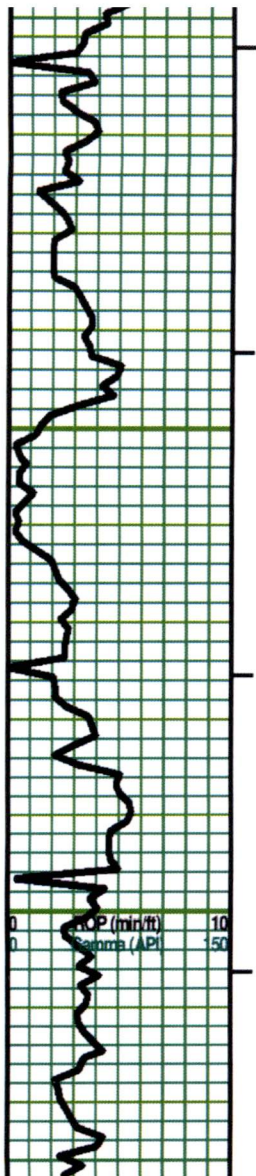
?

xxxxxx BIT TRIP @ 4,261' xxxxxx

LS - Tan/ Lt & Med Gray. Mot/Mixed. XF- Micro-xln. xln por. argil/shaly frags in part rare subchaly. No/ rare fossil frag/ Micro-Oolite (Dark Tan with Gray rimming). (few pcs: Chert - Clear/Grays. Mot semi-transparent, misc inclusions. No trip.) partly Firm. No/ tr vis por.

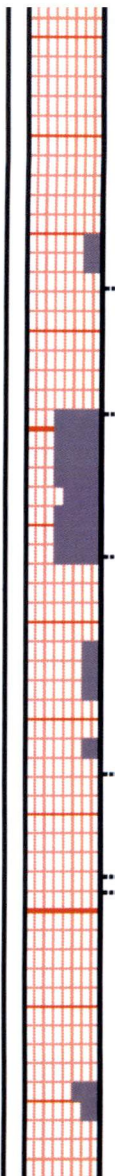
LS - XF-Micro-Oolites in Lt Grayish Tan/Tan Matrix. tr Re-xln. No/ rare gray argil rimmed Oolites. tr subchaly in part. Friable. tr/ Fair vis por.





4350

4400



some Re-xln. No/rare fossil frags. No/tr subchalky in part. partly Firm to Firm.

LS - Tan XF-/ Micro-Oolites or Oolcasts - Mixed. Clear/ Semi-transparent Tan Matrix. Friable. Good vis por.

LS - Tans/ some Grayish Tan. Mot/Mixed. XF-/Micro-xln. xln & part por. [some Chert - Off White/ Tans/ Lt Gray. Mot/Mixed. Opaque. misc inclusions. No trip.] No/ tr Re-xln. No/ tr vis por.

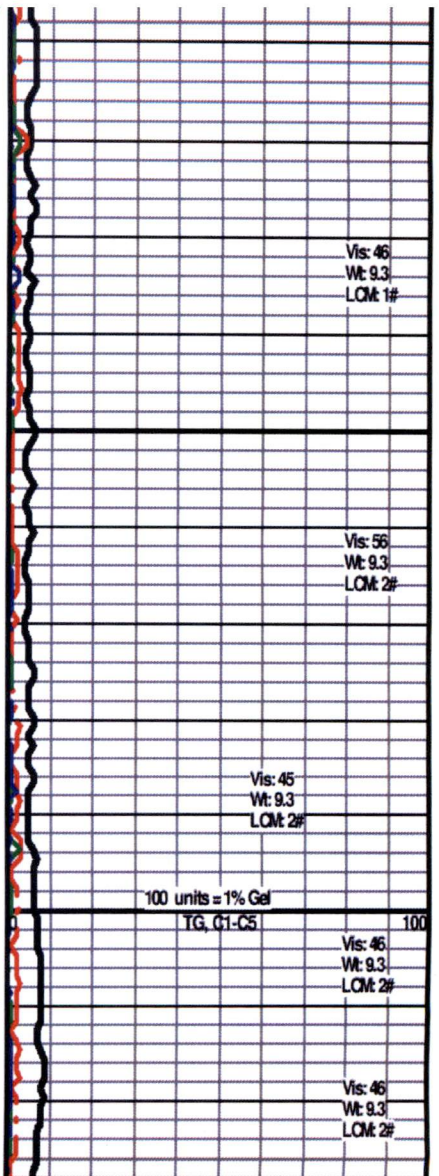
LS - Tan. Sing. Crypto-xln. xln por. Re-xln. Firm No vis por.

SH - Med Gray. Sing. soft.

Interbedded LS's and SH

LS - Tans. Sing/ Mot. XF-/ Micro-xln. xln por. No/ tr Re-xln. mostly Firm. No/ tr vis por.

LS - Tans. Sing. Micro-/ tr XF-xln. xln and sucrose por. No/ some misc dark specks. Friable in part. subchalky in part. No/ tr argil in part. No/ tr fossil frags. most No/ tr vis por.



Vis: 46
Wt: 9.3
LOM: 1#

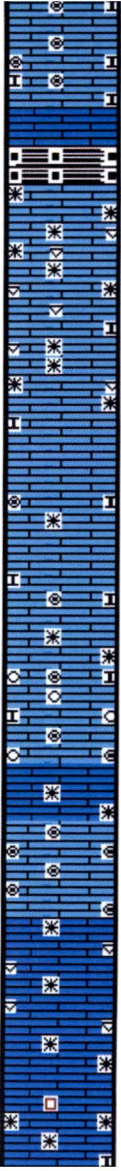
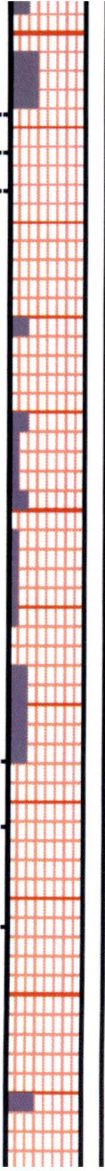
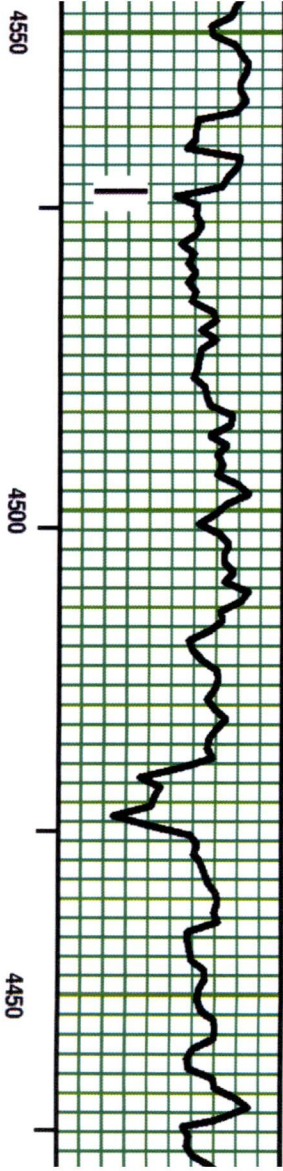
Vis: 56
Wt: 9.3
LOM: 2#

Vis: 45
Wt: 9.3
LOM: 2#

100 units = 1% Gel
TG, C1-C5 100

Vis: 46
Wt: 9.3
LOM: 2#

Vis: 46
Wt: 9.3
LOM: 2#



LS (3) - Gray/Brownish Gray Micro-Coalies. Opaque to semi-transparent Matrix. Misc Inclusions. Fair/Good vis por.

LS - Pale Graysh Tan/Tan. Sing. Crypto-xln. xln por. Firm. No/ tr vis

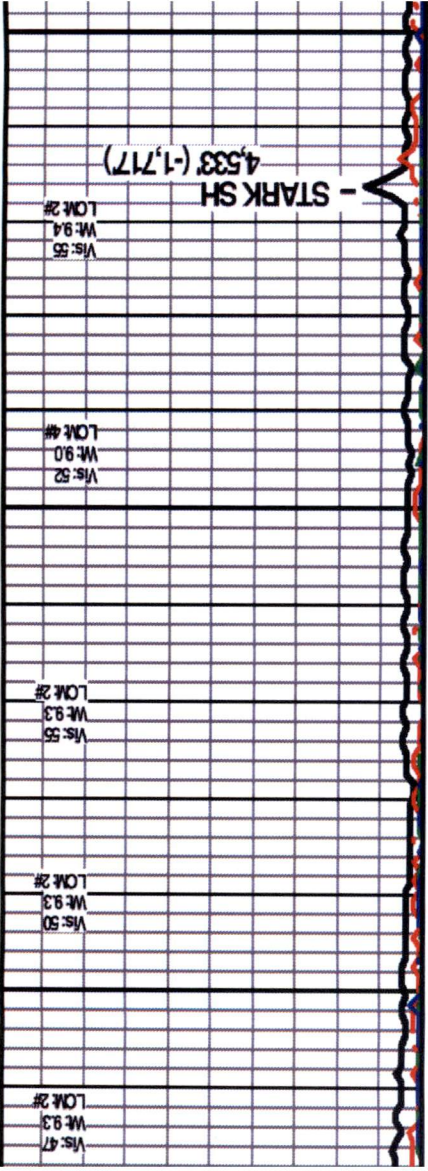
LS - similar to (3) above. Add: Tan Micro-Coalids in semi-transparent Matrix. Subchaly in part. Friable. Good vis por.

