Paramount resources

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TRANSMITTAL

Date: November 15, 2005

NATIONAL ENERGY BOARD
5th Floor, 444 – 7th Avenue SW
Calgary, Alberta
T2P 0X8

Attention: Bharat Dixit

Description of Data

Please find enclosed:

Para et al Liard K-29A
Geological Report Sidetrack Intermediate Hole -2

Received by:_____ **Date:**_____

Remarks:_____

Please acknowledge receipt of the above information by signing and returning this form to the attention of April McNeill.

Fax: (403) 266-6032

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Kickoff on Aug 25, 2005 at 5:00 hours. Reach 2520.62 m (MD) on Sept 1, 2005 at 2:30 hours.
Drill string stuck in hole at 2520.62 m, worked at getting unstuck until Sept 6, 2005.
Run abondonment plug from 2435 to 2290 m on Sept 7, 2005.
Begin drilling sidetrack well on Sept 8, 2005.
Successful sidetrack kickoff on Sept 13, 2005.
Reach intermediate casing point on Sept 20, 2005.
Finish logging intermediate hole on Sept 22, 2005 @ 13:45 hours.

Well Summary

Storage Units: Metric

Well Information

Operator:	**Paramount Resources Ltd.**
Well Name:	**Paramount et al Liard K-29A sidetrack**
Location:	**K-29A intermediate hole**
UWI:	300k296030123303
Pool:	N/A
Field:	Liard K-29
State / Province:	Northwest Territories
Country:	Canada
License Number:	1125
Well Status:	**Intermediate Casing Point reached**

Surface Co-ordinates

Hole Type: Deviated **Fault Indicator:**

Latitude: 60 28 41.040 **Longitude:** 123 35 4.100

N / S: 6704591.45
E / W: 467870.02

Bottom Hole Co-ordinates

Latitude: **Longitude:**

N / S:
E / W:

Elevations

Reference:	Ground		
Ground Elevation:	409.60	**Kelly Bushing to Ground:**	6.80
Kelly Bushing Elevation:	416.40	**Cut (-):**	
Casing Flange Elevation:		**Fill (+):**	

Total Depth

	Measured Depth	True Vertical Depth
Total Depth Driller (Tally) :	2,566.00	2,465.17
Total Depth Driller (Strap or SLM):		
Total Depth Logger:	2,568.00	2,466.50

Miscellaneous Depths

Plugback Depth:	2,435.00	**Water Depth Reference:**	
Sidetrack Depth:	2,290.00	**Water Depth:**	

Well Summary

Drilling Contractor:	Akita Drilling Rig #58	**Spud Date:**	Aug 25, 2005 @ 05:00
Rig Release Date:		**Total Depth Date:**	Sep 20, 2005 @ 14:15

Cores

#	Formation	Interval	Cut	Recovered	%

Casing Summary

Casing Type	Casing Size	Landed Depth	Hole Size

Logging Summary

Company	Engineer	Total Depth (MD)	Logging tools
Baker Atlas	Tim Fisher	2,566.00	oil based image log; TD to casing window
			Gamma Ray, Caliper, Compensated Z-Density, Compensated Neutron, High Definition Induction, Multipole Array Acoustic; log TD to casing window for second pass with XMAC; High Res: 2000 to 2100 m; 2150 to 2200 m; 2445 to 2505 m
			Gamma Ray, Caliper, Compensated Z-Density, Compensated Neutron, High Definition Induction, Multipole Array Acoustic; log TD to casing window; problems communicating with neutron and induction tools once on bottom

Bit Record Table (IADC Grading System)

Storage Units: Metric

**** For more detailed Bit Information refer to Bit Record ****

Bit #	Make	Type	Size	Depth In	Depth Out	Made	Hours	Avg. P.R.	I.A.D.C. Bit Condition								
									I	O	MDC	Loc	B	G	ODC	RP1	RP2
1	Hughes	MX20G	216.0	1,859.7	2,287.2	427.5	53.50	7.99	5	7	WT	A	4	2	BT	PR	
2	Hughes	MX30G	216.0	2,287.2	2,463.5	176.2	34.25	5.15	6	7	BT	A	F	8	PB		
5	Halliburt	TB26ST	215.0	2,295.0	2,298.0	3.0	8.00	0.38									
6	Hughes	MX5206D	216.0	2,297.8	2,363.0	65.3	32.25	2.02	4	5	WT	A	3	1	NO	BHA	
7	Hughes	MX-S30D	216.0	2,363.0	2,468.0	105.0	43.00	2.44	4	5	WT	A8		4	BT	HR	
8	Hughes	MX-S30G	216.0	2,468.0	2,566.0	98.0	49.00	2.00									

Total Rotating Hours: 220.00

Bit Record

Pump Data

Pump #1	**Model:**	F-1000	**Size:**		**Type:**		
	Pump Rod Diameter:		**Liner Size:**	152.0	**Stroke Length:**	254	
	Efficiency Rating (%):						
Pump #2	**Model:**	F-1000	**Size:**		**Type:**		
	Pump Rod Diameter:		**Liner Size:**	152.0	**Stroke Length:**	254	
	Efficiency Rating (%):						

Bit Data

Storage Units: Metric

Bit #: 1 **Make:** Hughes **Type:** MX20G **IADC Series / Type:** /
Serial #: 6038026 **Size:** 216.0 **Jets / Nozzles:** 17.50 / 17.50 / 17.50 / **T.F.A.:**
Depth In: 1,859.73 **Depth Out:** 2,287.22 **Made:** 427.49 **Rotating Hours:** 53.50
Average Drill Rate: 7.90 **Total Rotating Hours:** 53.50
Bit Grade / Condition **I.A.D.C.:** 5 / 7 / WT / A / 4 / 2 / BT / PR / **T / B / G:** / /
Remarks:
Formations Drilled: Lower Besa River, Muskwa
Drilling Parameters

	Min		Max		Min		Max
Force on Bit:	12,000	/	17,000	**R.P.M.:**	24	/	31
Pump 1 S.P.M. / Volume:	95	/		**Pump 2 S.P.M. / Volume:**	95	/	
S.P.P.:	7,500	/	8,200	**Fluid Density:**	935	/	990
Drift Angle:	4.500	/	33.800	**Funnel Viscosity:**	42	/	53

Annular Velocity	**Drill Collars:**	71.0	**HeavyWeight Drill Pipe:**	51.0	**Drill Pipe:**	51.0
Bottoms Up	**Depth:**	1,860.00	**Theoretical:**	36	**Actual:**	45

Bit #: 2 **Make:** Hughes **Type:** MX30G **IADC Series / Type:** /
Serial #: 6037748 **Size:** 216.0 **Jets / Nozzles:** 17.50 / 17.50 / 17.50 / **T.F.A.:**
Depth In: 2,287.22 **Depth Out:** 2,463.45 **Made:** 176.23 **Rotating Hours:** 34.25
Average Drill Rate: 5.15 **Total Rotating Hours:** 87.75
Bit Grade / Condition **I.A.D.C.:** 6 / 7 / BT / A / F / 8 / PB / / **T / B / G:** / /
Remarks:
Formations Drilled: Muskwa
Drilling Parameters

	Min		Max		Min		Max
Force on Bit:	9,000	/	22,000	**R.P.M.:**	26	/	28
Pump 1 S.P.M. / Volume:	95	/		**Pump 2 S.P.M. / Volume:**	95	/	
S.P.P.:	8,200	/	9,000	**Fluid Density:**	995	/	1,000
Drift Angle:	32.900	/	43.000	**Funnel Viscosity:**	46	/	53

Annular Velocity	**Drill Collars:**	71.0	**HeavyWeight Drill Pipe:**	51.0	**Drill Pipe:**	51.0
Bottoms Up	**Depth:**		**Theoretical:**		**Actual:**	

Bit Data

Storage Units: Metric

Bit #: 5 **Make:** Halliburton **Type:** TB26ST **IADC Series / Type:** /
Serial #: 6034568 **Size:** 215.0 **Jets / Nozzles:** 11.90 / 11.90 / 11.90 / **T.F.A.:**
Depth In: 2,295.00 **Depth Out:** 2,298.00 **Made:** 3.00 **Rotating Hours:** 8.00
Average Drill Rate: 0.38 **Total Rotating Hours:** 95.75
Bit Grade / Condition **I.A.D.C.:** / / / / / / / / **T / B / G:** / /
Remarks: sidetrack bit
Formations Drilled: Muskwa
Drilling Parameters

	Min		Max		Min		Max
Force on Bit:	1,000	/	11,000	**R.P.M.:**	0	/	0
Pump 1 S.P.M. / Volume:	80	/		**Pump 2 S.P.M. / Volume:**	80	/	
S.P.P.:	8,300	/	11,000	**Fluid Density:**	1,225	/	1,225
Drift Angle:	34.600	/	34.600	**Funnel Viscosity:**	58	/	62

Annular Velocity **Drill Collars:** 67.0 **HeavyWeight Drill Pipe:** 46.0 **Drill Pipe:** 43.0
Bottoms Up **Depth:** 2,298.00 **Theoretical:** 52 **Actual:** 52

Bit #: 6 **Make:** Hughes **Type:** MX5206DX **IADC Series / Type:** /
Serial #: 634418 **Size:** 216.0 **Jets / Nozzles:** 15.90 / 15.90 / 15.90 / **T.F.A.:**
Depth In: 2,297.75 **Depth Out:** 2,363.00 **Made:** 65.25 **Rotating Hours:** 32.25
Average Drill Rate: 2.02 **Total Rotating Hours:** 128.00
Bit Grade / Condition **I.A.D.C.:** 4 / 5 / WT / A / 3 / 1 / NO / BHA / **T / B / G:** / /
Remarks:
Formations Drilled:
Drilling Parameters

	Min		Max		Min		Max
Force on Bit:	13	/	21	**R.P.M.:**	28	/	37
Pump 1 S.P.M. / Volume:	80	/		**Pump 2 S.P.M. / Volume:**	80	/	
S.P.P.:	8,300	/	9,300	**Fluid Density:**	1,230	/	1,235
Drift Angle:	27.200	/	31.000	**Funnel Viscosity:**	61	/	64

Annular Velocity **Drill Collars:** 67.0 **HeavyWeight Drill Pipe:** 46.0 **Drill Pipe:** 43.0
Bottoms Up **Depth:** 2,342.00 **Theoretical:** 53 **Actual:** 53

Bit #: 7 **Make:** Hughes **Type:** MX-S30DX **IADC Series / Type:** /
Serial #: 6034455 **Size:** 216.0 **Jets / Nozzles:** 15.90 / 15.90 / 15.90 / **T.F.A.:**
Depth In: 2,363.00 **Depth Out:** 2,468.00 **Made:** 105.00 **Rotating Hours:** 43.00
Average Drill Rate: 2.44 **Total Rotating Hours:** 171.00
Bit Grade / Condition **I.A.D.C.:** 4 / 5 / WT / A 8 / / 4 / BT / HR / **T / B / G:** / /
Remarks:
Formations Drilled: Muskwa
Drilling Parameters

	Min		Max		Min		Max
Force on Bit:	15	/	25	**R.P.M.:**	30	/	33
Pump 1 S.P.M. / Volume:	80	/		**Pump 2 S.P.M. / Volume:**	80	/	
S.P.P.:	7,900	/	8,600	**Fluid Density:**	1,235	/	1,245
Drift Angle:	27.900	/	31.500	**Funnel Viscosity:**	62	/	66

Annular Velocity **Drill Collars:** 67.0 **HeavyWeight Drill Pipe:** 46.0 **Drill Pipe:** 43.0
Bottoms Up **Depth:** 2,390.00 **Theoretical:** 54 **Actual:** 54

Bit Data

Storage Units: Metric

Bit #:	8	**Make:**	Hughes	**Type:**	X-S30GDX	**IADC Series / Type:**	/
Serial #:	6022912	**Size:**	216.0	**Jets / Nozzles:**	15.90 / 15.90 / 15.90 /	**T.F.A.:**	
Depth In:	2,468.00	**Depth Out:**	2,566.00	**Made:**	98.00	**Rotating Hours:**	49.00
				Average Drill Rate:	2.00	**Total Rotating Hours:**	220.00

Bit Grade / Condition **I.A.D.C.:** / / / / / / / / **T / B / G:** / /

Remarks:

Formations Drilled: Muskwa, Nahanni

Drilling Parameters

	Min		Max		Min		Max
Force on Bit:	12,000	/	23,000	**R.P.M.:**	31	/	36
Pump 1 S.P.M. / Volume:	80	/		**Pump 2 S.P.M. / Volume:**	80	/	
S.P.P.:	8,700	/	9,600	**Fluid Density:**	1,240	/	1,245
Drift Angle:	35.600	/		**Funnel Viscosity:**	63	/	68

Annular Velocity	**Drill Collars:**	67.0	**HeavyWeight Drill Pipe:**	46.0	**Drill Pipe:** 43.0
Bottoms Up	**Depth:**	2,500.00	**Theoretical:**	56	**Actual:** 56

Wireline Logging Summary

Storage Units: Metric

Logging Suite Number: 1
Wireline Logging Company: Baker Atlas
District: Grande Prairie
Witness: Ken Glover

Engineer: Tim Fisher
Unit Number: 6558

Was Pressure Control Equipment Utilized: No
Was the Logging Job Mechanically Assisted: No

Maximum Deviation: 52.400 °
Hole Size: 216.0

Total Lost Time: 12.75
Loggers' Total Down Time:
Total Job Time (From Rig up to Rig down): 34.00

	Measured Depth	True Vertical Depth
Casing Depth Driller	1,853.00	1,840.00
Casing Depth Logger	1,853.00	1,840.00
Total Depth Driller (Tally)	2,566.00	2,465.17
Total Depth Driller (Strap or SLM)		

General Remarks: problems with tool string during logging run #1
lost time due to clean out trip after logging run #1 to remove tight spots and fill on bottom
new tool string was hotshotted to site and arrived during clean out trip
logging run #2 was done with replacement tool string, resulting in no net logger down time due to tool malfunction

Logging Run #: 1
Date: Sep 21, 2005

Drilling Fluid Data

Drilling Fluid Type: Invert
Fluid Density: 1245.0 **Viscosity:** **pH:** **Fluid Loss:**

Mud Resistivity (Rm): @ º
Mud Resistivity (Rm) @ BHT: @ º **Maximum Temperature:** 113.9 º
Mud Filtrate Resistivity (Rmf): @ º **Source (Rmf):**
Mud Cake Resistivity (Rmc): @ º **Source (Rmc):**

Logging Run Information

Date on Bottom: Sep 21, 2005
Total Depth Logger: 2,551.50 (MD) 2,456.03 (TVD)

Logging Tools: Gamma Ray, Caliper, Compensated Z-Density, Compensated Neutron, High Definition Induction, Multipole Array Acoustic;
log TD to casing window;
problems communicating with neutron and induction tools once on bottom

Remarks: tools on surface @ 11:00 hours; prepare for cleanout trip with bit

Hole Conditions: stuck/tight from 2241 to 2230 m, shut off calipers to get through, pulled 60%; string diameter is 12.4 cm

Wireline Logging Summary

Storage Units: Metric

Logging Run #: 2
Date: Sep 21, 2005

Drilling Fluid Data

Drilling Fluid Type: invert
Fluid Density: 1245.0 **Viscosity:** **pH:** **Fluid Loss:**

Mud Resistivity (Rm): @ º
Mud Resistivity (Rm) @ BHT: @ º **Maximum Temperature:** 114.0 º
Mud Filtrate Resistivity (Rmf): @ º **Source (Rmf):**
Mud Cake Resistivity (Rmc): @ º **Source (Rmc):**

Logging Run Information

Date on Bottom: Sep 22, 2005
Total Depth Logger: 2,568.00 (MD) 2,466.98 (TVD)

Logging Tools: Gamma Ray, Caliper, Compensated Z-Density, Compensated Neutron, High Definition Induction, Multipole Array Acoustic;
log TD to casing window for second pass with XMAC;
High Res: 2000 to 2100 m; 2150 to 2200 m; 2445 to 2505 m

Remarks: rig up at 23:45 hours on Sept.21, 2005; out of hole at 5:30 hours on Sept.22, 2005.

Hole Conditions: no problems after cleanout trip

Logging Run #: 3
Date: Sep 22, 2005

Drilling Fluid Data

Drilling Fluid Type: invert
Fluid Density: 1245.0 **Viscosity:** **pH:** **Fluid Loss:**

Mud Resistivity (Rm): @ °
Mud Resistivity (Rm) @ BHT: @ ° **Maximum Temperature:** °
Mud Filtrate Resistivity (Rmf): @ ° **Source (Rmf):**
Mud Cake Resistivity (Rmc): @ ° **Source (Rmc):**

Logging Run Information

Date on Bottom: Sep 22, 2005
Total Depth Logger: 2,568.00 (MD) 2,466.98 (TVD)

Logging Tools: oil based image log;
TD to casing window

Remarks: run in hole @ 5:45, out of hole @ 13:45; will process data offsite

Hole Conditions:

Directional Survey Points

Storage Units: Metric

Survey Type: /

Measured Depth	T.V.D.	Drift Angle (º)	Azimuth (º)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity
1,854.00	1,847.33	4.500	69.48				
1,864.37	1,857.65	6.900	45.60				
1,874.77	1,867.95	9.300	37.30				
1,881.50	1,874.56	11.700	26.00				
1,890.96	1,883.78	14.100	31.00				
1,900.35	1,892.86	15.700	33.60				
1,909.85	1,901.96	17.400	32.30				
1,919.42	1,911.04	19.500	30.20				
1,928.93	1,919.94	21.800	27.00				
1,938.53	1,928.79	23.900	22.80				
1,948.15	1,937.49	26.400	21.70				
1,957.62	1,945.89	28.700	21.20				
1,967.14	1,954.19	29.900	20.50				
1,976.74	1,962.49	30.500	20.10				
1,986.09	1,970.59	29.400	17.80				
1,995.43	1,978.78	28.200	14.60				
2,004.94	1,987.17	27.900	13.20				
2,014.44	1,995.57	27.700	13.00				
2,023.94	2,004.01	27.000	12.00				
2,033.56	2,012.60	26.600	11.30				
2,042.92	2,020.94	27.300	10.10				
2,052.35	2,029.29	28.000	9.40				
2,061.84	2,037.66	28.300	10.20				
2,071.51	2,046.17	28.400	12.30				
2,081.06	2,054.54	29.200	14.00				
2,090.59	2,062.87	29.000	15.60				
2,099.43	2,070.62	28.400	17.80				
2,109.43	2,079.42	28.300	17.30				
2,119.14	2,087.96	28.500	17.60				
2,128.80	2,096.45	28.600	17.50				
2,138.25	2,104.75	28.400	16.60				
2,147.92	2,113.28	28.000	14.60				
2,157.55	2,121.80	27.500	13.60				
2,167.10	2,130.30	26.600	12.10				
2,176.71	2,138.90	26.600	11.00				
2,186.18	2,147.38	26.200	10.40				

Directional Survey Points

Storage Units: Metric

Survey Type: /

Measured Depth	T.V.D.	Drift Angle (º)	Azimuth (º)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity
2,195.83	2,156.07	25.400	9.80				
2,205.31	2,164.64	25.100	14.00				
2,214.96	2,173.34	26.100	16.60				
2,224.47	2,181.87	26.600	19.30				
2,233.70	2,190.08	27.700	20.20				
2,243.31	2,198.52	29.500	21.80				
2,252.79	2,206.69	31.400	19.70				
2,262.33	2,214.79	32.400	18.00				
2,271.82	2,222.78	32.900	17.00				
2,281.47	2,230.84	33.800	15.40				
2,290.86	2,238.61	34.600	14.30				
2,300.20	2,246.39	32.400	13.30				
2,309.78	2,254.55	31.000	9.00				
2,319.35	2,262.80	29.900	7.50				
2,328.90	2,271.13	28.600	7.20				
2,338.32	2,279.45	27.400	3.40				
2,346.73	2,286.92	27.200	359.50				
2,356.12	2,295.25	27.800	355.20				
2,365.70	2,303.69	28.800	352.20				
2,375.27	2,312.09	28.300	347.90				
2,384.82	2,320.50	28.300	345.10				
2,394.24	2,328.78	28.600	343.60				
2,403.83	2,337.19	28.900	342.70				
2,413.35	2,345.55	28.200	341.10				
2,422.89	2,353.97	27.900	340.60				
2,432.50	2,362.45	28.200	341.80				
2,442.02	2,370.79	29.300	341.80				
2,451.41	2,378.94	30.400	340.70				
2,461.05	2,387.21	31.500	338.80				
2,470.50	2,395.18	33.300	336.50				
2,480.26	2,403.23	35.600	336.20				
2,489.72	2,410.82	37.700	336.40				
2,499.08	2,418.17	38.900	334.00				
2,508.50	2,425.44	40.100	333.20				
2,517.90	2,432.53	41.800	333.10				
2,527.39	2,439.49	43.900	333.40				

Directional Survey Points

Storage Units: Metric

Survey Type: /

Measured Depth	T.V.D.	Drift Angle (º)	Azimuth (º)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity
2,536.72	2,446.07	46.400	332.40				
2,546.31	2,452.58	48.100	331.30				
2,550.00	2,455.03	48.900	331.30				

Abandonment Plug Summary

Storage Units: Metric

Plug #: 1
From: 2,220.0 **To:** 2,435.0
Amount of Cement Used: 12.5 **Volume:**
Density: 1,876
Cement Blend: Thermal 40 Ft St John
0.5% TLF-HT
0.3% THR-100
0.5% TA-1
0.5% CFR-10
Date / Time Plug Down: Sep 6, 2005 @ 21:15

Plug Felt or Logged By: Trican
Representative:
Date / Time Plug Felt or Logged: Sep 7, 2005 @ 09:45
Depth Plug Felt: 2,180.0

Remarks: unsuccessful sidetrack kickoff in this plug;
cement remains soft after 72 hours

Plug #: 2
From: 2,220.0 **To:** 2,375.0
Amount of Cement Used: 11.7 **Volume:**
Density: 2,100
Cement Blend: 0.5% TLF-HT
0.1% TDH
0.5% TA-1
0.8% CFR-10
0.5% LTR
Date / Time Plug Down: Sep 10, 2005@ 18:00

Plug Felt or Logged By: Trican
Representative:
Date / Time Plug Felt or Logged: Sep 11, 2005@ 03:00
Depth Plug Felt: 2,220.0

Remarks: successful sidtrack kickoff drilled from 2295 m to 2298 m

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Drilling Fluid Type:	Produced Water	**From:**	1,853	**To:**	1,860
Drilling Fluid Type:	Invert	**From:**	1,860	**To:**	2,520

Company: Chalce Resources
Geologist: **Ken Glover**

Work Performed	**From:**	Aug 24, 2005	**To:**	Sep 12, 2005
Depths Logged	**From:**	1,855.0	**To:**	2,520.0

Remarks: abandoned stuck bottom hole assembly and drilled sidetrack well

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Company: Chalce Resources
Geologist: **Ken Glover**

Work Performed	**From:**	Sep 13, 2005	**To:**	Sep 22, 2005
Depths Logged	**From:**	2,295.0	**To:**	2,566.0

Remarks: Fishing and cementing abandonment plugs from Sep 1 to Sep 12, 2005.

1,855.00 to 1,860.00 (5.00)	**Shale** Mainly medium gray to dark gray to green gray, soft, occasional bentonitic, weakly fissile, micromicaceous, silty in places, minor calcareous; trace light gray to medium gray siltstone stringers, moderately calcareous matrix ? with quartz grains. No shows.
1,860.00 to 1,865.00 (5.00)	**Shale** Shale with siltstone stringers as above. Trace microcrystalline pyrite along siltstone bedding, especially at contacts with shale. Trace micro organic fragments (angular and black) in siltstone stringers.
1,865.00 to 1,870.00 (5.00)	**Shale** Shale with quartzose siltstone stringers as above.
1,870.00 to 1,875.00 (5.00)	**Shale** Medium gray to occasional green gray and bentonitic, silty in places, micromicaceous. Trace medium brown gray calcareous marlstone. Trace dark gray to black shale. Trace slickensides.
1,875.00 to 1,880.00 (5.00)	**Shale** Medium gray to occasional green gray and bentonitic, silty in places, micromicaceous. Trace light gray calcareous quartzose siltstone, tight, no shows.
1,880.00 to 1,885.00 (5.00)	**Shale** Shale as above. Trace brown gray marlstone. Trace slickensides.
1,885.00 to 1,890.00 (5.00)	**Shale** Shale as above. Very rare brown gray marlstone.
1,890.00 to 1,895.00 (5.00)	**Shale** Medium gray to green gray and bentonitic, micromicaceous, moderately indurated. Minor brown gray earthy marlstone.
1,895.00 to 1,900.00 (5.00)	**Shale** Shale as above.
1,900.00 to 1,905.00 (5.00)	**Shale** Medium gray to brown gray, micromicaceous, weak to moderately fissile. Minor light to medium gray calcareous siltstone stringers, tight, no shows. Rare dark gray to black shale, laminated, fissile.
1,905.00 to 1,910.00 (5.00)	**Shale** Medium gray to brown gray shale as above. Trace disseminated pyrite in medium gray shale. Trace black organic ? flecks in shale.
1,910.00 to 1,915.00 (5.00)	**Shale** Shale as above.
1,915.00 to 1,920.00 (5.00)	**Shale** Medium gray to brown gray, micromicaceous, weak to moderately fissile, common clusters of black organic ? flecks. Trace light gray to brown gray marlstone. Trace slickensides.

