

Sec. _____ Twp. _____ S. R. _____ ☐ East ☐ West County: _____

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	☐ Yes	☐ No	☐ Log	Formation (Top), Depth and Datum	☐ Sample
Samples Sent to Geological Survey	☐ Yes	☐ No	Name	Top	Datum
Cores Taken	☐ Yes	☐ No			
Electric Log Run	☐ Yes	☐ No			
Geologist Report / Mud Logs	☐ Yes	☐ No			
List All E. Logs Run:					

CASING RECORD ☐ New ☐ Used Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate				
☐ Protect Casing				
☐ Plug Back TD				
☐ Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☐ No (If No, skip questions 2 and 3)
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No (If No, skip question 3)
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No (If No, fill out Page Three of the ACO-1)

Date of first Production/Injection or Resumed Production/Injection:		Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (<i>Explain</i>) _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water	Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: ☐ Vented ☐ Sold ☐ Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: ☐ Open Hole ☐ Perf. ☐ Dually Comp. ☐ Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i>	PRODUCTION INTERVAL:	
		Top	Bottom

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record (Amount and Kind of Material Used)

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Indian Oil Co., Inc.
Well Name	BANKS NORTH 4
Doc ID	1770877

All Electric Logs Run

BOR
DIL
FF
MEL
PE
SON

Form	ACO1 - Well Completion
Operator	Indian Oil Co., Inc.
Well Name	BANKS NORTH 4
Doc ID	1770877

Tops

Name	Top	Datum
Indian Cave	2658	-995
Heebner	3556	-1893
Douglas	3588	-1925
Upper Douglas SS	3606	-1943
Lower Douglas SS	3699	-2036
Brown Lime	3753	-2090
Lansing	3765	-2102
Stark	4094	-2431
Hushpuckney	4134	-2471
Mississippi	4272	-2609
Kinderhook	4377	-2714
Viola	4546	-2883
Simpson Sh	4630	-2967
Simpson Sand	4650	-2987
Arbuckle	4738	-3075

Form	ACO1 - Well Completion
Operator	Indian Oil Co., Inc.
Well Name	BANKS NORTH 4
Doc ID	1770877

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	222	60/40 pozmix z	200	CaCl/Cello
Production	7.875	5.5	15.5	4763	H-long	175	+30sx h-plug

Geologic Report
Aaron L. Young

Drilling Time and Sample Log

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

Well Name: Banks North #4
API: 15-007-24486
Location: Section 36 - T30S - R12W
License Number: 31938
Spud Date: 12/09/2023
Surface Coordinates: 1400' FNL and 495' FWL
Approx. NE - NW - SW - NW
Region: Barber Co., KS
Drilling Completed: 12/15/2023
Bottom Hole Coordinates:
Ground Elevation (ft): 1652' K.B. Elevation (ft): 1663'
Logged Interval (ft): 3400' To: 4792' Total Depth (ft): 4792'
Formation: Arbuckle
Type of Drilling Fluid: Chemical - MudCo

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

OPERATOR

Company: Indian Oil Co., Inc
Address: PO Box 209
Medicine Lodge, KS 67104-0209

GEOLOGIST

Name: Aaron L. Young, M.S.
Company: Young Consulting LLC
Address: 929 W. Douglas Ave
Wichita, Kansas 67213

General Info

CONTRACTOR: Sterling Drilling Rig #4

BIT RECORD:

No.	Size	Make	Jets	Out	Feet	Hours
1	12-1/4	HTC MX1	14-14-14-14	227'	227'	3.00
2	7-7/8	OK5165	5x14's	4324'	4097'	51.25
3	7-7/8	BB616	6x13's	4792'	468'	4.75

Surveys: 198'-0.1, 227'-0.1, 321'-0.0, 444'-0.1, 444'-0.1, 538'-0.1, 631'-0.1, 726'-0.2, 822'-0.1, 917'-0.1, 1014'-0.0, 1108'-0.1, 1300'-0.2, 1395'-0.3, 1491'-0.4, 1586'-0.5, 1682'-0.2, 1777'-0.2, 1873'-0.2, 1968'-0.2, 2159'-0.1, 2255'-0.0, 2446'-0.2, 2542'-0.2, 2637'-0.1, 2732'-0.2, 2923'-0.1, 3019'-0.1, 3114'-0.2, 3210'-0.2, 3306'-0.7, 3401'-0.6, 3497'-0.4, 3974'-0.2, 4070'-0.2, 4166'-0.1, 4261'-0.0, 4357'-0.3, 4452'-0.7, 4548'-0.7, 4643'-0.6, 4739'-0.5, 4792'-0.7

GENERAL DRILLING AND PUMP INFORMATION:

Drilling with 11,000 lbs. on bit and approx 90 RPM.
Pumping approx 1000-1075 psi at standpipe @ 64-65 SPM

Daily Status

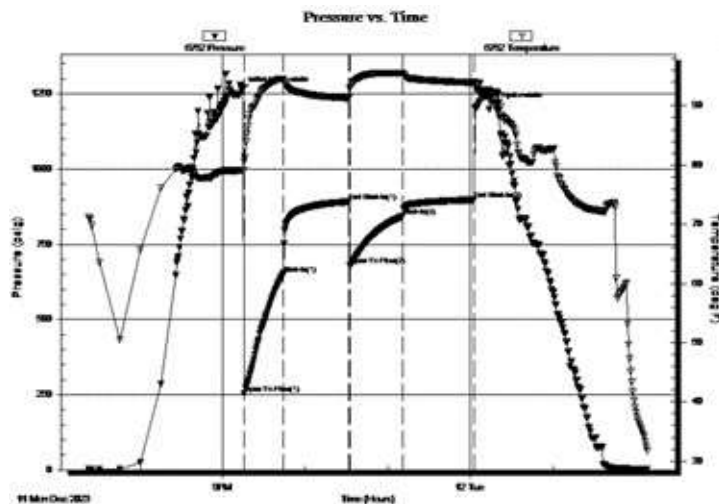
12/09/23 Spud @ 5:00am, drilled 227'. Set 5 jts of surface casing.
 12/10/23 Drilling @ 726'
 12/11/23 Drilling @ 2270', DST #1
 12/12/23 Drilling @ 2864'
 12/13/23 Drilling @ 4046'
 12/14/23 TIH w/ bit @ 4306' after DST #2, DST #3
 12/15/23 Drilling @ 4530', TD'd at 4792'
 12/16/23 Running 111 jts of new limited service 17# production casing set @ 4763' w/ 175# hurricane cement.

DST #1 INDIAN CAVE 30"-45"-30"-45"

IF: BOB in 1 min. Built to 205"
 ISI: No blow back
 FF: BOB in 2 min. Built to 138"
 FSI: No blow back

Rec'd: 1650' W (100% W)

SIP: 891-989#
 FP: 254-652#, 679-843#
 HP: 1261-1208#

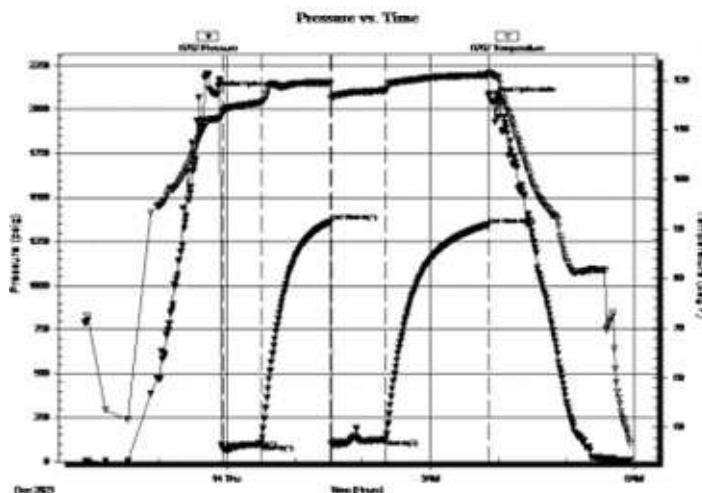


DST #2 Miss 4242' - 4306' 30" - 60" - 45" - 90"

IF: BOB in 1 min, built to 310"
 ISI: No blow back
 FF: BOB ASAO, built to 400"
 FSI: Blow back in 30 sec. 7 inches, GTS

Rec'd: 336' GMO (60% G, 35% O, 5% M)

SIP: 1362-1343#
 FP: 77-105#, 98-128#
 HP: 2086-2049#



DST #3

Miss 4306' - 4324'

30" - 60" - 45" - 90"

IF: Fair building blow, 2.5"

ISI: No blow back

FF: Tool plugged, flushed, weak surface blow

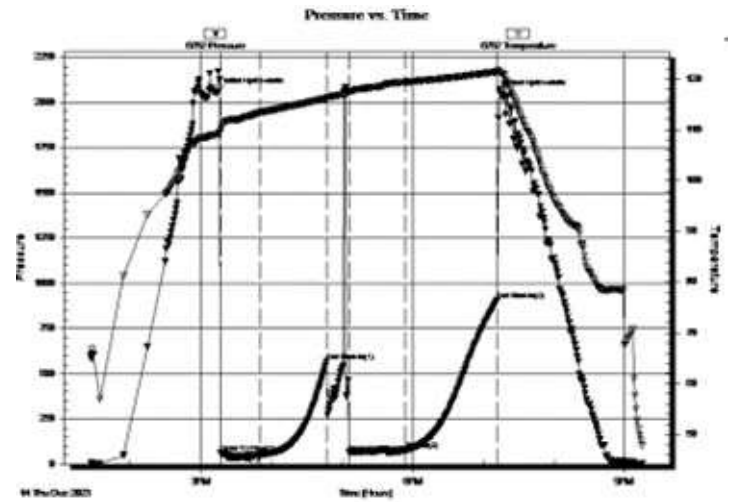
FSI: No blow back

Rec'd: 20' OSM (1% O, 99% M)

SIP: 567-906#

FP: 64-54#, 65-78#

HP: 2056-2049#



Log Tops		
Indian Cave	2658	-995
Heebner	3556	-1893
Douglas	3588	-1925
Upper Douglas SS	3606	-1943
Lower Douglas SS	3699	-2036
Brown lime	3753	-2090
Lansing	3765	-2102
Stark	4094	-2431
Hushpuckney	4134	-2471
Mississippi	4272	-2609
Kinderhook	4377	-2714
Viola	4546	-2883
Simpson Sh	4630	-2967
Simpson Sand	4650	-2987
Arbuckle	4738	-3075

LOOK AT TOP 2' OF UPPER DOUGLAS SS BEFORE ABANDONMENT

ROCK TYPES

Anhy
Bent
Brec
Cht
Clyst
Coal
Congl
Dol

Gyp
Igne
Lmst
Meta
Mrlst
Salt
Shale
Shcol

Shgy
Sltst
Ss
Till
Carb sh
Dol
Dtd
Gry sh

Sandylms
Shale
Sltstn
Shlyslts
Sltyslts
Lms

ACCESSORIES

MINERAL

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
 Chlorite
 Dol
 Sand
 Sltly

Fossil

Algae
 Amph
 Belm
 Bioclst
 Brach
 Bryozoa
 Cephal
 Coral
 Crin
 Echin
 Fish
 Foram

Fossil
 Gastro
 Oolite
 Ostra
 Pelec
 Pellet
 Pisolite
 Plant
 Strom
 Fuss
 Oomold

STRINGER

Anhy
 Arg
 Bent
 Coal
 Dol
 Gyp
 Ls
 Mrst
 Sltstrg
 Ssstrg
 Carbsh

Clystn
 Dol
 Grysh
 Gryslt
 Lms
 Sandylms
 Sh
 Sltstn

TEXTURE

Boundst
 Chalky
 Cryxln
 Earthy
 Finexln
 Grainst
 Lithogr
 Microxln
 Mudst
 Packst
 Wackest