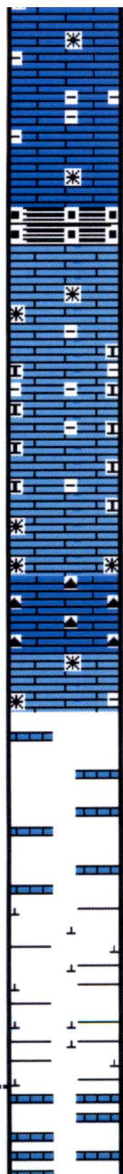
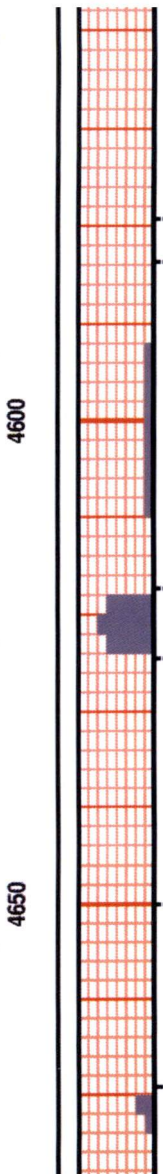
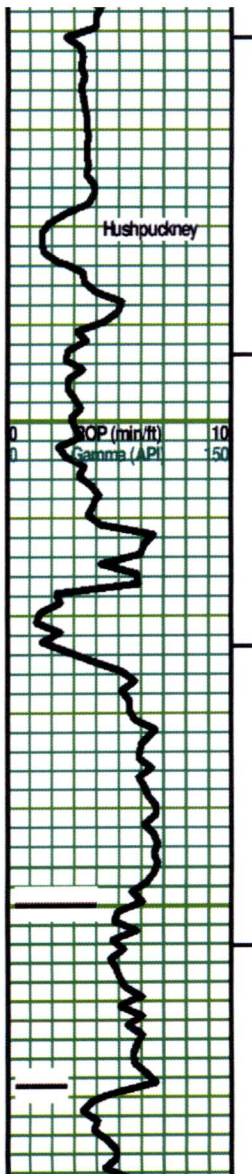
Add: Chert - Silvery Gray/ Gray. Sing. Opaque, mostly No/ tr minute Inclusions. No trip.

SH - Black. Sing. carb. soft

LS - Tan. Sing. Micro-xln. xln por. Firm. No/ tr vis por.

LS - Tan Micro-Coalies. Lt Tan chalky matrix. mostly Friable. tr fair vis por.





XF-Micro-xln. xln por. No/ tr Re-xln. mostly No/ tr argil in part. Firm. No/ tr vis por.

SH - Black. Sing. carb. minute pyrite. soft.
 LS - Lt/ Med Tan. Pale Lt Gray/Lt Gray at top. Micro-xln. xln por. Chalky in part. No/ tr Re-xln. tr argil in part. mostly No/ tr fossil frag. mostly partly Firm. No/ tr vis por.

Add: LS - Drusy Gray Mot with above and similar.

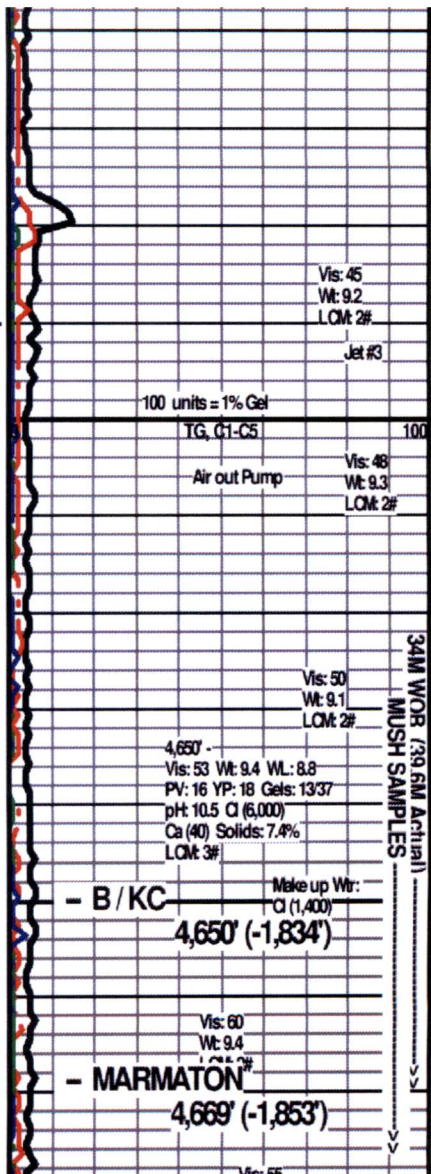
Chert - Grays/ Off White/ Silvery Gray/ tr Tan. Mot/ Mixed. Semi-transparent Matrix. Misc inclusions. No trip.

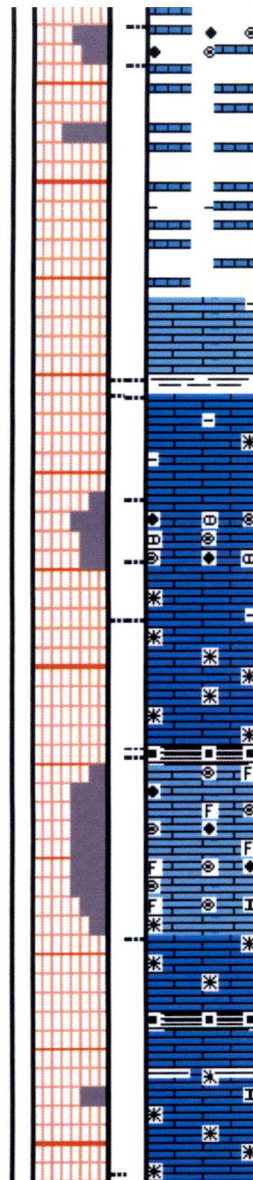
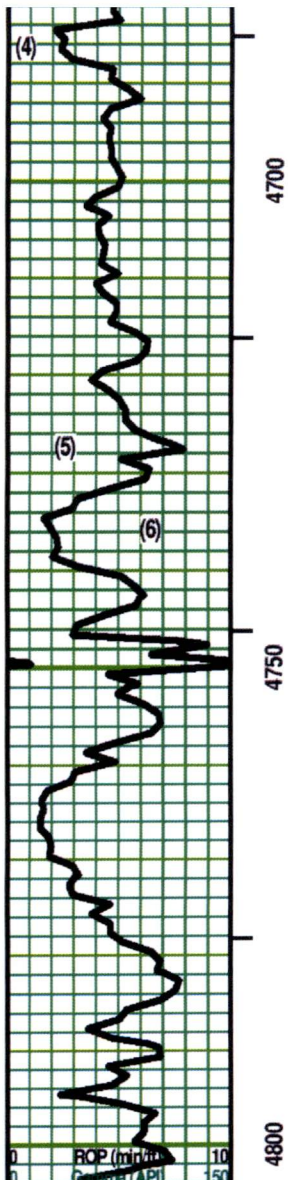
LS - Tans/ Lt Gray & Pale Lt Gray. Sing/ tr Mixed.
 XF-Micro-xln. xln por. No/ tr Re-xln. No/ tr argil in part. Firm. No/ tr vis por.

LS - Med/ tr Dark Gray, some Black. Sing/ Mot. Micro/ Crypto-xln. xln por. argil/shaly. Firm. No vis por

SH - Dark Gray. Sing. Highly limy. Dense. Firm.

LS - Tans/ tr to some Grayish Tan. Sing/ Mot/ tr Mixed. tr XF- mostly Micro-xln. xln por. No/ rare dark specks. mostly No/ few pcs subchalky. mostly No/ tr argil in part. No/ tr Re-xln. mostly Firm. mostly No/ tr vis por.





few pcs: LS (4) - Lt Tan Oolites + Ooloids. Clear/ semi-transparent Off Whitish Tan Matrix. Friable. Good vis por.

SH - Med Gray. Sing. soft.
 LS (5) - Tans/ tr Lt Gray or Grayish Tan. Sing/ some Mixed. Micro-/ tr Crypto-xin. xin por. No/ tr Re-xin. mostly Firm No/ tr vis por.

