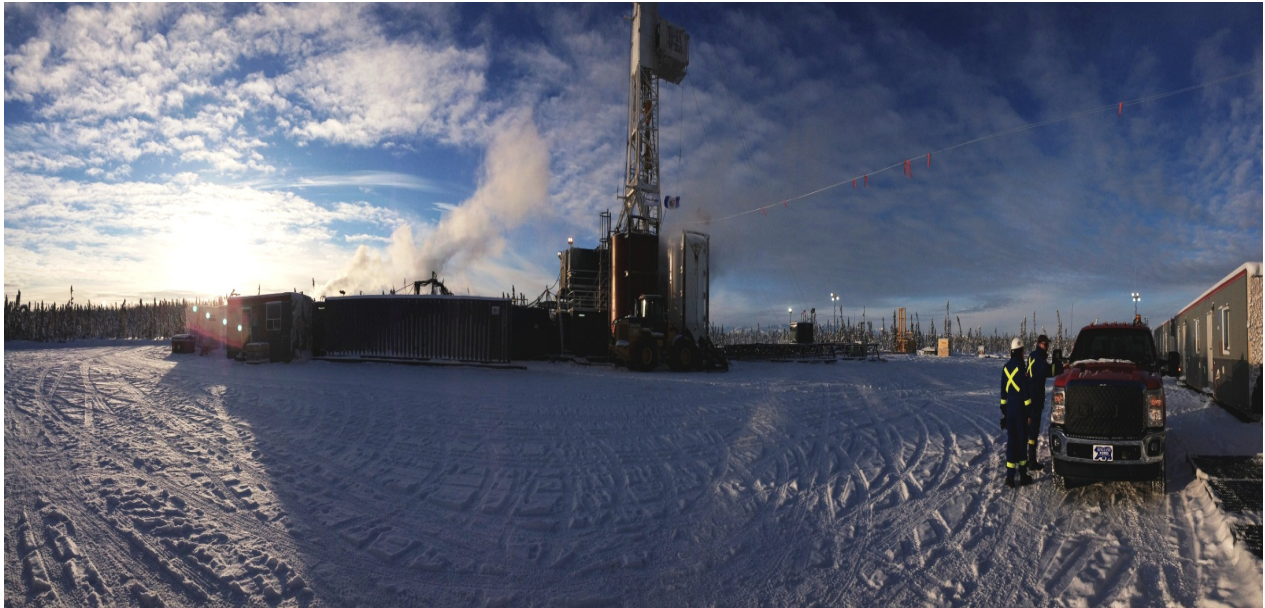


COPRC Loon Creek O-06 Final Well Report

Grid # 65°10', 127°00'

2013/04/12



COPRC Loon Creek O-06

Table of Contents

Table of Contents	2
1.0 Introduction	3
1.1 Summary	3
1.2 Locality Map	4
2.0 General Data	5
2.1 Well Name	5
2.2 Unique Well Identifier	5
2.3 Operator and Drilling Contractor	5
2.4 Difficulties and Delays.....	5
3.0 Summary of Drilling Operations.....	6
3.1 Elevations.....	6
3.2 Total depth.....	6
3.3 Spud Date and Time.....	6
3.4 Date Drilling Completed	6
3.5 Rig Release Date and Time	6
3.6 Well Status	6
3.7 Hole sizes and depths.....	6
3.8 Casing and Cementing Record	6
3.9 Drilling Fluids.....	6
3.10 Formation Leak Off Tests	6
4. Geology.....	10
4.1 Drill Cuttings.....	10
4.2 Cores	10
4.3 Lithology	10
5. Well Evaluation	11
5.1 Open Hole Logs.....	11
5.2 DFIT Results.....	11
Appendices to Well History Report.....	12
I. Final Survey Plot of COPRC Loon Creek O-06	12
II. Casing and Cementing Report	13
III. Coring Report	15
IV. Drilling Fluid Summary.....	16
V. Leak Off Test Charts.....	17
VI. Geological Striplog.....	19
VII. Mud Gas log	20
VIII. Daily Activity and Cost Summary Report.....	22
IX. Daily Drilling Reports	23
X. Tour sheets – Drilling Rig	24
XI. Bit record	26
XII. Directional Summary	27
XIII. Completions Daily Reports.....	28
XIV. Final Completion Schematic.....	29
XV. DFIT Summary.....	30
XVI. Tour sheets – Service Rig.....	31
XVII. Electric Logs	34

1.0 Introduction

1.1 Summary

The COPRC Loon Creek well was spudded on January 26, 2013 and the rig was released on February 21 2013 after reaching a total depth of 1856 m KB with a total of 26 operating days on the well.

Construction operations to support COPRC's 2012/2013 exploration program commenced on November 27 2012 when profiling of the ice cover on the Mackenzie River began. Clearing of the route of the ice bridge was done and flooding and thickening of the 6 kilometre ice bridge from Norman Wells to EL 470 began in early December 2012. The ice bridge was thick enough to support heavy loads by January 4 2013 and construction of the EL 470 ice roads began January 5 2013.

The well pad at the Loon Creek O-06 location was completed by January 19 2013 at about the same time that the main camp pad was constructed and the drill camp installed.

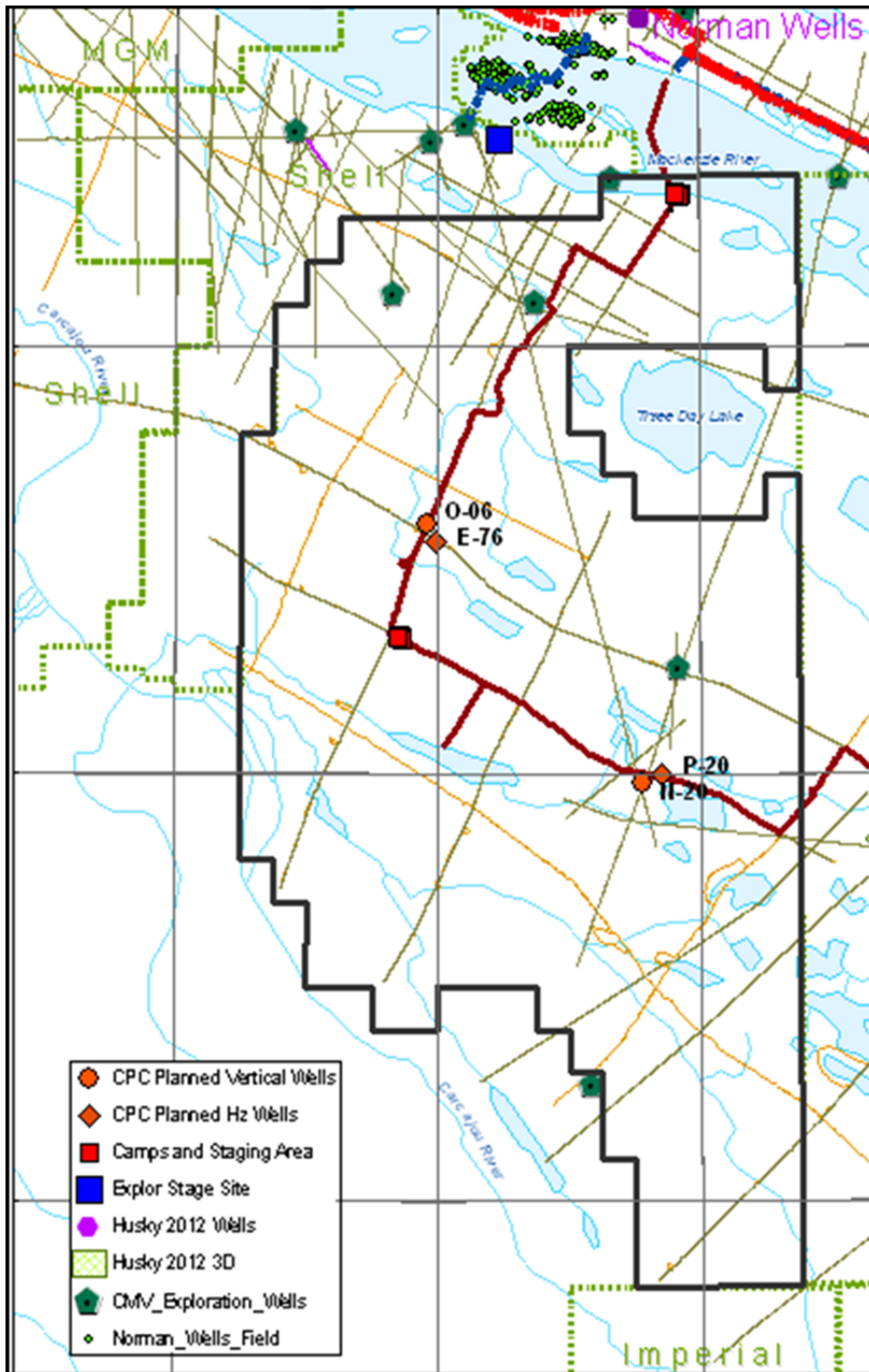
Beaver Drilling Rig # 2 was mobilized to Norman Wells starting on January 15 2013 and all rig loads were on location by January 21 2013. Rig up took approximately 5 days due to the extremely cold weather and short days.

Drilling operations were conducted with no major issues and no safety incidents occurred. The Canol target zone was encountered at 1643 m KB and the secondary target, the Bluefish member, came in at 1746 m KB. Wire line retrievable coring techniques were used to core a total of 234 meters from 1622 m KB to 1856 m KB. The surface hole was logged using Schlumberger's platform express suite of logs. Production hole was logged with a full suite of electric logs. A long string of 177.8 mm casing was run to bottom and cemented full length using Hi Lite fill cement from surface to 1382 m KB and Oilwell 'G' cement from 1382 m to 1856 m KB.

A VSP survey was conducted on COPRC Loon Creek O-06 between February 25 and March 1 2013. Completion operations commenced March 1 and were finished by March 4 2013; having conducted 3 DFIT's on the Canol formation. The intervals for the DFIT's were 1769 – 1770 m KB, 1727 – 1728 m KB and 1692 – 1693 m KB. Each interval was suspended by setting two wire line retrievable bridge plugs with recorders installed beneath the bottom WRBP.

Nabors Service Rig #414 was rigged up on location on March 16 2013. Each set of Bridge plugs and gauges were recovered with no problems. Casing patches were set on wire line over all 3 perforated intervals. Nabors #414 was rigged out on March 24 2013 and the Loon Creek O-06 well is suspended with wellhead installed and locked.

1.2 Locality Map



2.0 General Data

2.1 Well Name

COPRC Loon Creek O-06

2.2 Unique Well Identifier

3000066510127000

2.3 Operator and Drilling Contractor

ConocoPhillips Canada Resources Corporation

Beaver Drilling Ltd. Rig #2

2.4 Difficulties and Delays

There were no significant drilling issues or delays experienced on this well.

3.0 Summary of Drilling Operations

3.1 Elevations

Ground Level: 252.40 m

Kelly Bushing: 257.60 m

KB – Ground Level: 5.20 m

3.2 Total depth

1856 m KB

3.3 Spud Date and Time

January 26 2013 @ 1200 Hours

3.4 Date Drilling Completed

Drilling completed 2/20/2103

3.5 Rig Release Date and Time

Rig Released 02 /20/13 @2400 Hrs.

3.6 Well Status

Suspended

3.7 Hole sizes and depths

Surface Hole: 311 mm to 600 m KB

Main Hole: 222 mm to 1856 m KB (TD)

3.8 Casing and Cementing Record

3.7.1 Conductor Hole

3.8.2 Surface Hole

244.5 mm, 53.57 kg/m, J-55 LTC set at 597.0 m KB

3.8.3 Main Hole

177.8 mm, 38.69 kg/m P-110 LTC set at 1856.0 m KB

3.9 Drilling Fluids

3.9.1 Surface Hole

Gel Chemical (MI Swaco)

3.9.2 Main Hole

Versaclean Mineral Oil (MI Swaco)

3.10 Formation Leak Off Tests

3.10.1 Surface Casing Drill out

COPRC Loon Creek O-06

A Formation Integrity Test (FIT) was conducted on Loon Creek O-06 on February 3, 2013 after drilling out the surface casing shoe at 597 m KB and making 3 metres of new hole. The FIT at 603 m KB was conducted with 855.0 kg/m³ OBM in the hole and was taken to a pressure of 6000 kPa with no leak off. This equates to an equivalent fracture pressure of 11055 kPa or an equivalent mud weight of 1870 kg/m³.

3.11 Time Distribution

Casing: 26.5 hrs.

Cementing: 14.74 hrs.

Coring: 196.50 hrs.

Drilling: 204.50 hrs.

Formation Evaluation: 93.0 hrs.

Rig Move: 303.50 hrs.

Rig Maintenance: 23.25 hrs.

Wellhead/BOP testing: 50.0 hrs.

Trouble Time: 4.75 hrs.

3.12 Deviation Survey

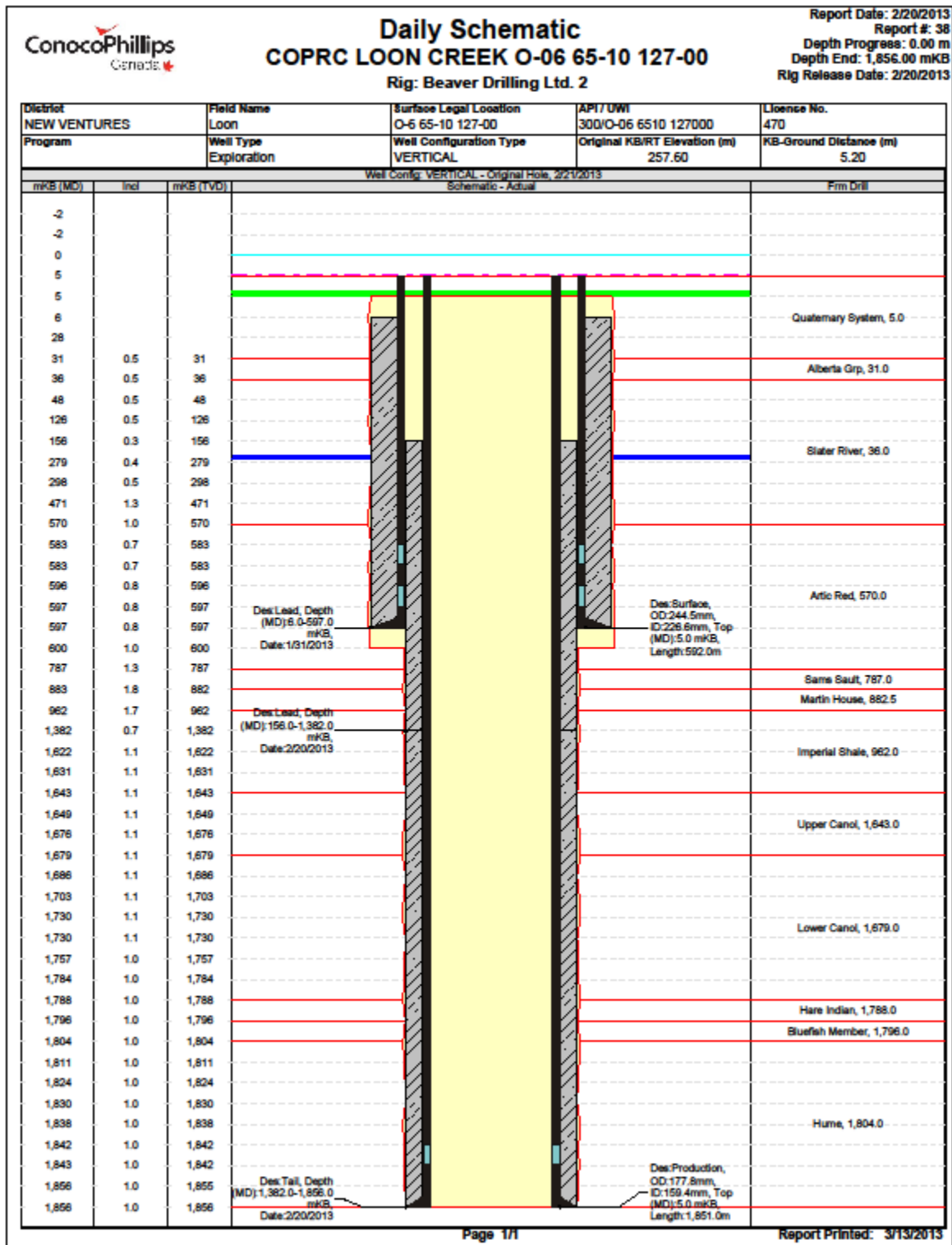
The maximum deviation encountered on this well was 2.59° at 1465.0 m KB

3.13 Suspension Status

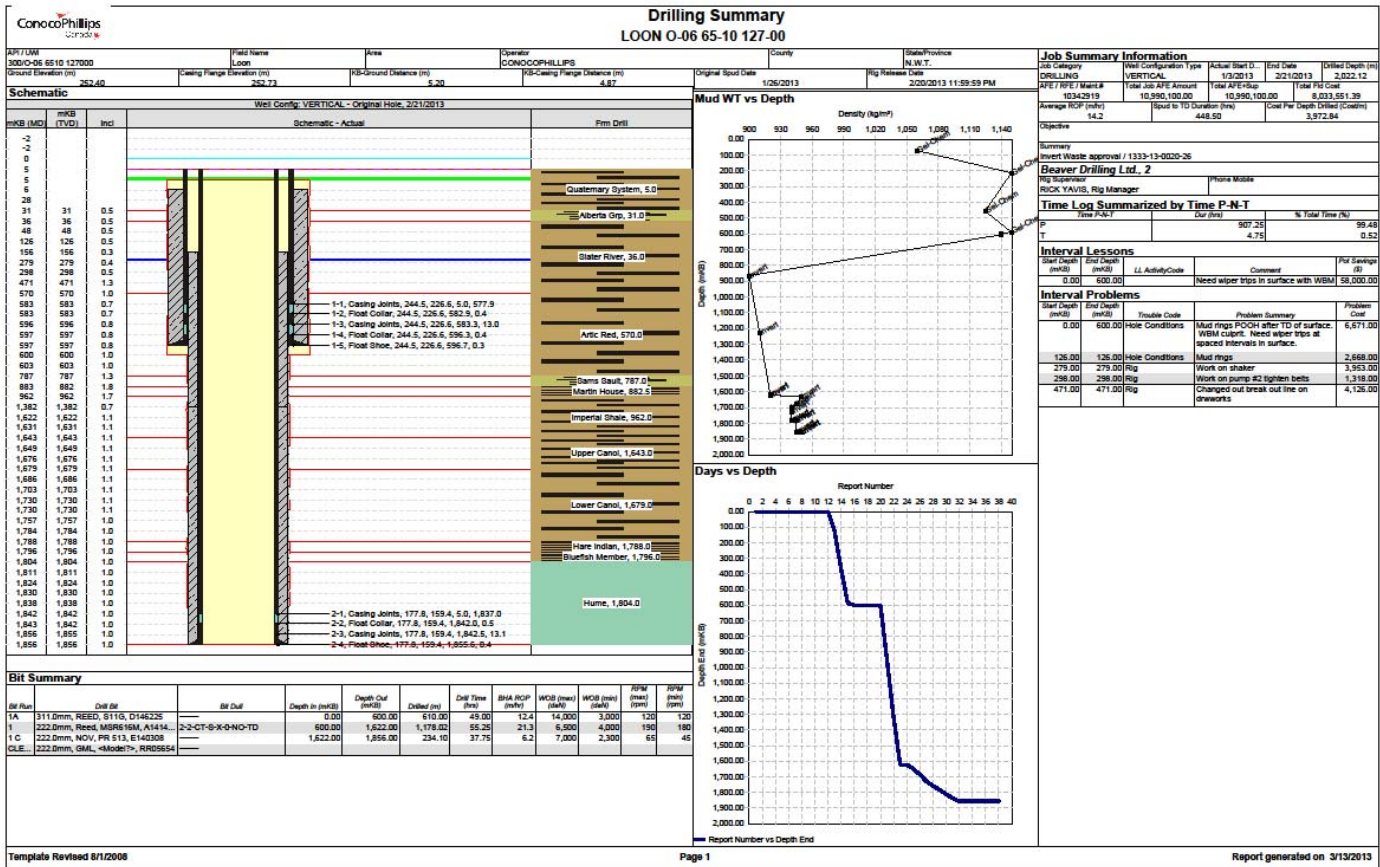
CPORC O-06 is suspended. A StreamFlo 34.5 MPa wellhead with two master valves is installed and chained and locked.

3.14 Composite Well Record

COPRC Loon Creek O-06



COPRC Loon Creek O-06



4. Geology

4.1 Drill Cuttings

Drill cuttings were collected at 5 metre intervals from spud to TD (1873 m KB). A set of bulk samples as well as a set of washed samples in vials have been delivered to the GSC (03/28/2013).

4.2 Cores

The interval from 1622.0 m to 1838 m KB was wire line cored in the Loon Creek O-06 well. A total of 8 – 27 metre cores were cut with 100% recovery.

4.3 Lithology

Formation	Prognosis		Sample		
	TVD	SS	MD	TVD	SS
Quaternary	5	252	5.0	5.0	255.0
Little Bear	28	229	31.0	31.0	227
Slater River	48	210	36.0	36.0	222
Arctic Red	578	-320	570.0	570.0	-312
Sans Sault	813	-555	787.0	787.0	-529
Martin House	888	-630.0	882.0	882.0	-625
Imperial	958	-700.0	962.5	962.5	-705
Upper Canol	1648	-1390.0	1642.5	1642.5	-1385
Lower Canol	1673	-1415.0	1679.0	1679.0	-1409
Hare Indian	1768	-1510.0	1788.0	1788.0	-1530
Bluefish Member	1783	-1525.0	1796.0	1796.0	-1538
Hume	1798	-1540.0	1804.0	1804.0	-1546
TD	1856	-1598.0	1856	1856.0	-1598.0

5. Well Evaluation

5.1 Open Hole Logs

Hole Section	Run Number	Log description	Depth In	Depth Out
Surface	1	Resistivity/Dual Density/ Neutron/Total GR/Sonic/GPIT	600	0
Main	1	AIT/NEXT/TLD/HGNS/TLD2	1858	600
	2	UBI/OBMI/OBMI2/PPC/MSIP/GPIT	1858	600
	3	ADT/HNGS/CMR (NTR)	1858	600
	4	RST	1858	600

5.2 DFIT Results

Completion operations commenced March 1 and were finished by March 4 2013, # DFIT's having been conducted on the Canol formation. The intervals for the DFIT's were 1769 – 1770 m KB, 1727 – 1728 m KB and 1692 – 1693 m KB. Each interval was suspended by setting two wire line retrievable bridge plugs with recorders installed beneath the bottom WRBP.

The wire line retrievable bridge plugs were left in place for 2 weeks in order to allow sufficient time for pressure bleed off. The bridge plugs and recorders were retrieved without incident and interpretation of the results is underway.

Appendices to Well History Report

I. Final Survey Plot of COPRC Loon Creek O-06

COPRC Loon Creek O-06

II. Casing and Cementing Report

 Casing Summary LOON O-06 65-10 127-00											
API / UWI 300/O-06 6510 127000		Surface Legal Location O-6 65-10 127-00		District NEW VENTURES		Field Name Loon		License No. 470			
Program		Well Type Exploration		Well Configuration Type VERTICAL		Original KB/RT Elevation (m) 257.60		KB-Ground Distance (m) 5.20			
Surface, 597.00mKB											
Set Depth (mKB) 597.00		Set Tension (daN) 28.0		String Nominal OD (mm) 244.5		Minimum Drift (mm)		Centralizers Count 16		Scratchers Count	
Jbs	Item Description	OD Nominal (mm)	Nominal ID (mm)	WT (kg/m)	Grade	Top Thread	Top (mKB)	Btm (mKB)	Section Length (m)	Burst Pres (MPa)	P (collapse) (MPa)
45	Casing Joints	244.5	226.6	53.574	K-55	LTC	-1.78	582.87	584.65		13,927
1	Float Collar	244.5	226.6	53.574	K-55	LTC	582.87	583.29	0.42		13,927
1	Casing Joints	244.5	226.6	53.574	K-55	LTC	583.29	596.29	13.00		13,927
1	Float Collar	244.5	226.6	53.574	K-55	LTC	596.29	596.71	0.42		13,927
1	Float Shoe	244.5	226.6	53.574	K-55	LTC	596.71	597.00	0.29		13,927
Production, 1,856.00mKB											
Set Depth (mKB) 1,856.00		Set Tension (daN) 48,000.0		String Nominal OD (mm) 177.8		Minimum Drift (mm)		Centralizers Count 86		Scratchers Count	
Jbs	Item Description	OD Nominal (mm)	Nominal ID (mm)	WT (kg/m)	Grade	Top Thread	Top (mKB)	Btm (mKB)	Section Length (m)	Burst Pres (MPa)	P (collapse) (MPa)
146	Casing Joints	177.8	159.4	38.692	P-110	LTC	-1.74	1,842.01	1,843.75		42,954
1	Float Collar	177.8	159.4	38.692	P-110	LTC	1,842.01	1,842.47	0.46		42,954
1	Casing Joints	177.8	159.4	38.692	P-110	LTC	1,842.47	1,855.57	13.10		42,954
1	Float Shoe	177.8	159.4	38.692	P-110	LTC	1,855.57	1,856.00	0.43		42,954

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Page 1/1

Report Printed: 3/13/2013

COPRC Loon Creek O-06

III. Coring Report

 Coring COPRC LOON CREEK O-06 65-10 127-00										
API/OWI	Surface Legal Location	District	Field Name	License No.	Program	Well Type	Well Config	Orig KBHT (m)	KB-GRD (m)	
300/O-06 6510 127000	O-6 65-10 127-00	NEW VENTURES	Loon	470		Exploration	VERTICAL	257.60	5.20	
Bottom Hole Cores										
Date	Core No.	Type	Top (mKB)	Btm (mKB)	Recov (m)	Coring Company	Comment			
2/7/2013	1	WL Coring	1,622.00	1,631.00	9.0	NOV				
2/7/2013 8:00:00 AM	1	WL Coring	1,631.00	1,649.00	18.0	NOV				
2/8/2013 4:15:00 AM	2	WL Coring	1,649.00	1,676.00	27.0	NOV				
2/8/2013 11:00:00 PM	3	WL Coring	1,676.00	1,686.00	10.0	NOV				
2/9/2013 2:30:00 AM	3	WL Coring	1,686.00	1,703.00	17.0	NOV				
2/9/2013 6:45:00 PM	4	WL Coring	1,703.00	1,730.10	27.0	NOV				
2/10/2013 4:00:00 PM	5	WL Coring	1,730.00	1,757.00	27.0	NOV				
2/11/2013 8:00:00 AM	6	WL Coring	1,757.00	1,784.00	27.0	NOV				
2/12/2013 8:00:00 AM	7	WL Coring	1,784.00	1,811.00	27.0	NOV				
2/13/2013 4:30:00 AM	8	WL Coring	1,811.00	1,824.00	13.0	NOV				
2/13/2013 8:00:00 AM	8	WL Coring	1,824.00	1,830.00	6.0	NOV				
2/13/2013 10:30:00 AM	8	WL Coring	1,830.00	1,838.00	8.0	NOV				

Template Revised 8/1/2007
Page 1/1
Report Printed: 3/13/2013

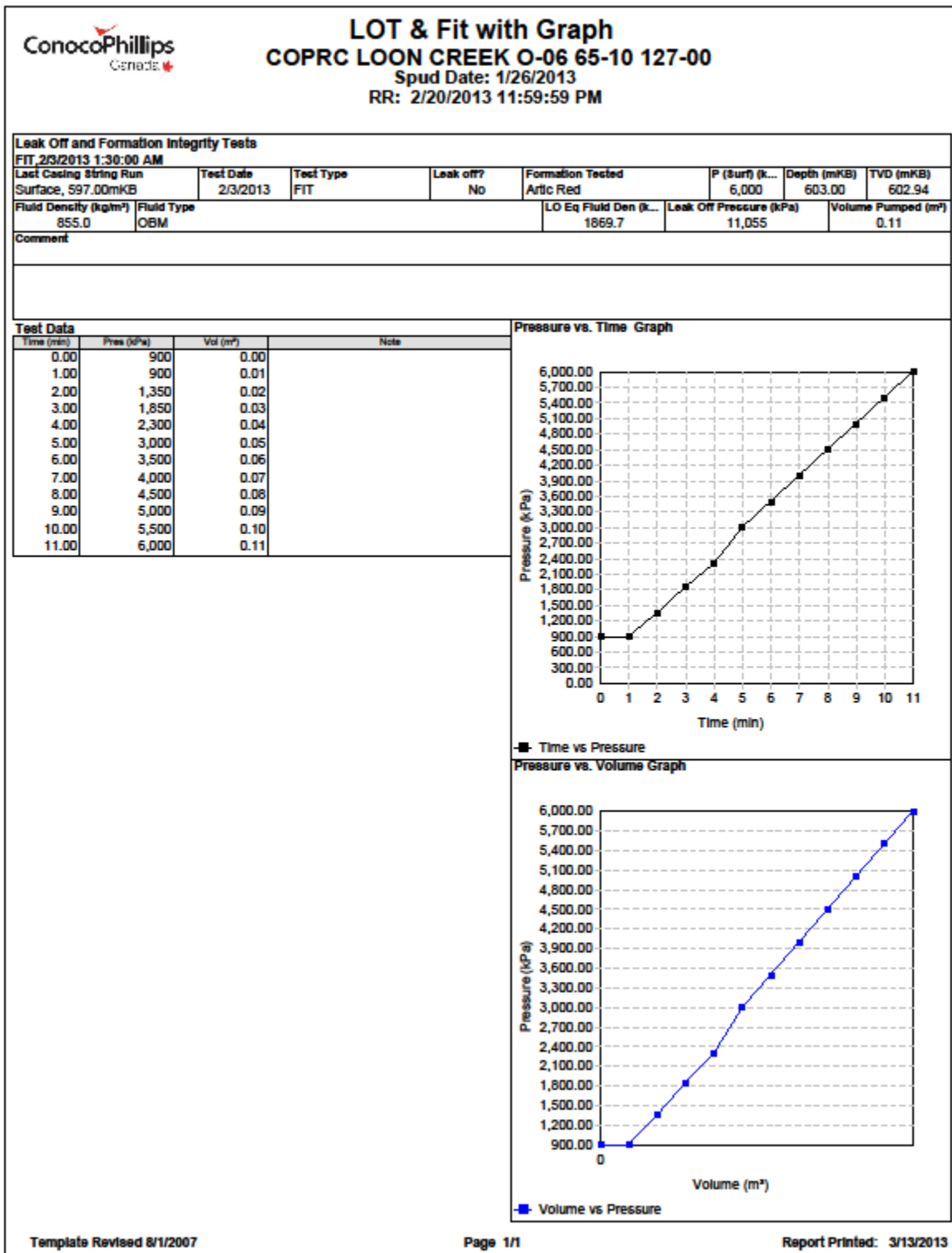
COPRC Loon Creek O-06

IV. Drilling Fluid Summary

ConocoPhillips Canada		Mud Properties Summary (legal size) COPRC LOON CREEK O-06 65-10 127-00																												
API / UWI 300/O-06 6510 127000		Surface Legal Location O-6 65-10 127-00		License No. 470		Well Configuration Type VERTICAL			Ground Elevation (m) 252.40		Casing Flange Elevation (m) 252.73		KB-Ground Distance (m) 5.20		KB-Casing Flange Distance (m) 4.87															
Rigs		APE / RPE		Type		Sub-type		Plan TMD (m00)		Plan Form		Contractor		Rig Name#		Rig Type		Rig Accept Date		RRI Date										
10342919		DRILLING ORIGINAL						1,873.00				Beaver Drilling Ltd.		2		DRILLING-DOUBLE		1/26/2013		2/20/2013										
Fluid / Mud Checks																														
Date	Depth (m00)	Depth (TVD) (m00)	Type	Dens (kg/m3)	Via (mL)	PV Calc (cp)	YP Calc (Pa)	Gel (10s) (Pa)	Gel (10m) (Pa)	API Filtrate (mL/30min)	pH	Pow (mL/mL)	Water Solids (%)	CaCl2 (ppm)	Ca (mg/L)	Chlor (mg/L)	K	Vendor	Lime (kg/m3)	Loss (%)	Mg (mg/L)	MBT (kg/m3)	n	OW Ratio	PI (mL/mL)	Pes (mL/mL)	Pot (mg/L)	Sand (%)	Solids, Cor. (%)	Wellbore
1/26/2013	71.00	71.00	Gel-Chem	1060.0	40	2.0	6.0	2.5	2.5	20.0	10.5				40	600	18.5...	Mil Swaco		3.8			0.198		0.100			0.0	5.0	Original Hole
1/27/2013	213.00	212.99	Gel-Chem	1150.0	52	10.0	12.0	7.0	20.0	7.5	9.0				20	700	45.2...	Mil Swaco		9.5			0.186		0.200			0.0	6.0	Original Hole
1/28/2013	455.00	454.96	Gel-Chem	1125.0	50	19.0	7.5	4.0	7.0	5.5	8.0				20	500	22.4...	Mil Swaco		7.9		64	0.285		0.100			0.0	5.0	Original Hole
1/29/2013	587.00	586.94	Gel-Chem	1150.0	68	27.0	11.0	6.5	14.0	7.0	8.0				20	500	31.1...	Mil Swaco		9.5		84	0.361		0.500			0.0	5.5	Original Hole
1/30/2013	600.00	599.94		1140.0	80																									Original Hole
1/31/2013	606.00	605.94		1140.0	56																									Original Hole
2/3/2013	865.00	864.87	Invert	900.0	50	12.0	3.5	6.0	9.0			5.700	6.0		39,000	249,926	22.2...	Mil Swaco	21	4.2			0.198	85/15						Original Hole
2/4/2013	1,230.00	1,229.71	Invert	910.0	54	11.0	4.0	6.0	8.5			5.700	7.2		35,500	263,383	16.9...	Mil Swaco	21	5.5			0.25	87/13						Original Hole
2/5/2013	1,617.00	1,616.62	Invert	920.0	60	13.0	5.5	7.5	10.0			5.100	8.5		33,000	266,597	25.0...	Mil Swaco	19	6.9			0.217	88/12						Original Hole
2/6/2013	1,622.00	1,621.62	Invert	920.0	60	13.0	5.5	7.5	10.0			5.100	8.5		33,000	266,597	25.0...	Mil Swaco	19	6.9			0.217	88/12						Original Hole
2/7/2013	1,631.00	1,630.62	Invert	950.0	58	12.0	4.5	6.0	11.0			5.300	9.5		35,000	260,156	22.2...	Mil Swaco	20	7.4			0.198	87/13						Original Hole
2/8/2013	1,676.00	1,675.61	Invert	945.0	68	12.0	4.5	6.5	10.0			5.100	9.7		32,000	259,568	22.2...	Mil Swaco	19	8.1			0.198	88/12						Original Hole
2/9/2013	1,703.00	1,702.60	Invert	940.0	78	12.0	4.5	5.5	8.0			4.800	10.0		32,500	277,514	16.3...	Mil Swaco	18	8.3			0.273	88.3/...					8.6	Original Hole
2/10/2013	1,730.00	1,729.60	Invert	940.0	64	12.0	4.0	5.0	8.0			4.400	10.5		31,000	274,255	12.7...	Mil Swaco	16	8.7			0.289	89/11					9.1	Original Hole
2/11/2013	1,784.00	1,783.59	Invert	940.0	80	13.0	5.5	5.5	11.5			5.700	10.5		31,000	274,255	0.084	Mil Swaco	21	9.0			0.752	88.8/...					9.2	Original Hole
2/11/2013	1,785.00	1,784.59		940.0	74																									Original Hole
2/12/2013	1,784.00	1,783.59	Invert	940.0	80	13.0	5.5	5.5	11.5			5.700	10.5		31,000	274,255	0.084	Mil Swaco	21	9.0			0.752	88.8/...					9.2	Original Hole
2/13/2013	1,784.00	1,783.59	Invert	945.0	75	13.0	4.5	5.5	11.5			5.700			31,000	252,475	0.037	Mil Swaco	16	8.7			0.866	88/12					8.7	Original Hole
2/13/2013	1,784.00	1,783.59	Invert	945.0	77	14.0	4.0	5.5	12.0			5.700			31,000	274,255	0.037	Mil Swaco	22	8.7			0.866	88/12					8.7	Original Hole
2/15/2013	1,856.00		Invert	945.0	77	14.0	4.0	5.5	12.0			5.700			31,000	274,255	20.6...	Mil Swaco	22	8.7			0.242	88/12					8.7	Original Hole
Template Revised 8/1/2007												Page 1/2			Report Printed: 3/13/2013															

V. Leak Off Test Charts

COPRC Loon Creek O-06



COPRC Loon Creek O-06

VI. Geological Strip log

PowerSuite V11.0 developed by TriVision Geosystems Ltd. (403) 777-9454 (Canada) www.powerlogger.com

Well Information

Operator: **ConocoPhillips Canada Resources Corp.**
Well Name: **COPRC Loon Creek O-6**
Location: **Unit O, Section 6, Grid 65-10 127-00**
UWI: **3000066510127000**
Pool / Field: **Undefined / Loon Creek**
Well License #: **470**
Province / State: **Northwest Territories**
Country: **Canada**

Elevations

Reference: Ground Ground: 252.4 m
Cut(-) / Fill(+): 5.2 m Kelly Bushing: 257.6 m
K.B. to Ground: 5.2 m Casing Flange: 252.73 m

Total Depth

Measurement Type	Measured Depth	True Vertical Depth
Drillers TD (Tally)	1856 m	1855.94 m
Drillers TD (Strap or SLM)	m	m
Loggers TD	1857.6 m	1857.54 m

Well Co - Ordinates

	Longitude	Latitude	Well Type: Vertical
Surface Co-Ordinates:	127 00 30.7 W	65 05 51.5 N	NS: EW:
Int. Casing Co-Ordinates:			NS: EW:
Bottom Hole Co-Ordinates:			NS: 9.69 Meters North EW: 28.17 Meters East of the surface location.
UTM Surface Co-Ordinates:	Northing: 7220618.3	Easting: 593560.14	

Drilling Fluid Summary

Fluid Type	From	To
Spud Mud & Gel Chem	0 m	600 m
Invert (Versaclean)	600 m	1856 m

Casing Summary

Type	Hole Size	Casing Size	Landed At
Surface	311 mm	244.5 mm	596.78 m

Well Summary

Spud Date: Jan 26, 2013 @ 12:00hrs Contractor: Beaver Drilling Ltd.
TD Date: Feb 14, 2013 @ 06:35hrs Rig Release Date:

Work Schedule

Contractor	Geologist	Log Interval	Dates Logged
Black Gold Geotechnical	Dave Lawrence	0 m - 1856 m	Jan 24, 2013 - Feb 14, 2013

Remarks

VII. Mud Gas log



**Continental
Laboratories Ltd.**

Hydrocarbon Well Log

WELL NAME: COPRC LOON CREEK O-6

LOCATION: UWI 300 O 066510127000 LICENSE# 470

COMPANY: Conocophillips CanadaResources Corp.

PROVINCE: Northwest Territories **FILE:** 19255

ELEVATION K.B.: 257.9 m **HOLE SIZE:** 311 mm from 24 m to 600 m

ELEVATION G.L.: 252.7 m 222 mm from 600 m to 1622 m

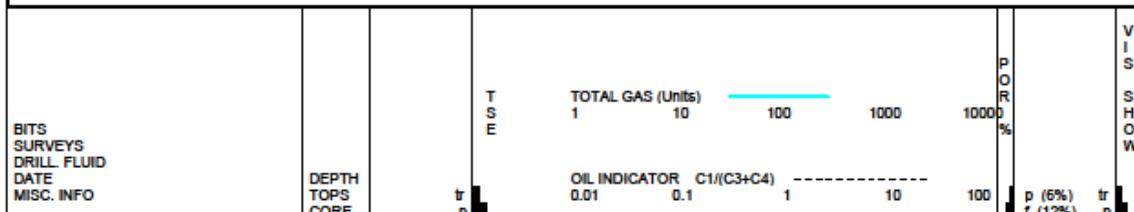
LOGGING INTERVAL: 23.9 m to m

LOGGING DATES: 18/01/2013 to **MUD SYSTEM:** Gel Chem from: 24 m to: 600 m

PERSONNEL: Rahil Kiani / Fayaz Rehman Invert from: 600 m to: 1622 m

INSTRUMENTATION: MP2300 Chromat Invert from: 1622 m to: m

ALL LITHOLOGIC SYMBOLS ARE CANSTRAT COMPATIBLE



COPRC Loon Creek O-06

VIII. Daily Activity and Cost Summary Report

ConocoPhillips Canada		Daily Activity and Cost Summary LOON O-06 65-10 127-00							
API / UMI 300/O-06 6510 127000		Surface Legal Location O-6 65-10 127-00		District NEW VENTURES		Field Name Loon		License No. 470	
Program		Well Type Exploration		Well Configuration Type VERTICAL		Original KB/RT Elevation (m) 257.60		KB-Ground Distance (m) 5.20	
Job Category DRILLING				Primary Job Type DRILLING ORIGINAL			Secondary Job Type		
Actual Start Date 1/3/2013		End Date 2/21/2013		AFE / RFE / Maint.# 10342919			Total Job AFE Amount 10,990,100.00		
Objective									
Summary Invert Waste approval / 1333-13-0020-26									
Contractor Beaver Drilling Ltd.				Rig Name/No 2		Rig Type DRILLING-DOUBLE			
Report No.	Start Date	End Date	Depth Start (mKB)	Depth End (mKB)	Day Total	Cum Cost	Last 24hr Sum		
1	1/3/2013	1/4/2013	0.00	0.00	650,799.60	650,799.60	Tear out and mobilize rig to Grande Prairie		
2	1/8/2013	1/9/2013	0.00	0.00	27,494.00	678,293.60	Oriental personal for Chinook Project		
3	1/9/2013	1/10/2013	0.00	0.00	27,494.00	705,787.60	Oriental personal for Chinook Project and start well control simulator		
4	1/10/2013	1/11/2013	0.00	0.00	168,863.00	874,650.60	Finish well control simulator		
5	1/18/2013	1/19/2013	0.00	0.00	1,825,302.00	2,699,952.60	Continue to build and prepare rig to move on to O-06,65-10127-00		
6	1/19/2013	1/20/2013	0.00	0.00	27,494.00	2,727,446.60	Continue to build and prepare rig to move on to O-06,65-10127-00		
7	1/20/2013	1/21/2013	0.00	0.00	27,494.00	2,754,940.60	Attempt to lay preheated rig liner, too cold liner shattered due to -40 temp. Lay poly spot Matting and Sub, Pin derrick together.		
8	1/21/2013	1/22/2013	0.00	0.00	37,516.50	2,792,457.10	Continue to spot rig and third party equipment		
9	1/22/2013	1/23/2013	0.00	0.00	45,219.00	2,837,676.10	Continue to spot third party equipment, general rig up to raise derrick and raise derrick, Fire boiler, unload casing.		
10	1/23/2013	1/24/2013	0.00	0.00	29,794.00	2,867,470.10	General rig up, fire boiler rig up power cords, lightes, steam lines and water lines.		
11	1/24/2013	1/25/2013	0.00	0.00	260,055.09	3,127,525.19	No accidents or incidents 5 Hazard ID's 1 Reportable spill: General rig up, Weld on diverter flange and nipple up diverter, Rig up diverter lines, Recieved 3 loads sawdust, Directional tools, High side shale bins, ConleyMax heaters 3 loads of New Invert, Continue installing rig septic system		
12	1/25/2013	1/26/2013	0.00	0.00	53,555.00	3,181,080.19	No accidents or incidents 5 Hazard ID's: Weld on diverter flow T and nipple up diverter, Rig up diverter lines and flare tank, Modify and build mud pump suction and discharge lines,		
13	1/26/2013	1/27/2013	0.00	126.00	134,311.71	3,315,391.90	No accidents or incidents 2 Hazard ID's: 4 Job observations: Weld on diverter flow T, Modify and build mud pump suction and discharge lines, Mix spud mud, Perform pre-spud inspection and provide NEB with documentation. Recieved confirmation from NEB representative of pre-spud inspection, Hold pre-spud safety meeting with drill crew and relevant service providers, Hold diverter drill and man down drill, Spud well @12:00 Hours, Drill 311mm surface hole F/ 0 to 126m with Reed S11G Mill Tooth bit and slick rotary BHA, Accumulated survey, connection and Work tight hole time.		
14	1/27/2013	1/28/2013	126.00	370.00	66,777.18	3,382,169.08	No accidents or incidents 1 Hazard ID's: 4 Job observations: Drill 311mm surface hole F/ 126 to 370m with Reed S11G Mill Tooth bit and slick rotary BHA, Accumulated survey and connection time		
15	1/28/2013	1/29/2013	370.00	587.00	105,046.38	3,487,215.46	No accidents or incidents 1 Hazard ID's: 4 Job observations: Drill 311mm surface hole F/ 370 to 587m with Reed S11G Mill Tooth bit and slick rotary BHA, Accumulated survey and connection time		
16	1/29/2013	1/30/2013	587.00	600.00	171,939.88	3,659,155.34	No accidents or incidents 1 Hazard ID's: 4 Job observations: Pull out of hole, Work mud ring from 400m to surface, Clean bit and run in hole, Wash and ream F/ 290 - 410, Drill 311mm surface hole F/ 587 to 600m with Reed S11G Mill Tooth bit and slick rotary BHA, Accumulated survey and connection time. Circulate condition hole, Wiper trip to 200m and back.		
17	1/30/2013	1/31/2013	600.00	600.00	297,930.57	3,957,085.91	No accidents or incidents 1 Hazard ID's: 5 Job observations: 3: Run in hole, Circulate hole clean, Pull out of hole (hole in good condition) Lay down 220mm DC's, Rig to and run wireline logs with Schlumberger, Rig in power tongs and run 244.5mm surface casing		
18	1/31/2013	2/1/2013	600.00	600.00	191,033.34	4,148,119.25	No accidents or incidents 1 Hazard ID's: 5 Job observations: 3: Run 244.5mm surface casing, Circulate and condition mud, Transfer surface mud to storage and prepare for cementing, Rig to and cement surface casing with Schlumberger, Recieved 6.5m3 good cement returns, Annulus remained static after job complete, Wait on cement, Nipple down diverter system, Screw on casing Bowl.		
Template Revised 8/1/2007					Page 1/3		Report Printed: 3/13/2013		

COPRC Loon Creek O-06

IX. Daily Drilling Reports

Well Header									
COPRC LOON CREEK O-06 35-10 127-00									
APN: 001		District: NEW YORK		Field Name: Loon		KB-Grid (m): 5.20		License No.: 479	
30500-000-000-000		Original KB/RT (m): 257.00		Well Configuration Type: VERTICAL		Well Type: Explorer			
Johs									
LINS ORIGINAL, 1/3/2013 00:00									
/ RFF / Malt. /		Estimate Days: 35-34		Actual Start Date: 4/02/2013		End Date: 2/21/2013			
0342913									
Time Log									
Start Time	End Time	Job Time	Up-Loss	Down-Loss	P	Alt Sub	Depth (m)	Depth (m)	Notes
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Tan-out and mobilize rig to Grande Prairie
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Arrive 1.50, training for Deaver Drilling Co cranes and service personnel for Chinook project.
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Highly Active HSL training and cultural awareness for Deaver Drilling Co crew and service personnel for Chinook project. Start simulator well control session.
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Finish simulator well control session.
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Continue to build and prepare rig at move on to Loon Creek O-06 35-10 127-00
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Continue to build and prepare rig to move on to Loon Creek O-06 35-10 127-00
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Attempt to lay preheated 70 liner, too soft that shattered due to -40 temp. Lay poly spot Mating and Sub 1 Hr derrick together.
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Continue to set equipment and wait on loads.
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Continue to spot third party equipment, general rig up to raise derrick and raise derrick, uncap casing.
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	General rig up, lift boiler, rig up power cords, lights, check lines and water lines
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	General rig to spud, Rig in 5 are and heavy lines, (tag damaged location liner)
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Rig service, Function Crown sealer
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Continue general rig to spud.
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Safety meeting with Welder prior to welding Diverter flange.
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Calculate weld on Diverter Flange
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Rig service, Function Crown sealer
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Weld on diverter flange, (strip and caliper BHA)
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Crew hand over tooling.
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Weld on diverter flange and nipple up.
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Nipple up and water weld up flow Trip up liner tank and clear rig
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Crew change safety meeting
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Rig service function test crown sealer
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Rig up evaporator, 30.5 pipe and 30 ready, & all base equipment.
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Rig service
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Rig up evaporator, 30.5 pipe and 30 ready, weld pump suction line re-modify prop valve lines and bleed off lines on pump house with two dump water in tanks structure blow ropper
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Rig service
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Weld pop valve lines
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	weld flow and metal
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	CAD/CAM rig inspection Function tested motor file operating properly
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Crew change safety meeting
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Rig service function test crown sealer
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Rig up to spud
00:00	00:00	24.00 MRL	MOVE	VCB	P		0.00	0.00	Diverter B.O.G drill

X. Tour sheets – Drilling Rig

Form X. Tour sheets – Drilling Rig, showing multiple pages of data tables and logs. The form includes sections for:

- Well Information (Well Name, Location, etc.)
- Drilling Log (Time, Depth, etc.)
- Drilling Parameters (Rate of Penetration, etc.)
- Drilling Fluids (Mud, etc.)
- Drilling Tools (Bit, etc.)
- Drilling Problems (Circulation, etc.)
- Drilling Summary (Total Depth, etc.)