1,920.00 to 1,925.00 (5.00)	**Shale** Shale as above. Trace light gray to brown gray marlstone.
1,925.00 to 1,930.00 (5.00)	**Shale** Medium gray to brown gray shale as above. Rare light gray to brown gray marlstone.
1,930.00 to 1,935.00 (5.00)	**Shale** Medium gray to brown gray, micromicaceous, moderately fissile, Rare non calcareous quartzose siltstone stringers.
1,935.00 to 1,940.00 (5.00)	**Shale** Shale as above with indurated non calcareous silty bituminous. Trace brown gray marlstone. Trace slickensides.
1,940.00 to 1,945.00 (5.00)	**Shale** Medium gray, micromicaceous, weak to moderately fissile. Minor light to medium gray calcareous siltstone stringers. Trace slickensides.
1,945.00 to 1,950.00 (5.00)	**Shale** Medium gray shale as above.
1,950.00 to 1,955.00 (5.00)	**Shale** Medium to dark gray, micromicaceous, fissile, with minor dark gray to black, fissile laminations. Weak to moderately laminated. Trace siltstone laminations with trace disseminated pyrite. Trace slickensides.
1,955.00 to 1,960.00 (5.00)	**Shale** Medium to dark gray with minor green gray and bentonitic, micromicaceous, fissile, slightly calcareous.
1,960.00 to 1,965.00 (5.00)	**Shale** Shale as above. Trace silty calcareous stringers.
1,965.00 to 1,970.00 (5.00)	**Shale** Dark gray to black, fissile, micromicaceous in places with trace microfractures and minor slickensides, some slickensided surfaces are curved.Trace light to medium gray very calcareous silty marlstone with occasional milky white flecks (shell fragments ?)
1,970.00 to 1,975.00 (5.00)	**Shale** Dark gray shale as above. Increased very silty marlstone.
1,975.00 to 1,980.00 (5.00)	**Shale** Dark gray shale with silty marlstone as above.
1,980.00 to 1,985.00 (5.00)	**Shale** Gray, laminated with black wisps along laminations, common microcrystalline pyrite nodules <0.1 mm diameter, silty in places, trace dark gray to black shale laminations. Occasional light to medium gray siltstone stringers or laminations in shale, micromicaceous, occasional calcareous. No shows.

1,985.00 to 1,990.00 (5.00)	**Shale** Gray shale as above but with increased dark gray to black shale laminations. Trace microfractures. One visible calcite fracture fill shows some calcite mineral cleavage, 0.5 mm thickness preserved in contact with shale, has associated irregular microfractures emanating from a smooth and regular primary fracture surface.
1,990.00 to 1,995.00 (5.00)	**Shale** Medium gray to green gray and bentonitic with minor brown gray, micromicaceous, occasional laminated, trace black shale.
1,995.00 to 2,000.00 (5.00)	**Shale** Shale as above. Slightly calcareous in places.
2,000.00 to 2,005.00 (5.00)	**Shale** Shale as above.
2,005.00 to 2,010.00 (5.00)	**Shale** Medium gray to green gray and bentonitic to minor brown gray, micromicaceous, occasional laminated. Common black organic flecks.Trace very thin (<0.05 mm thick) calcite healed microfractures.
2,010.00 to 2,015.00 (5.00)	**Shale** Shale as above.
2,015.00 to 2,020.00 (5.00)	**Shale** Medium gray, dark gray in places, very thin (0.05 mm thick) light gray siltstone laminae in places, micromicaceous in places, moderately fissile
2,020.00 to 2,025.00 (5.00)	**Shale** As above. Increasing dark gray shale, usually laminated. Trace curvilinear slickensided surfaces.
2,025.00 to 2,030.00 (5.00)	**Shale** Medium to dark gray with occasional black shale. Rare calcite fracture fill up to 0.2 mm thick, translucent with a smooth undulating surface. Trace clacareous light gray siltstone.
2,030.00 to 2,035.00 (5.00)	**Shale** As above. Increasing finely laminated, fissile black shale. Trace dolomitic light gray siltstone.
2,035.00 to 2,040.00 (5.00)	**Shale** Medium gray to black, variably laminated, variably fissile, occasionally micromicaceous. Trace microcrystalline pyrite. Trace calcite fracture fill up to 0.2 mm thick.
2,040.00 to 2,045.00 (5.00)	**Shale** As above. Trace light gray soft marlstone.

2,045.00 to 2,050.00 (5.00)	**Shale** Medium gray with trace dark gray shale, occasionally micromicaceous, weakly fissile. Trace water sensitive light gray non calcareous shale with wisps of black organics. Trace calcareous.
2,050.00 to 2,055.00 (5.00)	**Shale** As above with increasing dark gray shale.
2,055.00 to 2,060.00 (5.00)	**Shale** As above.
2,060.00 to 2,065.00 (5.00)	**Shale** Medium to dark gray, weakly fissile, micromicaceous. Trace calcite healed microfractures. trace disseminated pyrite. Trace fissile, very finely laminated black shale.
2,065.00 to 2,070.00 (5.00)	**Shale** As above.
2,070.00 to 2,075.00 (5.00)	**Shale** As above. Increasing black shale.
2,075.00 to 2,080.00 (5.00)	**Shale** As above.
2,080.00 to 2,085.00 (5.00)	**Shale** Medium gray, laminated with 0.05 to 0.1 mm thick laminations of medium gray and black and dark gray shale bands. Fissile, micromicaceous. Trace very small (<0.05 mm diameter) milky white nodules in banding.
2,085.00 to 2,090.00 (5.00)	**Shale** As above.
2,090.00 to 2,095.00 (5.00)	**Shale** Medium to dark gray to black banded shale. Banding is less common than above. Micromicaceous.
2,095.00 to 2,100.00 (5.00)	**Shale** medium gray to dark gray. Trace black shale. Micromicaceous.
2,100.00 to 2,105.00 (5.00)	**Shale** As above. Trace slickensides.
2,105.00 to 2,110.00 (5.00)	**Shale** Medium gray to dark gray. Trace black shale. Occasionally laminated, weakly fissile, micromicaceous.
2,110.00 to 2,115.00 (5.00)	**Shale** As above.
2,115.00 to 2,120.00 (5.00)	**Shale** Dark gray to medium gray with occasional laminated black shale. Fissile. Micromicaceous.

2,120.00 to 2,125.00 (5.00)	**Shale** Medium gray to dark gray. Weakly fissile to fissile.
2,125.00 to 2,130.00 (5.00)	**Shale** As above. Poor sample.
2,130.00 to 2,135.00 (5.00)	**Shale** Medium gray. Trace dark gray shale. Micromicaceous.
2,135.00 to 2,140.00 (5.00)	**Shale** Dark gray to medium gray, variably fissile. Medium gray shale is micromicaceous, dark gray shale less show of oil. Trace disseminated pyrite in medium gray shale.
2,140.00 to 2,145.00 (5.00)	**Shale** As above, but more medium gray shale.
2,145.00 to 2,150.00 (5.00)	**Shale** As above, but increasing dark gray shale. Trace slickensides.
2,150.00 to 2,155.00 (5.00)	**Shale** As above.
2,155.00 to 2,160.00 (5.00)	**Shale** Medium to dark gray, micromicaceous, variably fissile, trace slickensides
2,160.00 to 2,165.00 (5.00)	**Shale** As above
2,165.00 to 2,170.00 (5.00)	**Shale** medium to dark gray, micromicaceous, fissile, variably laminated, occasional slickensides, trace translucent calcite fracture fill with some up to 0.4 mm thick. Some fracture mineralisation contacts are preserved, showing fractures at about 45 degrees to laminations and calcite crystal growth at about 45 degrees to fracture face. Minor light gray marly siltstone.
2,170.00 to 2,175.00 (5.00)	**Shale** Medium to dark gray, micromicaceous, fissile, variably laminated, trace microcrystalline pyrite in dark gray shale. Rare calcite healed micro fractures. Trace water sensitive light gray shale with black organic ? wisps.
2,175.00 to 2,180.00 (5.00)	**Shale** Medium to dark gray, micromicaceous, fissile, variably laminated, trace unattached translucent calcite crystals. Rare Black Shale: micromicaceous, laminated, fissile. Rare light gray marly very fine grained sand to siltstone.
2,180.00 to 2,185.00 (5.00)	**Shale** As above with more of the dark gray shale component. Trace calcite healed microfractures.
2,185.00 to 2,190.00 (5.00)	**Shale** As above.

2,190.00 to 2,195.00 (5.00)	**Shale** Medium gray with minor dark gray, micromicaceous, fissile, occasionally laminated. Trace marly siltstone as above.
2,195.00 to 2,200.00 (5.00)	**Shale** Dark gray to medium gray, micromicaceous, fissile with minor laminated black shale stringeres. Trace microcrystalline pyrite, especially in black shale.
2,200.00 to 2,205.00 (5.00)	**Shale** Medium to dark gray, fissility and moderate lamination in dark gray shale, weak fissility in medium gray shale. Hard, micromicaceous. Rare light gray marly siltstone.
2,205.00 to 2,210.00 (5.00)	**Shale** As above.
2,210.00 to 2,215.00 (5.00)	**Shale** Dark gray to medium gray, micromicaceous, variable fissilty. Occasional light gray marly siltstone.
2,215.00 to 2,220.00 (5.00)	**Shale** Medium gray, micromicaceous, trace microcrystalline pyrite, slickensides, fissile, moderately laminated.
2,220.00 to 2,225.00 (5.00)	**Shale** As above. Trace fracture fill: beige, dolomitic, translucent, up to 0.4 mm thick with a rough surface.
2,225.00 to 2,230.00 (5.00)	**Shale** Very dark gray to black with some medium gray shale. Sub blocky to fissile, micromicaceous, common slickensides throughout, laminated. Some very dark gray to black silty marlstone, dolomitic in part.
2,230.00 to 2,235.00 (5.00)	**Shale** Very dark gray to black with occasional medium gray shale but less than above. Common slickensides throughout, laminated, fissile, occasional cubic pyrite crystals 0.01 to 0.03 mm across in black shale laminae. Minor dark gray silty marlstone as above but more calcareous.

Muskwa: 2,238.00 MD, 2,193.90 TVD, -1,777.50 SSL

2,235.00 to 2,240.00 (5.00)	**Shale** Very dark gray to black shale, micromicaceous, laminated, common slickensides throughout, common microcrystalline pyrite cubes along laminae. Trace calcite healed microfractures.
2,240.00 to 2,245.00 (5.00)	**Shale** Black shale, fissile, moderately indurated, occasional microcrystalline pyrite, also trace disseminated pyrite, laminated, common slickensides. Occasional black silty marlstone.

2,245.00 to 2,250.00 (5.00)	**Shale** Black, fissile, micromicaceous, weak to moderate lamination, common isolated cubic pyrite crystals along laminations. Trace microcrystalline pyrite clusters. Occasional very hard dark gray siltstone. Trace slickensides.
2,250.00 to 2,255.00 (5.00)	**Shale** As above.
2,255.00 to 2,260.00 (5.00)	**Shale** As above.
2,260.00 to 2,265.00 (5.00)	**Shale** Dark gray to black, fissile, micromicaceous, occasional microcrystalline pyrite. Trace slickensides.
2,265.00 to 2,270.00 (5.00)	**Shale** Black with minor dark gray. Trace clusters of microcrystalline pyrite. Rare massive pyrite chunks to 2 mm across.
2,270.00 to 2,275.00 (5.00)	**Shale** Black to dark gray, micromicaceous, siliceous, fissile, laminated in places, occasional microcrystalline pyrite, Trace hard light to medium gray shale. Common light gray calcareous cemented Siltstone, hard, quartzose.
2,275.00 to 2,280.00 (5.00)	**Shale** Black to dark gray, fissile, hard, siliceous, occasional hard black grains of chert? that is silica cemented with microcrystalline calcite. Occasional microcrystalline pyrite. Variably laminated.
2,280.00 to 2,285.00 (5.00)	**Shale** Dark gray to black, micromicaceous, fissile, trace disseminated pyrite along laminations in black shale. Trace pyrite mineralisation along fracture surfaces. Slickensided fracture surface. Minor calcareous silty bituminous containing hard black chert? grains. Rare pyrite nodules <0.1 mm thick.
2,285.00 to 2,290.00 (5.00)	**Shale** Dark gray to black as above, hard. Trace calcite healed microfractures. Pyritic. Common microcrystalline pyrite nodules.
2,290.00 to 2,295.00 (5.00)	**Shale** Dark gray to black, very hard, siliceous, pyritic, trace calcite healed microfractures.
2,295.00 to 2,300.00 (5.00)	**Shale** Black to dark gray, occasional calcareous silty, blocky to laminated, moderately argillaceous, fissile, trace slickensides, bituminous, rare loose quartz crystals, common pyrite throughout with occasional very pyritic laminae.Trace calcite healed microfractures and trace loose quartz crystals. Minor medium grey shale, hard, siliceous, massive to blocky.
2,300.00 to 2,305.00 (5.00)	**Shale** Dark grey to black, hard, siliceous, pyritic as above. Decreasing medium grey shale. Trace black to brown, soft, earthy shale.

2,305.00 to 2,310.00 (5.00)	**Shale** Dark grey to black, hard, siliceous. Trace colorless quartz healed microfractures up to 0.01 mm aperture, <1 mm spacing, parallel with non uniform thickness, perpendicular to fissility. Common microcrystalline pyrite. Trace black, soft carbonaceous flecks up to 0.2 mm in black shale.
2,310.00 to 2,315.00 (5.00)	**Shale** Dark grey to black shale as above, with increasing black shale. Rare dark grey calcareous shale.
2,315.00 to 2,320.00 (5.00)	**Shale** Black to dark grey as above, with increasing calcareous dark grey shale. Occasional colorless, microcrystalline, spherical, well sorted, well rounded calcite peloids (no visible nucleus), matrix supported in soft, non calcareous dark grey shale.
2,320.00 to 2,325.00 (5.00)	**Shale** Dark grey to black, micromicaceous, pyritic, hard, siliceous, rarely laminated to commonly platy, fissile. Minor medium to dark grey shale, calcareous, micromicaceous, pyritic. Trace calcite healed microfractures, trace slickensides. Trace peloidal shale as above.
2,325.00 to 2,330.00 (5.00)	**Shale** Dark grey, micromicaceous, brittle but not very hard, pyritic in places, fissile, laminated to blocky, trace slickensides. Rare loose creamy white calcite crystals up to 0.4 mm.
2,330.00 to 2,335.00 (5.00)	**Shale** Dark grey as above. Trace calcite healed microfractures. Slightly calcareous in places.
2,335.00 to 2,340.00 (5.00)	**Shale** As above. Occasional loose calcite crystals. Minor brown grey shale, calcareous, soft, rounded cuttings. Trace slickensides.
2,340.00 to 2,345.00 (5.00)	**Shale** As above, with decreasing brown grey shale. Rare light grey shale, micromicaceous, slightly argillaceous, pyritic, moderately hard.
2,345.00 to 2,350.00 (5.00)	**Shale** As above, but moderately calcareous in places. Rare loose drusy white quartz crystals to 1 mm.
2,350.00 to 2,355.00 (5.00)	**Shale** Dark grey, micromicaceous, occasional disseminated pyrite bands, fissile, trace slickensides, occasionally laminated, moderately calcareous in places but mostly siliceous. Minor brown grey marlstone, soft, earthy, calcareous with very weak fissility.
2,355.00 to 2,360.00 (5.00)	**Shale** Lithologies as above with decreasing brown grey shale. Rare white non calcareous specks.

2,360.00 to 2,365.00 (5.00)	**Shale** Dark grey, micromicaceous, trace disseminated pyrite bands, trace brown grey marly shale, soft, earthy, calcareous. Rare light grey, siliceous, micromicaceous shale with a slaty lustre.
2,365.00 to 2,370.00 (5.00)	**Shale** Dark grey to black, platy, micromicaceous, microcrystalline pyrite to disseminated in lenses parallel to bedding. Trace calcite healed microfractures. Trace light grey pyritic argillaceous shale as above.
2,370.00 to 2,375.00 (5.00)	**Shale** Black to dark grey, platy, micromicaceous, pyritic, weakly calcareous, trace calcite healed microfractures and loose calcite crystals. Trace dark grey silty marlstone with common microcrystalline pyrite.
2,375.00 to 2,380.00 (5.00)	**Shale** Black to dark grey, weakly laminated to sub blocky, micromicaceous, pyritic, weakly calcareous, trace calcite healed microfractures up to 0.2 mm thick. Trace loose calcite crystals. Trace dark grey silty marlstone with common microcrystalline pyrite.
2,380.00 to 2,385.00 (5.00)	**Shale** Black to dark grey, platy, micromicaceous, pyritic, moderately calcareous, minor interbeds of very calcareous dark grey marlstone. Trace slickensides.
2,385.00 to 2,390.00 (5.00)	**Shale** black to dark grey, calcareous to very calcareous, micromicaceous. Trace loose calcite crystals.
2,390.00 to 2,395.00 (5.00)	**Shale** Black to dark grey, micromicaceous, pyritic in places. Minor stringers of very very calcareous dark grey marlstone.
2,395.00 to 2,400.00 (5.00)	**Shale** Black to dark grey, micromicaceous, pyritic in places as above, trace slickensides. Trace dark grey marlstone, occasionally silty.
2,400.00 to 2,405.00 (5.00)	**Shale** Black, fissile, laminated to platy, pyritic, calcareous, micromicaceous, common slickensides.
2,405.00 to 2,410.00 (5.00)	**Shale** Dark grey and black but mostly very dark grey, micromicaceous, pyritic, trace loose calcite crystals, trace slickensides.
2,410.00 to 2,415.00 (5.00)	**Shale** Dark grey and black, fissile, as above. Rare silty marlstone. Rare brownish dark grey marlstone, not fissile.
2,415.00 to 2,420.00 (5.00)	**Shale** Equal parts shale as above and marlstone as above.

2,420.00 to 2,425.00 (5.00)	**Shale** Dark grey, calcareous, fissile, platy to blocky, pyritic, trace slickensides. Also brownish dark grey marlstone, softer, very calcareous, rarely silty.
2,425.00 to 2,430.00 (5.00)	**Shale** Dark grey to black, fissile, calcareous, hard, pyritic with occasional microcrystalline pyrite cubes. Lesser brownish grey marlstone, pyritic in places, very calcareous. Occasional silt sized calcareous rounded white specks in marlstone. Trace silty zones. Trace slickensides. Trace calcite healed microfractures in black shale, up to 0.4 mm thick.
2,430.00 to 2,435.00 (5.00)	**Shale** Shale as above. Minor stringers of dark grey marlstone, soft. Rare greenish medium grey shale, bentonitic lustre, waxy looking.
2,435.00 to 2,440.00 (5.00)	**Shale** Dark grey to black, fissile, pyritic, micromicaceous, very calcareous. Increasing stringers of very calcareous grey marlstone. Rare rounded translucent loose quartz crystals. Trace calcite healed microfractures, mainly in shale. Rare biege microcrystalline dolomitic pieces comprising <<1% of cuttings, trace interstitial porosity.
2,440.00 to 2,445.00 (5.00)	**Marlstone** Grey, as above. Occasional white flecks as above, also trace milky white calcareous shell fragments or fossil fragments as wisps parallel to bedding planes. Lesser dark grey shale as above, with trace clacite healed microfractures, with occasional euhedral crystalline habit.
2,445.00 to 2,450.00 (5.00)	**Marlstone** Grey to dark grey, micromicaceous in places, weakly fissile in places, common silt sized rounded white calcareous flecks comprising up to 10% of the rock. Trace calcite healed microfractures, but more commonly loose milky white calcite crystals.
2,450.00 to 2,455.00 (5.00)	**Marlstone** Medium to light grey, very calcareous, commonly with white silt sized calcareous flecks, trace pyrite flecks of similar size and distribution pattern. Trace wispy fossil fragments. Trace slickensides.
2,455.00 to 2,460.00 (5.00)	**Shale** Dark grey, micromicaceous, pyritic, very calcareous to marly in places. Trace medium grey marlstone as above. Trace slickensides. Trace calcite healed microfractures. Rare light grey, micromicaceous, non calcareous water sensitive shale.
2,460.00 to 2,465.00 (5.00)	**Marlstone** Medium grey, very calcareous, rounded to platy, calcite healed microfractures becoming more common. Lesser dark grey shale as above. Rare drusy loose quartz crystals.

2,465.00 to 2,470.00 (5.00)	**Shale** Dark grey to black, fissile, micromicaceous, rare microcrystalline pyrite, platy to sub blocky, calcareous, occasional calcite healed microfractures up to 0.4 mm aperture. Loose cacite crystals. Trace milky white calcite laminae parallel to bedding. Common slickensides. Grey to dark grey marlstone stringers, calcareous silt sized fragments in places. Trace fossiliferous. Rare loose quartz crystals.
2,470.00 to 2,475.00 (5.00)	**Shale** Dark grey to black as above. Very calcareous. Decreasing marlstone stringers as above.
2,475.00 to 2,480.00 (5.00)	**Marlstone** Medium grey to dark grey, very calcareous, slickensides, silty in places, common calcite fracture fill and loose pieces with smeared edges. Rare euhedral calcite crystals in fractures. Minor dark grey to black calcareous shale as above.
2,480.00 to 2,485.00 (5.00)	**Marlstone** Lithologies as above, with increasing shale. Less calcareous silty fragments.
2,485.00 to 2,490.00 (5.00)	**Shale** Black to very dark grey, micromicaceous, rarely laminated to sub blocky, microcrystalline pyrite in places, slickensides, very calcareous, common fractures cemented with calcite up to 0.4 mm thick, also loose calcite crystals and crystal agglomerates. Trace brownish grey marlstone, very calcareous with calcareous fossil fragments up to 0.01 mm diameter.
2,490.00 to 2,495.00 (5.00)	**Shale** Dark grey to black, micromicaceous, pyritic in places, rarely laminated to sub blocky, very calcareous, common calcite mineralised fractures and occasional loose crystals. Common slickensides. Minor marlstone stringers with occasional fossiliferous fragments.
2,495.00 to 2,500.00 (5.00)	**Shale** As above, with less fracturing.
2,500.00 to 2,505.00 (5.00)	**Shale** Dark grey, very calcareous to marly, micromicaceous, hard, common calcite healed microfractures, slickensides. Minor lighter grey marly stringers, trace chalky calcareous lenses up to 2 mm wide.
2,505.00 to 2,510.00 (5.00)	**Shale** Dark grey to black, micromicaceous, pyritic with occasional microcrystalline pyrite, very calcareous, laminated to sub blocky, slickensides, trace calcite healed microfractures, trace loose calcite crystals up to 3 mm. Minor stringers of lighter brownish grey marlstone, very calcareous, trace calcareous white specks.
2,510.00 to 2,515.00 (5.00)	**Shale** As above, with trace black, shiny, carbonaceous?, angular fragments. Slightly less marlstone than above.

2,515.00 to 2,520.00 (5.00)	**Shale** Dark grey, fissile, micromicaceous, pyritic, hard, calcareous, marly in places grading to marlstone. Trace calcite healed microfractures. Lesser marlstone, brownish grey, softer, very calcareous.
2,520.00 to 2,525.00 (5.00)	**Shale** As above, platy to blocky, fracture fill more common. Rare rounded loose quartz crystals. Lesser distinct dark grey marlstone, very calcareous, fossiliferous in places, calcareous white specks, trace slickensides.
2,525.00 to 2,530.00 (5.00)	**Marlstone** Brownish grey to dark grey, soft, trace soft chalky white calcareous wisps, trace slickensides. Minor dark grey shale as above.
2,530.00 to 2,535.00 (5.00)	**Marlstone** Medium to dark grey, very calcareous, soft, fossiliferous in places, common soft chalky white calcareous flecks. Minor dark brownish grey marlstone, rarely fossiliferous. Occasional calcite healed microfractures. Minor hard fissile dark grey shale as above.
2,535.00 to 2,540.00 (5.00)	**Marlstone** Brownish grey to dark grey, fossiliferous in places, occasional calcareous white specks. Minor soft, grey, fossiliferous marlstone with occasional soft chalky white calcareous specks. Minor hard, fissile, dark grey shale as above.
2,540.00 to 2,545.00 (5.00)	**Marlstone** Mixed calcareous marlstones as above. Minor hard, fissile dark grey shale as above.
2,545.00 to 2,550.00 (5.00)	**Marlstone** Dirty dark grey, very calcareous, occasional chalky calcareous white flecks to fossiliferous. Minor dark grey, hard, calcareous, micromicaceous, pyritic. Rare loose calcite crystals? weak acid response but stains dark red.

Nahanni: 2,553.00 MD, 2,457.02 TVD, -2,040.62 SSL

2,550.00 to 2,555.00 (5.00)	**Marlstone** Medium to dark sirty grey, very minor dark grey fissile shale. Minor dolomite, fine to coarse crystalline, bitumen (invert?) plugging intercrystalline porosity. Trace coarse crystalline dolomite rhombs cemented into weakly calcareous/dolomitic marl.
2,555.00 to 2,560.00 (5.00)	**Marlstone/dolomite** Marlstone with minor dark grey fissile shale as above. Minor dolomite, light to medium grey, microcrystalline to coarse crystalline, trace coarse crystalline loose rhombs, poor to fair intercrystalline porosity mostly bitumen filled.

2,560.00 to 2,566.00 (6.00)	**Dolomite** Light to medium grey, microcrystalline to coarse crystalline, medium to coarse crystalline dolomite rhombs, poor intercrystalline porosity with bitumen partially filling pore space (may be gilsonite from invert in some cases). Trace pinpoint porosity. Trace loose clear hexagonal quartz crystals. Minor cuttings of calcareous dark grey fissile shale and marlstone, presumed to be cavings.

Geological Report

on

Paramount et al Liard
K-29A intermediate hole

Well Reached Total Depth on

for

Paramount Resources Ltd.

Prepared For: Paul Price
Paramount Resources

Prepared By: Ken Glover
Chalce Resources

Ken Glover

Kickoff on Aug 25, 2005 at 5:00 hours. Reach 2520.62 m (MD) on Sept 1, 2005 at 2:30 hours.
Drill string stuck in hole at 2520.62 m, worked at getting unstuck until Sept 6, 2005.
Run abondonment plug from 2435 to 2290 m on Sept 7, 2005.
Begin drilling sidetrack well on Sept 8, 2005.