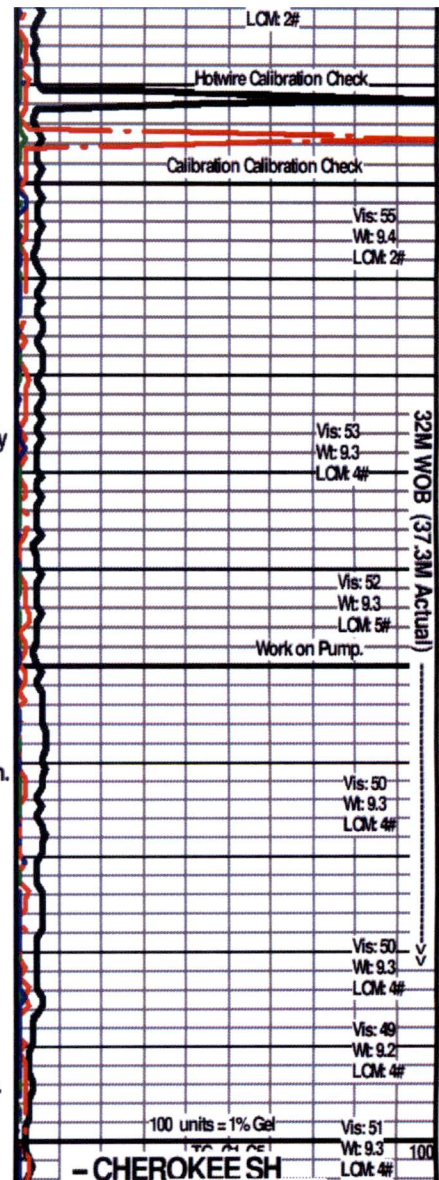
LS (6) - Lt Med Gray Oolites, Ooloids, nodules and misc frags. Clear/ semi-transparent Matrix. Friable. Good vis por.

LS - similar to (5) above.
 SH - Black Sing. carb. soft.

LS - similar to (5) above.
 SH - Black Sing. carb. soft. tr platy
 LS - Whitish Tan/ Lt Tan Oolites, Ooloids and fossil hash. Clear Matrix. part por. subchalky with at depth. Re-xin with depth. mostly Friable. Fair vis por.

Interbedded LS & SH
 LS - Tans/ some Grays. Sing/Mot. mostly XF-/ some Micro-xin. xin por. tr Re-xin. argil/shaly in part. rare subchalky with depth. mostly Firm. No/ tr vis por.

SH - Black Sing. carb. -or- Med/ Dark Gray. Sing. tr platy.



100 units = 1% Gel
 Vis: 51
 Wt: 9.3
 LOM: 4#

WOB (37.3M Actual)

MUSH SAMPLES

Vis: 50
Wt: 9.2
LOM: #

Jet #1

Vis: 58
Wt: 9.2+
LOM: 2#

Hotwire Calibration Check

Chromatograph Calibration Check

Vis: 60
Wt: 9.4
LOM: 2#

4.998
Vis: 54 Wt: 9.4 VL: 8.8
PV: 16 YP: 19 Gels: 14/36

pH: 11.0 Cl (5,500)
Ca (40) Solids: 7.4%

LOM: #
Vis: 53
Wt: 9.4
LOM: 2#

4,914' (-2,098')

Redcheck Hotwire Calibration Check

32M WOB (37.3M Actual)

MUSH SAMPLES

measured on 12/13

Sh - Grays, Sing. - or - Black Sing. Carb. Soft.

LS - Tans/ some Grays. Sing/lot. mostly XF-/ some
Micro-xdn. xdn por. No/ some Re-xdn. argill/shaly in part.
rare fossil frag. mostly Firm. No/ tr vis por.

some pcs: Med Tan. Sing. Micro-/tr Crypto-xdn. xdn por.
Firm. No vis por.

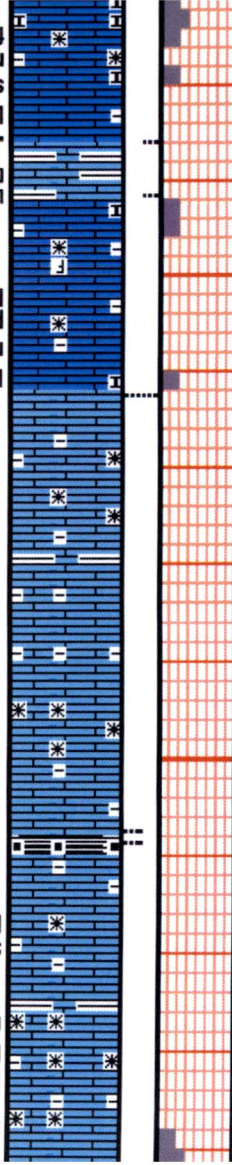
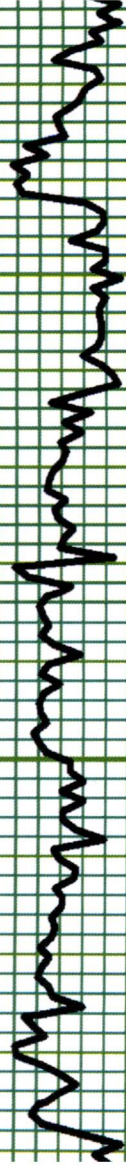
LS - Med Tan/ Grayish Tan/ Lt Gray. Not/ Mixed. tr XF-/
mostly Micro-xdn. xdn & rare part por. No/ tr Re-xdn. argill in
part. No/ rare fossil frags. mostly No/ tr subchalky. partly
Firm. No/ tr vis por.

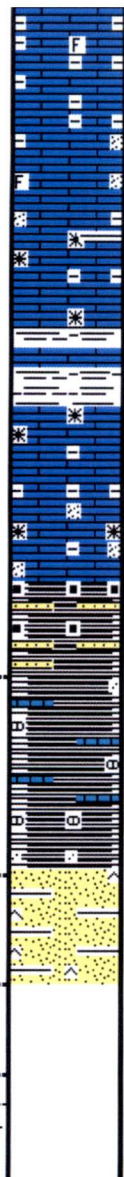
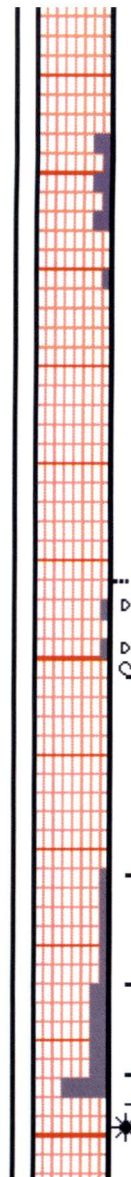
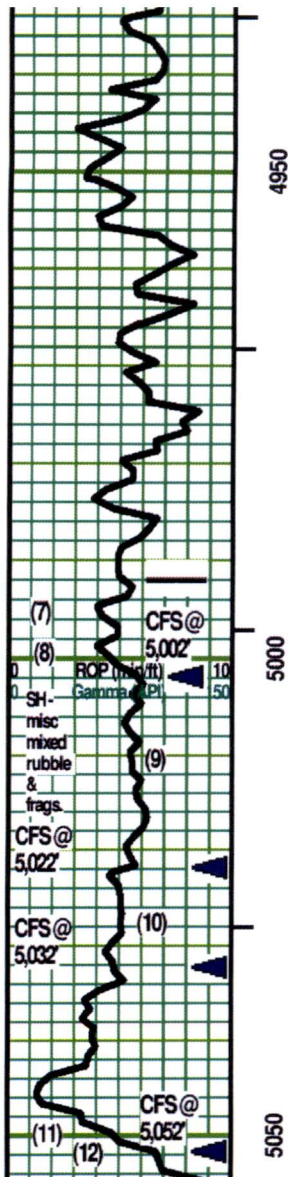
LS - Greenish Dark Gray. Sing. Crypto-xdn. xdn por. Highly shaly.
Dense. No vis por.

LS - Med Tan/ some Grayish Tan/ Lt & Med Gray. Sing/
some Mlt/ some Mixed. tr XF-/ mostly Micro-xdn. xdn &
rare part por. No/ tr Re-xdn. argill in part. No/ rare fossil
frags. mostly No/ tr subchalky. partly Firm. No/ tr vis por.

4850

4900





Add: minute dark specks

Add: LS - Druzy Gray/ Druzy Brown. Sing. Crypto-xln. xln por. argil in part. Firm. No vi por.

Add Interbedded SH - Med/ Dark Gray Sing. tr platy.