The form is divided into several columns and rows, with data entries for each section. The top right corner features a logo for "MD Toteco".

COPRC Loon Creek O-06

XII. Directional Summary

ConocoPhillips Canada		Directional Survey LOON O-06 65-10 127-00									
API / UWI 300/O-06 6510 127000	Surface Legal Location O-6 65-10 127-00	District NEW VENTURES	Field Name Loon	License No. 470							
Program	Well Type Exploration	Well Configuration Type VERTICAL	Original KB/RT Elevation (m) 257.60	KB-Ground Distance (m) 5.20							
Parent Wellbore	Wellbore Name Original Hole	Kick Off Date	Kick Off Method	KO MD (mKB)	KO (TVD) (mKB)						
Date 1/26/2013	Description Els Dir. survey for Original Hole	As Ran No	Proposed? No								
MD Tie in (mKB)	TVD Tie in (mKB)	Inclination Tie in (°)	Azimuth Tie in (°)	NS Tie in (m)	EW Tie in (m)						
Survey Data											
Date	MD (mKB)	Incl (°)	Azm (°)	TVD (mKB)	Depth (m)	VS (m)	NS (m)	EW (m)	DLS (°/50m)	Method	Survey Company
1/26/2013	29.00	0.50	110.00	29.00	0.13	0.10	-0.04	0.12	0.52	WIRELINE	
1/26/2013	58.00	0.50	110.00	58.00	0.38	0.31	-0.13	0.36	0.00	WIRELINE	
1/26/2013	86.00	0.20	110.00	86.00	0.55	0.45	-0.19	0.52	0.32	WIRELINE	
1/26/2013	114.00	0.80	110.00	114.00	0.79	0.64	-0.27	0.75	0.64	WIRELINE	
1/27/2013	142.00	0.10	110.00	142.00	1.01	0.82	-0.35	0.95	0.75	WIRELINE	
1/27/2013	171.00	0.60	110.00	171.00	1.19	0.97	-0.41	1.12	0.52	WIRELINE	
1/27/2013	199.00	0.70	110.00	198.99	1.51	1.22	-0.52	1.42	0.11	WIRELINE	
1/27/2013	228.00	1.20	110.00	227.99	1.99	1.61	-0.68	1.87	0.52	WIRELINE	
1/27/2013	257.00	0.90	110.00	256.98	2.52	2.04	-0.86	2.37	0.31	WIRELINE	
1/27/2013	287.00	0.20	110.00	286.98	2.81	2.28	-0.96	2.64	0.70	WIRELINE	
1/27/2013	314.00	1.00	110.00	313.98	3.09	2.51	-1.06	2.91	0.89	WIRELINE	
1/27/2013	354.00	0.90	110.00	353.98	3.76	3.04	-1.28	3.53	0.08	WIRELINE	
1/28/2013	390.00	1.10	110.00	389.97	4.38	3.55	-1.50	4.12	0.17	WIRELINE	
1/28/2013	439.00	1.10	110.00	438.96	5.32	4.31	-1.82	5.00	0.00	WIRELINE	
1/28/2013	478.00	1.30	110.00	477.95	6.14	4.97	-2.10	5.77	0.15	WIRELINE	
1/28/2013	516.00	0.30	110.00	515.95	6.67	5.40	-2.28	6.27	0.79	WIRELINE	
1/28/2013	555.00	1.20	110.00	554.94	7.18	5.82	-2.46	6.75	0.69	WIRELINE	
1/29/2013	592.00	0.60	110.00	591.94	7.76	6.29	-2.66	7.30	0.49	WIRELINE	
2/3/2013	600.62	1.01	110.09	600.56	7.88	6.39	-2.70	7.41	1.43	MWD	
2/3/2013	619.94	1.01	122.48	619.88	8.22	6.64	-2.85	7.71	0.34	MWD	
2/3/2013	639.13	1.10	125.10	639.06	8.57	6.87	-3.04	8.01	0.16	MWD	
2/3/2013	652.00	1.10	125.12	651.93	8.80	7.02	-3.19	8.21	0.00	MWD	
2/3/2013	671.00	1.49	123.41	670.93	9.22	7.30	-3.43	8.56	0.62	MWD	
2/3/2013	715.36	1.71	126.48	715.27	10.43	8.08	-4.14	9.58	0.16	MWD	
2/3/2013	726.00	1.41	120.59	725.90	10.72	8.26	-4.30	9.82	0.96	MWD	
2/3/2013	735.65	1.01	128.42	735.55	10.92	8.40	-4.41	9.99	1.34	MWD	
2/3/2013	754.85	1.32	119.50	754.75	11.30	8.65	-4.63	10.31	0.56	MWD	
2/3/2013	764.71	1.10	112.99	764.61	11.51	8.80	-4.72	10.50	0.79	MWD	
2/3/2013	784.15	1.32	111.59	784.04	11.92	9.13	-4.87	10.88	0.34	MWD	
2/3/2013	793.85	1.19	81.31	793.74	12.12	9.31	-4.90	11.08	2.06	MWD	
2/3/2013	812.15	1.41	51.12	812.03	12.38	9.71	-4.73	11.44	1.16	MWD	
2/3/2013	831.00	1.58	49.01	830.88	12.62	10.16	-4.41	11.82	0.28	MWD	
2/3/2013	860.00	2.02	64.70	859.86	13.19	11.03	-3.93	12.58	0.68	MWD	
2/3/2013	879.00	1.89	64.74	878.85	13.67	11.66	-3.66	13.17	0.21	MWD	
2/3/2013	898.00	1.19	23.61	897.85	13.94	12.10	-3.34	13.53	2.00	MWD	
2/3/2013	926.00	1.32	19.08	925.84	14.03	12.47	-2.77	13.76	0.18	MWD	
2/4/2013	955.60	1.71	32.88	955.43	14.26	13.00	-2.08	14.11	0.54	MWD	
2/4/2013	985.10	1.58	42.42	984.92	14.69	13.67	-1.41	14.62	0.31	MWD	
2/4/2013	1,014.95	1.89	51.51	1,014.75	15.30	14.48	-0.80	15.28	0.42	MWD	
2/4/2013	1,043.60	2.11	57.62	1,043.39	16.10	15.42	-0.22	16.10	0.32	MWD	
2/4/2013	1,071.58	2.42	62.41	1,071.34	17.06	16.49	0.33	17.06	0.39	MWD	
2/4/2013	1,090.66	2.11	51.60	1,090.41	17.70	17.21	0.73	17.69	0.83	MWD	
2/4/2013	1,101.16	2.29	55.20	1,100.90	18.04	17.59	0.97	18.01	0.65	MWD	
2/4/2013	1,119.52	1.19	24.40	1,119.25	18.44	18.06	1.36	18.39	2.30	MWD	
2/4/2013	1,138.74	1.32	299.98	1,138.47	18.36	18.03	1.65	18.28	2.64	MWD	
2/4/2013	1,177.53	1.19	321.29	1,177.25	17.78	17.57	2.19	17.64	0.37	MWD	
2/4/2013	1,196.83	1.01	337.60	1,196.55	17.63	17.47	2.50	17.45	0.56	MWD	
2/4/2013	1,216.03	1.58	351.22	1,215.74	17.59	17.48	2.92	17.35	1.01	MWD	
2/4/2013	1,235.60	1.01	6.29	1,235.31	17.65	17.58	3.36	17.33	1.01	MWD	
2/4/2013	1,264.35	1.58	321.29	1,264.05	17.55	17.52	3.92	17.11	1.17	MWD	
2/4/2013	1,274.14	1.89	325.50	1,273.84	17.43	17.42	4.16	16.93	1.03	MWD	
2/4/2013	1,301.38	0.70	320.72	1,301.07	17.21	17.21	4.65	16.57	1.31	MWD	
2/5/2013	1,321.64	0.62	328.98	1,321.33	17.13	17.13	4.84	16.44	0.18	MWD	
2/5/2013	1,349.45	0.48	352.80	1,349.14	17.12	17.11	5.09	16.34	0.29	MWD	
2/5/2013	1,368.89	0.48	345.11	1,368.58	17.14	17.13	5.25	16.31	0.10	MWD	
Template Revised 8/1/2007						Page 1/2		Report Printed: 4/12/2013			

XIV. Final Completion Schematic

Completions schematic Loon Creek O-06

Wednesday, April 10, 2013
10:22 AM

General Page 1

COPRC Loon Creek O-06

XVI. Tour sheets – Service Rig

FIELD TICKET:

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Definition of Generalization

From	To	Frequency	Mode	Description	Frequency	Mode	Description
97.97	98.00	12 Hz	FM	FM	97.97	FM	FM
98.00	98.03	12 Hz	FM	FM	98.00	FM	FM
98.03	98.06	12 Hz	FM	FM	98.03	FM	FM
98.06	98.09	12 Hz	FM	FM	98.06	FM	FM
98.09	98.12	12 Hz	FM	FM	98.09	FM	FM
98.12	98.15	12 Hz	FM	FM	98.12	FM	FM
98.15	98.18	12 Hz	FM	FM	98.15	FM	FM
98.18	98.21	12 Hz	FM	FM	98.18	FM	FM
98.21	98.24	12 Hz	FM	FM	98.21	FM	FM
98.24	98.27	12 Hz	FM	FM	98.24	FM	FM
98.27	98.30	12 Hz	FM	FM	98.27	FM	FM
98.30	98.33	12 Hz	FM	FM	98.30	FM	FM
98.33	98.36	12 Hz	FM	FM	98.33	FM	FM
98.36	98.39	12 Hz	FM	FM	98.36	FM	FM
98.39	98.42	12 Hz	FM	FM	98.39	FM	FM
98.42	98.45	12 Hz	FM	FM	98.42	FM	FM
98.45	98.48	12 Hz	FM	FM	98.45	FM	FM
98.48	98.51	12 Hz	FM	FM	98.48	FM	FM
98.51	98.54	12 Hz	FM	FM	98.51	FM	FM
98.54	98.57	12 Hz	FM	FM	98.54	FM	FM
98.57	98.60	12 Hz	FM	FM	98.57	FM	FM
98.60	98.63	12 Hz	FM	FM	98.60	FM	FM
98.63	98.66	12 Hz	FM	FM	98.63	FM	FM
98.66	98.69	12 Hz	FM	FM	98.66	FM	FM
98.69	98.72	12 Hz	FM	FM	98.69	FM	FM
98.72	98.75	12 Hz	FM	FM	98.72	FM	FM
98.75	98.78	12 Hz	FM	FM	98.75	FM	FM
98.78	98.81	12 Hz	FM	FM	98.78	FM	FM
98.81	98.84	12 Hz	FM	FM	98.81	FM	FM
98.84	98.87	12 Hz	FM	FM	98.84	FM	FM
98.87	98.90	12 Hz	FM	FM	98.87	FM	FM
98.90	98.93	12 Hz	FM	FM	98.90	FM	FM
98.93	98.96	12 Hz	FM	FM	98.93	FM	FM
98.96	98.99	12 Hz	FM	FM	98.96	FM	FM
98.99	99.02	12 Hz	FM	FM	98.99	FM	FM
99.02	99.05	12 Hz	FM	FM	99.02	FM	FM
99.05	99.08	12 Hz	FM	FM	99.05	FM	FM
99.08	99.11	12 Hz	FM	FM	99.08	FM	FM
99.11	99.14	12 Hz	FM	FM	99.11	FM	FM
99.14	99.17	12 Hz	FM	FM	99.14	FM	FM
99.17	99.20	12 Hz	FM	FM	99.17	FM	FM
99.20	99.23	12 Hz	FM	FM	99.20	FM	FM
99.23	99.26	12 Hz	FM	FM	99.23	FM	FM
99.26	99.29	12 Hz	FM	FM	99.26	FM	FM
99.29	99.32	12 Hz	FM	FM	99.29	FM	FM
99.32	99.35	12 Hz	FM	FM	99.32	FM	FM
99.35	99.38	12 Hz	FM	FM	99.35	FM	FM
99.38	99.41	12 Hz	FM	FM	99.38	FM	FM
99.41	99.44	12 Hz	FM	FM	99.41	FM	FM
99.44	99.47	12 Hz	FM	FM	99.44	FM	FM
99.47	99.50	12 Hz	FM	FM	99.47	FM	FM
99.50	99.53	12 Hz	FM	FM	99.50	FM	FM
99.53							

Backlist

[illegible][illegible]

Final Time	To Time	Meeting Topic	Notes
11:00	11:35	OTIEC-3000	Meeting of the OTIEC-3000

B.C.F. function

D.O.P. Function Test:	OK	Accur. Pressure:	PSI	Recharge Time:	min:sec	Blow:	MPa	Temp:	Wind
Perching (DO #):	00	PSI	00	00	00	MPa	00	00	00
Drill Time Start (HH:MM):	00:00	00	00	00	00	00	00	00	00
Drill Time Stop:	00:00	00	00	00	00	00	00	00	00

Vehicles - Travel Kms Travelled

[illegible]

Information

[illegible][illegible]

XVII. Electric Logs

Downhole Well Profile

for
COPRC LOON CREEK O-06 65-10 127-00

API / UWI 300/O-06 6510 127000		Surface Legal Location O-6 65-10 127-00		Field Name Loon		License No. 470		Well Configuration Type VERTICAL	
Ground Elevation (m) 252.40		Orig KB/RT (m) 257.60		KB-Grd (m) 5.20		KB-CF (m) 4.87		KB-TF (m) 4.22	
						Other Elevation Type BGW		Other Elevation (m)	
Well Config: VERTICAL - Original Hole, 4/10/2013 10:20:54 AM									
mKB (MD)		Incl		Schematic - Actual		Type		Install Date	
-2				Well Configuration: VERTICAL					
-2						Description		Make	
5								Model	
6								WP (kPa)	
100		0.5						Top Ring Gasket	
125		0.5						Min Bore (mm)	
156		0.3							
583		0.7							
583		0.7							
596		0.8							
597		0.8							
597		0.8							
600		1.0							
1,382		0.7							
1,622		1.1							
1,631		1.1							
1,649		1.1							
1,676		1.1							
1,686		1.1							
1,691		1.1							
1,692		1.1							
1,693		1.1							
1,694		1.1							
1,703		1.1							
1,726		1.1							
1,727		1.1							
1,728		1.1							
1,730		1.1							
1,730		1.1							
1,730		1.1							
1,757		1.0							
1,768		1.0							
1,769		1.0							
1,770		1.0							
1,771		1.0							
1,784		1.0							
1,811		1.0							
1,824		1.0							
1,830		1.0							
1,838		1.0							
1,842		1.0							
1,842		1.0							
1,843		1.0							
1,856		1.0							
1,856		1.0							

CASING STRINGS					
Casing Description	String OD (mm)	String Wt (kg/m)	String Grade	String Top Thrd	Set Depth (mKB)
Surface	244.5	53.574	K-55	LTC	597.00
Production	177.8	38.692	P-110	LTC	1,856.00
PBTDS					
Depth (mKB)		KO MD (mKB)		TD (max) (mKB)	
1,841.50				1,856.00	
PERFORATIONS					
Date	Top (mKB)	Btm (mKB)	Zone	Current Status	
3/3/2013	1,692.00	1,693.00	Upper Lower Canol, Original ...	Suspended	
3/3/2013	1,727.00	1,728.00	Middle Lower Canol, Original ...	Suspended	
3/2/2013	1,769.00	1,770.00	Basal Lower Canol, Original H...	Suspended	
OTHER IN HOLE					
Run Date	Description		OD (mm)	ID (mm)	
3/22/2013	Casing Patch		155.2	139.7	
Top (mKB)	Bottom (mKB)		Make	Model	
1,767.56	1,771.43		Core-lab	X-Span	
Run Date	Description		OD (mm)	ID (mm)	
3/22/2013	Casing Patch		155.2	139.7	
Top (mKB)	Bottom (mKB)		Make	Model	
1,725.96	1,729.83		Core-lab	X-Span	
Run Date	Description		OD (mm)	ID (mm)	
3/22/2013	Casing Patch		155.2	139.7	
Top (mKB)	Bottom (mKB)		Make	Model	
1,690.56	1,694.43		Core-lab	X-Span	
Run Date	Description		OD (mm)	ID (mm)	
3/22/2013	Barrier - Fluid		155.2		
Top (mKB)	Bottom (mKB)		Make	Model	
125.00	1,856.00		Fresh water	TDS<4000 ppm	
Run Date	Description		OD (mm)	ID (mm)	
3/22/2013	Barrier - Fluid		155.2		
Top (mKB)	Bottom (mKB)		Make	Model	
100.00	125.00		Propylene Glycol	Mixed with 30 % H2O	

OIL MINI-FRAC ANALYSIS

WELL NAME: **COPRC Loon Creek**
 WELL LOCATION:
 Bottomhole Location: **300/O-06 65-10 127-00**
 Surface Location: 300/O-06 65-10 127-00
 Well License #: **470**

ZONE: **"BASAL" LOWER CANOL**

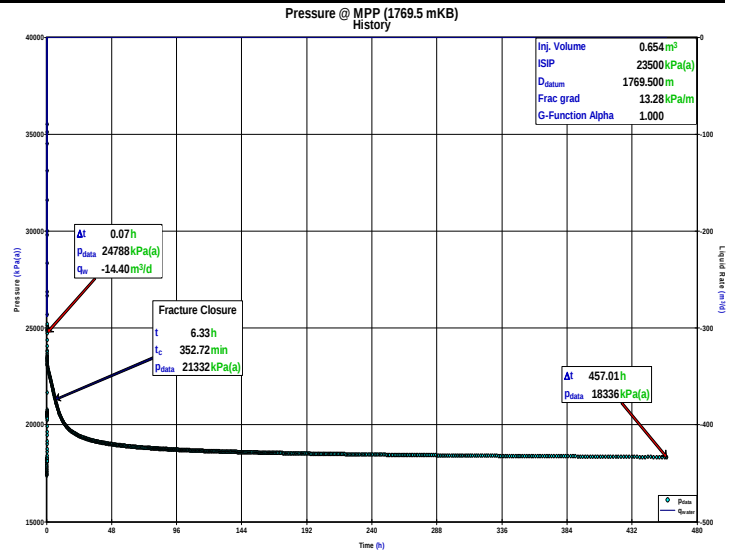
COST CENTRE: **10345055**

TEST DATE: **Mar 2 – 21, 2013**

STAGE OF WELL TEST: **Post-Perf Inj-Falloff**

ORIENTATION: **Vertical**

TYPE/SIZE OF STIMULATION: **N/A**



Reservoir Properties

Injection Interval: 1769 – 1770 mKB		
Frac Height (h): 5 m (Estimate)	Porosity (ϕ): 15 %	Water Saturation (S_w): 13 %
Oil Gravity: 50 °API (Estimate)	H ₂ S Content: 0 %	BHT: 79.2 °C

Injection Data

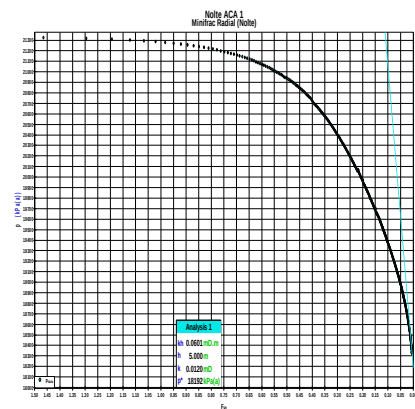
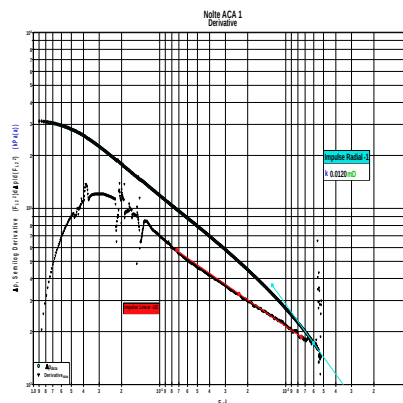
Test	Time	Final Rates				Final Pressures		
		Gas	New Oil	New H ₂ O	Load	Tubing	Casing	BHP
	Hours	e ³ m ³ /d	m ³ /d	m ³ /d	m ³ /d	kPag	kPag	kPaa
Injection	0.1	---	---	---	14.4	N/A	0	24788
Shut-In	457.0	---	---	---	0	N/A	0	18336

Injection Summary

New Fluid (m ³)				Load Fluid (m ³)		Remaining Load (m ³)	
Gas (E ³ M ³)	Gas (MSCF)	Cond (m ³)	Water (m ³)	Oil (m ³)	Water (m ³)	Oil (m ³)	Water (m ³)
---	---	---	---	0	0.65	0	0.65

Pressure Transient Analysis Results Summary

Analysis Results	
P^*	18192 kPaa
$(kh/\mu)_o$	0.21 mD·m/mPa·s
$(kh)_o$	0.06 mD·m
k_o	0.01 mD



Discussion

Test Procedure:

The “Basal” LOWER CANOL interval was perforated on Mar 1st, 2013. The following day, a retrievable bridge plug, with tandem electronic recorders hung below, was run in hole (center element at 1767 mKB). Water injection was initiated to achieve formation breakdown. Injection continued for several more minutes after breakdown, including for a brief period after the bridge plug setting mechanism was activated (dynamic shut-in). The final water injection rate prior to shut-in was reported to be 14.4 m³/d (0.01 m³/min). The subsequent falloff was monitored for almost 19 days (~457 hrs). Another bridge plug was run in hole shortly thereafter. Completion and test operations were then carried out on the “Middle” and “Upper” intervals of the Lower Canol formation while the “Basal” interval falloff was in progress. After recovering the respective bridge plugs & recorders for each of the upper intervals, the bridge plugs immediately above the “Basal” interval were unset and recovered (including the recorders) on Mar 21st. The primary objectives of the mini-frac test were to obtain frac design and reservoir flow parameters. The analyses / results for the “Middle” and “Upper” intervals have been provided in separate reports.

The test data (injection & falloff) from the subject test was corrected to the mid-point of the perforations (MPP=1769.5 mKB) using an estimated water gradient of 9.8 kP/m.

Analysis:

The mini-frac test data was analyzed using traditional techniques. Diagnostic plots, such as the G-Function & Sqrt (t) plots, were utilized first to confirm the occurrence of fracture closure. For the subject zone, the diagnostic plots indicated closure after almost 6 hrs (or ~353 minutes) of shut-in. However, there wasn't any evidence of pseudo-radial flow on the derivative plot prior to the end of the test. Regardless, after-closure analysis, via Nolte & Soliman / Craig techniques, was then conducted in an attempt to obtain estimates for reservoir parameters. It is also noted that the terminal portion of the data indicated the presence of non-reservoir effects, most likely as a result of uphole operations. Therefore, this portion of the falloff data was not used in the analysis. The corresponding results / plots have been presented in this report.

Conclusions / Recommendations:

The test was only partially successful in satisfying the primary objectives set forth at the onset of the test program. Although closure was achieved, pseudo-radial flow was not reached prior to the end of the test. Therefore, the reported reservoir flow parameters ($k_o = 0.01$ mD, $P^* = 18.2$ MPaa) are considered maximum estimates and should be used with **caution**. Consequently, the overall confidence of the test results is considered to be poor. It is also noted that the oil permeability was calculated based on estimated values for frac height (5 m) & oil viscosity (50 °API oil with a viscosity of 0.28 mPa·s).

Analyzed by: Al Kassam

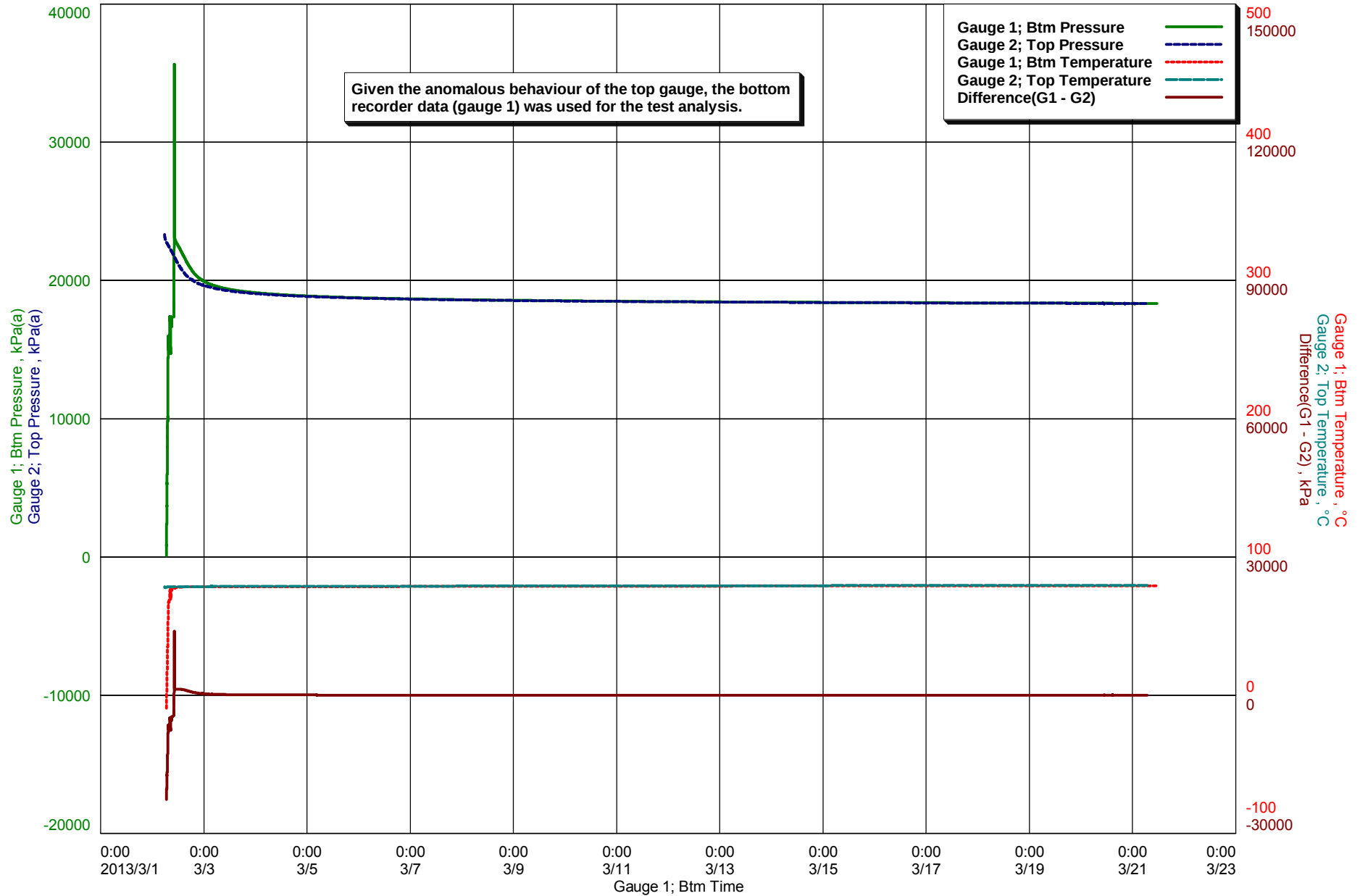
Report Date: May 3rd, 2013

Copy: Kim Clarke Alex Novgorodova Well File

O-06 65-10 127-00

Recorder Validation Plot

Formation: "Basal" Lower Canol



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COPRC Loon Creek
300/O-06- 65-10 127-00

Pressure @ MPP (1769.5 mKB)
History

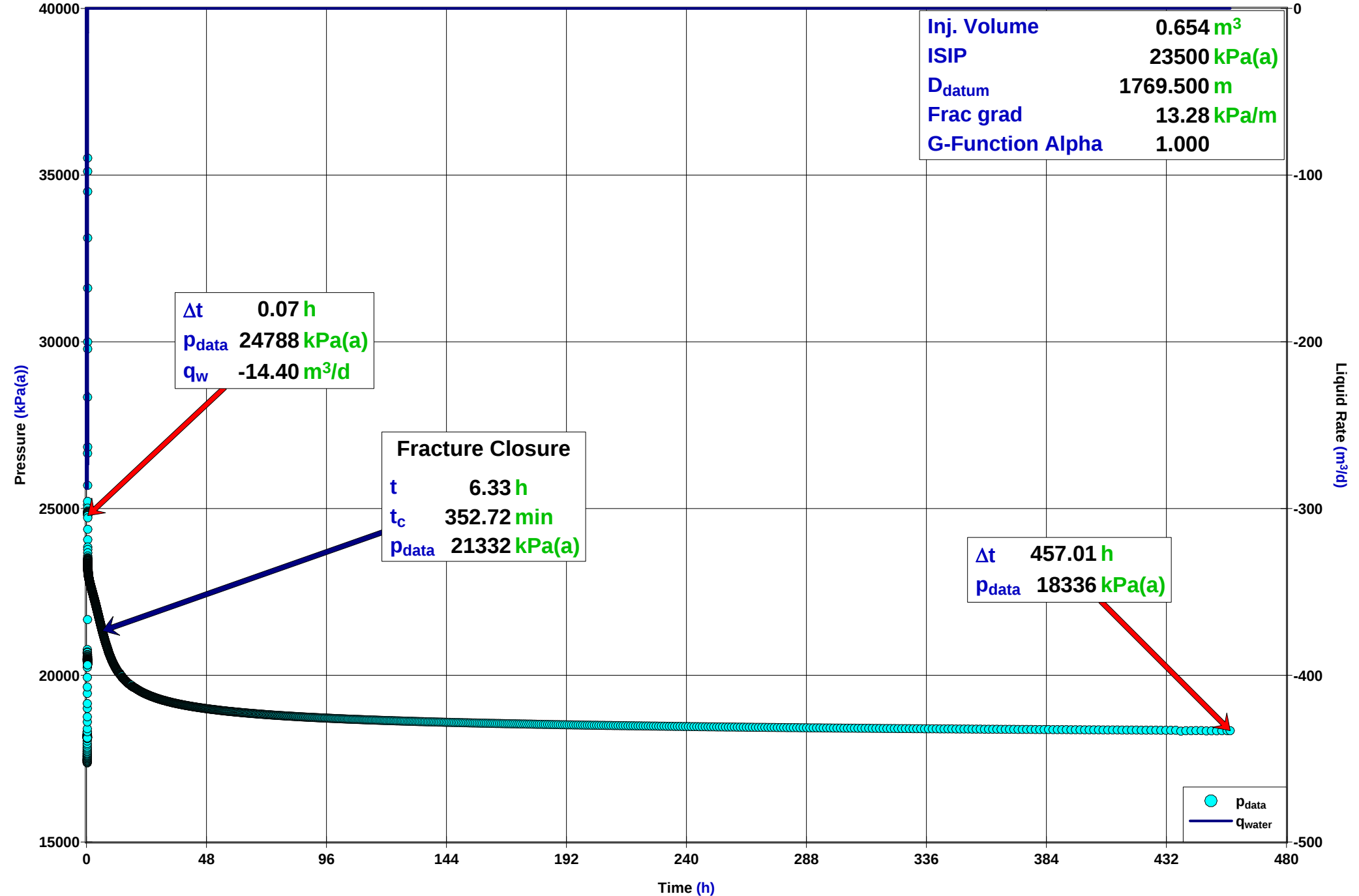
Basal Lower Canol (1769 - 1770 mKB)
DFIT (Mar 2 - 21, 2013)

Inj. Volume	0.654 m ³
ISIP	23500 kPa(a)
D _{datum}	1769.500 m
Frac grad	13.28 kPa/m
G-Function Alpha	1.000

Δt 0.07 h
 p_{data} 24788 kPa(a)
 q_w -14.40 m³/d

Fracture Closure
 t 6.33 h
 t_c 352.72 min
 p_{data} 21332 kPa(a)

Δt 457.01 h
 p_{data} 18336 kPa(a)



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COPRC Loon Creek
300/O-06- 65-10 127-00

Pressure @ MPP (1769.5 mKB)
History

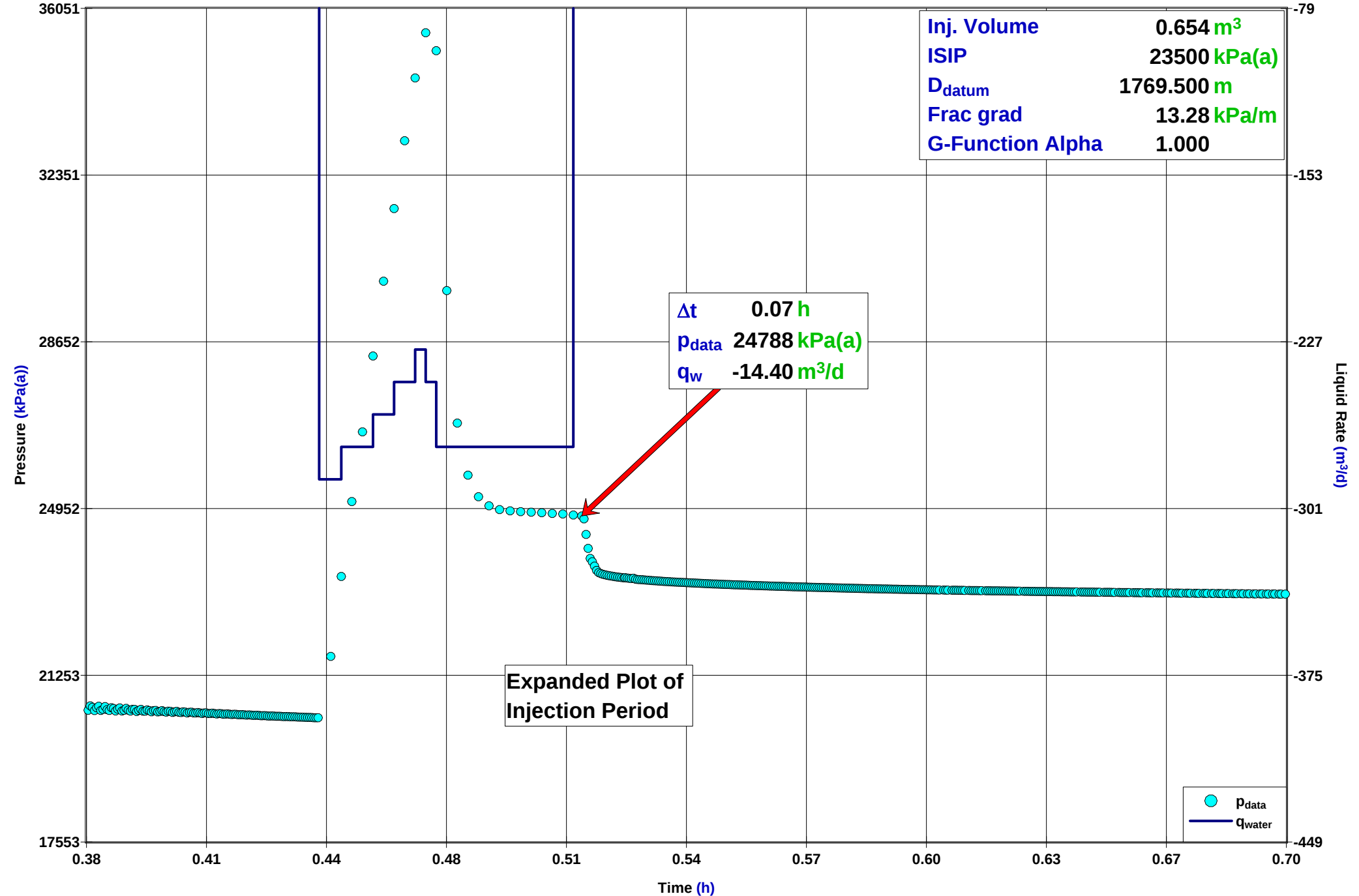
Basal Lower Canol (1769 - 1770 mKB)
DFIT (Mar 2 - 21, 2013)

Inj. Volume	0.654 m ³
ISIP	23500 kPa(a)
D _{datum}	1769.500 m
Frac grad	13.28 kPa/m
G-Function Alpha	1.000

Δt	0.07 h
p _{data}	24788 kPa(a)
q _w	-14.40 m ³ /d

Expanded Plot of
Injection Period

● p_{data}
— q_{water}

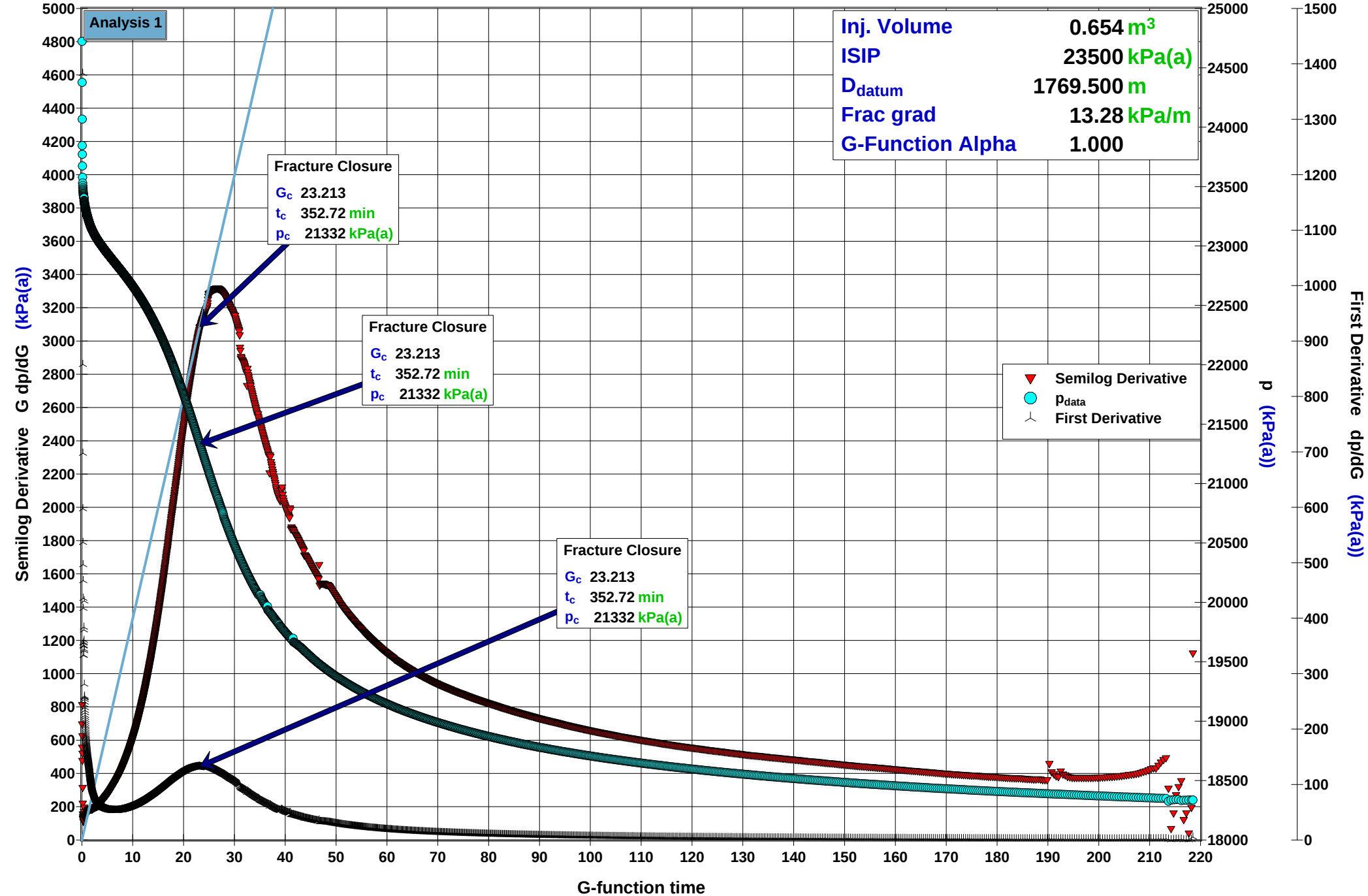


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300/O-06- 65-10 127-00

PCA Diagnostic 1 G-Function

Basal Lower Canol (1769 - 1770 mKB)
DFIT (Mar 2 - 21, 2013)



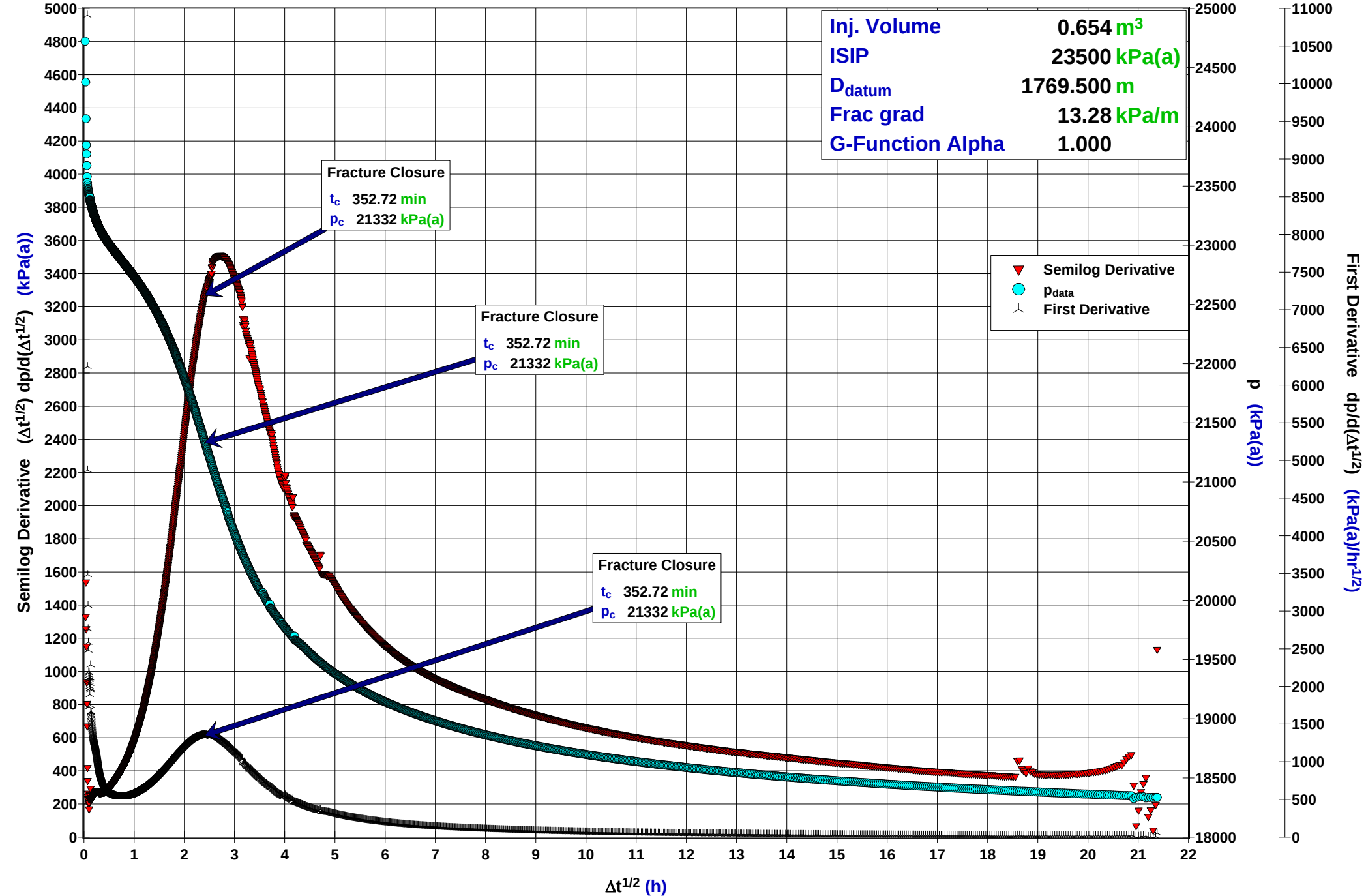
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COPRC Loon Creek
300/O-06- 65-10 127-00

PCA Diagnostic 1
MiniFrac Sqrt(t)

Basal Lower Canol (1769 - 1770 mKB)
DFIT (Mar 2 - 21, 2013)

Inj. Volume	0.654 m ³
ISIP	23500 kPa(a)
D _{datum}	1769.500 m
Frac grad	13.28 kPa/m
G-Function Alpha	1.000

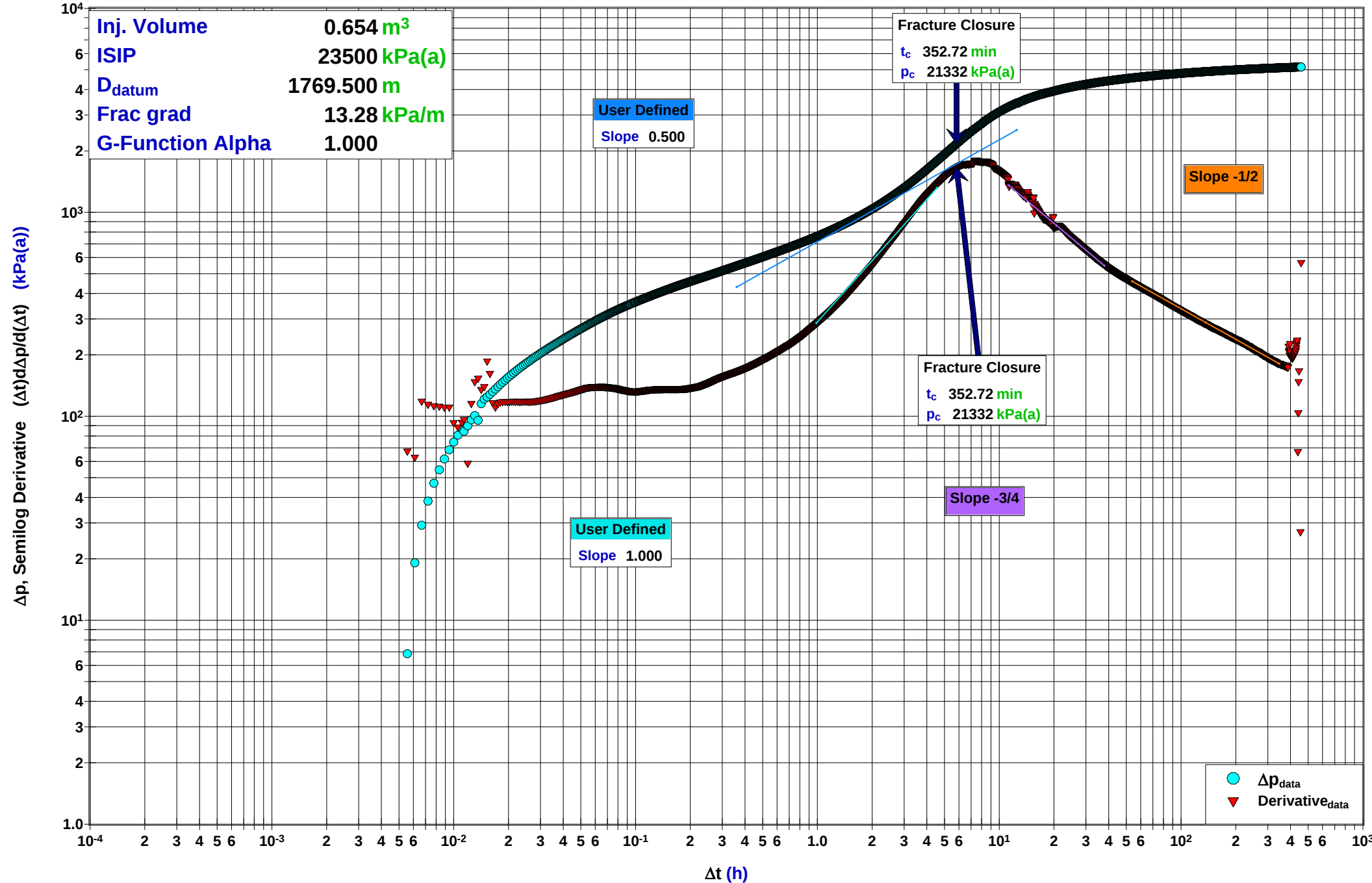


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PCA Diagnostic 1 Derivative

COPRC Loon Creek
300/O-06- 65-10 127-00

Basal Lower Canol (1769 - 1770 mKB)
DFIT (Mar 2 - 21, 2013)