Well Summary

Storage Units: Metric

Well Information

Operator:	**Paramount Resources Ltd.**
Well Name:	**Paramount et al Liard**
Location:	**K-29A intermediate hole**
UWI:	300K-29A-6030-123302
Pool:	N/A
Field:	Liard K-29
State / Province:	Northwest Territories
Country:	Canada
License Number:	1125
Well Status:	**abandoned**

Surface Co-ordinates

Hole Type: Deviated **Fault Indicator:**

Latitude: 60 28 41.040 **Longitude:** 123 35 4.100

N / S: 6704591.45
E / W: 467870.02

Bottom Hole Co-ordinates

Latitude: **Longitude:**

N / S:
E / W:

Elevations

		Reference:	Ground
Ground Elevation:	409.60	**Kelly Bushing to Ground:**	6.80
Kelly Bushing Elevation:	416.40	**Cut (-):**	
Casing Flange Elevation:		**Fill (+):**	

Total Depth

	Measured Depth	**True Vertical Depth**
Total Depth Driller (Tally) :	2,520.62	2,418.92
Total Depth Driller (Strap or SLM):		
Total Depth Logger:		

Miscellaneous Depths

Plugback Depth:	2,435.00	**Water Depth Reference:**	
Sidetrack Depth:	2,290.00	**Water Depth:**	

Well Summary

Drilling Contractor: Akita Drilling Rig #58 **Spud Date:** Aug 25, 2005 @ 05:00

Rig Release Date: **Total Depth Date:**

Cores

#	Formation	Interval	Cut	Recovered	%

Casing Summary

Casing Type	Casing Size	Landed Depth	Hole Size

Logging Summary

Company	Engineer	Total Depth (MD)	Logging tools

Bit Record Table (IADC Grading System)

Storage Units: Metric

**** For more detailed Bit Information refer to Bit Record ****

Bit #	Make	Type	Size	Depth In	Depth Out	Made	Hours	Avg. P.R.	I.A.D.C. Bit Condition								
									I	O	MDC	Loc	B	G	ODC	RP1	RP2
1	Hughes	MX20G	216.0	1,859.7	2,287.2	427.5	53.50	7.99	5	7	WT	A	4	2	BT	PR	
2	Hughes	MX30G	216.0	2,287.2	2,463.5	176.2	34.25	5.15	6	7	BT	A	F	8	PB		
3	Hughes	MX-30G	216.0	2,463.0	2,520.0	57.0	10.50	5.43									

Total Rotating Hours: 98.25

Bit Record

Pump Data

Pump #1	**Model:**	**Size:**	**Type:**
	Pump Rod Diameter:	**Liner Size:**	**Stroke Length:**
	Efficiency Rating (%):		
Pump #2	**Model:**	**Size:**	**Type:**
	Pump Rod Diameter:	**Liner Size:**	**Stroke Length:**
	Efficiency Rating (%):		

Bit Data

Storage Units: Metric

Bit #: 1 **Make:** Hughes **Type:** MX20G **IADC Series / Type:** /
Serial #: 6038026 **Size:** 216.0 **Jets / Nozzles:** 11.90 / / / **T.F.A.:**
Depth In: 1,859.73 **Depth Out:** 2,287.22 **Made:** 427.49 **Rotating Hours:** 53.50
Average Drill Rate: 7.90 **Total Rotating Hours:** 53.50
Bit Grade / Condition **I.A.D.C.:** 5 / 7 / WT / A / 4 / 2 / BT / PR / **T / B / G:** / /
Remarks:
Formations Drilled: Lower Besa River, Muskwa
Drilling Parameters

	Min	Max		Min	Max
Force on Bit:	/		**R.P.M.:**	/	
Pump 1 S.P.M. / Volume:	/		**Pump 2 S.P.M. / Volume:**	/	
S.P.P.:	/		**Fluid Density:**	/	
Drift Angle:	/		**Funnel Viscosity:**	/	

Annular Velocity	**Drill Collars:**	**HeavyWeight Drill Pipe:**	**Drill Pipe:**
Bottoms Up	**Depth:**	**Theoretical:**	**Actual:**

Bit #: 2 **Make:** Hughes **Type:** MX30G **IADC Series / Type:** /
Serial #: 6037748 **Size:** 216.0 **Jets / Nozzles:** / / / **T.F.A.:**
Depth In: 2,287.22 **Depth Out:** 2,463.45 **Made:** 176.23 **Rotating Hours:** 34.25
Average Drill Rate: 5.15 **Total Rotating Hours:** 87.75
Bit Grade / Condition **I.A.D.C.:** 6 / 7 / BT / A / F / 8 / PB / / **T / B / G:** / /
Remarks:
Formations Drilled: Muskwa
Drilling Parameters

	Min	Max		Min	Max
Force on Bit:	/		**R.P.M.:**	/	
Pump 1 S.P.M. / Volume:	/		**Pump 2 S.P.M. / Volume:**	/	
S.P.P.:	/		**Fluid Density:**	/	
Drift Angle:	/		**Funnel Viscosity:**	/	

Annular Velocity	**Drill Collars:**	**HeavyWeight Drill Pipe:**	**Drill Pipe:**
Bottoms Up	**Depth:**	**Theoretical:**	**Actual:**

Bit Data

Storage Units: Metric

Bit #:	3	**Make:**	Hughes	**Type:**	MX-30G	**IADC Series / Type:**	/
Serial #:	6037749	**Size:**	216.0	**Jets / Nozzles:**	/ / /	**T.F.A.:**	
Depth In:	2,463.00	**Depth Out:**	2,520.00	**Made:**	57.00	**Rotating Hours:**	10.50
				Average Drill Rate:	5.43	**Total Rotating Hours:**	98.25
Bit Grade / Condition		**I.A.D.C.:**	/ / / / / / / /			**T / B / G:**	/ /
Remarks:	abandoned						
Formations Drilled:							

Drilling Parameters

	Min	Max		Min	Max
Force on Bit:	/		**R.P.M.:**	/	
Pump 1 S.P.M. / Volume:	/		**Pump 2 S.P.M. / Volume:**	/	
S.P.P.:	/		**Fluid Density:**	/	
Drift Angle:	/		**Funnel Viscosity:**	/	

Annular Velocity	**Drill Collars:**	**HeavyWeight Drill Pipe:**	**Drill Pipe:**
Bottoms Up	**Depth:**	**Theoretical:**	**Actual:**

Directional Survey Points

Storage Units: Metric

Survey Type: /

Measured Depth	T.V.D.	Drift Angle (º)	Azimuth (º)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity
1,854.00	1,847.33	4.500	69.48				
1,864.37	1,857.65	6.900	45.60				
1,874.77	1,867.95	9.300	37.30				
1,881.50	1,874.56	11.700	26.00				
1,890.96	1,883.78	14.100	31.00				
1,900.35	1,892.86	15.700	33.60				
1,909.85	1,901.96	17.400	32.30				
1,919.42	1,911.04	19.500	30.20				
1,928.93	1,919.94	21.800	27.00				
1,938.53	1,928.79	23.900	22.80				
1,948.15	1,937.49	26.400	21.70				
1,957.62	1,945.89	28.700	21.20				
1,967.14	1,954.19	29.900	20.50				
1,976.74	1,962.49	30.500	20.10				
1,986.09	1,970.59	29.400	17.80				
1,995.43	1,978.78	28.200	14.60				
2,004.94	1,987.17	27.900	13.20				
2,014.44	1,995.57	27.700	13.00				
2,023.94	2,004.01	27.000	12.00				
2,033.56	2,012.60	26.600	11.30				
2,042.92	2,020.94	27.300	10.10				
2,052.35	2,029.29	28.000	9.40				
2,061.84	2,037.66	28.300	10.20				
2,071.51	2,046.17	28.400	12.30				
2,081.06	2,054.54	29.200	14.00				
2,090.59	2,062.87	29.000	15.60				
2,099.43	2,070.62	28.400	17.80				
2,109.43	2,079.42	28.300	17.30				
2,119.14	2,087.96	28.500	17.60				
2,128.80	2,096.45	28.600	17.50				
2,138.25	2,104.75	28.400	16.60				
2,147.92	2,113.28	28.000	14.60				
2,157.55	2,121.80	27.500	13.60				
2,167.10	2,130.30	26.600	12.10				
2,176.71	2,138.90	26.600	11.00				
2,186.18	2,147.38	26.200	10.40				

Directional Survey Points

Storage Units: Metric

Survey Type: /

Measured Depth	T.V.D.	Drift Angle (º)	Azimuth (º)	+N / -S Distance	+E / -W Distance	Vertical Section	DogLeg Severity
2,195.83	2,156.07	25.400	9.80				
2,205.31	2,164.64	25.100	14.00				
2,214.96	2,173.34	26.100	16.60				
2,224.47	2,181.87	26.600	19.30				
2,233.70	2,190.08	27.700	20.20				
2,243.31	2,198.52	29.500	21.80				
2,252.79	2,206.69	31.400	19.70				
2,262.33	2,214.79	32.400	18.00				
2,271.82	2,222.78	32.900	17.00				
2,281.47	2,230.84	33.800	15.40				
2,290.86	2,238.61	34.600	14.30				
2,300.44	2,246.46	35.200	12.90				
2,310.01	2,254.27	35.500	12.90				
2,319.56	2,262.06	35.200	14.30				
2,328.98	2,269.78	34.600	14.40				
2,338.57	2,277.73	33.500	14.50				
2,348.09	2,285.70	32.900	13.70				
2,357.63	2,293.68	33.400	12.60				
2,367.24	2,301.66	34.300	10.60				
2,376.76	2,309.49	35.100	9.70				
2,386.15	2,317.19	34.700	9.00				
2,395.79	2,325.10	35.000	5.20				
2,405.21	2,332.76	36.400	1.40				
2,415.00	2,340.56	37.900	359.00				
2,424.46	2,347.98	38.800	357.90				
2,433.82	2,355.24	39.400	354.50				
2,443.24	2,362.44	41.000	350.20				
2,452.64	2,369.48	42.000	344.10				
2,462.13	2,376.48	43.000	341.10				
2,471.46	2,383.30	43.100	337.00				
2,481.05	2,390.31	42.900	332.60				
2,490.35	2,397.11	43.300	327.70				
2,499.93	2,404.06	43.600	325.00				

Drilling Fluid Type:	Produced Water	**From:**	1,853	**To:**	1,860
Drilling Fluid Type:	Invert	**From:**	1,860	**To:**	2,520

Work Schedule

Storage Units: Metric

Company: Chalce Resources
Geologist: **Ken Glover**

Work Performed	**From:**	Aug 25, 2005	**To:**	Sep 01, 2005
Depths Logged	**From:**	1,854.0	**To:**	2,520.0

Remarks: Arrive onsite on Aug 21, 2005. Kickoff on Aug 25, 2005. Reach TD of 2520.62 m on Sept 1, 2005. Run abondonment plug from 2435 to 2290 m on Sept 7, 2005.

1,855.00 to 1,860.00 (5.00)	**Shale** Mainly medium gray to dark gray to green gray, soft, occasional bentonitic, weakly fissile, micromicaceous, silty in places, minor calcareous; trace light gray to medium gray siltstone stringers, moderately calcareous matrix ? with quartz grains. No shows.
1,860.00 to 1,865.00 (5.00)	**Shale** Shale with siltstone stringers as above. Trace microcrystalline pyrite along siltstone bedding, especially at contacts with shale. Trace micro organic fragments (angular and black) in siltstone stringers.
1,865.00 to 1,870.00 (5.00)	**Shale** Shale with quartzose siltstone stringers as above.
1,870.00 to 1,875.00 (5.00)	**Shale** Medium gray to occasional green gray and bentonitic, silty in places, micromicaceous. Trace medium brown gray calcareous marlstone. Trace dark gray to black shale. Trace slickensides.
1,875.00 to 1,880.00 (5.00)	**Shale** Medium gray to occasional green gray and bentonitic, silty in places, micromicaceous. Trace light gray calcareous quartzose siltstone, tight, no shows.
1,880.00 to 1,885.00 (5.00)	**Shale** Shale as above. Trace brown gray marlstone. Trace slickensides.
1,885.00 to 1,890.00 (5.00)	**Shale** Shale as above. Very rare brown gray marlstone.
1,890.00 to 1,895.00 (5.00)	**Shale** Medium gray to green gray and bentonitic, micromicaceous, moderately indurated. Minor brown gray earthy marlstone.
1,895.00 to 1,900.00 (5.00)	**Shale** Shale as above.
1,900.00 to 1,905.00 (5.00)	**Shale** Medium gray to brown gray, micromicaceous, weak to moderately fissile. Minor light to medium gray calcareous siltstone stringers, tight, no shows. Rare dark gray to black shale, laminated, fissile.
1,905.00 to 1,910.00 (5.00)	**Shale** Medium gray to brown gray shale as above. Trace disseminated pyrite in medium gray shale. Trace black organic ? flecks in shale.
1,910.00 to 1,915.00 (5.00)	**Shale** Shale as above.
1,915.00 to 1,920.00 (5.00)	**Shale** Medium gray to brown gray, micromicaceous, weak to moderately fissile, common clusters of black organic ? flecks. Trace light gray to brown gray marlstone. Trace slickensides.

1,920.00 to 1,925.00 (5.00)	**Shale** Shale as above. Trace light gray to brown gray marlstone.
1,925.00 to 1,930.00 (5.00)	**Shale** Medium gray to brown gray shale as above. Rare light gray to brown gray marlstone.
1,930.00 to 1,935.00 (5.00)	**Shale** Medium gray to brown gray, micromicaceous, moderately fissile, Rare non calcareous quartzose siltstone stringers.
1,935.00 to 1,940.00 (5.00)	**Shale** Shale as above with indurated non calcareous silty bituminous. Trace brown gray marlstone. Trace slickensides.
1,940.00 to 1,945.00 (5.00)	**Shale** Medium gray, micromicaceous, weak to moderately fissile. Minor light to medium gray calcareous siltstone stringers. Trace slickensides.
1,945.00 to 1,950.00 (5.00)	**Shale** Medium gray shale as above.
1,950.00 to 1,955.00 (5.00)	**Shale** Medium to dark gray, micromicaceous, fissile, with minor dark gray to black, fissile laminations. Weak to moderately laminated. Trace siltstone laminations with trace disseminated pyrite. Trace slickensides.
1,955.00 to 1,960.00 (5.00)	**Shale** Medium to dark gray with minor green gray and bentonitic, micromicaceous, fissile, slightly calcareous.
1,960.00 to 1,965.00 (5.00)	**Shale** Shale as above. Trace silty calcareous stringers.
1,965.00 to 1,970.00 (5.00)	**Shale** Dark gray to black, fissile, micromicaceous in places with trace microfractures and minor slickensides, some slickensided surfaces are curved.Trace light to medium gray very calcareous silty marlstone with occasional milky white flecks (shell fragments ?)
1,970.00 to 1,975.00 (5.00)	**Shale** Dark gray shale as above. Increased very silty marlstone.
1,975.00 to 1,980.00 (5.00)	**Shale** Dark gray shale with silty marlstone as above.
1,980.00 to 1,985.00 (5.00)	**Shale** Gray, laminated with black wisps along laminations, common microcrystalline pyrite nodules <0.1 mm diameter, silty in places, trace dark gray to black shale laminations. Occasional light to medium gray siltstone stringers or laminations in shale, micromicaceous, occasional calcareous. No shows.

1,985.00 to 1,990.00 (5.00)	**Shale** Gray shale as above but with increased dark gray to black shale laminations. Trace microfractures. One visible calcite fracture fill shows some calcite mineral cleavage, 0.5 mm thickness preserved in contact with shale, has associated irregular microfractures emanating from a smooth and regular primary fracture surface.
1,990.00 to 1,995.00 (5.00)	**Shale** Medium gray to green gray and bentonitic with minor brown gray, micromicaceous, occasional laminated, trace black shale.
1,995.00 to 2,000.00 (5.00)	**Shale** Shale as above. Slightly calcareous in places.
2,000.00 to 2,005.00 (5.00)	**Shale** Shale as above.
2,005.00 to 2,010.00 (5.00)	**Shale** Medium gray to green gray and bentonitic to minor brown gray, micromicaceous, occasional laminated. Common black organic flecks.Trace very thin (<0.05 mm thick) calcite healed microfractures.
2,010.00 to 2,015.00 (5.00)	**Shale** Shale as above.
2,015.00 to 2,020.00 (5.00)	**Shale** Medium gray, dark gray in places, very thin (0.05 mm thick) light gray siltstone laminae in places, micromicaceous in places, moderately fissile
2,020.00 to 2,025.00 (5.00)	**Shale** As above. Increasing dark gray shale, usually laminated. Trace curvilinear slickensided surfaces.
2,025.00 to 2,030.00 (5.00)	**Shale** Medium to dark gray with occasional black shale. Rare calcite fracture fill up to 0.2 mm thick, translucent with a smooth undulating surface. Trace clacareous light gray siltstone.
2,030.00 to 2,035.00 (5.00)	**Shale** As above. Increasing finely laminated, fissile black shale. Trace dolomitic light gray siltstone.
2,035.00 to 2,040.00 (5.00)	**Shale** Medium gray to black, variably laminated, variably fissile, occasionally micromicaceous. Trace microcrystalline pyrite. Trace calcite fracture fill up to 0.2 mm thick.
2,040.00 to 2,045.00 (5.00)	**Shale** As above. Trace light gray soft marlstone.

2,045.00 to 2,050.00 (5.00)	**Shale** Medium gray with trace dark gray shale, occasionally micromicaceous, weakly fissile. Trace water sensitive light gray non calcareous shale with wisps of black organics. Trace calcareous.
2,050.00 to 2,055.00 (5.00)	**Shale** As above with increasing dark gray shale.
2,055.00 to 2,060.00 (5.00)	**Shale** As above.
2,060.00 to 2,065.00 (5.00)	**Shale** Medium to dark gray, weakly fissile, micromicaceous. Trace calcite healed microfractures. trace disseminated pyrite. Trace fissile, very finely laminated black shale.
2,065.00 to 2,070.00 (5.00)	**Shale** As above.
2,070.00 to 2,075.00 (5.00)	**Shale** As above. Increasing black shale.
2,075.00 to 2,080.00 (5.00)	**Shale** As above.
2,080.00 to 2,085.00 (5.00)	**Shale** Medium gray, laminated with 0.05 to 0.1 mm thick laminations of medium gray and black and dark gray shale bands. Fissile, micromicaceous. Trace very small (<0.05 mm diameter) milky white nodules in banding.
2,085.00 to 2,090.00 (5.00)	**Shale** As above.
2,090.00 to 2,095.00 (5.00)	**Shale** Medium to dark gray to black banded shale. Banding is less common than above. Micromicaceous.
2,095.00 to 2,100.00 (5.00)	**Shale** medium gray to dark gray. Trace black shale. Micromicaceous.
2,100.00 to 2,105.00 (5.00)	**Shale** As above. Trace slickensides.
2,105.00 to 2,110.00 (5.00)	**Shale** Medium gray to dark gray. Trace black shale. Occasionally laminated, weakly fissile, micromicaceous.
2,110.00 to 2,115.00 (5.00)	**Shale** As above.
2,115.00 to 2,120.00 (5.00)	**Shale** Dark gray to medium gray with occasional laminated black shale. Fissile. Micromicaceous.

2,120.00 to 2,125.00 (5.00)	**Shale** Medium gray to dark gray. Weakly fissile to fissile.
2,125.00 to 2,130.00 (5.00)	**Shale** As above. Poor sample.
2,130.00 to 2,135.00 (5.00)	**Shale** Medium gray. Trace dark gray shale. Micromicaceous.
2,135.00 to 2,140.00 (5.00)	**Shale** Dark gray to medium gray, variably fissile. Medium gray shale is micromicaceous, dark gray shale less show of oil. Trace disseminated pyrite in medium gray shale.
2,140.00 to 2,145.00 (5.00)	**Shale** As above, but more medium gray shale.
2,145.00 to 2,150.00 (5.00)	**Shale** As above, but increasing dark gray shale. Trace slickensides.
2,150.00 to 2,155.00 (5.00)	**Shale** As above.
2,155.00 to 2,160.00 (5.00)	**Shale** Medium to dark gray, micromicaceous, variably fissile, trace slickensides
2,160.00 to 2,165.00 (5.00)	**Shale** As above
2,165.00 to 2,170.00 (5.00)	**Shale** medium to dark gray, micromicaceous, fissile, variably laminated, occasional slickensides, trace translucent calcite fracture fill with some up to 0.4 mm thick. Some fracture mineralisation contacts are preserved, showing fractures at about 45 degrees to laminations and calcite crystal growth at about 45 degrees to fracture face. Minor light gray marly siltstone.
2,170.00 to 2,175.00 (5.00)	**Shale** Medium to dark gray, micromicaceous, fissile, variably laminated, trace microcrystalline pyrite in dark gray shale. Rare calcite healed micro fractures. Trace water sensitive light gray shale with black organic ? wisps.
2,175.00 to 2,180.00 (5.00)	**Shale** Medium to dark gray, micromicaceous, fissile, variably laminated, trace unattached translucent calcite crystals. Rare Black Shale: micromicaceous, laminated, fissile. Rare light gray marly very fine grained sand to siltstone.
2,180.00 to 2,185.00 (5.00)	**Shale** As above with more of the dark gray shale component. Trace calcite healed microfractures.
2,185.00 to 2,190.00 (5.00)	**Shale** As above.

2,190.00 to 2,195.00 (5.00)	**Shale** Medium gray with minor dark gray, micromicaceous, fissile, occasionally laminated. Trace marly siltstone as above.
2,195.00 to 2,200.00 (5.00)	**Shale** Dark gray to medium gray, micromicaceous, fissile with minor laminated black shale stringeres. Trace microcrystalline pyrite, especially in black shale.
2,200.00 to 2,205.00 (5.00)	**Shale** Medium to dark gray, fissility and moderate lamination in dark gray shale, weak fissility in medium gray shale. Hard, micromicaceous. Rare light gray marly siltstone.
2,205.00 to 2,210.00 (5.00)	**Shale** As above.
2,210.00 to 2,215.00 (5.00)	**Shale** Dark gray to medium gray, micromicaceous, variable fissilty. Occasional light gray marly siltstone.
2,215.00 to 2,220.00 (5.00)	**Shale** Medium gray, micromicaceous, trace microcrystalline pyrite, slickensides, fissile, moderately laminated.
2,220.00 to 2,225.00 (5.00)	**Shale** As above. Trace fracture fill: beige, dolomitic, translucent, up to 0.4 mm thick with a rough surface.
2,225.00 to 2,230.00 (5.00)	**Shale** Very dark gray to black with some medium gray shale. Sub blocky to fissile, micromicaceous, common slickensides throughout, laminated. Some very dark gray to black silty marlstone, dolomitic in part.
2,230.00 to 2,235.00 (5.00)	**Shale** Very dark gray to black with occasional medium gray shale but less than above. Common slickensides throughout, laminated, fissile, occasional cubic pyrite crystals 0.01 to 0.03 mm across in black shale laminae. Minor dark gray silty marlstone as above but more calcareous.

Muskwa: 2,238.00 MD, 2,193.90 TVD, -1,777.50 SSL

2,235.00 to 2,240.00 (5.00)	**Shale** Very dark gray to black shale, micromicaceous, laminated, common slickensides throughout, common microcrystalline pyrite cubes along laminae. Trace calcite healed microfractures.
2,240.00 to 2,245.00 (5.00)	**Shale** Black shale, fissile, moderately indurated, occasional microcrystalline pyrite, also trace disseminated pyrite, laminated, common slickensides. Occasional black silty marlstone.

2,245.00 to 2,250.00 (5.00)	**Shale** Black, fissile, micromicaceous, weak to moderate lamination, common isolated cubic pyrite crystals along laminations. Trace microcrystalline pyrite clusters. Occasional very hard dark gray siltstone. Trace slickensides.
2,250.00 to 2,255.00 (5.00)	**Shale** As above.
2,255.00 to 2,260.00 (5.00)	**Shale** As above.
2,260.00 to 2,265.00 (5.00)	**Shale** Dark gray to black, fissile, micromicaceous, occasional microcrystalline pyrite. Trace slickensides.
2,265.00 to 2,270.00 (5.00)	**Shale** Black with minor dark gray. Trace clusters of microcrystalline pyrite. Rare massive pyrite chunks to 2 mm across.
2,270.00 to 2,275.00 (5.00)	**Shale** Black to dark gray, micromicaceous, siliceous, fissile, laminated in places, occasional microcrystalline pyrite, Trace hard light to medium gray shale. Common light gray calcareous cemented Siltstone, hard, quartzose.
2,275.00 to 2,280.00 (5.00)	**Shale** Black to dark gray, fissile, hard, siliceous, occasional hard black grains of chert? that is silica cemented with microcrystalline calcite. Occasional microcrystalline pyrite. Variably laminated.
2,280.00 to 2,285.00 (5.00)	**Shale** Dark gray to black, micromicaceous, fissile, trace disseminated pyrite along laminations in black shale. Trace pyrite mineralisation along fracture surfaces. Slickensided fracture surface. Minor calcareous silty bituminous containing hard black chert? grains. Rare pyrite nodules <0.1 mm thick.
2,285.00 to 2,290.00 (5.00)	**Shale** Dark gray to black as above, hard. Trace calcite healed microfractures. Pyritic. Common microcrystalline pyrite nodules. Trace Marlstone, medium grey, dolomitic
2,290.00 to 2,295.00 (5.00)	**Shale** Dark gray to black, very hard, siliceous, pyritic, trace calcite healed microfractures.
2,295.00 to 2,300.00 (5.00)	**Shale** Black to dark gray, occasional calcareous silty bituminous, rare loose quartz crystals, common pyrite throughout.
2,300.00 to 2,305.00 (5.00)	**Shale** Black to dark gray, micromicaceous, pyritic, siliceous and hard. Occasional dark gray siltstone stringers ? with hard black grains and calcite cement. Trace quartz healed microfractures.

2,305.00 to 2,310.00 (5.00)	**Shale** Black with minor dark gray. Oily and very hard to clean. Hard, fissile to platy, micromicaceous, pyritic, trace quartz healed microfractures.
2,310.00 to 2,315.00 (5.00)	**Shale** Dark gray with lesser black shale. Micromicaceous, pyritic, fissile to platy, hard. Trace quartz healed microfractures. Trace dark gray siltstone with hard black grains and calcite cement.
2,315.00 to 2,320.00 (5.00)	**Shale** Dark gray with minor black shale bituminous as above. Occasional dark gray calcareous siltstone.
2,320.00 to 2,325.00 (5.00)	**Shale** Very dark gray, micromicaceous, micro pyritic, hard. Dark gray marlstone, silty in places, very calcareous.
2,325.00 to 2,330.00 (5.00)	**Shale** Very dark gray, micromicaceous, micro pyritic, fissile, hard.
2,330.00 to 2,335.00 (5.00)	**Shale** As above
2,335.00 to 2,340.00 (5.00)	**Shale** As above.
2,340.00 to 2,345.00 (5.00)	**Shale** Very dark gray, micromicaceous, common microcrystalline pyrite, occasional pyrite nodules, hard, fissile. Minor very dark gray calcareous marlstone, silty in places.
2,345.00 to 2,350.00 (5.00)	**Shale** Very dark gray, micromicaceous, pyritic, hard, fissile, oily. Minor very dark gray calcareous marlstone, silty in places.
2,350.00 to 2,355.00 (5.00)	**Shale** As above.
2,355.00 to 2,360.00 (5.00)	**Shale** Very dark gray, fissile, pyritic, hard, trace slickensides, oily. Minor dark gray silty marlstone.
2,360.00 to 2,365.00 (5.00)	**Marlstone** Dark gray, silty in places, pyritic, oily. Minor dark gray shale, fissile, micromicaceous, pyritic.
2,365.00 to 2,370.00 (5.00)	**Shale** Dark gray to black, pyritic in places, laminated to platy. Trace calcite healed microfractures, most cuttings vertically through shale laminations. Minor dark gray silty marlstone.