LS - Lt/ Med Brown, Lt Gray, Dark Tan. Mot/Mixed. Micro-/tr Crypto-xln. xln por. Re-xln. No/ tr subchalky. misc dark specks. mostly Firm. No/ tr vis por

Rubble

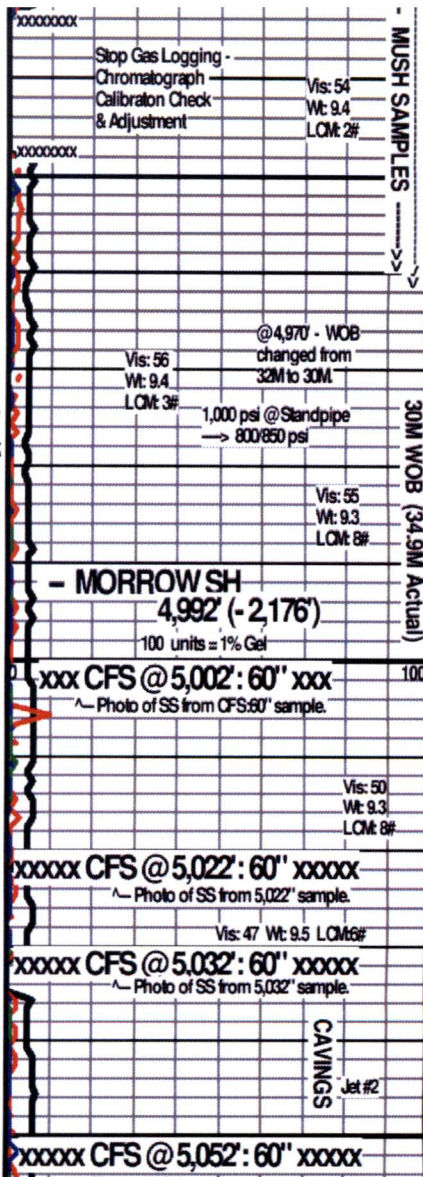
SH - Black Sing. carb. misc inclusions.
 SS (7) - Clear/ Black/ rare Green or Blue Green/ Off White. Mot/ tr Mixed. few pcs: Blue green/Off white/ Clear. Browns in 60' CFS sample. Silt sized qtz. SA/SR. Hl sort. Mod sph. Vitreous/ tr Frosted luster. Point/ some 'floating' grain contact. misc inclusions. some clay infill. partly Firm. tr vis por.

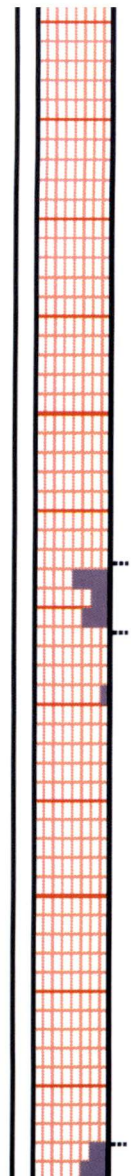
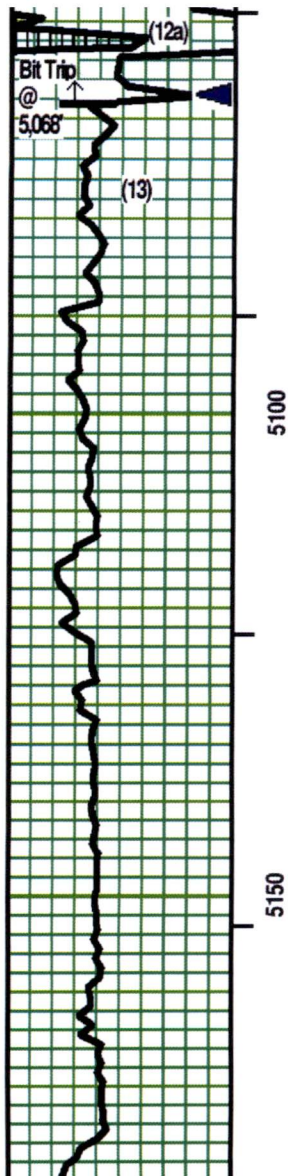
5,022 Sample: SS (8) - Clear, Brown, some Black, tr Blue Green. Mot Silt sized qtz / tr chloride grains. SA/SR. Highly sorted. Point grain contact. misc inclusions. No/ tr vis por. No/? odor. Dull greenish yellow fluorescence. A/C, no free oil or gas. Uniform stain. Asphaltic infill. No cut/ residual. No acid/residual

(9) - Mixture of SH, LS, misc inclusions (SS/tr Siltstone): SH-Dark Gray/ Black Sing. misc inclusions. LS - Med Tan. Sing. Micro-xln. xln & part por. Silt sized, SR, qtz grains. misc inclusions. SS streaks - similar to above. Misc carbonate nodules.

SS (10) - Clear/ Blue Green/ tr Off White. Mixed. Silt sized qtz and tr chlorite grains. SA/SR. Hl sort. Mod sph. Vitreous luster. some Point/ lots highly sutured grain contact. tr chlorite grains. some interbedded Med/Dark Gray lams. Firm. No/ tr vis por.

LS (11) - Off Whitish Tan/ Lt Tan/ Clear. Mot. Micro-xln. xln & part por.





LS (12) - Lt/Med VF-/ XF SR nodules. Mixed. Point/ some sutured nodule contact. minute misc inclusions. partly Firm. tr vis por. No/? odor. spotted dull yellow fluorescence. A/C, rare minute Dark Brown oil bleb floating to the water surface. Spotted, very minute Dark Brown/Black OIL spheres clinging to rx chip. Spotted Med/Dark Brown stain. Weak positive cut/ residual Weak positive acid/ residual.

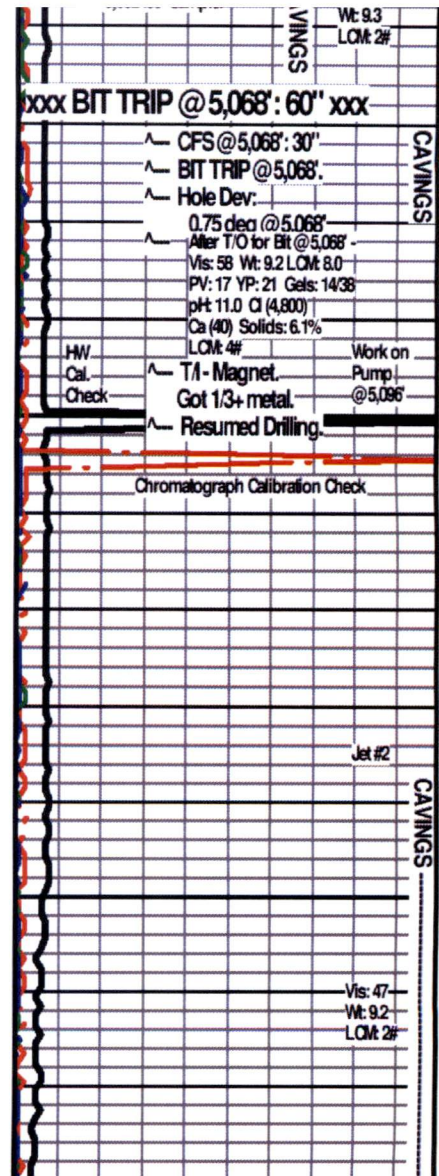
LS (12a) - Lt/Med VF-/ XF SR nodules. Mixed. Point/ some sutured nodule contact. minute misc inclusions (Silt sized qtz grains, rare dark specks), partly Firm. tr vis por.

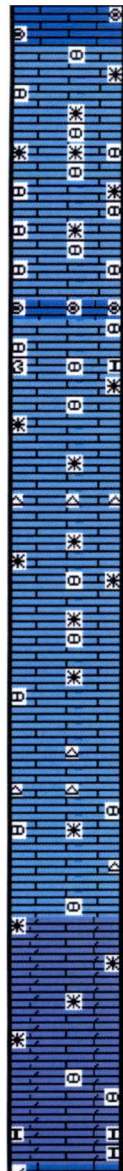
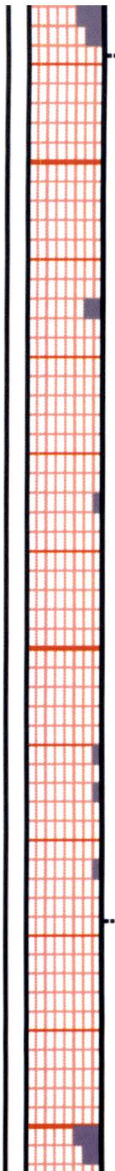
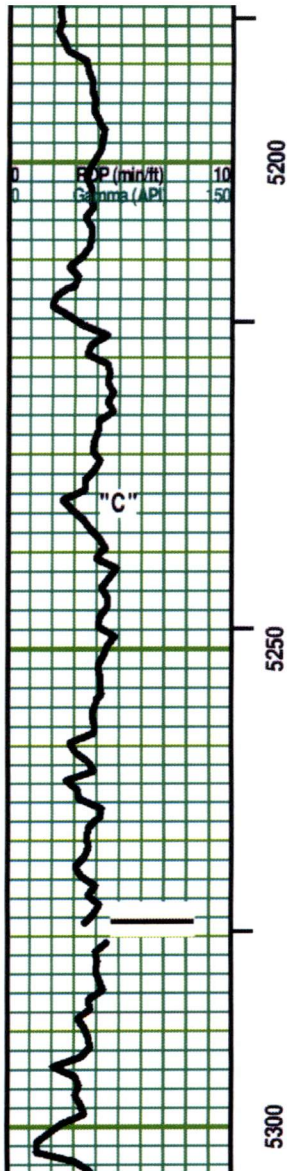
LS (13) - Lt/ Med Tan. Lt Tan/ some Whitish Tan XF nodules and Oolites. Micro-xln. xln & part por. mostly No/ v rare glauc flecks. [Add Chert - Drusy Gray/Off Whitish Gray/ Clear. Semi-transparent matrix. Off Whitish Gray Nodules inclusions. No Trip.] No/ tr subchalky in part. No/ tr Re-xln. Firm. No/ tr vis por.