OTHER SYMBOLS

POROSITY TYPE

Earthy
 Fenest
 Fracture
 Inter
 Moldic
 Organic
 Pinpoint
 Vuggy

SORTING

Well
 Moderate
 Poor

ROUNDING

Rounded
 Subrnd
 Subang
 Angular

OIL SHOWS

Even
 Spotted
 Ques
 Dead
 Gas show

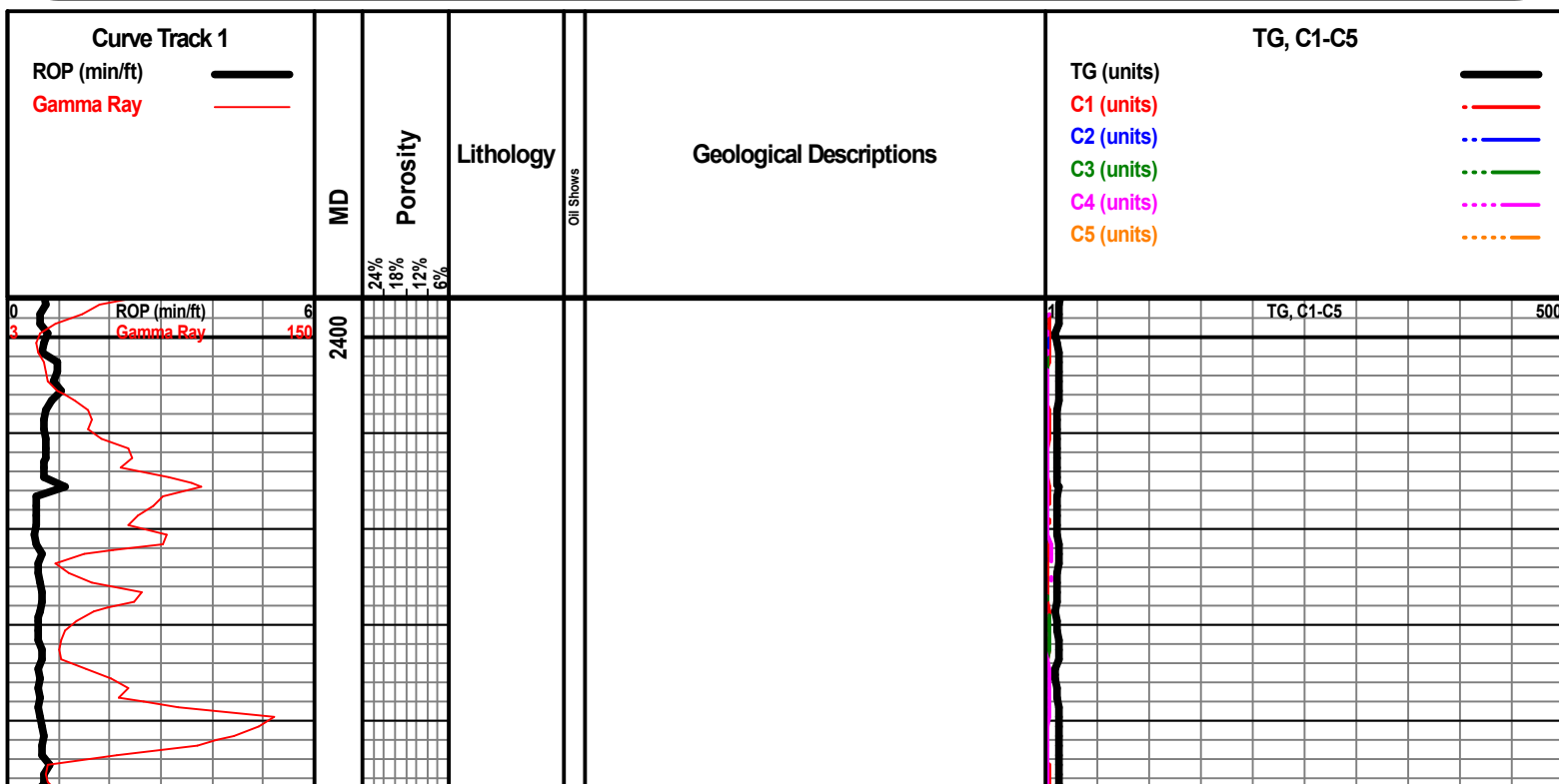
INTERVALS

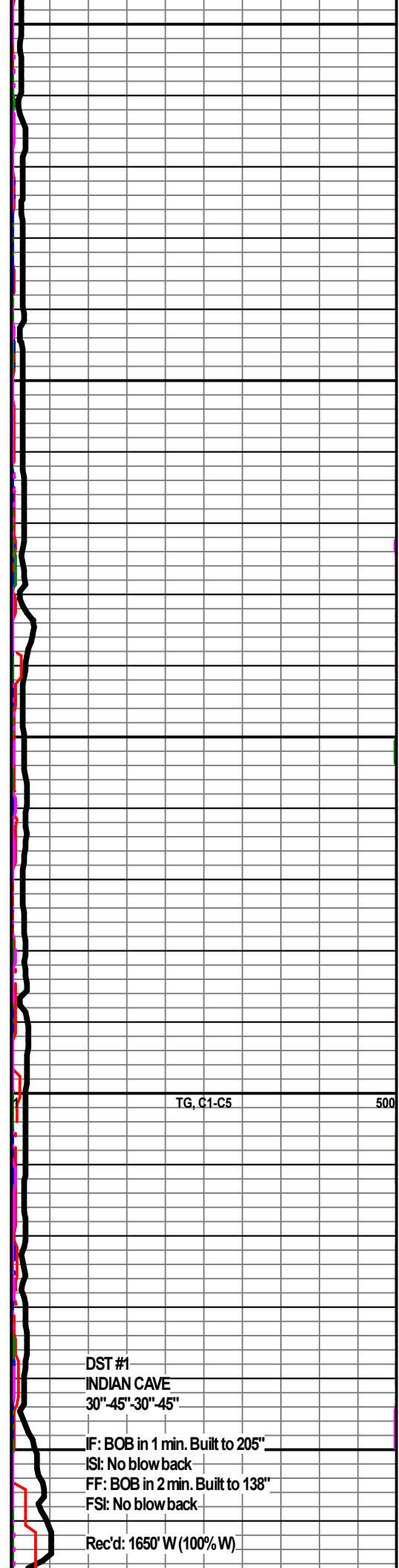
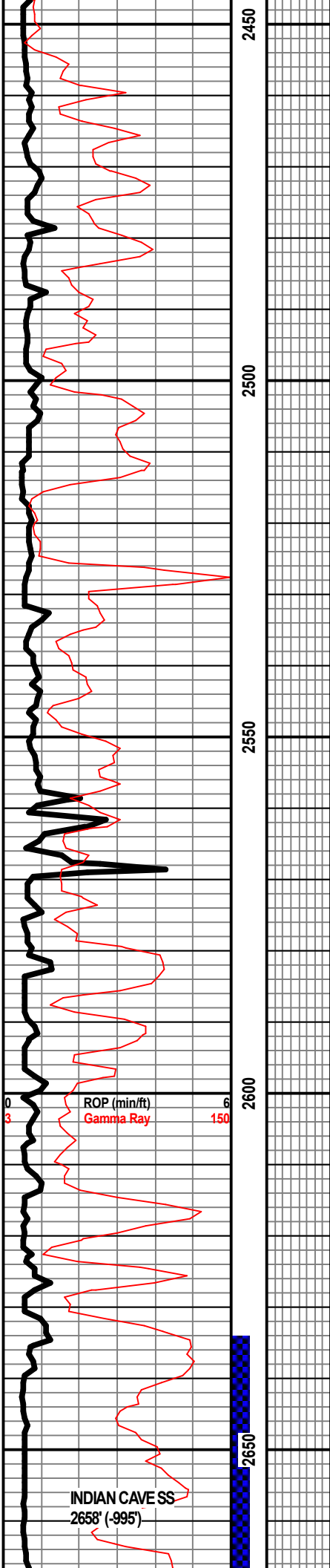
Core
 Dst

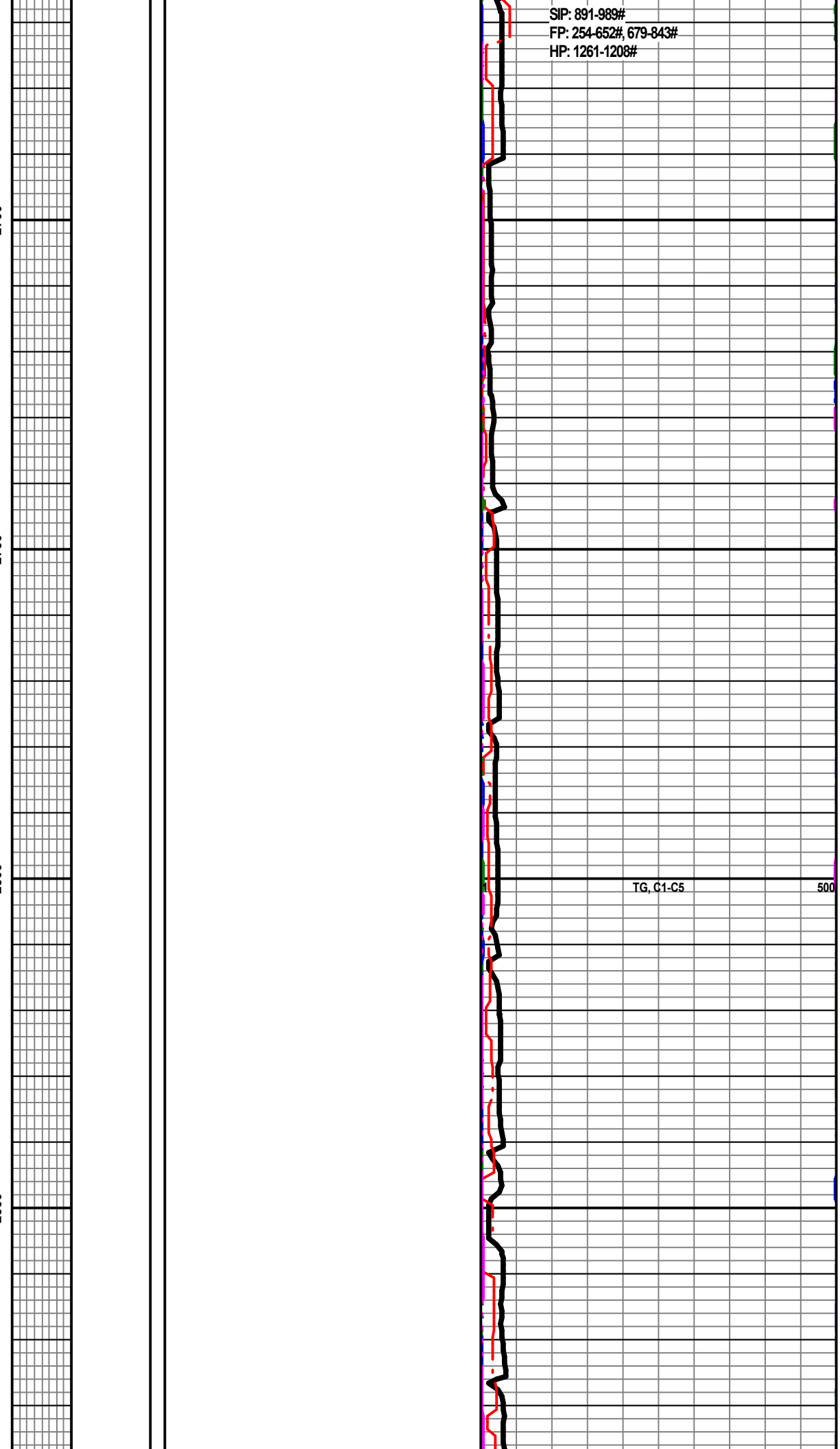
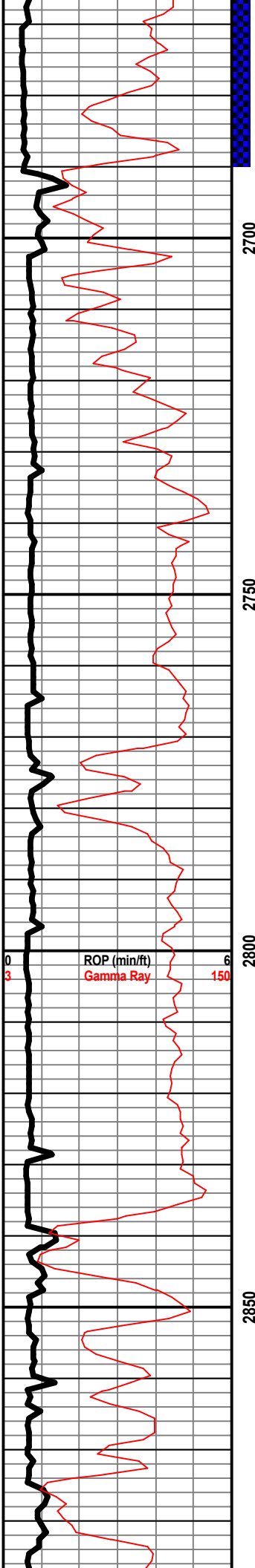
Dst