2,370.00 to 2,375.00 (5.00)	**Shale** Black to very dark gray, platy, micromicaceous, pyritic, moderately calcareous, trace calcite healed microfractures and loose calcite crystals. Trace dark gray silty bituminous.
2,375.00 to 2,380.00 (5.00)	**Shale** Black to dark gray, laminated to sub blocky, pyritic, micromicaceous, occasional white calcite grains and silty bituminous. Trace calcite healed microfractures and loose calcite crystals up to 0.1 mm thick.
2,380.00 to 2,385.00 (5.00)	**Shale** Dark gray to black, calcareous to very calcareous, micromicaceous, pyritic, laminated to sub blocky, trace calcite healed microfractures up to 0.5 mm thick.
2,385.00 to 2,390.00 (5.00)	**Shale** Black to dark gray, traceblacky loose pyrite clasts, calcareous, micromicaceous, trace slickensides, trace silty bituminous, interbedded with minor dark to medium gray marlstone, occasionally silty, very calcareous, occasional very fine laminae of opaque white calcite.
2,390.00 to 2,395.00 (5.00)	**Shale** As above, but only minor marlstone interbeds. Trace loose calcite crystals.
2,395.00 to 2,400.00 (5.00)	**Shale** Very dark gray, micromicaceous, pyritic, trace loose calcite crystals, trace slickensides, trace calcite healed microfractures, very calcareous, trace white calcareous specks.
2,400.00 to 2,405.00 (5.00)	**Shale** Very dark gray, micromicaceous, pyritic in places, trace loose calcite crystals, rare loose subrounded quartz crystals. Minor black shale, micromicaceous, pyritic, fissile, laminated to platy, calcareous.
2,405.00 to 2,410.00 (5.00)	**Shale** Black. fissile, laminated to platy, very calcareous, pyritic, micromicaceous, trace loose subrounded quartz crystals, trace slickensides, trace silty bituminous.
2,410.00 to 2,415.00 (5.00)	**Shale** Dark gray with black, fissile, pyritic, micromicaceous shale stringers, very calcareous, pyritic, trace calcite healed microfractures, trace loose calcite crystals, trace opaque angular quartz crystals. Occasional silty bituminous.
2,415.00 to 2,420.00 (5.00)	**Shale** Dark gray, laminated to platy, moderately fissile, very calcareous, micromicaceous, pyritic, trace slickensides, silty in places, rare calcite healed microfractures. Minor stringers of medium gray marlstone, silty in places.
2,420.00 to 2,425.00 (5.00)	**Shale** Black, sub blocky to platy, micromicaceous, pyritic, hard, trace slickensides, trace silty bituminous, calcareous to very calcareous.

2,425.00 to 2,430.00 (5.00)	**Shale** As above but softer and less marlstone.
2,430.00 to 2,435.00 (5.00)	**Shale** Very dark gray to black, very calcareous, micromicaceous, pyritic, trace light to medium gray silty marlstone. Rare loose bituminous of drusy quartz fracture fill.
2,435.00 to 2,440.00 (5.00)	**Shale** Dark gray, platy, very calcareous, silty in places, micromicaceous, pyritic, trace light to medium gray silty marlstone.
2,440.00 to 2,445.00 (5.00)	**Shale** Dark with minor medium gray, micromicaceous, weakly fissile, laminated to platy, trace calcite healed microfractures, trace microcrystalline pyrite, trace milky white calcareous specks, trace slickensides. Trace light to medium gray marlstone, silty in places.
2,445.00 to 2,450.00 (5.00)	**Shale** Dark gray, micromicaceous, trace slickensides. Minor light to medium gray marlstone, dolomitic in places. Rare green gray bentonitic shale, dolomitic in part.
2,450.00 to 2,455.00 (5.00)	**Shale** Dark gray with trace medium gray stringers. Micromicaceous, hard, siliceous, very calcareous. Trace slickensides. Trace pyrite chinks <1 mm across. Common calcite healed microfractures up to 1 mm thick. Trace loose clacite crystals up to 0.8 mm across. Rare green gray bentonitic shale, weakly calcareous.
2,455.00 to 2,460.00 (5.00)	**Shale** Very dark gray to black, platy to sub blocky, hard, calcareous, common calcite healed microfractures up to 2 mm aperture. Trace loose calcite crystals, trace pyrite clasts. Trace light gray calcareous marlstone.
2,463.45 to 2,465.00 (1.55)	**Shale** Dark gray, platy to sub blocky, variably fissile, micromicaceous, calcareous, hard, pyritic in places, trace calcite healed microfractures, common loose calcite crystals, rare loose quartz crystals. Trace lisght to medium gray dolomitic marlstone, silty in places.
2,465.00 to 2,470.00 (5.00)	**Shale** Dark gray as above, but calcite fracture fill and loose crystals are common. Trace slickensides, trace calcareous specks. Trace light to medium gray, platy, marly siltstone stringers.
2,470.00 to 2,475.00 (5.00)	**Shale** Dark gray, micromicaceous, pyritic in places, platy to laminated, very calcareous, hard, trace calcite healed microfractures associated with thicker (up to 0.5 mm) calcite filled fractures.

2,475.00 to 2,480.00 (5.00)	**Shale** Dark gray, micromicaceous, trace calcareous white specks, trace pyritic zones, trace calcite healed fractures to 1 mm aperture, trace clickensides. Trace light to medium gray silty marlstone.
2,480.00 to 2,485.00 (5.00)	**Shale** Dark gray and fractured as above with trace silty marlstone as above. Very hard, very calcareous.
2,485.00 to 2,490.00 (5.00)	**Shale** Dark gray, micromicaceous, platy variably fissile, calcareous, trace calcite healed microfractures and common loose calcite crystals. Occasional stringers of common (10 to 25% by volume) calcareous milky white flecks. Minor light to medium gray marly siltstone.
2,490.00 to 2,495.00 (5.00)	**Shale** Dark gray with trace dark brownish gray, common calcite fracture fill throughout from <0.05 mm to >1 mm. Laminated to platy with occasional very pyritic laminae. Trace gray marly siltstone that occasionally grades to very fine sandstone, calcareous cemented.
2,495.00 to 2,500.00 (5.00)	**Shale** Dark gray, non calcareous to calcareous, hard, calcite fracture fill from <0.05 mm to about 1 mm thick, trace slickensides.
2,500.00 to 2,505.00 (5.00)	**Shale** Dark gray, fissile, laminated to platy, with abundant calcite healed microfractures and common loose calcite crystals, occasionallly euhedral in crystal form. Some fracture surfaces show smeared calcite veneers.
2,505.00 to 2,510.00 (5.00)	**Shale** Dark gray as above. Abundant fractures as above.
2,510.00 to 2,515.00 (5.00)	**Shale** Dark gray, micromicaceous, trace very pyritic lenses, abundant calcite healed microfractures (0.01 mm to 1 mm) with loose calcite crystals throughout.
2,515.00 to 2,519.00 (4.00)	**Shale** Dark gray and fractured as above, with trace slickensides.

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Wednesday, August 24, 2005	**Well Report #**	1
Report To:	Paul Price / Craig Chappell	**Report From:**	Ken Glover
Report Period:	Aug. 23 @ 8:00 to Aug. 24 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	N/A	**Day From Kick Off:**	N/A
Ground Elevation:	409.60 m	**K.B. Elevation:**	418.80 m
24:00 Hour Depth:	1855.63 m (MD)	**Formation:**	Lower Besa River

24 Hour Progress: 0.13 m
Average Drilling Rate: N/A
24:00 Hour Status: Pulling out of hole to inspect mill bit.

8:00 Hour Depth: 1859.00 (MD) **Formation:** Lower Besa River
Average Drilling Rate: 0.5 metres/hour
8:00 Hour Status: Milling window in casing.

Operations Summary Last 24 Hour Period: Set whipstock @ 1853.05 m @ 10:00 hrs 8/23/05. Begin to mill through casing @ 11:00 hrs with mill bit and gyroscope assembly. Top of window milled @ 1855.5 m @ 15:00 hrs. Pull out of hole @ 1855.63 m @ 16:00 hrs due to concern over slow milling. Inspect and modify mill bit assembly, begin running in hole @ 21:00 hrs. Resume milling window @ 2:00 hrs 8/24/05. Continue window milling to 1858.00 m.

Forecast Operations Next 24 Hour Period: Continue milling window to 1862.00 m. Drill 8 metres of additional hole with mill bit and gyroscope assembly. Displace mud and changeover to invert mud system. Pull out of hole to pick up directional/MWD tools.

Mud Properties:

Density:	**1055**	**kg/m3**	**Viscosity:**	**28**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**	**6.5**	

Comments: Using produced water from Nahanni Formation during the milling of the casing window.

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Thursday, August 25, 2005	**Well Report #**	2
Report To:	Paul Price / Craig Chappell	**Report From:**	Ken Glover
Report Period:	Aug. 24 @ 8:00 to Aug. 25 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	0
Ground Elevation:	409.60 m	**K.B. Elevation:**	418.80 m
24:00 Hour Depth:	1859.85 m (MD)	**Formation:**	Lower Besa River

24 Hour Progress: 8.65 m
Average Drilling Rate: N/A
24:00 Hour Status: Pulling out of hole to inspect mill bit.

8:00 Hour Depth: 1868.50 (MD) **Formation:** Lower Besa River
Average Drilling Rate: 6 metres/hour
8:00 Hour Status: Begin drilling ahead from kick off point.

Operations Summary Last 24 Hour Period: Finish window milling @ 1859.85 m @ 9:15 hrs on 8/24/05. Change mud system over to invert. Pull out of hole @ 13:30 hrs. Make up directional tools, run in hole at 23:00 hrs with tricone bit #1. Kick off point @ 1859.85 m @ 5:00 hrs on 8/25/05.

Forecast Operations Next 24 Hour Period: Drill ahead with directional and MWD tools.

Mud Properties:

Density:	**940**	**kg/m3**	**Viscosity:**	**47**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

COMMENTS:

Started drilling this morning from kick off point with tricone bit #1.

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Friday, August 26, 2005	**Well Report #**	3
Report To:	Paul Price / Craig Chappell	**Report From:**	Ken Glover
Report Period:	Aug. 25 @ 8:00 to Aug. 26 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	1
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	1887.77 m (MD)	**Formation:**	Lower Besa River

24 Hour Progress: 66.24 m
Average Drilling Rate: 7 metres/hour
24:00 Hour Status: Running in hole with modified directional tools.

8:00 Hour Depth: 1934.74 (MD) **Formation:** Lower Besa River
Average Drilling Rate: 10 metres/hour
8:00 Hour Status: Drilling ahead and building angle.

Operations Summary Last 24 Hour Period: Run in hole with temporary directional assembly. Drill ahead from kick off point to 1887.77 m @ 12:15 hrs on 8/25/05. Pull out of hole and make up final directional assembly. Run in hole. Drill ahead to 1934.74 m @ 8:00 hrs on 8/26/05.

Forecast Operations Next 24 Hour Period: Drill ahead. No further trips out of the hole are expected in the near future.

Deviation Surveys:

Measured Depth (m)	Deviation (degrees)	Azimuth
1873.77	**9.3**	**37.3**

Mud Properties:

Density: **940** **kg/m3** **Viscosity:** **46** **s/L**
Water Loss: **cm3/30 min** **pH:**
Comments:

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Friday, August 27, 2005	**Well Report #**	4
Report To:	Paul Price / Craig Chappell	**Report From:**	Ken Glover
Report Period:	Aug. 26 @ 8:00 to Aug. 27 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	2
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2048.66 m (MD)	**Formation:**	Lower Besa River

24 Hour Progress: 160.89 m
Average Drilling Rate: 7 metres/hour
24:00 Hour Status: Drilling ahead.

8:00 Hour Depth: 2105.75 (MD) **Formation:** Lower Besa River
Average Drilling Rate: 10 metres/hour
8:00 Hour Status: Drilling ahead and building angle.

Operations Summary Last 24 Hour Period: Drill ahead from 1934.74 m @ 8:00 hrs on 8/26/05, to 2105.75 m @ 8:00 hrs on 8/27/05.

Forecast Operations Next 24 Hour Period: Drill ahead.

Latest Deviation Survey:

Measured Depth (m)	Deviation (degrees)	Azimuth
2081.06	**29.2**	**14**

Mud Properties:

Density:	**955**	**kg/m3**	**Viscosity:**	**48**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Sunday, August 28, 2005	**Well Report #**	5
Report To:	Paul Price / Craig Chappell	**Report From:**	Ken Glover
Report Period:	Aug. 27 @ 8:00 to Aug. 28 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	3
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2198.02 m (MD)	**Formation:**	Lower Besa River

24 Hour Progress: 149.36 m
Average Drilling Rate: 6 metres/hour
24:00 Hour Status: Drilling ahead.

8:00 Hour Depth: 2257.51 (MD) **Formation:** Muskwa
Average Drilling Rate: 6 metres/hour
8:00 Hour Status: Drilling ahead.

Operations Summary Last 24 Hour Period: Drill ahead from 2105.75 m @ 8:00 hrs on 8/27/05, to 2257.51 m @ 8:00 hrs on 8/28/05. Wiper trip into casing at 2163.28 m @ 16:30 hrs on 8/27/05.

Forecast Operations Next 24 Hour Period: Drill ahead.
Latest Deviation Survey:

Measured Depth (m)	Deviation (degrees)	Azimuth
2224.47	**26.6**	**19.3**

Mud Properties:

Density:	**985**	**kg/m3**	**Viscosity:**	**49**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

COMMENTS:

Drilled into the top of the Muskwa Formation at about 2240 m (MD).

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Monday, August 29, 2005	**Well Report #**	6
Report To:	Paul Price / Craig Chappell	**Report From:**	Ken Glover
Report Period:	Aug. 28 @ 8:00 to Aug. 29 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	4
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2287.22 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 89.2 m
Average Drilling Rate: 6 metres/hour
24:00 Hour Status: Pulling out of hole to change bits.

8:00 Hour Depth: 2313.89 (MD) **Formation:** Muskwa
Average Drilling Rate: 6 metres/hour
8:00 Hour Status: Drilling ahead.

Operations Summary Last 24 Hour Period: Drill ahead from 2257.51 m @ 8:00 hrs on 8/28/05, to 2313.89 m @ 8:00 hrs on 8/29/05. Pull out of hole at 2287.22 m (MD) @ 14:30 hrs on 8/28/05 to change bits due to concern over bit wear.

Forecast Operations Next 24 Hour Period: Drill ahead.
Latest Deviation Survey:

Measured Depth (m)	Deviation (degrees)	Azimuth
2281.47	**33.8**	**15.4**

Mud Properties:

Density:	**980**	**kg/m3**	**Viscosity:**	**46**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

COMMENTS:

Baker Atlas alerted at 16:00 hrs on Sunday Aug. 28 for anticipated logging on Wednesday Aug. 31.

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Tuesday, August 30, 2005	**Well Report #**	7
Report To:	Paul Price / Craig Chappell	**Report From:**	Ken Glover
Report Period:	Aug. 29 @ 8:00 to Aug. 30 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	5
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2386.13 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 98.91 m
Average Drilling Rate: 5 metres/hour
24:00 Hour Status: Drilling ahead.

8:00 Hour Depth: 2416.61 (MD) **Formation:** Muskwa
Average Drilling Rate: 5 metres/hour
8:00 Hour Status: Drilling ahead.

Operations Summary Last 24 Hour Period: Drill ahead from 2313.89 m @ 8:00 hrs on 8/29/05, to 2416.61 m @ 8:00 hrs on 8/30/05.

Forecast Operations Next 24 Hour Period: Drill ahead.
Latest Deviation Survey:

Measured Depth (m)	Deviation (degrees)	Azimuth
2386.15	34.7	9.0

Mud Properties:

Density:	**990**	**kg/m3**	**Viscosity:**	**47**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		

Comments:

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Wednesday, August 31, 2005	**Well Report #**	8
Report To:	Paul Price / Craig Chappell	**Report From:**	Ken Glover
Report Period:	Aug. 30 @ 8:00 to Aug. 31 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	6
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2463.45 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 46.84 m
Average Drilling Rate: 2 metres/hour
24:00 Hour Status: Pulling out of hole to change faulty mud motor.

8:00 Hour Depth: 2463.45 (MD) **Formation:** Muskwa
Average Drilling Rate: 3 metres/hour
8:00 Hour Status: Running in hole with new mud motor.

Operations Summary Last 24 Hour Period: Drill ahead from 2416.61 m @ 8:00 hrs on 8/30/05, to 2463.45 m @ 0:00 hrs on 8/31/05. Pull out of hole to change faulty mud motor.

Forecast Operations Next 24 Hour Period: Drill ahead. With bit #2.

Latest Deviation Survey:

Measured Depth (m)	Deviation (degrees)	Azimuth
2433.82	**39.4**	**354.5**

Mud Properties:

Density:	**990**	**kg/m3**	**Viscosity:**	**44**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Thursday, September 1, 2005	**Well Report #**	9
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Aug. 31 @ 8:00 to Sept. 1 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	7
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2514.01 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 50.56 m
Average Drilling Rate: 2 metres/hour
24:00 Hour Status: Drilling 5 metre intervals and circulating up samples to find the top of the Nahanni.

8:00 Hour Depth: 2520.84 (MD) **Formation:** Muskwa
Average Drilling Rate: 0 metres/hour
8:00 Hour Status: Stuck in the hole.

Operations Summary Last 24 Hour Period: Run in hole with new mud motor and new bit #3. Drill ahead from 2463.45 m @ 11:00 hrs on 8/31/05, to 2507.00 m @ 20:00 hrs. Begin circulating up samples to locate the top of the Nahanni. Stuck in hole without circulation at 2520.84 m @ 2:30 hrs on 9/01/05. Jarred out 8 metres to 2512 m, freed pipe and regained circulation. Worked pipe and cleaned hole to 2519.68 m. Stuck in hole again at 2519 m. Jarring out again @ 8:00 hrs on 9/01/05.

Forecast Operations Next 24 Hour Period: Clean out bottom of hole and adjust mud properties. Locate top of Nahanni. Clean out trip to prepare for logging.

Latest Deviation Survey:

Measured Depth (m)	Deviation (degrees)	Azimuth
2499.93	**43.6**	**325.0**

Mud Properties:

Density: **995** **kg/m3** **Viscosity:** **45** **s/L**
Water Loss: **cm3/30 min** **pH:**
Comments:

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Saturday, September 3, 2005	**Well Report #**	10
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 2 @ 8:00 to Sept. 3 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	9
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2520.84 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 0 m
Average Drilling Rate: 0 metres/hour
24:00 Hour Status: Pulling pipe out of hole after backing off with stringshot, at 2429 m.

8:00 Hour Depth: 2520.84 (MD) **Formation:** Muskwa
Average Drilling Rate: 0 metres/hour
8:00 Hour Status: Tripping in the hole with fishing tools.

Operations Summary Last 24 Hour Period: Run in hole with backoff charge on wireline @ 9:00 hrs on 9/03/05. Determine that drill string is stuck at 2455 m. Successfully untwist drill pipe at 2429 m @ 16:45 hrs on 9/03/05, after third attempt. Circulate and condition mud. Pull twisted-off pipe out of hole. Slip and cut drill line. Trip back in hole with fishing tools.

Forecast Operations Next 24 Hour Period: Fish out remainder of drilling assembly.

Latest Deviation Survey:

Measured Depth (m)	Deviation (degrees)	Azimuth
2499.93	43.6	325.0

Mud Properties:

Density:	**995**	**kg/m3**	**Viscosity:**	**76**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Monday, September 5, 2005	**Well Report #**	11
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 4 @ 8:00 to Sept. 5 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	11
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2520.84 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 0 m
Average Drilling Rate: 0 metres/hour
24:00 Hour Status: Running in hole with wireline stringshot.

8:00 Hour Depth: 2520.84 (MD) **Formation:** Muskwa
Average Drilling Rate: 0 metres/hour
8:00 Hour Status: Running in hole with wireline stringshot for backoff attempt at 2457 m.

Operations Summary Last 24 Hour Period: Trip out of hole with washover pipe. Trip in hole with fisherman's jars. Jar on fish with topdrive screwed in. Hold tight on the blocks and run in hole with wireline freepoint. Break free at 2485 m. Pull out freepoint tools and run in with wireline stringshot. Attempt to backoff at 2485.5 m, then at 2475 m, then at 2465.9 m, then at 2457 m.

Forecast Operations Next 24 Hour Period: Attempt to back off with stringshot at 2457 m. Circulate and eventually wash down to the bit. Pull out of hole to make up drilling string. Drill ahead.

Latest Deviation Survey:

Measured Depth (m)	Deviation (degrees)	Azimuth
2499.93	**43.6**	**325.0**

Mud Properties:

Density:	**1100**	**kg/m3**	**Viscosity:**	**76**	**s/L**
Water Loss:	**10**	**cm3/30 min**	**pH:**	**5.7**	

Comments:

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Tuesday, September 6, 2005	**Well Report #**	12
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 5 @ 8:00 to Sept. 6 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	12
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2520.84 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 0 m
Average Drilling Rate: 0 metres/hour
24:00 Hour Status: Washing down to 2479.2 m with washover pipe.

8:00 Hour Depth: 2520.84 (MD) **Formation:** Muskwa
Average Drilling Rate: 0 metres/hour
8:00 Hour Status: Laying down washover pipe.

Operations Summary Last 24 Hour Period: Run in hole with wireline stringshot and back off @ 2457 m. Trip out of hole, pick up wash pipe, and trip in hole. Wash down with washover pipe from 2467 m to 2479.2 m. Trip out of hole to lay down washover pipe.

Forecast Operations Next 24 Hour Period:

Latest Deviation Survey:

Measured Depth (m)	Deviation (degrees)	Azimuth
2499.93	43.6	325.0

Mud Properties:

Density: 1120 kg/m3 **Viscosity:** 73 s/L
Water Loss: cm3/30 min **pH:**
Comments:

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Wednesday, September 7, 2005	**Well Report #**	13
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 6 @ 8:00 to Sept. 7 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	13
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2520.84 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 0 m
Average Drilling Rate: 0 metres/hour
24:00 Hour Status: Pulling out of hole after setting abandonment plug.

8:00 Hour Depth: 2520.84 (MD) **Formation:** Muskwa
Average Drilling Rate: 0 metres/hour
8:00 Hour Status: Tripping in hole with bit.

Operations Summary Last 24 Hour Period: Trip out of hole to lay down washover pipe. Trip in hole. Condition mud and circulate. Set cement abandonment plug from 2435 m to 2220 m. Finish cement job @ 21:15 hrs on 9/06/05. Pull out of hole. Trip in hole with bit.

Forecast Operations Next 24 Hour Period: Trip in hole with bit. Tag abandonment plug with bit. Trip out of hole, pick up directional tools and wait for cement to cure. Begin drilling sidetrack well.

Latest Deviation Survey Above Plug:

Measured Depth (m)	True Vertical Depth (m)	Inclination (degrees)	Azimuth (degrees)
2214.96	2173.34	26.10	16.60

Mud Properties:

Density:	**1140**	**kg/m3**	**Viscosity:**	**63**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A2 (sidetrack)

Date:	Thursday, September 8, 2005	**Well Report #**	14
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 7 @ 8:00 to Sept. 8 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	14
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2290 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 2.32 m
Average Drilling Rate: 0 metres/hour
24:00 Hour Status: Running in hole with directional tools.

8:00 Hour Depth: 2309.58 (MD) **Formation:** Muskwa
Average Drilling Rate: 0.7 metres/hour
8:00 Hour Status: Control drilling .

Operations Summary Last 24 Hour Period: Trip in hole with bit. Tag abandonment plug and drill green cement down to 2247.61 m @ 10:30 hrs on 9/07/05. Circulate and wait for cement to cure. Drill harder cement down to 2290 m @ 16:00 hrs on 9/07/05. Pull out of hole to pick up directional tools. Trip in hole and wash down to 2307 m. Begin directional control drilling out of cement plug @ 2307.26 m @ 4:30 hrs on 9/08/05.

Forecast Operations Next 24 Hour Period: Control drill out of cement plug. Drill ahead in sidetrack well.

Latest Deviation Survey Above Plug:

Measured Depth (m)	True Vertical Depth (m)	Inclination (degrees)	Azimuth (degrees)
2300.44	2246.46	35.20	12.90

Mud Properties:

Density:	**1155**	**kg/m3**	**Viscosity:**	**58**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Friday, September 9, 2005	**Well Report #**	15
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 8 @ 8:00 to Sept. 9 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	15
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2317.96 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 0 m
Average Drilling Rate: 0 metres/hour
24:00 Hour Status: Sidetracking out of cement plug.

8:00 Hour Depth: 2322.61 m (MD) **Formation:** Muskwa
Average Drilling Rate: 0 metres/hour
8:00 Hour Status: Pulling out of hole after sidetracking out of cement plug.

Operations Summary Last 24 Hour Period: Control drill with tricone bit, attempt to kickoff out of cement plug from 2307.46 m to 2317.47 m. Pull out of hole to put on sidetrack bit, run in hole with sidetrack bit. Control drill with sidetrack bit, attempt to kickoff out of cement plug from 2317.47 to 2322.64 m. Begin drilling into Muskwa @ about 2318 m.

Forecast Operations Next 24 Hour Period: Finish drilling kickoff @ 2323 m. Pull out of hole. Run in hole with tricone bit. Drill ahead from sidetrack kickoff point.

Latest Deviation Survey Above Cement Plug:

Measured Depth (m)	True Vertical Depth (m)	Inclination (degrees)	Azimuth (degrees)
2310.01	2254.27	35.50	12.90

Mud Properties:

Density:	**1180**	**kg/m3**	**Viscosity:**	**58**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

COMMENTS:

Begin drilling new hole into Muskwa @ about 2318 m.

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Saturday, September 10, 2005	**Well Report #**	16
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 9 @ 8:00 to Sept. 10 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	16
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2344.6 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 0 m
Average Drilling Rate: 0 metres/hour
24:00 Hour Status: Drilling through cement plug, searching for hard cement.

8:00 Hour Depth: 2375.0 m (MD) **Formation:** Muskwa
Average Drilling Rate: 0 metres/hour
8:00 Hour Status: Running in hole and waiting for cementers.

Operations Summary Last 24 Hour Period: Finish drilling with sidetrack bit to 2322.72 m. Pull out of hole. Run in hole with tricone bit. Attempted to drill ahead from kickoff point but encountered soft cement. Drilled out cement plug to 2375.0 m @ 2:20 hrs on 9/10/05. Pull out of hole and prepare to run new cement plug.