LS - similar to above. Chert - Drusy Gray Opaque to Semi-transparent. Misc Whitish Gray/ Lt Gray inclusions. No trip.

LS - Lt/ Med Tan. Lt Tan/ some Whitish Tan XF nodules and Oolites. Micro-xln. xln & part por. mostly No/ v rare glauc flecks. [Add Chert - Drusy Gray/Off Whitish Gray/ Clear. Semi-transparent matrix. Off Whitish Gray Nodules inclusions. No Trip.] No/ tr subchalky in part. No/ tr Re-xln. Firm. No/ tr vis por.

LS - Lt/ Med Tan, Whitish Tan XF-/ Micro-xln. xln & part por. Lt Tan, semi-transparent Matrix. No/ tr subchalky





LS - Lt/ Med Tan. Lt Tan/ some Whitish Tan XF/ Micro nodules and Oolites (mixed). Micro-xdn. xdn & part por. [No/ rare Chert - Drusy Gray/Off Whitish Gray/ Clear. Semi-transparent matrix. Off Whitish Gray Nodules inclusions. No Trip.] No/ tr subchalky in part. No/ tr Re-xdn. Firm. No/ tr vis por.

Add: Off White, XF-Micro Oolites. Clear Matrix. Friable. No vis por.

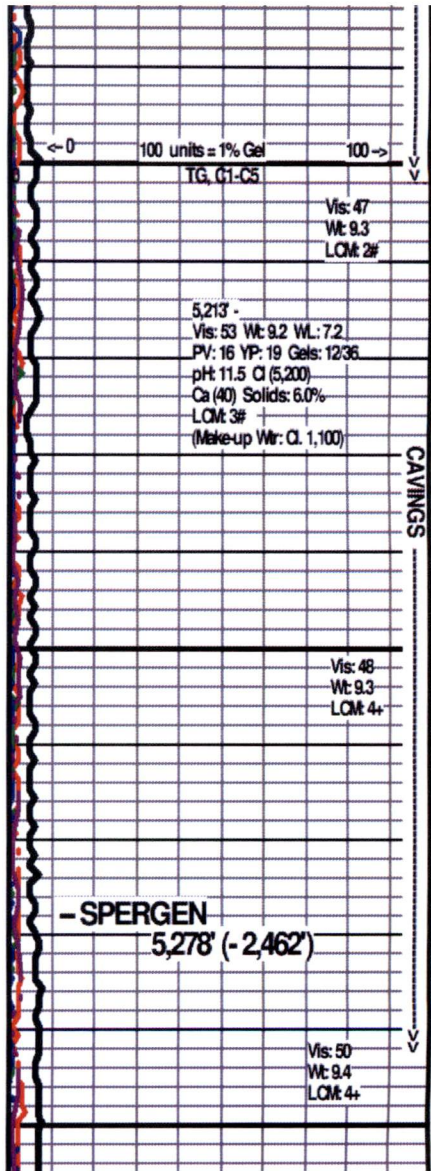
LS - Lt/ Med Tan. Lt Tan/ some Whitish Tan XF/ Micro nodules and Oolites (mixed). some misc fossil 'hash'. Micro-xdn. xdn & part por. [No/ rare Chert - Drusy Gray/Off Whitish Gray/ White/ tr Clear. Semi-transparent matrix. Off Whitish Gray Nodules inclusions. No Trip.] No/ tr subchalky in part. No/ tr Re-xdn. Firm. No/ tr vis por.

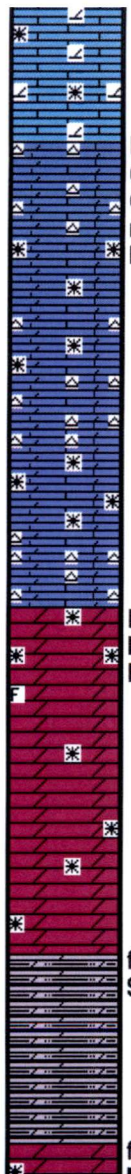
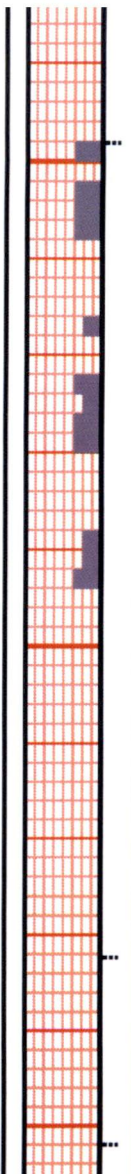
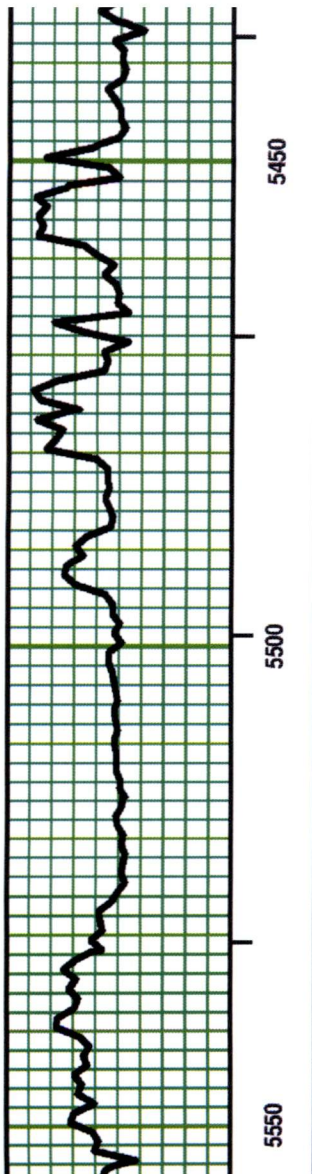
LS - Lt/ Med Tan. Lt Tan/ some Whitish Tan XF/ Micro nodules and Oolites (mixed). No. rare misc fossil 'hash'. Micro-xdn. xdn & part por. [No/ rare Chert - /Off Whitish Gray/ White/ tr Clear. Semi-transparent matrix. Off Whitish Gray Nodules inclusions. No Trip.] No/ tr subchalky in part. No/ tr Re-xdn. Firm. No/ tr vis por.

Add LS - Lt Brownish Tan. similar to above.

Add: LS (tr Dol) - Grayish Tan/ Med Tan. Sing. Crypto-xdn. xdn por. Firm. No vis por.

LS (tr Dol) - Grayish Tan/ Med Tan. Sing. mixture of: Crypto- Micro-xdn. xdn por. No/ tr Re-xdn. subchalky in part. Firm. No/ tr vis por.



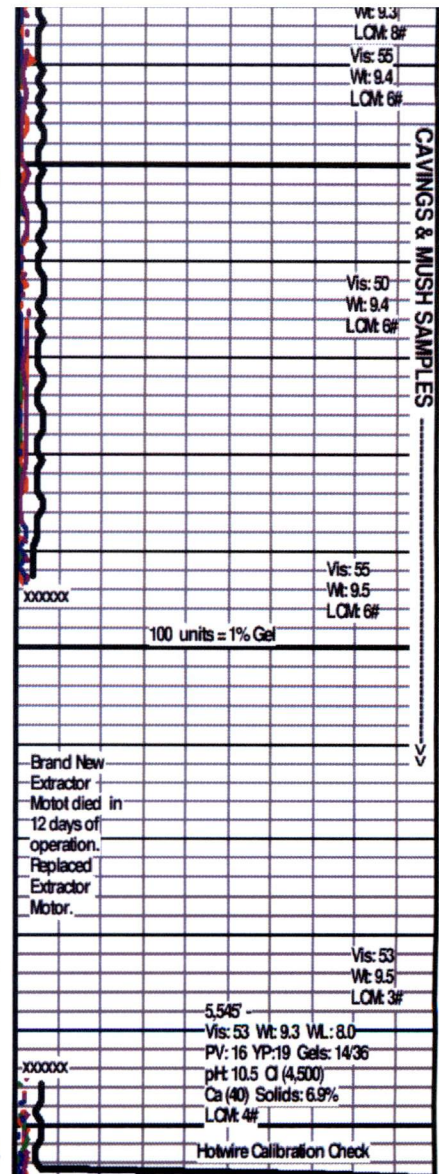


LS (Do) - Tans/Lt Gray. Sing/ mostly Mot. Micro- / tr
 Crypto-xdn. xln por. [Chert - Silvery Gray/ Off White/ Pale
 Gray. Sing/ some Mot. misc Inclusions, Opaque. No/ tr
 minute dark specks. No trip.] xln por. No/ tr Re-xln.
 Interbedded Friable or Firm. No/ tr vis por.