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PCA Diagnostic 1

Input Data

Injected Volume 0.654 m³
Datum Depth 1769.500 m

Results

ISIP 23500 kPa(a)
Fracture Gradient 13.28 kPa/m

Closure Marker 1

Closure time (t_c) 5.8786 h
Closure pressure (p_c) 21332 kPa(a)
Net Frac Press (Δp_{net}) 2168 kPa
G-Function at Closure (G_c) 23.213
Fluid Efficiency (η) 92.07 %

Closure Marker 2

Closure time (t_c) 5.8786 h
Closure pressure (p_c) 21332 kPa(a)
Net Frac Press (Δp_{net}) 2168 kPa
G-Function at Closure (G_c) 23.213
Fluid Efficiency (η) 92.07 %

Fluid Properties

Oil Gravity (γ_o) 50.0 °API
Bubble Point Pressure (p_{bp}) 17488 kPa(a)
Oil Formation Volume Factor (B_o) 1.498
Oil Viscosity (μ_o) 0.2839 mPa.s
Oil Compressibility (c_o) 3.2157e-06 1/kPa
Solution Gas Ratio (R_s) 148.61 m³/m³

Reservoir Properties

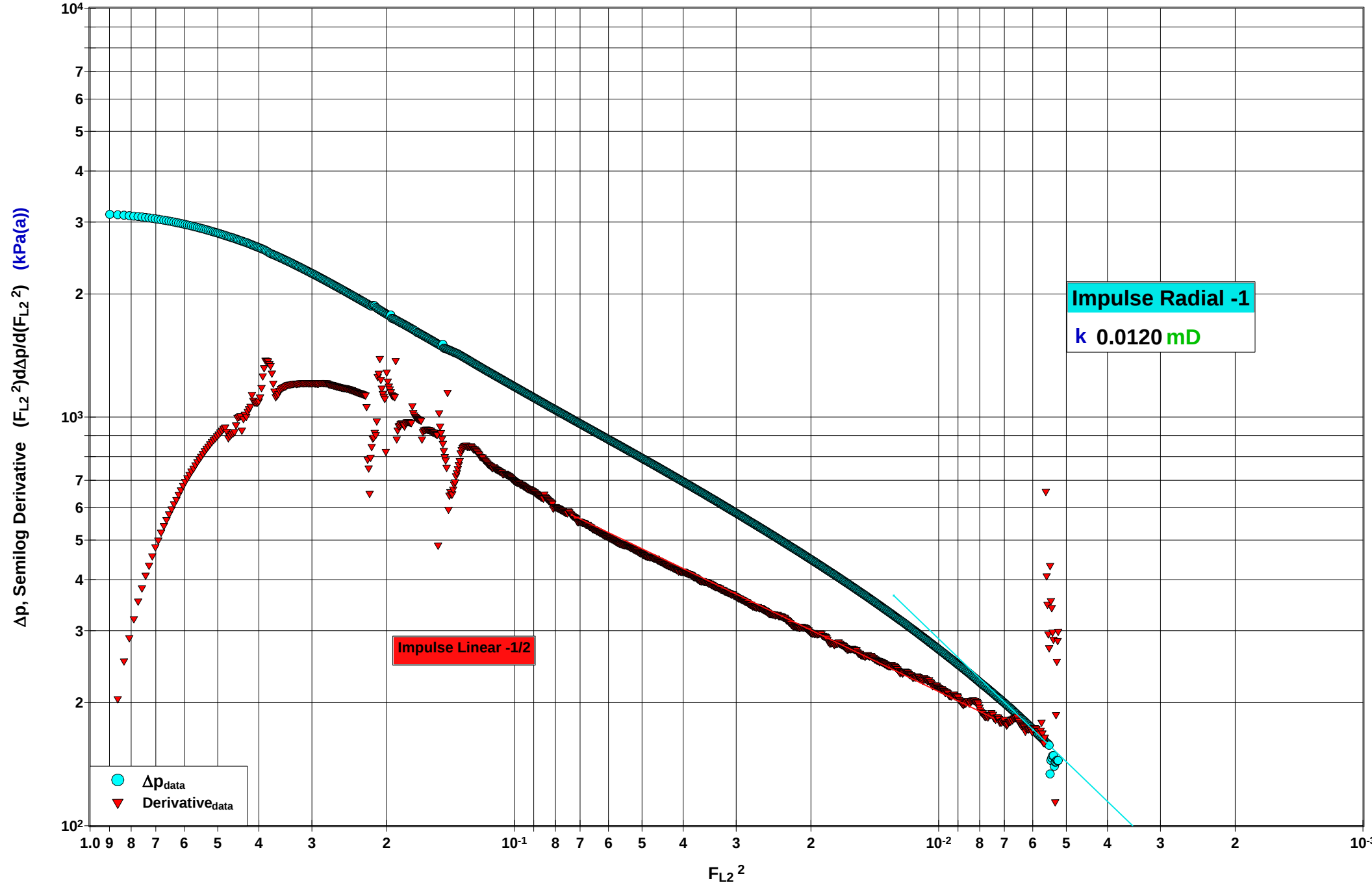
Reservoir Temperature (T_{resv}) 79.2 °C
Reservoir Pressure (p_{resv}) 17495 kPa(a)

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300/O-06- 65-10 127-00

Nolte ACA 1
Derivative

Basal Lower Canol (1769 - 1770 mKB)
DFIT (Mar 2 - 21, 2013)

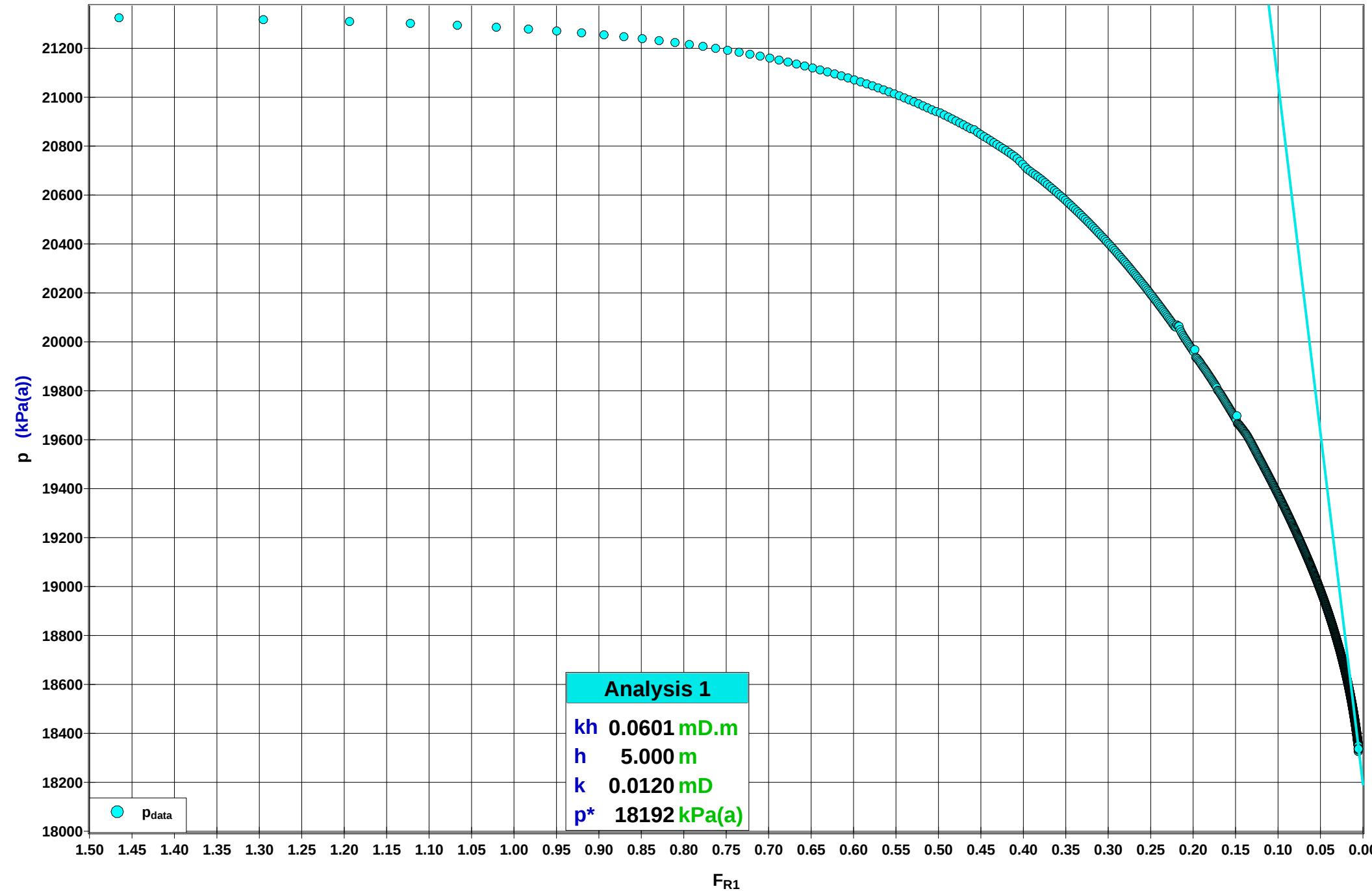


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300/O-06- 65-10 127-00

Nolte ACA 1
Minifrac Radial (Nolte)

Basal Lower Canol (1769 - 1770 mKB)
DFIT (Mar 2 - 21, 2013)

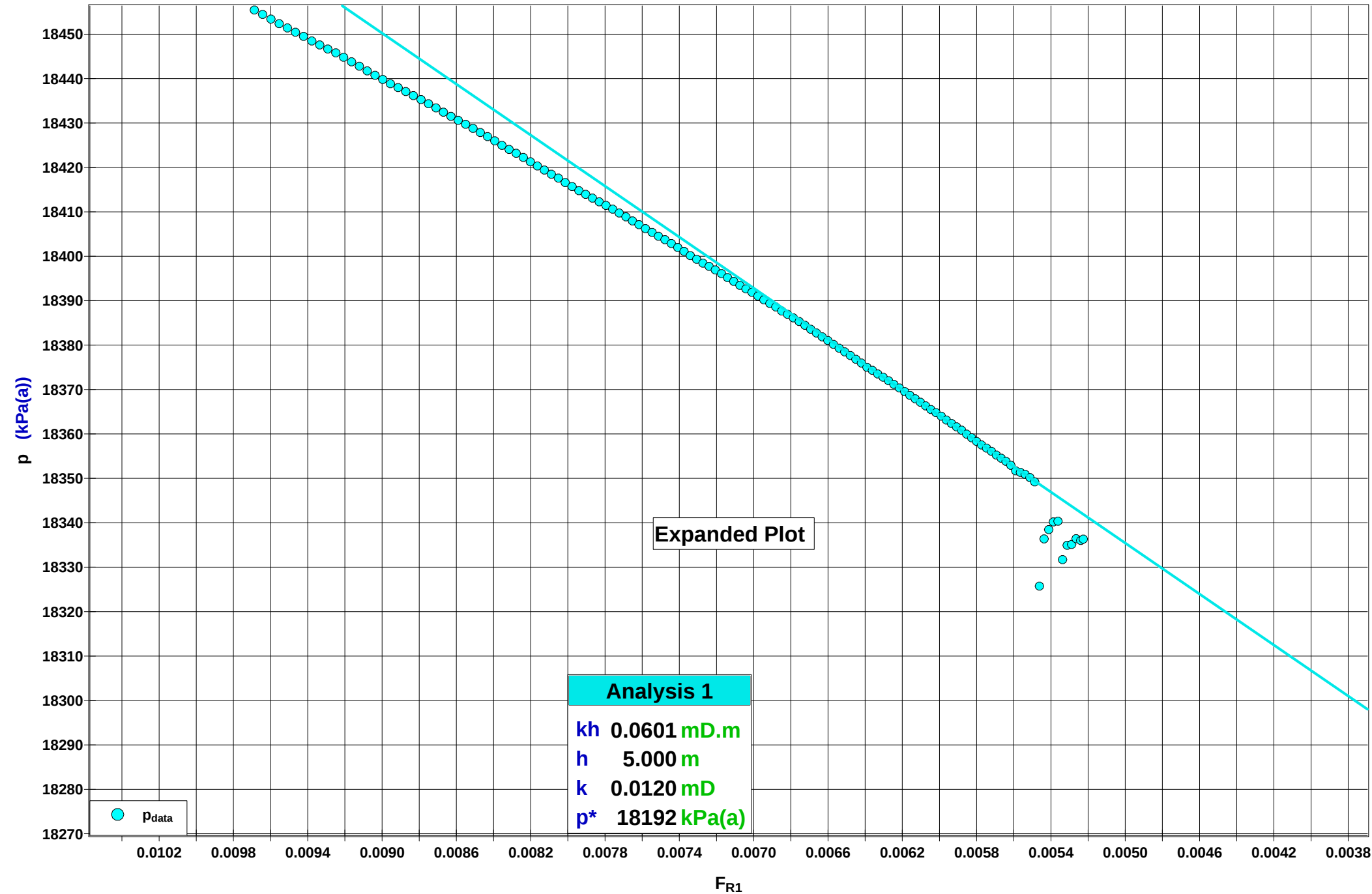


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COPRC Loon Creek
300/O-06- 65-10 127-00

Nolte ACA 1
Minifrac Radial (Nolte)

Basal Lower Canol (1769 - 1770 mKB)
DFIT (Mar 2 - 21, 2013)



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Nolte ACA 1

Linear Analysis (FL)

Flow Capacity (kh)	mD.m
Effective Permeability (k)	mD
Extrapolated Pressure (p*)	18036 kPa(a)
Closure Pressure (pc)	kPa(a)
Reservoir Leakoff Coefficient (CR)	m/min ^{1/2}
Total Leakoff Coefficient (CT)	m/min ^{1/2}

Radial Analysis (FR)

Flow Capacity (kh)	0.06008 mD.m
Effective Permeability (k)	0.0120 mD
Extrapolated Pressure (p*)	18192 kPa(a)

Input Parameters

Estimated Initial Pressure (p _i)	18192 kPa(a)
Closure time (t _c)	352.72 min

Fluid Properties

Oil Gravity (γ _o)	50.0 °API
Bubble Point Pressure (p _{bp})	17488 kPa(a)
Oil Formation Volume Factor (B _o)	1.498
Oil Viscosity (μ _o)	0.2839 mPa.s
Oil Compressibility (c _o)	3.2157e-06 1/kPa
Solution Gas Ratio (R _s)	148.61 m ³ /m ³

Reservoir Properties

Reservoir Temperature (T _{resv})	79.2 °C
Reservoir Pressure (p _{resv})	17495 kPa(a)
Net Pay (h)	5.000 m
Total Porosity (φ _t)	15.00 %
Gas Saturation (S _g)	0.00 %
Oil Saturation (S _o)	87.00 %
Water Saturation (S _w)	13.00 %
Formation Compressibility (c _f)	5.9600e-07 1/kPa
Total Compressibility (c _t)	3.4506e-06 1/kPa

OIL MINI-FRAC ANALYSIS

WELL NAME: **COPRC Loon Creek**
 WELL LOCATION:
 Bottomhole Location: **300/O-06 65-10 127-00**
 Surface Location: 300/O-06 65-10 127-00
 Well License #: **470**

ZONE: **"MIDDLE" LOWER CANOL**

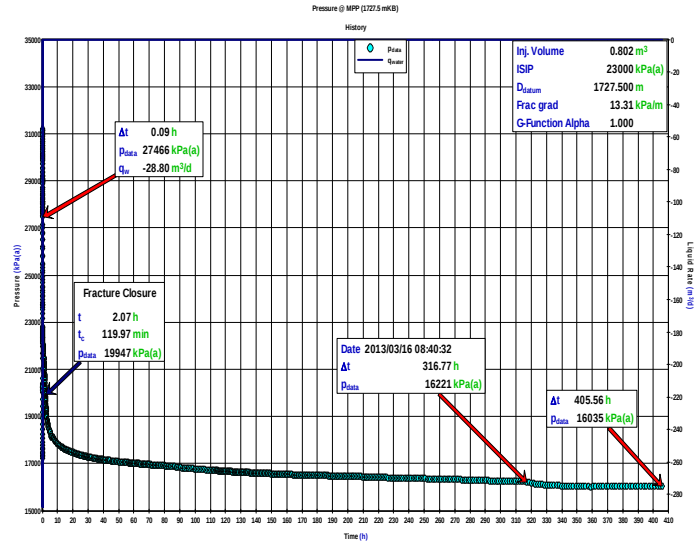
COST CENTRE: **10345055**

TEST DATE: **Mar 3 – 20, 2013**

STAGE OF WELL TEST: **Post-Perf Inj-Falloff**

ORIENTATION: **Vertical**

TYPE/SIZE OF STIMULATION: **N/A**



Reservoir Properties

Injection Interval: 1727 – 1728 mKB		
Frac Height (h): 5 m (Estimate)	Porosity (ϕ): 11 %	Water Saturation (S_w): 22 %
Oil Gravity: 50 °API (Estimate)	H ₂ S Content: 0 %	BHT: 77.3 °C

Injection Data

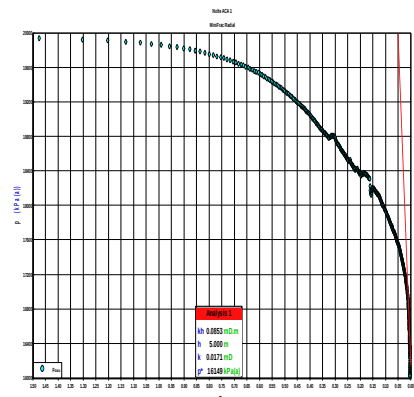
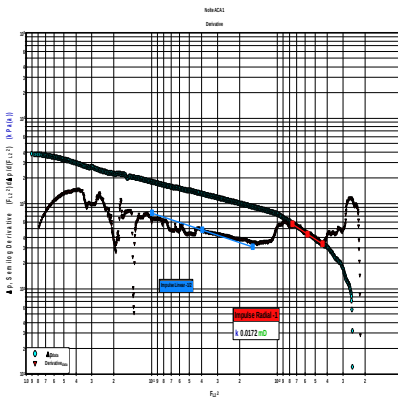
Test	Time	Final Rates				Final Pressures		
		Gas	New Oil	New H ₂ O	Load	Tubing	Casing	BHP
	Hours	e ³ m ³ /d	m ³ /d	m ³ /d	m ³ /d	kPag	kPag	kPaa
Injection	0.1	---	---	---	28.8	N/A	0	27466
Shut-In	405.6	---	---	---	0	N/A	0	16035

Injection Summary

New Fluid (m ³)				Load Fluid (m ³)		Remaining Load (m ³)	
Gas (E ³ M ³)	Gas (MSCF)	Cond (m ³)	Water (m ³)	Oil (m ³)	Water (m ³)	Oil (m ³)	Water (m ³)
---	---	---	---	0	0.8	0	0.8

Pressure Transient Analysis Results Summary

Analysis Results	
P*	16149 kPaa
(kh/ μ) _o	0.28 mD·m/mPa·s
(kh) _o	0.09 mD·m
k _o	0.02 mD



Discussion

Test Procedure:

A segregated post-perf mini-frac test was conducted on the “Basal” Lower Canol interval. This interval was subsequently isolated below bridge plugs. On Mar 3rd, 2013, the “Middle” LOWER CANOL interval was perforated. A retrievable bridge plug, with tandem electronic recorders hung below, was run in hole (center element at 1723 mKB). Water injection was initiated to achieve formation breakdown. Injection continued for several more minutes after breakdown, including for a brief period after the bridge plug setting mechanism was activated (dynamic shut-in). The final water injection rate prior to shut-in was reported to be 28.8 m³/d (0.02 m³/min). The subsequent falloff was monitored for almost 17 days (~406 hrs). On Mar 20th, the bridge plug (including the recorders) was unset and recovered. The primary objectives of the mini-frac test were to obtain frac design and reservoir flow parameters. It is noted that upon isolating this interval, operations were conducted to carry out a mini-frac test on the “Upper” Lower Canol. The analyses / results for each of the zones have been provided in separate reports.

The test data (injection & falloff) from the subject test was corrected to the mid-point of the perforations (MPP=1727.5 mKB) using an estimated water gradient of 9.8 kP/m.

Analysis:

The mini-frac test data was analyzed using traditional techniques. Diagnostic plots, such as the G-Function & Sqrt (t) plots, were utilized first to confirm the occurrence of fracture closure. For the subject zone, the diagnostic plots indicated closure after about 120 minutes of shut-in. After-closure analysis, via Nolte & Soliman / Craig techniques, was then conducted to obtain estimates for reservoir parameters. It is noted that although the derivative data was relatively noisy, the late-time data suggested evidence of pseudo-radial flow. However, the final almost 4 days of the falloff data was deemed unusable as a result of non-reservoir effects (uphole operations). It is also noted that one of the plugs (Basal interval top plug) was tagged at a depth lower (~4m) than it was set at. Therefore, it is speculated that this movement may have caused and / or contributed to the pressure anomaly observed starting on Mar 16th @ ~9AM. Consequently, the terminal portion of the falloff data was not analyzed. The corresponding results / plots have been presented in this report.

Conclusions / Recommendations:

The test was successful in satisfying the primary objectives set forth at the onset of the test program. The test results suggested an effective permeability to oil of 0.02 mD. However, it is noted that this oil permeability was calculated based on estimated values for frac height (5 m) & oil viscosity (50 °API oil with a viscosity of 0.30 mPa·s).

The corresponding extrapolated reservoir pressure was determined to be about 16.1 MPaa.

The overall confidence of the test results is considered to be fair.

Analyzed by: Al Kassam

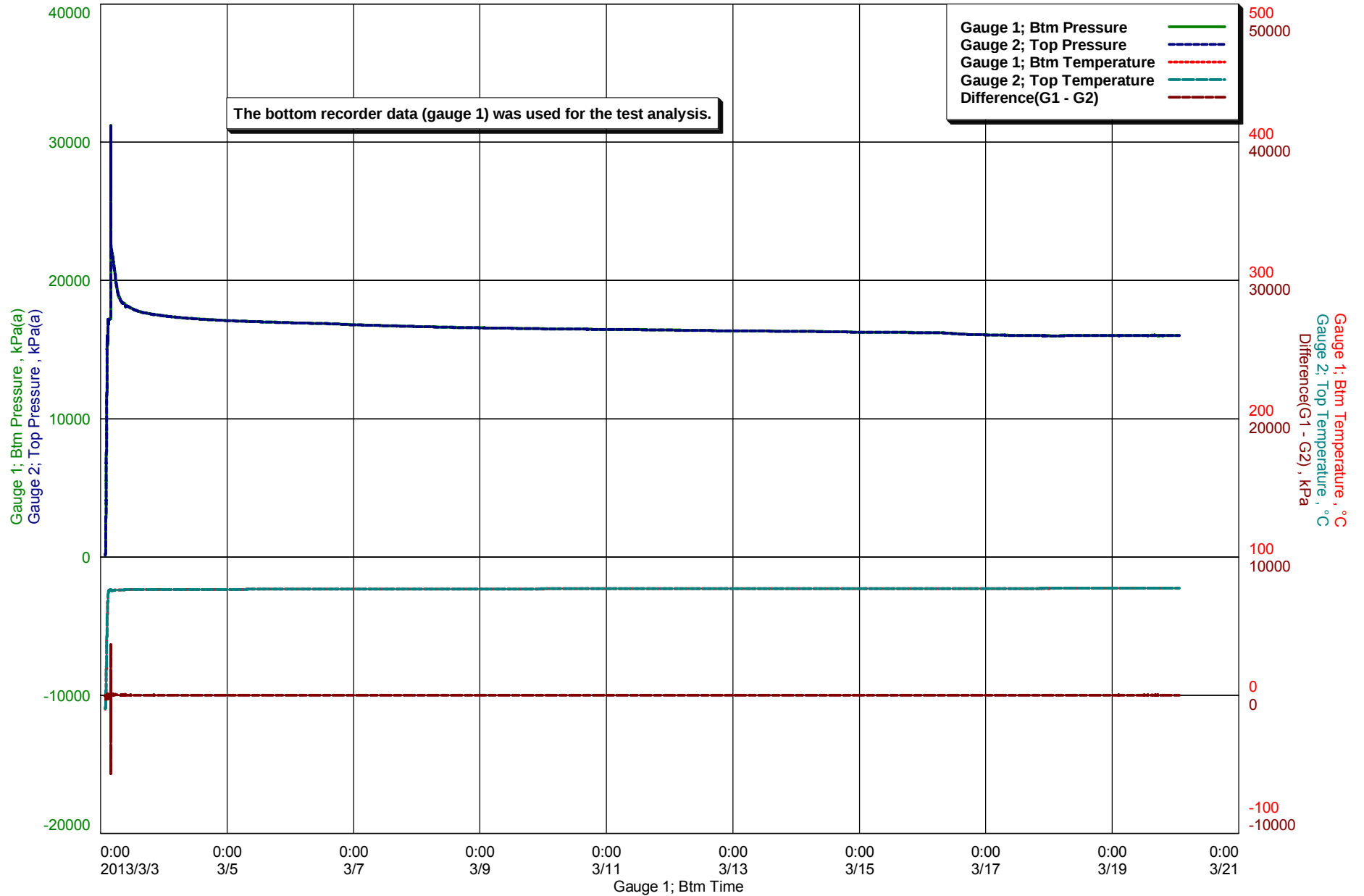
Report Date: May 3rd, 2013

Copy: Kim Clarke Alex Novgorodova Well File

O-06 65-10 127-00

Recorder Validation Plot

Formation: "Middle" Lower Canol

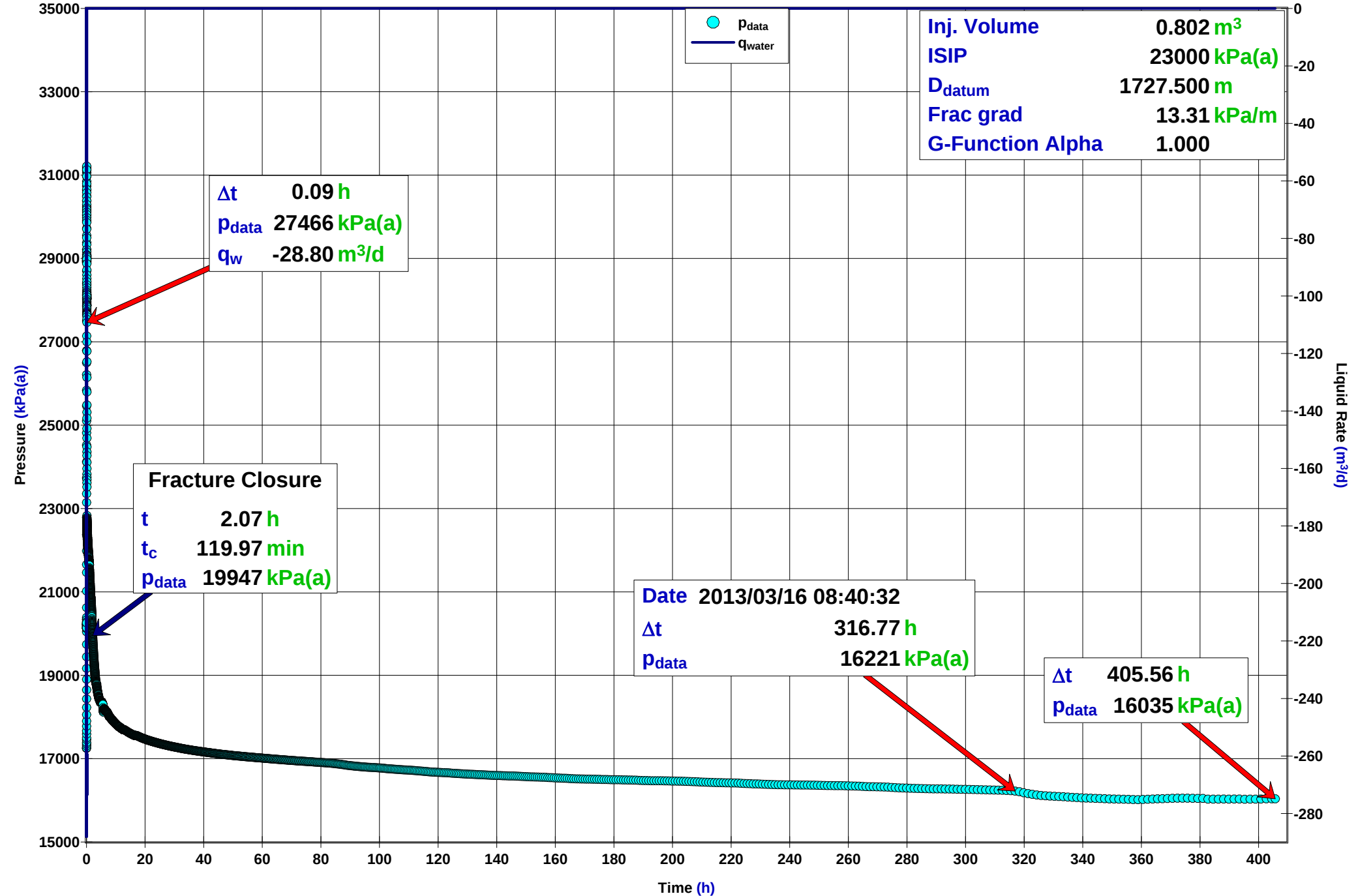


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COPRC Loon Creek
300/O-06 65-10 127-00

Pressure @ MPP (1727.5 mKB) History

Middle Lower Canol (1727 - 1728 mKB)
DFIT (Mar 3 - 20, 2013)

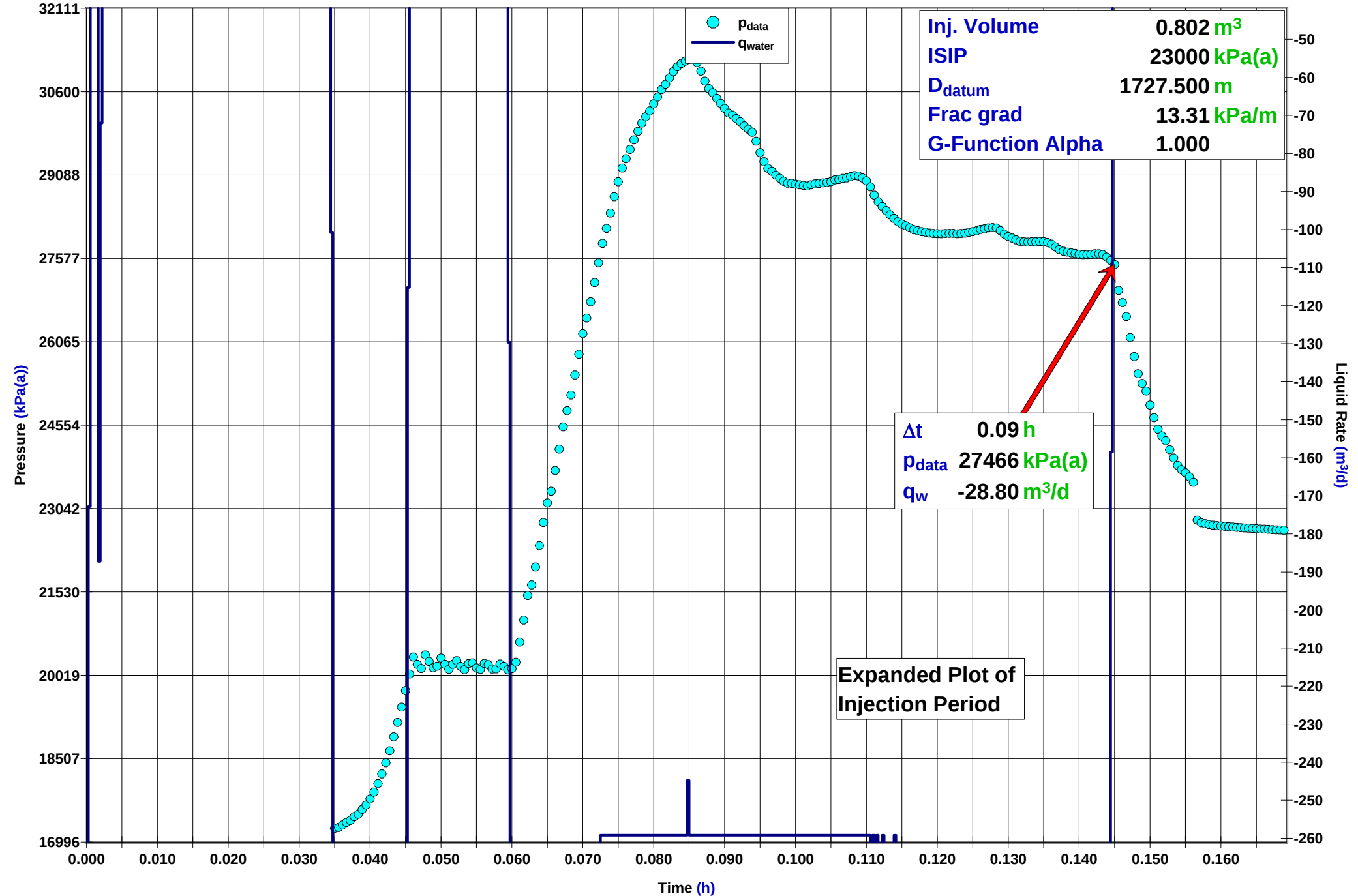


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COPRC Loon Creek
300/O-06 65-10 127-00

Pressure @ MPP (1727.5 mKB)
History

Middle Lower Canol (1727 - 1728 mKB)
DFIT (Mar 3 - 20, 2013)

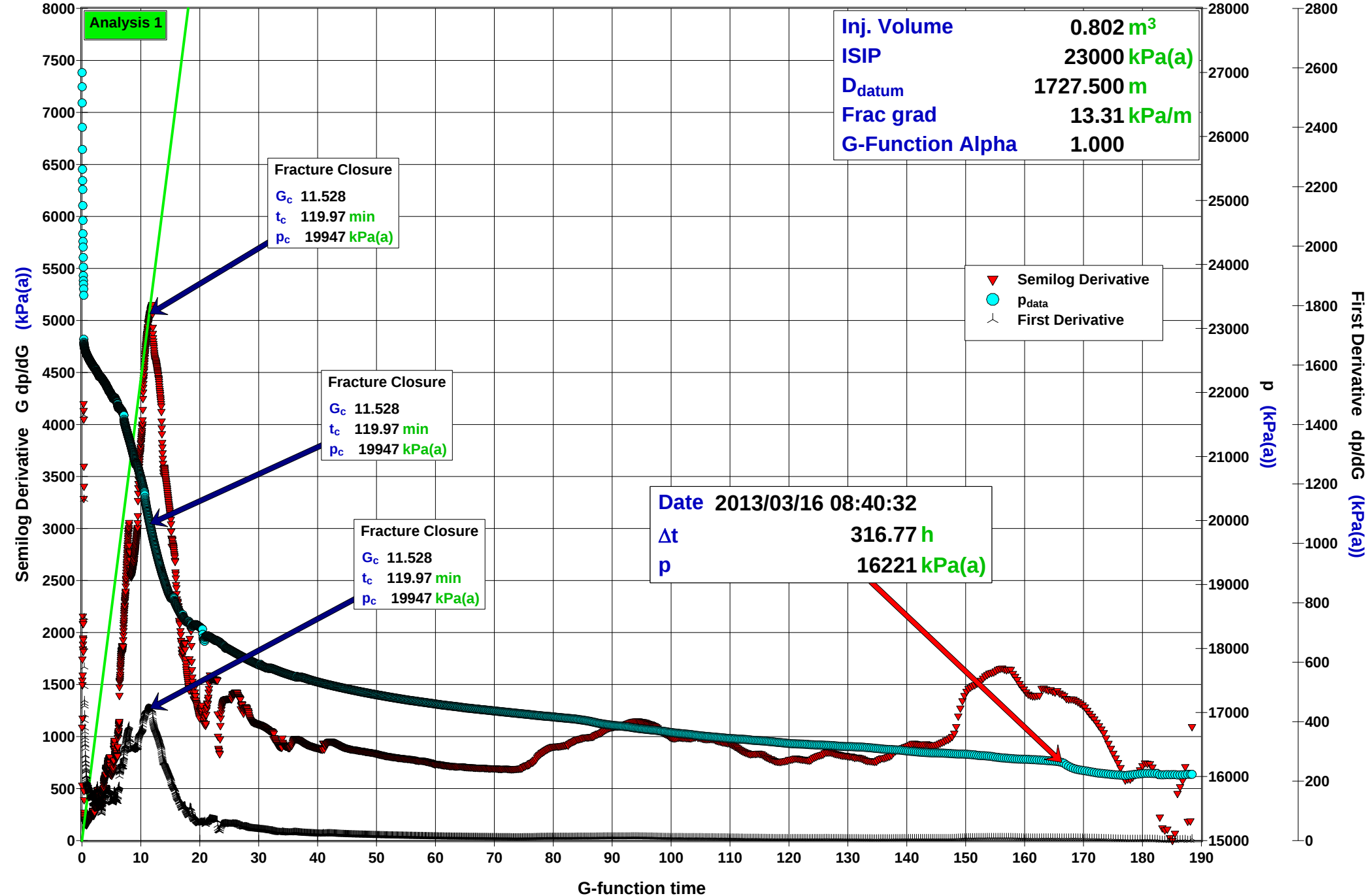


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PCA Diagnostic 1 G-Function

COPRC Loon Creek
300/O-06 65-10 127-00

Middle Lower Canol (1727 - 1728 mKB)
DFIT (Mar 3 - 20, 2013)

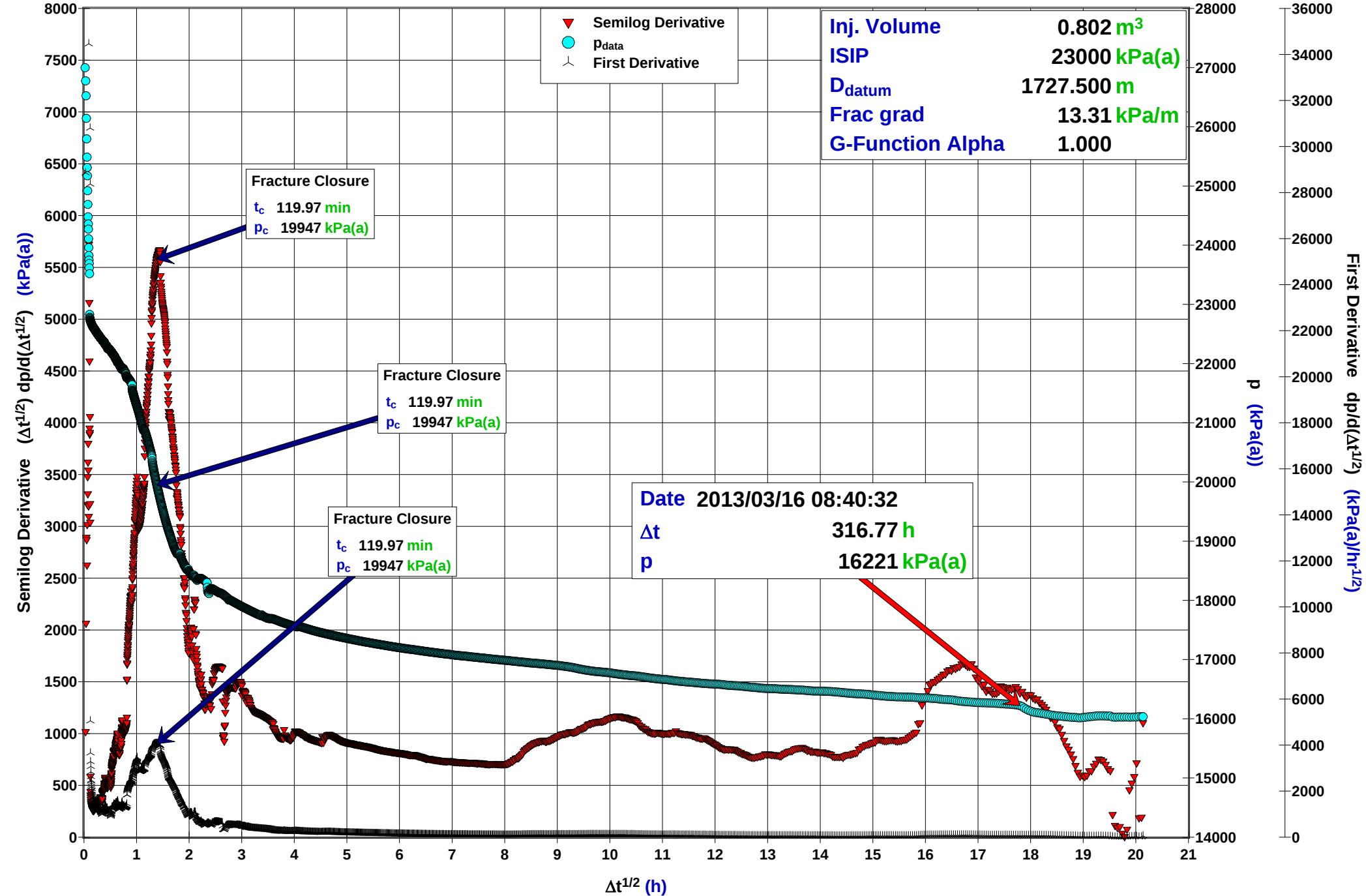


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COPRC Loon Creek
300/O-06 65-10 127-00

PCA Diagnostic 1
MiniFrac Sqrt(t)

Middle Lower Canol (1727 - 1728 mKB)
DFIT (Mar 3 - 20, 2013)

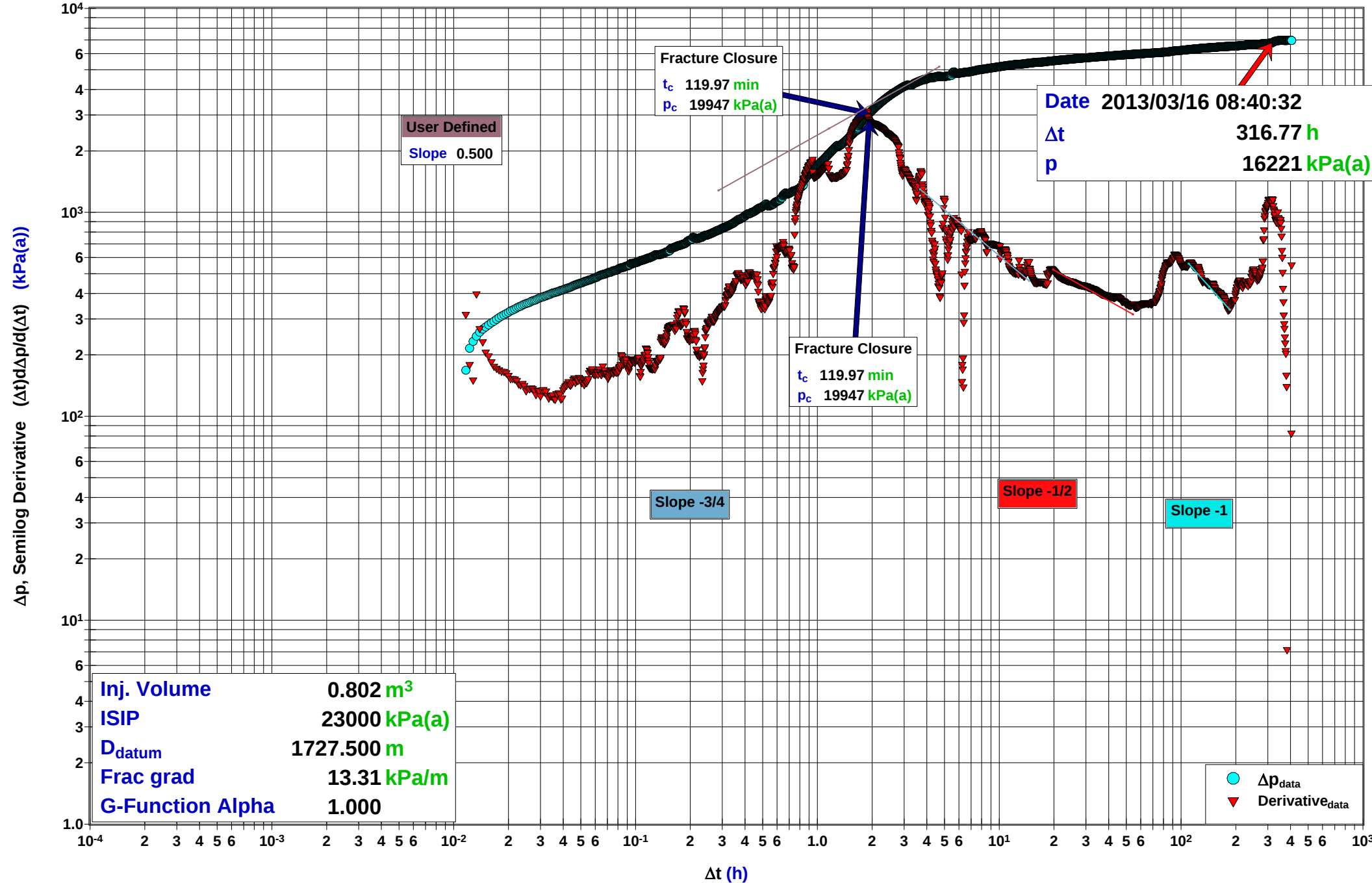


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COPRC Loon Creek
300/O-06 65-10 127-00

PCA Diagnostic 1 Derivative

Middle Lower Canol (1727 - 1728 mKB)
DFIT (Mar 3 - 20, 2013)



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PCA Diagnostic 1

Input Data

Injected Volume 0.802 m³
Datum Depth 1727.500 m

Results

ISIP 23000 kPa(a)
Fracture Gradient 13.31 kPa/m

Closure Marker 1

Closure time (t_c) 1.9994 h
Closure pressure (p_c) 19947 kPa(a)
Net Frac Press (Δp_{net}) 3053 kPa
G-Function at Closure (G_c) 11.528
Fluid Efficiency (η) 85.22 %

Closure Marker 2

Closure time (t_c) 1.9994 h
Closure pressure (p_c) 19947 kPa(a)
Net Frac Press (Δp_{net}) 3053 kPa
G-Function at Closure (G_c) 11.528
Fluid Efficiency (η) 85.22 %

Fluid Properties

Oil Gravity (γ_o) 50.0 °API
Bubble Point Pressure (p_{bp}) 16028 kPa(a)
Oil Formation Volume Factor (B_o) 1.460
Oil Viscosity (μ_o) 0.3004 mPa.s
Oil Compressibility (c_o) 3.2390e-06 1/kPa
Solution Gas Ratio (R_s) 135.38 m³/m³