Forecast Operations Next 24 Hour Period: Run in hole and cement new abandonment plug. Wait for cement to cure.

Latest Deviation Survey:

Measured Depth (m)	True Vertical Depth (m)	Inclination (degrees)	Azimuth (degrees)

Mud Properties:

Density:	**1200**	**kg/m3**	**Viscosity:**	**58**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Sunday, September 11, 2005	**Well Report #**	17
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 10 @ 8:00 to Sept. 11 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	17
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	0 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 0 m
Average Drilling Rate: 0 metres/hour
24:00 Hour Status: Running in hole to polish cement plug.

8:00 Hour Depth: 0 m (MD) **Formation:** Muskwa
Average Drilling Rate: 0 metres/hour
8:00 Hour Status: Circulating and waiting on cement.

Operations Summary Last 24 Hour Period: Run in hole. Cement plug #2 from 2375 to 2220 m. Pull out of hole. Run in hole with bit and polish plug. Circulate and wait on cement.

Forecast Operations Next 24 Hour Period: Circulate and polish cement plug. Wait for cement to cure.

Latest Deviation Survey:

Measured Depth (m)	True Vertical Depth (m)	Inclination (degrees)	Azimuth (degrees)

Mud Properties:

Density: 1210 kg/m3 **Viscosity:** 66 s/L
Water Loss: cm3/30 min **pH:**
Comments: Bringing up viscosity with barite.

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Monday, September 12, 2005	**Well Report #**	18
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 11 @ 8:00 to Sept. 12 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	18
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	0 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 0 m
Average Drilling Rate: 0 metres/hour
24:00 Hour Status: Circulating and waiting for cement.

8:00 Hour Depth: 0 m (MD) **Formation:** Muskwa
Average Drilling Rate: 0 metres/hour
8:00 Hour Status: Circulating and waiting for cement.

Operations Summary Last 24 Hour Period: Polish cement plug, circulate and wait on cement.

Forecast Operations Next 24 Hour Period: Circulate, polish cement plug, trip out of hole to put on sidetrack bit, run in hole and drill sidetrack kickoff hole.

Latest Deviation Survey:

Measured Depth (m)	True Vertical Depth (m)	Inclination (degrees)	Azimuth (degrees)

Mud Properties:

Density:	**1235**	**kg/m3**	**Viscosity:**	**60**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Tuesday, September 13, 2005	**Well Report #**	19
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 12 @ 8:00 to Sept. 13 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	19
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2295.63 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 0.63 m
Average Drilling Rate: 0 metres/hour
24:00 Hour Status: Drilling sidetrack kickoff hole.

8:00 Hour Depth: 2298.12 m (MD) **Formation:** Muskwa
Average Drilling Rate: 0 metres/hour
8:00 Hour Status: Pulling out of hole after drilling sidetrack kickoff hole.

Operations Summary Last 24 Hour Period: Polish cement plug, circulate and wait on cement. Pull out of hole. Run in hole with sidetrack bit. Drill sidetrack kickoff hole to 2298.12 m @ 6:00 hrs on 9/13/05. Begin pulling out of hole.

Forecast Operations Next 24 Hour Period: Pull out of hole. Run in hole with tricone bit. Drill ahead in sidetrack hole.

Latest Deviation Survey Above Sidetrack Kickoff:

Measured Depth	True Vertical Depth	Inclination	Azimuth
2290.86 (m)	2238.61 (m)	34.60 (degrees)	14.30 (degrees)

Mud Properties:

Density:	**1225**	**kg/m3**	**Viscosity:**	**62**	**s/L**
Water Loss:		**cm3/30 min**	**pH:**		
Comments:					

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Wednesday, September 14, 2005	**Well Report #**	20
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 13 @ 8:00 to Sept. 14 @ 8:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	20
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2301.33 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 5.7 m
Average Drilling Rate: 0.3 metres/hour
24:00 Hour Status: Drilling ahead in sidetrack hole.

8:00 Hour Depth: 2318.14 m (MD) **Formation:** Muskwa
Average Drilling Rate: 2 to 3 metres/hour
8:00 Hour Status: Pulling out of hole after drilling sidetrack kickoff hole.

Operations Summary Last 24 Hour Period: Pull out of hole. Run in hole with tricone bit. Ease tricone bit into sidetrack kickoff hole. Drill ahead in sidetrack hole.

Forecast Operations Next 24 Hour Period: Drill ahead.

Latest Deviation Survey Above Sidetrack Kickoff:

Measured Depth	True Vertical Depth	Inclination	Azimuth
2290.86 (m)	2238.61 (m)	34.60 (degrees)	14.30 (degrees)

Mud Properties:

Density:	**1230 kg/m3**	**Viscosity:**	**65 s/L**
Water Loss:	**cm3/30 min**	**pH:**	
Comments:			

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Thursday, September 15, 2005	**Well Report #**	21
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 14 @ 7:00 to Sept. 15 @ 7:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	21
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2349.3 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 48 m
Average Drilling Rate: 2 metres/hour
24:00 Hour Status: Drilling ahead in sidetrack hole.

7:00 Hour Depth: 2361.6 m (MD) **Formation:** Muskwa
Average Drilling Rate: 1 - 2 m/h sliding; 2 - 3 m/h rotating
7:00 Hour Status: Drilling ahead in sidetrack hole.

Operations Summary Last 24 Hour Period: Drill ahead.

Forecast Operations Next 24 Hour Period: Drill ahead.

Latest Deviation Survey:

Measured Depth	True Vertical Depth	Inclination	Azimuth
2338.32 (m)	~2275 (m)	27.4 (degrees)	3.4 (degrees)

Mud Properties:

Density:	**1230 kg/m3**	**Viscosity:**	**62 s/L**
Fluid Loss:	**7.38 m3/100 m**	**Yield Point:**	**5.5 Pa**

Comments: **Maintaining high yield point for hole stability.**

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Friday, September 16, 2005	**Well Report #**	22
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 15 @ 7:00 to Sept. 16 @ 7:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	22
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2366.76 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 17.5 m
Average Drilling Rate: 0.7 metres/hour
24:00 Hour Status: Drilling ahead in sidetrack hole.

7:00 Hour Depth: 2384.22 m (MD) **Formation:** Muskwa
Average Drilling Rate: 1 - 3 m/h sliding; 4 - 5 m/h rotating
7:00 Hour Status: Drilling ahead in sidetrack hole.

Operations Summary Last 24 Hour Period: Pull out of hole @ 8:00 hrs on 9/15/05. Change bits, mud motor and MWD batteries. Run in hole and begin drilling ahead again @ 22:30 hrs on 9/15/05.

Forecast Operations Next 24 Hour Period: Drill ahead.

Latest Deviation Survey:

Measured Depth	True Vertical Depth	Inclination	Azimuth
2365.7 (m)	~2290 (m)	28.8 (degrees)	352.2 (degrees)

Mud Properties:

Density:	**1235**	**kg/m3**	**Viscosity:**	**66**	**s/L**
Fluid Loss:	**7.40**	**m3/100 m**	**Yield Point:**	**5.5**	**Pa**

Comments: **Maintaining high yield point for hole stability.**

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Saturday, September 17, 2005	**Well Report #**	23
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 15 @ 7:00 to Sept. 16 @ 7:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	23
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2427.56 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 60.78 m
Average Drilling Rate: 2.5 metres/hour
24:00 Hour Status: Drilling ahead in sidetrack hole.

7:00 Hour Depth: 2443.19 m (MD) **Formation:** Muskwa
Average Drilling Rate: 1 – 3 m/h sliding; 2 - 4 m/h rotating
7:00 Hour Status: Drilling ahead in sidetrack hole.

Operations Summary Last 24 Hour Period: Drill ahead.

Forecast Operations Next 24 Hour Period: Drill ahead.

Latest Deviation Survey:

Measured Depth	True Vertical Depth	Inclination	Azimuth
2422.89 (m)	~2348 (m)	27.9 (degrees)	340.6 (degrees)

Mud Properties:

Density:	**1240 kg/m3**	**Viscosity:**	**64 s/L**
Fluid Loss:	**6.77 m3/100 m**	**Yield Point:**	**5.5 Pa**

Comments: **Maintaining high yield point for hole stability.**

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Sunday, September 18, 2005	**Well Report #**	24
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 17 @ 7:00 to Sept. 18 @ 7:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	24
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2468.75 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 41.19 m
Average Drilling Rate: 1.7 metres/hour
24:00 Hour Status: Pulling out of hole to examine bit and mud motor.

7:00 Hour Depth: 2468.75 m (MD) **Formation:** Muskwa
Average Drilling Rate: 0 m/hr
7:00 Hour Status: Back in hole, preparing to drill ahead with new bit.

Operations Summary Last 24 Hour Period: Drill ahead to 2468.75 mMD @ 21:10 hrs on 9/17/05. Pull out of hole to change bits. Run in hole with new bit.

Forecast Operations Next 24 Hour Period: Drill ahead.

Latest Deviation Survey:

Measured Depth	True Vertical Depth	Inclination	Azimuth
2451.41 (m)	~2379 (m)	30.4 (degrees)	340.7 (degrees)

Mud Properties:

Density:	**1240 kg/m3**	**Viscosity:**	**63 s/L**
Fluid Loss:	**6.77 m3/100 m**	**Yield Point:**	**6.5 Pa**

Comments: **Maintaining high yield point for hole stability.**

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Monday, September 19, 2005	**Well Report #**	25
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 18 @ 7:00 to Sept. 19 @ 7:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	25
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2502.6 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 33.85 m
Average Drilling Rate: 2.1 metres/hour
24:00 Hour Status: Drilling ahead.

7:00 Hour Depth: 2511.00 m (MD) **Formation:** Muskwa
Average Drilling Rate: 2 m/hr
7:00 Hour Status: Drilling ahead.

Operations Summary Last 24 Hour Period: Drill ahead from 2468.75 mMD @ 8:00 hrs on 9/18/05 with new bit.

Forecast Operations Next 24 Hour Period: Drill ahead, locate top of Nahanni.

Latest Deviation Survey:

Measured Depth	True Vertical Depth	Inclination	Azimuth
2489.72 (m)	2410.82 (m)	37.7 (degrees)	336.4 (degrees)

Mud Properties:

Density:	**1245 kg/m3**	**Viscosity:**	**65 s/L**
Fluid Loss:	**6.51 m3/100 m**	**Yield Point:**	**6.0 Pa**

Comments: **Maintaining high yield point for hole stability.**

COMMENTS:

Baker Atlas has been alerted to be onsite by 20:00 hrs on Sept. 19.

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Tuesday, September 20, 2005	**Well Report #**	26
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 19 @ 7:00 to Sept. 20 @ 7:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	26
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2540.0 m (MD)	**Formation:**	Muskwa

24 Hour Progress: 37.4 m
Average Drilling Rate: 1.6 metres/hour
24:00 Hour Status: Drilling ahead, looking for the Nahanni.

7:00 Hour Depth: 2552.7 m (MD) **Formation:** Muskwa
Average Drilling Rate: 1.5 to 2 m/hr
7:00 Hour Status: Drilling ahead, looking for the Nahanni.

Operations Summary Last 24 Hour Period: Drill ahead.

Forecast Operations Next 24 Hour Period: Drill ahead, locate top of Nahanni. Drill at least 5 metres into the Nahanni. Wiper trip. Prepare for logging.

Latest Deviation Survey:

Measured Depth	True Vertical Depth	Inclination	Azimuth
2536.72 (m)	**~2443 (m)**	**43.9 (degrees)**	**333.4 (degrees)**

Mud Properties:

Density:	**1250**	**kg/m3**	**Viscosity:**	**66**	**s/L**
Fluid Loss:	**6.23**	**m3/100 m**	**Yield Point:**	**6.0**	**Pa**

Comments: **Maintaining high yield point for hole stability.**

COMMENTS:

Baker Atlas arrived onsite at 18:30 hrs on Sept. 19.

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Wednesday, September 21, 2005	**Well Report #**	27
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 20 @ 7:00 to Sept. 21 @ 7:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	27
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2566.0 m (MD)	**Formation:**	Nahanni

24 Hour Progress: 26 m
Average Drilling Rate: 2 metres/hour
24:00 Hour Status: Pulling out of hole to lay down directional tools.

7:00 Hour Depth: 2566.0 m (MD) **Formation:** Nahanni
Average Drilling Rate: m/hr
7:00 Hour Status: Logging.

Operations Summary Last 24 Hour Period: Drill ahead into Nahanni dolomite. Reach intermediate casing point @ 2566 mMD (2465 mTVD) @ 14:15 hrs on 9/20/05. Wiper trip to clean hole and prepare for logging. Rig in loggers @ ??? hrs on 9/21/05. Loggers on bottom @ 7:00 hrs.

Forecast Operations Next 24 Hour Period: Finish logging. Run intermediate casing.

Latest Deviation Survey:

Measured Depth	True Vertical Depth	Inclination	Azimuth
2536.72 (m)	~2443 (m)	43.9 (degrees)	333.4 (degrees)
Projection to ICP:			
2566.00 (m)	2465.17 (m)	52.37	330.0

Mud Properties:

Density:	1240 kg/m3	**Viscosity:**	65 s/L
Fluid Loss:	6.03 m3/100 m	**Yield Point:**	7.0 Pa
Comments:	Added 130 kg of Gilsonite.		

COMMENTS:

DAILY GEOLOGICAL WELL REPORT

Paramount et al Liard K-29A

Date:	Thursday, September 22, 2005	**Well Report #**	28
Report To:	Paul Price	**Report From:**	Ken Glover
Report Period:	Sept. 21 @ 7:00 to Sept. 22 @ 7:00	**Site Telephone #**	403 451-3136
Kick Off Date:	Aug. 25, 2005	**Day From Kick Off:**	28
Ground Elevation:	409.60 m	**K.B. Elevation:**	416.60 m
24:00 Hour Depth:	2566.0 m (MD)	**Formation:**	Nahanni

24 Hour Progress: m
Average Drilling Rate: metres/hour
24:00 Hour Status: Rigging up loggers.

7:00 Hour Depth: 2566.0 m (MD) **Formation:** Nahanni
Average Drilling Rate: m/hr
7:00 Hour Status: Logging with OBMI.

Operations Summary Last 24 Hour Period: Logging run #1 with neutron, densilog, sonic, induction and gamma. Problems communicating with neutron and induction. Bottom depth reached was 2552 m. Tight spot around 2240. Clean out trip with rotary assembly after first log run. Begin rigging up loggers for logging run # 2 with new set of logging tools at 0:15 hrs on 9/22/05. Total depth reached on logging run #2 is 2568 m. Finish logging run #2 at 5:45 hrs on 9/22/05. Run in hole with logging run #3 – Oil Based Mud Formation Imager.

Forecast Operations Next 24 Hour Period: Finish logging. Run intermediate casing.

COMMENTS:

Well Information

Operator:	**Paramount Resources Ltd.**
Well Name:	**Paramount et al Liard**
Location:	**K-29A intermediate hole**
UWI:	300K-29A-6030-123302
Pool:	N/A
Field:	Liard K-29
Province / State:	Northwest Territories
Country:	Canada

Elevations

Reference:	Ground	**Ground:**	409.6 m
Cut(-) / Fill(+):		**Kelly Bushing:**	416.4 m
K.B. to Ground:	6.8 m	**Casing Flange:**	m

Total Depth

Measurement Type	Measured Depth	True Vertical Depth
Drillers TD (Tally)	2520.62 m	2418.92 m
Drillers TD (Strap or SLM)	m	m
Loggers TD	m	m

Surface Co - Ordinates

Well Type: Deviated **Longitude:** 123 35 4.100 **Latitude:** 60 28 41.040

N / S Co - Ordinates: 6704591.45

E / W Co - Ordinates: 467870.02

Bottom Hole Co - Ordinates

Longitude: **Latitude:**

N / S Co - Ordinates:

E / W Co - Ordinates:

Drilling Fluid Summary

Fluid Type	From	To
Produced Water	1853 m	1860 m
Invert	1860 m	2520 m

Casing Summary

Type	Hole Size	Casing Size	Landed At

Well Summary

Spud Date: Aug 25, 2005 @ 05:00hrs **Contractor:** Akita Drilling Rig #58

TD Date: **Rig Release Date:**

Work Schedule

Contractor	Geologist	Log Interval	Dates Logged
Chalce Resources	Ken Glover	1854 m - 2520 m	Aug 25, 2005 - Sep 1, 2005

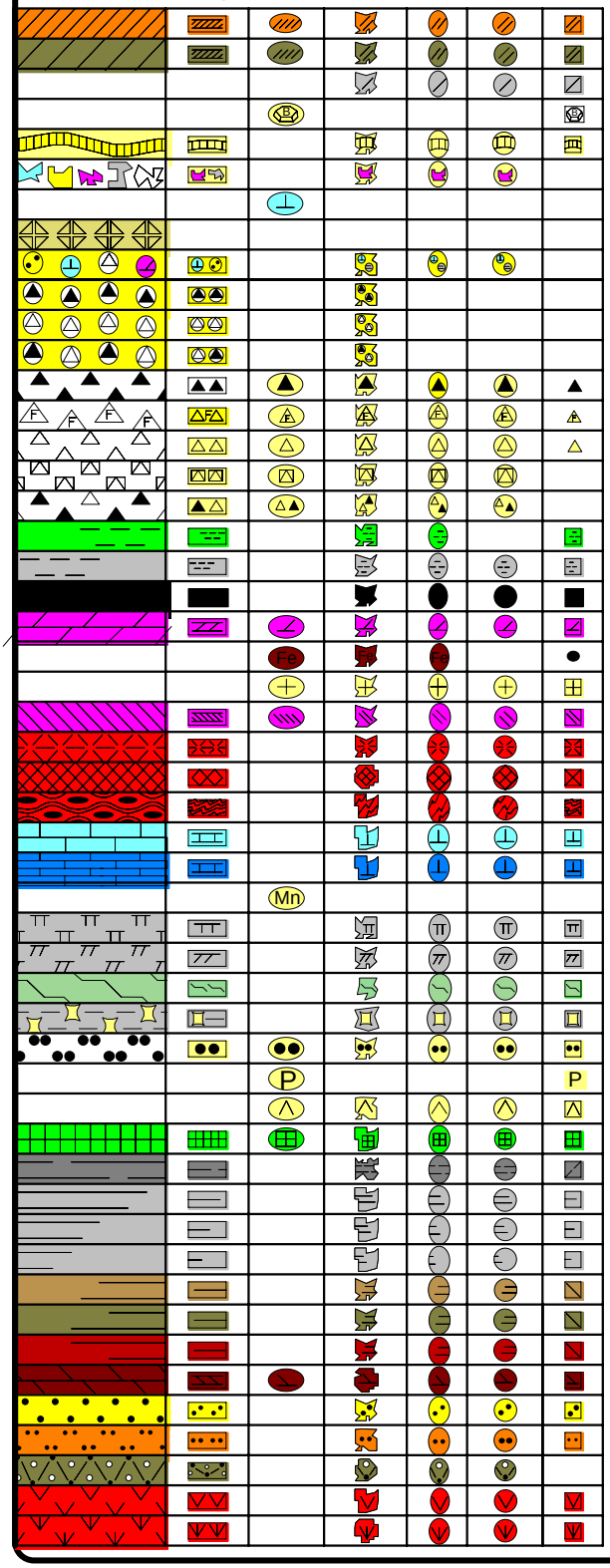
Remarks

This leg of the well was abandoned.

K-29A sidetrack well drilled below 2295 m.

Legend

Rock Types and Thin Beds



Whole Bed	Stringer	Nodule	Breccia	Clast	Pebble	Grain	Rock Type
							Anhydrite - primary
							Anhydrite - secondary
							Argillite
							Barite
							Bentonite
							Breccia
							Calcareous
							Cement
							Conglomerate - mixed
							Conglomerate - dark chert
							Conglomerate - light chert
							Conglomerate - varicolored chert
							Chert - dark
							Chert - fossiliferous
							Chert - light
							Chert - tripolitic
							Chert - varicolored
							Claystone - colored
							Claystone - gray
							Coal
							Dolomite
							Ferruginous
							Feldspar
							Gypsum
							Igneous - acidic
							Igneous - basic
							Igneous - metamorphic
							Limestone - grain supported
							Limestone - mud supported
							Manganese
							Marlstone - calcareous
							Marlstone - dolomitic
							Mudstone
							Paleosol
							Phosphate
							Pyrite
							Quartz
							Salt
							Shale - black
							Shale - dark gray
							Shale - medium gray
							Shale - light gray
							Shale - brown
							Shale - green
							Shale - red
							Siderite
							Sandstone
							Siltstone
							Till - glacial
							Volcanic (Tuff)
							Welded Volcanic (Tuff)

Accessories

	Anhydritic	G	Gibbsitic
	Argillaceous	I	Illitic
	Baritic	K	Kaolinitic
	Bentonitic	L	Lithic Fragment
	Bituminous		Marly - calcareous
	Calcareous		Marly - dolomitic
	Carbonaceous	m	Micromicaceous
	Cherty - dark	ML	Mixed layer clayey
F	Cherty - fossiliferous	M	Montmorillonitic
	Cherty - light		Phosphate pellets
	Cherty - tripolitic	P	Pyritic
	Cherty - varicolored		Salt casts
C	Chloritic		Sandy
	Clayey		Sideritic
	Dolomitic		Siliceous
Fe	Ferruginous staining		Silty
	Fractures		Stylolitic
	Glauconitic		Tuffaceous
	Gypsiferous	Z	Zeolitic

Fossils (Rock Builders)

	Aggregate grains		Euryamphipora
	Algae - laminations		Foraminifera
	Algae - non descript	F	Fossil
	Algae - ootoid		Fragmental
	Algae - skeletal		Gastropod
	Amphipora		Graptolite
	Belemnite	H	Hydrozoa
	Bioclastic		Intraclast
	Brachiopod		Mollusc
	Bryozoa		Oncolite
	Calciphaera		Oolite
	Cephalopod		Ostracod
	Chaetetes		Pelecypod
	Coated grain		Pellet
	Conodont		Pisolite
	Coral		Plant Remains
	Coral - branching		Scaphopod
	Coral - head		Spicule
	Coral - colonial		Sponge
S	Coral - solitary		Stromatoporoid
	Crinoid	B	Stromatoporoid - bulbous
	Diatom	M	Stromatoporoid - massive
	Echnoid		Stromatoporoid - tabular
	Echnoid - spine		Tentaculites
	Fish Remains		Trilobite

Matrix

	Argillaceous		Marl - dolomitic
B	Bentonite		Micrite
	Bituminous	ML	Mixed Clay
	Clay	M	Montmorillonite
C	Chlorite		Sand
G	Gibbsite		Silt
I	Illite		Sparry Calcite
K	Kaolinite	Z	Zeolite
	Marl - calcareous		

Textures

C	Chalky	e	Earthy	mx	Microcrystalline
CX	Cryptocrystalline	L	Lithographic		Slickenside
MS	Mudstone	GS	Grainstone	BFS	Bafflestone
WS	Wackestone	FLS	Floatstone	BS	Bindstone
PS	Packstone	RS	Rudstone	FS	Framestone

Miscellaneous Grains

	Biotite		Mineral crystal		Orthoclase
	Glauconite		Mineral - dark		Plagioclase
	Mica flakes		Muscovite		Sand grain

Porosity Type Track

e	Earthy - low permeability - crystals / grains less than 1 / 16 mm		
	Fenestral - voids from gas bubbles - shrinkage cracks - birdseye texture		
X	Intercrystalline - Interfragmental - Intergranular		
F	Fracture	O	Organic - Bridged - Intrafossil
	Interoolitic - Interpelletoidal	P	Pinpoint - voids less than 1/ 16 mm
	Moldic	V	Vuggy - voids greater than 1 / 16 mm

Oil Show Track

	Even staining (75 - 100% of the rock is stained) - fluoresces in solvent
	Spotted staining (50 - 75% of the rock is stained) - fluoresces in solvent
	Spotted staining (25 - 50% of the rock is stained) - fluoresces in solvent
	Spotted staining (1 - 25% of the rock is stained) - fluoresces in solvent
	Questionable oil staining - No fluorescents in solvent
D	Dead oil staining - asphaltic - bitumen - pyrobitumen etc.
F	Fluoresces - no visible oil staining

Trace Fossil Track

An	Anconichnus	Ar	Arenicolites	At	Arthrophycus	As	Asterosoma
Au	Aulichnites	Be	Bergaueria	Cg	Camborygma	Cf	Celliforma
Cb	Chabutolithes	Ch	Chondrites	Cl	Climactichnites	Co	Conichnus
Cp	Cosmoraphe	C	Cruziana	Cy	Cylindrichnus	Da	Dactyloidites
Dm	Dimorphichnus	D	Diplocraterion	Ea	Eatonichnus	En	Entobia
Et	Entomichnus	Esc	Escape Traces	Ga	Gastrochaenolites	Gl	Glossifungites
G	Gyrolithes	Gy	Gyrophyllites	H	Helminthopsis	K	Kouphichnium
L	Lockeia	Lo	Lorenzinia	Mp	Macanopsis	Ma	Macaronichnus
Mo	Monocraterion	Ne	Neonereites	N	Nereites	O	Ophiomorpha
Pa	Palaeophycus	Pd	Paleodictyon	Pc	Paleohelcura	Pl	Paleoscolytus
Pt	Petalichnus	Py	Phycodes	Ph	Phycosiphon	P	Planolites
Pm	Psammichnites	Ps	Psilonichnus	Rh	Rhizocorallium	Rg	Rogerella
Ro	Rosselia	Ru	Rusophycus	Sb	Scalarituba	Sc	Schaubcylindrichnus
Sy	Scoyenia	Si	Siphonichnus	S	Skolithos	Sp	Spirophycus
Su	Subphyllochorda	Syn	Synaeresis Cracks	Te	Teichichnus	Tr	Terebellina
Td	Teredolites	Th	Thalassinoides	Tc	Trichichnus	Tp	Trichophycus
Ty	Trypanites	Z	Zoophycos				

Sedimentary Structures

	Ball and pillow		Bioturb-churned		Bioturb-slightly		Bioturb-moderate
	Bioturb-mod well		Bioturb-well		Boudinage		Burrows
	Clastic Dike		Clastic sill		Desiccation crack		Dish structure
	Fault-Large scale		Fault-Small scale		Flame structure		Flute mark
	Geopetal		Groove casts		Gutter casts		Load casts
HS	Inclined heterolithic strata				Mud chips		Mud drapes
	Neptunian dike		Pit marks		Pull-a-part		Rill marks
	Rip up clasts		Roots / root trace		Scour and Fill		Slump structure
	Swash marks		Synersis crack		Teepee structure		Tool marks
	Water Escape						