DOL - Lt/ Med Tan, Pale Lt Gray. Sing/ tr Mixed.
 Micro-/Crypto-xdn. Re-xln por. rare fossil frag 'ghost'.
 Firm. No vis por.

few pcs: DOL - Pale Lt Gray. Sing. Micro-Re-xln. xln por.
 Silty to Shaly, partly Friable. No/ tr vis por.

few pcs: DOL - Lt/ Med Tan, Pale Lt Gray. Sing/ tr Mixed.



Wt: 9.3
 LOM: 8#
 Vis: 55
 Wt: 9.4
 LOM: 6#

Vis: 50
 Wt: 9.4
 LOM: 6#

Vis: 55
 Wt: 9.5
 LOM: 6#

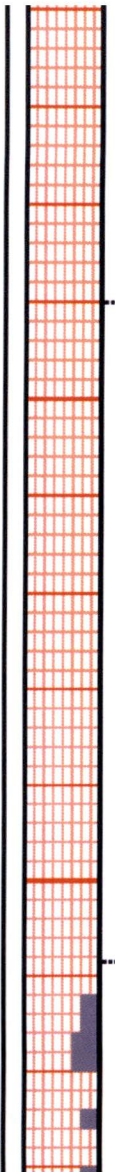
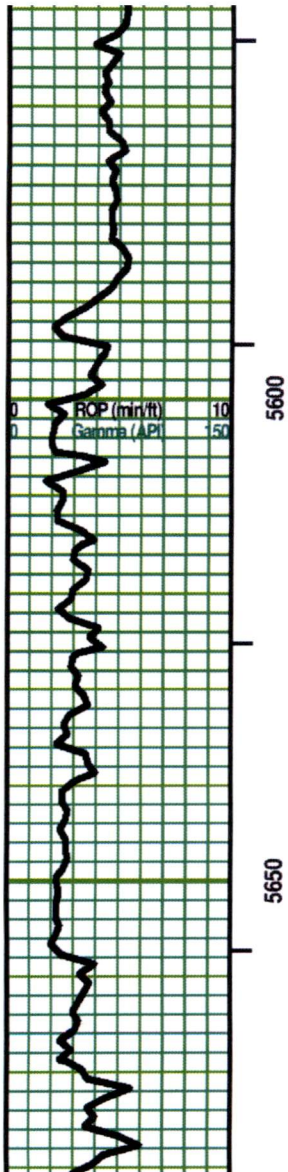
100 units = 1% Gel

Brand New
 Extractor
 Motor died in
 12 days of
 operation.
 Replaced
 Extractor
 Motor.

Vis: 53
 Wt: 9.5
 LOM: 3#

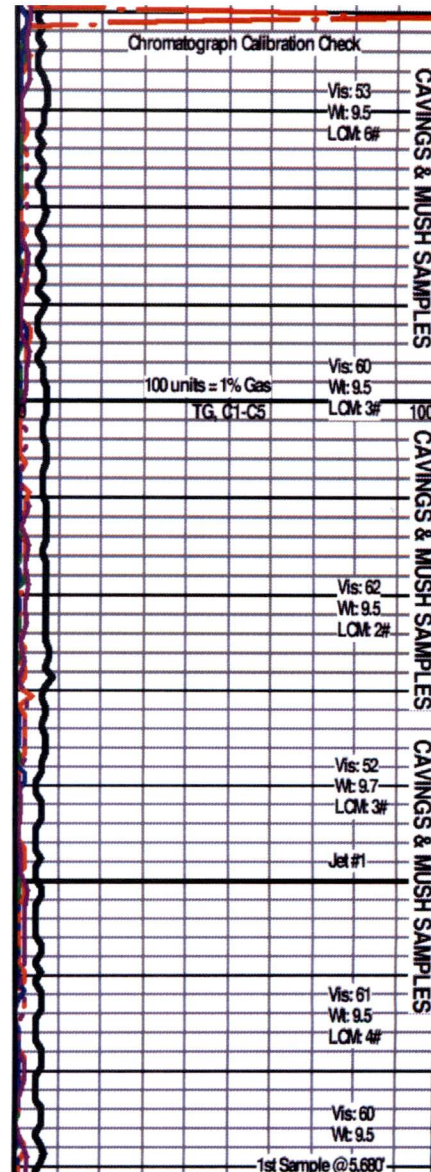
5,545'
 Vis: 53 Wt: 9.3 VL: 8.0
 PV: 16 YP: 19 Gels: 14/36
 pH: 10.5 Cl (4,500)
 Ca (40) Solids: 6.9%
 LOM: 4#

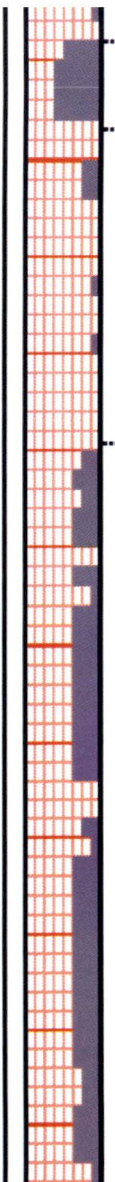
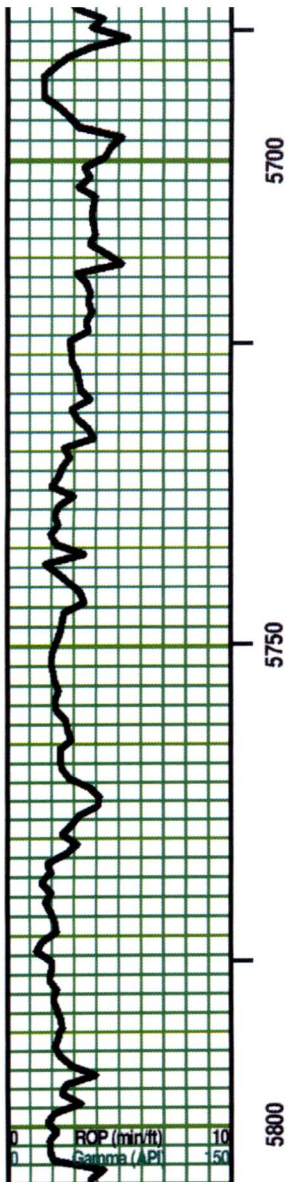
Hotwire Calibration Check



DOL - Pale Lt Gray/ Lt Gray. Sing. Micro-Re-xln. xln por. [lots Chert - White/ Off White/ some Pale Lt Gray. Sing/ Mot. semi-transparent Matrix. Off White spicules other misc inclusions. No trip.] Subchalky in part. mostly Friable. tr/ some fair vis por.

DOL - Pale Lt Gray/ Lt Gray/ Off Whitish Tan. Sing. Micro-Re-xln. xln and sucrosic por. [some/lots Chert - White/ Off White/ some Pale Lt Gray. Sing/ Mot. semi-transparent Matrix. mixture of: Off White spicules -or- other misc inclusions -or- XF-/Micro- Oolites or Coloids. Minute glauc flecks towards top. No trip.] Subchalky in part. mostly Friable. tr/ some fair vis por.





Chert - White/ Off White/ tr Pale Lt Gray. Sing/ tr mixed. Opaque to semi-transparent. Misc Inclusion: spicules, fossil frags, Micro-Oolites, No/ tr SA, XF, glauc grains. No tripolitic. Friable. No vis por.

DOL - Pale Lt Gray/ Lt Gray/ Off Whitish Tan. Sing. Micro-Re-xln. xln and sucrosic por. [lots Chert - White/ Off White/ some Pale Lt Gray. Sing/ Mot. semi-transparent Matrix. mixture of: Off White spicules -or- other misc inclusions -or- XF/Micro-Oolites or Ooloids. Minute glauc flecks towards top. No trip.] Subchalky in part. minute glauc flecks in part. mostly Friable. tr/ some fair vis por. LS at top.

lots of Chert - similar to above.
Intermixed / Interbedded with:
DOL - similar to above. Add: Lt Tan. Sing.

Add: Chert - Pale & Lt Gray. Mot. Brecc frags. semi-transparent matrix. No trip. No/ tr fossil frags. rare minute dark specks.

Add: DOL - Tan. Sing. Micro-xln. xln por riming Chert (similar to above).