Reservoir Properties

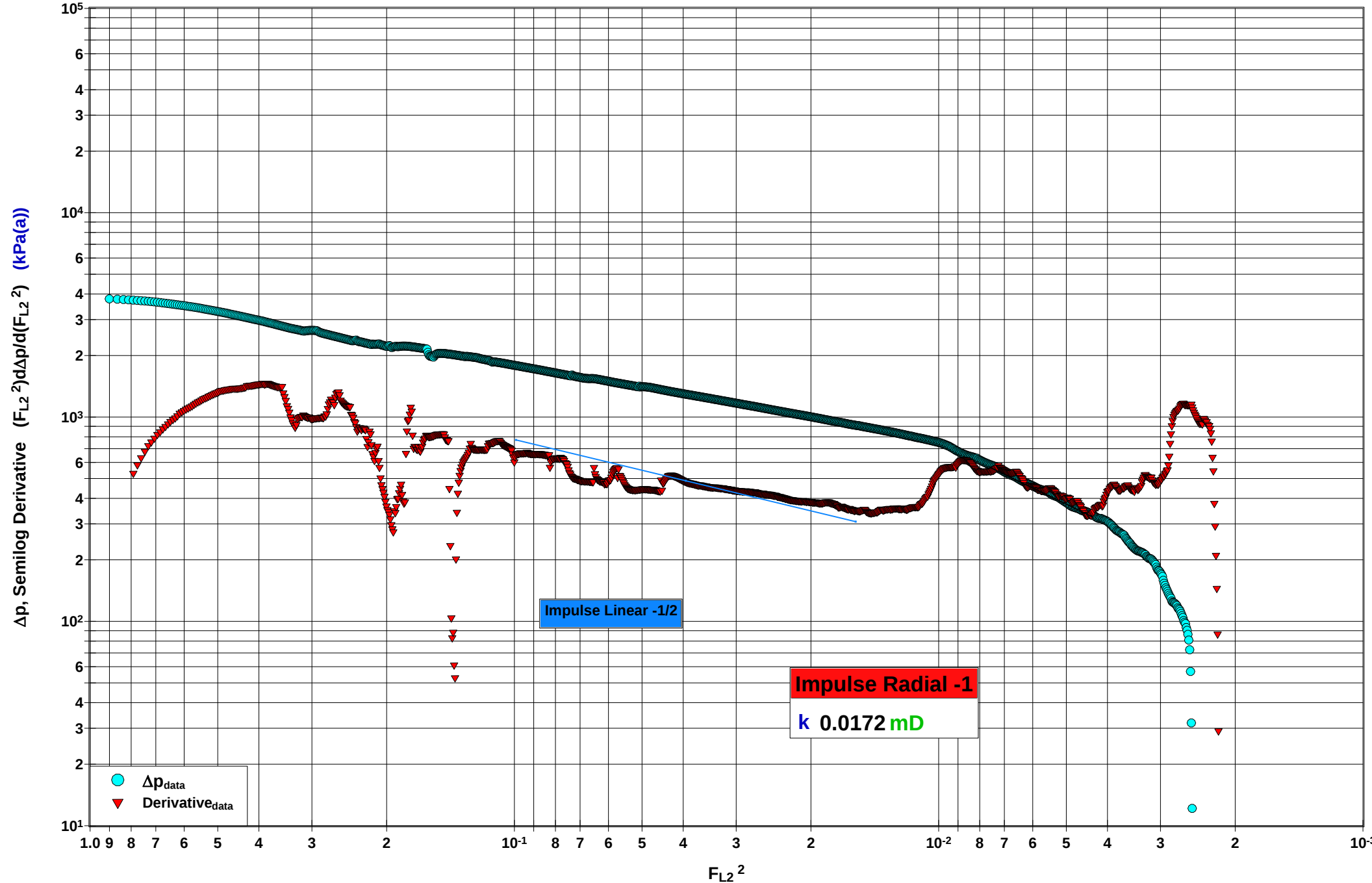
Reservoir Temperature (T_{resv}) 77.3 °C
Reservoir Pressure (p_{resv}) 16035 kPa(a)

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COPRC Loon Creek
300/O-06 65-10 127-00

Nolte ACA 1
Derivative

Middle Lower Canol (1727 - 1728 mKB)
DFIT (Mar 3 - 20, 2013)

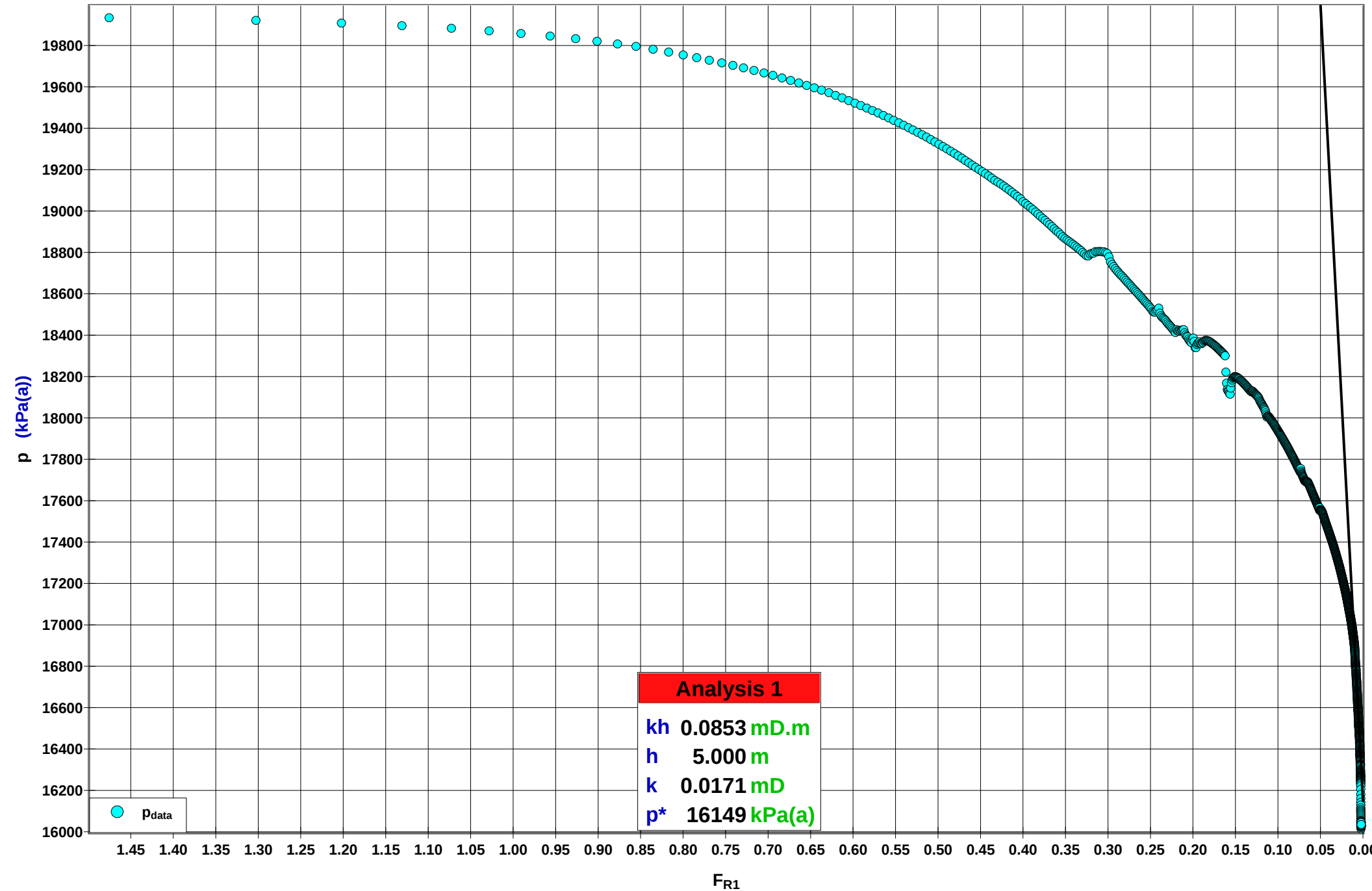


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COPRC Loon Creek
300/O-06 65-10 127-00

Nolte ACA 1
MiniFrac Radial

Middle Lower Canol (1727 - 1728 mKB)
DFIT (Mar 3 - 20, 2013)

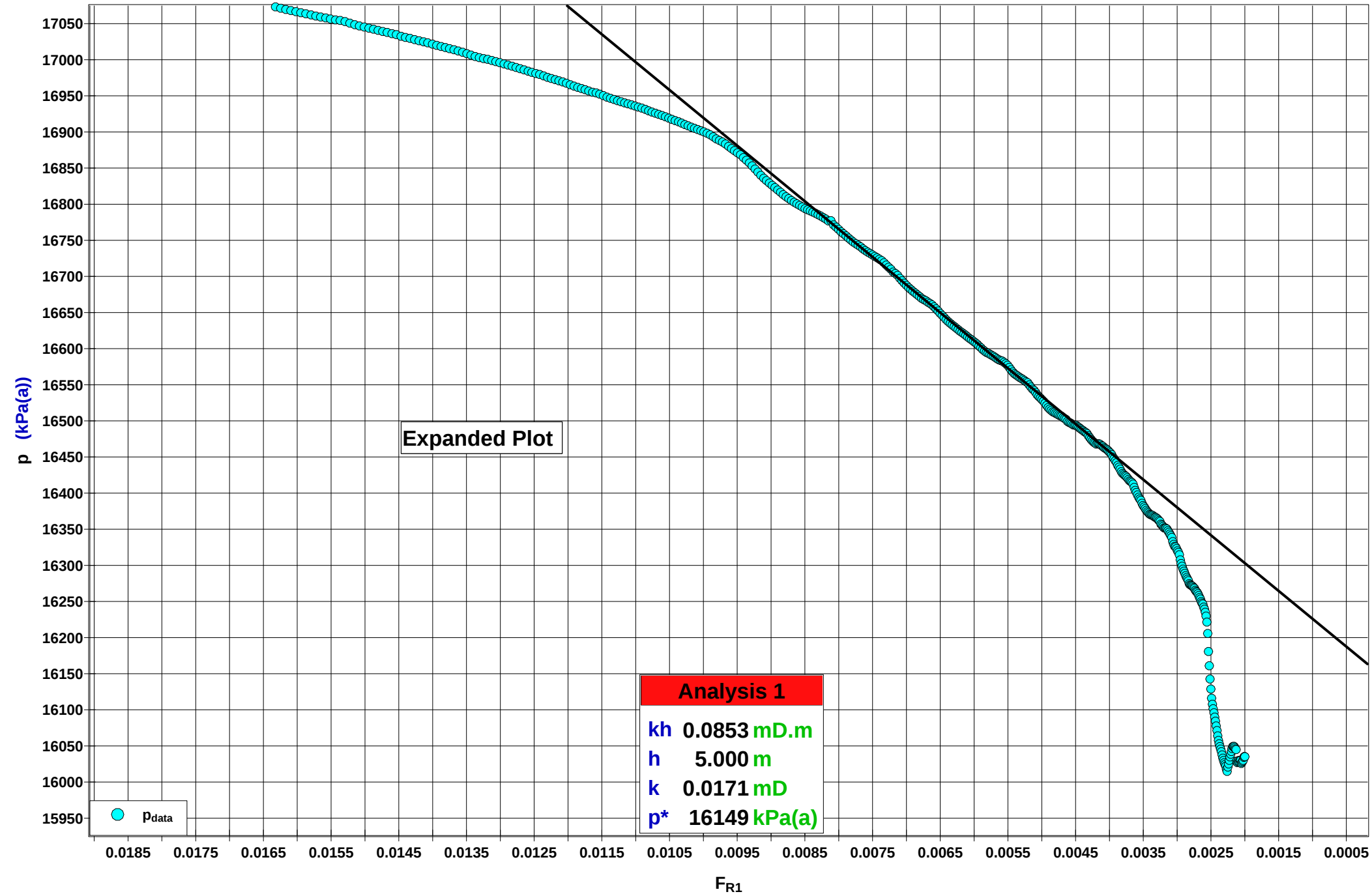


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COPRC Loon Creek
300/O-06 65-10 127-00

Nolte ACA 1
MiniFrac Radial

Middle Lower Canol (1727 - 1728 mKB)
DFIT (Mar 3 - 20, 2013)



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Nolte ACA 1

Linear Analysis (FL)

Flow Capacity (kh)	mD.m
Effective Permeability (k)	mD
Extrapolated Pressure (p*)	16460 kPa(a)
Closure Pressure (pc)	kPa(a)
Reservoir Leakoff Coefficient (CR)	m/min ^{1/2}
Total Leakoff Coefficient (CT)	m/min ^{1/2}

Radial Analysis (FR)

Flow Capacity (kh)	0.08529 mD.m
Effective Permeability (k)	0.0171 mD
Extrapolated Pressure (p*)	16149 kPa(a)

Input Parameters

Estimated Initial Pressure (p _i)	16149 kPa(a)
Closure time (t _c)	119.97 min

Fluid Properties

Oil Gravity (γ _o)	50.0 °API
Bubble Point Pressure (p _{bp})	16028 kPa(a)
Oil Formation Volume Factor (B _o)	1.460
Oil Viscosity (μ _o)	0.3004 mPa.s
Oil Compressibility (c _o)	3.2390e-06 1/kPa
Solution Gas Ratio (R _s)	135.38 m ³ /m ³

Reservoir Properties

Reservoir Temperature (T _{resv})	77.3 °C
Reservoir Pressure (p _{resv})	16035 kPa(a)
Net Pay (h)	5.000 m
Total Porosity (φ _t)	11.00 %
Gas Saturation (S _g)	0.00 %
Oil Saturation (S _o)	78.00 %
Water Saturation (S _w)	22.00 %
Formation Compressibility (c _f)	6.7787e-07 1/kPa
Total Compressibility (c _t)	3.3008e-06 1/kPa

OIL MINI-FRAC ANALYSIS

WELL NAME: **COPRC Loon Creek**
 WELL LOCATION:
 Bottomhole Location: **300/O-06 65-10 127-00**
 Surface Location: 300/O-06 65-10 127-00
 Well License #: **470**

ZONE: **“UPPER” LOWER CANOL**

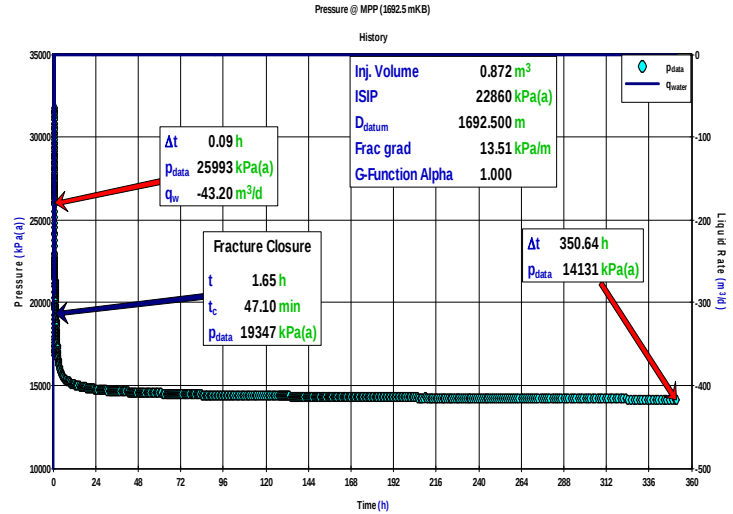
COST CENTRE: **10345055**

TEST DATE: **Mar 3 – 18, 2013**

STAGE OF WELL TEST: **Post-Perf Inj-Falloff**

ORIENTATION: **Vertical**

TYPE/SIZE OF STIMULATION: **N/A**



Reservoir Properties

Injection Interval: 1692 – 1693 mKB		
Frac Height (h): 5 m (Estimate)	Porosity (ϕ): 13 %	Water Saturation (S_w): 13 %
Oil Gravity: 50 °API (Estimate)	H ₂ S Content: 0 %	BHT: 76.1 °C

Injection Data

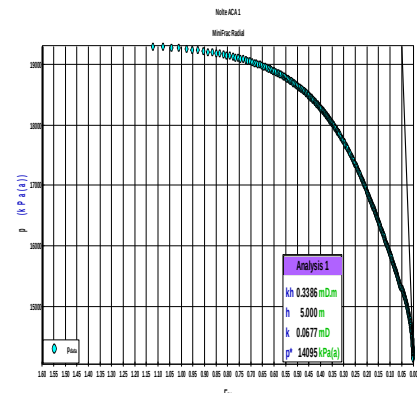
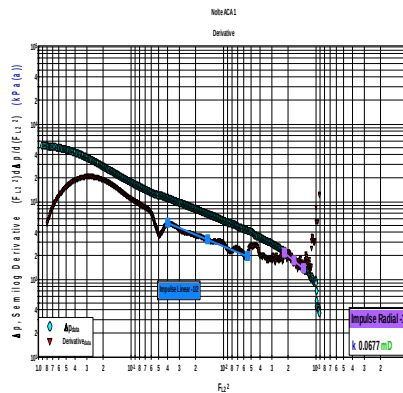
Test	Time	Final Rates				Final Pressures		
		Gas	New Oil	New H ₂ O	Load	Tubing	Casing	BHP
	Hours	e ³ m ³ /d	m ³ /d	m ³ /d	m ³ /d	kPag	kPag	kPaa
Injection	0.1	---	---	---	43.2	N/A	0	25993
Shut-In	350.6	---	---	---	0	N/A	0	14131

Injection Summary

New Fluid (m ³)				Load Fluid (m ³)		Remaining Load (m ³)	
Gas (E ³ M ³)	Gas (MSCF)	Cond (m ³)	Water (m ³)	Oil (m ³)	Water (m ³)	Oil (m ³)	Water (m ³)
---	---	---	---	0	0.9	0	0.9

Pressure Transient Analysis Results Summary

Analysis Results	
P*	14095 kPaa
(kh/ μ) _o	0.59 mD·m/mPa·s
(kh) _o	0.19 mD·m
k _o	0.04 mD



Discussion**Test Procedure:**

Segregated post-perf mini-frac tests were conducted on the “Basal” and “Middle” LOWER CANOL intervals. The mini-frac tests were conducted concurrently and as such, each interval was isolated below bridge plugs. On Mar 3rd, 2013, the “Upper” LOWER CANOL interval was perforated. A retrievable bridge plug, with tandem electronic recorders hung below, was run in hole (center element at 1689 mKB). Water injection was initiated to achieve formation breakdown. Injection continued for several more minutes after breakdown, including for a brief period after the bridge plug setting mechanism was activated (dynamic shut-in). The final water injection rate prior to shut-in was reported to be 43.2 m³/d (0.03 m³/min). The subsequent falloff was monitored for almost 15 days (~351 hrs). On Mar 18th, the bridge plug (including the recorders) was unset and recovered. The primary objectives of the mini-frac test were to obtain frac design and reservoir flow parameters.

The test data (injection & falloff) was corrected to the mid-point of the perforations (MPP=1692.5 mKB) using an estimated water gradient of 9.8 kP/m.

Analysis:

The mini-frac test data was analyzed using traditional techniques. Diagnostic plots, such as the G-Function & Sqrt (t) plots, were utilized first to confirm the occurrence of fracture closure. For the subject zone, the diagnostic plots indicated closure after about 47 minutes of shut-in. After-closure analysis, via Nolte & Soliman / Craig techniques, was then conducted to obtain estimates for reservoir parameters. Although the derivative data was relatively noisy, the late-time data suggested evidence of pseudo-radial flow. The terminal portion of the falloff data was not analyzed since it was most likely being affected by uphole operations in preparation for unsetting & pulling the bridge plug (well was also bled off prior to unsetting the plug). The corresponding results / plots have been presented in this report.

Conclusions / Recommendations:

The test was successful in satisfying the primary objectives set forth at the onset of the test program. The test results suggested an effective permeability to oil of 0.04 mD. However, it is noted that this oil permeability was calculated based on estimated values for frac height (5 m) & oil viscosity (50 °API oil with a viscosity of 0.32 mPa·s).

The corresponding extrapolated reservoir pressure was determined to be about 14.1 MPaa.

The overall confidence of the test results is considered to be fair.

Analyzed by: Al Kassam

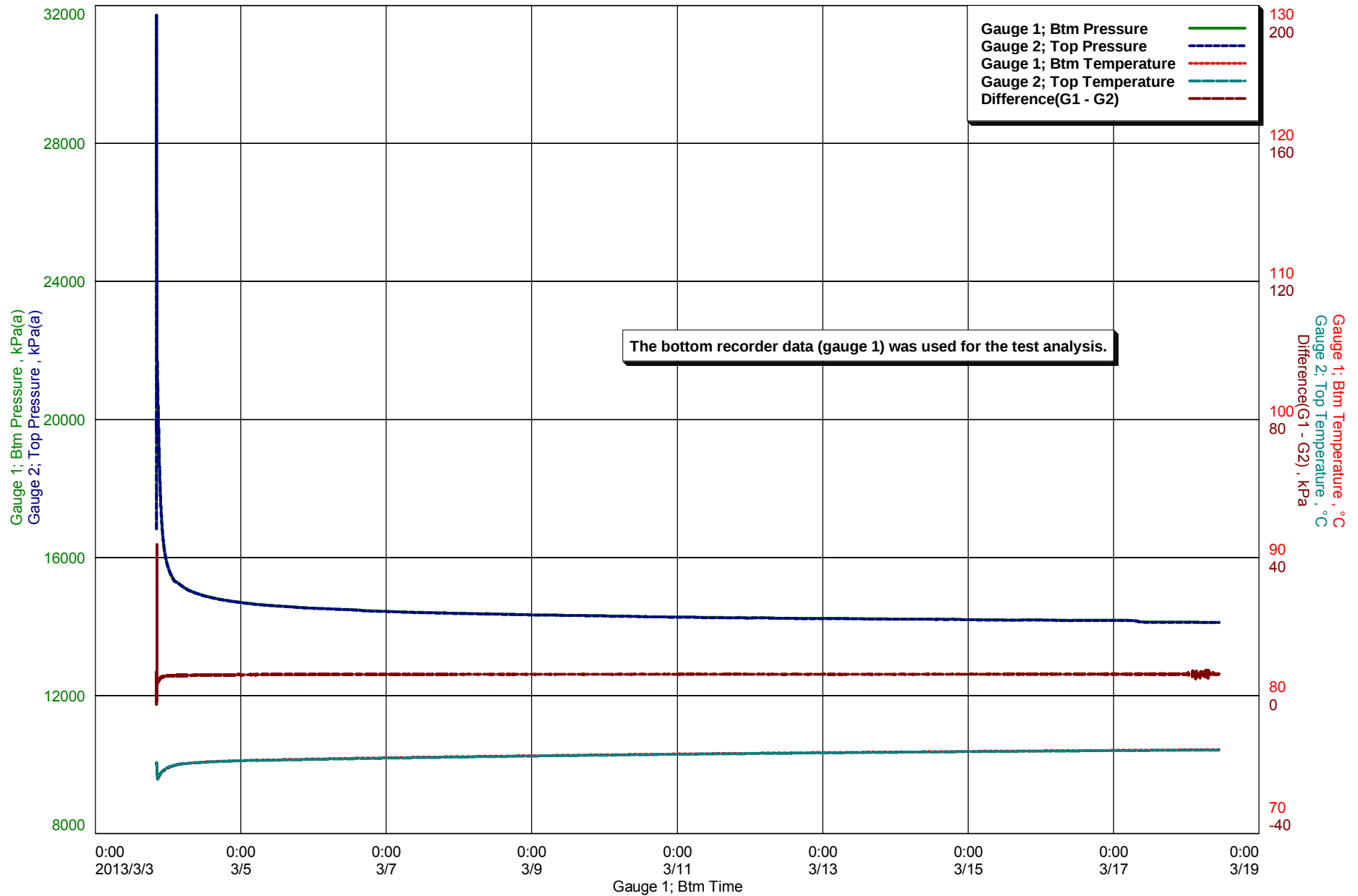
Report Date: May 3rd, 2013

Copy: Kim Clarke Alex Novgorodova Well File

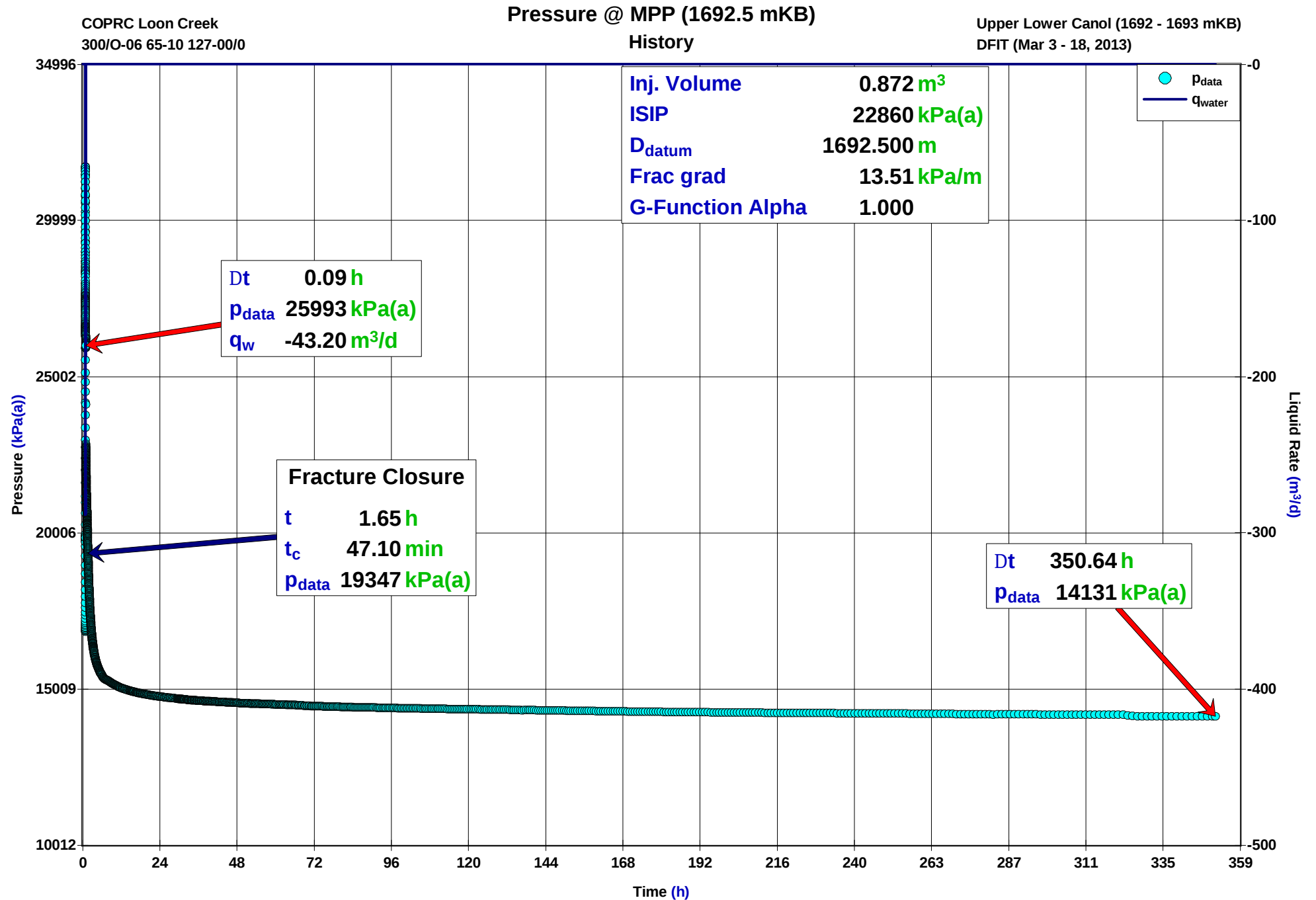
O-06 65-10 127-00

Recorder Validation Plot

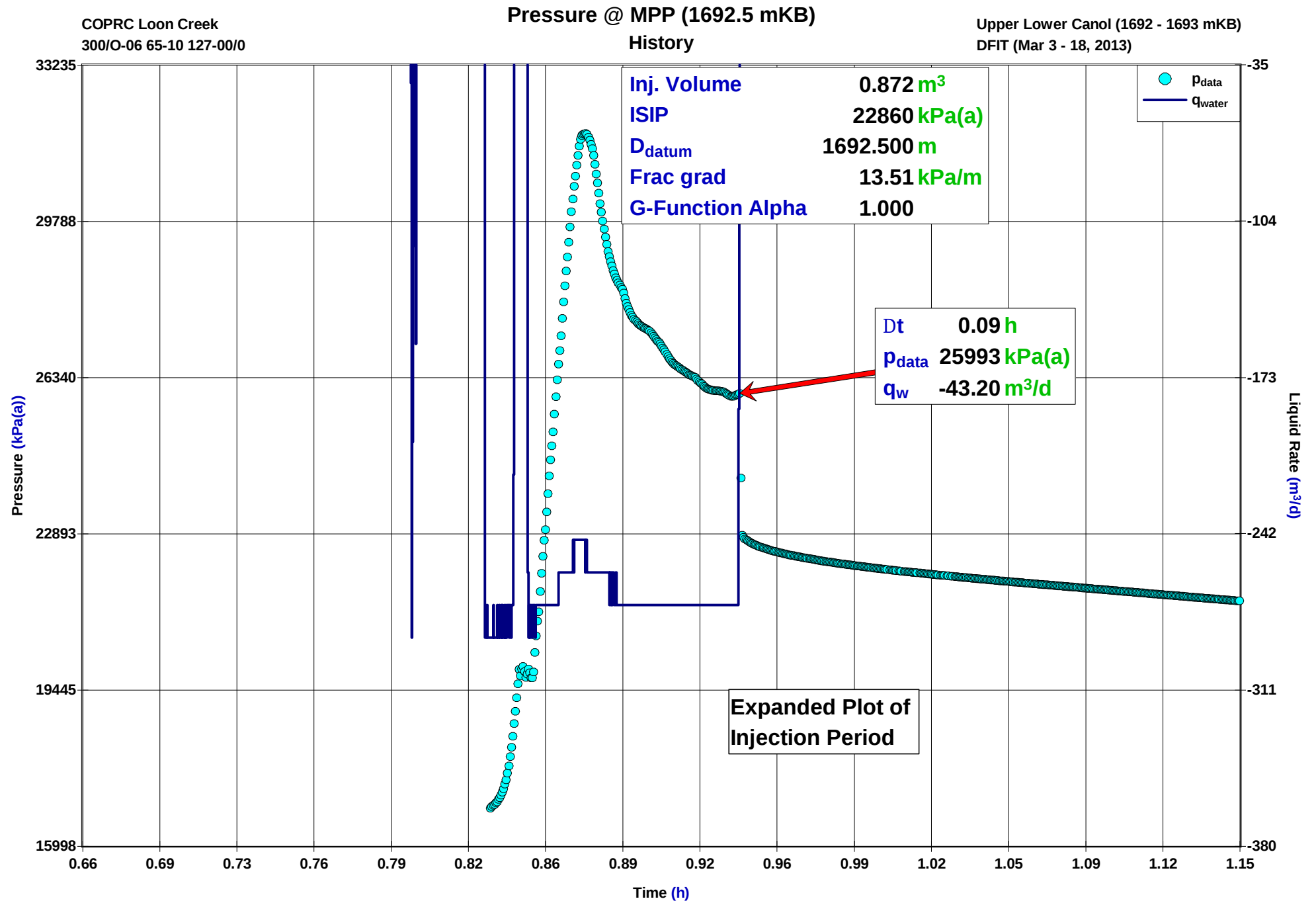
Formation: "Upper" Lower Canol



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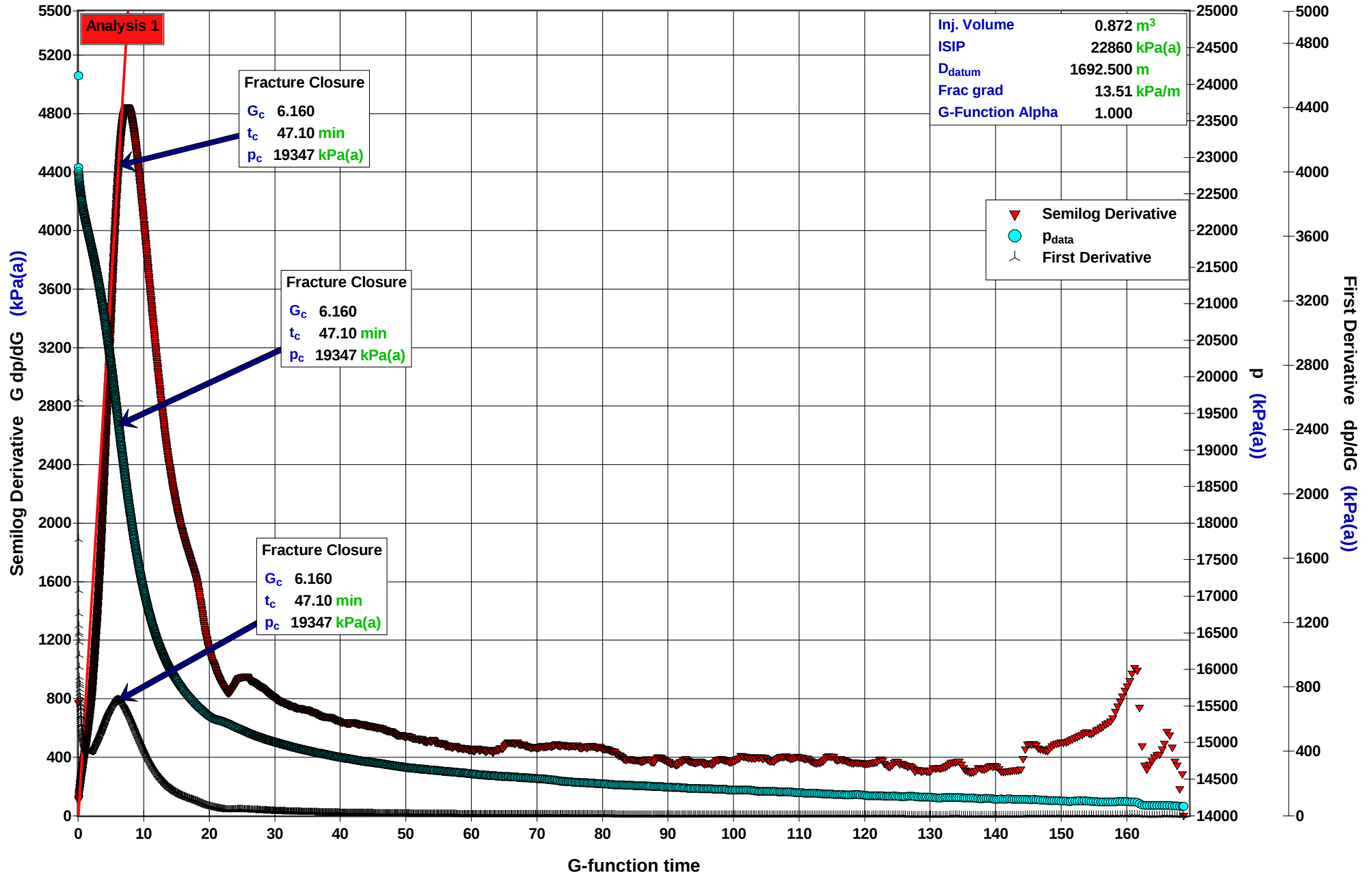
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PCA Diagnostic 1 G-Function

COPRC Loon Creek
300/O-06 65-10 127-00/0

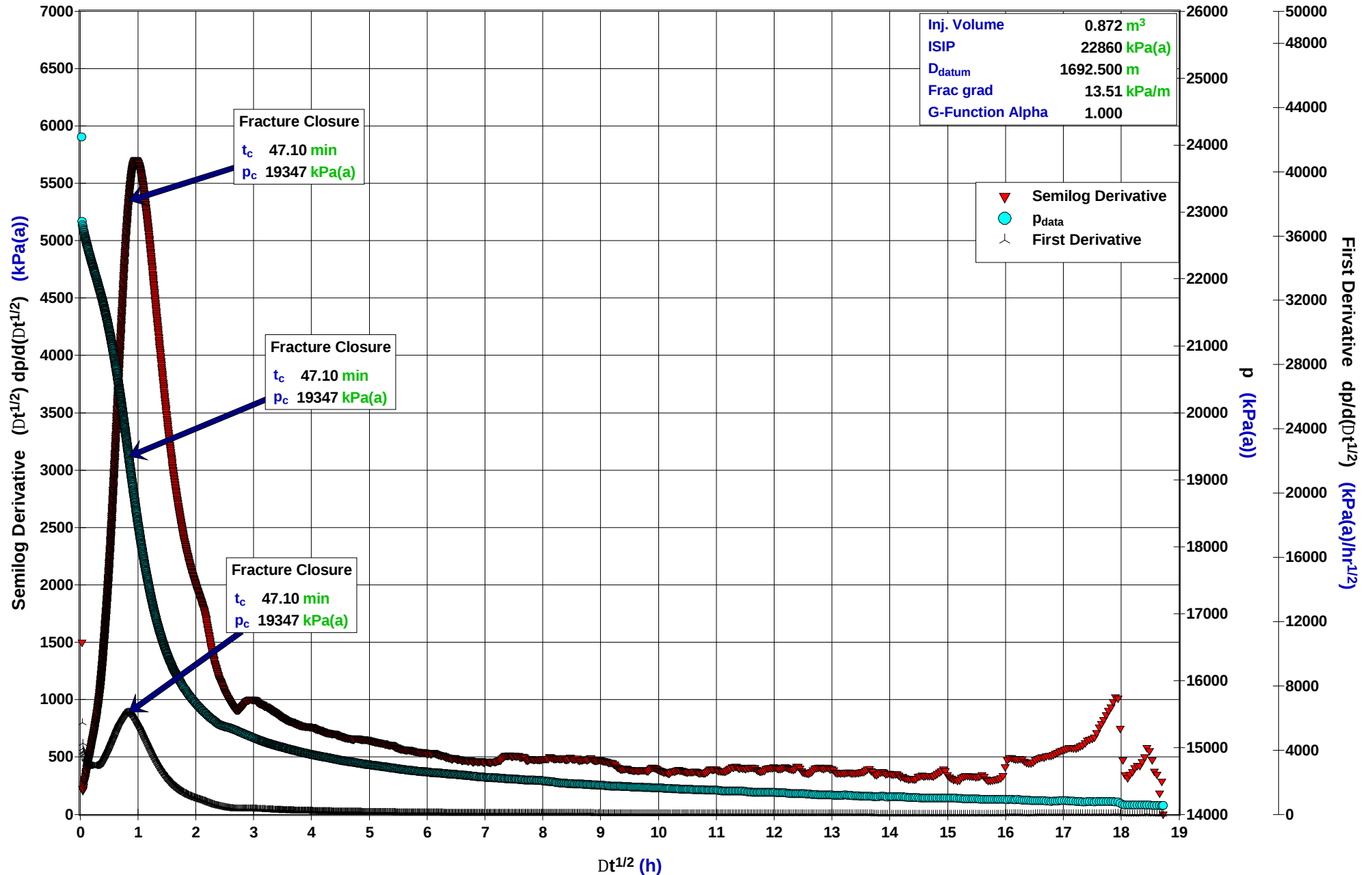
Upper Lower Canol (1692 - 1693 mKB)
DFIT (Mar 3 - 18, 2013)



COPRC Loon Creek
300/O-06 65-10 127-00/0

PCA Diagnostic 1 MiniFrac Sqrt(t)

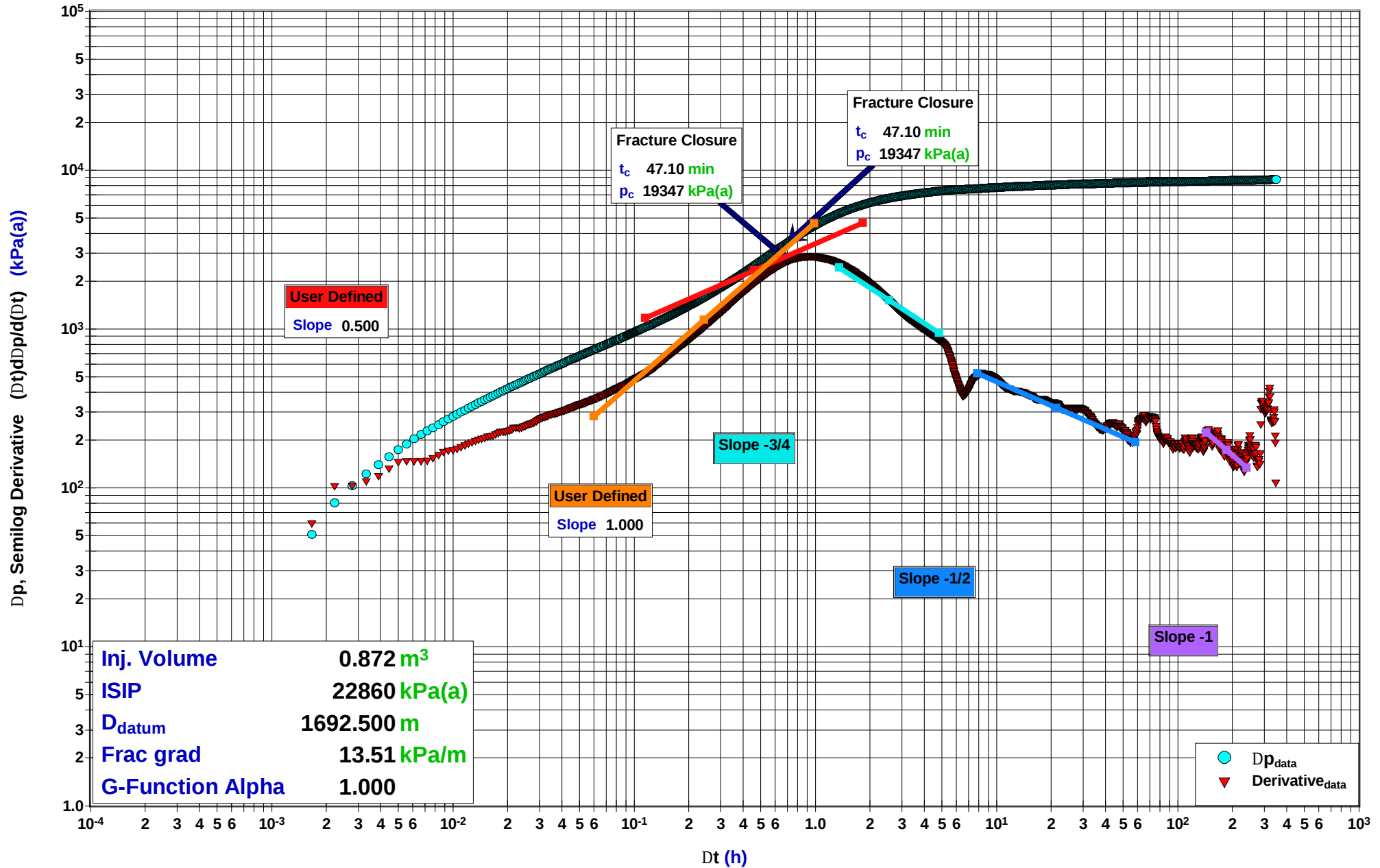
Upper Lower Canol (1692 - 1693 mKB)
DFIT (Mar 3 - 18, 2013)



COPRC Loon Creek
300/O-06 65-10 127-00/0

PCA Diagnostic 1 Derivative

Upper Lower Canol (1692 - 1693 mKB)
DFIT (Mar 3 - 18, 2013)



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PCA Diagnostic 1

Input Data

Injected Volume 0.872 m³
Datum Depth 1692.500 m

Results

ISIP 22860 kPa(a)
Fracture Gradient 13.51 kPa/m

Closure Marker 1

Closure time (t_c) 0.7850 h
Closure pressure (p_c) 19347 kPa(a)
Net Frac Press (Δp_{net}) 3513 kPa
G-Function at Closure (G_c) 6.160
Fluid Efficiency (η) 75.49 %

Closure Marker 2

Closure time (t_c) 0.7850 h
Closure pressure (p_c) 19347 kPa(a)
Net Frac Press (Δp_{net}) 3513 kPa
G-Function at Closure (G_c) 6.160
Fluid Efficiency (η) 75.49 %

Fluid Properties

Oil Gravity (γ_o) 50.0 °API
Bubble Point Pressure (p_{bp}) 14124 kPa(a)
Oil Formation Volume Factor (B_o) 1.409
Oil Viscosity (μ_o) 0.3229 mPa.s
Oil Compressibility (c_o) 3.2876e-06 1/kPa
Solution Gas Ratio (R_s) 117.27 m³/m³

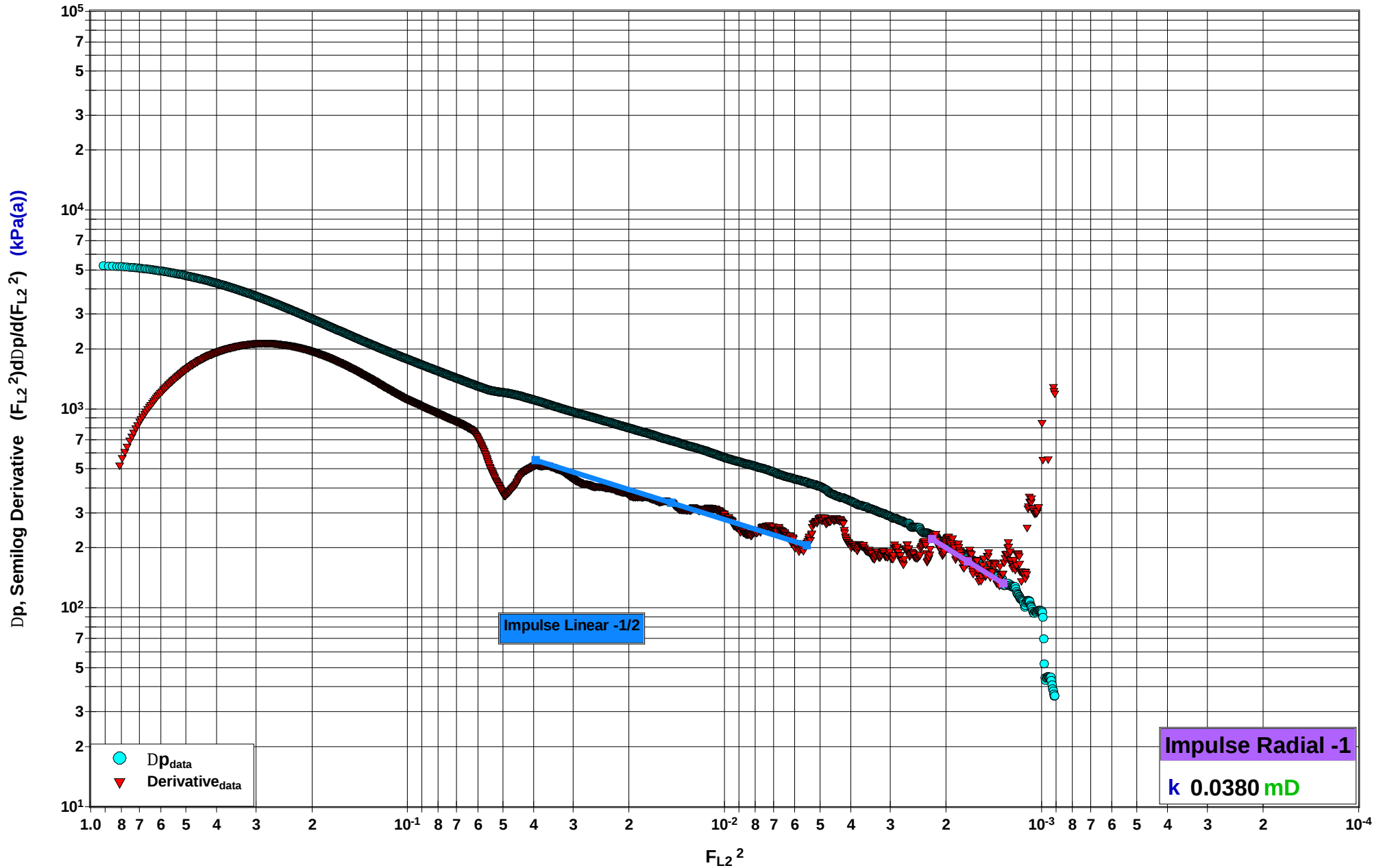
Reservoir Properties

Reservoir Temperature (T_{resv}) 76.1 °C
Reservoir Pressure (p_{resv}) 14131 kPa(a)