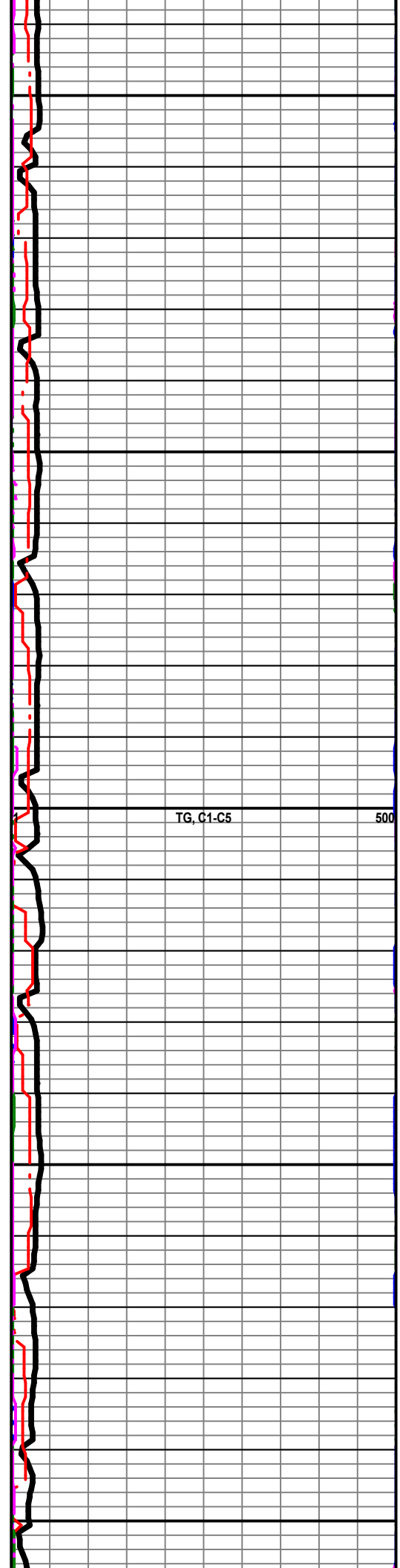
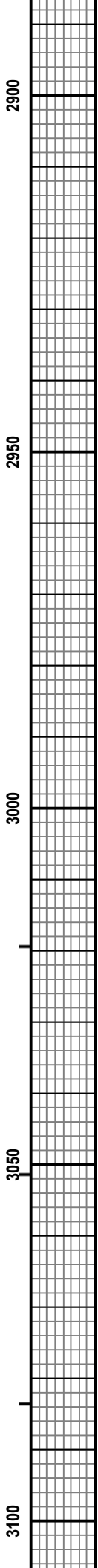
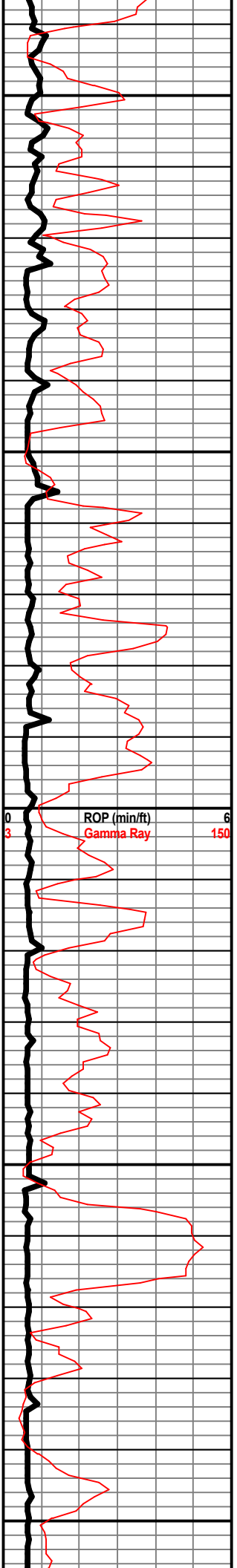
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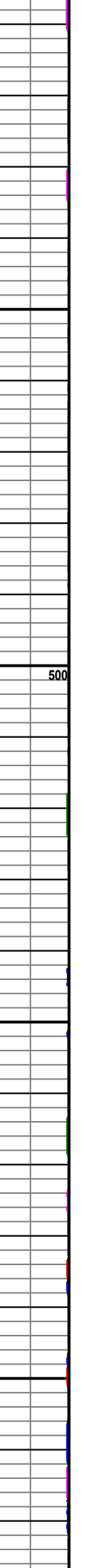
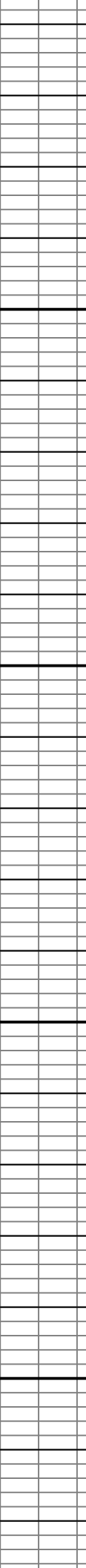
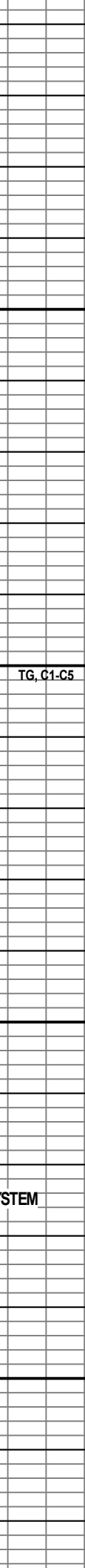
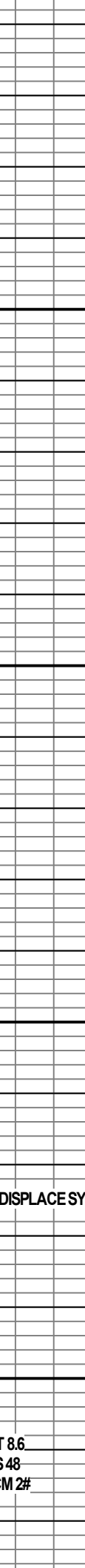
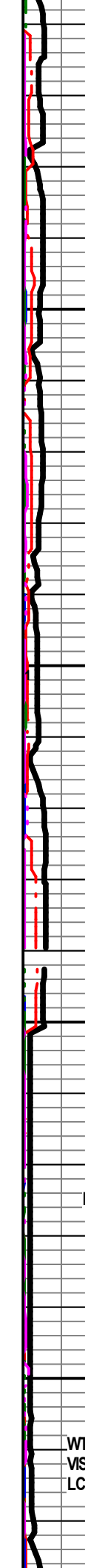
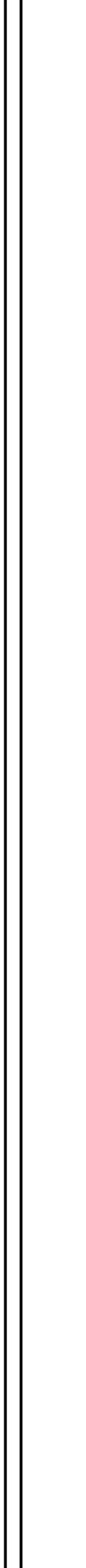
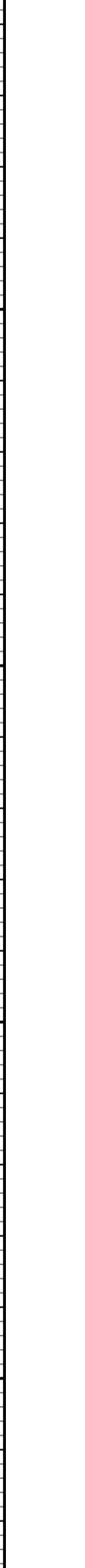
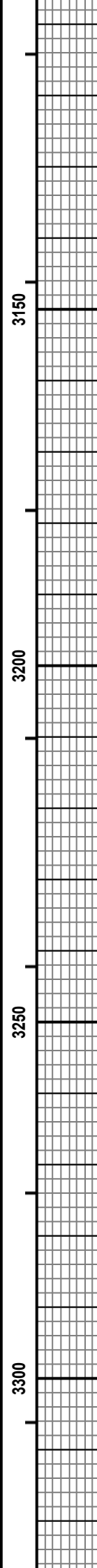
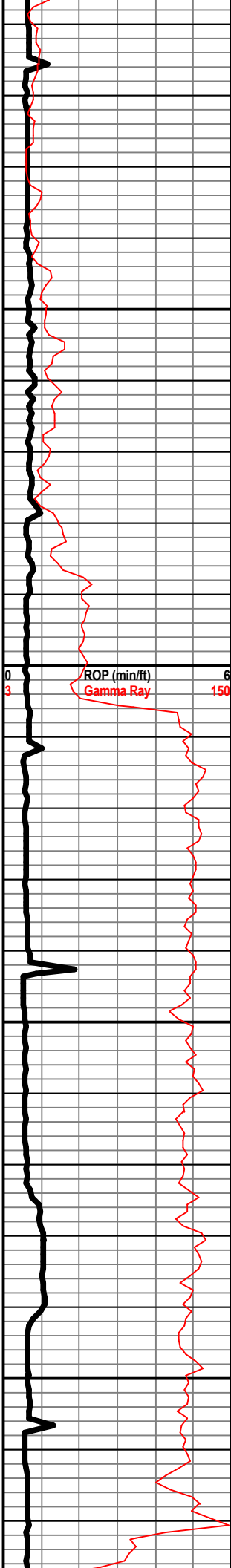
Rft
 Sidewall
 Conn