Cement

	Anhydritic		Gypsiferous
	Baritic		Hematitic
	Bituminous		Limonitic
	Calcareous		Pyritic
	Chert - dark		Salt
	Chert - light		Sideritic
	Dolomitic		Siliceous
	Ferruginous		

Sorting Track

vP	Very poorly sorted - > 10 phi size grade classes
P	Poorly sorted - 6-10 phi size grade classes
M	Moderately sorted - 3-6 phi size grade classes
mW	Moderately well sorted - 2-3 phi size grade classes
W	Well sorted - < 2 phi size grade classes

Rounding Track

vA	Very Angular	**r**	Subrounded
A	Angular	**R**	Rounded
a	Subangular	**wR**	Well Rounded

Framework Track

Framework is a ratio between clastic material greater than 1/16 mm and primary void filler less than 1/16 mm.
? indicates questionable interpretation

Core Track

Indicates Cored Interval
Indicates Lost Core

Test Track

Indicates Tested Interval

Sedimentary Structures Bedding / Cross Bedding

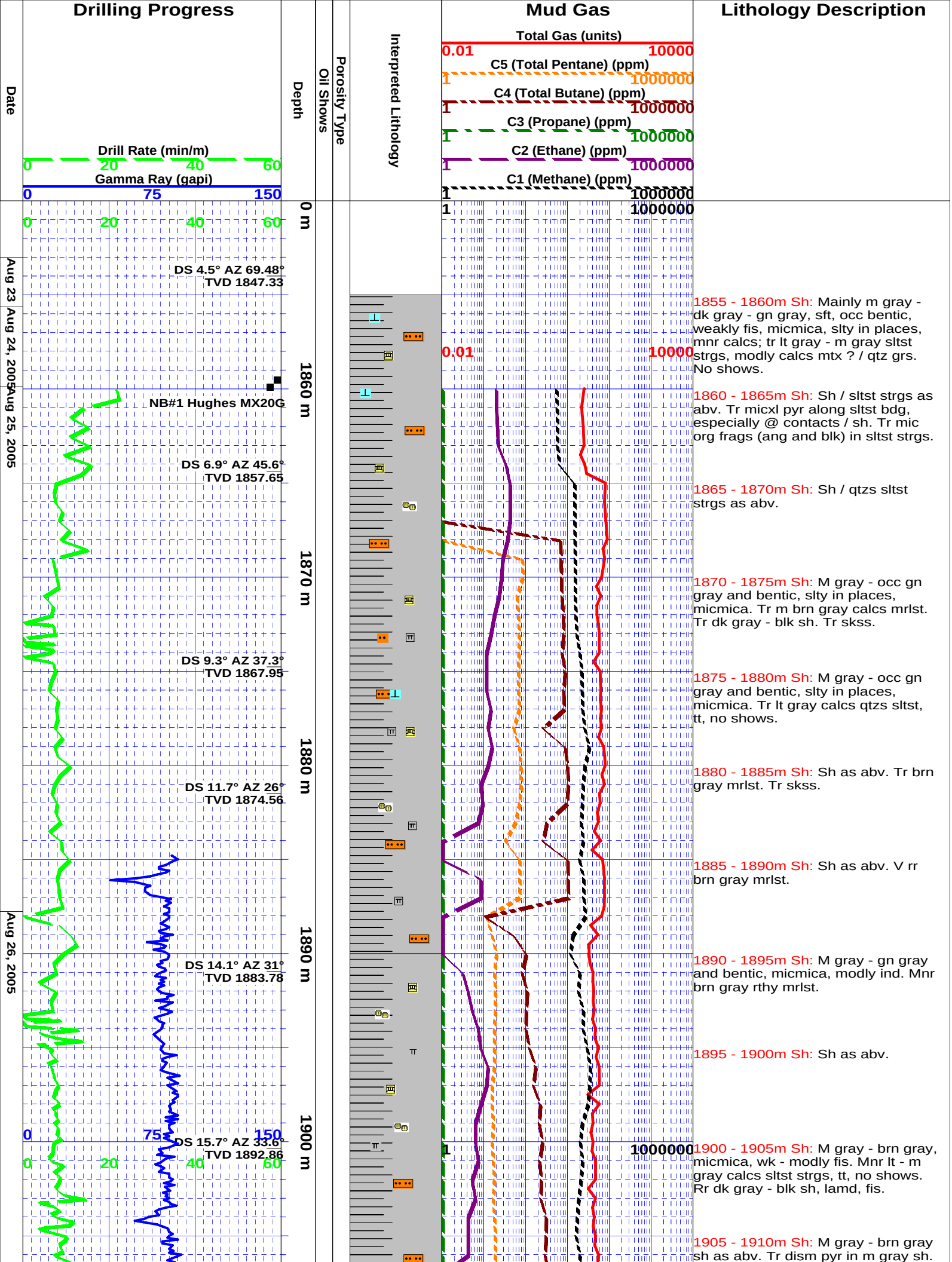
CM	Centimeter bedding		Inverted graded bedding
DM	Decimeter bedding		Massive bedding
MM	Millimeter bedding		Normal graded bedding
	Chevron x-bedding		Herringbone x-bedding
	Sigmoidal x-bedding		Hummocky x-bedding
	Swaley x-bedding		Planar/Tabular x-bedding
	Trough x-bedding		

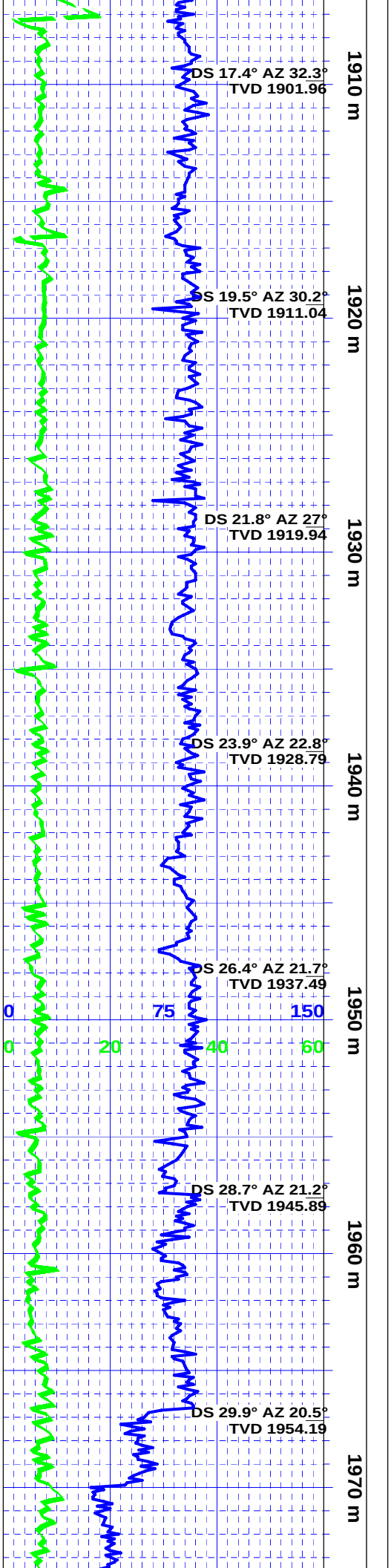
Sedimentary Structures Laminations / Cross Laminations

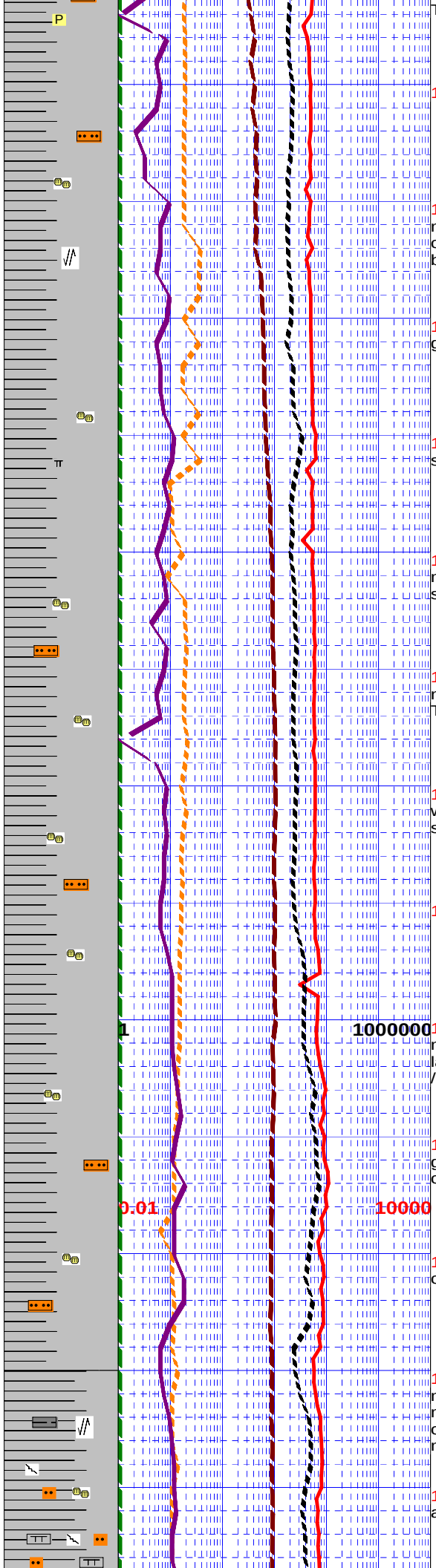
	Climbing ripple xlam		Contorted/Slumped lams
	Current ripple xlam		Flaser laminations
	High angle xlam		High angle parrallel lams
	Lenticular lams		Low angle xlam
	Low angle para lam		Parallel laminations
	Trough xlam		Varved laminations
	Wave ripple xlam		Wavy laminations

Sedimentary Bedding Contacts

BIO	Bioturbated	BORED	Bored	CAL	Caliche / calcrete	COR	Corrosional	DC	Dessication cracks
EX	Exposure	FS	Flooding surface	GLOSS	Glossifungites	GRAD	Gradational	HG	Hardground
INCL	Inclined - sharp	IRR	Irregular - sharp	MFS	Maximum flooding surface			MC	Mud cracks
NOD	Nodular	PB	Parasequence boundary	RS	Ravinement surface	RSE	Regressive surface of erosion		
ROOT	Rooted	SCOUR	Scour	SB	Sequence boundary	SHARP	Sharp	TRUN	Truncation
TSE	Transgressive surface of erosion			UNCON	Unconformity	WAVY	Wavy		


Drilling Progress
Mud Gas
Lithology Description
Date
Depth
Oil Shows
Porosity Type
Interpreted Lithology
Drill Rate (min/m)
0
20
40
60
Gamma Ray (gapi)
0
75
150
Total Gas (units)
0.01
10000
C5 (Total Pentane) (ppm)
1
1000000
C4 (Total Butane) (ppm)
1
1000000
C3 (Propane) (ppm)
1
1000000
C2 (Ethane) (ppm)
1
1000000
C1 (Methane) (ppm)
1
1000000
0 m
1860 m
1870 m
1880 m
1890 m
1900 m
Aug 23
Aug 24, 2005
Aug 25, 2005
Aug 26, 2005
DS 4.5° AZ 69.48°
TVD 1847.33
NB#1 Hughes MX20G
DS 6.9° AZ 45.6°
TVD 1857.65
DS 9.3° AZ 37.3°
TVD 1867.95
DS 11.7° AZ 26°
TVD 1874.56
DS 14.1° AZ 31°
TVD 1883.78
DS 15.7° AZ 33.6°
TVD 1892.86
1855 - 1860m Sh: Mainly m gray - dk gray - gn gray, sft, occ bentic, weakly fis, micmica, slty in places, mnr calcs; tr lt gray - m gray sltst strgs, modly calcs mtx ? / qtz grs. No shows.
1860 - 1865m Sh: Sh / sltst strgs as abv. Tr micxl pyr along sltst bdg, especially @ contacts / sh. Tr mic org frags (ang and blk) in sltst strgs.
1865 - 1870m Sh: Sh / qtzs sltst strgs as abv.
1870 - 1875m Sh: M gray - occ gn gray and bentic, slty in places, micmica. Tr m brn gray calcs mrlst. Tr dk gray - blk sh. Tr skss.
1875 - 1880m Sh: M gray - occ gn gray and bentic, slty in places, micmica. Tr lt gray calcs qtzs sltst, tt, no shows.
1880 - 1885m Sh: Sh as abv. Tr brn gray mrlst. Tr skss.
1885 - 1890m Sh: Sh as abv. V rr brn gray mrlst.
1890 - 1895m Sh: M gray - gn gray and bentic, micmica, modly ind. Mnr brn gray rthy mrlst.
1895 - 1900m Sh: Sh as abv.
1900 - 1905m Sh: M gray - brn gray, micmica, wk - modly fis. Mnr lt - m gray calcs sltst strgs, tt, no shows. Rr dk gray - blk sh, lamd, fis.
1905 - 1910m Sh: M gray - brn gray sh as abv. Tr dism pyr in m gray sh.





Tr blk org ? fks in sh.

1910 - 1915m Sh: Sh as abv.

1915 - 1920m Sh: M gray - brn gray, micmica, wk - modly fis, com clusters of blk org ? fks. Tr lt gray - brn gray mrlst. Tr skss.

1920 - 1925m Sh: Sh as abv. Tr lt gray - brn gray mrlst.

1925 - 1930m Sh: M gray - brn gray sh as abv. Rr lt gray - brn gray mrlst.

1930 - 1935m Sh: M gray - brn gray, micmica, modly fis, Rr nn calcs qtzs sltst strgs.

1935 - 1940m Sh: Sh as abv / ind nn calcs slty bits. Tr brn gray mrlst. Tr skss.

1940 - 1945m Sh: M gray, micmica, wk - modly fis. Mnr lt - m gray calcs sltst strgs. Tr skss.

1945 - 1950m Sh: M gray sh as abv.

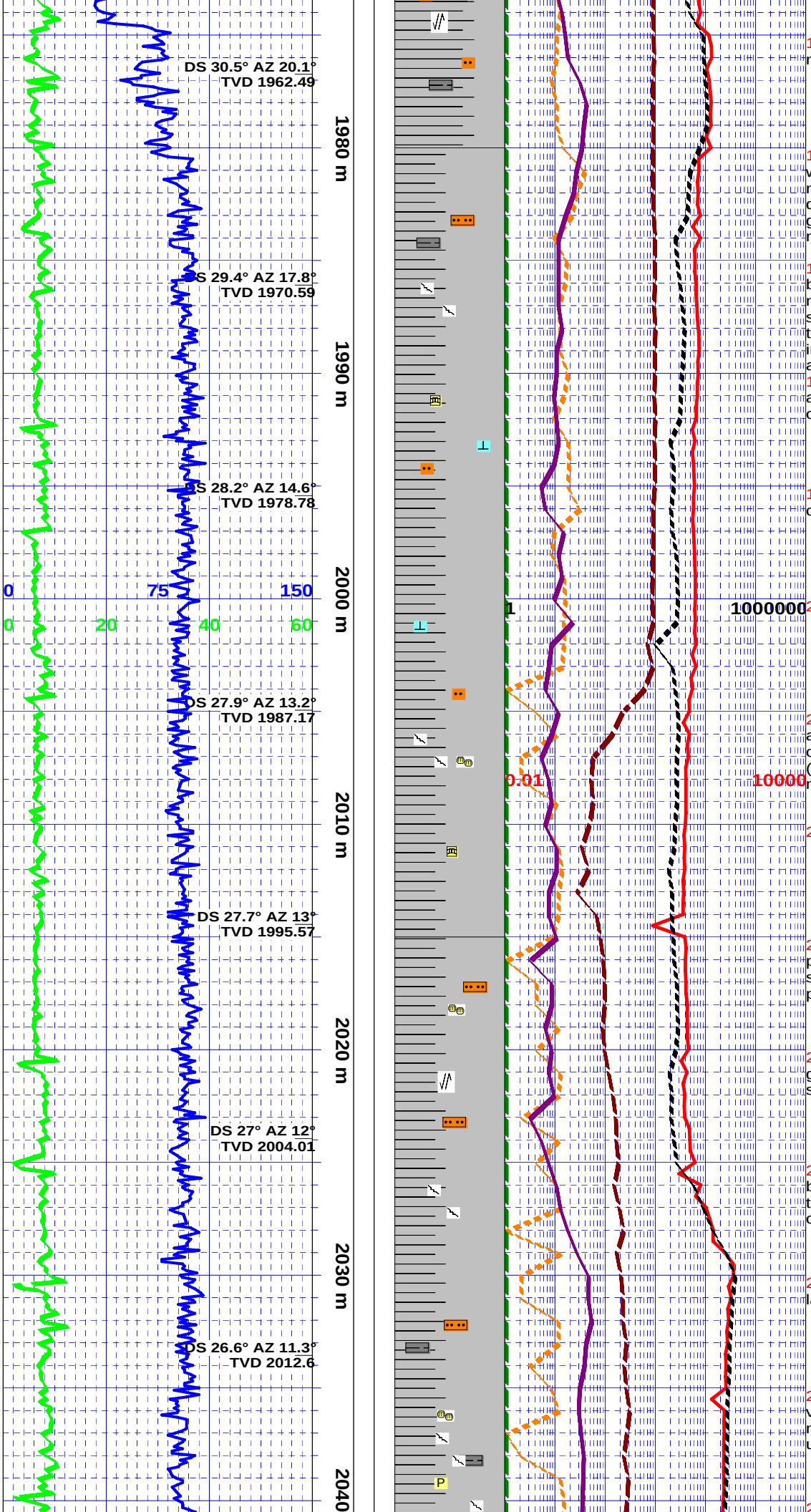
1950 - 1955m Sh: M - dk gray, micmica, fis, / mnr dk gray - blk, fis lams. Wk - modly lamd. Tr sltst lams / tr dism pyr. Tr skss.

1955 - 1960m Sh: M - dk gray / mnr gn gray and bentic, micmica, fis, slly calcs.

1960 - 1965m Sh: Sh as abv. Tr slty calcs strgs.

1965 - 1970m Sh: Dk gray - blk, fis, micmica in places / tr micfracs and mnr skss, some sksd sfcs are curved.Tr lt - m gray v calcs slty mrlst / occ mky wh fks (shl frags ?)

1970 - 1975m Sh: Dk gray sh as abv. Incrd v slty mrlst.



1975 - 1980m Sh: Dk gray sh / slty mrlst as abv.

1980 - 1985m Sh: Gray, lamd / blk wisps along lams, com micxl pyr nods <0.1 mm dia, slty in places, tr dk gray - blk sh lams. Occ lt - m gray sltst strgs or lams in sh, micmica, occ calcs. No shows.

1985 - 1990m Sh: Gray sh as abv but / incrd dk gray - blk sh lams. Tr micfracs. One vis calc frac fl shows some calc mnrl clvg, 0.5 mm thickness pres in ctc / sh, has assoc ireg micfracs emanating from a sm and regular prim frac sfc.

1990 - 1995m Sh: M gray - gn gray and bentic / mnr brn gray, micmica, occ lamd, tr blk sh.

1995 - 2000m Sh: Sh as abv. Slly calcs in places.

2000 - 2005m Sh: Sh as abv.

2005 - 2010m Sh: M gray - gn gray and bentic - mnr brn gray, micmica, occ lamd. Com blk org fks.Tr v thn (<0.05 mm thk) calc healed micfracs.

2010 - 2015m Sh: Sh as abv.

2015 - 2020m Sh: M gray, dk gray in places, v thn (0.05 mm thk) lt gray sltst lam in places, micmica in places, modly fis

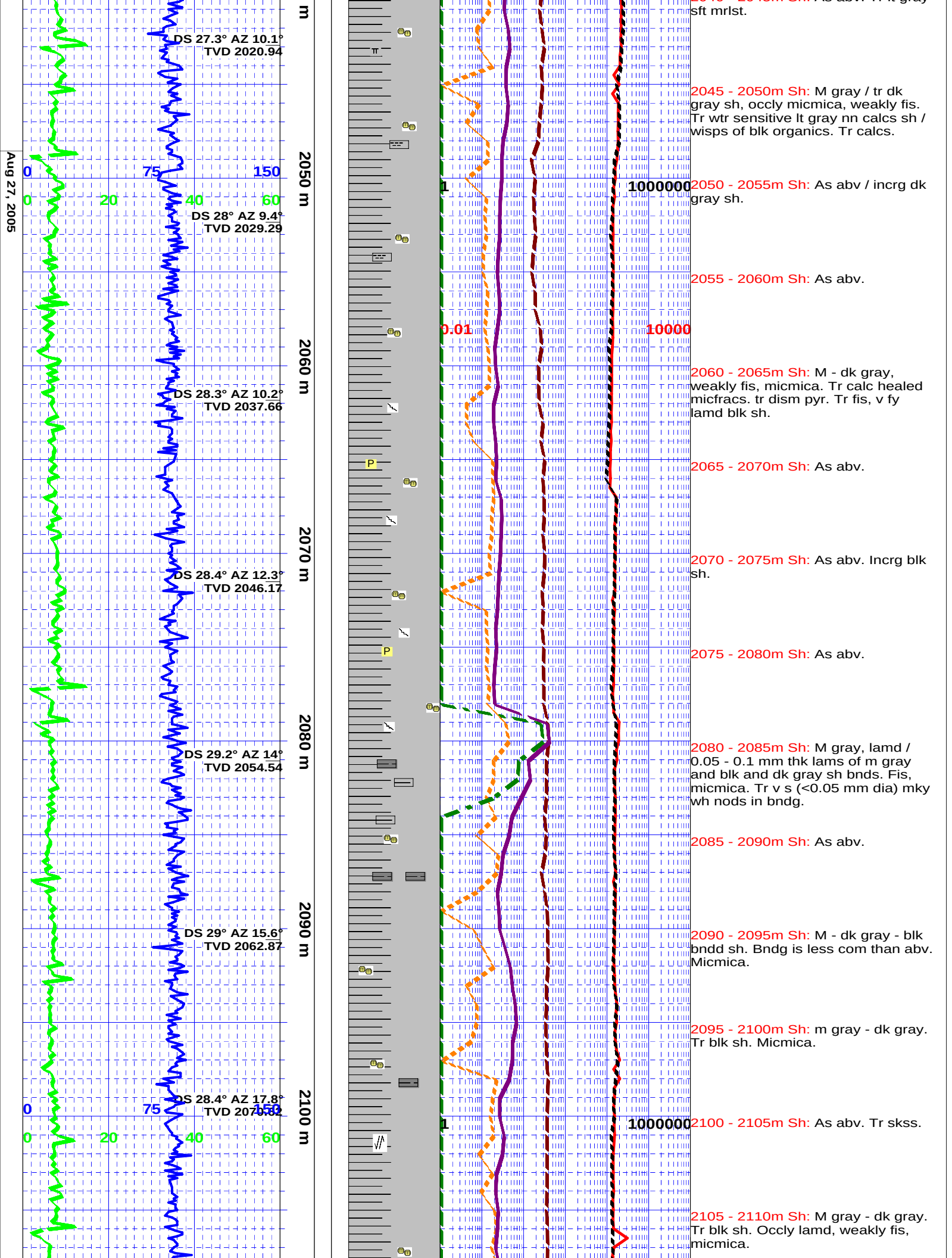
2020 - 2025m Sh: As abv. Incrg dk gray sh, usually lamd. Tr curvilinear sksd sfcs.

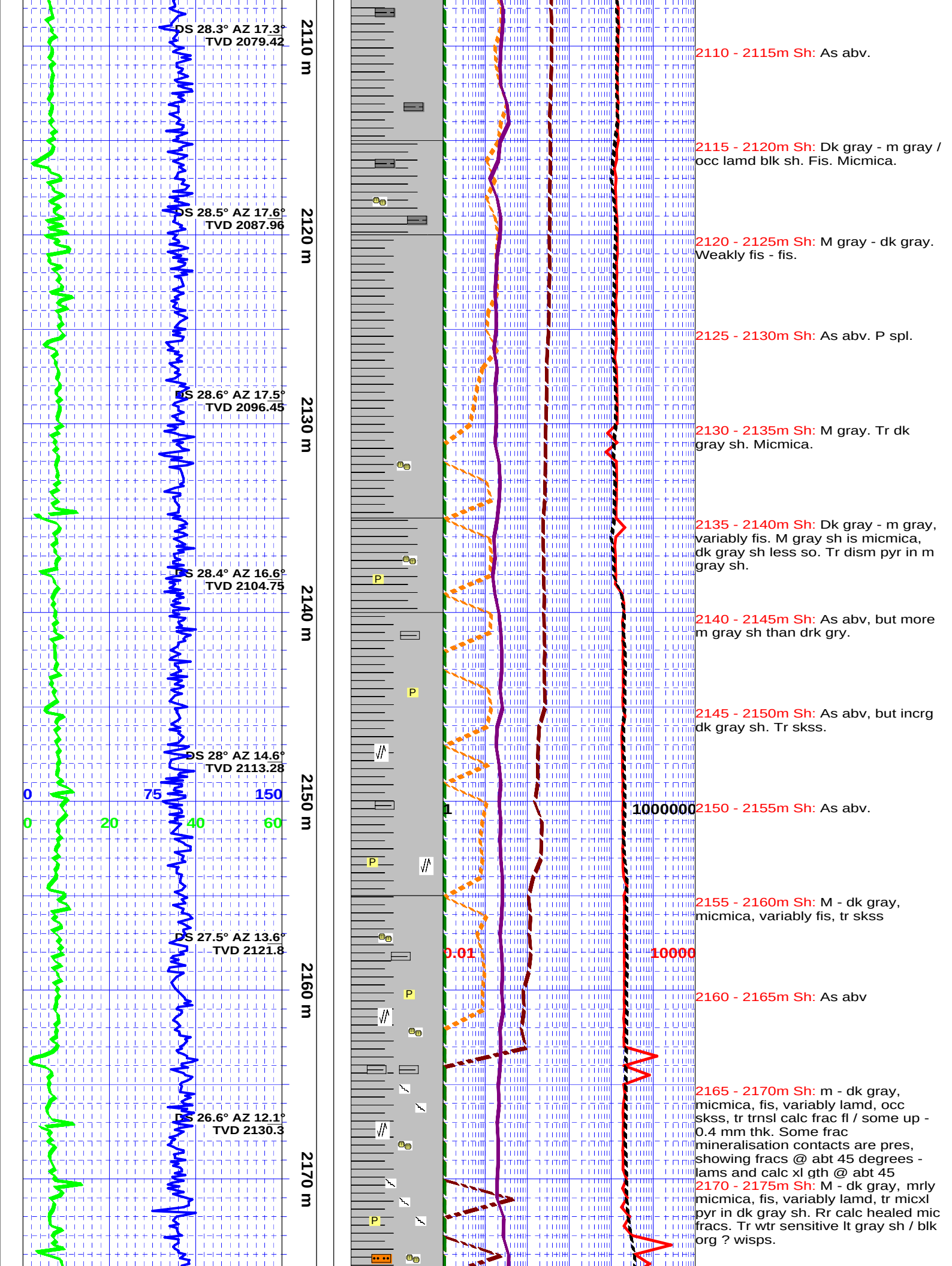
2025 - 2030m Sh: M - dk gray / occ blk sh. Rr calc frac fl up - 0.2 mm thk, trnsl / a sm undul sfc. Tr clacareous lt gray sltst.