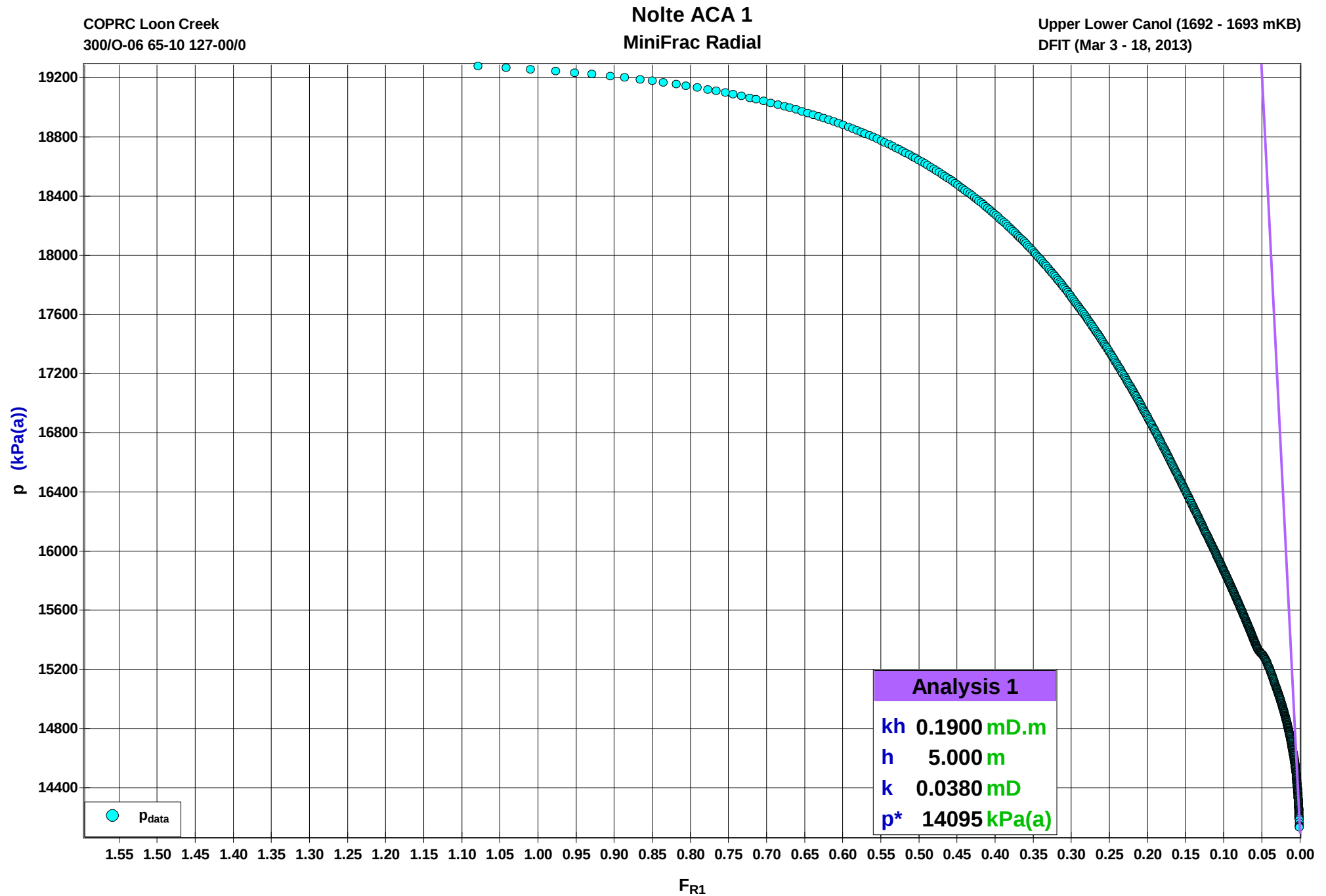
COPRC Loon Creek
300/O-06 65-10 127-00/0

Nolte ACA 1
Derivative

Upper Lower Canol (1692 - 1693 mKB)
DFIT (Mar 3 - 18, 2013)



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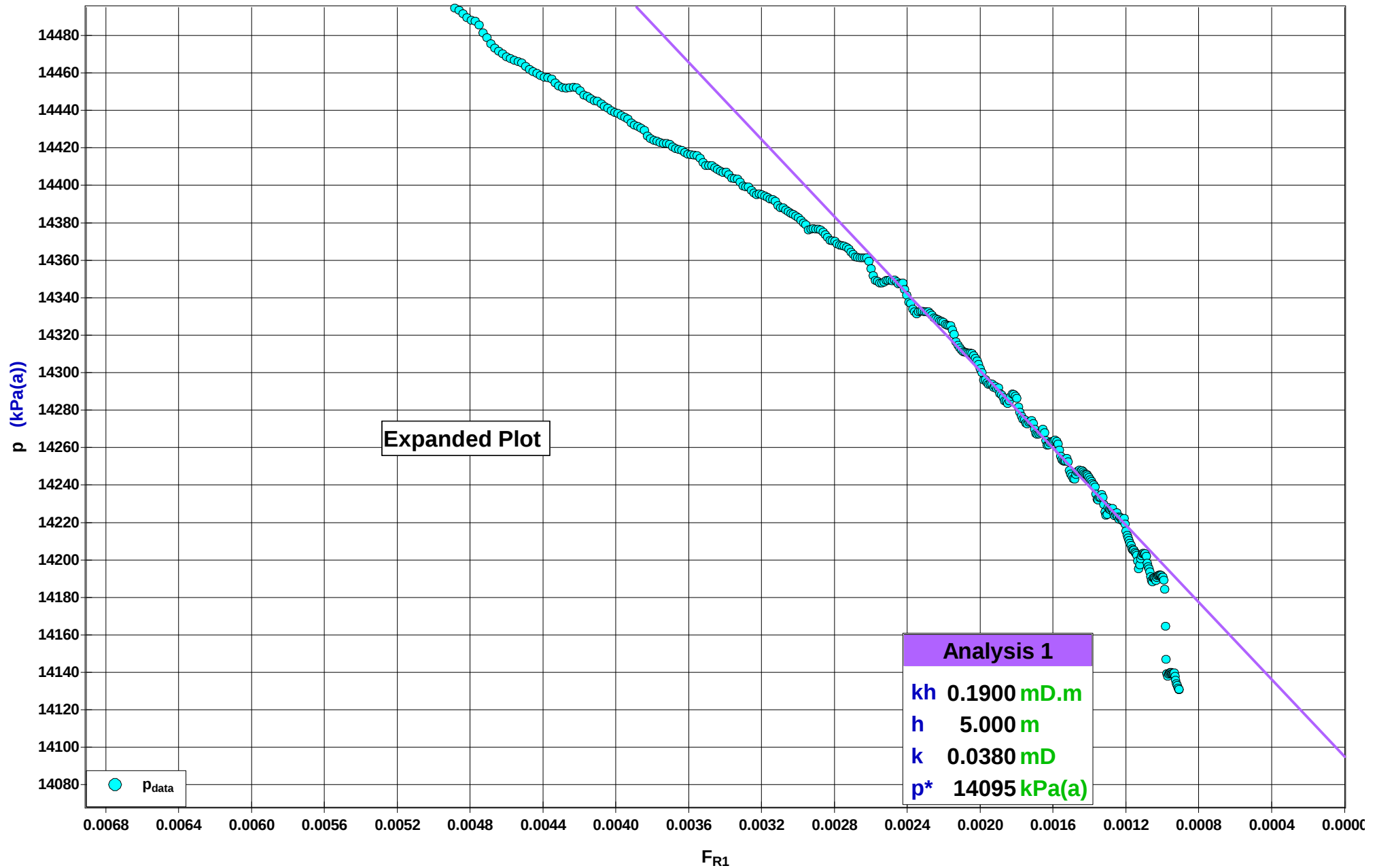


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COPRC Loon Creek
300/O-06 65-10 127-00/0

Nolte ACA 1
MiniFrac Radial

Upper Lower Canol (1692 - 1693 mKB)
DFIT (Mar 3 - 18, 2013)



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Nolte ACA 1

Linear Analysis (FL)

Flow Capacity (kh)	mD.m
Effective Permeability (k)	mD
Extrapolated Pressure (p*)	14152 kPa(a)
Closure Pressure (pc)	kPa(a)
Reservoir Leakoff Coefficient (CR)	m/min ^{1/2}
Total Leakoff Coefficient (CT)	m/min ^{1/2}

Radial Analysis (FR)

Flow Capacity (kh)	0.19 mD.m
Effective Permeability (k)	0.0380 mD
Extrapolated Pressure (p*)	14095 kPa(a)

Input Parameters

Estimated Initial Pressure (p _i)	14152 kPa(a)
Closure time (t _c)	47.10 min

Fluid Properties

Oil Gravity (γ _o)	50.0 °API
Bubble Point Pressure (p _{bp})	14124 kPa(a)
Oil Formation Volume Factor (B _o)	1.409
Oil Viscosity (μ _o)	0.3229 mPa.s
Oil Compressibility (c _o)	3.2876e-06 1/kPa
Solution Gas Ratio (R _s)	117.27 m ³ /m ³

Reservoir Properties

Reservoir Temperature (T _{resv})	76.1 °C
Reservoir Pressure (p _{resv})	14131 kPa(a)
Net Pay (h)	5.000 m
Total Porosity (φ _t)	13.00 %
Gas Saturation (S _g)	0.00 %
Oil Saturation (S _o)	87.00 %
Water Saturation (S _w)	13.00 %
Formation Compressibility (c _f)	6.3246e-07 1/kPa
Total Compressibility (c _t)	3.5500e-06 1/kPa

Schlumberger

Company: **CONOCOPHILLIPS CANADA RESOURCES CORP.**

Well: COPRC LOON CREEK O-6

Field: LOON CREEK

Province: Northwest Territories

Vertical Well

RESERVOIR SATURATION LOG
SIGMA / CARBON OXYGEN

Province:		Northwest Territories	
Field:		LOON CREEK	
Location:		UNIT O SECTION 6	
Well:		COPRC LOON CREEK O-6	
Company:		CONOCOPHILLIPS CANADA RESOURCES CORP.	
RESERVOIR SATURATION LOG			
SIGMA / CARBON OXYGEN			
LOCATION			
UNIT O SECTION 6		Elev.: K.B. 257.60 m	
300O066510127000		G.L. 252.40 m	
NORTHING: 7220618.3 EASTING: 593560.14		D.F. 257.30 m	
Permanent Datum: _____		Elev.: 252.40 m _____	
Log Measured From: _____		5.20 m above Perm. Datum	
Drilling Measured From: _____		Kelly Bushing _____	
API Serial No. _____		Latitude _____	
EL470 _____		Longitude _____	
		127d 0' 30.7 65d 5' 51.5	

[illegible]

Logging Date	17-Feb-2013				
Run Number	2.4				
Depth Driller	1856 m				
Schlumberger Depth	1857.6 m				
Bottom Log Interval	1832 m				
Top Log Interval	870 m				
Casing Driller Size @ Depth	244.500 mm		@	597.8 m	@
Casing Schlumberger	597.8 m				
Bit Size	222.000 mm				
Type Fluid In Hole	INVERT				
Density	Viscosity	84 s			
Fluid Loss	PH				
Source Of Sample	N/A				
RM @ Measured Temperature	@				@
RMF @ Measured Temperature	@				@
RMC @ Measured Temperature	@				@
Source RMF	RMC	N/A			
RM @ MRT	RMF @ MRT	@ 85	84	@ 85	@
Maximum Recorded Temperatures	85 degC				
Circulation Stopped	15-Feb-2013			7:30	
Logger On Bottom	17-Feb-2013			20:00	
Unit Number	Location	2187	GRANDE PRAIRIE		
Recorded By	JEFFREY TATLOCK				
Witnessed By	DAVID LAWRENCE				

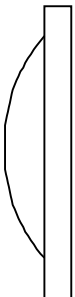
Logging Date				
Run Number				
Depth Driller				
Schlumberger Depth				
Bottom Log Interval				
Top Log Interval				
Casing Driller Size @ Depth	@			
Casing Schlumberger				
Bit Size				
Type Fluid In Hole				
Density	Viscosity			
Fluid Loss	PH			
Source Of Sample				
RM @ Measured Temperature	@			
RMF @ Measured Temperature	@			
RMC @ Measured Temperature	@			
Source RMF	RMC			
RM @ MRT	RMF @ MRT	@	@	
Maximum Recorded Temperatures				
Circulation Stopped	Time			
Logger On Bottom	Time			
Unit Number	Location			
Recorded By				
Witnessed By				

OTHER SERVICES1	OTHER SERVICES2
OS1: AIT-ILE-NEXT-PEX-TLD	OS1:
OS2: UBI-OBMI-OBMI2-PPC-	OS2:
OS3: -MSIP	OS3:
OS4: ADT-HNGS-CMR	OS4:
OS5:	OS5:
REMARKS: RUN NUMBER 1	REMARKS: RUN NUMBER 2
ALL PRESENTATIONS AND INTERVALS AS PER CLIENT REQUEST	
SLB CREW: GREG BOYD, BASIL MARTIN	
RIG: BEAVER 2	
LOGGER ARRIVED AT: 12:00 15-FEB-2013	
RIG READY AT : 15:00 15-FEB-2013	
RST EXHIBITED HIGH VOLTAGE LEAKAGES, PUTTING STRAIN ON THE MINITRON	
TOOL LOGGED WITH A REDUCED SET POINT TO REDUCE THE LOAD ON THE MINITRON	

TO REDUCE RISK OF MINITRON FAILURE DURING POWER UP / POWER DOWN SEQUENCE, MINITRON WAS LEFT ON BETWEEN PASSES

RUN 1 SERVICE ORDER #: CA5M-00021 PROGRAM VERSION: 19C0-187 FLUID LEVEL:			RUN 2 SERVICE ORDER #: PROGRAM VERSION: FLUID LEVEL:		
LOGGED INTERVAL	START	STOP	LOGGED INTERVAL	START	STOP

EQUIPMENT DESCRIPTION

RUN 1		RUN 2	
SURFACE EQUIPMENT			
WITM-A PSC_16MHZ			
DOWNHOLE EQUIPMENT			
LEH-QT LEH-QT		13.17	
ILE-F ILE-F		12.28	
AH-83		9.84	
EQF-43		9.68	
PSPT PSC-A PSPT-A PSTC-A PBMS-A 10k Sapphire Mano RTD Thermometer GR CCL PBMS		9.58	
Detail MT TelStatus CTEM		9.58	
GR		8.45	
Well_Temp Manometer CCL PBMS PSTC		7.51 7.47 7.29 7.06	
RST-C RSCH-A RSC-E RSS-A RSXH-A RSX-E		7.06	

RSC-A Far
RSC-A PNG
RSC-A Nea
RSX-A PNG

4.28

4.13

Tension HV 0.00
TOOL ZERO

0.04

MAXIMUM STRING DIAMETER 92 MM
MEASUREMENTS RELATIVE TO TOOL ZERO
ALL LENGTHS IN METERS

Company: CONOCOPHILLIPS CANADA RESOURCES CORP.

Well: COPRC LOON CREEK O-6

Input DLIS Files

DEFAULT	RST_PSP_034LUP	FN:49	PRODUCER	18-Feb-2013 12:18	989.4 M	854.5 M
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Output DLIS Files

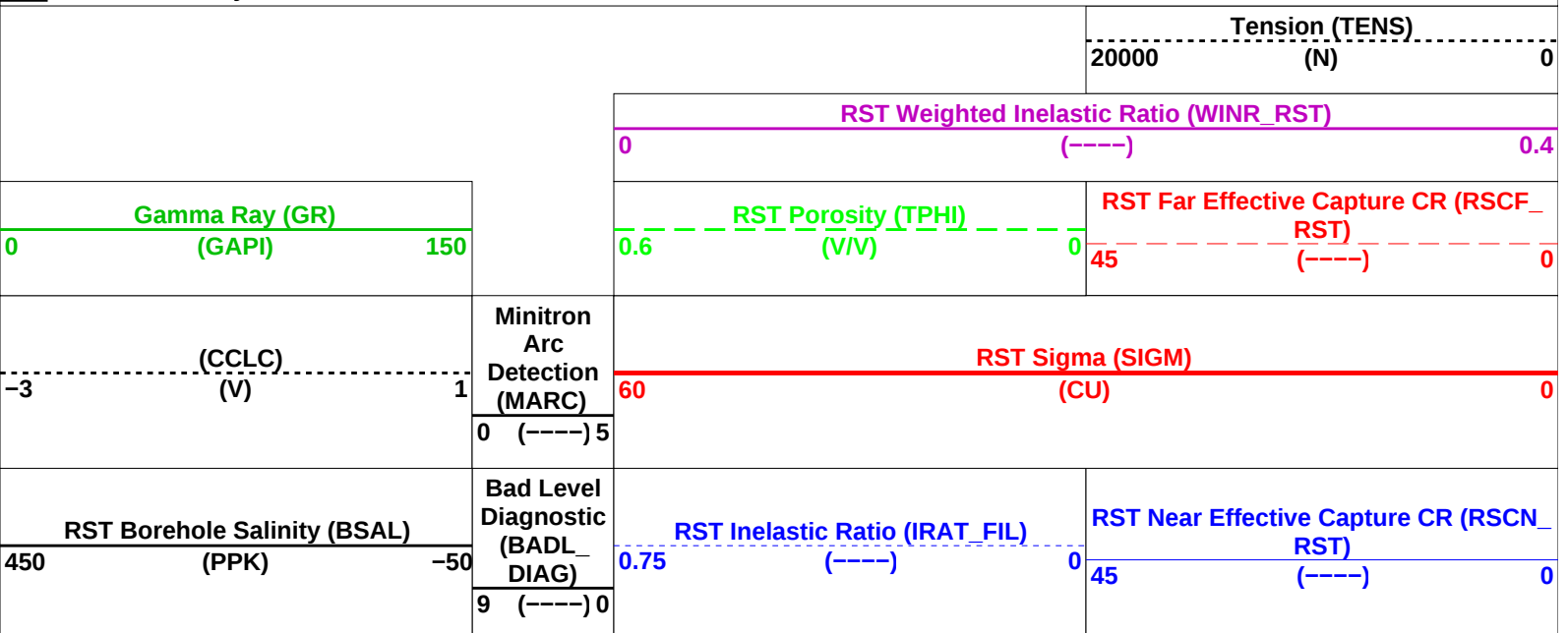
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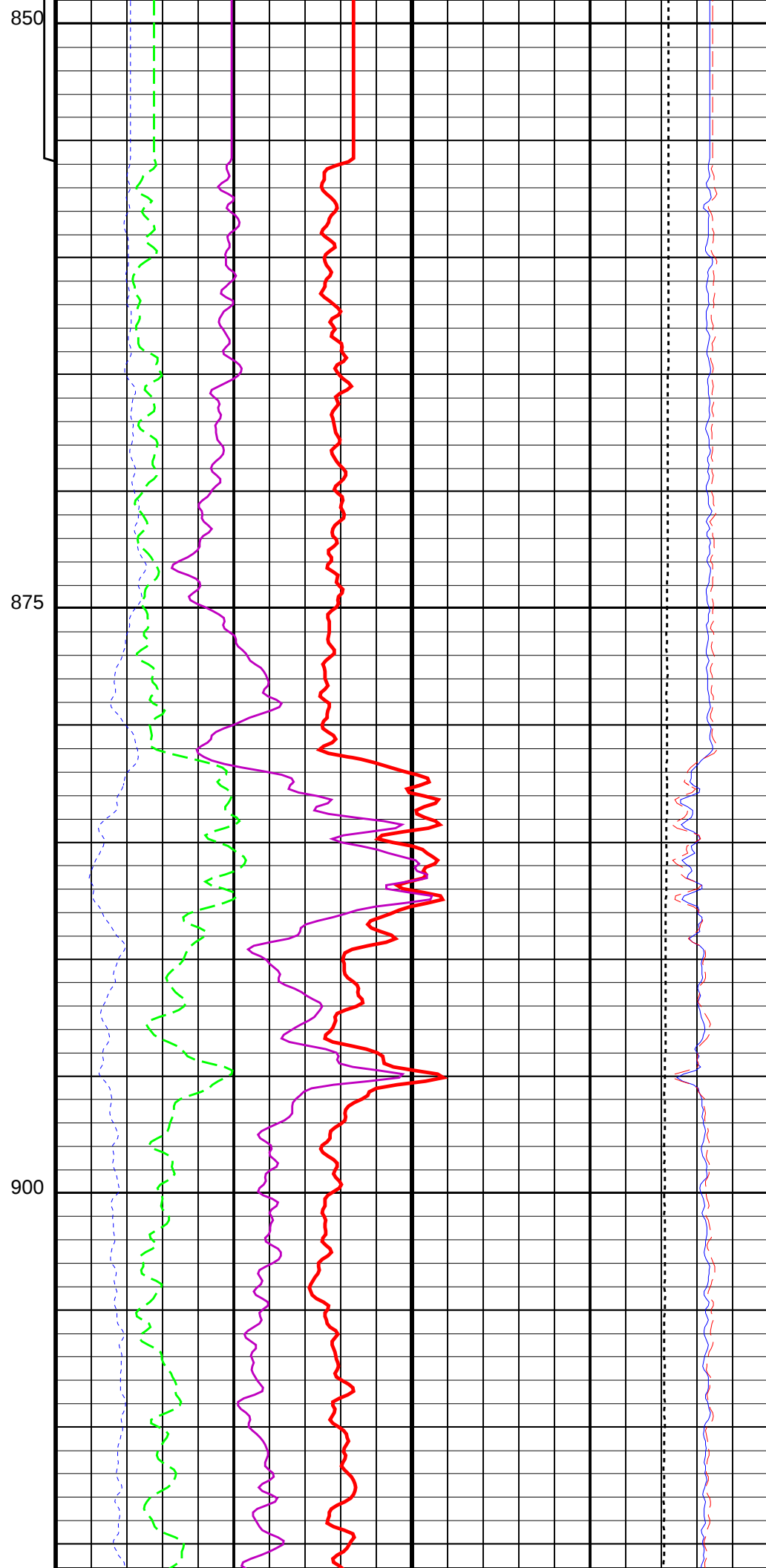
OP System Version: 19C0-187

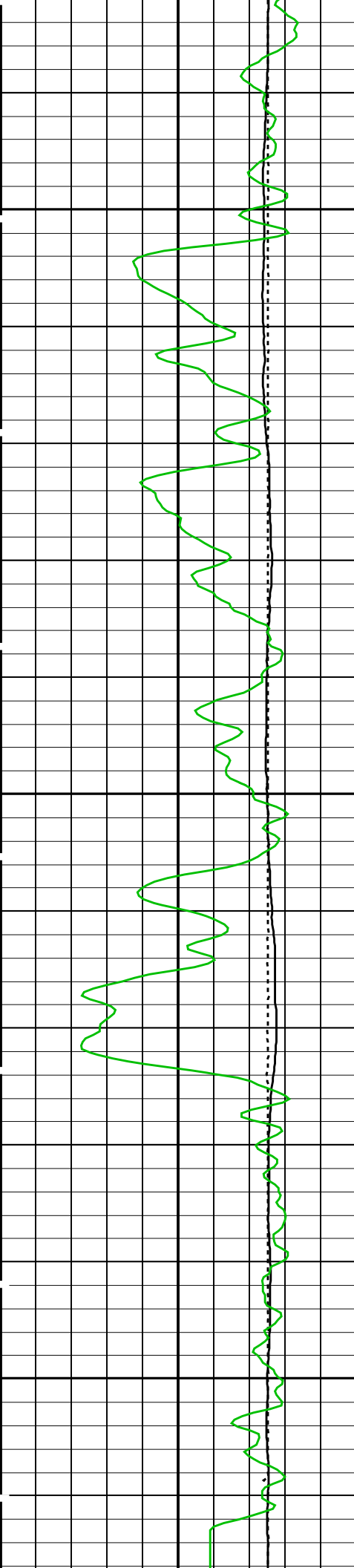
RST-C	SRPC-5047-H1-2011-OP19	PSPT	19C0-187
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PIP SUMMARY

Time Mark Every 60 S



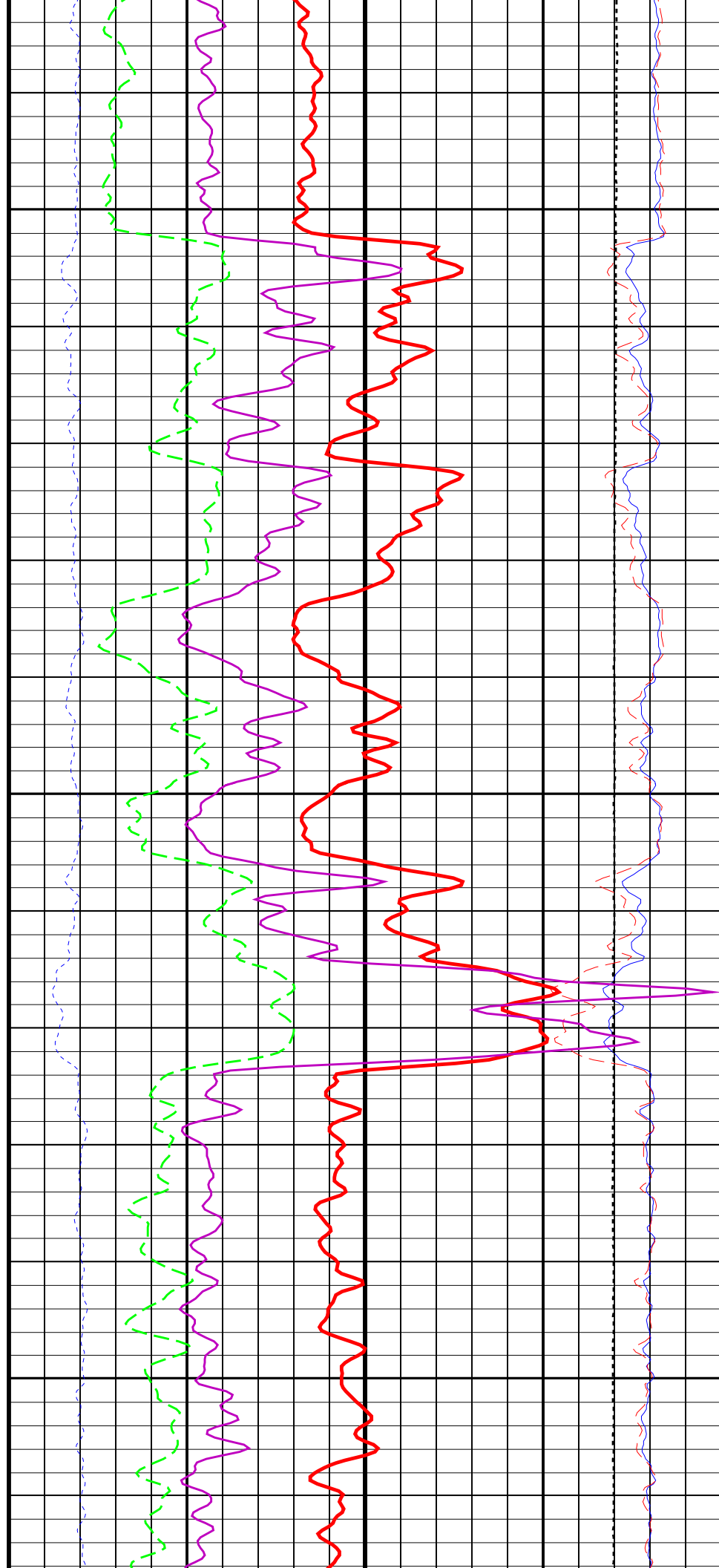


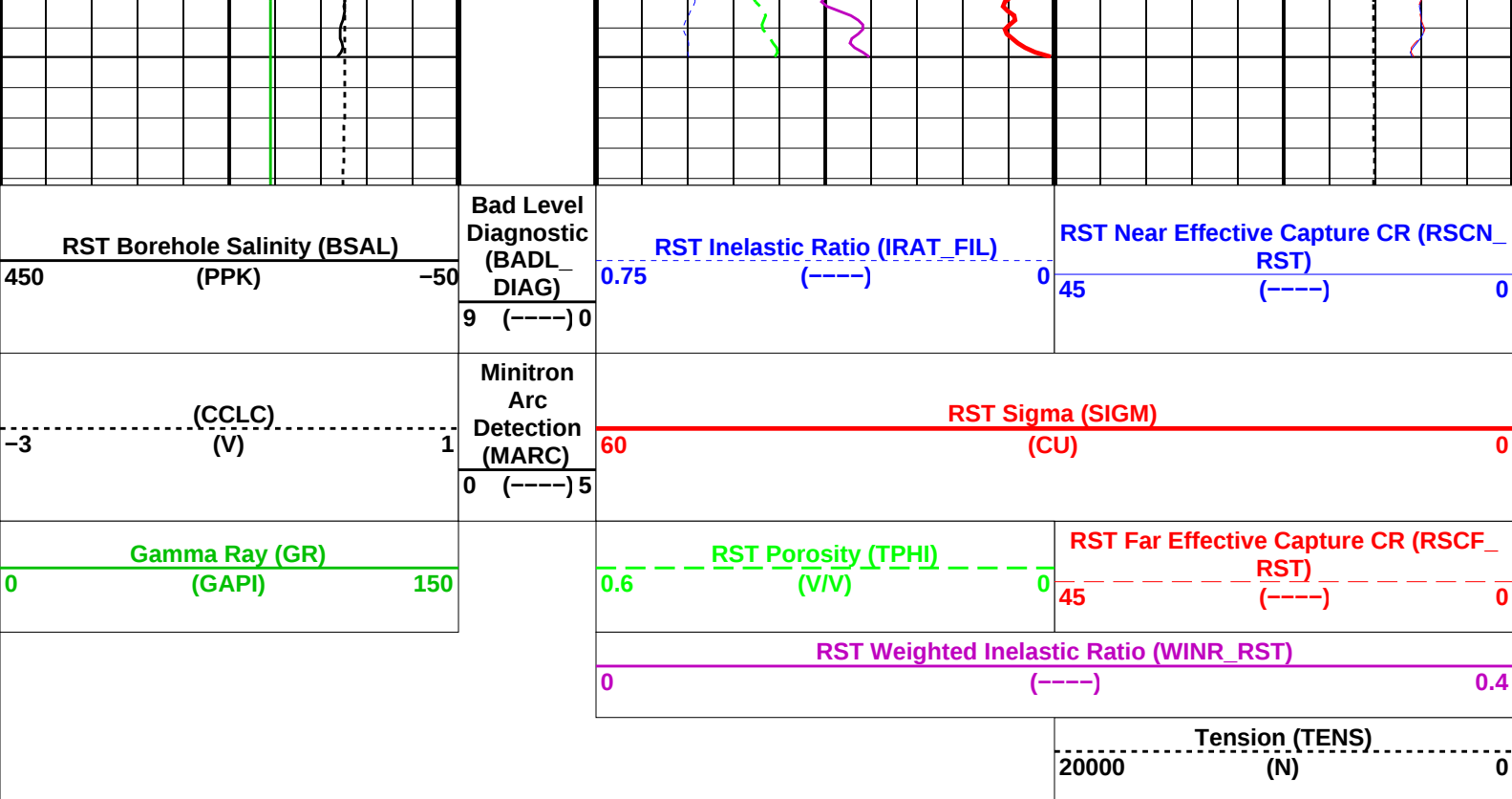


925

950

975





Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
RST-C: Reservoir Saturation Pro Tool C		
AIRB	RST Air Borehole	No
BHS	Borehole Status	OPEN
BSALOPT	RST Borehole Salinity Option	Unknown
BSFL	RST Borehole Salinity Filter Length	51
DFPC	RST Depth Filter Processing Constant	One
DFPC_TDTL	RST Depth Filter Processing Constant (TDT-like)	Two
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
NORM_IRAT_RST	RST Normalized Inelastic Ratio	0.48
NORM_SIGM_RST	RST Normalized Sigma	3
RGAI	Near/Far Gain Calibration Ratio	1
TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith
TIER_SIGM	RST Sigma Acquisition Mode	0_RST_Sigma
PSPT: Production Services Logging Platform		
BHS	Borehole Status	OPEN
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE
System and Miscellaneous		
BS	Bit Size	222.000 MM
BSAL	Borehole Salinity	-50000.00 PPM
CSIZ	Current Casing Size	244.500 MM
CWEI	Casing Weight	53.57 KG/M
DO	Depth Offset for Playback	-0.2 M
PP	Playback Processing	NORMAL

Format: RST_SIG_ANSW Vertical Scale: 1:240 Graphics File Created: 18-Feb-2013 12:52

OP System Version: 19C0-187

RST-C SRPC-5047-H1-2011-OP19 PSPT 19C0-187

Input DLIS Files

DEFAULT	RST_PSP_034LUP	FN:49	PRODUCER	18-Feb-2013 12:18	989.4 M	854.5 M
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Output DLIS Files

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RTB	RST_PSP_037PUP	FN:56	PRODUCER	18-Feb-2013 12:54

Output DLIS Files

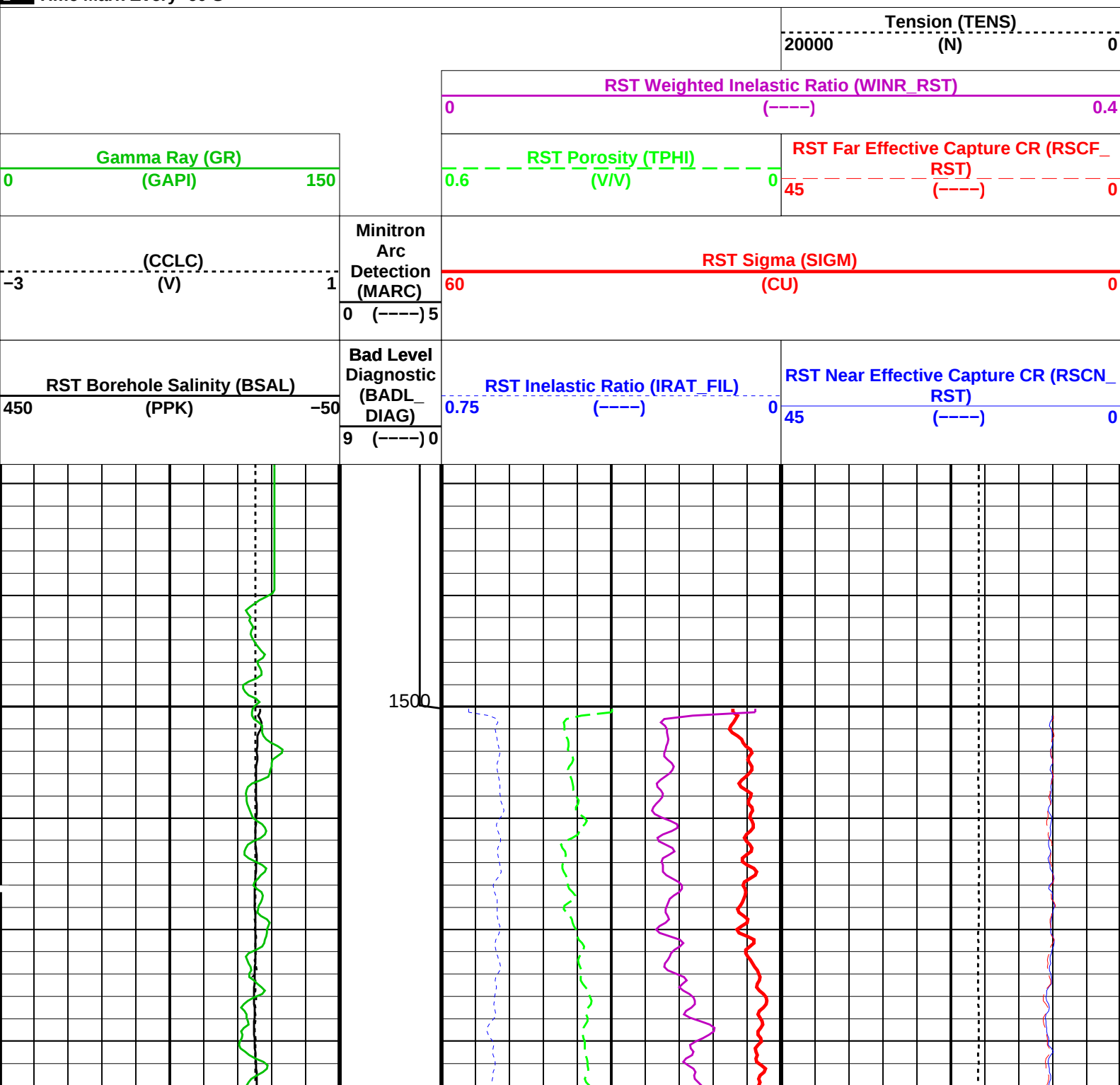
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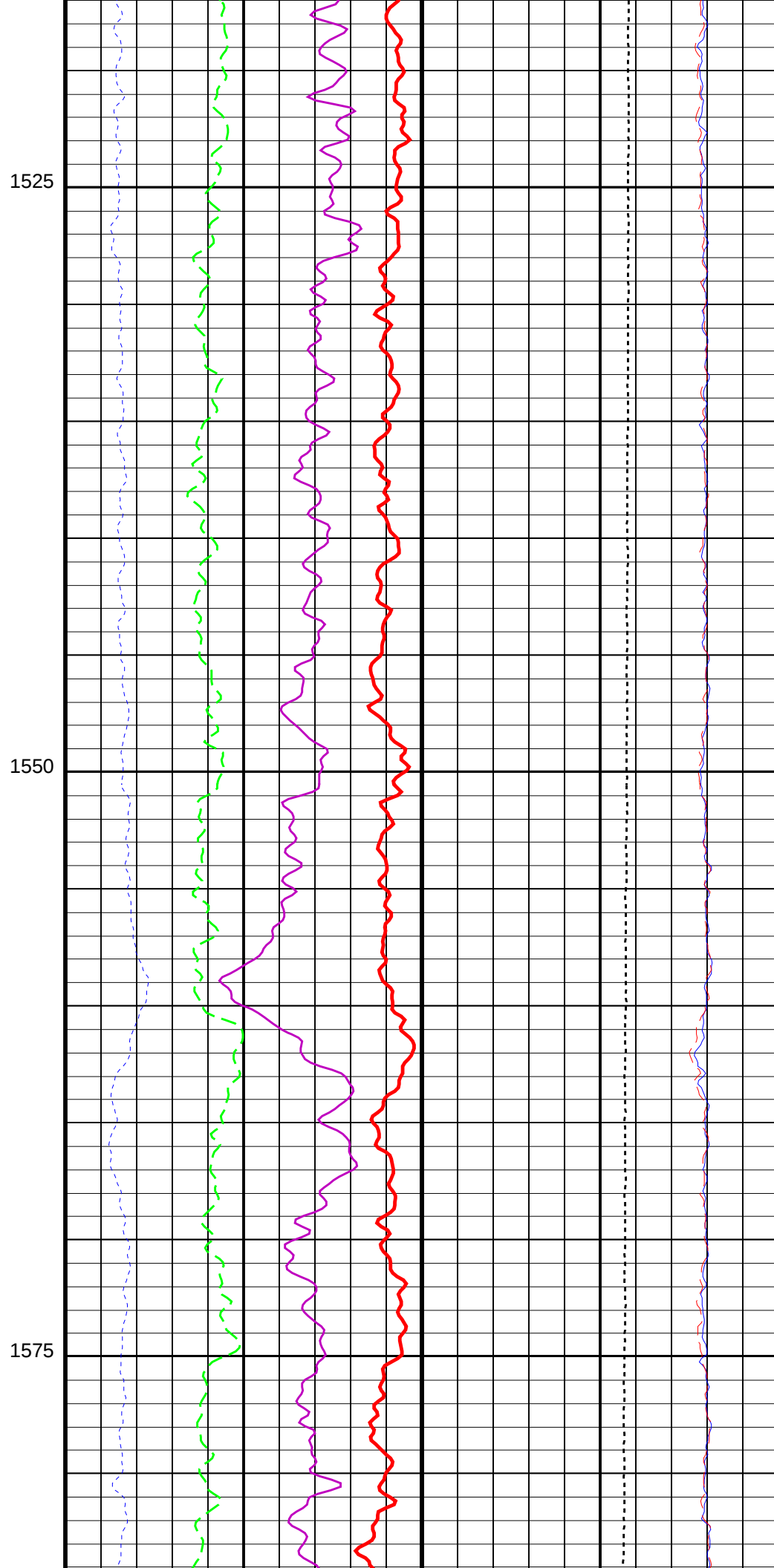
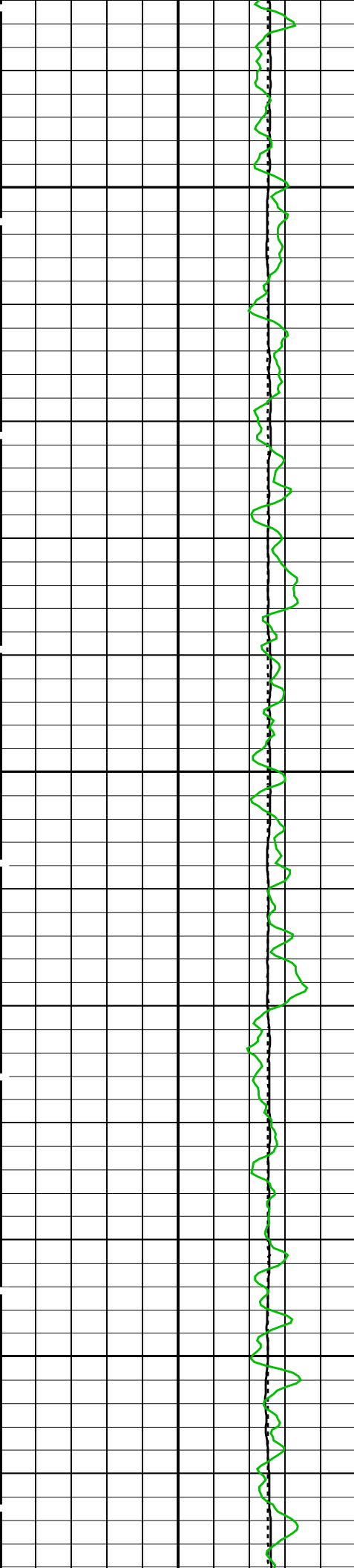
OP System Version: 19C0-187

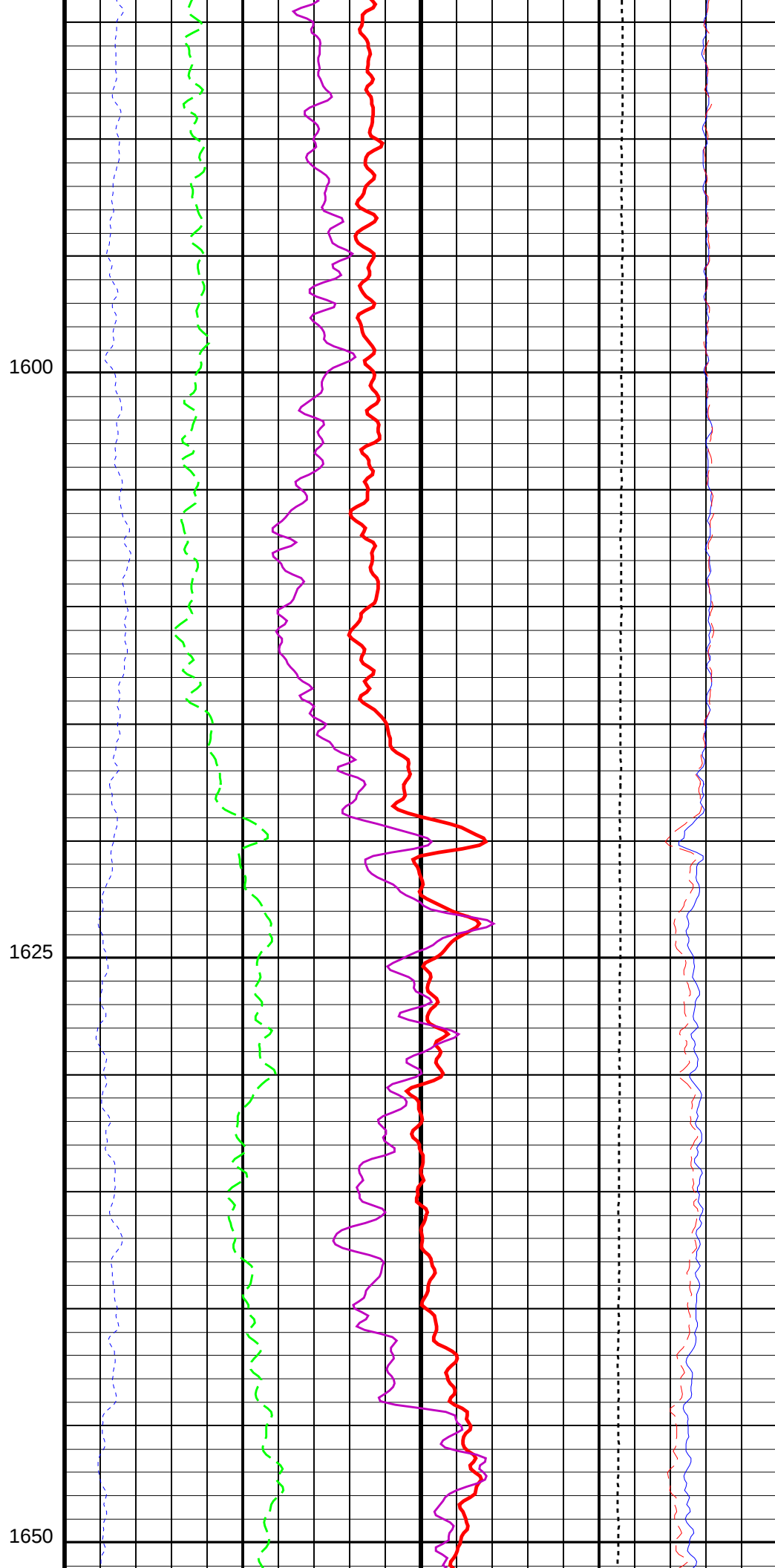
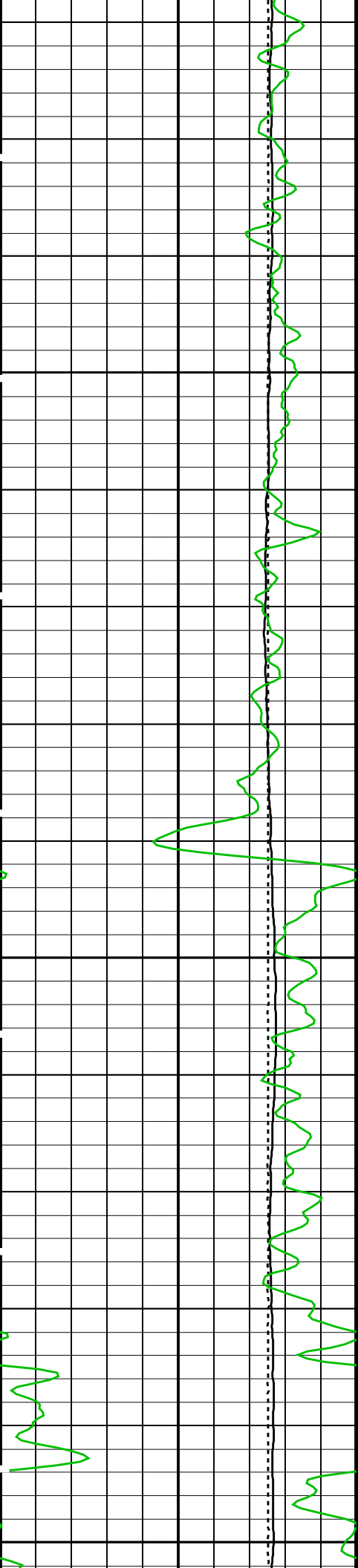
RST-C	SRPC-5047-H1-2011-OP19	PSPT	19C0-187
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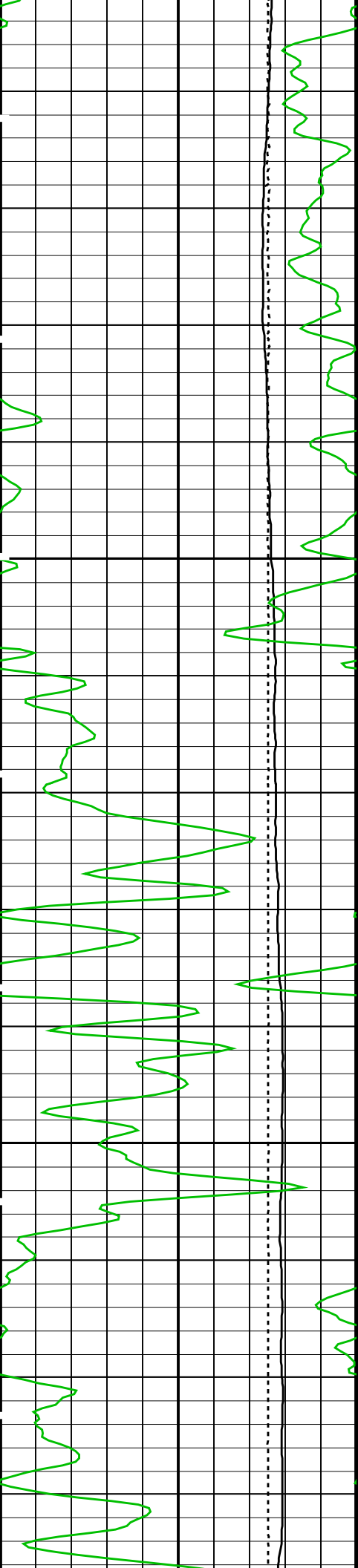
PIP SUMMARY