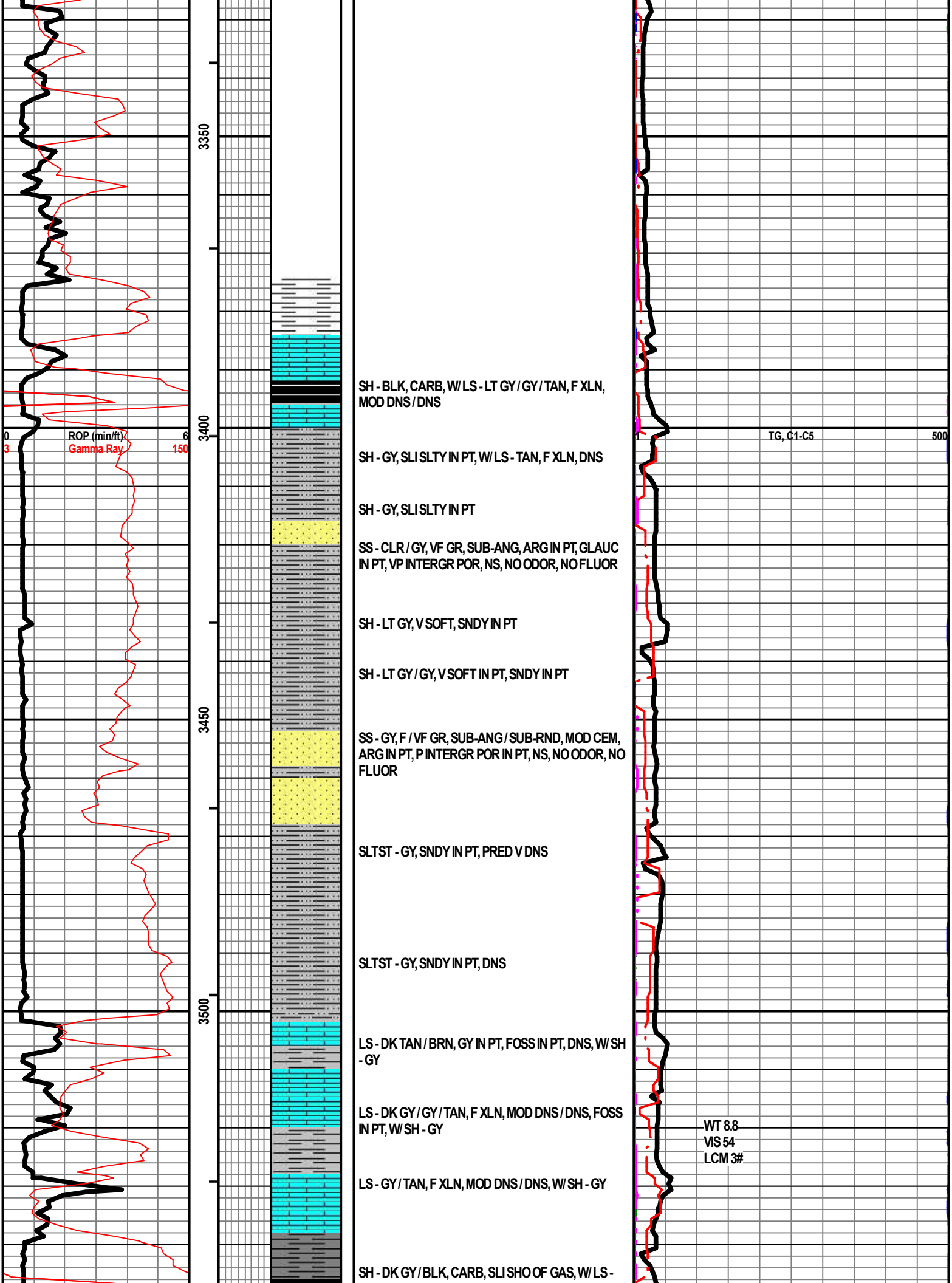


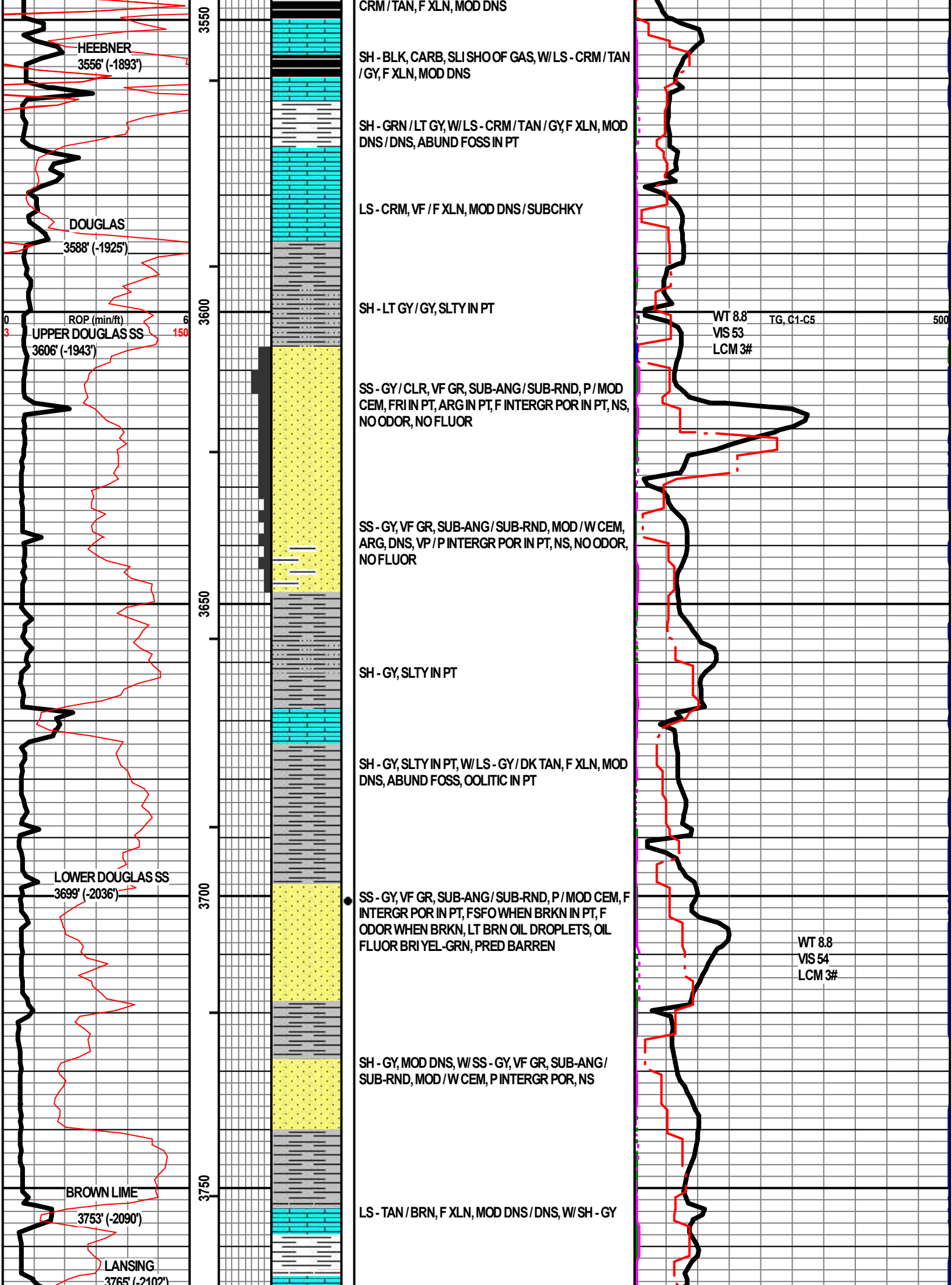




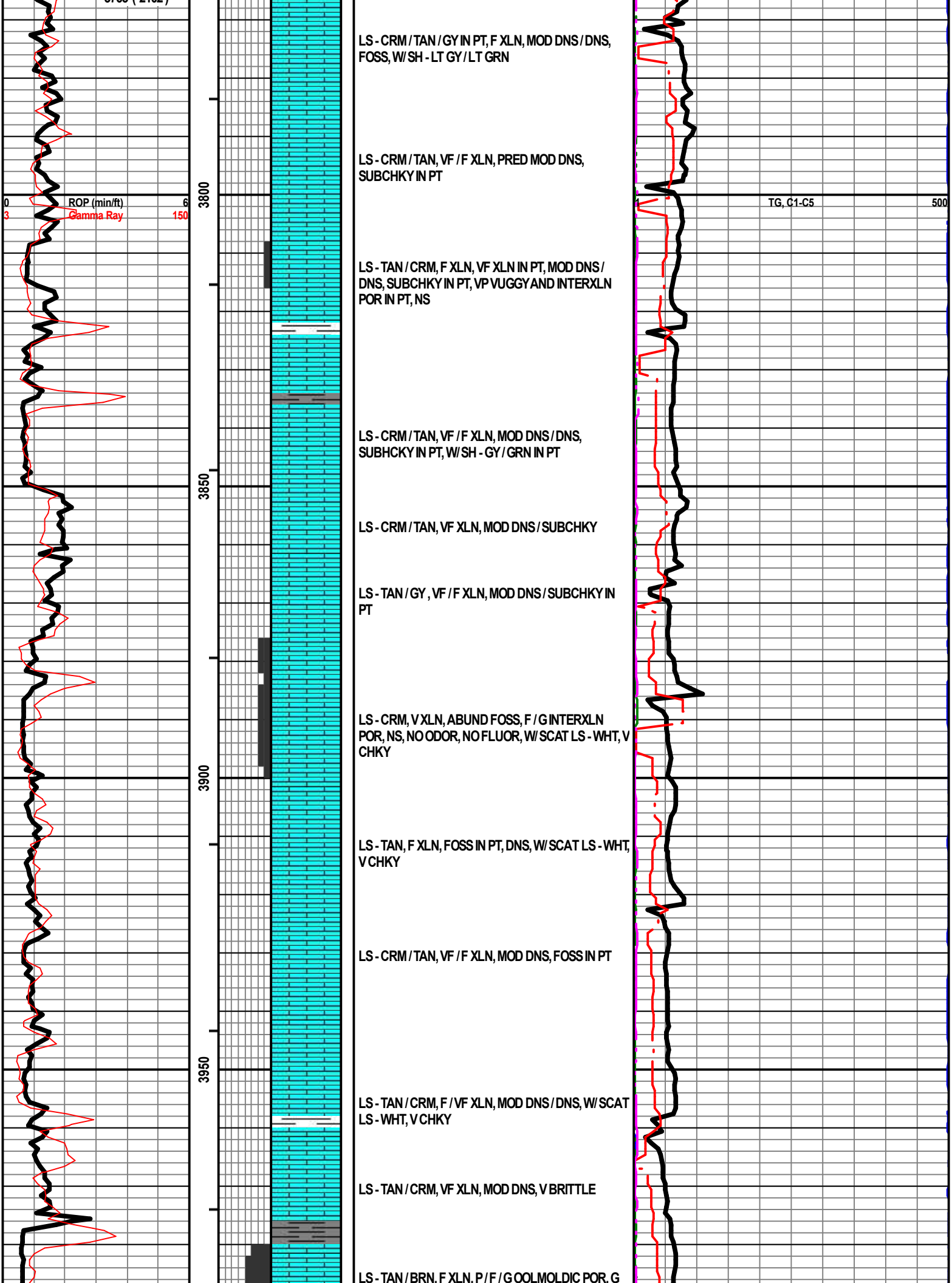


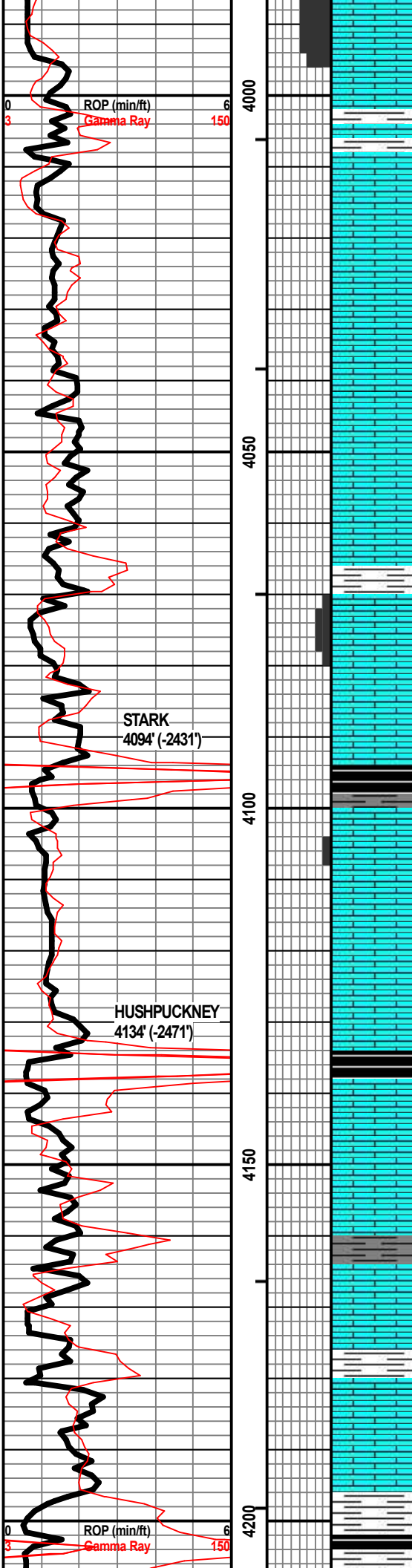






0733 (2102)





INTERXLN POR IN PT, NS, NO ODOR, NO FLUOR, W/ SH - GY

LS - CRM, VF XLN, SUBCHKY, MOD DNS IN PT, PYRITIC IN FEW PIECES

LS - CRM / TAN, VF / F XLN, MOD DNS / DNS, SUBCHKY IN PT

LS - TAN / CRM, VF / F XLN, M XLN IN PT, PRED MOD DNS / SUBCHKY, DNS IN PT, W/ SCAT CHT - TAN / DK GY, SLI TRANSLUCNT, FRSH

LS - TAN / CRM, F XLN, MOD DNS / DNS, P OOLMOLDIC POR IN PT, NS, NO ODOR, NO FLUOR

SH - BLK, CARB, W/ LS - CRM / TAN, F XLN, MOD DNS / SUBCHKY IN PT

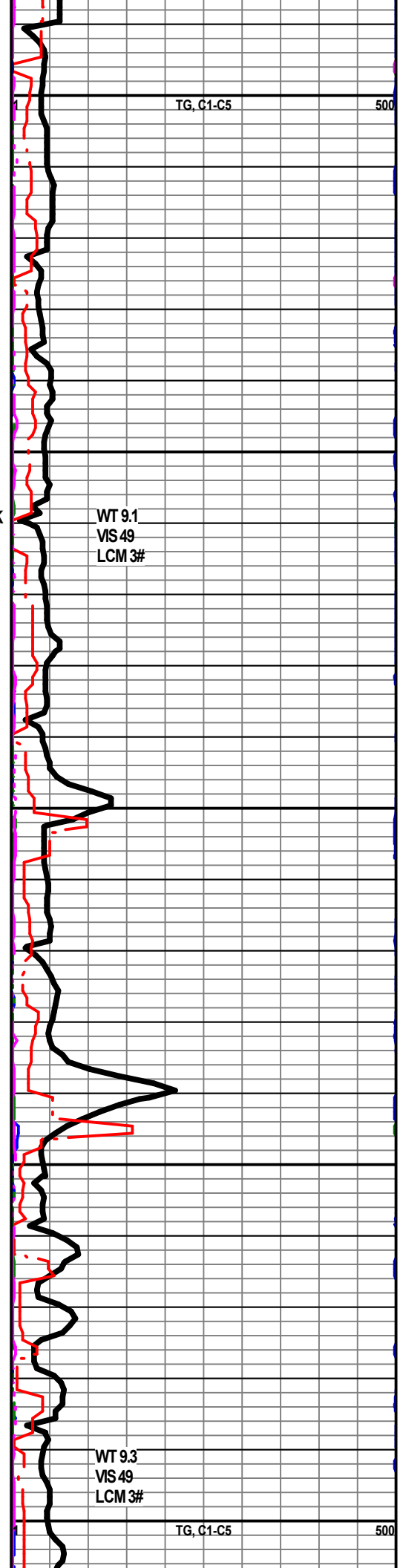
LS - CRM / TAN, F / VF XLN, P INTERXLN & OOLMODIC POR IN FEW PIECES, NS, NO ODOR, SUBCHKY / CHKY IN PT

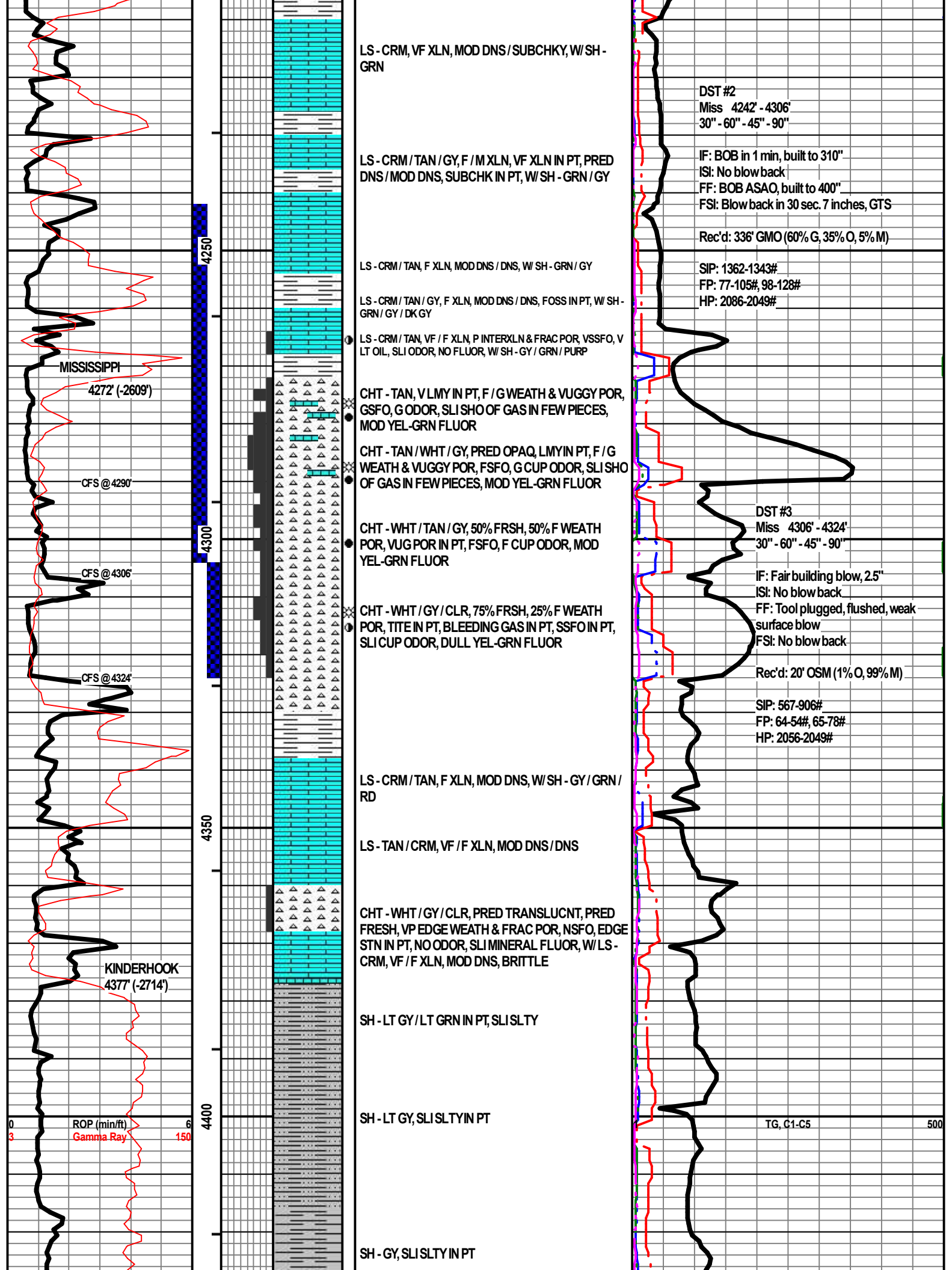
LS - CRM, VF XLN, SUBCHKY / CHKY, W/ SH - BLK, CARB