2030 - 2035m Sh: As abv. Incrg fy lamd, fis blk sh. Tr dolic lt gray sltst.

2035 - 2040m Sh: M gray - blk, variably lamd, variably fis, occly micmica. Tr micxl pyr. Tr calc frac fl up - 0.2 mm thk.

2040 - 2045m Sh: As abv. Tr lt gray


Aug 27, 2005
2050 m
2060 m
2070 m
2080 m
2090 m
2100 m
DS 27.3° AZ 10.1°
TVD 2020.94
DS 28° AZ 9.4°
TVD 2029.29
DS 28.3° AZ 10.2°
TVD 2037.66
DS 28.4° AZ 12.3°
TVD 2046.17
DS 29.2° AZ 14°
TVD 2054.54
DS 29° AZ 15.6°
TVD 2062.87
DS 28.4° AZ 17.8°
TVD 2071.82
0
75
150
0
20
40
60
1
1000000
0.01
10000
P
P
2045 - 2050m Sh: M gray / tr dk gray sh, occly micmica, weakly fis. Tr wtr sensitive lt gray nn calcs sh / wisps of blk organics. Tr calcs.
2050 - 2055m Sh: As abv / incrg dk gray sh.
2055 - 2060m Sh: As abv.
2060 - 2065m Sh: M - dk gray, weakly fis, micmica. Tr calc healed micfracs. tr dism pyr. Tr fis, v fy lamd blk sh.
2065 - 2070m Sh: As abv.
2070 - 2075m Sh: As abv. Incrg blk sh.
2075 - 2080m Sh: As abv.
2080 - 2085m Sh: M gray, lamd / 0.05 - 0.1 mm thk lams of m gray and blk and dk gray sh bnds. Fis, micmica. Tr v s (<0.05 mm dia) mky wh nods in bndg.
2085 - 2090m Sh: As abv.
2090 - 2095m Sh: M - dk gray - blk bndd sh. Bndg is less com than abv. Micmica.
2095 - 2100m Sh: m gray - dk gray. Tr blk sh. Micmica.
2100 - 2105m Sh: As abv. Tr skss.
2105 - 2110m Sh: M gray - dk gray. Tr blk sh. Occly lamd, weakly fis, micmica.



2110 - 2115m Sh: As abv.

2115 - 2120m Sh: Dk gray - m gray / occ lamd blk sh. Fis. Micmica.

2120 - 2125m Sh: M gray - dk gray. Weakly fis - fis.

2125 - 2130m Sh: As abv. P spl.

2130 - 2135m Sh: M gray. Tr dk gray sh. Micmica.

2135 - 2140m Sh: Dk gray - m gray, variably fis. M gray sh is micmica, dk gray sh less so. Tr dism pyr in m gray sh.

2140 - 2145m Sh: As abv, but more m gray sh than drk gry.

2145 - 2150m Sh: As abv, but incrg dk gray sh. Tr skss.

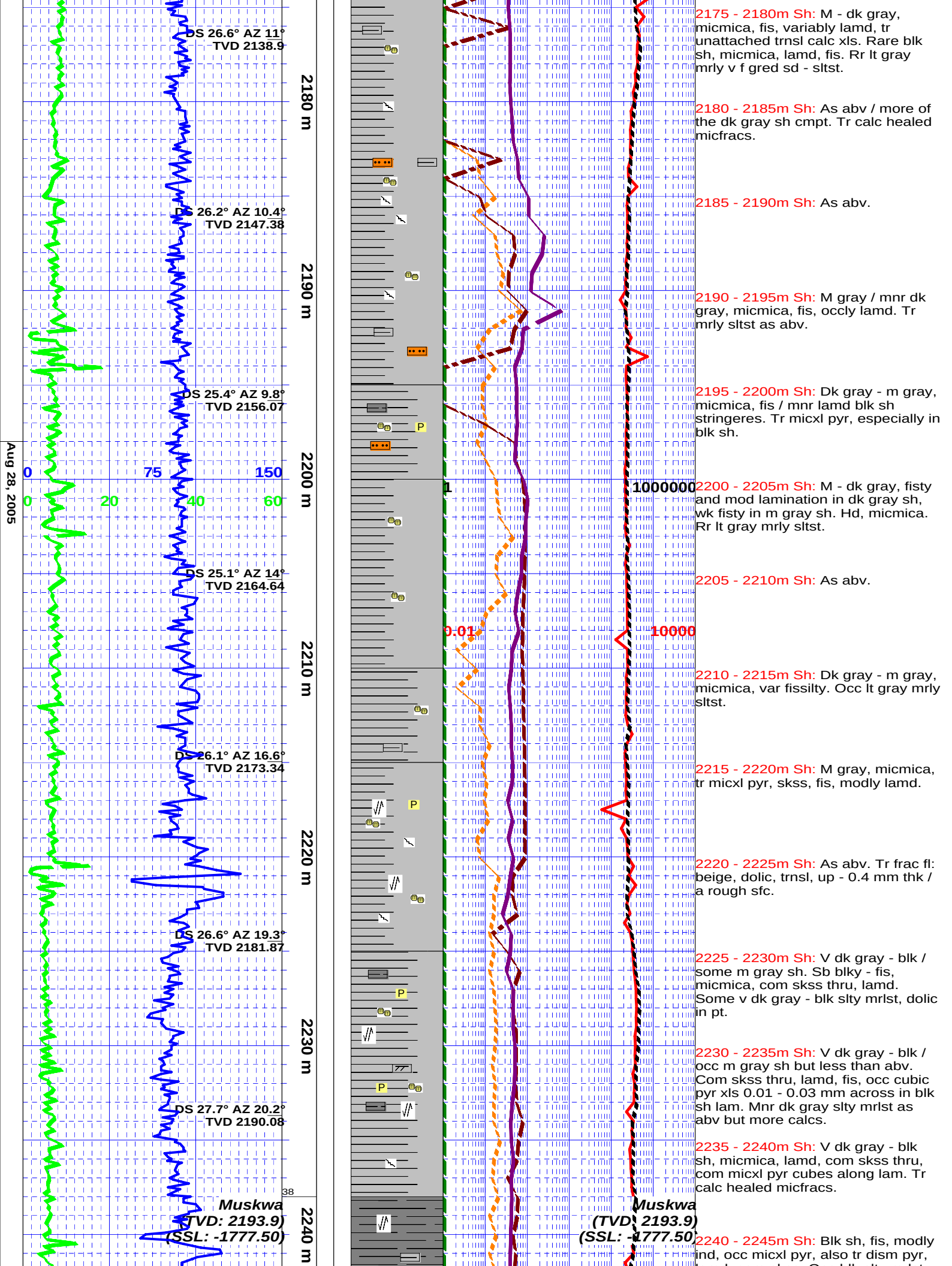
2150 - 2155m Sh: As abv.

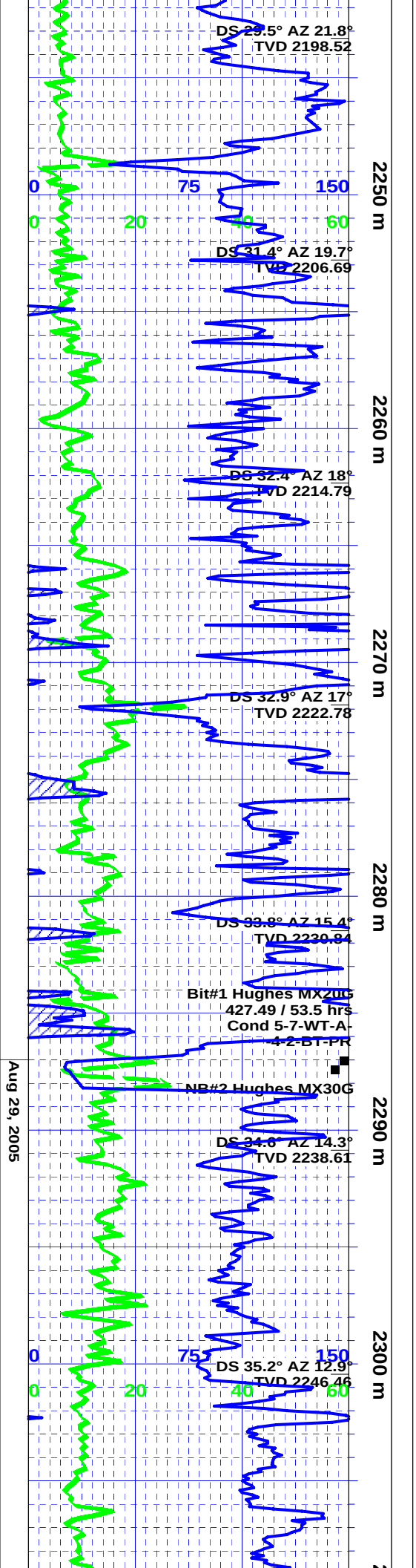
2155 - 2160m Sh: M - dk gray, micmica, variably fis, tr skss

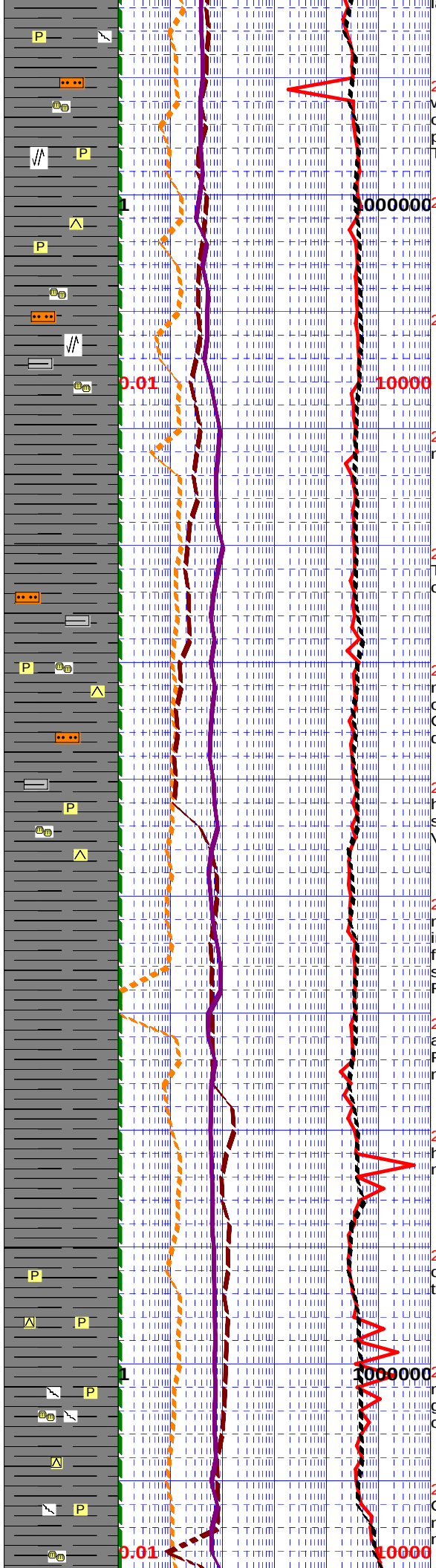
2160 - 2165m Sh: As abv

2165 - 2170m Sh: m - dk gray, micmica, fis, variably lamd, occ skss, tr trnsl calc frac fl / some up - 0.4 mm thk. Some frac mineralisation contacts are pres, showing fracs @ abt 45 degrees - lams and calc xl gth @ abt 45

2170 - 2175m Sh: M - dk gray, mrly micmica, fis, variably lamd, tr micxl pyr in dk gray sh. Rr calc healed mic fracs. Tr wtr sensitive lt gray sh / blk org ? wisps.


DS 26.6° AZ 11°
TVD 2138.9
DS 26.2° AZ 10.4°
TVD 2147.38
DS 25.4° AZ 9.8°
TVD 2156.07
DS 25.1° AZ 14°
TVD 2164.64
DS 26.1° AZ 16.6°
TVD 2173.34
DS 26.6° AZ 19.3°
TVD 2181.87
DS 27.7° AZ 20.2°
TVD 2190.08
Muskwa
(TVD: 2193.9)
(SSL: -1777.50)
2180 m
2190 m
2200 m
2210 m
2220 m
2230 m
2240 m
Aug 28, 2005
0
75
150
0
20
40
60
1
1000000
0.01
10000
P
2175 - 2180m Sh: M - dk gray, micmica, fis, variably lamd, tr unattached trnsl calc xls. Rare blk sh, micmica, lamd, fis. Rr lt gray mrly v f gred sd - sltst.
2180 - 2185m Sh: As abv / more of the dk gray sh cmpt. Tr calc healed micfracs.
2185 - 2190m Sh: As abv.
2190 - 2195m Sh: M gray / mnr dk gray, micmica, fis, occly lamd. Tr mrly sltst as abv.
2195 - 2200m Sh: Dk gray - m gray, micmica, fis / mnr lamd blk sh stringeres. Tr micxl pyr, especially in blk sh.
2200 - 2205m Sh: M - dk gray, fisty and mod lamination in dk gray sh, wk fisty in m gray sh. Hd, micmica. Rr lt gray mrly sltst.
2205 - 2210m Sh: As abv.
2210 - 2215m Sh: Dk gray - m gray, micmica, var fissilty. Occ lt gray mrly sltst.
2215 - 2220m Sh: M gray, micmica, tr micxl pyr, skss, fis, modly lamd.
2220 - 2225m Sh: As abv. Tr frac fl: beige, dolic, trnsl, up - 0.4 mm thk / a rough sfc.
2225 - 2230m Sh: V dk gray - blk / some m gray sh. Sb blky - fis, micmica, com skss thru, lamd. Some v dk gray - blk slty mrlst, dolic in pt.
2230 - 2235m Sh: V dk gray - blk / occ m gray sh but less than abv. Com skss thru, lamd, fis, occ cubic pyr xls 0.01 - 0.03 mm across in blk sh lam. Mnr dk gray slty mrlst as abv but more calcs.
2235 - 2240m Sh: V dk gray - blk sh, micmica, lamd, com skss thru, com micxl pyr cubes along lam. Tr calc healed micfracs.
2240 - 2245m Sh: Blk sh, fis, modly ind, occ micxl pyr, also tr dism pyr,





lamd, com skss. Occ blk slty mrlst.

2245 - 2250m Sh: Blk, fis, micmica, wk - mod lamination, com isolated cubic pyr xls along lams. Tr micxl pyr clusters. Occ v hd dk gray sltst. Tr skss.

2250 - 2255m Sh: As abv.

2255 - 2260m Sh: As abv.

2260 - 2265m Sh: Dk gray - blk, fis, micmica, occ micxl pyr. Tr skss.

2265 - 2270m Sh: Blk / mnr dk gray. Tr clusters of micxl pyr. Rr mas pyr chunks - 2 mm across.

2270 - 2275m Sh: Blk - dk gray, micmica, sils, fis, lamd in places, occ micxl pyr, Tr hd lt - m gray sh. Com lt gray calcs cmtd Sltst, hd, qtzs.

2275 - 2280m Sh: Blk - dk gray, fis, hd, sils, occ hd blk grs of cht? that is sil cmtd / micxl calc. Occ micxl pyr. Variably lamd.

2280 - 2285m Sh: Dk gray - blk, micmica, fis, tr dism pyr along lams in blk sh. Tr pyr mineralisation along frac sfcs. Sksd frac sfc. Mnr calcs slty bits containing hd blk cht? grs. Rr pyr nods <0.1 mm thk.

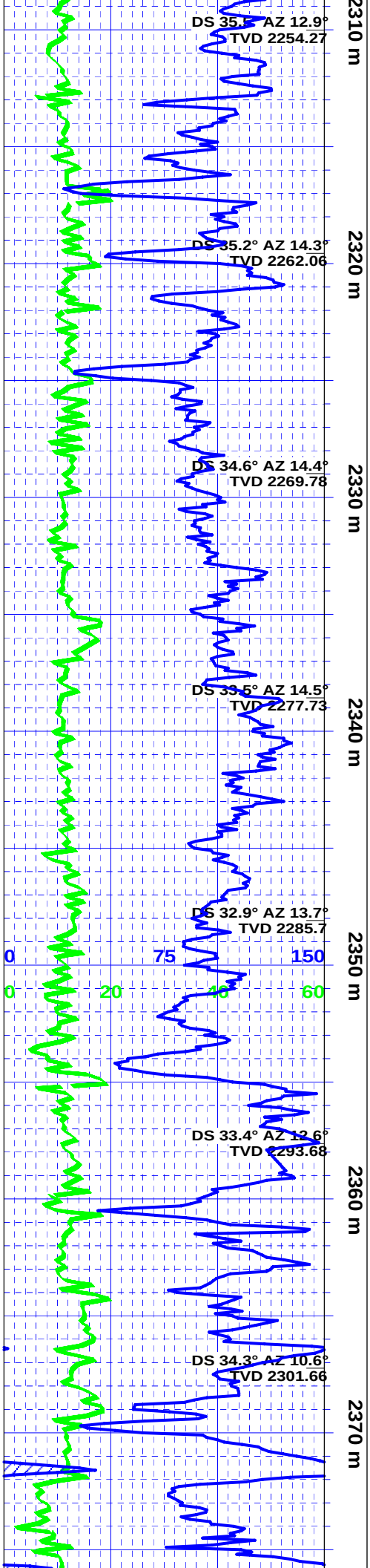
2285 - 2290m Sh: Dk gray - blk as abv, hd. Tr calc healed micfracs. Pyric. Com micxl pyr nods. Tr Mrlst, m gy, dolic.

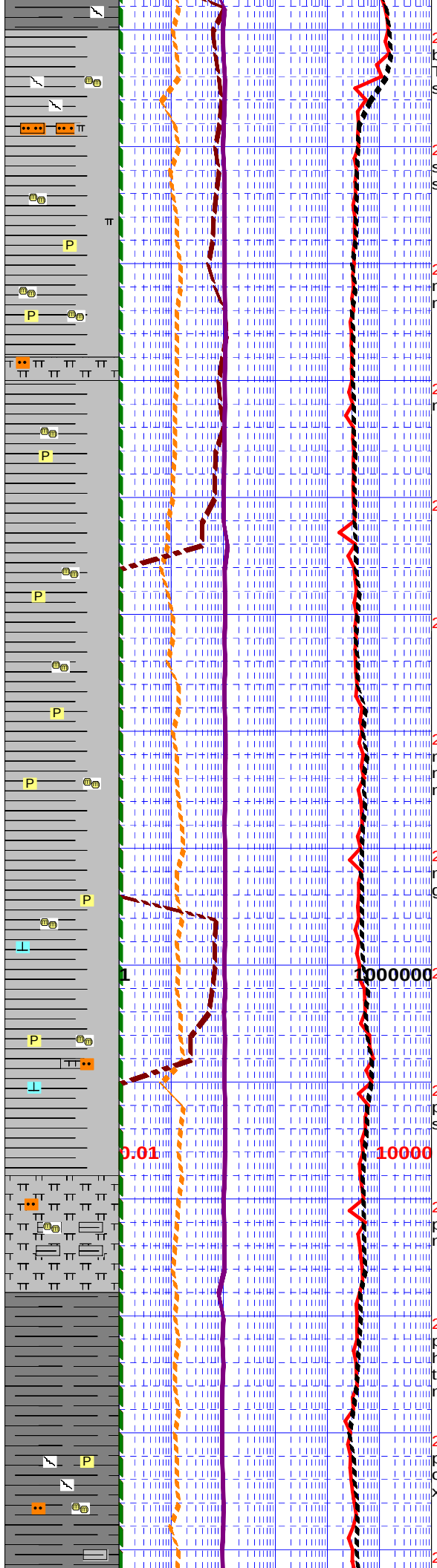
2290 - 2295m Sh: Dk gray - blk, v hd, sils, pyric, tr calc healed micfracs.

2295 - 2300m Sh: Blk - dk gray, occ calcs slty bits, rr lse qtz xls, com pyr thru.

2300 - 2305m Sh: Blk - dk gray, micmica, pyric, sils and hd. Occ dk gray sltst strgs ? / hd blk grs and calc cmt. Tr qtz healed micfracs.

2305 - 2310m Sh: Blk / mnr dk gray. Oy and v hd - cln. Hd, fis - plty, micmica, pyric, tr qtz healed micfracs.





2310 - 2315m Sh: Dk gray / lesser blk sh. Micmica, pyric, fis - plty, hd. Tr qtz healed micfracs. Tr dk gray sltst / hd blk grs and calc cmt.

2315 - 2319m Sh: Dk gray / mnr blk sh bits as abv. Occ dk gray calcs sltst.

2320 - 2325m Sh: V dk gray, micmica, mic pyric, hd. Dk gray mrlst, slty in places, v calcs.

2325 - 2330m Sh: V dk gray, micmica, mic pyric, fis, hd.

2330 - 2335m Sh: As abv

2335 - 2340m Sh: As abv.

2340 - 2345m Sh: V dk gray, micmica, com micxl pyr, occ pyr nods, hd, fis. Mnr v dk gray calcs mrlst, slty in places.

2345 - 2350m Sh: V dk gray, micmica, pyric, hd, fis, oy. Mnr v dk gray calcs mrlst, slty in places.

2350 - 2355m Sh: As abv.

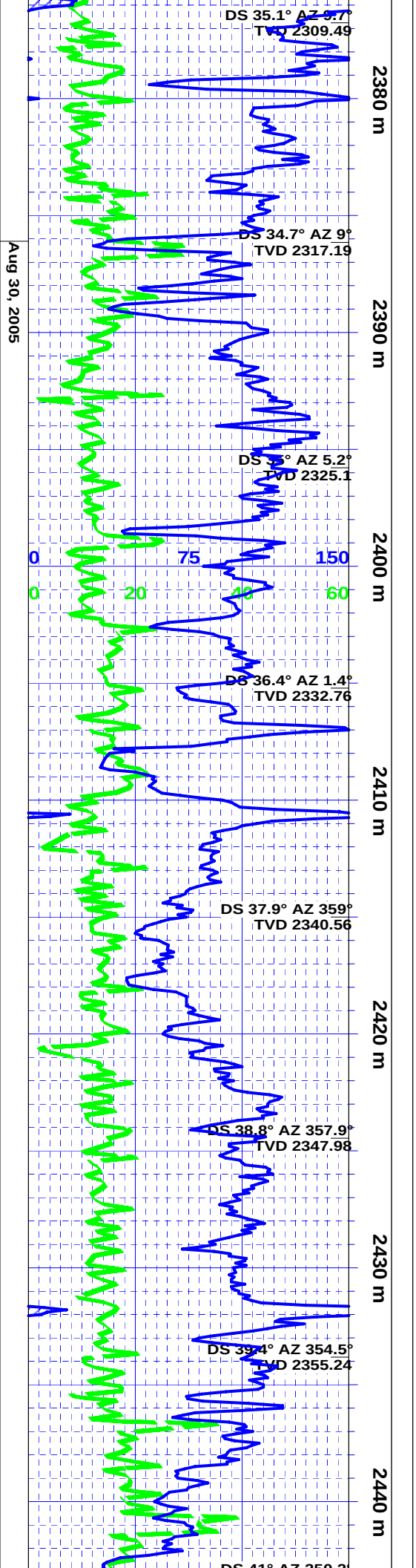
2355 - 2360m Sh: V dk gray, fis, pyric, hd, tr skss, oy. Mnr dk gray slty mrlst.

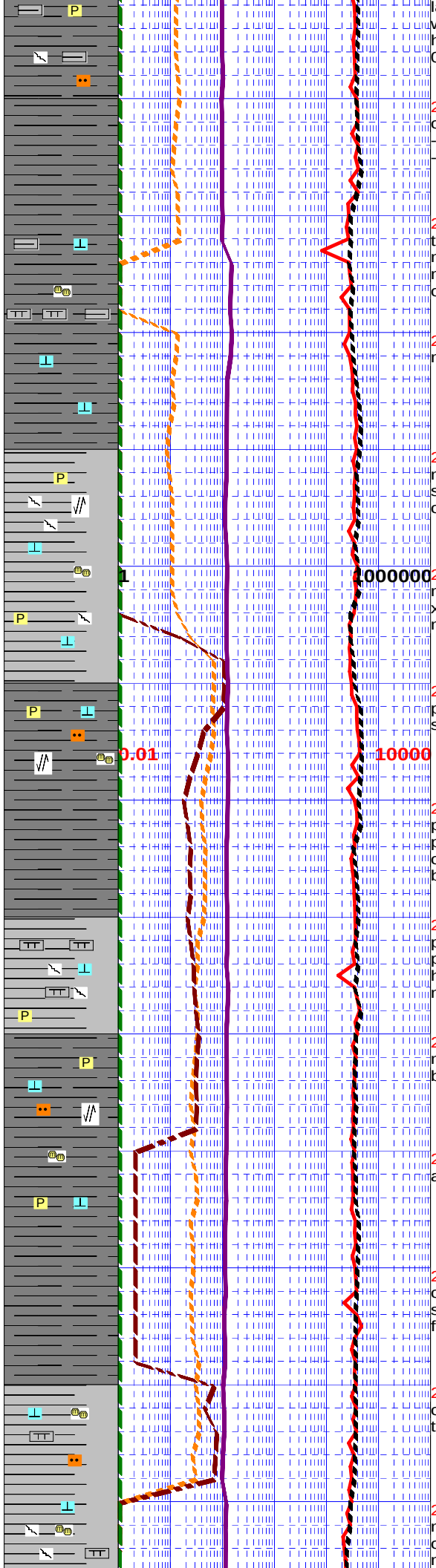
2360 - 2365m Mrlst: Dk gray, slty in places, pyric, oy. Mnr dk gray sh, fis, micmica, pyric.