Time Mark Every 60 S



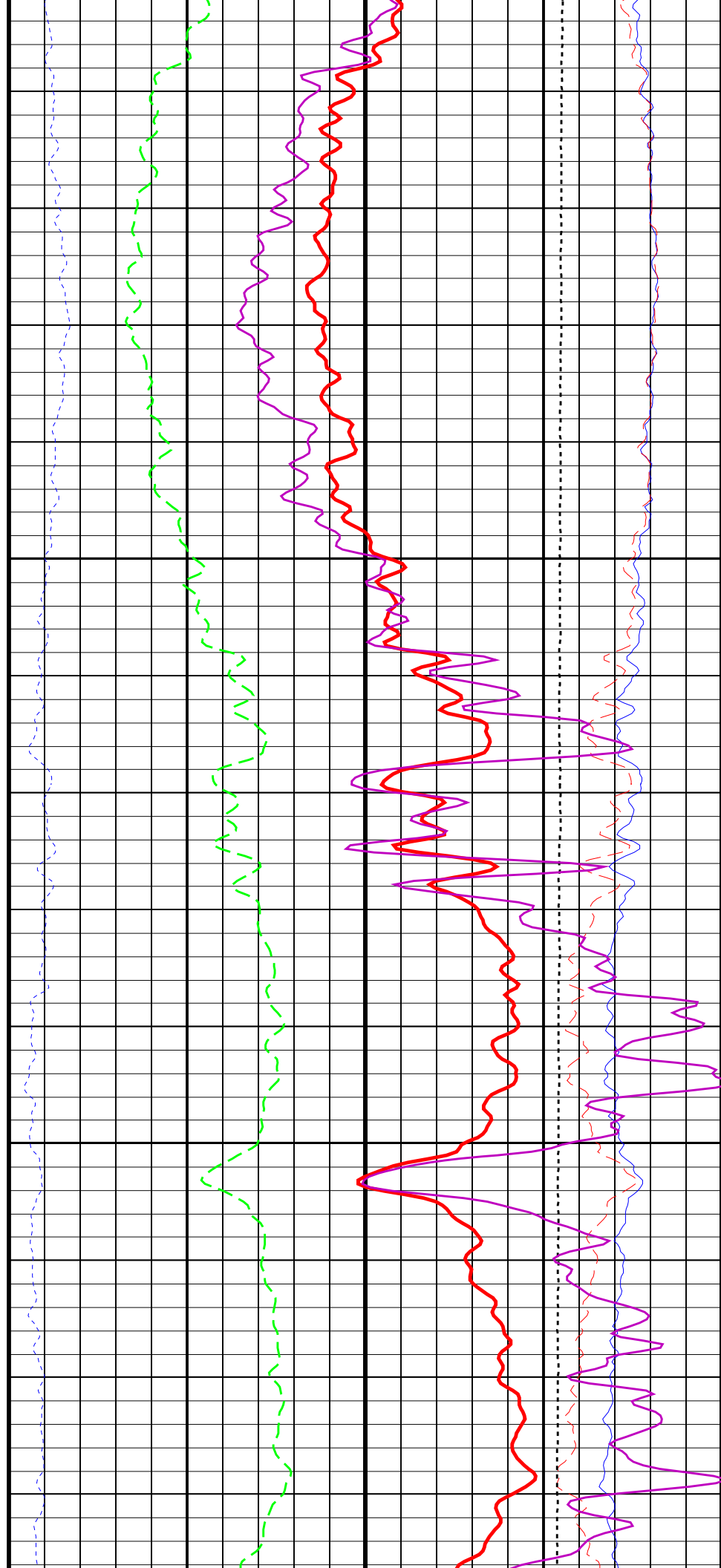


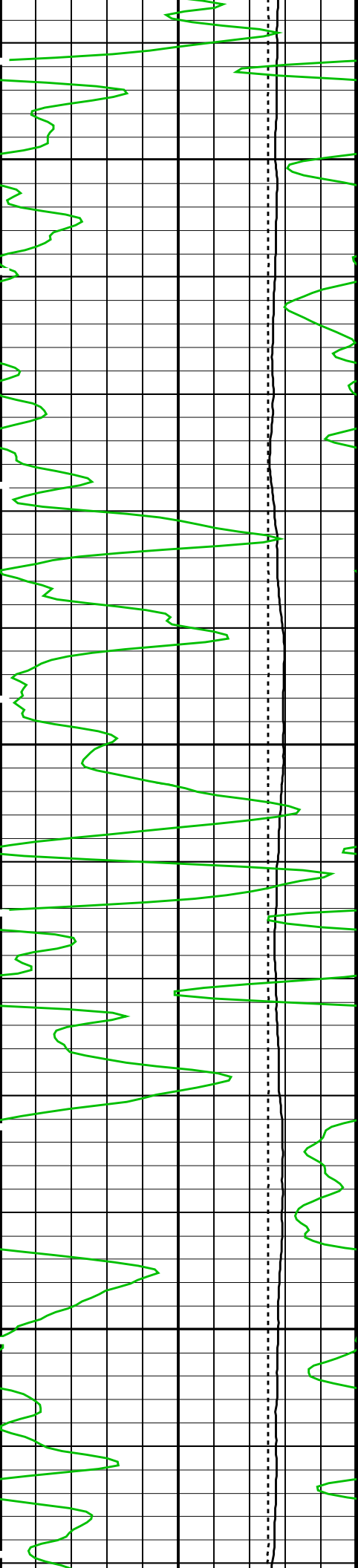




1675

1700

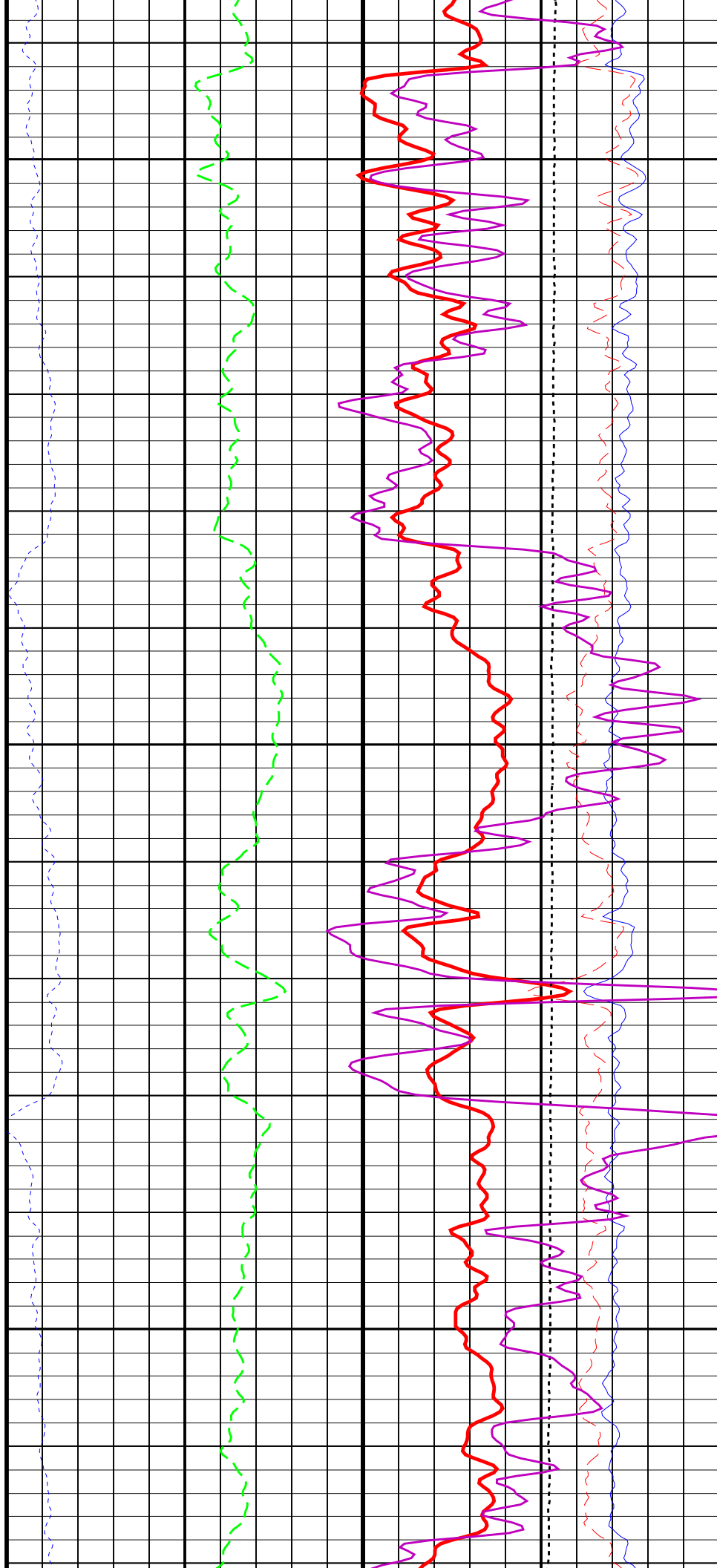


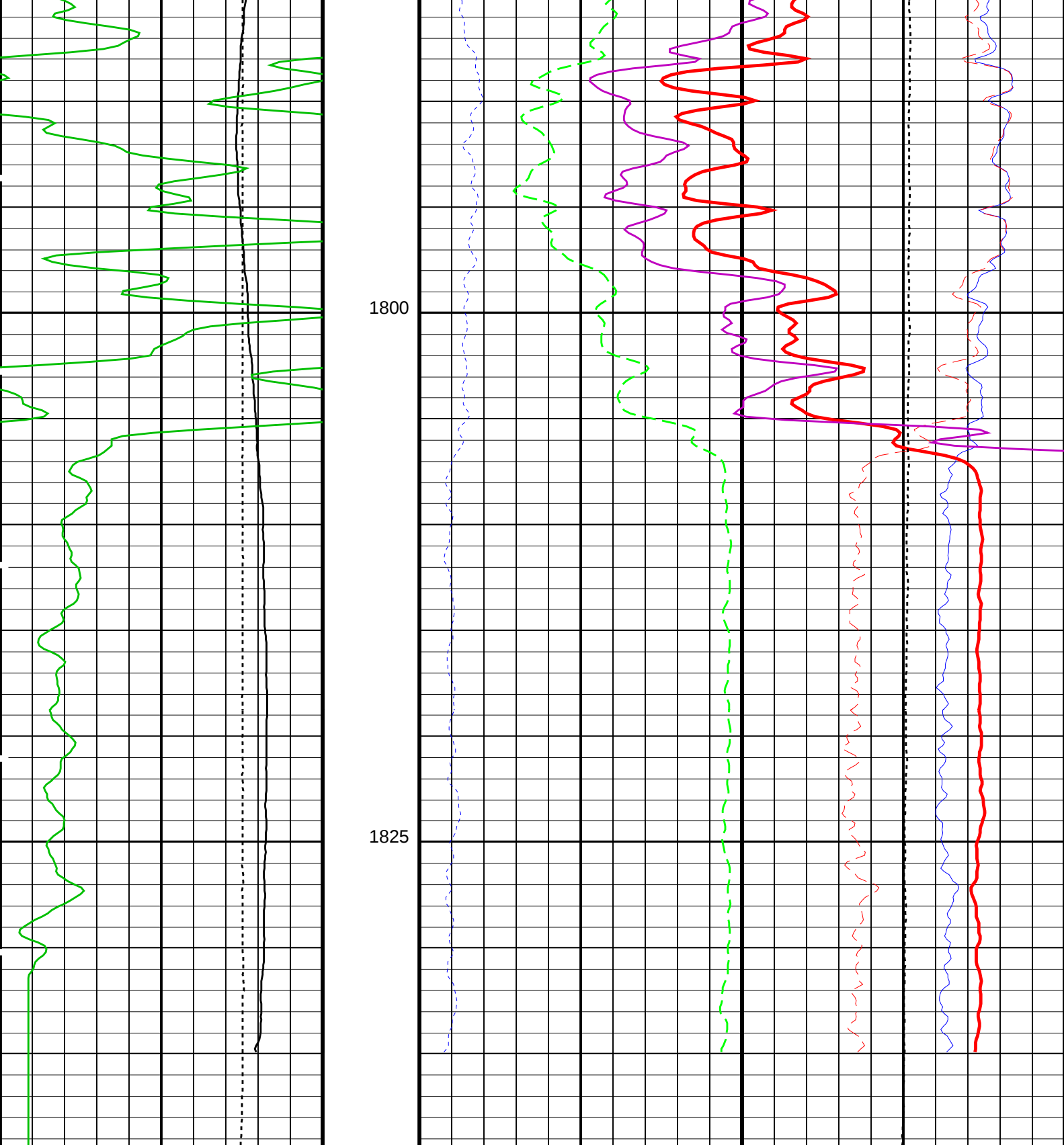


1725

1750

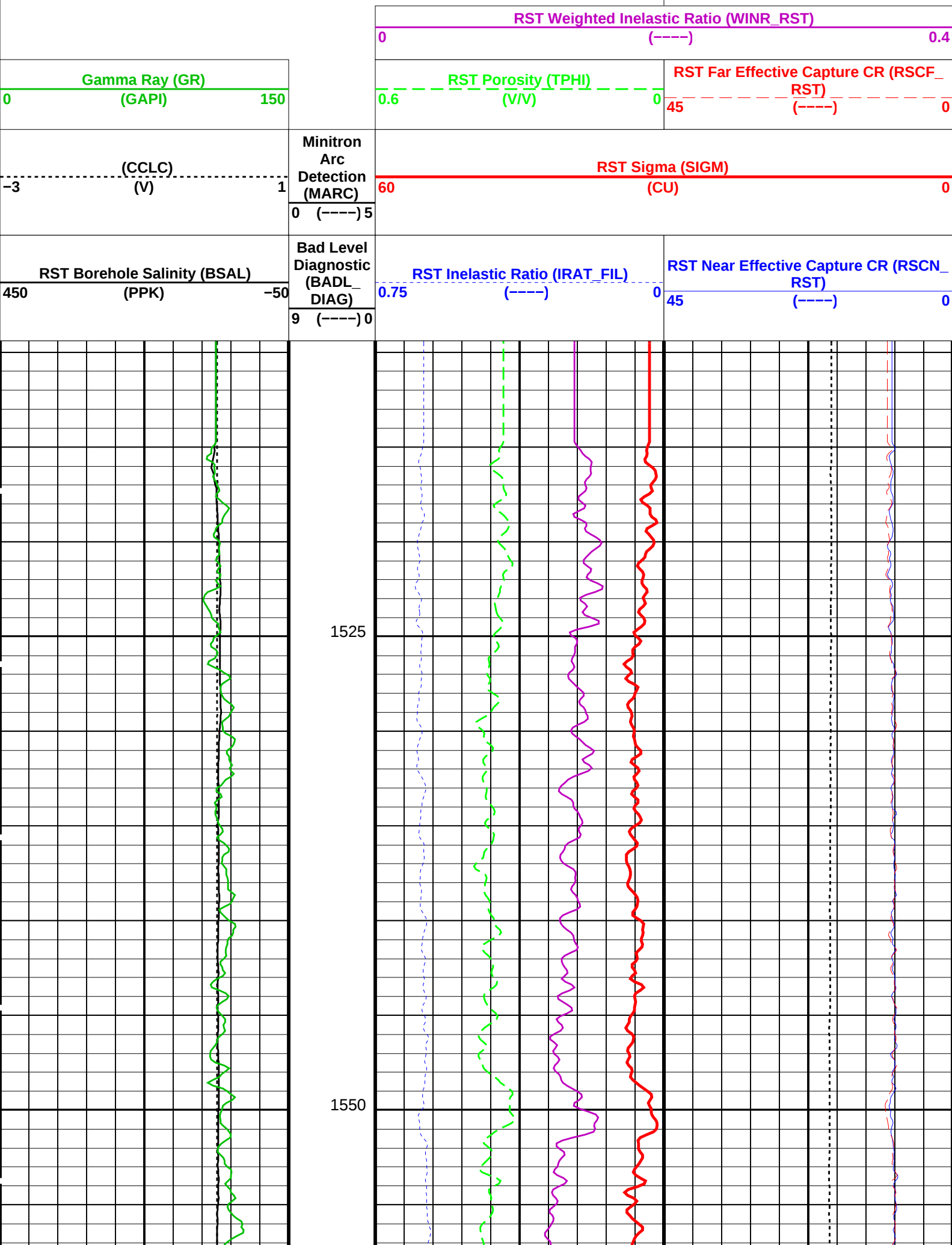
1775

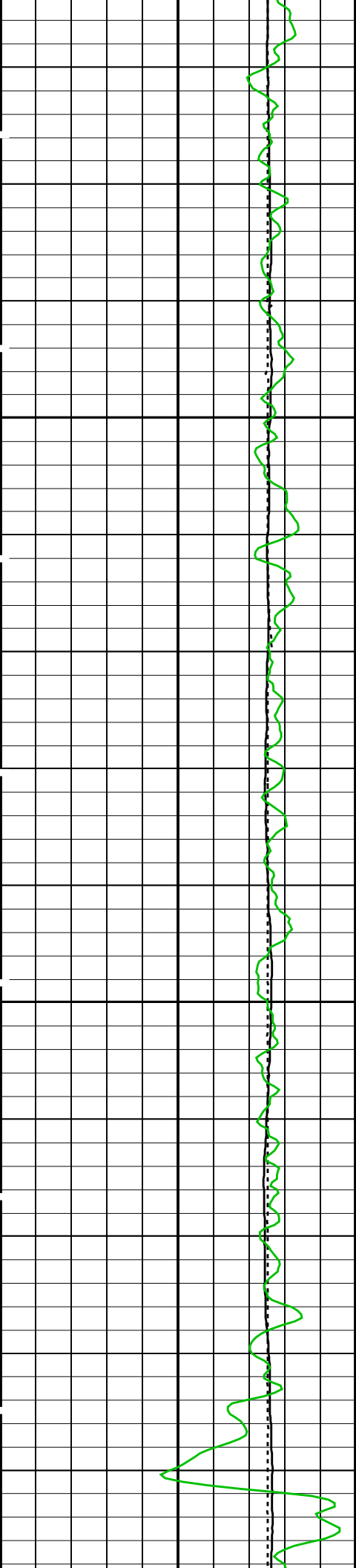




RST Borehole Salinity (BSAL)		Bad Level Diagnostic (BADL_DIAG)	RST Inelastic Ratio (IRAT_FIL)		RST Near Effective Capture CR (RSCN_RST)		
450	(PPK)		-50	0.75	(----	0	
			9	(----	0	45	(----
(CCLC)		Minitron Arc Detection (MARC)	RST Sigma (SIGM)				
-3	(V)		1	60	(CU)		0
			0	(----	5		
Gamma Ray (GR)			RST Porosity (TPHI)		RST Far Effective Capture CR (RSCF_RST)		

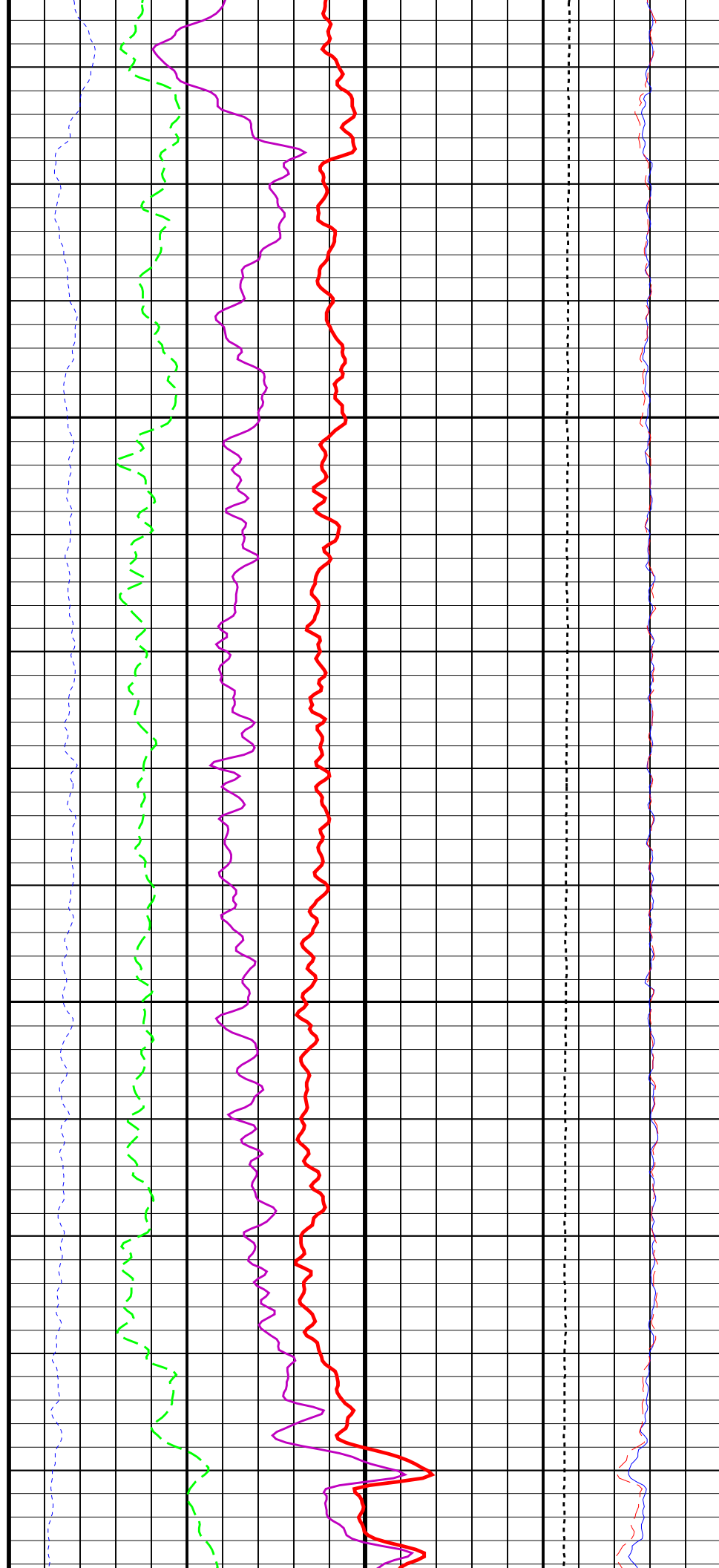
C

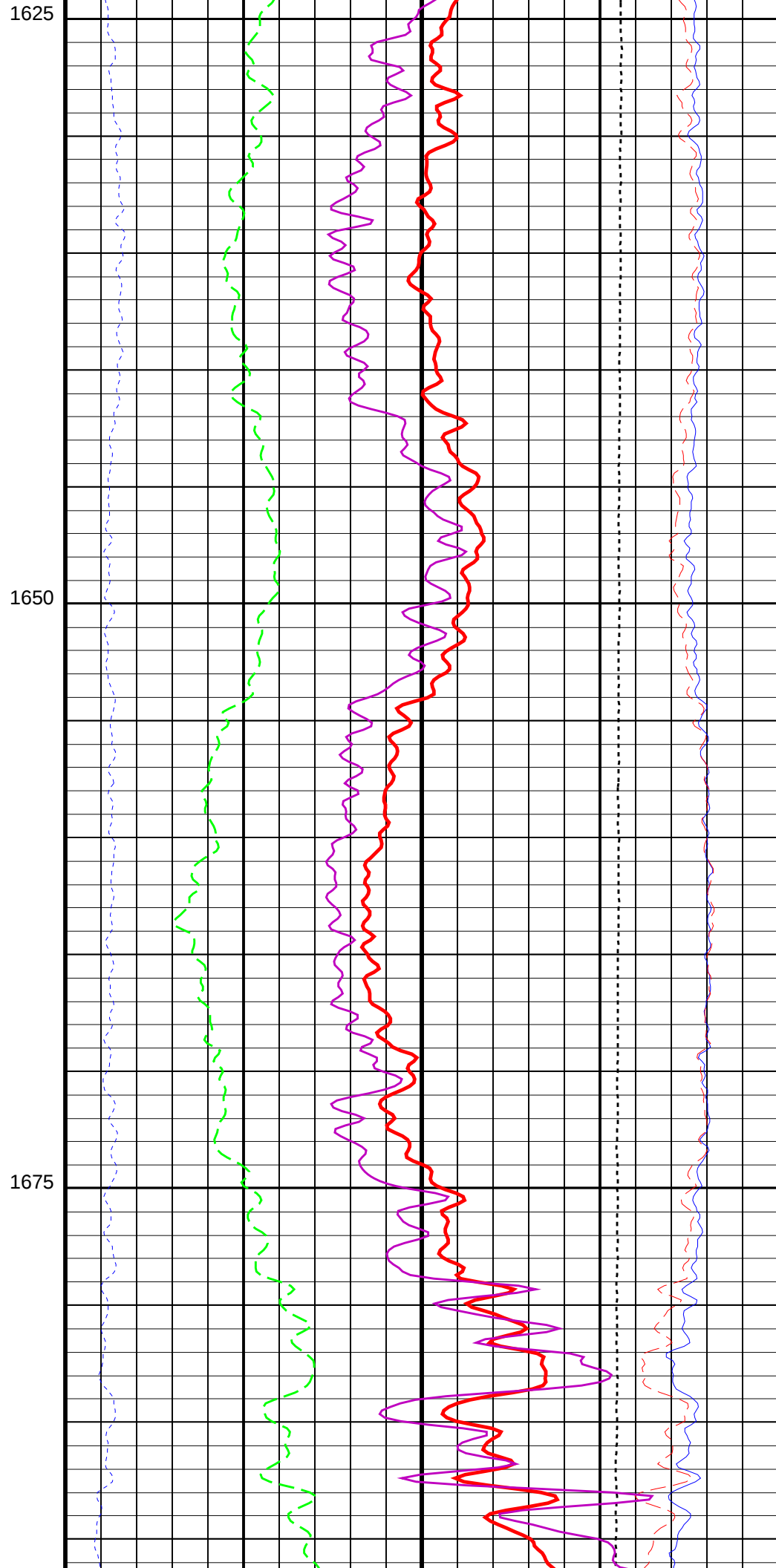
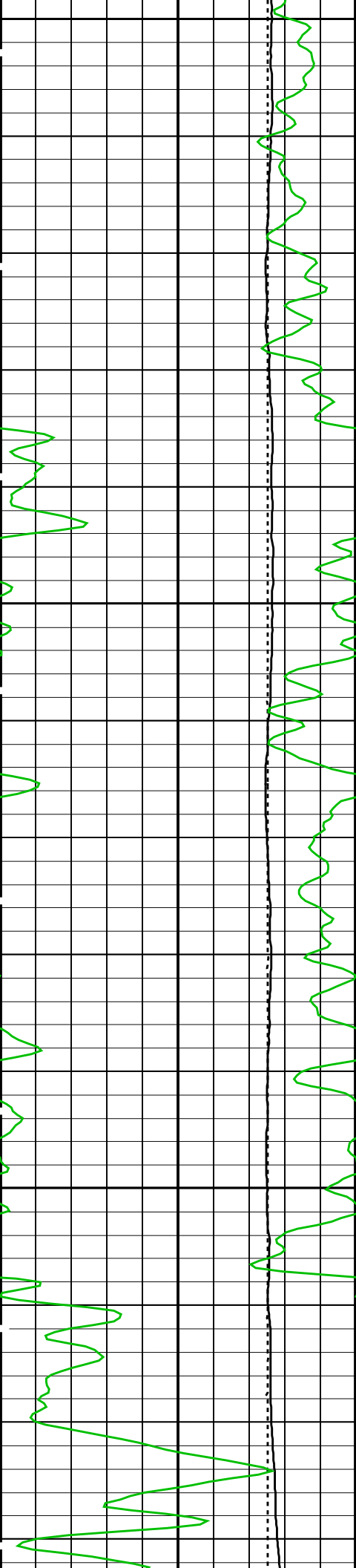


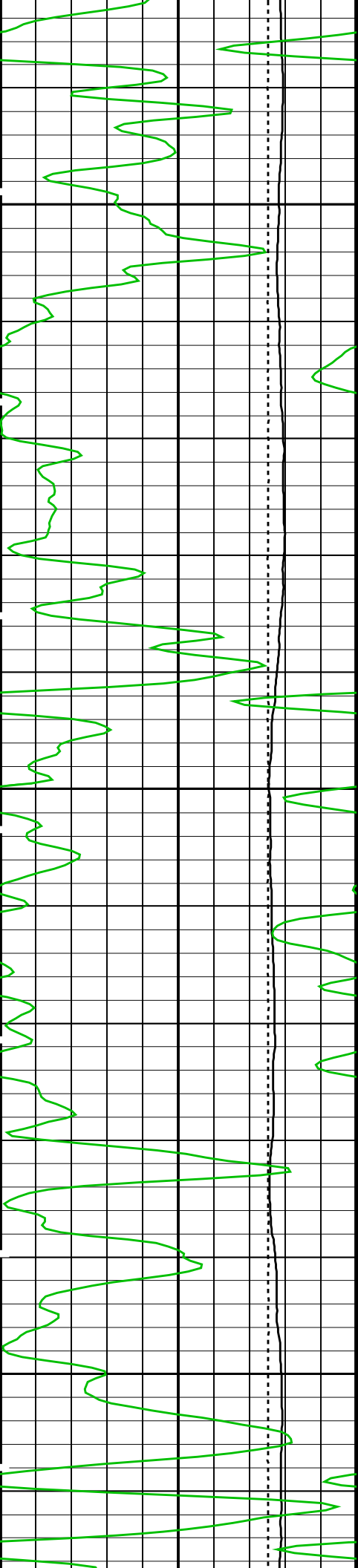


1575

1600



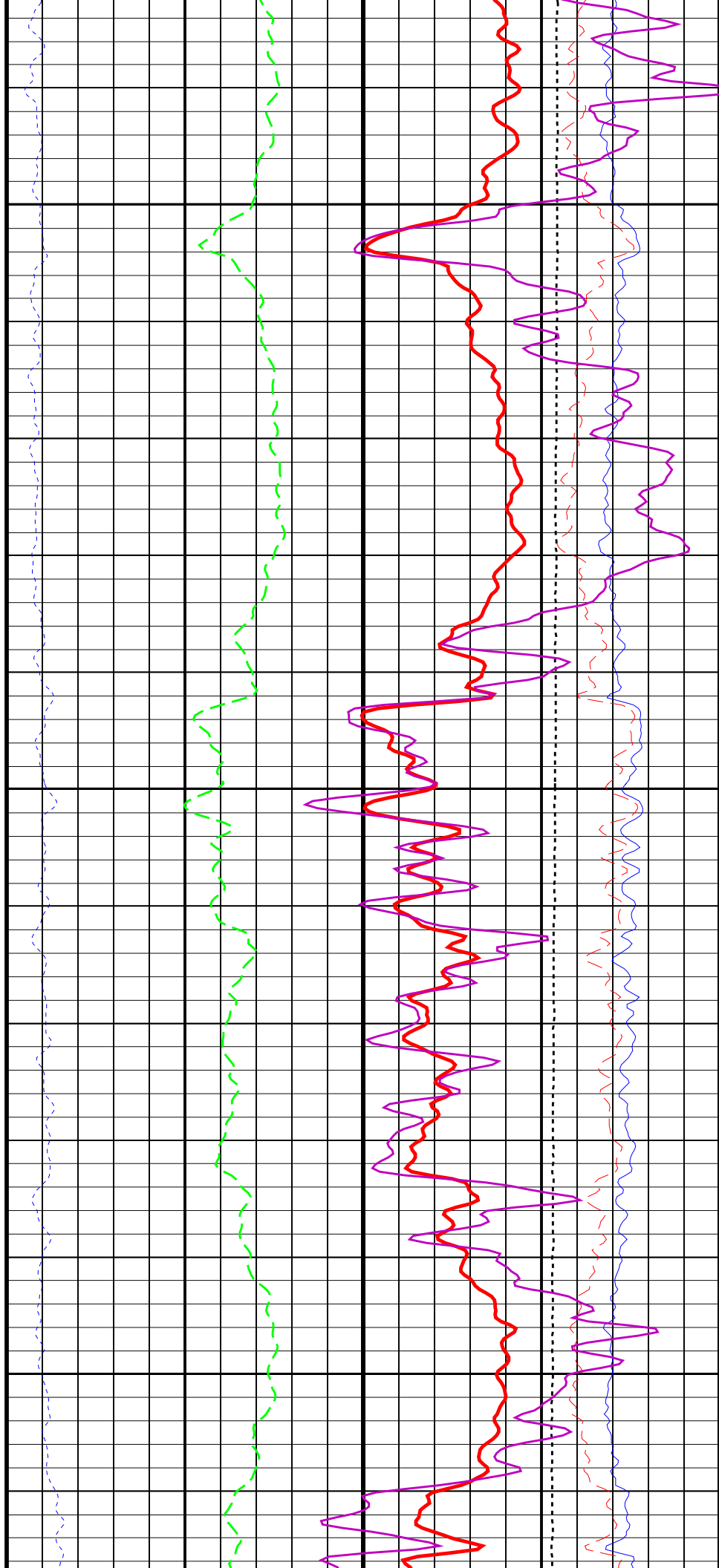


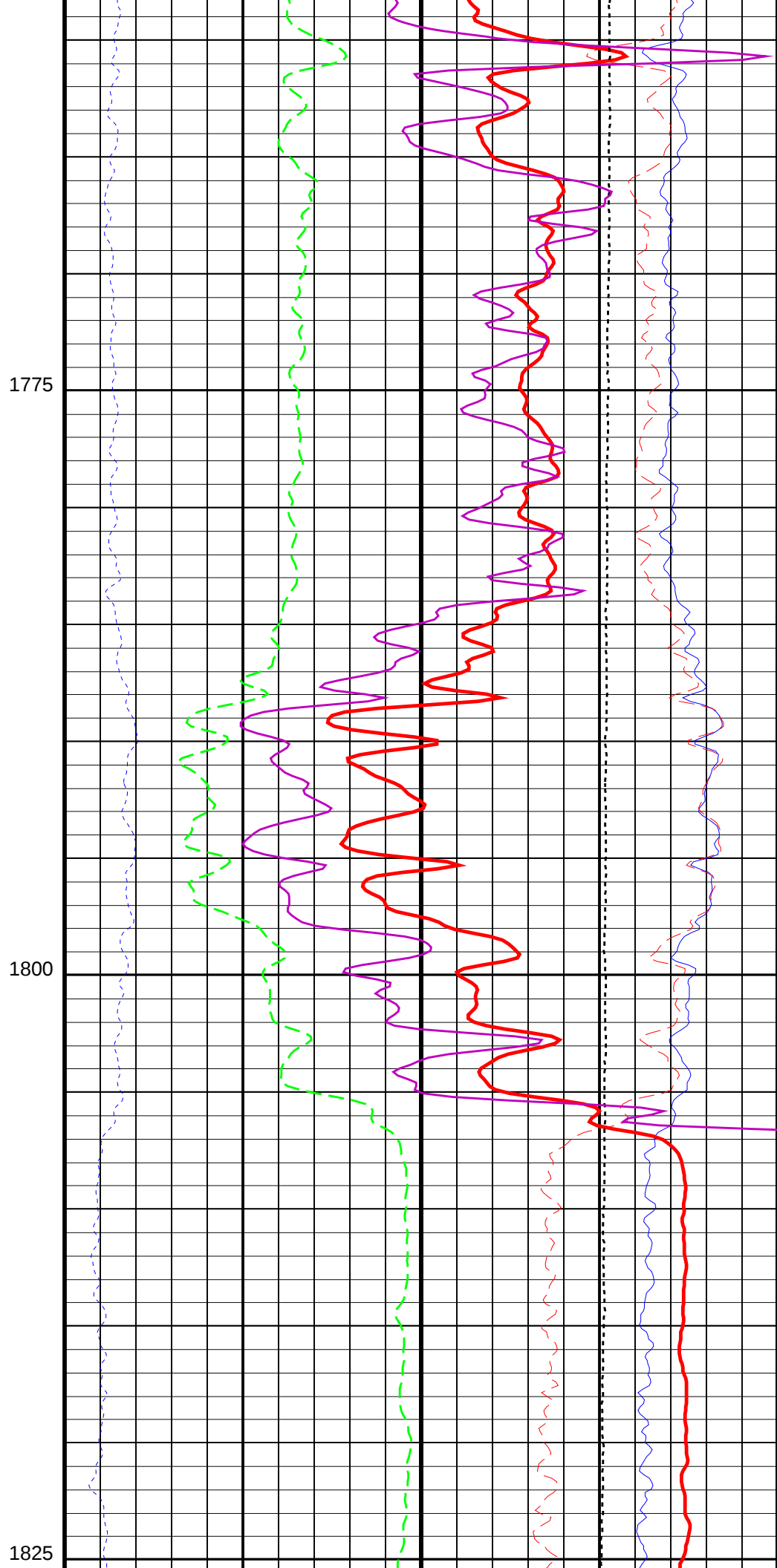
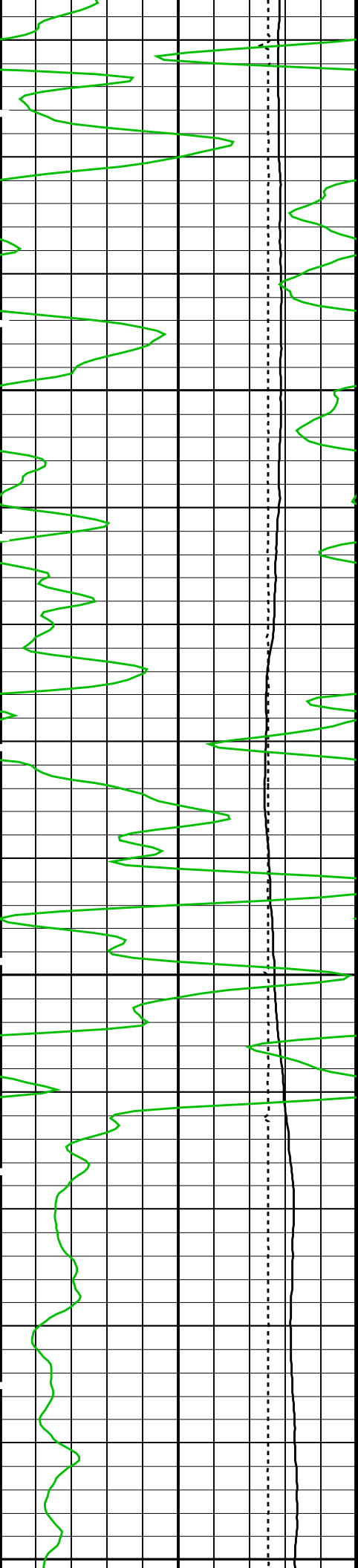


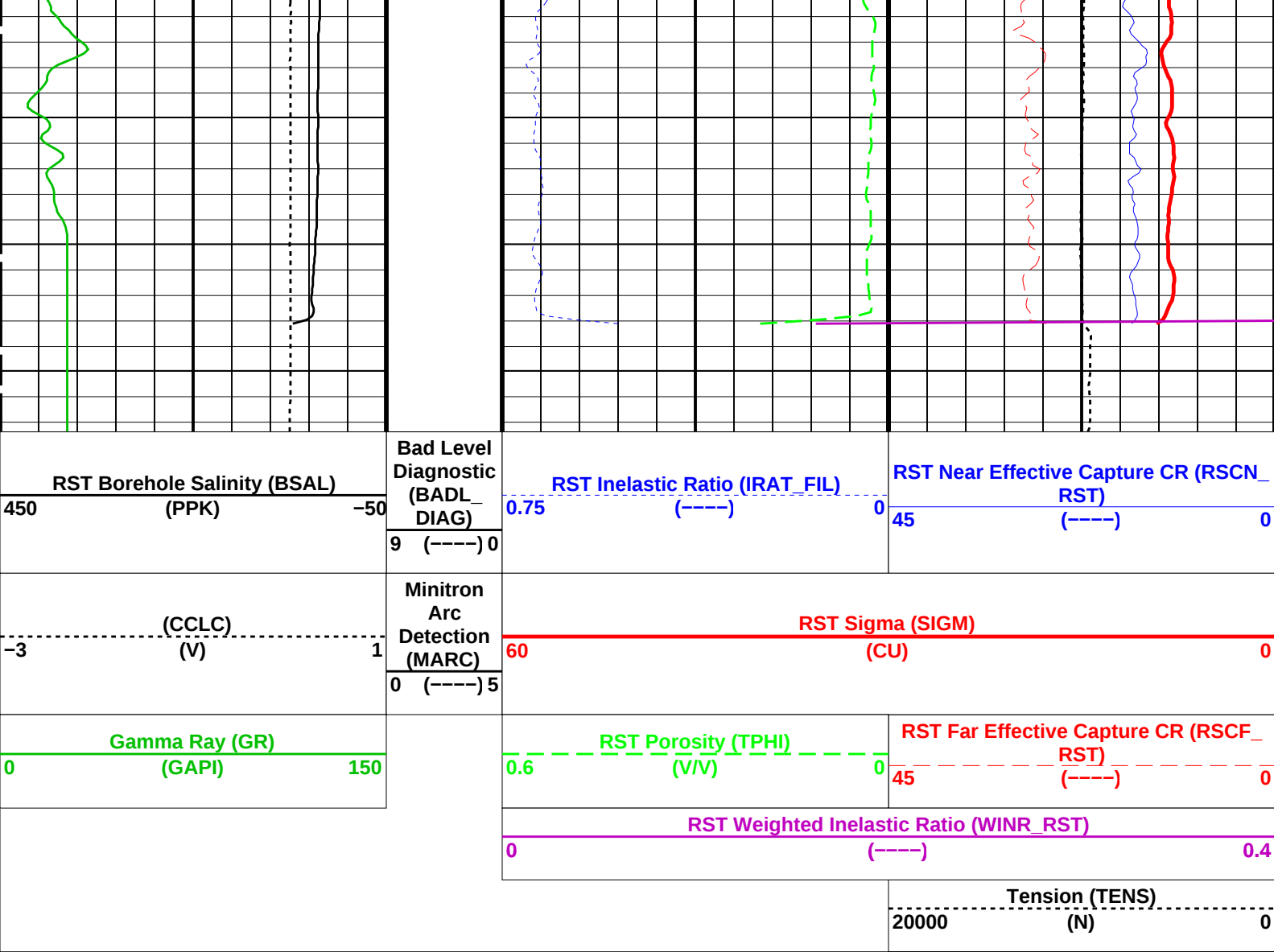
1700

1725

1750







PIP SUMMARY

Time Mark Every 60 S

Parameters			
DLIS Name	Description	Value	
RST-C: Reservoir Saturation Pro Tool C			
AIRB	RST Air Borehole	No	
BHS	Borehole Status	OPEN	
BSALOPT	RST Borehole Salinity Option	Unknown	
BSFL	RST Borehole Salinity Filter Length	51	
DFPC	RST Depth Filter Processing Constant	One	
DFPC_TDTL	RST Depth Filter Processing Constant (TDT-like)	Two	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
NORM_IRAT_RST	RST Normalized Inelastic Ratio	0.48	
NORM_SIGM_RST	RST Normalized Sigma	3	M-1
RGAI	Near/Far Gain Calibration Ratio	1	
TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith	
TIER_SIGM	RST Sigma Acquisition Mode	0_RST_Sigma	
PSPT: Production Services Logging Platform			
BHS	Borehole Status	OPEN	
MATR	Rock Matrix for Neutron Porosity Corrections	SANDSTONE	
System and Miscellaneous			
BS	Bit Size	222.000	MM
BSAL	Borehole Salinity	-50000.00	PPM
CSIZ	Current Casing Size	244.500	MM
CWEI	Casing Weight	53.57	KG/M
DO	Depth Offset for Playback	-2.3	M
DORL	Depth Offset for Repeat Analysis	0.0	M
PP	Playback Processing	NORMAL	

Format: RST_SIG_ANSW Vertical Scale: 1:240 Graphics File Created: 17-Feb-2013 20:06

RST-C	SRPC-5047-H1-2011-OP19	PSPT	19C0-187
Input DLIS Files			
DEFAULT	RST_PSP_010LUP	FN:15	PRODUCER 17-Feb-2013 19:03 1844.6 M 1479.7 M
Output DLIS Files			
DEFAULT	RST_PSP_016PUP	FN:27	PRODUCER 17-Feb-2013 20:06
RTB	RST_PSP_016PUP	FN:28	PRODUCER 17-Feb-2013 20:06