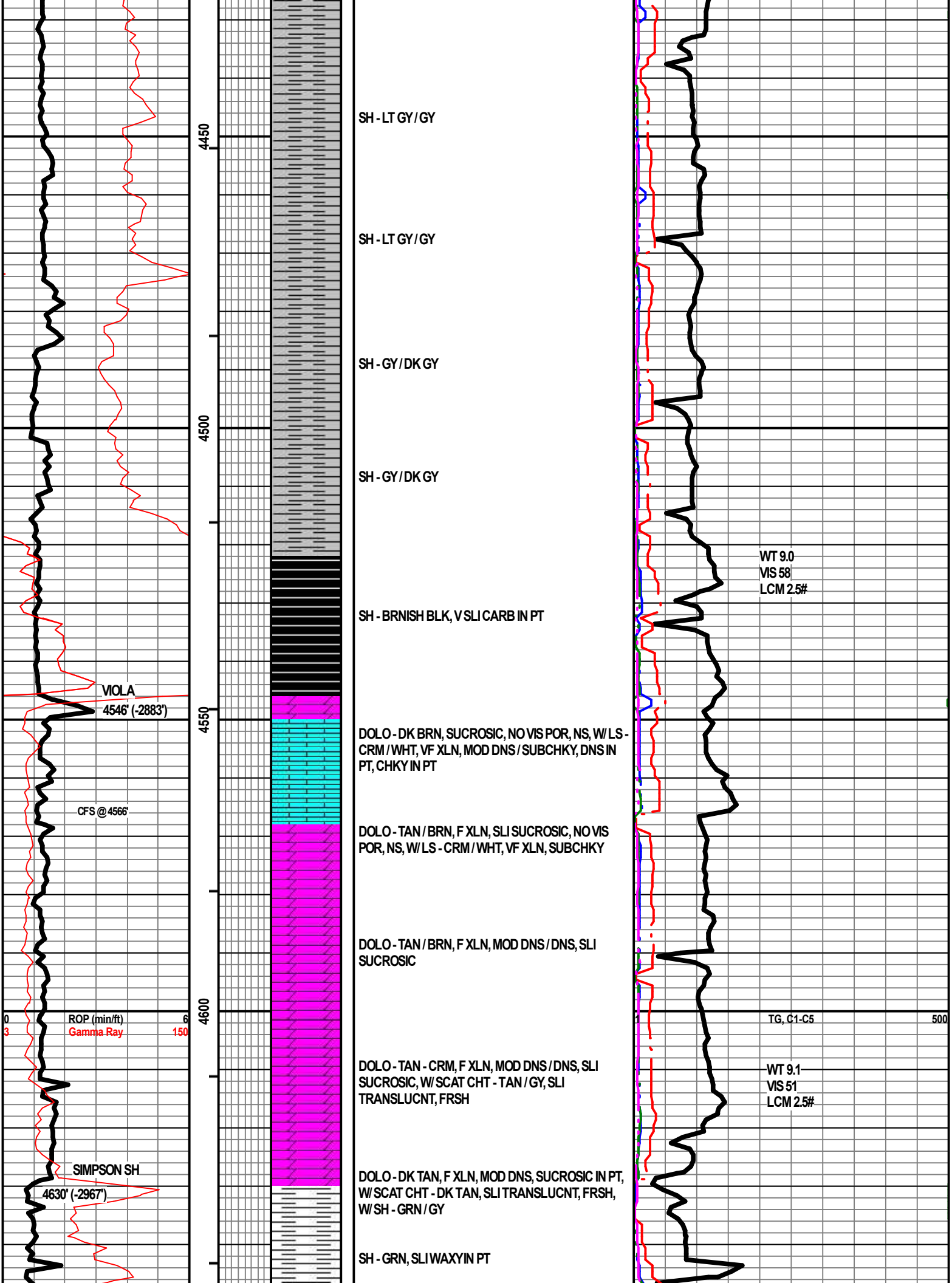
LS - CRM / TAN, F XLN, MOD DNS / DNS, FOSS

LS - CRM / TAN, VF XLN, MOD DNS / SUBCHY, CHKY IN PT, W/ SH - DK GY, GRN IN PT

SH - BLK, CARB, W/ SH - GRN, W/ LS - GY / TAN, F / M XLN, MOD DNS, FOSS







SH - LT GY / GY

SH - LT GY / GY

SH - GY / DK GY

SH - GY / DK GY

SH - BRNISH BLK, V SLI CARB IN PT

WT 9.0
VS 58
LCM 2.5#

VIOLA
4546' (-2883')

CFS @ 4566'

DOLO - DK BRN, SUCROSIC, NO VIS POR, NS, W / LS - CRM / WHT, VF XLN, MOD DNS / SUBCHKY, DNS IN PT, CHKY IN PT

DOLO - TAN / BRN, F XLN, SLI SUCROSIC, NO VIS POR, NS, W / LS - CRM / WHT, VF XLN, SUBCHKY

DOLO - TAN / BRN, F XLN, MOD DNS / DNS, SLI SUCROSIC

TG, C1-C5 500

ROP (min/ft)
Gamma Ray 3 150

DOLO - TAN - CRM, F XLN, MOD DNS / DNS, SLI SUCROSIC, W / SCAT CHT - TAN / GY, SLI TRANSLUCNT, FRSH

WT 9.1
VS 51
LCM 2.5#

SIMPSON SH
4630' (-2967')

DOLO - DK TAN, F XLN, MOD DNS, SUCROSIC IN PT, W / SCAT CHT - DK TAN, SLI TRANSLUCNT, FRSH, W / SH - GRN / GY

SH - GRN, SLI WAXY IN PT

SIMPSON SS
4650' (-2987')

4650

SS - CLR / GY, M / F GR, VF GR IN PT, WRND, MOD
CEM, P CEM IN PT, FRI IN PT, PSRTD, F / G INTERGR
POR IN PT, NS, NO ODOR, NO FLUOR

SS - CLR / GY, F XLN, WRND, P CEM, MOD / W CEM IN
PT, MOD / W SRTD, FRI IN PT, F / F INTERGR POR, NS,
NO ODOR, NO FLUOR, ARG IN PT, W / SH - GRN

4700

SH - GRN / GY, W / DOLO - DK TAN / GY, F XLN, SLI
SUCROSIC, MOD DNS / DNS

ARBUCKLE
4738' (-3075')

4750

DOLO - TAN, F / M XLN, DNS / MOD DNS, P INTERXLN
POR IN PT, NS, NO ODOR, MOD YEL-GRN MINERAL
FLUOR

DOLO - F / M XLN, MOD DNS / DNS, P INTERXLN POR
IN PT, NS, NO ODOR, MOD YEL-GRN MINERAL
FLUOR

DOLO - TAN / CRM, F XLN, MOD DNS / DNS, P
INTERXLN & VUGGY POR IN PT, NS

DOLO - TAN, F XLN, F / G INTERXLN & VUG POR, NS,
NO ODOR, MOD YEL-GRN FLUOR

RTD 4792'

WT 9.3
VIS 51
LCM 4#

WT 9.2
VIS 57
LCM 5#

00



Drilling

Customer	Indian Oil Co. Inc.		Lease & Well #	Banks North 4		Date	12/16/2023	
Service District	Pratt Kansas		County & State	Barber Kansas		Legals S/T/R	36-30s-12w	
Job Type	Longstring	☐ PROD ☐ INJ ☐ SWD	New Well?	☒ YES ☐ No		Job #		
Equipment #	Driver	Job Safety Analysis - A Discussion of Hazards & Safety Procedures						
916	M Brungardt	☐ Hard hat ☐ Gloves ☐ Lockout/Tagout ☐ Warning Signs & Flagging ☐ H2S Monitor ☐ Eye Protection ☐ Required Permits ☐ Fall Protection ☐ Safety Footwear ☐ Respiratory Protection ☐ Slip/Trip/Fall Hazards ☐ Specific Job Sequence/Expectations ☐ FRC/Protective Clothing ☐ Additional Chemical/Acid PPE ☐ Overhead Hazards ☐ Muster Point/Medical Locations ☐ Hearing Protection ☐ Fire Extinguisher ☐ Additional concerns or issues noted below						
179/522	M McGraw							
176/532	B Whitfield							
Comments								
Product/Service Code	Description	Unit of Measure	Quantity			Net Amount		
cp030	H-Long	sack	175.00			\$6,125.00		
cp055	H-Plug A	sack	50.00			\$800.00		
fe145	5 1/2" Float Shoe - AFU Flapper Type	ea	1.00			\$376.00		
fe170	5 1/2" Latch Down Plug & Baffle	ea	1.00			\$350.00		
fe130	5 1/2" Cement Basket	ea	1.00			\$300.00		
fe135	5 1/2" Turbolizer	ea	10.00			\$1,250.00		
cp170	Mud Flush	gal	500.00			\$500.00		
af056	Liquid KCL Substitute 2	gal	1.00			\$20.00		
m015	Light Equipment Mileage	mi	25.00			\$50.00		
m010	Heavy Equipment Mileage	mi	50.00			\$200.00		
m020	Ton Mileage	tm	259.00			\$388.50		
c060	Cement Blending & Mixing Service	sack	225.00			\$315.00		
d015	Depth Charge: 4001'-5000'	job	1.00			\$2,500.00		
c035	Cement Data Acquisition	job	1.00			\$250.00		
c050	Cement Plug Container	job	1.00			\$250.00		
r061	Service Supervisor	day	1.00			\$275.00		
c025	Cement Pump - Hourly Service	hr	2.00			\$500.00		
						#VALUE!	#VALUE!	
Customer Section: On the following scale how would you rate Hurricane Services Inc.?						#VALUE!	Net:	#VALUE!
Based on this job, how likely is it you would recommend HSI to a colleague?				Total Taxable \$ -		Tax Rate:		
☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Unlikely 1 2 3 4 5 6 7 8 9 10 Extremely Likely				State tax laws deem certain products and services used on new wells to be sales tax exempt. Hurricane Services relies on the customer provided well information above to make a determination if services and/or products are tax exempt.		Sale Tax: \$ -		
						Total:		#VALUE!
				HSI Representative: Mark Brungardt				

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 1/4% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results from the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well information in determining taxable services.

X

CUSTOMER AUTHORIZATION SIGNATURE

[The text in this section is extremely faint and illegible. It appears to be a multi-paragraph document, possibly a letter or a report, with a vertical line down the center suggesting a fold or a page divider. The content is mostly lost to noise and low contrast.]



CEMENT TREATMENT REPORT

Customer:	Indian Oil Co.Inc	Well:	Banks North 4	Ticket:	wp 4998
City, State:	Medicine Lodge Kansas	County:	Barber Kansas	Date:	12/16/2023
Field Rep:	SIR Anthony Farrar	S-T-R:	36-30s-12w	Service:	Longstring

Downhole Information		Calculated Slurry - Lead		Calculated Slurry - Tail	
Hole Size:	7 7/8 in	Blend:	H-Long	Blend:	H-Plug
Hole Depth:	4792 ft	Weight:	15.0 ppg	Weight:	13.7 ppg
Casing Size:	5 1/2 in	Water / Sx:	6.0 gal / sx	Water / Sx:	6.9 gal / sx
Casing Depth:	4763 ft	Yield:	1.42 ft ³ / sx	Yield:	1.43 ft ³ / sx
Tubing / Liner:	in	Annular Bbls / Ft.:	bbs / ft.	Annular Bbls / Ft.:	bbs / ft.
Depth:	ft	Depth:	ft	Depth:	ft
Tool / Packer:		Annular Volume:	0.0 bbls	Annular Volume:	0 bbls
Tool Depth:	ft	Excess:		Excess:	
Displacement:	110.0 bbls	Total Slurry:	44.2 bbls	Total Slurry:	12.7 bbls
		Total Sacks:	175 sx	Total Sacks:	50 sx

TIME	RATE	PSI	BBLs	TOTAL BBLs	REMARKS
8:15 AM			-	-	on location job and safety
8:30 AM				-	spot trucks and rig up
				-	turbolizers 2,4,6,7,8,9,10,11,12,13
				-	basket 14
11:00 AM				-	start casing
1:30 PM				-	casing on bottom and establish circulation
2:30 PM				-	start flush
	4.0	230.0	5.0	5.0	fresh water
	4.0	230.0	12.0	17.0	mud flush
	4.0	230.0	5.0	22.0	fres water
2:40 PM	2.0	-	12.7	34.7	p plug mouse hole 20 sacks h-pluglug rat hole 30 sacks h-plug
2:50 PM					start cement down hole
	6.5	600.0	44.0		mlx 175 sack H-Long at 15 ppg
3:00 PM					cement in and shut down close in well
					wash pump and lines and release the plug
3:05 PM					open top valve on manifold and start displacement
	6.5	310.0	20.0		
	7.0	330.0	30.0		
	7.0	330.0	40.0		
	7.0	330.0	50.0		
	7.0	330.0	60.0		
	7.0	330.0	70.0		
	6.5	450.0	80.0		Increase in pressure and slow rate
	5.0	650.0	90.0		
	3.5	700.0	100.0		
3:20 PM		800.0	110.0		plug down,,,,took pressure from 800 to 1400release pressure and plug held

CREW		UNIT	SUMMARY		
Cementer:	M Brungardt	916	Average Rate	Average Pressure	Total Fluid
Pump Operator:	M McGraw	179/522	5.5 bpm	390 psi	729 bbls
Bulk #1:	B Whitfield	176/532			
Bulk #2:					

[The text in this section is extremely faint and illegible due to heavy noise and low contrast. It appears to be a multi-paragraph document, possibly a letter or a report, but the specific content cannot be transcribed.]