Vis: 61
Wt: 9.6
LCM: 4#

Vis: 61
Wt: 9.6
LCM: 4#

Vis: 60
Wt: 9.5
LCM: 4#

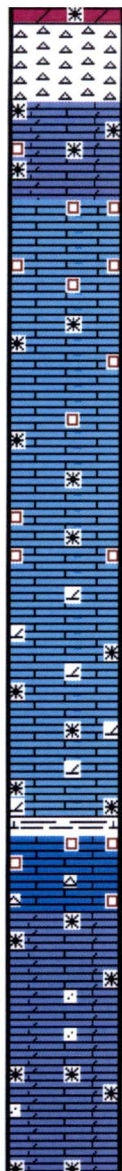
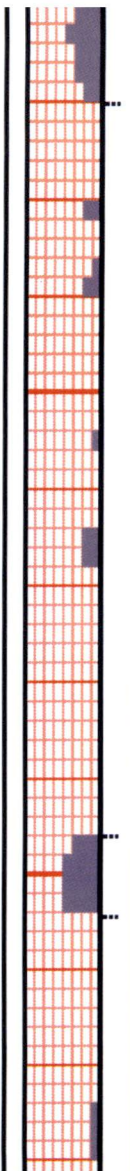
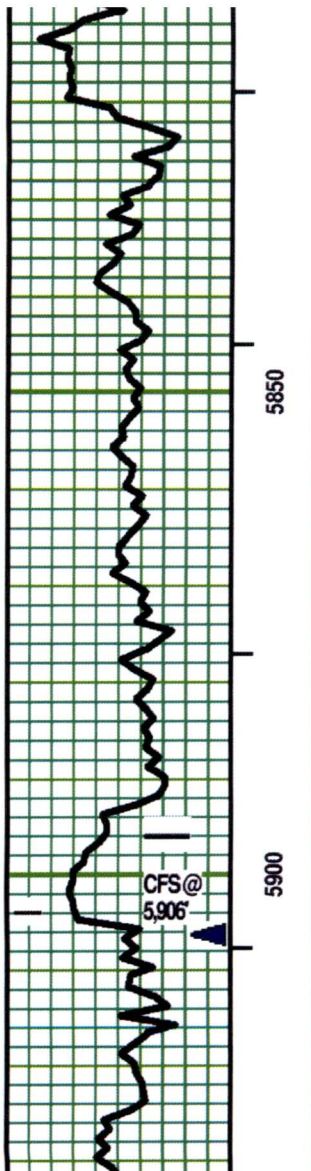
Vis: 62
Wt: 9.4
LCM: 6#

Vis: 56
Wt: 9.5
LCM: 6#

100 units = 1% Gas
TG, G1-C5

MUSH SAMPLES

100
↑



LS (DoI) - Lt/ Med Tan. Sing. Micro-xin. xin & sucrosic porosity. Re-xin. Firm. No/ tr vis por.

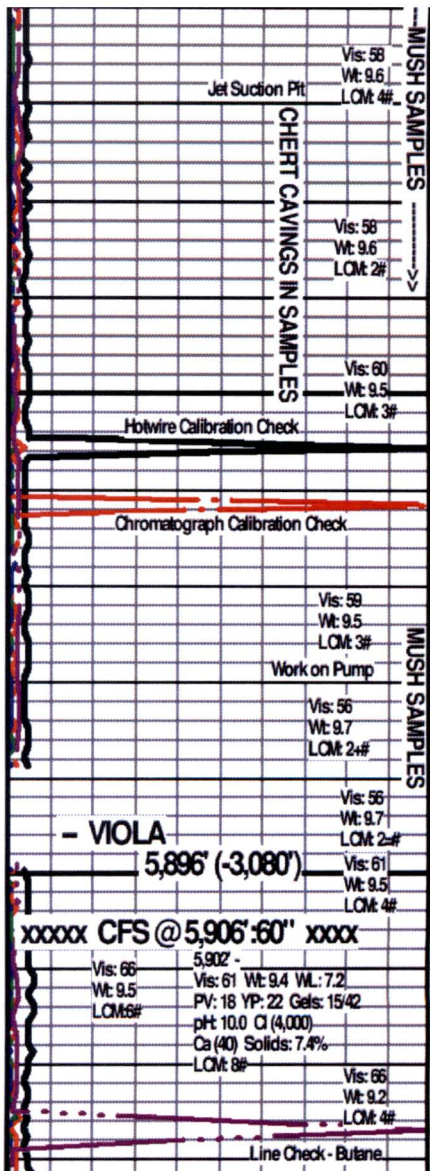
LS - Med Tan. Sing. Micro-xin. xin & some sucrosic por. Re-xin. FirmDense. No/ tr vis por.

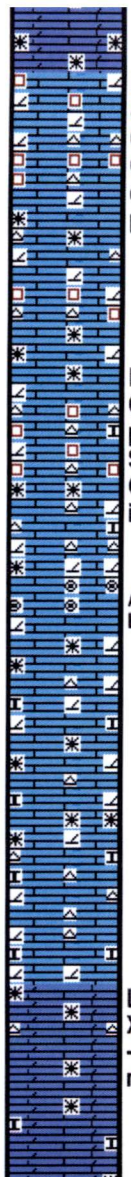
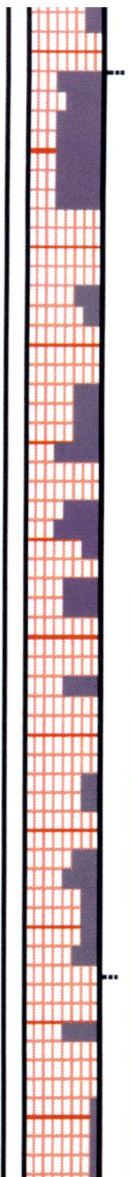
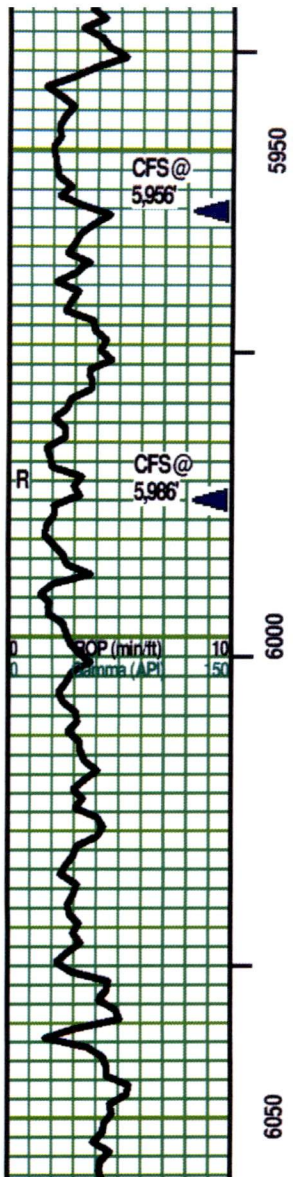
Add: LS (tr DoI) - Lt Brown. Sing. Micro- Crypto-xin. xin & tr sucrosic por. Re-xin. FirmDense. No/ tr vis por.

SH - Med Gray. Sing. tr calc. partly blocky.

NHT -
 LS - Lt Tan. Sing. Micro-xin. xin & tr sucrosic por. [some CHERT - Lt Silvery Gray. Sing. Opaque. misc dark inclusions. No trip.] Friable. tr vis por.

LS (tr DoI) - Lt & mostly Med Tan/ tr Pale Lt Gray. Sing. mostly Micro- tr XF- & tr Crypto-xin. xin por. Re-xin. No/ rare minute fossil frag. No/ some minute SA, vitreous qtz grains. Firm. No/ tr vis por.