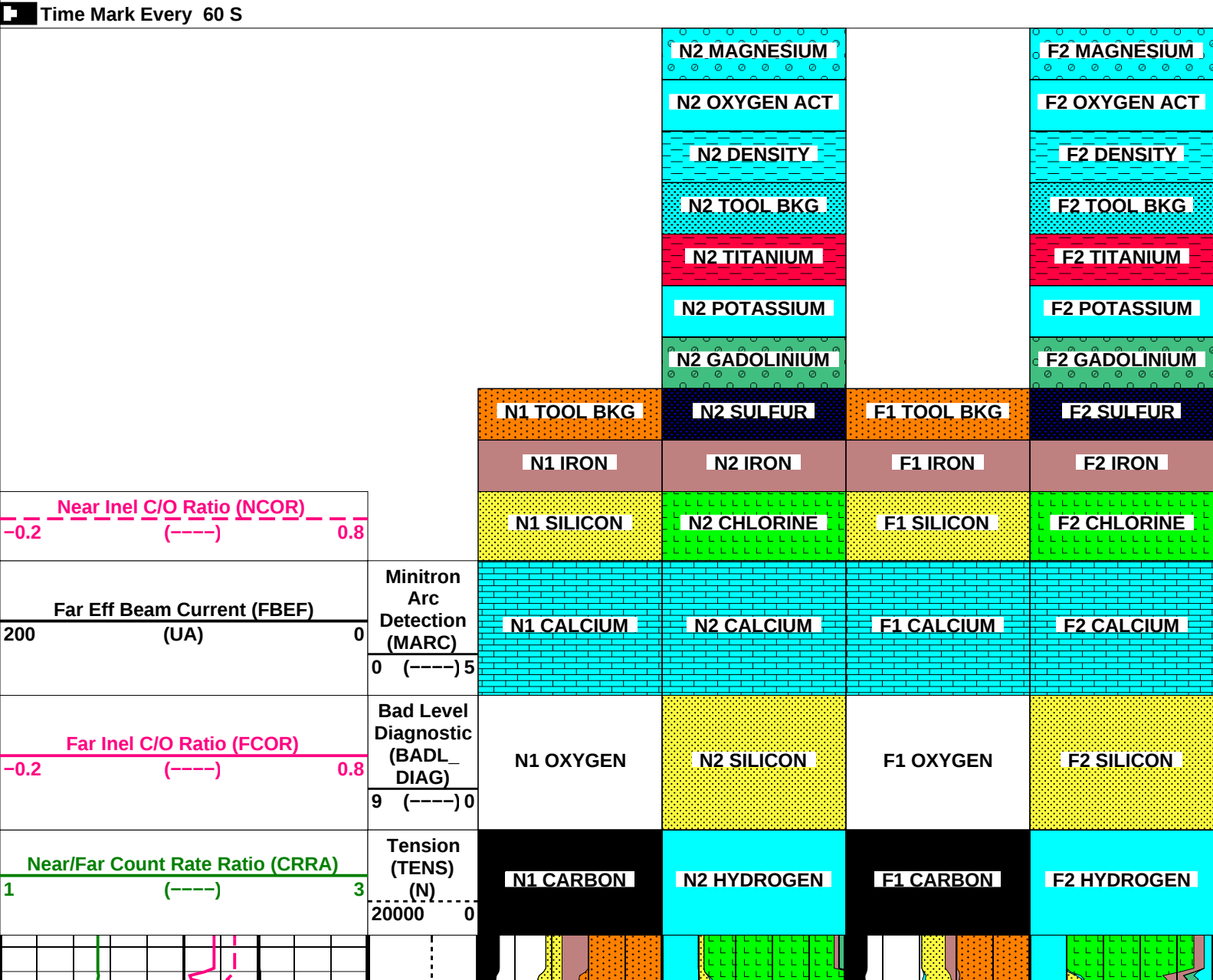
Company: CONOCOPHILLIPS CANADA RESOURCES CORP.	Well: COPRC LOON CREEK O-6
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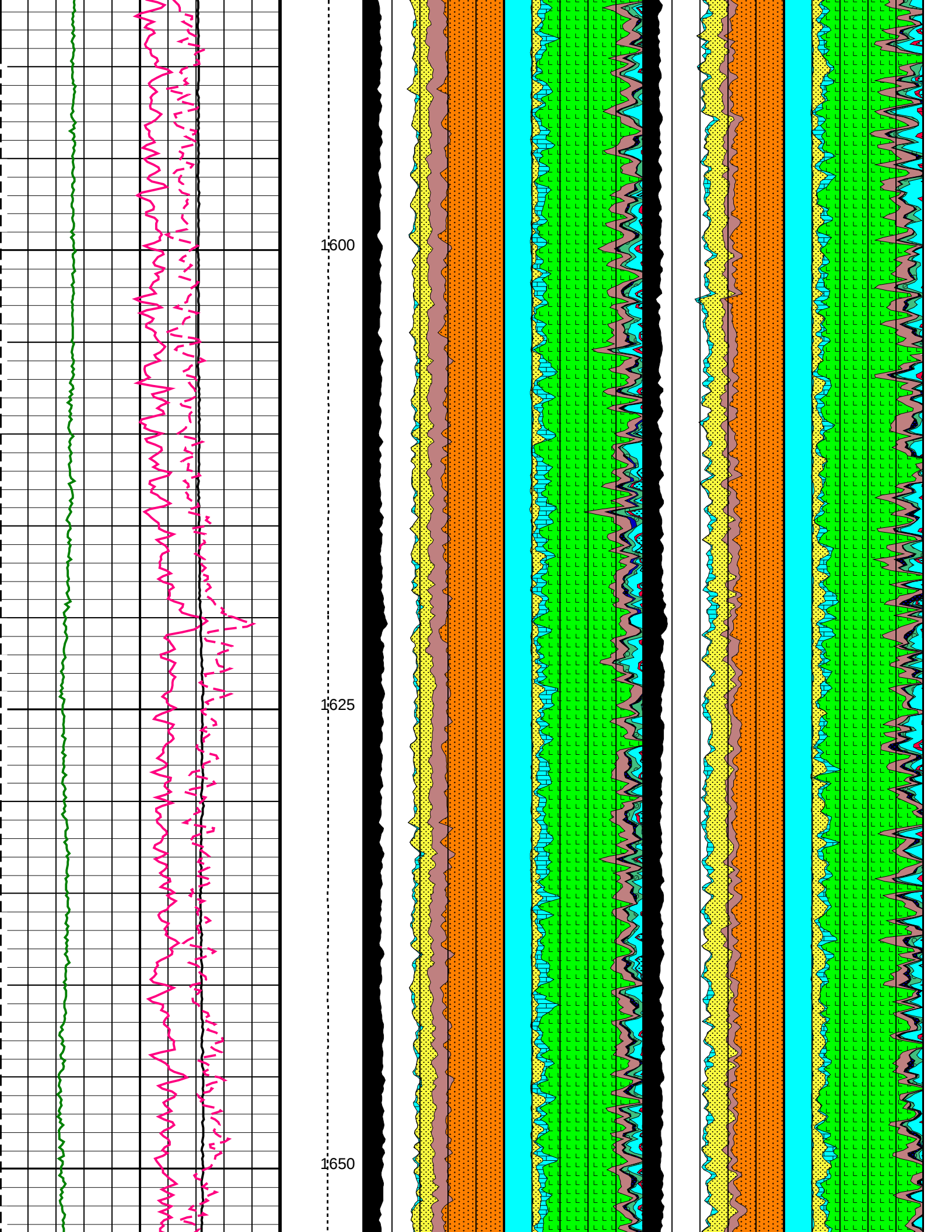
Output DLIS Files			
DEFAULT	RST_PSP_026LUP	FN:42	PRODUCER 17-Feb-2013 23:07 1752.3 M 0.0 M
RTB	RST_PSP_026LUP	FN:43	PRODUCER 17-Feb-2013 23:09

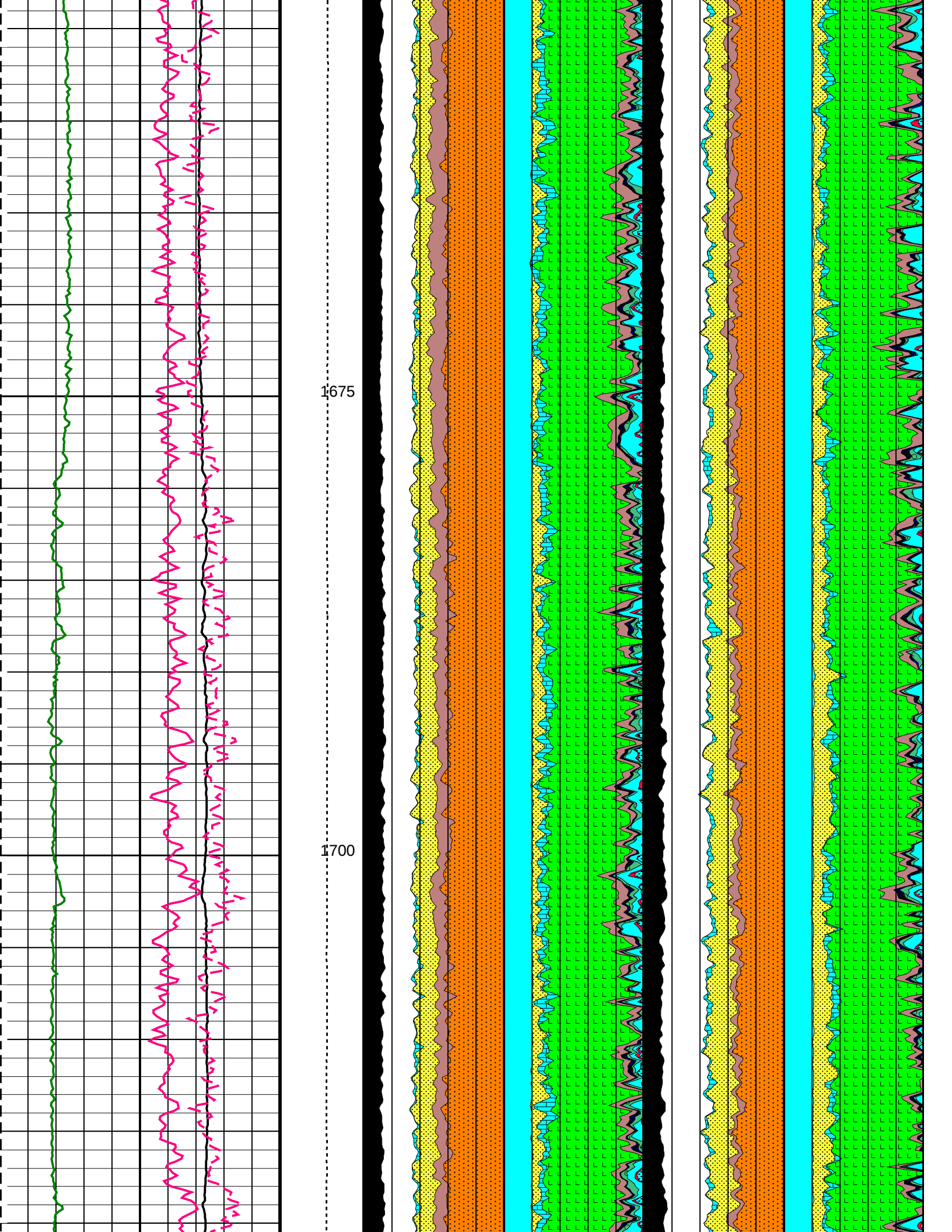
OP System Version: 19C0-187

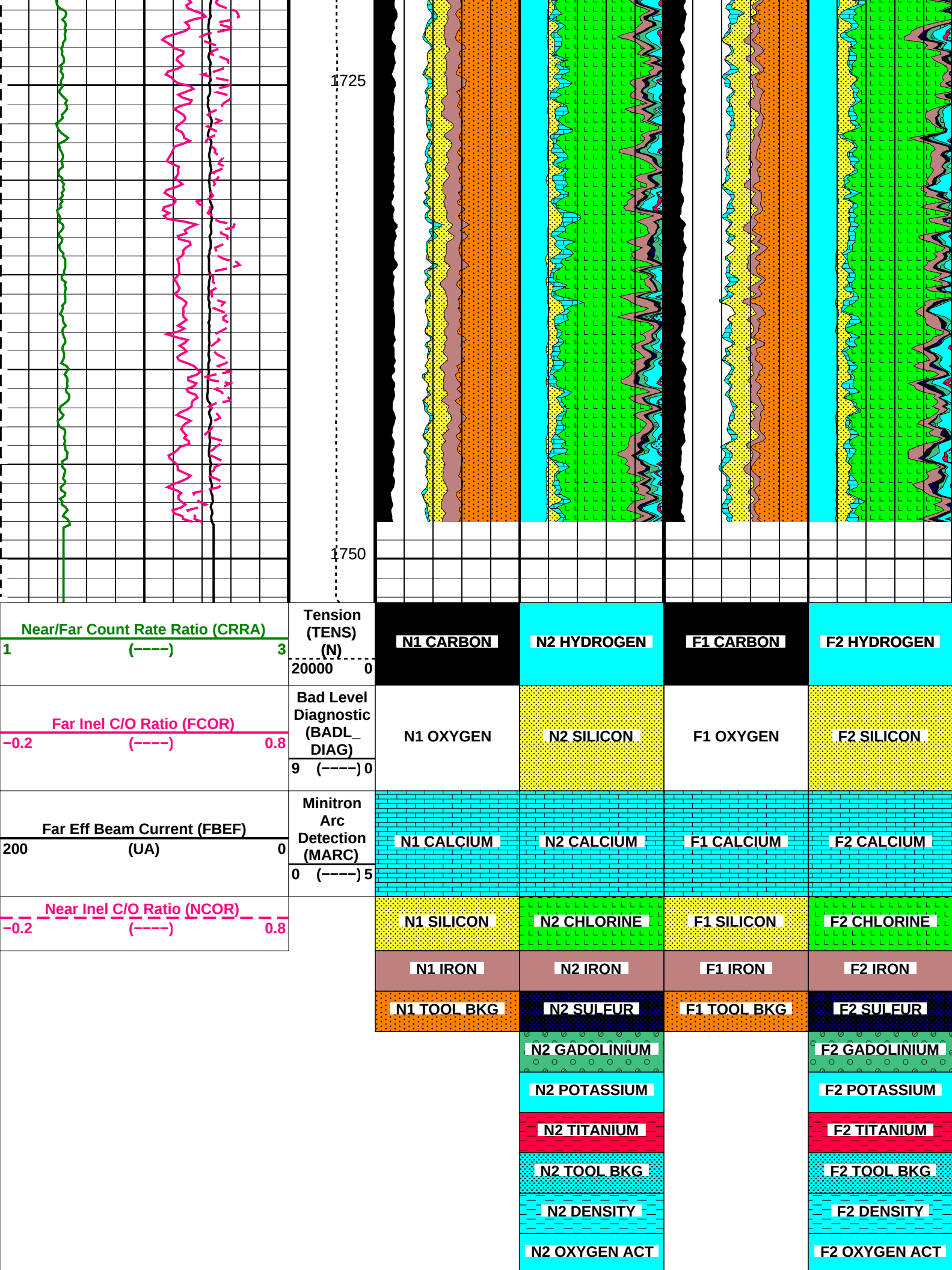
RST-C	SRPC-5047-H1-2011-OP19	PSPT	19C0-187
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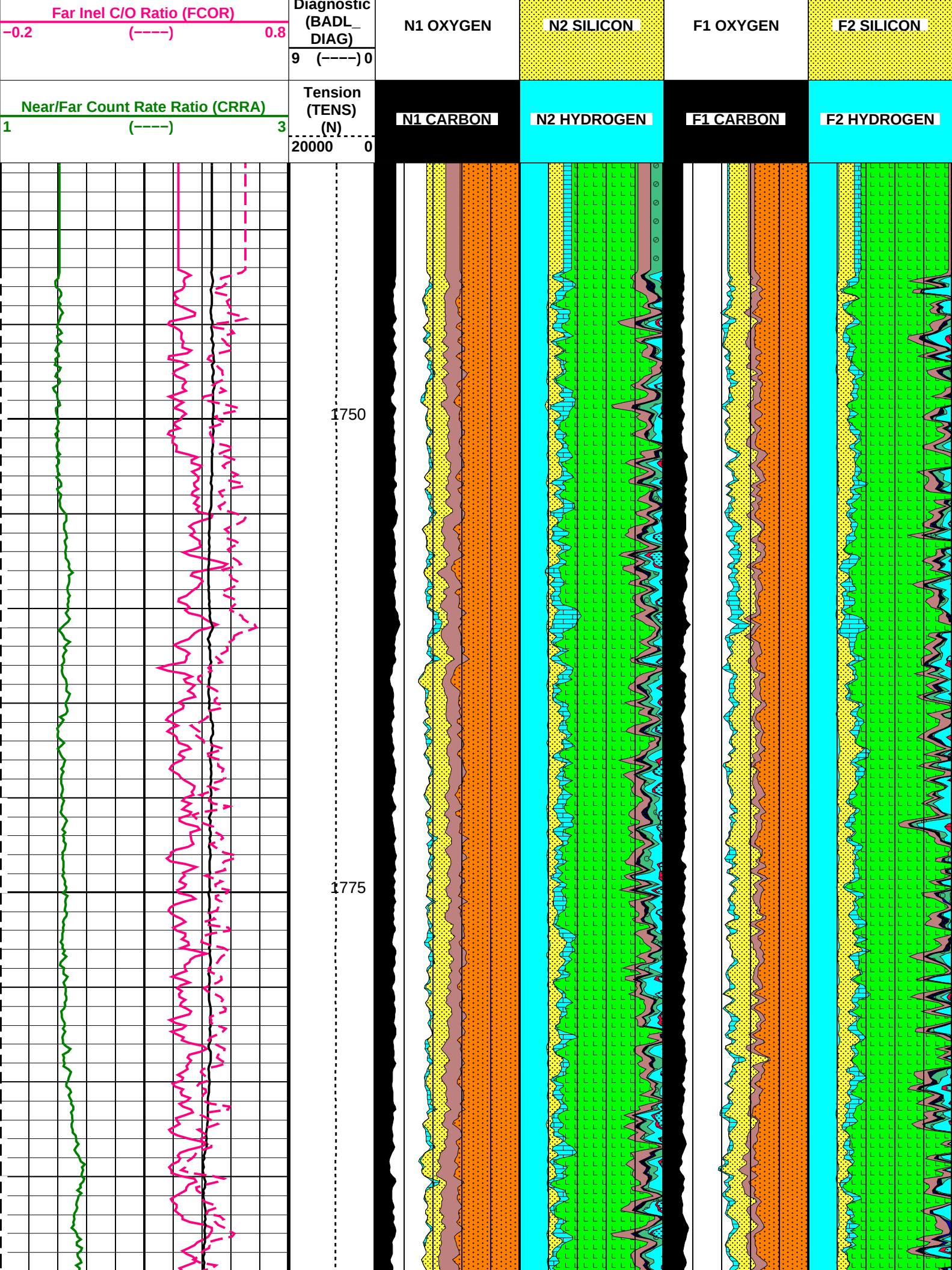
PIP SUMMARY

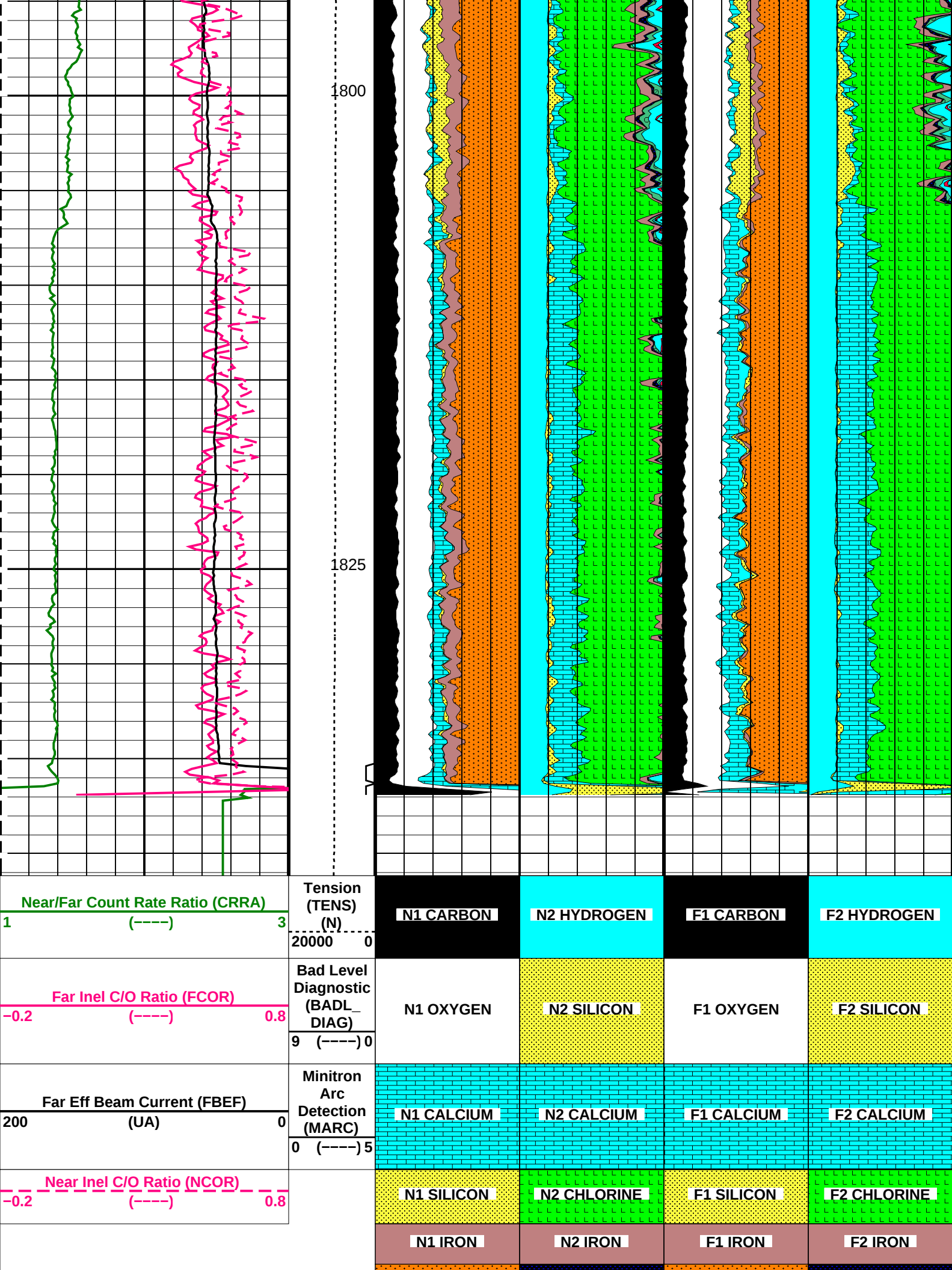










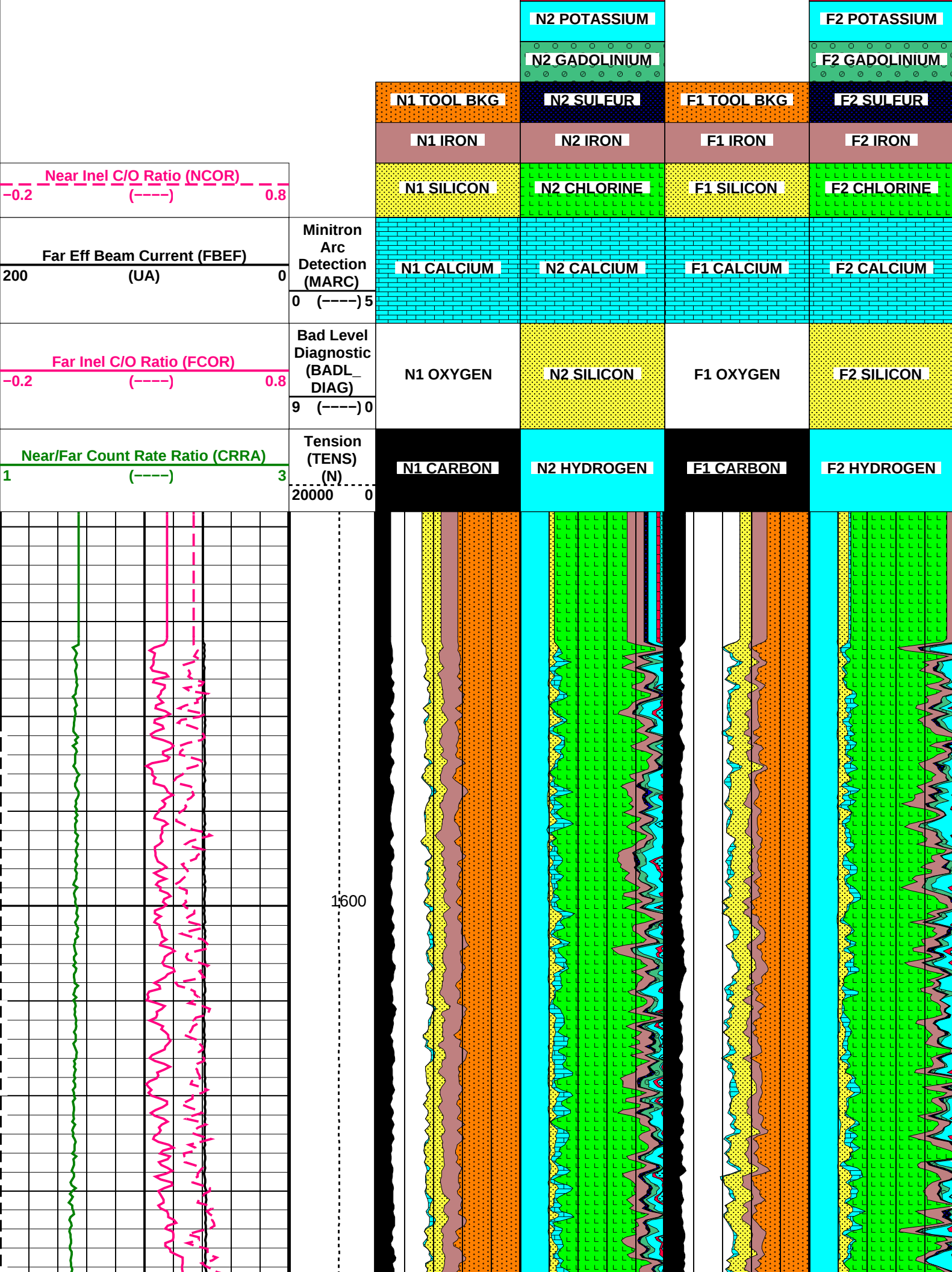


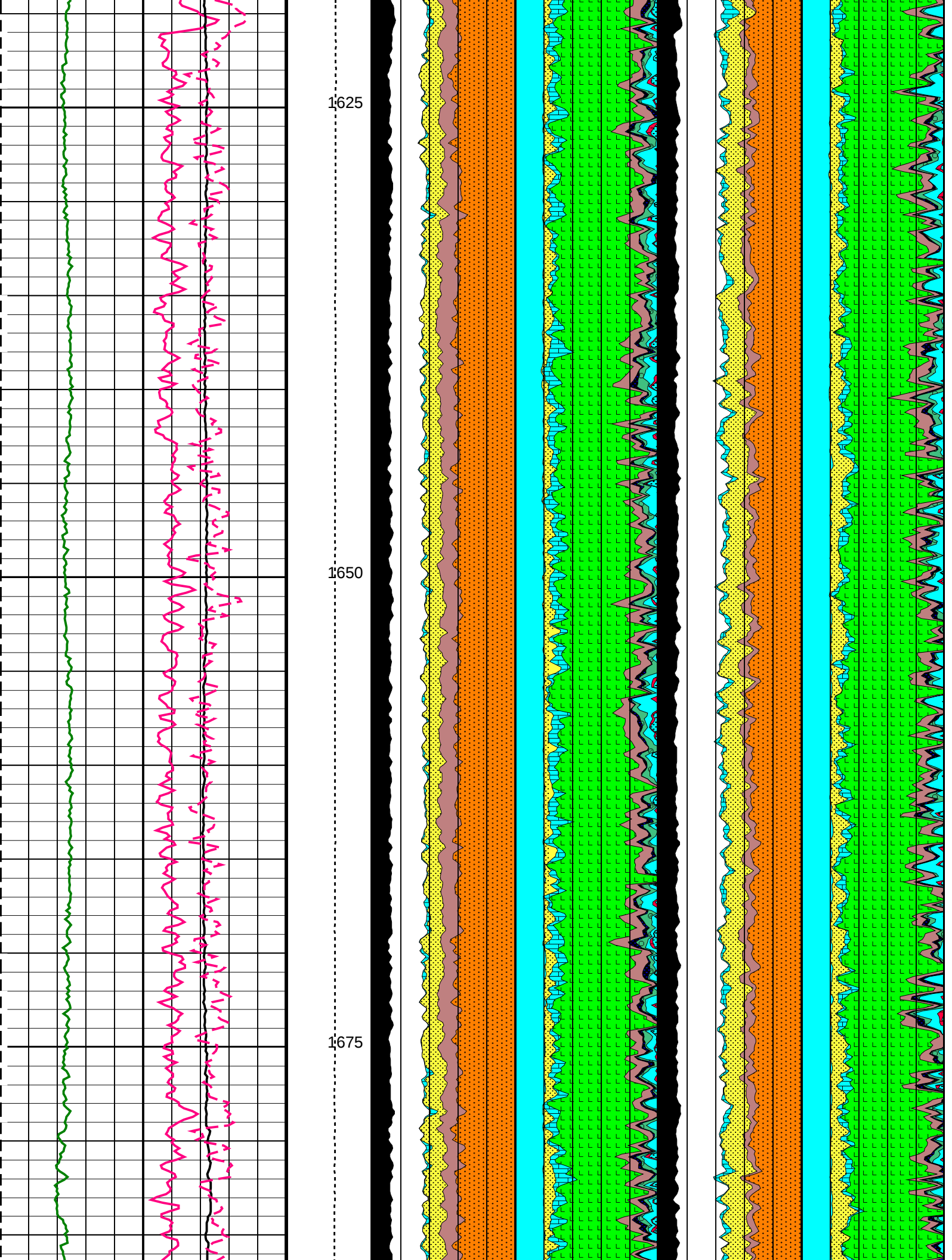
	N1 TOOL BKG	N2 SULFUR	F1 TOOL BKG	F2 SULFUR
		N2 GADOLINIUM		F2 GADOLINIUM
		N2 POTASSIUM		F2 POTASSIUM
		N2 TITANIUM		F2 TITANIUM
		N2 TOOL BKG		F2 TOOL BKG
		N2 DENSITY		F2 DENSITY
		N2 OXYGEN ACT		F2 OXYGEN ACT
		N2 MAGNESIUM		F2 MAGNESIUM

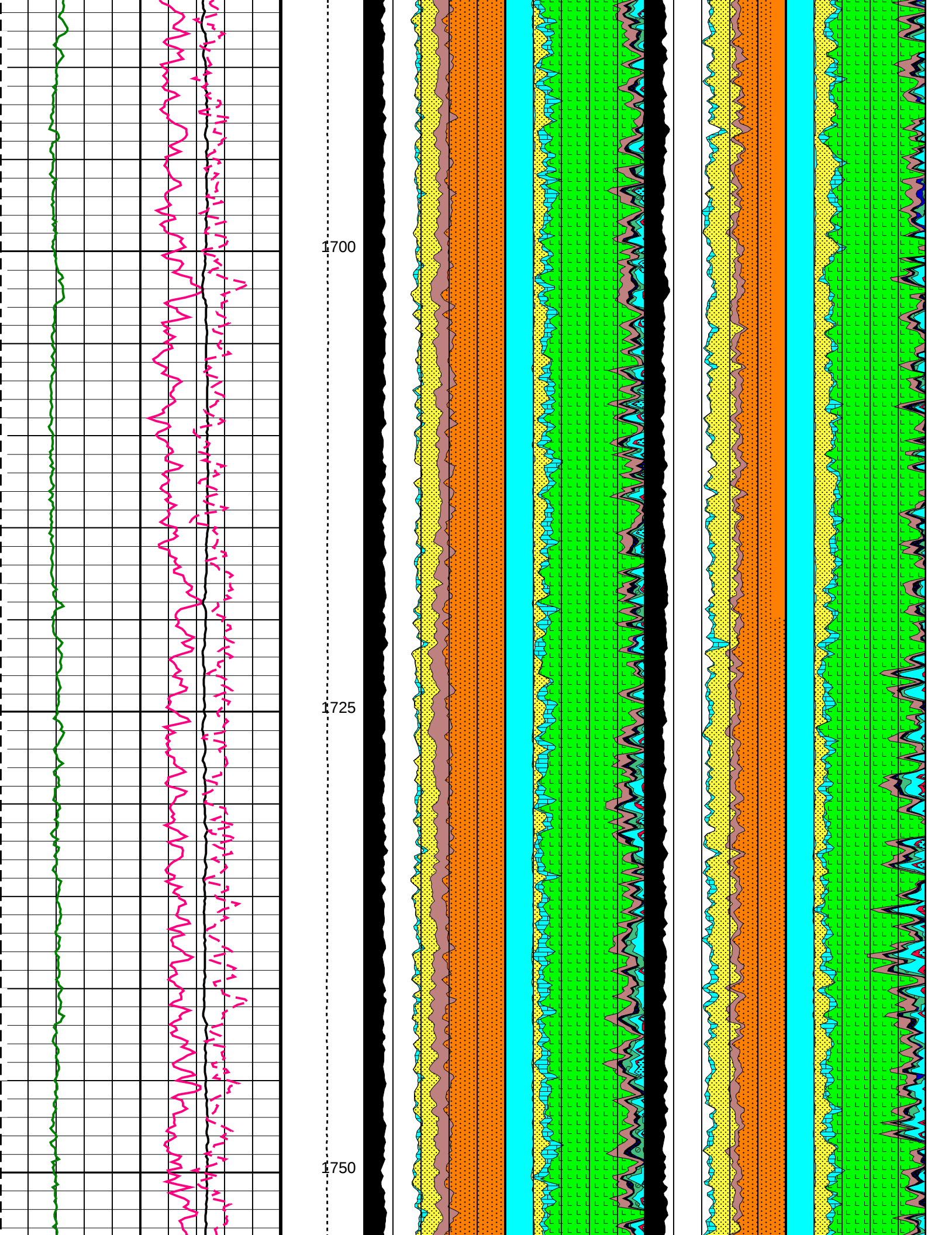
PIP SUMMARY				
Time Mark Every 60 S				
Parameters				
DLIS Name		Description		Value
RST-C: Reservoir Saturation Pro Tool C				
TIER_IC	RST IC Acquisition Mode		0_CO_Yield_and_Spectrolith	
Format: RST_YIELDS		Vertical Scale: 1:240		Graphics File Created: 17-Feb-2013 20:31
OP System Version: 19C0-187				
RST-C	SRPC-5047-H1-2011-OP19		PSPT	19C0-187
Output DLIS Files				
DEFAULT	RST_PSP_021LUP	FN:35	PRODUCER	17-Feb-2013 20:31
RTB	RST_PSP_021LUP	FN:36	PRODUCER	17-Feb-2013 20:31

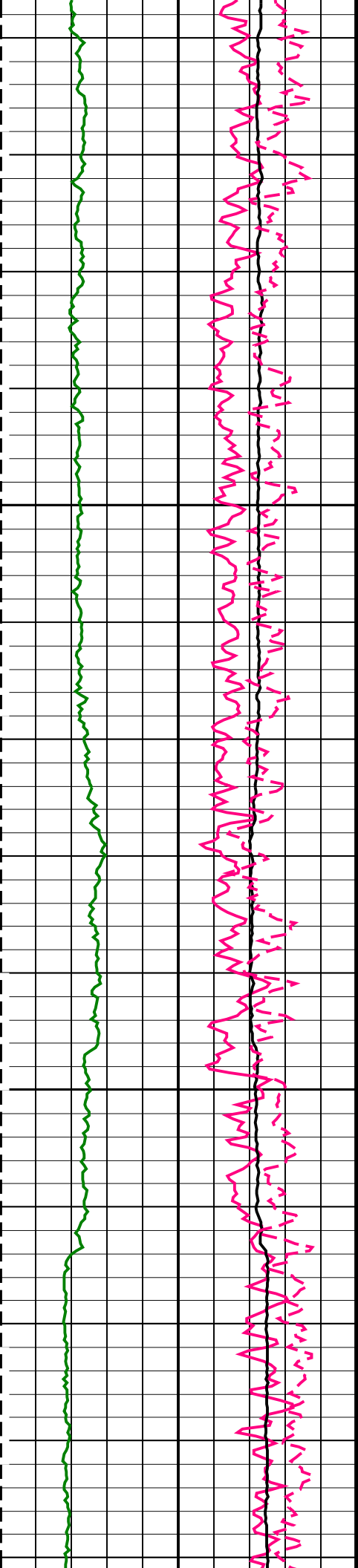
Company: CONOCOPHILLIPS CANADA RESOURCES CORP.				Well: COPRC LOON CREEK O-6		
Input DLIS Files						
DEFAULT	RST_PSP_029LUP	FN:44	PRODUCER	18-Feb-2013 02:35	1829.3 M	1584.8 M
Output DLIS Files						
DEFAULT	RST_PSP_035PUP	FN:51	PRODUCER	18-Feb-2013 12:49	1829.1 M	1579.2 M
RTB	RST_PSP_035PUP	FN:52	PRODUCER	18-Feb-2013 12:51	1829.1 M	1579.2 M
OP System Version: 19C0-187						
RST-C	SRPC-5047-H1-2011-OP19		PSPT	19C0-187		

PIP SUMMARY						
Time Mark Every 60 S						
		N2 MAGNESIUM			F2 MAGNESIUM	
		N2 OXYGEN ACT			F2 OXYGEN ACT	
		N2 DENSITY			F2 DENSITY	
		N2 TOOL BKG			F2 TOOL BKG	
		N2 TITANIUM			F2 TITANIUM	



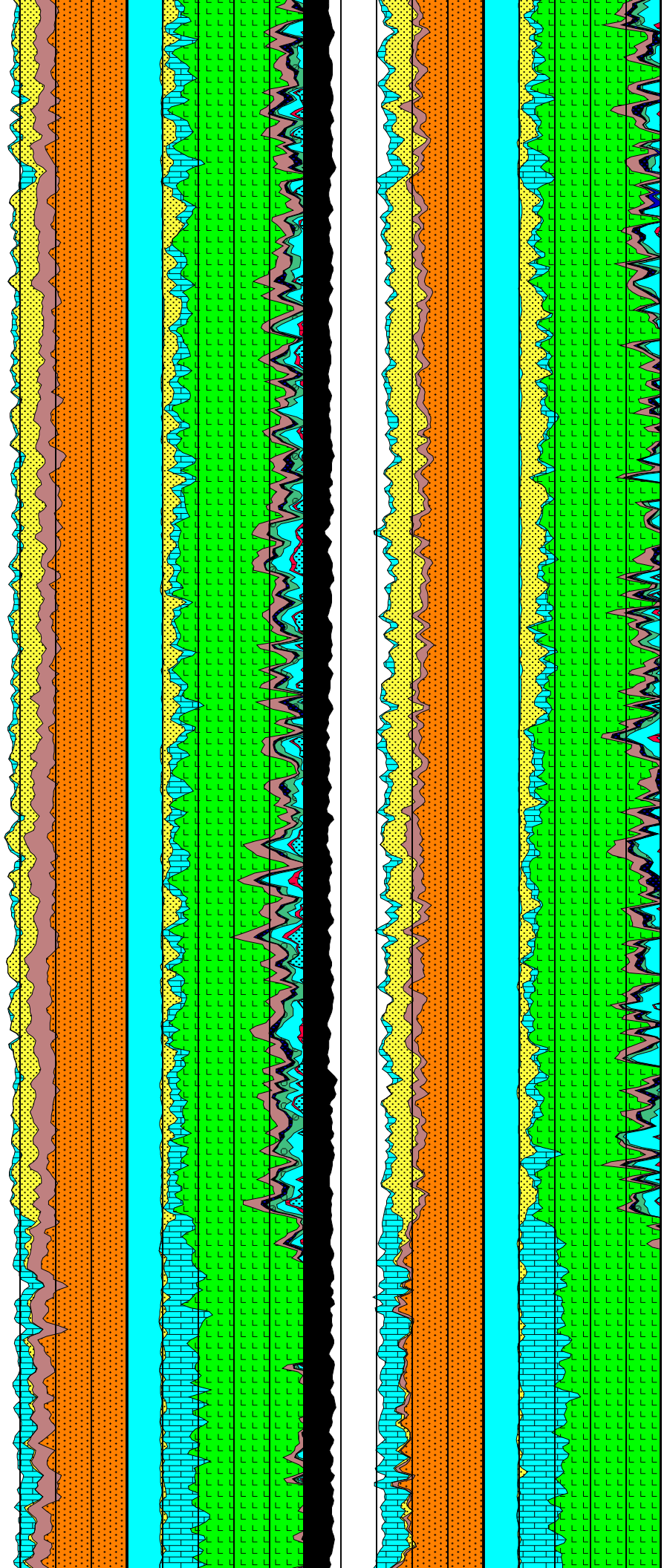


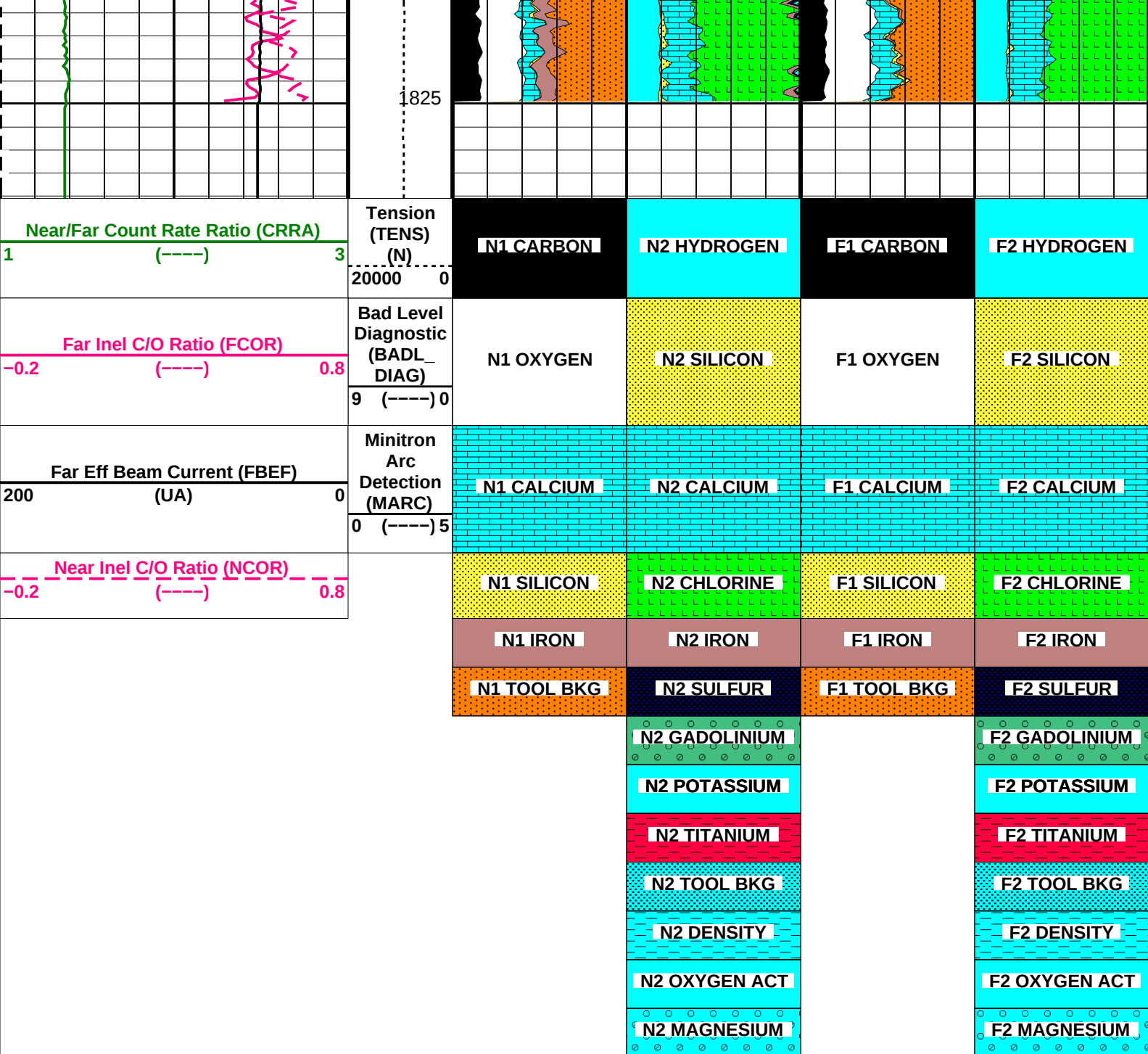




1775

1800





PIP SUMMARY

Time Mark Every 60 S

Parameters

DLIS Name	Description	Value
RST-C: Reservoir Saturation Pro Tool C		
TIER_IC	RST IC Acquisition Mode	0_CO_Yield_and_Spectrolith
DO	System and Miscellaneous	
PP	Depth Offset for Playback	-0.1 M
	Playback Processing	NORMAL

Format: RST_YIELDS Vertical Scale: 1:240

Graphics File Created: 18-Feb-2013 12:49

OP System Version: 19C0-187

RST-C SRPC-5047-H1-2011-OP19 PSPT 19C0-187

Input DLIS Files

DEFAULT RST PSP 029LUP FN:44 PRODUCER 18-Feb-2013 02:35 1829.3 M 1584.8 M

Output DLIS Files

DEFAULT	RST_PSP_035PUP	FN:51	PRODUCER	18-Feb-2013 12:49
RTB	RST_PSP_035PUP	FN:52	PRODUCER	18-Feb-2013 12:51

Company: CONOCOPHILLIPS CANADA RESOURCES CORP.