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HURRICANE SERVICES INC

Remit To: Hurricane Services, Inc.
250 N. Water, Suite 200
Wichita, KS 67202
316-303-9515

Customer:
INDIAN OIL CO INC
PO BOX 209
MEDICINE LODGE, KS 67104-0209

Invoice Date: 12/9/2023
Invoice #: 0373229
Lease Name: Banks North
Well #: 4 (New)
County: Barber, Ks
Job Number: WP4978
District: Pratt

Drilling

Date/Description	HRS/QTY	Rate	Total
Surface	0.000	0.000	0.00
Cement Pozmix 60/40	200.000	16.000	3,200.00
Cement Gel-Tacobond	344.000	0.450	154.80
Calcium Chloride	516.000	0.750	387.00
Cello Flake	50.000	1.750	87.50
Light Eq Mileage	25.000	2.000	50.00
Heavy Eq Mileage	50.000	4.000	200.00
Ton Mileage	215.000	1.500	322.50
Cement Blending & Mixing	200.000	1.400	280.00
Depth Charge 0'-500'	1.000	1,000.000	1,000.00
Cement Data Acquisition	1.000	250.000	250.00
Service Supervisor	1.000	275.000	275.00

Total 6,206.80

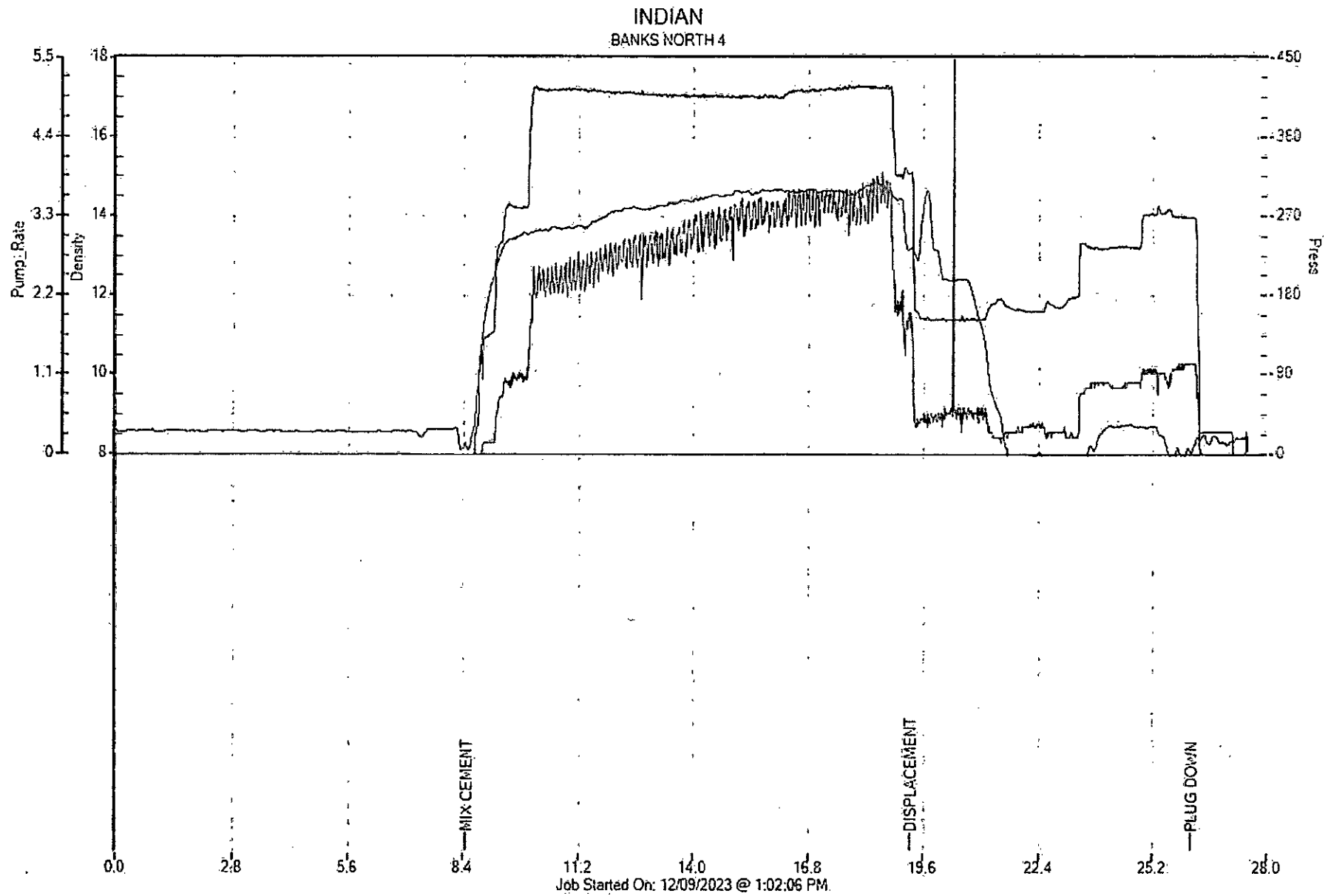
TERMS: Net 30 days. Interest may be charged on past due invoice at rate of 1 ½% per month or maximum allowed by applicable state or federal laws. HSI has right to revoke any discounts applied in arriving at net invoice price if invoice is past due. If revoked, full invoice price without discount plus additional sales tax, as applicable, is due immediately and subject to interest charges. Customer agrees to pay all collection costs directly or indirectly incurred by HSI in the event HSI engages a third party to pursue collection of past due invoice.

SALES TAX: Services performed on oil, gas and water wells in Kansas are subject to sales tax, with certain exceptions. HSI relies on the well information provided by the customer in identifying whether the services performed on wells qualify for exemption.

WE APPRECIATE YOUR BUSINESS!

TERMS: Cash in advance unless Hurricane Services Inc. (HSI) has approved credit prior to sale. Credit terms of sale for approved accounts are total invoice due on or before the 30th day from the date of invoice. Past due accounts shall pay interest on the balance past due at the rate of 1 1/4% per month or the maximum allowable by applicable state or federal laws. In the event it is necessary to employ an agency and/or attorney to affect the collection, Customer hereby agrees to pay all fees directly or indirectly incurred for such collection. In the event that Customer's account with HSI becomes delinquent, HSI has the right to revoke any discounts previously applied in arriving at net invoice price. Upon revocation, the full invoice price without discount is immediately due and subject to collection. Prices quoted are estimates only and are good for 30 days from the date of issue. Pricing does not include federal, state, or local taxes, or royalties and stated price adjustments. Actual charges may vary depending upon time, equipment, and material ultimately required to perform these services. Any discount is based on 30 days net payment terms or cash. **DISCLAIMER NOTICE:** Technical data is presented in good faith, but no warranty is stated or implied. HSI assumes no liability for advice or recommendations made concerning the results from the use of any product or service. The information presented is a best estimate of the actual results that may be achieved and should be used for comparison purposes and HSI makes no guarantee of future production performance. Customer represents and warrants that well and all associated equipment in acceptable condition to receive services by HSI. Likewise, the customer guarantees proper operational care of all customer owned equipment and property while HSI is on location performing services. The authorization below acknowledges the receipt and acceptance of all terms/conditions stated above, and Hurricane has been provided accurate well information in determining taxable services.

ftv: 7-2020/11/30
mply: 440-2023/11/20





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Indian Oil Co., Inc.

36/30/12

P.O Box 209
Medicine Lodge, KS 67104

Banks North 4

Job Ticket: 70534

DST#: 1

ATTN: Aaron Young

Test Start: 2023.12.11 @ 19:23:00

GENERAL INFORMATION:

Formation: **Indian Cave**

Deviated: No Whipstock: 1671.00 ft (KB)

Time Tool Opened: 21:15:47

Time Test Ended: 02:09:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

Interval: 2634.00 ft (KB) To 2691.00 ft (KB) (TVD)

Reference Elevations: 1671.00 ft (KB)

Total Depth: 2691.00 ft (KB) (TVD)

1660.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 6752 Inside

Press@RunDepth: 842.63 psig @ 2635.00 ft (KB)

Capacity: psig

Start Date: 2023.12.11

End Date: 2023.12.12

Last Calib.: 1899.12.30

Start Time: 19:23:01

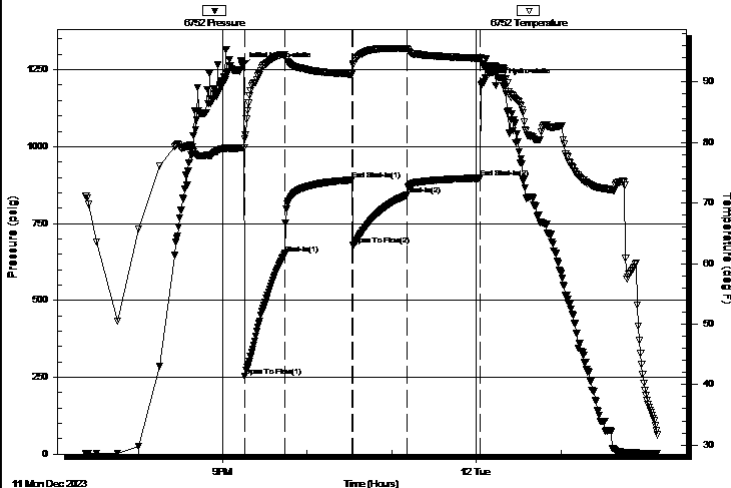
End Time: 02:09:02

Time On Btm: 2023.12.11 @ 21:14:17

Time Off Btm: 2023.12.12 @ 00:04:47

TEST COMMENT: IF: 30 min., BOB 1 min., strong building blow , 205 inches
IS: 45 min., no blow back
FF: 30 min., BOB 2 min., strong building blow , 138 inches
FS: 45 min., no blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1260.70	79.14	Initial Hydro-static
2	253.68	80.68	Open To Flow (1)
30	652.40	94.57	Shut-In(1)
78	890.90	91.32	End Shut-In(1)
79	679.15	92.96	Open To Flow (2)
117	842.63	95.49	Shut-In(2)
169	897.98	93.92	End Shut-In(2)
171	1207.68	92.78	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1650.00	100% w ater	21.22

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Indian Oil Co., Inc.

36/30/12

P.O Box 209
Medicine Lodge, KS 67104

Banks North 4

Job Ticket: 70534

DST#: 1

ATTN: Aaron Young

Test Start: 2023.12.11 @ 19:23:00

GENERAL INFORMATION:

Formation: **Indian Cave**

Deviated: No Whipstock: 1671.00 ft (KB)

Time Tool Opened: 21:15:47

Time Test Ended: 02:09:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

Interval: 2634.00 ft (KB) To 2691.00 ft (KB) (TVD)

Total Depth: 2691.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 1671.00 ft (KB)

1660.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 2635.00 ft (KB)

Start Date: 2023.12.11

End Date:

2023.12.12

Start Time: 19:23:01

End Time:

02:09:02

Capacity: psig

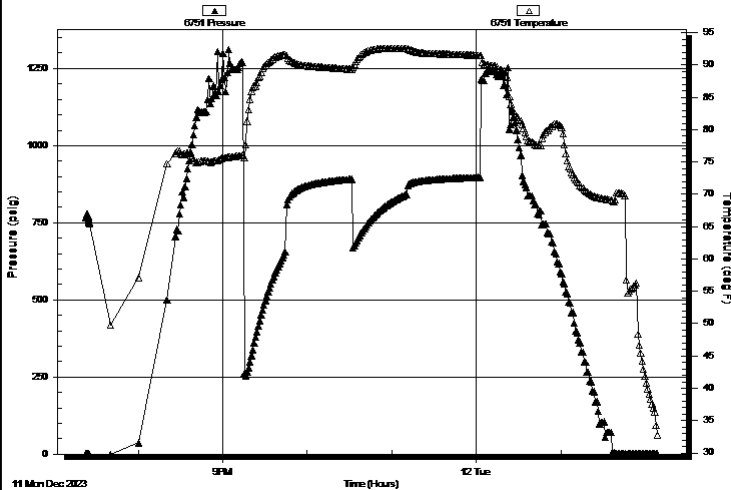
Last Calib.: 1899.12.30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 30 min., BOB 1 min., strong building blow , 205 inches
IS: 45 min., no blow back
FF: 30 min., BOB 2 min., strong building blow , 138 inches
FS: 45 min., no blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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Recovery

Length (ft)	Description	Volume (bbl)
1650.00	100% w ater	21.22

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Indian Oil Co., Inc.

36/30/12

P.O Box 209
Medicine Lodge, KS 67104

Banks North 4

Job Ticket: 70534

DST#: 1

ATTN: Aaron Young

Test Start: 2023.12.11 @ 19:23:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity: 225000 ppm

Viscosity: 29.00 sec/qt

Cushion Volume:

bbl

Water Loss: in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 58000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1650.00	100% water	21.223

Total Length: 1650.00 ft Total Volume: 21.223 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW=.060@50F=225000ppm