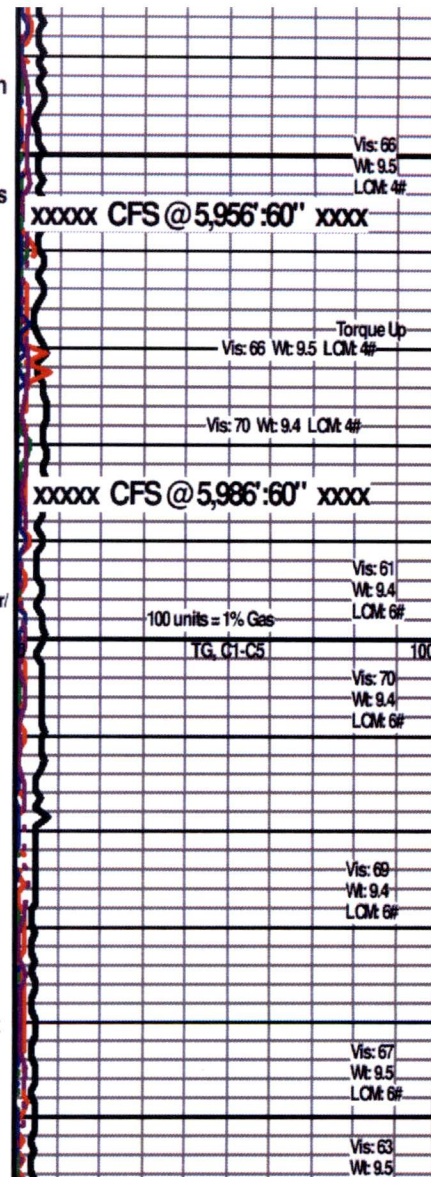


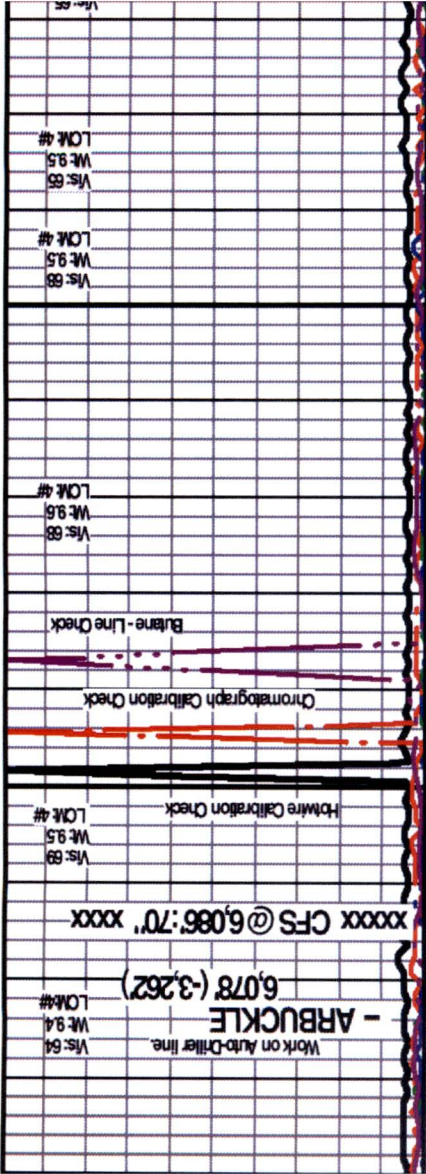
LS (tr Dol in part) - Lt & Med Tan. Sing. XF-/Micro-xln. xln & sucrosic por. No/tr Re-xln. partly Friable. [some CHERT - White, some Pale Bluish Silvery Gray, Lt Gray. Sing/ Mot/ Mixed. Opaque. No/tr minute dark specks. No trip.] mixture of tr/Fair visible and No vis por.

LS (Dol in part) - Lt & Med Tan. Sing. XF-/Micro-xln, tr Crypto-xln in part. xln & sucrosic por. No/tr Re-xln. partly Friable. [some CHERT - White, some Pale Bluish Silvery Gray, Lt Gray. Sing/ Mot/ Mixed. Opaque. No/tr minute dark specks. No trip.] subchalky in part. mixture of tr/Fair visible and No vis por.

Add: LS - Off White/ Lt Tan XF-/ tr Micro-Oolites, rare Colicast. Clear/ Lt Brownish Clear Matrix. Friable. Fair/ Good vis por.

LS (Hi Dol) - Tans/ Lt Gray. Sing/ some Mot. tr VF-/some XF-/ mostly Micro-xln. xln & sucrosic por. few pcs: Chert - similar to above. Re-xln in part. No/tr subchalky. mostly Firm. No/tr vis por.

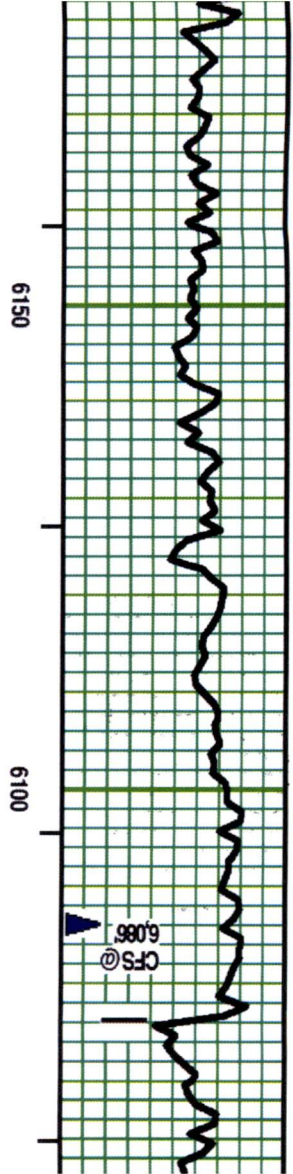
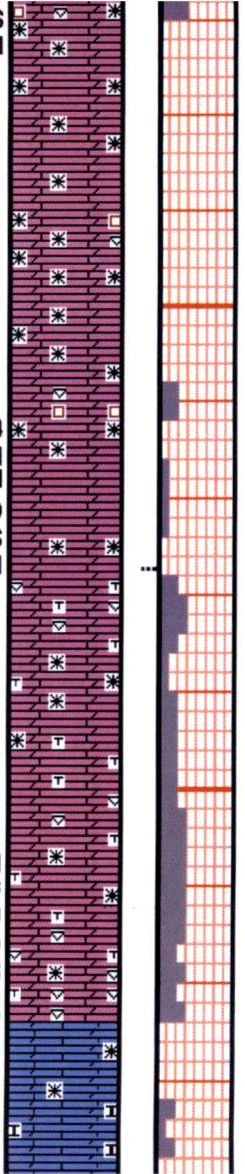


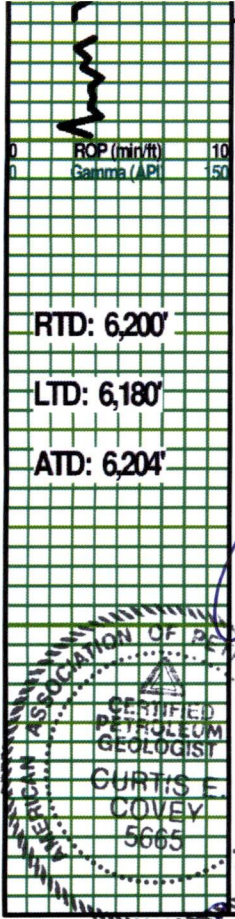


DOL (Hi Calc) - some Pale Grayish Tan/ mostly Med Tan.
 Sing/ some Mot/ tr/ Mixed. Micro-/ tr to some
 Crypto-Re-xin. No/ tr subeuhedral xtals. [no / tr Chert -
 mostly Off White/ White/ tr v Pale Lt Gray Sing. Opaque.
 some misc inclusions. No trip.] partly Firm. No/ tr/ some
 Fair vs por (intermixed).

DOL (Hi Calc) - mostly Med Tan/ v Pale Grayish Tan.
 Sing/ some Mot/ tr/ Mixed. Micro-/ tr to some
 Crypto-Re-xin. No/ tr subeuhedral xtals. xin & sucrosic
 por. [mostly no/ rare Chert - mostly Off White/ White/ tr v
 Pale Lt Gray Sing. Opaque. some misc inclusions. No
 trip.] partly Firm. No/ tr/ some Fair vs por (intermixed).

DOL (Hi Calc) - mostly Med Tan/ v Pale Grayish Tan.
 Sing/ some Mot/ tr/ Mixed. Micro-/ tr to some

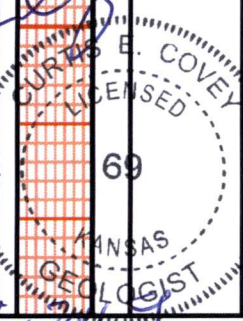
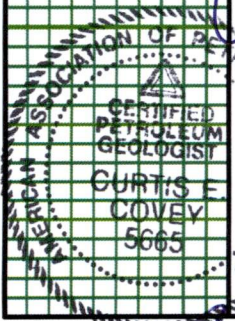




6200

RTD: 6,200'
 LTD: 6,180'
 ATD: 6,204'

6250



... (mostly) ...
 Pale Lt Gray, Sing. Opaque. some misc inclusions. No trip.] partly Firm. No/ tr/ some Fair vis por (intermixed).

FARIS #2 - 35
 2,245' FSL & 1,525' FEL 35-T26S-R31W
 Finney County, Kansas

BENGALIA LAND & CATTLE CO.
 Tulsa, Oklahoma

Vis: 63	Wt: 9.5	WL: 7.2	LCM: 4#
PV: 18	YP: 22	Gels: 15/48	
pH: 10.0	C: (4,000)		
Ca (40)	Solids: 8.3%		
LCM: 5#			
100 units = 1% Gas			
TG: (1-C5)			100

xxxxxx RTD @ 6,200' xxxxxxx
 ^ CFS @ 6,200': 75"
 ^ ST: 6 stands.
 ^ CHC: 70"
 Work Kelly (every 15').
 No Shake.
 Check Box (every 15") for
 Volume & Type of Fill.
 ^ Hole Dev: 1.5 deg @ RTD.
 ^ E-LOG.
 (Allied Horizontal Wireline)

Geologist:
 Curtis Covey
 COVEY - The Well Watchers
 Well Number: 1,181