Well: COPRC LOON CREEK O-6

Input DLIS Files

DEFAULT	RST_PSP_031LUP	FN:46	PRODUCER	18-Feb-2013 07:04	1843.1 M	1584.0 M
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Output DLIS Files

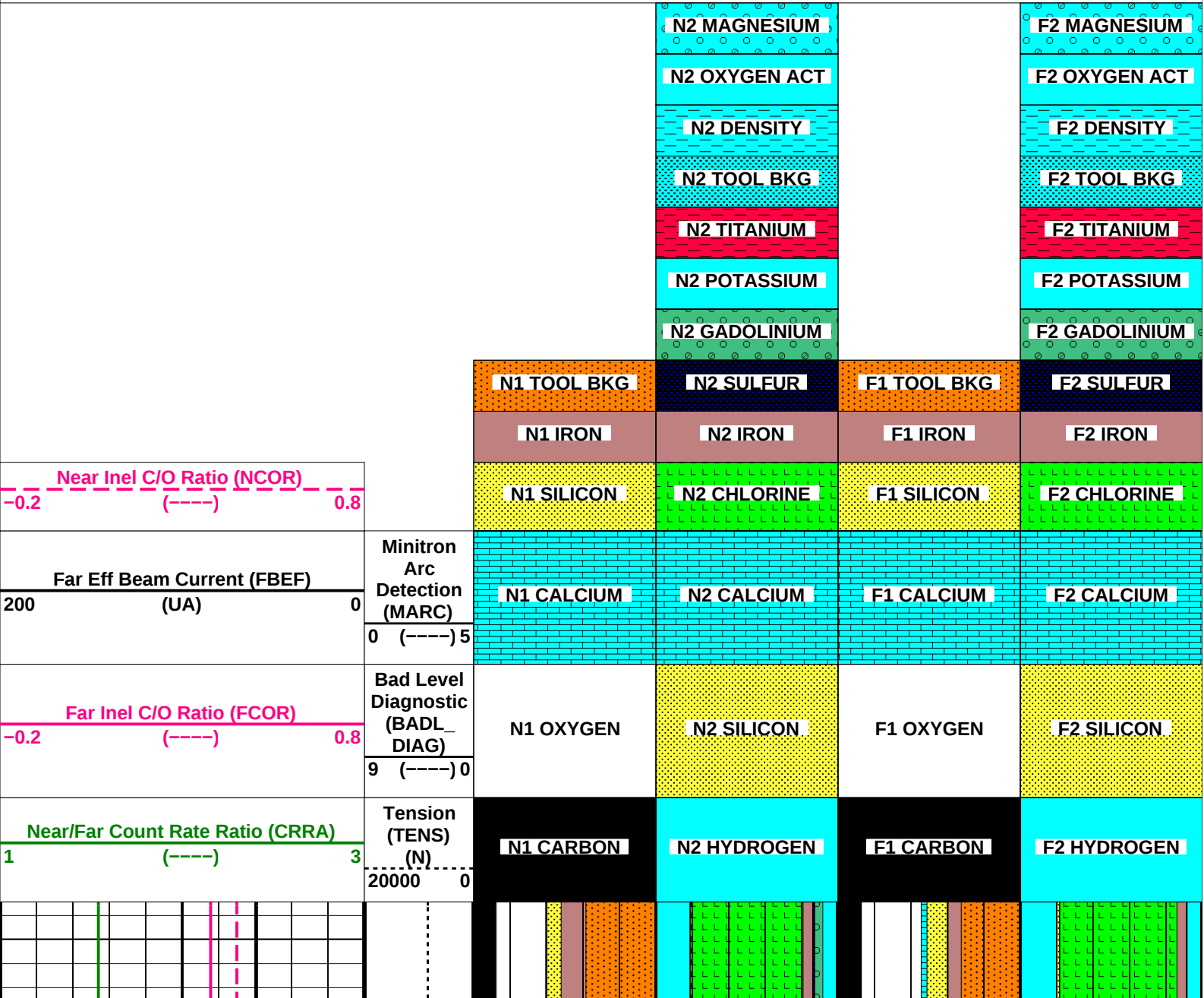
DEFAULT	RST_PSP_036PUP	FN:53	PRODUCER	18-Feb-2013 12:50	1843.0 M	1578.4 M
RTB	RST_PSP_036PUP	FN:54	PRODUCER	18-Feb-2013 12:52	1843.0 M	1578.4 M

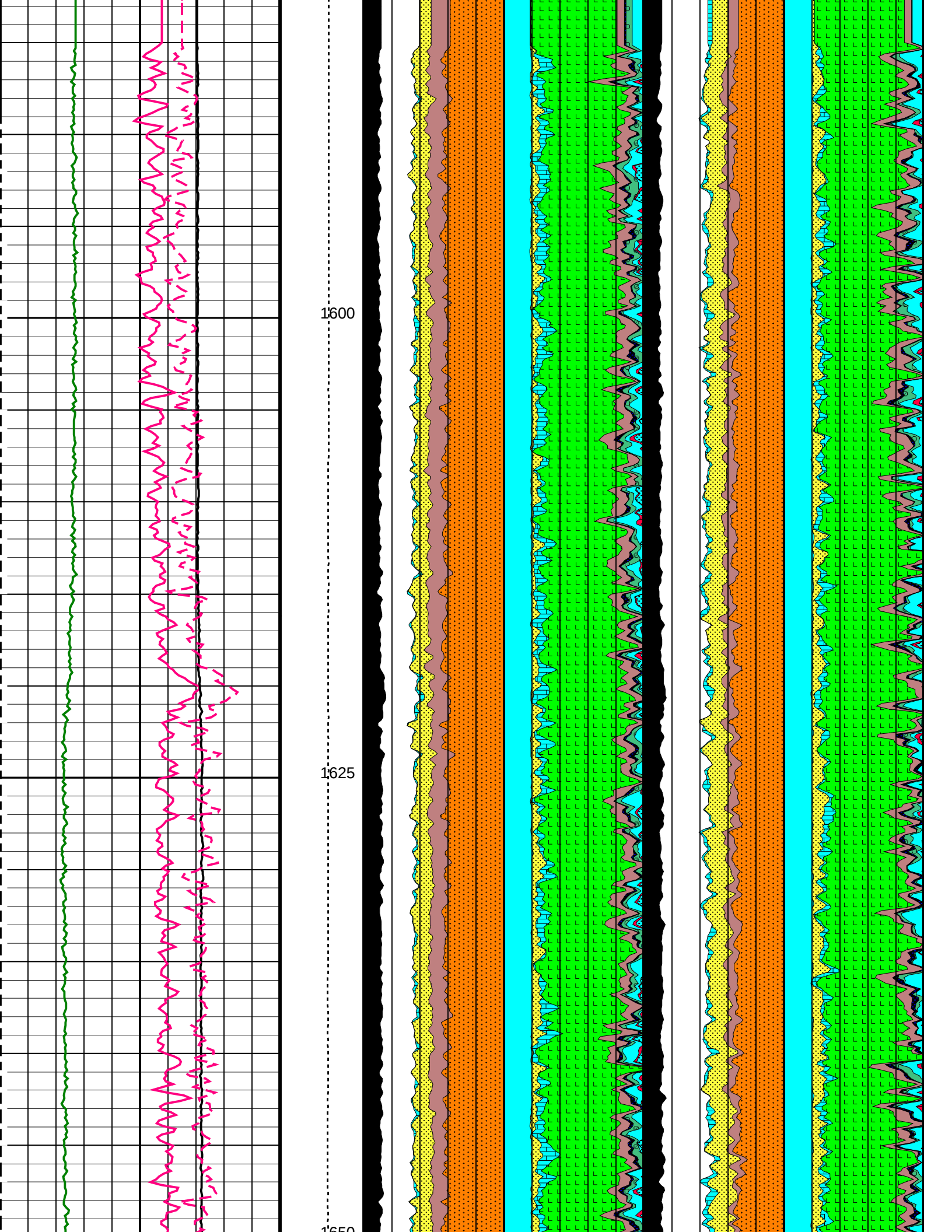
OP System Version: 19C0-187

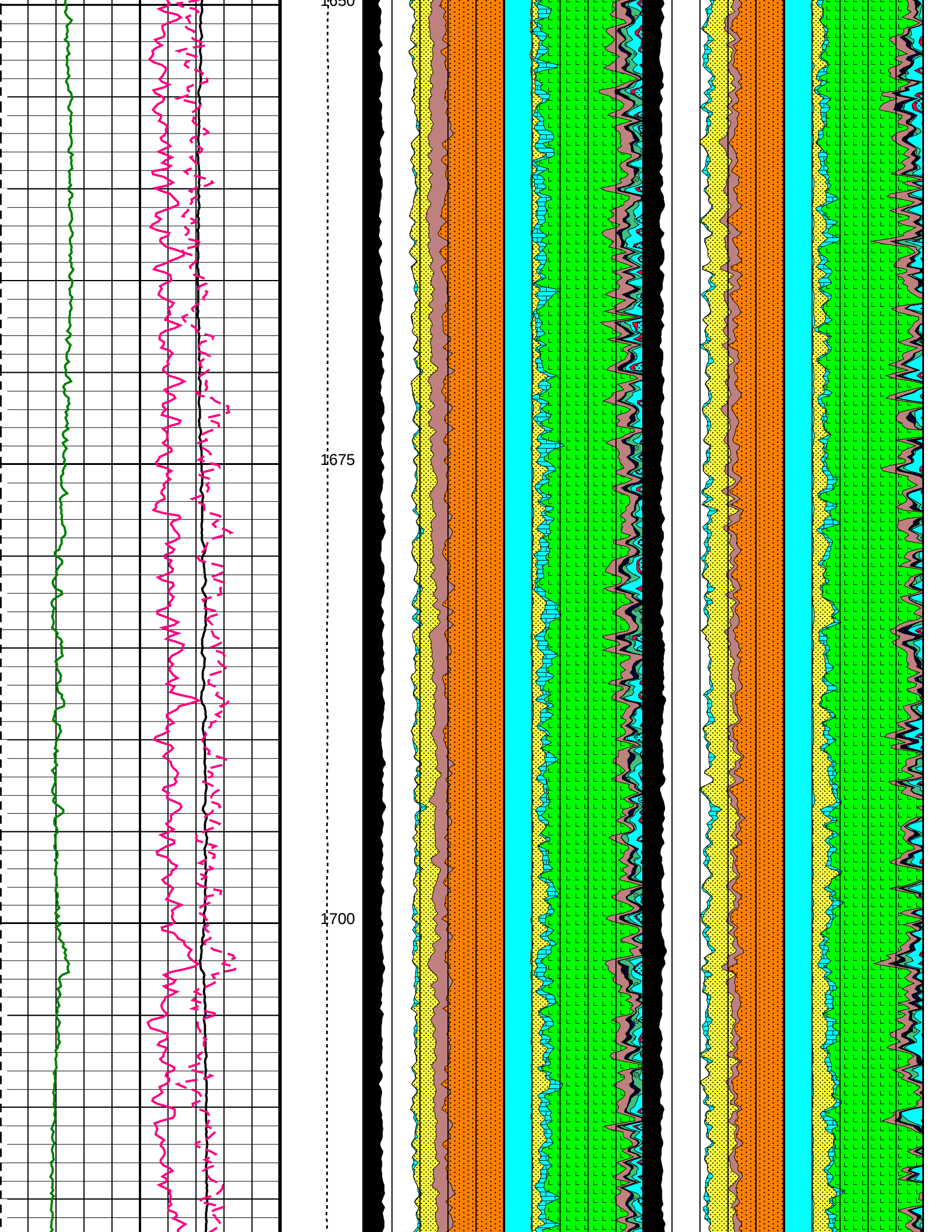
RST-C	SRPC-5047-H1-2011-OP19	PSPT	19C0-187
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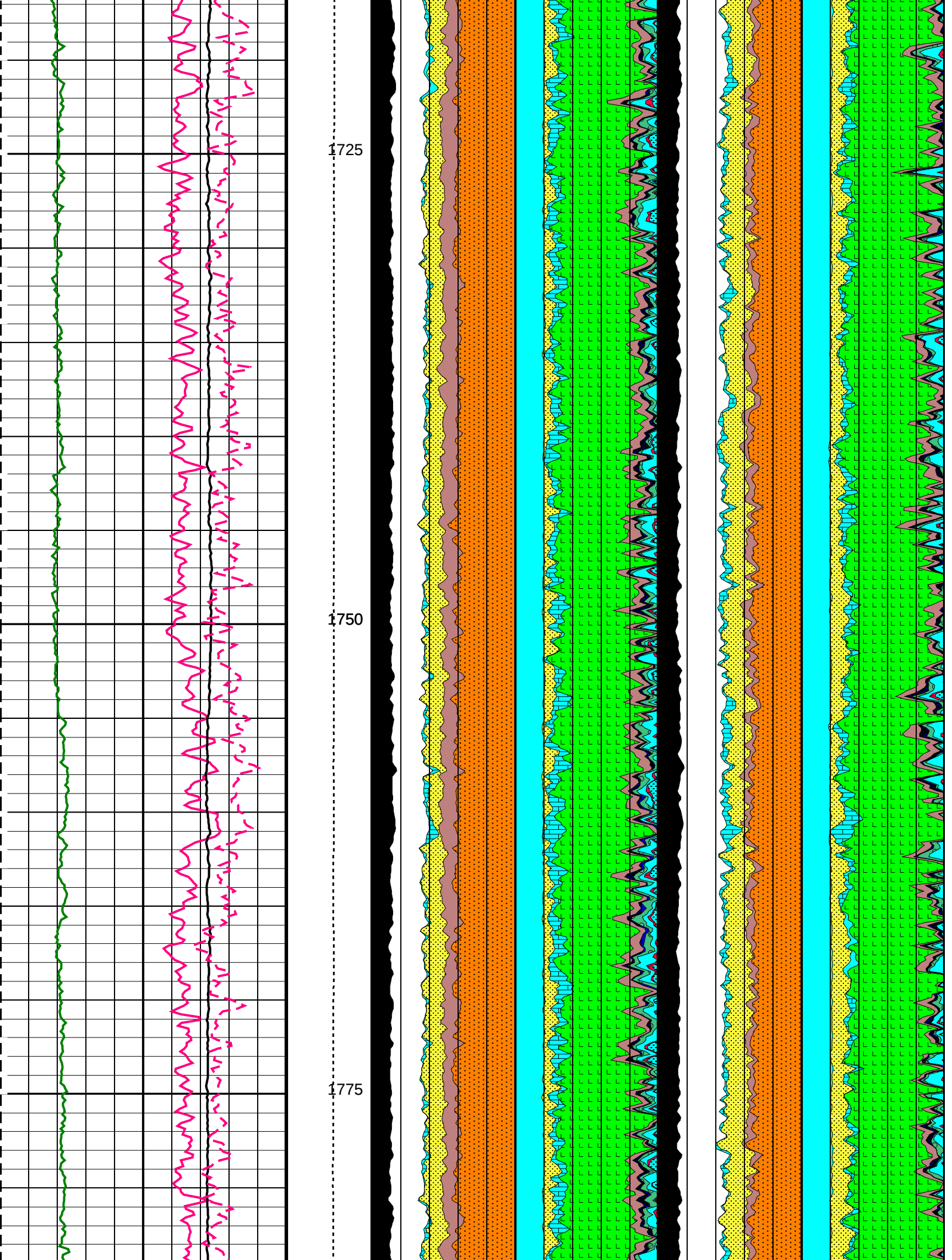
PIP SUMMARY

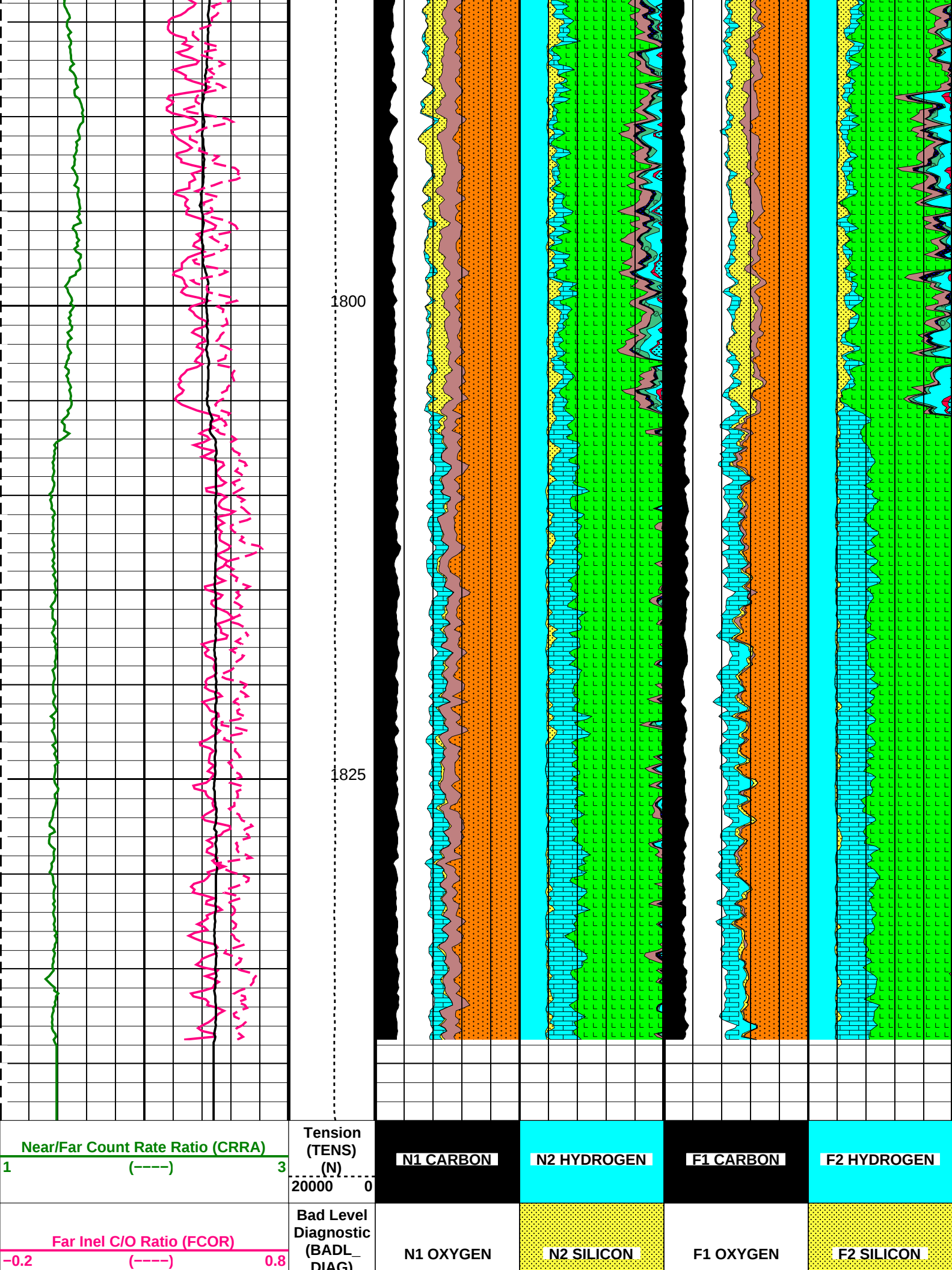
Time Mark Every 60 S











Near/Far Count Rate Ratio (CRRA)

(----

Tension
(TENS)
(N)

20000 0

N1 CARBON

N2 HYDROGEN

F1 CARBON

F2 HYDROGEN

N1 OXYGEN

N2 SILICON

F1 OXYGEN

F2 SILICON

Far Inel C/O Ratio (FCOR)

(----

Bad Level
Diagnostic
(BADL_
DIAG)

-0.2

0.8

	9 (----) 0				
Far Eff Beam Current (FBEF) 200 (UA)	Minitron Arc Detection (MARC) 0 (----) 5	N1 CALCIUM	N2 CALCIUM	F1 CALCIUM	F2 CALCIUM
Near Inel C/O Ratio (NCOR) -0.2 (----) 0.8		N1 SILICON	N2 CHLORINE	F1 SILICON	F2 CHLORINE
		N1 IRON	N2 IRON	F1 IRON	F2 IRON
		N1 TOOL BKG	N2 SULFUR	F1 TOOL BKG	F2 SULFUR
			N2 GADOLINIUM		F2 GADOLINIUM
			N2 POTASSIUM		F2 POTASSIUM
			N2 TITANIUM		F2 TITANIUM
			N2 TOOL BKG		F2 TOOL BKG
			N2 DENSITY		F2 DENSITY
			N2 OXYGEN ACT		F2 OXYGEN ACT
			N2 MAGNESIUM		F2 MAGNESIUM

PIP SUMMARY					
Time Mark Every 60 S					

Parameters					
DLIS Name	Description			Value	
RST-C: Reservoir Saturation Pro Tool C					
TIER_IC	RST IC Acquisition Mode			0_CO_Yield_and_Spectrolith	
DO	System and Miscellaneous				
PP	Depth Offset for Playback			-0.2 M	
	Playback Processing			NORMAL	

Format: RST_YIELDS	Vertical Scale: 1:240	Graphics File Created: 18-Feb-2013 12:50			
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OP System Version: 19C0-187					
RST-C	SRPC-5047-H1-2011-OP19	PSPT	19C0-187		

Input DLIS Files						
DEFAULT	RST_PSP_031LUP	FN:46	PRODUCER	18-Feb-2013 07:04	1843.1 M	1584.0 M
Output DLIS Files						
DEFAULT	RST_PSP_036PUP	FN:53	PRODUCER	18-Feb-2013 12:50		
RTB	RST_PSP_036PUP	FN:54	PRODUCER	18-Feb-2013 12:52		

Company:	CONOCOPHILLIPS CANADA RESOURCES CORP.	Schlumberger			
Well:	COPRC LOON CREEK O-6				
Field:	LOON CREEK				
Province:	Northwest Territories				
	Vertical Well				

RESERVOIR SATURATION LOG
SIGMA / CARBON OXYGEN



W011313536247000



GEOFRAME
PROCESSED
INTERPRETATION

Analysis Behind Casing

RST-C Spectrolith

*A Mark of Schlumberger

Using the following logs:

COMPANY: CONOCOPHILLIPS CANADA RESOURCES CORP.
WELL: COPRC LOON CREEK O-6
FIELD: LOON CREEK
Province: NORTHWEST TERRITORIES
COUNTRY: CANADA
Date Logged: 17-Feb-2013 Date Processed: 5-March-2013
Well Location: UNIT 0 SECTION 6
3000066510127000
Elevations: KB: 257.6m DF: 257.3m GL: 252.4m
API Number: EL470 Job Number: CA5M-00021

FOLD HERE The well name, location and borehole reference data were furnished by the customer.

Any interpretation, research, analysis, data, results, estimates, or recommendation furnished with the services or otherwise communicated by Schlumberger to the customer at any time in connection with the services are opinions based on inferences from measurements, empirical relationships, and/or assumptions; which, inferences, empirical relationships and/or assumptions are not infallible and with respect to which professionals in the industry may differ. Accordingly, Schlumberger cannot and does not warrant the accuracy, correctness, or completeness of any such interpretation, research, analysis, data, results, estimates, or recommendation. The customer acknowledges that it is accepting the services of any kind or description in respect thereto, and that such services are delivered with the explicit understanding and agreement that any action taken based on the services received shall be at its own risk and responsibility, and no claim shall be made against Schlumberger as a consequence thereof.

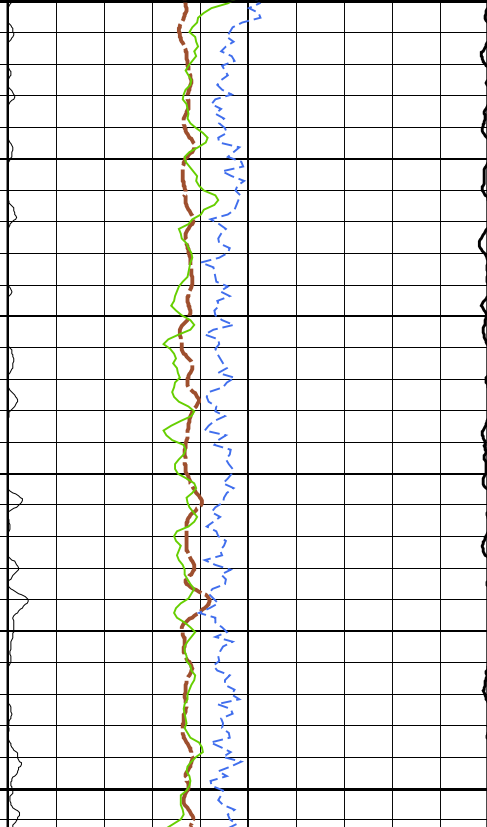
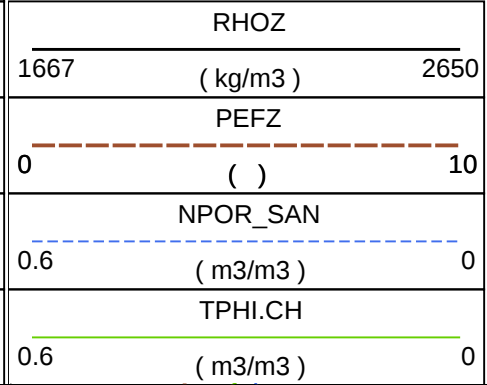
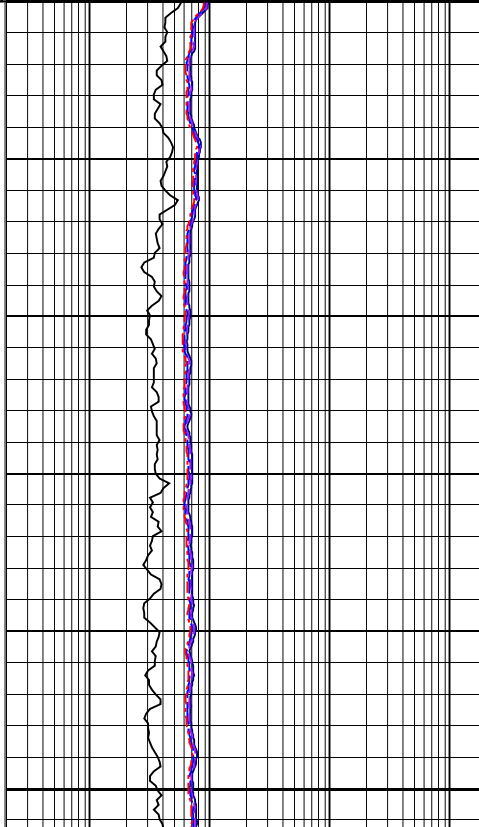
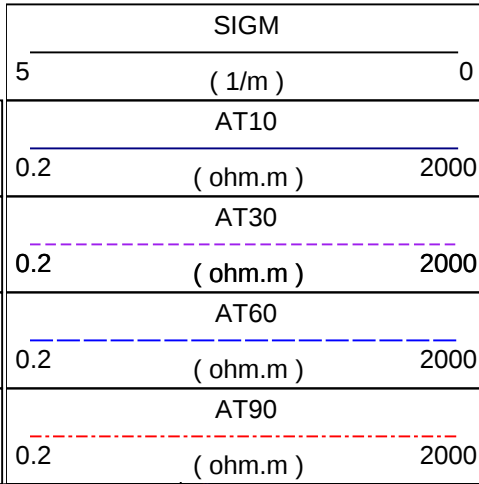
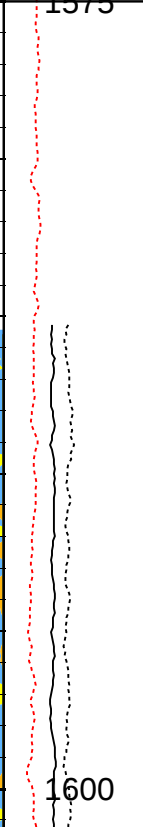
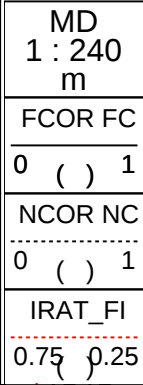
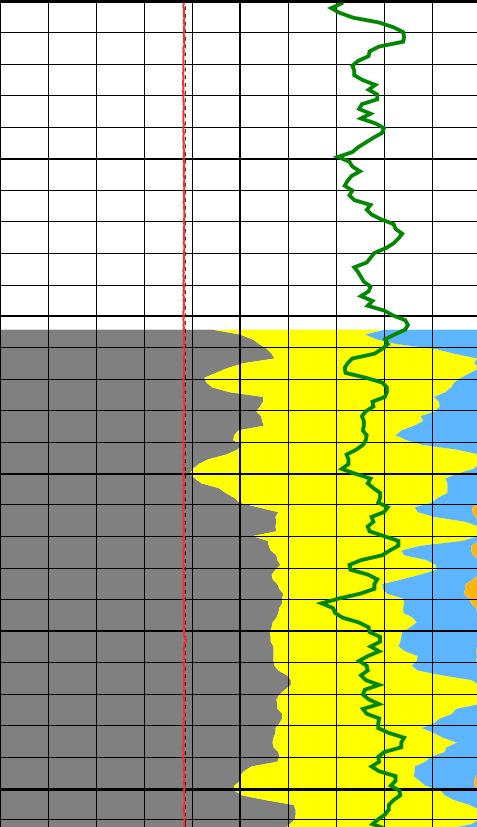
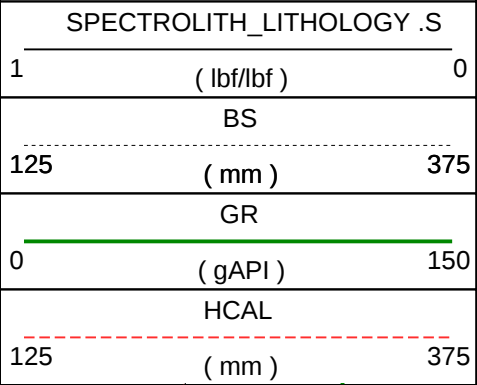
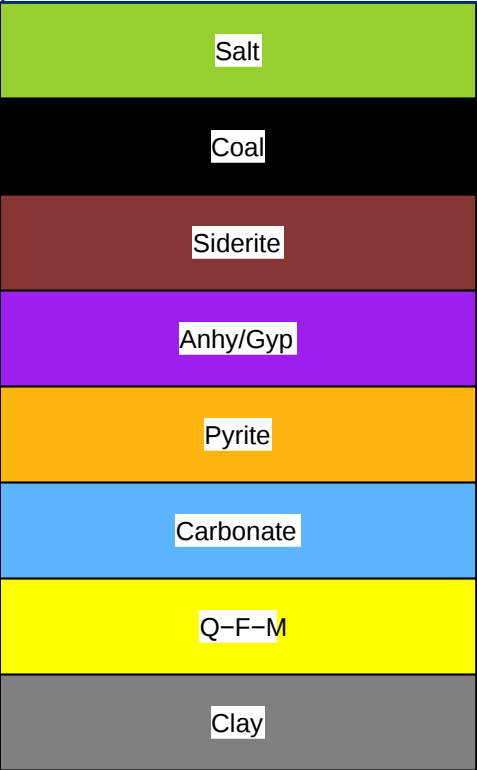
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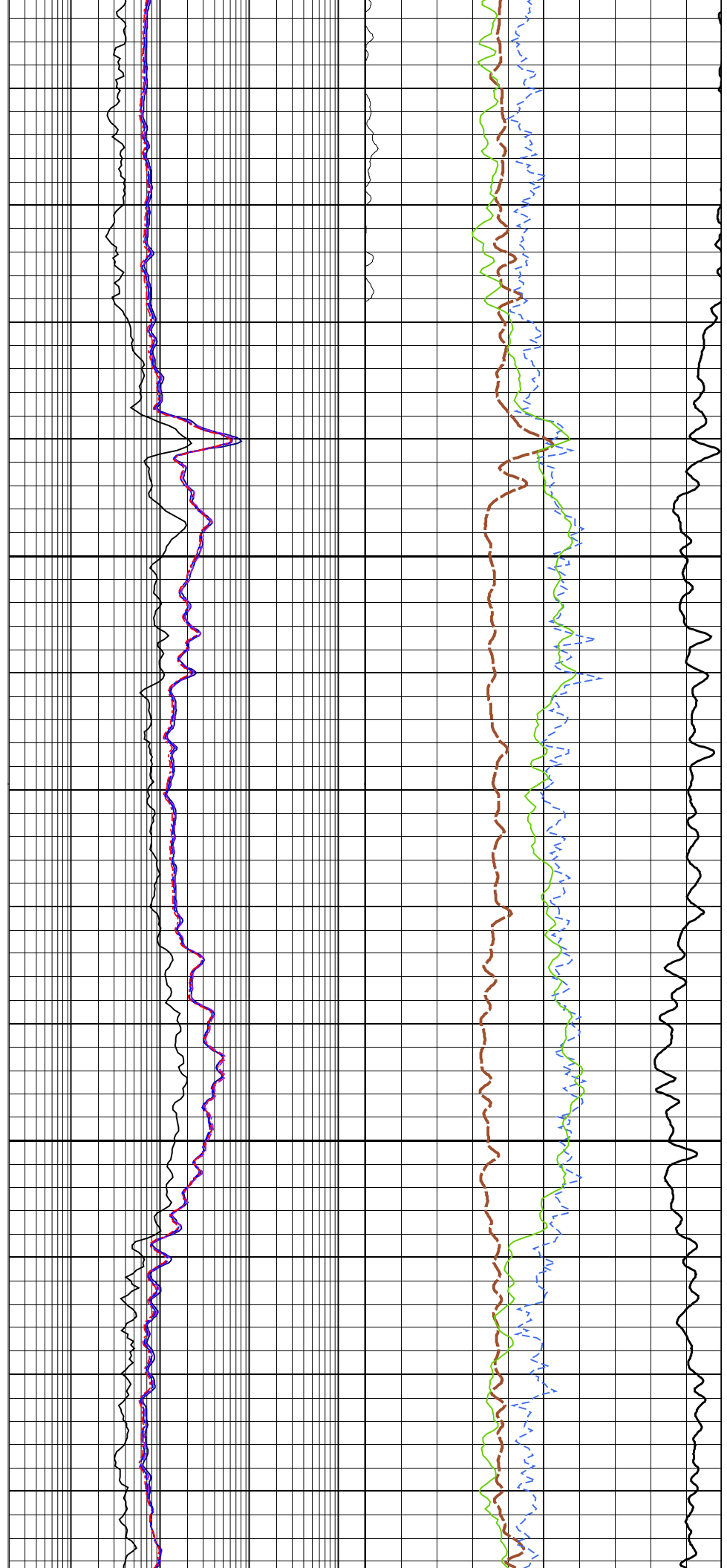
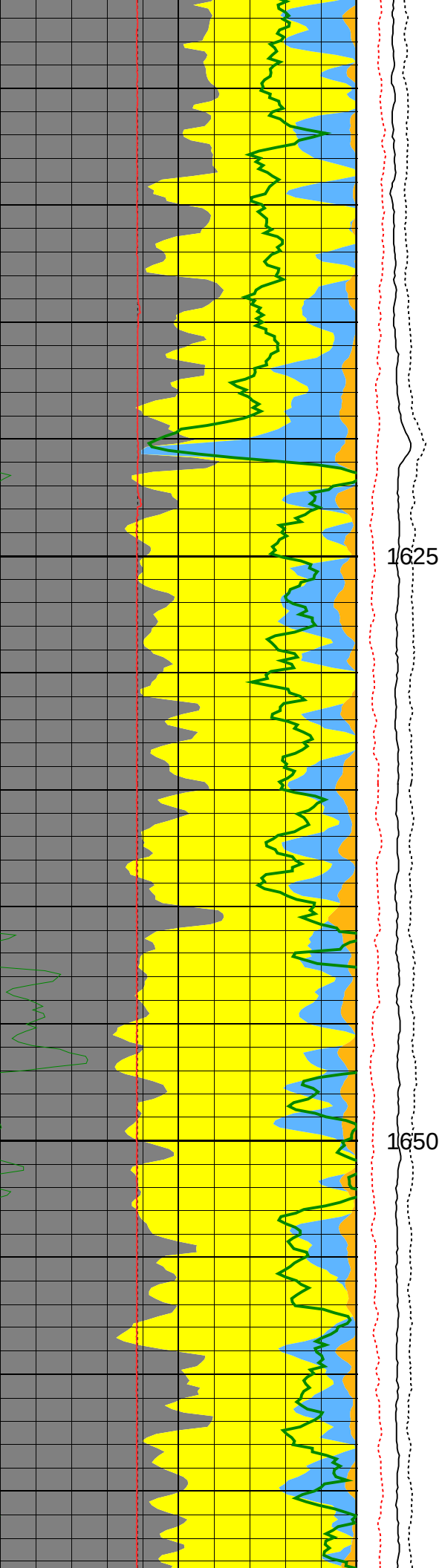
Field Recording:	Location: GRANDE PRAIRIE	Software Version: 20C0-999	Engineer: JEFFREY TATLOCK
Office Recording:	ICS Center: DCS Calgary	Baseline: GF 4.5	Log Analyst: Mirhasanov

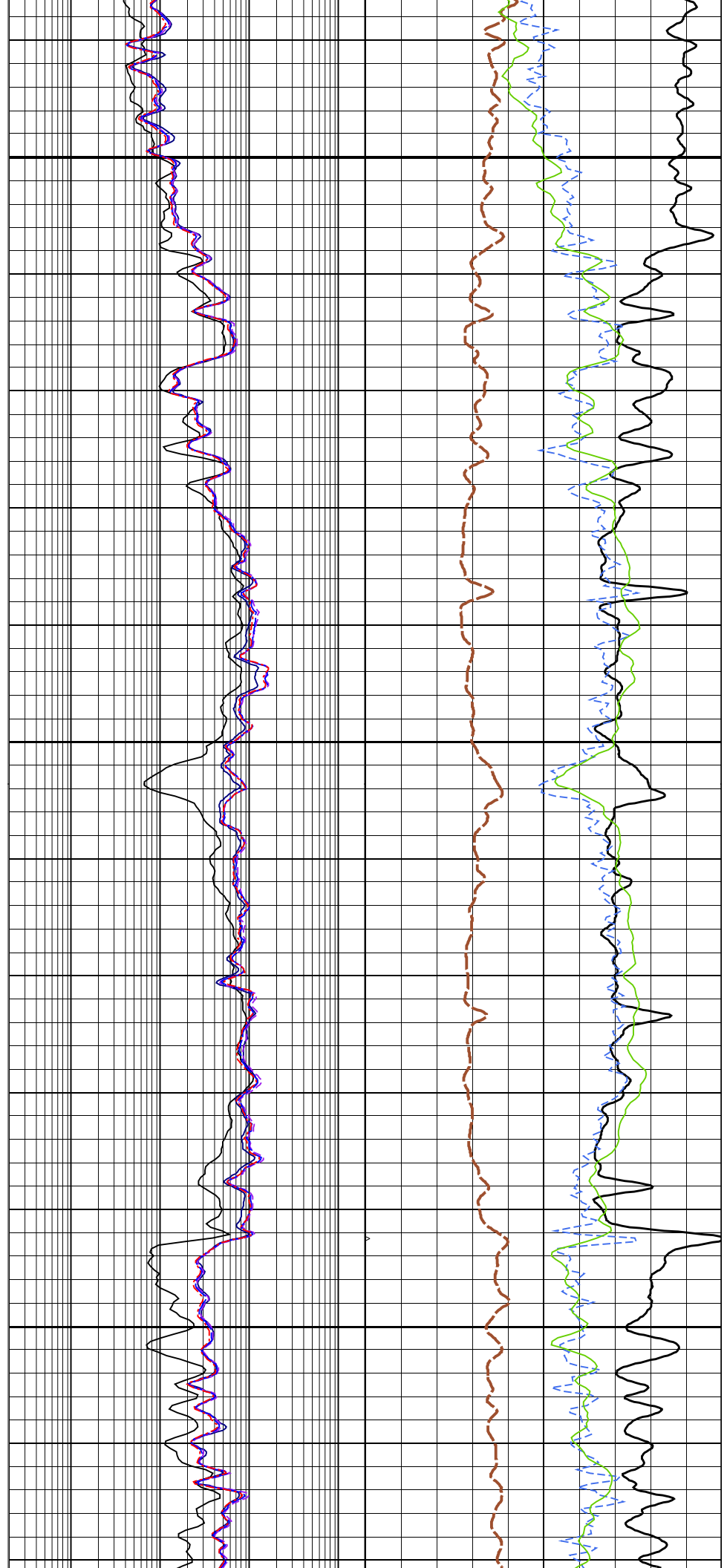
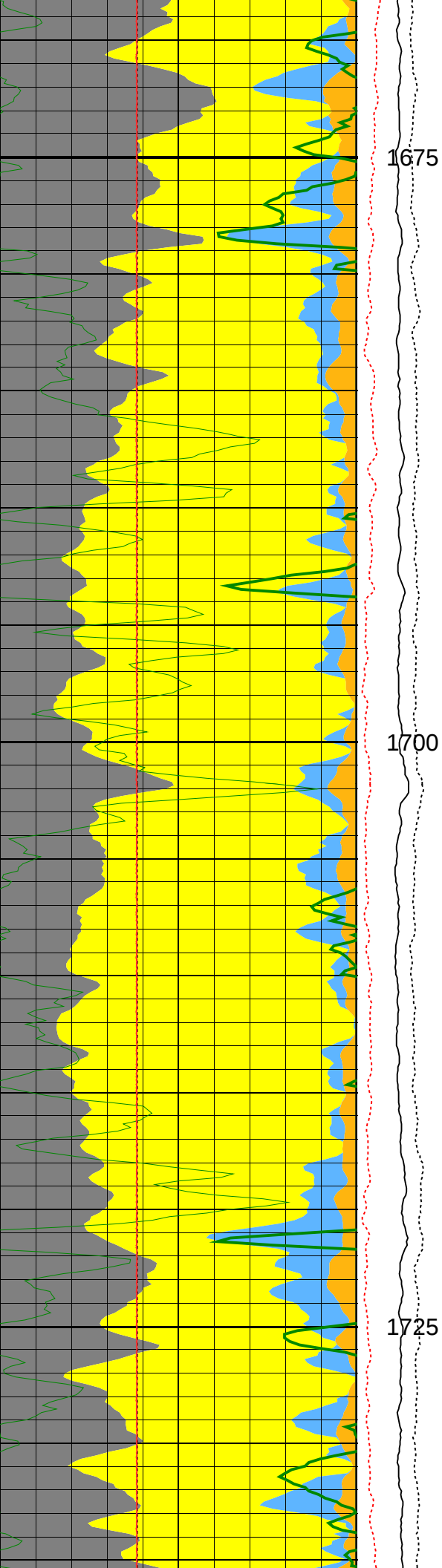
Mud and Borehole Measurements:

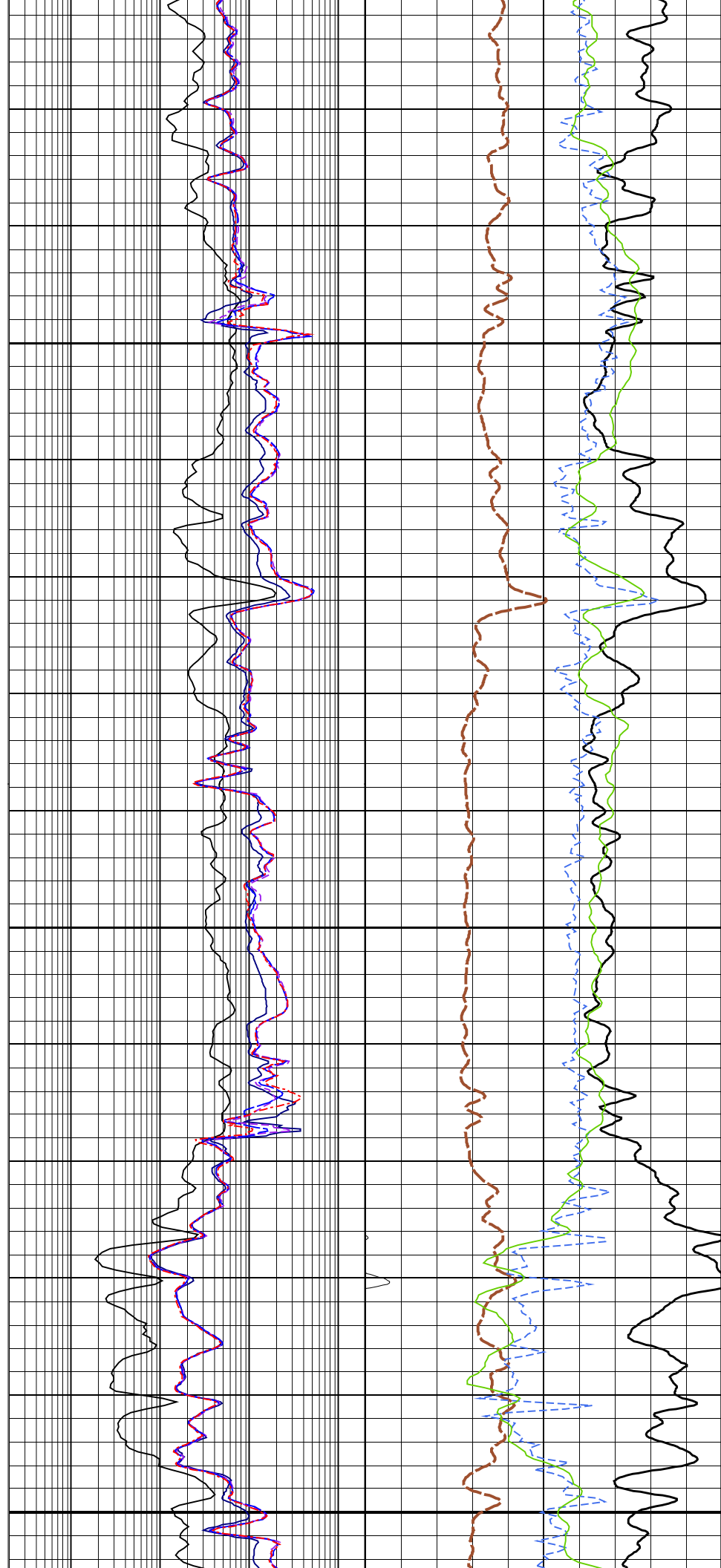
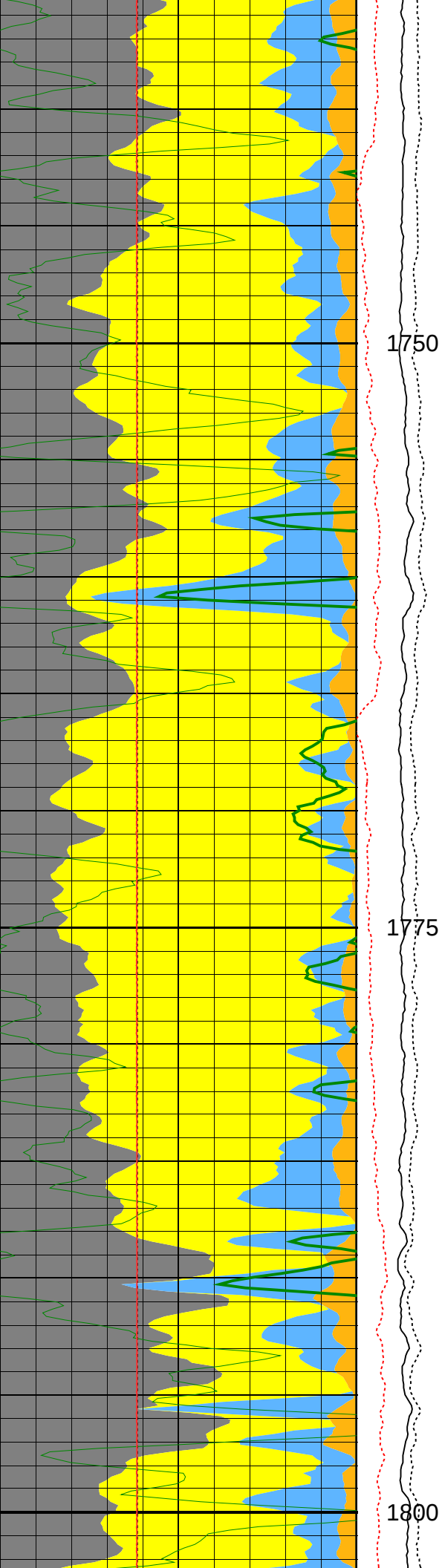
Rm @ Measured Temperature: 500ohm.m @ 20degC	BHT: 66.2degC	Bitsize: 222mm
Rmf @ Measured Temperature: 375ohm.m @ 20degC	Type Fluid in Hole:	INVERT
Rmc @ Measured Temperature: @ 20degC	Mud Density: 945kg/m3	

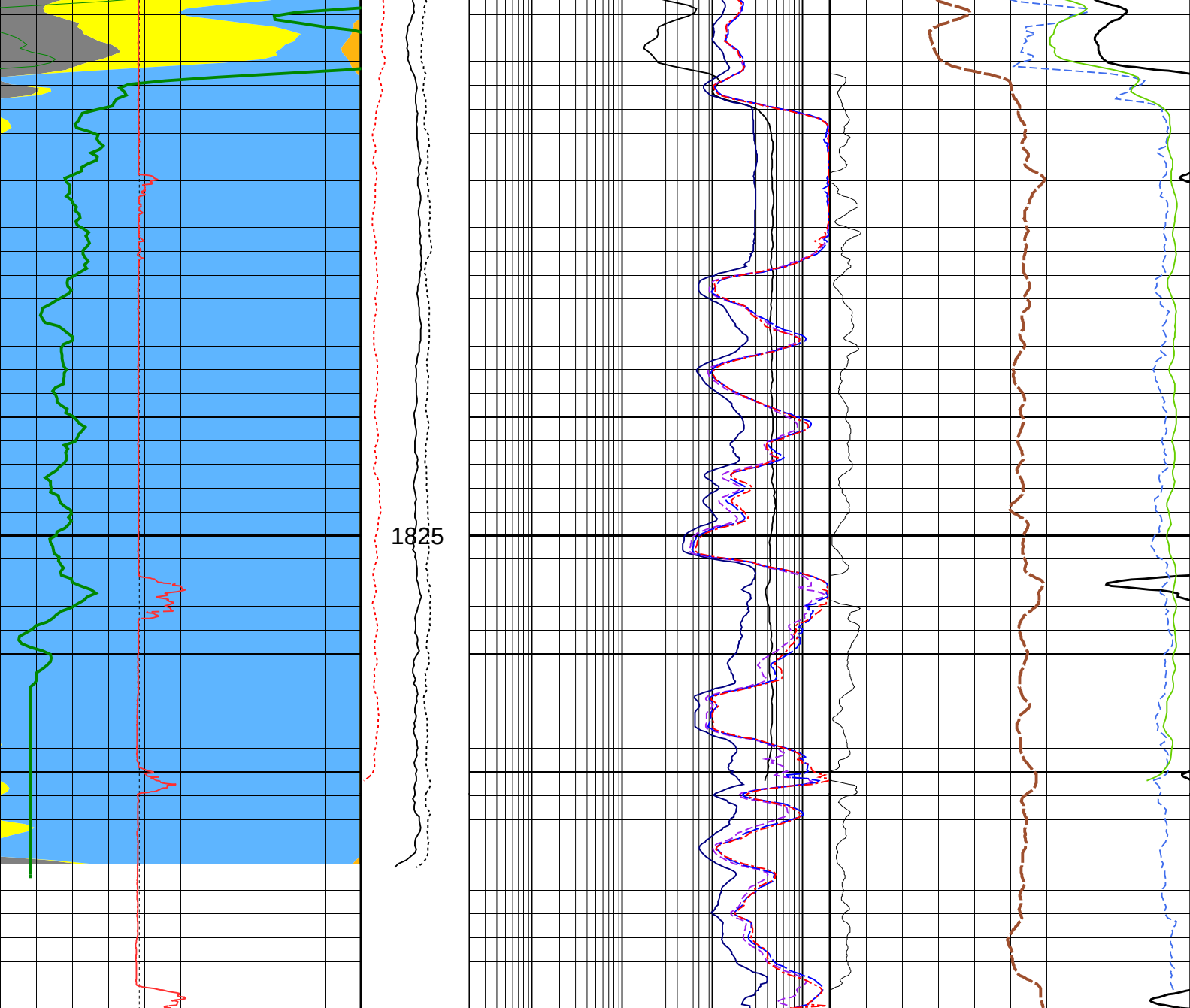
Remarks:











HCAL (mm) 125375	IRAT_FI 0.750.25	AT90 (ohm.m) 0.22000	TPHI.CH (m3/m3) 0.60
GR (gAPI) 0150	NCOR NC 0 () 1	AT60 (ohm.m) 0.22000	NPOR_SAN (m3/m3) 0.60
BS (mm) 125375	FCOR FC 0 () 1	AT30 (ohm.m) 0.22000	PEFZ () 010
Salt	MD 1 : 240 m	AT10 (ohm.m) 0.22000	RHOZ (kg/m3) 16672650
Coal		SIGM (1/m) 50	
Siderite			
Anhy/Gyp			
Pyrite			

Carbonate
Q-F-M
Clay
SPECTROLITH_LITHOLOGY .S
1 (lbf/lbf) 0

Company:	CONOCOPHILLIPS CANADA RESOURCES CORP.		
Well:	COPRC LOON CREEK O-6		
FIELD:	LOON CREEK		
Province:	NORTHWEST TERRITORIES		
Date Logged:	17-Feb-2013	Date Processed:	5-March-2013
Well Location:	UNIT 0 SECTION 6 300O066510127000		
Elevations:	KB: 257.6m	DF: 257.3m	GL: 252.4m
API Number:	EL470	Job Number:	CA5M-00021