Serial #: 6752

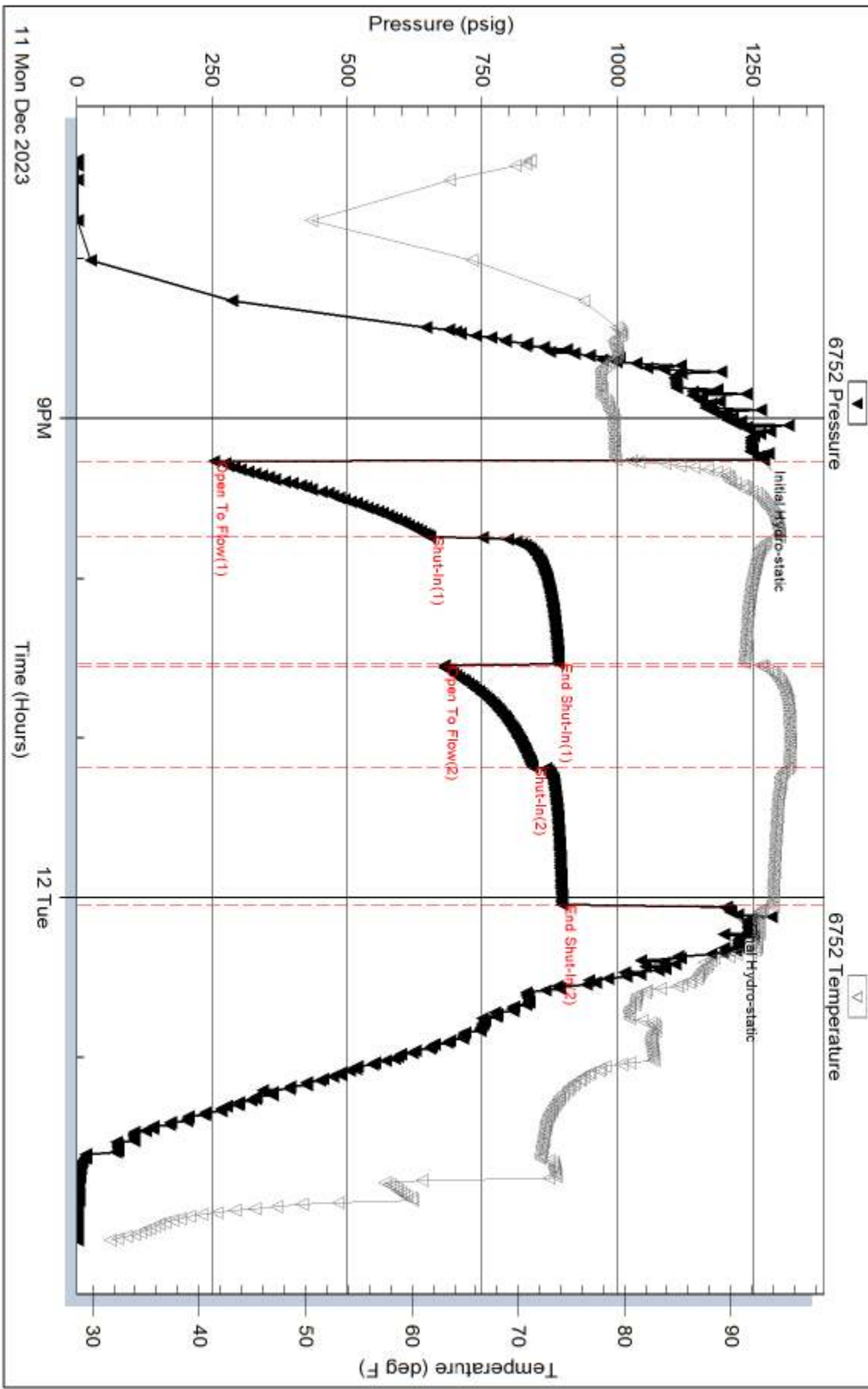
Inside

Indian Oil Co., Inc.

Banks North 4

DST Test Number: 1

Pressure vs. Time

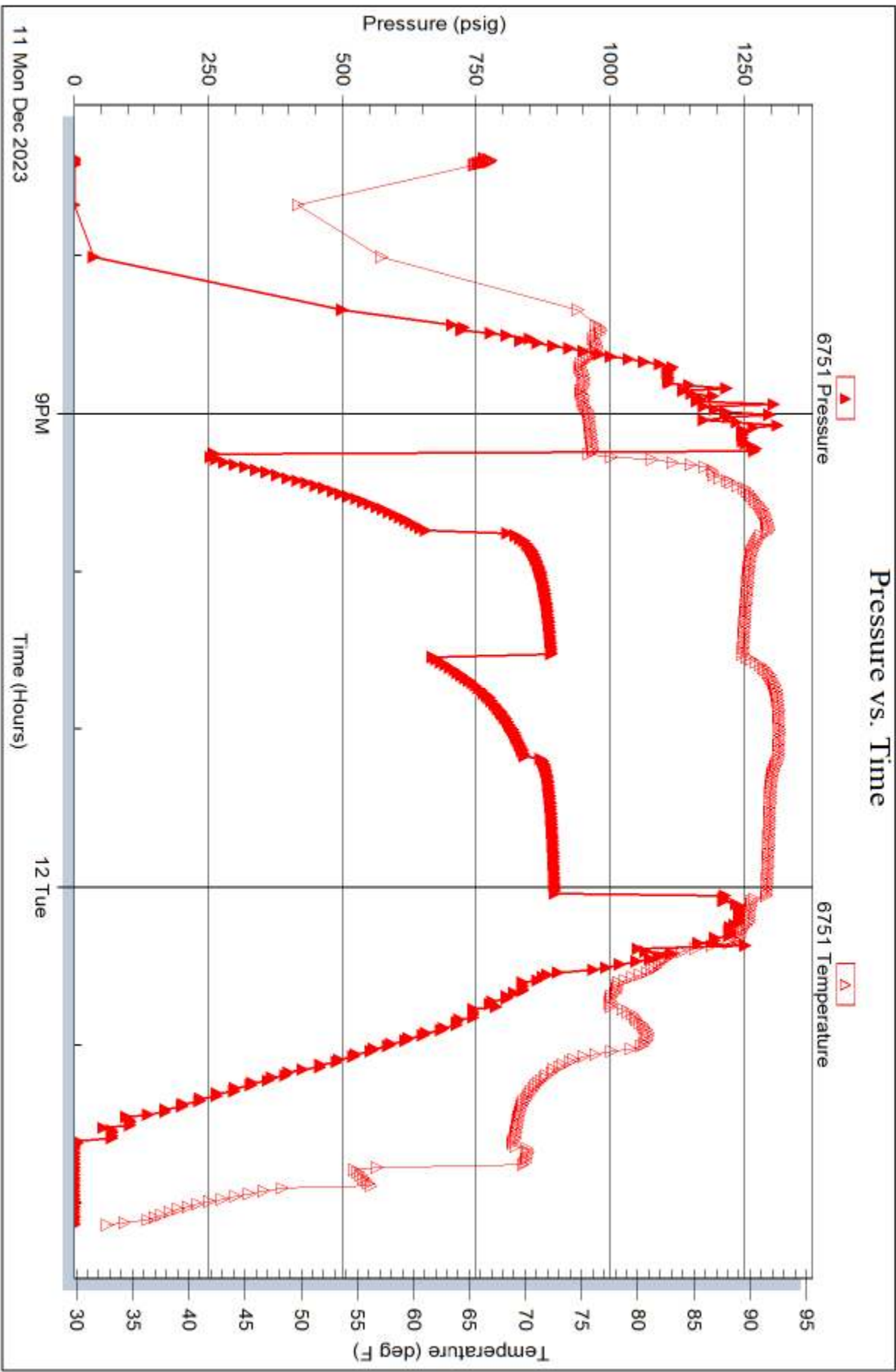


Serial #: 6751

Outside Indian Oil Co., Inc.

Banks North 4

DST Test Number: 1





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Indian Oil Co., Inc.

36/30/12

P.O Box 209
Medicine Lodge, KS 67104

Banks North 4

Job Ticket: 70535

DST#: 2

ATTN: Aaron Young

Test Start: 2023.12.13 @ 21:55:00

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: 1671.00 ft (KB)

Time Tool Opened: 23:56:02

Time Test Ended: 05:57:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

Interval: 4242.00 ft (KB) To 4306.00 ft (KB) (TVD)

Total Depth: 4306.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 1671.00 ft (KB)

1660.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 6752 Inside

Press@RunDepth: 127.82 psig @ 4245.00 ft (KB)

Start Date: 2023.12.13

End Date:

2023.12.14

Start Time: 21:55:01

End Time:

05:57:02

Capacity: psig

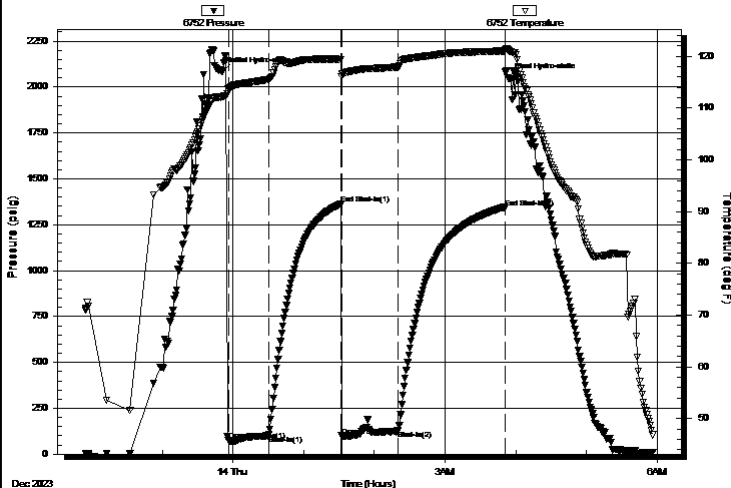
Last Calib.: 1899.12.30

Time On Btm: 2023.12.13 @ 23:51:32

Time Off Btm: 2023.12.14 @ 03:53:47

TEST COMMENT: IF: 30 min., BOB 1 min., strong building blow, 310 inches
IS: 60 min., no blow back
FF: 45 min., BOB ASAO, strong building blow, 400 inches
FS: 90 min., blow back 30 sec., 7 inches, GTS

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2086.15	112.19	Initial Hydro-static
5	76.64	113.77	Open To Flow (1)
39	105.10	115.53	Shut-In(1)
100	1361.74	119.35	End Shut-In(1)
102	97.50	116.56	Open To Flow (2)
149	127.82	117.96	Shut-In(2)
240	1343.29	121.08	End Shut-In(2)
243	2048.99	121.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
336.00	gassy muddy oil 60%G,35%O,5%M	2.79

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Indian Oil Co., Inc.

36/30/12

P.O Box 209
Medicine Lodge, KS 67104

Banks North 4

Job Ticket: 70535

DST#: 2

ATTN: Aaron Young

Test Start: 2023.12.13 @ 21:55:00

GENERAL INFORMATION:

Formation: **Miss**

Deviated: No Whipstock: 1671.00 ft (KB)

Time Tool Opened: 23:56:02

Time Test Ended: 05:57:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

Interval: 4242.00 ft (KB) To 4306.00 ft (KB) (TVD)

Total Depth: 4306.00 ft (KB) (TVD)

Hole Diameter: 7.80 inches Hole Condition: Good

Reference Elevations: 1671.00 ft (KB)

1660.00 ft (CF)

KB to GR/CF: 11.00 ft

Serial #: 6751 Outside

Press@RunDepth: psig @ 4245.00 ft (KB)

Start Date: 2023.12.13

End Date:

2023.12.14

Start Time: 21:55:01

End Time:

05:57:02

Capacity: psig

Last Calib.:

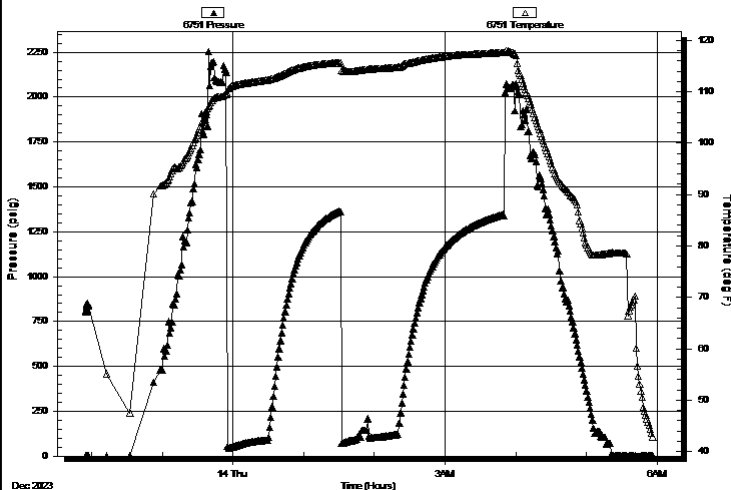
1899.12.30

Time On Btm:

Time Off Btm:

TEST COMMENT: IF: 30 min., BOB 1 min., strong building blow , 310 inches
IS: 60 min., no blow back
FF: 45 min., BOB ASAO, strong building blow , 400 inches
FS: 90 min., blow back 30 sec., 7 inches, GTS

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
-------------	-----------------	--------------	------------

Recovery

Length (ft)	Description	Volume (bbl)
336.00	gassy muddy oil 60%G,35%O,5%M	2.79

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Indian Oil Co., Inc.

36/30/12

P.O Box 209
Medicine Lodge, KS 67104

Banks North 4

Job Ticket: 70535

DST#: 2

ATTN: Aaron Young

Test Start: 2023.12.13 @ 21:55:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 50.00 sec/qt

Water Loss: 8.39 in³

Resistivity: ohm.m

Salinity: 2800.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

deg API

ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
336.00	gassy muddy oil 60%G,35%O,5%M	2.791

Total Length: 336.00 ft Total Volume: 2.791 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: too frothy to get api

Serial #: 6752

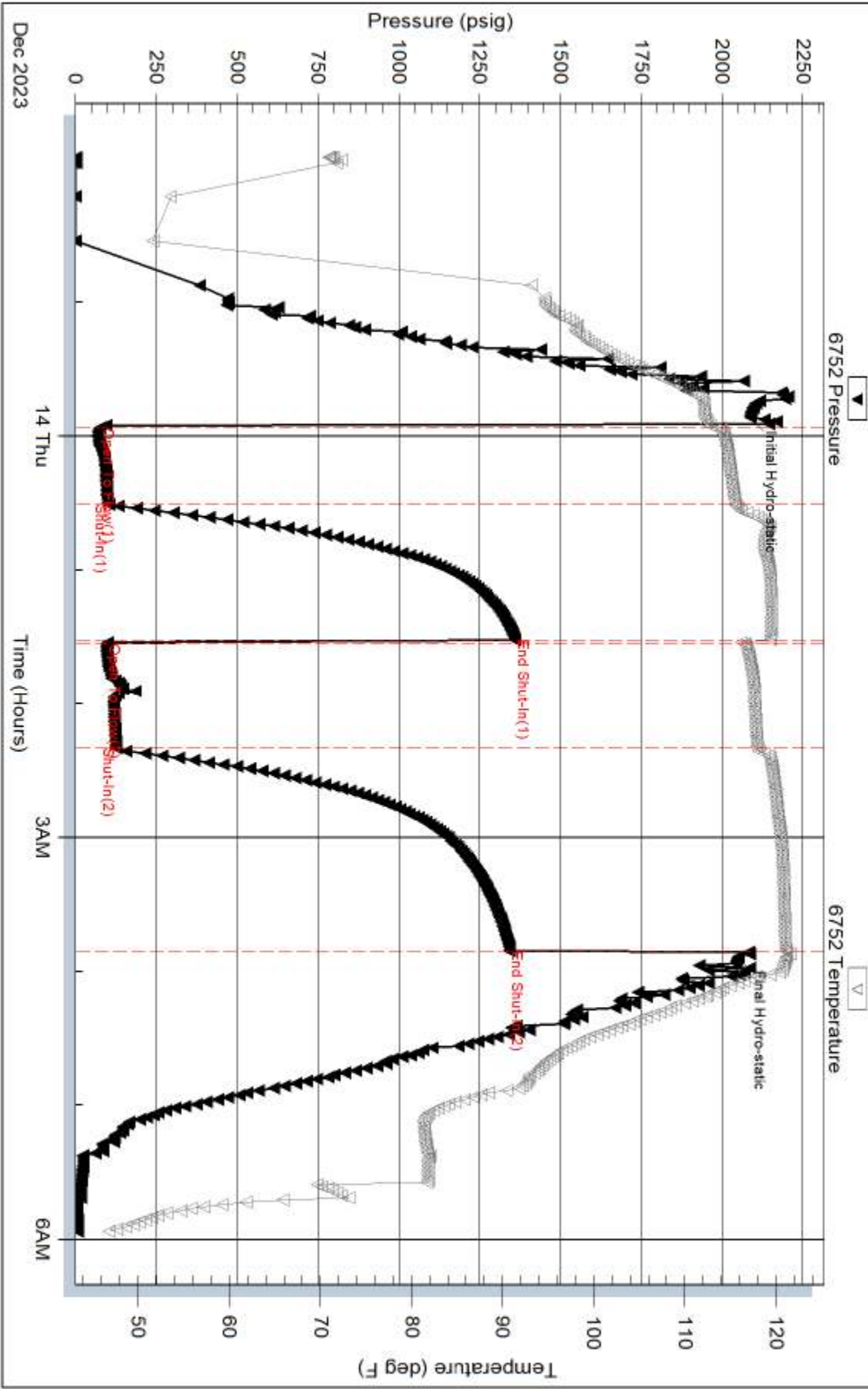
Inside

Indian Oil Co., Inc.

Banks North 4

DST Test Number: 2

Pressure vs. Time

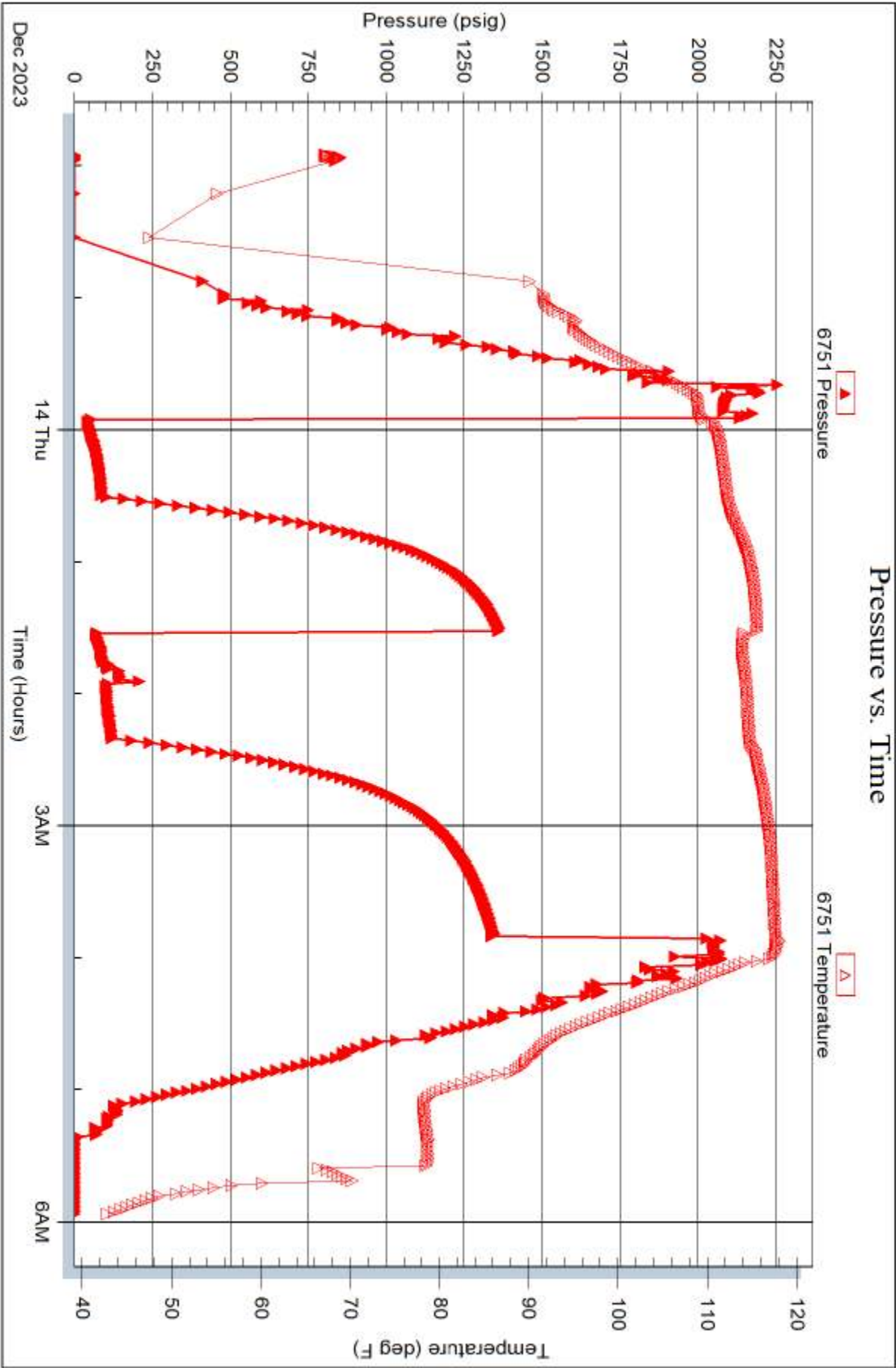


Serial #: 6751

Outside Indian Oil Co., Inc.

Banks North 4

DST Test Number: 2





TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

Indian Oil Co., Inc.

36/30/12

P.O Box 209
Medicine Lodge, KS 67104

Banks North 4

Job Ticket: 70536

DST#: 3

ATTN: Aaron Young

Test Start: 2023.12.14 @ 13:27:00

GENERAL INFORMATION:

Formation: **Miss.**

Deviated: No Whipstock: 1671.00 ft (KB)

Time Tool Opened: 15:17:02

Time Test Ended: 21:15:02

Test Type: Conventional Bottom Hole (Initial)

Tester: Chris Hagman

Unit No: 69

Interval: 4306.00 ft (KB) To 4324.00 ft (KB) (TVD)

Reference Elevations: 1671.00 ft (KB)

Total Depth: 4324.00 ft (KB) (TVD)

1660.00 ft (CF)

Hole Diameter: 7.80 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

Serial #: 6752 Inside

Press@RunDepth: 78.03 psig @ 4308.00 ft (KB)

Capacity: psig

Start Date: 2023.12.14

End Date:

2023.12.14

Last Calib.: 1899.12.30

Start Time: 13:27:01

End Time:

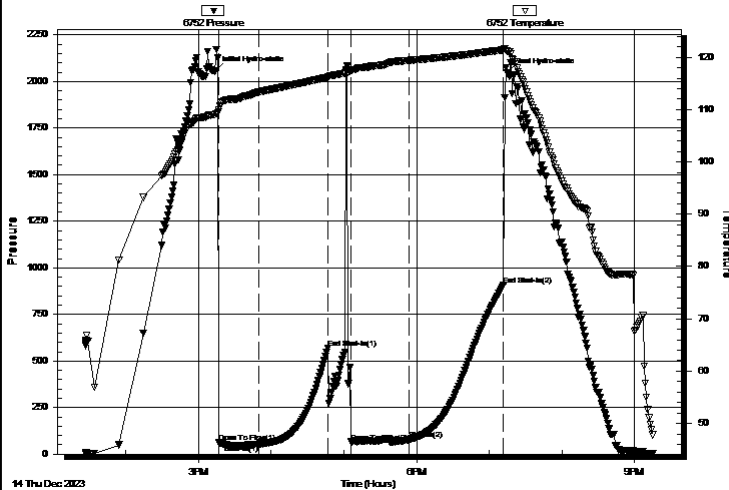
21:15:02

Time On Btm: 2023.12.14 @ 15:14:02

Time Off Btm: 2023.12.14 @ 19:14:47

TEST COMMENT: IF: 30 min., fair building blow, 2.5 inches
IS: 60 min., no blow back
FF: 45 min., tool plugged, flushed, weak surface blow
FS: 90 min., no blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2055.97	109.08	Initial Hydro-static
3	64.23	110.02	Open To Flow (1)
36	53.59	113.31	Shut-In(1)
93	567.41	116.20	End Shut-In(1)
112	65.36	117.41	Open To Flow (2)
160	78.03	119.40	Shut-In(2)
238	906.24	121.41	End Shut-In(2)
241	2048.88	121.21	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
20.00	oil spotted mud 1%O, 99%M	0.10

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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TRILOBITE
TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Indian Oil Co., Inc.

36/30/12

P.O Box 209
Medicine Lodge, KS 67104

Banks North 4

Job Ticket: 70536

DST#: 3

ATTN: Aaron Young

Test Start: 2023.12.14 @ 13:27:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 4800.00 sec/qt

Water Loss: 7.20 in³

Resistivity: ohm.m

Salinity: 4800.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

deg API

ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	oil spotted mud 1%O, 99%M	0.098

Total Length: 20.00 ft

Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

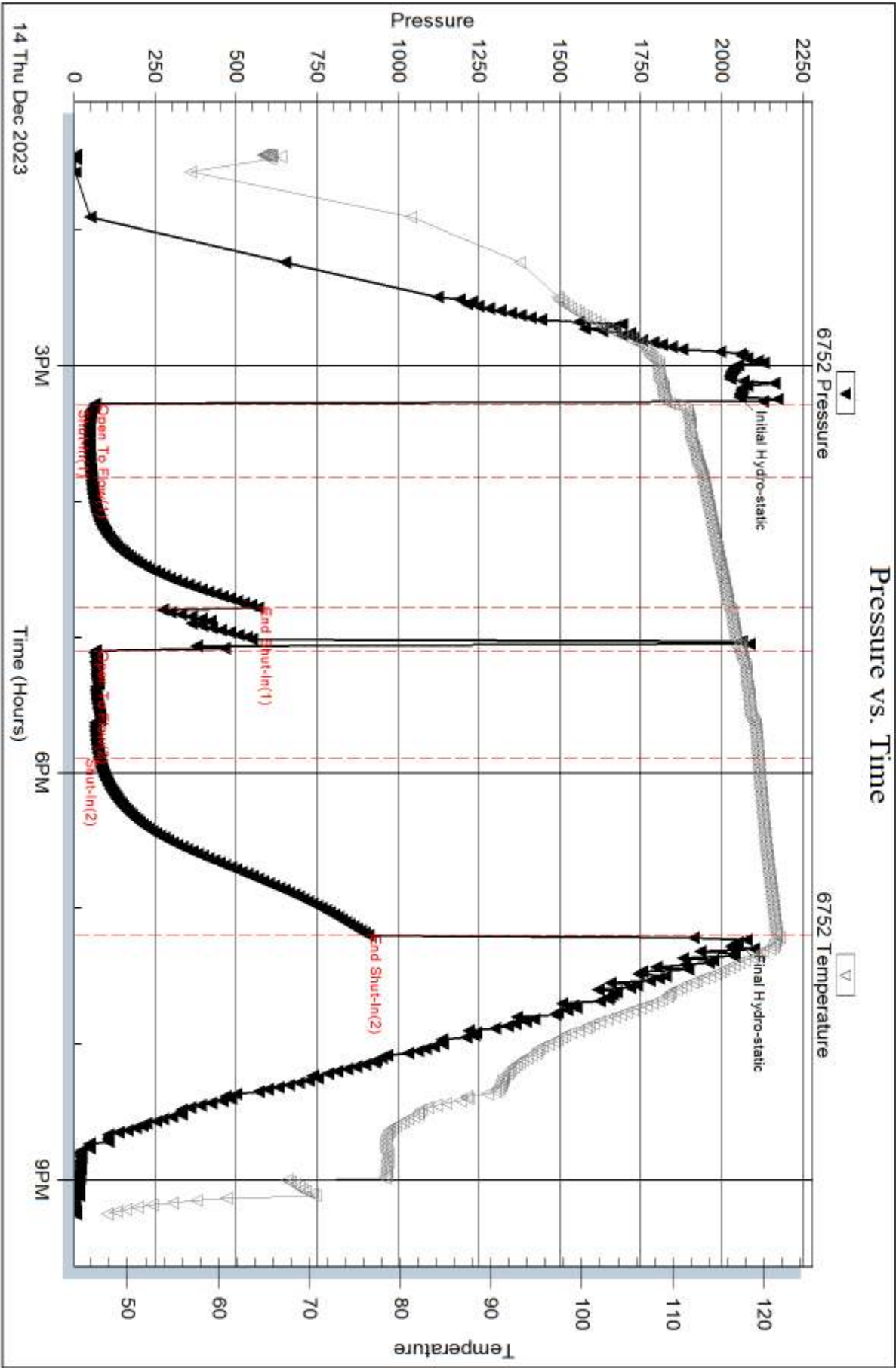
Serial #: 6752

Inside

Indian Oil Co., Inc.

Banks North 4

DST Test Number: 3



Serial #: 6751

Outside Indian Oil Co., Inc.

Banks North 4

DST Test Number: 3