2365 - 2370m Sh: Dk gray - blk, pyric in places, lamd - plty. Tr calc healed micfracs, most ctgs vertically through sh lams. Mnr dk gray slty mrlst.

2370 - 2375m Sh: Blk - v dk gray, plty, micmica, pyric, modly calcs, tr calc healed micfracs and lse calc xls. Tr dk gray slty bits.

2375 - 2380m Sh: Blk - dk gray,





lamd - sb blky, pyric, micmica, occ wh calc grs and slty bits. Tr calc healed micfracs and lse calc xls up - 0.1 mm thk.

2380 - 2385m Sh: Dk gray - blk, calcs - v calcs, micmica, pyric, lamd - sb blky, tr calc healed micfracs up - 0.5 mm thk.

2385 - 2390m Sh: Blk - dk gray, traceblacky lse pyr cls, calcs, micmica, tr skss, tr slty bits, intbd / mnr dk - m gray mrlst, occly slty, v calcs, occ v f lam of op wh calc.

2390 - 2395m Sh: As abv, but only mnr mrlst intbds. Tr lse calc xls.

2395 - 2400m Sh: V dk gray, micmica, pyric, tr lse calc xls, tr skss, tr calc healed micfracs, v calcs, tr wh calcs specs.

2400 - 2405m Sh: V dk gray, micmica, pyric in places, tr lse calc xls, rr lse sbrdd qtz xls. Mnr blk sh, micmica, pyric, fis, lamd - plty, calcs.

2405 - 2410m Sh: Blk. fis, lamd - plty, v calcs, pyric, micmica, tr lse sbrdd qtz xls, tr skss, tr slty bits.

2410 - 2415m Sh: Dk gray / blk, fis, pyric, micmica sh strgs, v calcs, pyric, tr calc healed micfracs, tr lse calc xls, tr op ang qtz xls. Occ slty bits.

2415 - 2420m Sh: Dk gray, lamd - plty, modly fis, v calcs, micmica, pyric, tr skss, slty in places, rr calc healed micfracs. Mnr strgs of m gray mrlst, slty in places.

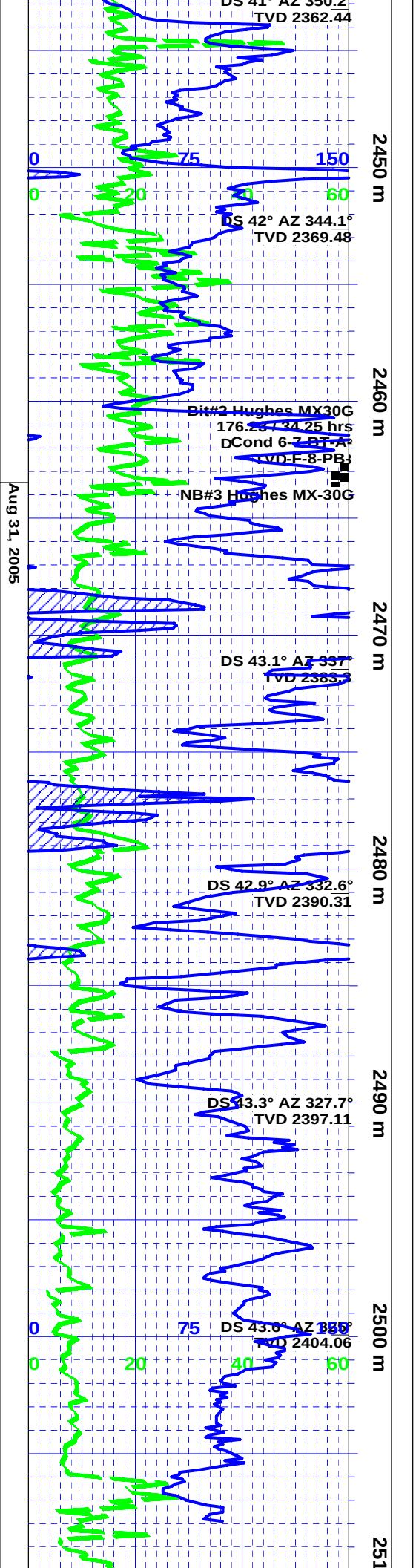
2420 - 2425m Sh: Blk, sb blky - plty, micmica, pyric, hd, tr skss, tr slty bits, calcs - v calcs.

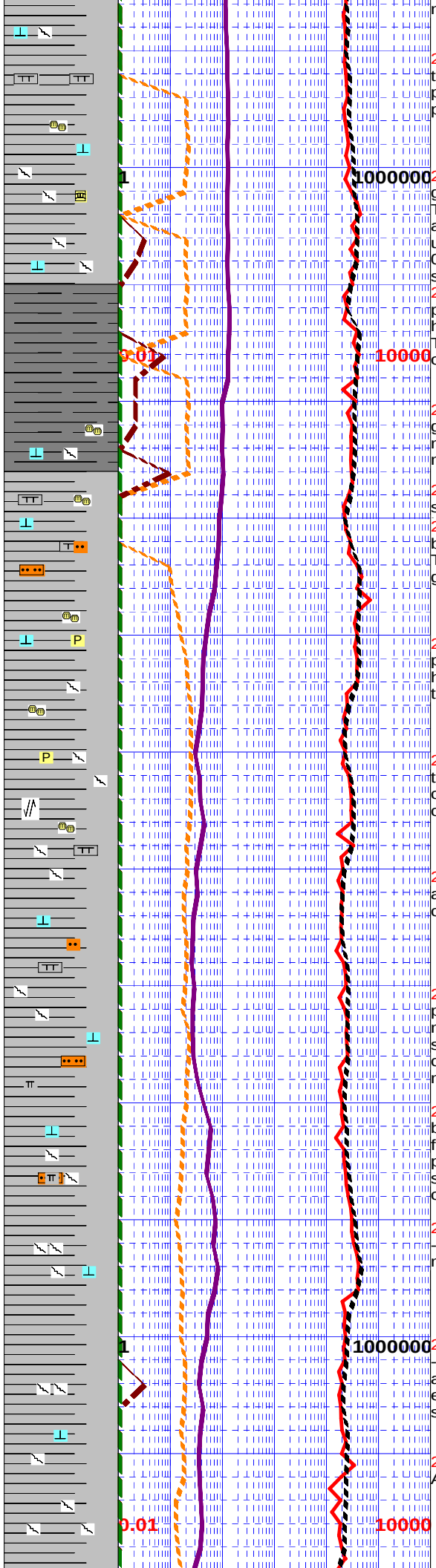
2425 - 2430m Sh: As abv but softer and less mrlst.

2430 - 2435m Sh: V dk gray - blk, v calcs, micmica, pyric, tr lt - m gray slty mrlst. Rr lse bits of drsy qtz frac fl.

2435 - 2440m Sh: Dk gray, plty, v calcs, slty in places, micmica, pyric, tr lt - m gray slty mrlst.

2440 - 2445m Sh: Dk / mnr m gray, micmica, weakly fis, lamd - plty, tr calc healed micfracs, tr micxl pyr, tr mky wh calcs specs, tr skss. Tr lt -





m gray mrlst, slty in places.

2445 - 2450m Sh: Dk gray, micmica, tr skss. Mnr lt - m gray mrlst, dolic in places. Rr gn gray bentic sh, dolic in pt.

2450 - 2455m Sh: Dk gray / tr m gray strgs. Micmica, hd, sils, v calcs. Tr skss. Tr pyr chunks <1 mm across. Com calc healed micfracs up - 1 mm thk. Tr lse clacite xls up - 0.8 mm across. Rr gn gray bentic sh, weakly calcs.

2455 - 2460m Sh: V dk gray - blk, plty - sb blky, hd, calcs, com calc healed micfracs up - 2 mm aperture. Tr lse calc xls, tr pyr cls. Tr lt gray calcs mrlst.

2460 - 2463.45m Sh: Blk / mnr dk gray sh, micmica, tr pyr cls and microcrystals, tr calc healed micfracs, hd, calcs.

2463.45 - 2465m Sh: Dk gray, plty - sb blky, variably fis, micmica, calcs,

2465 - 2470m Sh: Dk gray as abv, but calc frac fl and lse xls are com. Tr skss, tr calcs specs. Tr lt - m , slty gray, plty, mrly sltst strgs.

2470 - 2475m Sh: Dk gray, micmica, pyric in places, plty - lamd, v calcs, hd, tr calc healed micfracs assoc / thicker (up - 0.5 mm) calc flld fracs.

2475 - 2480m Sh: Dk gray, micmica, tr calcs wh specs, tr pyric zns, tr calc healed fracs - 1 mm aperture, tr clickensides. Tr lt - m gray slty mrlst.

2480 - 2485m Sh: Dk gray and fracd as abv / tr slty mrlst as abv. V hd, v calcs.

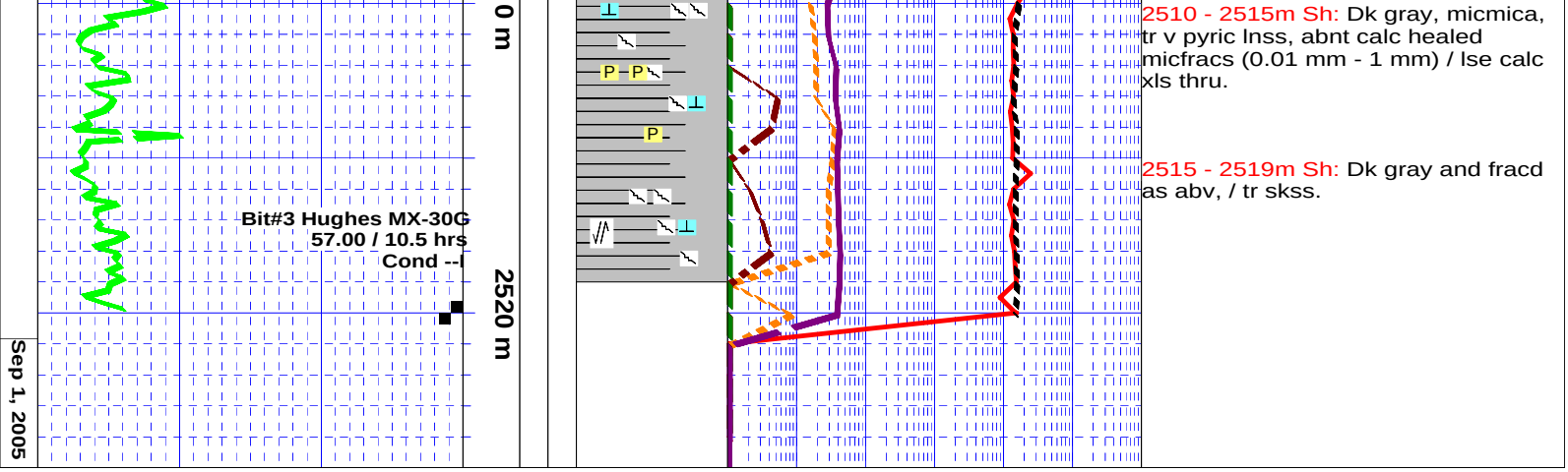
2485 - 2490m Sh: Dk gray, micmica, plty variably fis, calcs, tr calc healed micfracs and com lse calc xls. Occ strgs of com (10 - 25% by volume) calcs mky wh fks. Mnr lt - m gray mrly sltst.

2490 - 2495m Sh: Dk gray / tr dk brnsh gray, com calc frac fl thru from <0.05 mm - >1 mm. Lamd - plty / occ v pyric lam. Tr gray mrly sltst that occly grds - v f ss, calcs cmtd.

2495 - 2500m Sh: Dk gray, nn calcs - calcs, hd, calc frac fl from <0.05 mm - abt 1 mm thk, tr skss.

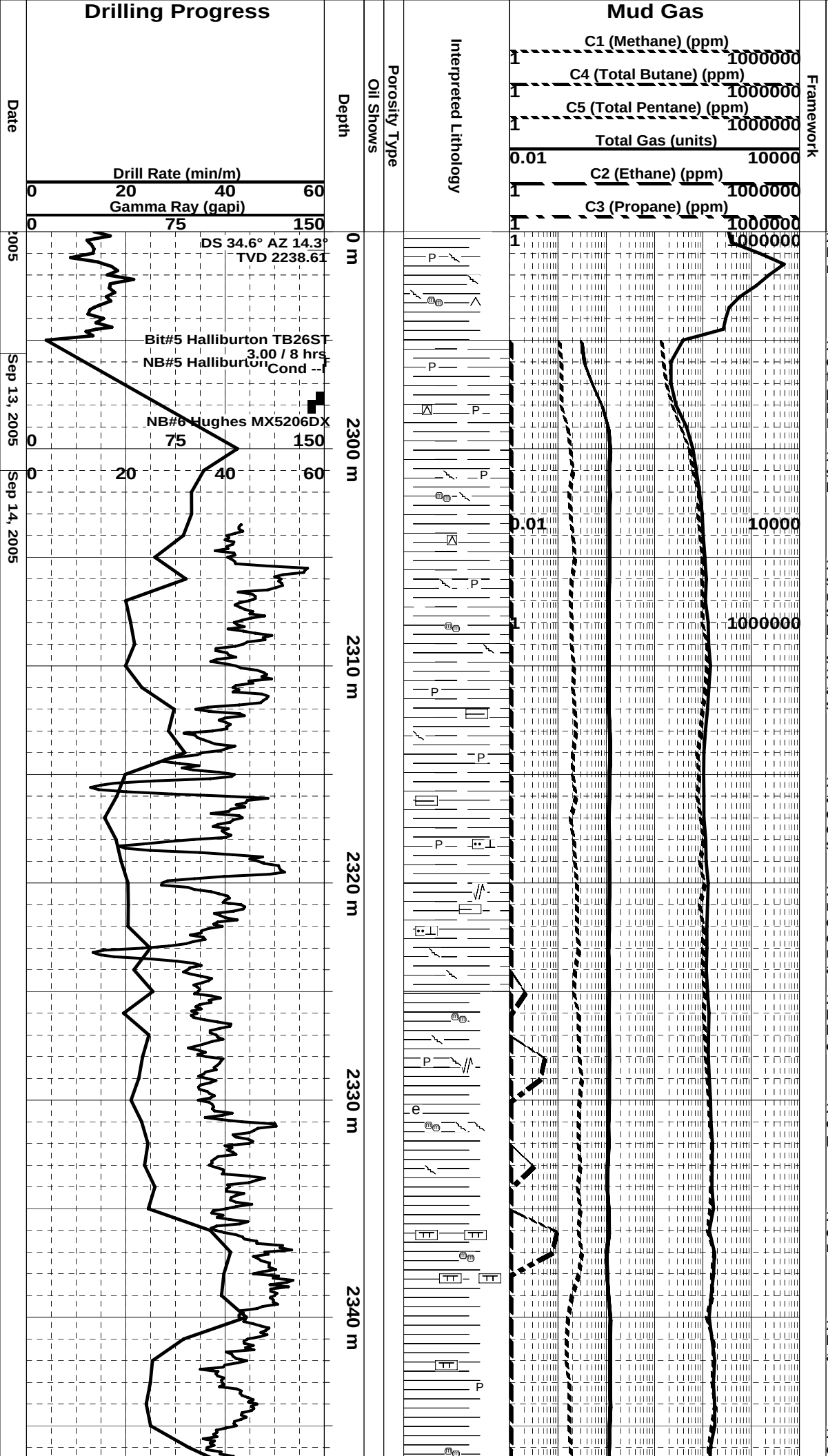
2500 - 2505m Sh: Dk gray, fis, lamd - plty, / abnt calc healed micfracs and com lse calc xls, occasionallly euhed in xl form. Some frac sfcs shw smeared calc veneers.

2505 - 2510m Sh: Dk gray as abv. Abnt fracs as abv.



2510 - 2515m Sh: Dk gray, micmica, tr v pyric lnss, abnt calc healed micfracs (0.01 mm - 1 mm) / lse calc xls thru.

2515 - 2519m Sh: Dk gray and fracd as abv, / tr skss.



2290 - 2295m Sh: Dk gray - blk, v hd, sils, pyric, tr calc healed micfracs.

2295 - 2300m Sh: Blk - dk gray, occ calcs slty, blky - lamd, modly arg, fis, tr skss, bits, rr lse qtz xls, com pyr thru / occ v pyric lam.Tr calc healed micfracs and tr lse qtz xls. Mnr m gy sh, hd, sils, mas - blky.

2300 - 2305m Sh: Dk gy - blk, hd, sils, pyric as abv. Decrg m gy sh. Tr blk - brn, sft, rthy sh.

2305 - 2310m Sh: Dk gy - blk, hd, sils. Tr colorless qtz healed micfracs up - 0.01 mm aperture, <1 mm spacing, parallel / nn uni thickness, perpendicular - fisty. Com micxl pyr. Tr blk, sft carb fks up - 0.2 mm in blk sh.

2310 - 2315m Sh: Dk gy - blk sh as abv, / incrg blk sh. Rr dk gy calcs sh.

2315 - 2320m Sh: Blk - dk gy as abv, / incrg calcs dk gy sh. Occ colorless, micxl, spher, w srt, w rdd calc peloids (no vis nucleus), mtx supd in sft, nn calcs dk gy sh.

2320 - 2325m Sh: Dk gy - blk, micmica, pyric, hd, sils, rarely lamd - comly plty, fis. Mnr m - dk gy sh, calcs, micmica, pyric. Tr calc healed micfracs, tr skss. Tr peloidal sh as abv.

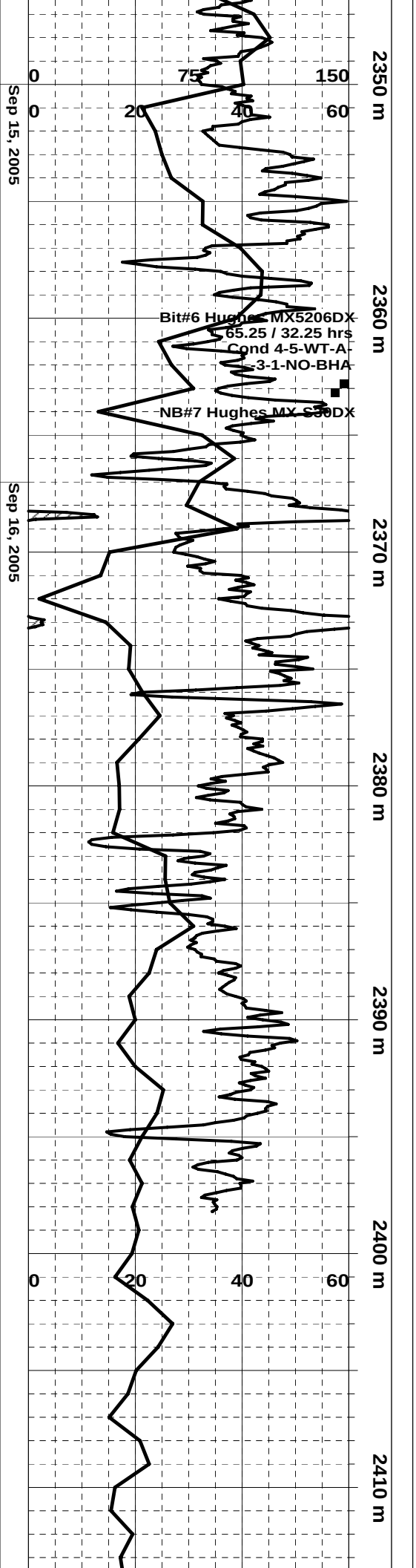
2325 - 2330m Sh: Dk gy, micmica, brit but not v hd, pyric in places, fis, lamd - blky, tr skss. Rr lse crmy wh calc xls up - 0.4 mm.

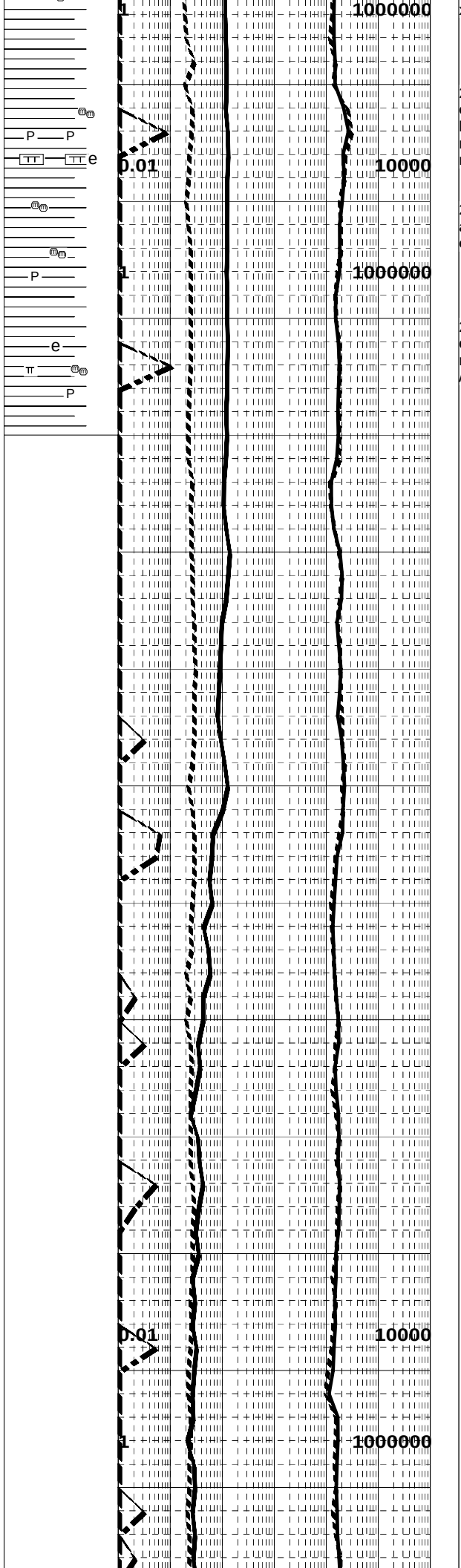
2330 - 2335m Sh: Dk gy as abv. Tr calc healed micfracs. Slly calcs in places.

2335 - 2340m Sh: As abv. Occ lse calc xls. Mnr brn gy sh, calcs, sft, rdd ctgs. Tr skss.

2340 - 2345m Sh: As abv, / decrg brn gy sh. Rr lt gy sh, micmica, slly arg, pyric, modly hd.

2345 - 2350m Sh: As abv, but modly calcs in places. Rr lse drsy wh qtz



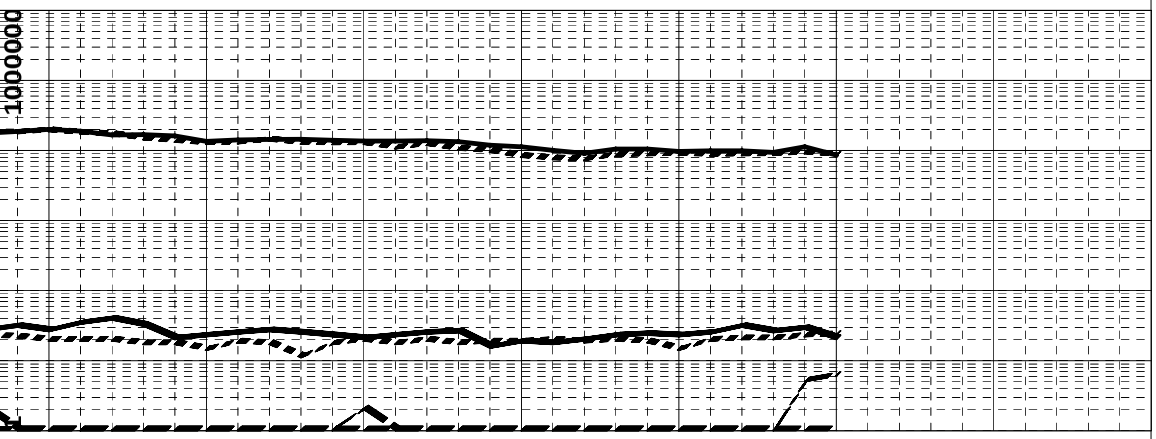


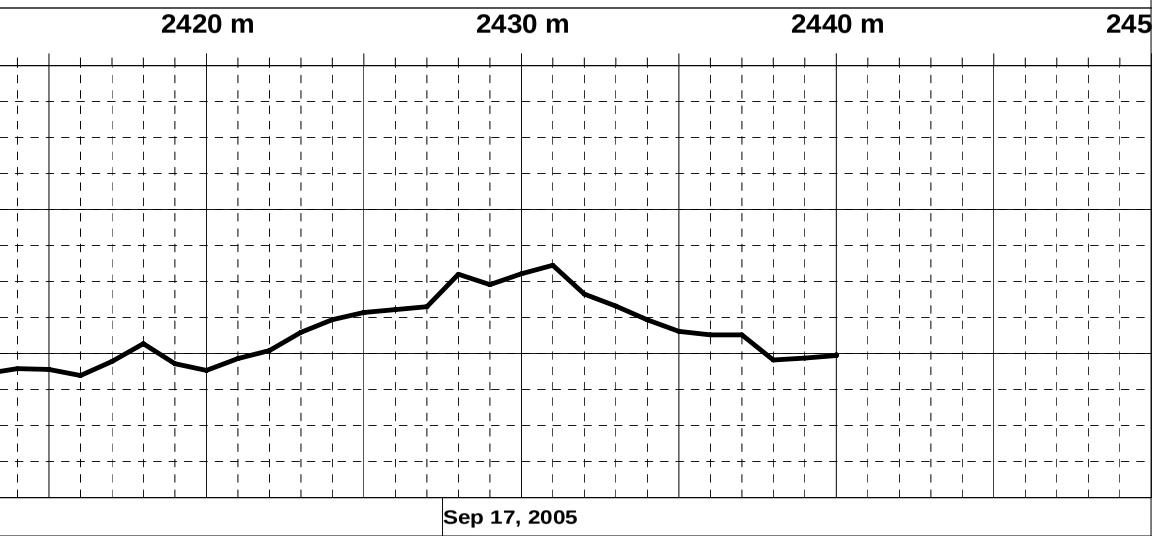
xls - 1 mm.

2350 - 2355m Sh: Dk gy, micmica, occ dism pyr bnds, fis, tr skss, occly lamd, modly calcs in places but mostly sils. Mnr brn gy mrlst, sft, rthy, calcs / v wk fisty.

2355 - 2360m Sh: Lithologies as abv / decrg brn gy sh. Rr wh nn calcs specs.

2360 - 2365m Sh: Dk gy, micmica, tr dism pyr bnds, tr brn gy mrly sh, sft, rthy, calcs. Rr lt gy, sils, micmica sh / a slaty lstr.


1000000

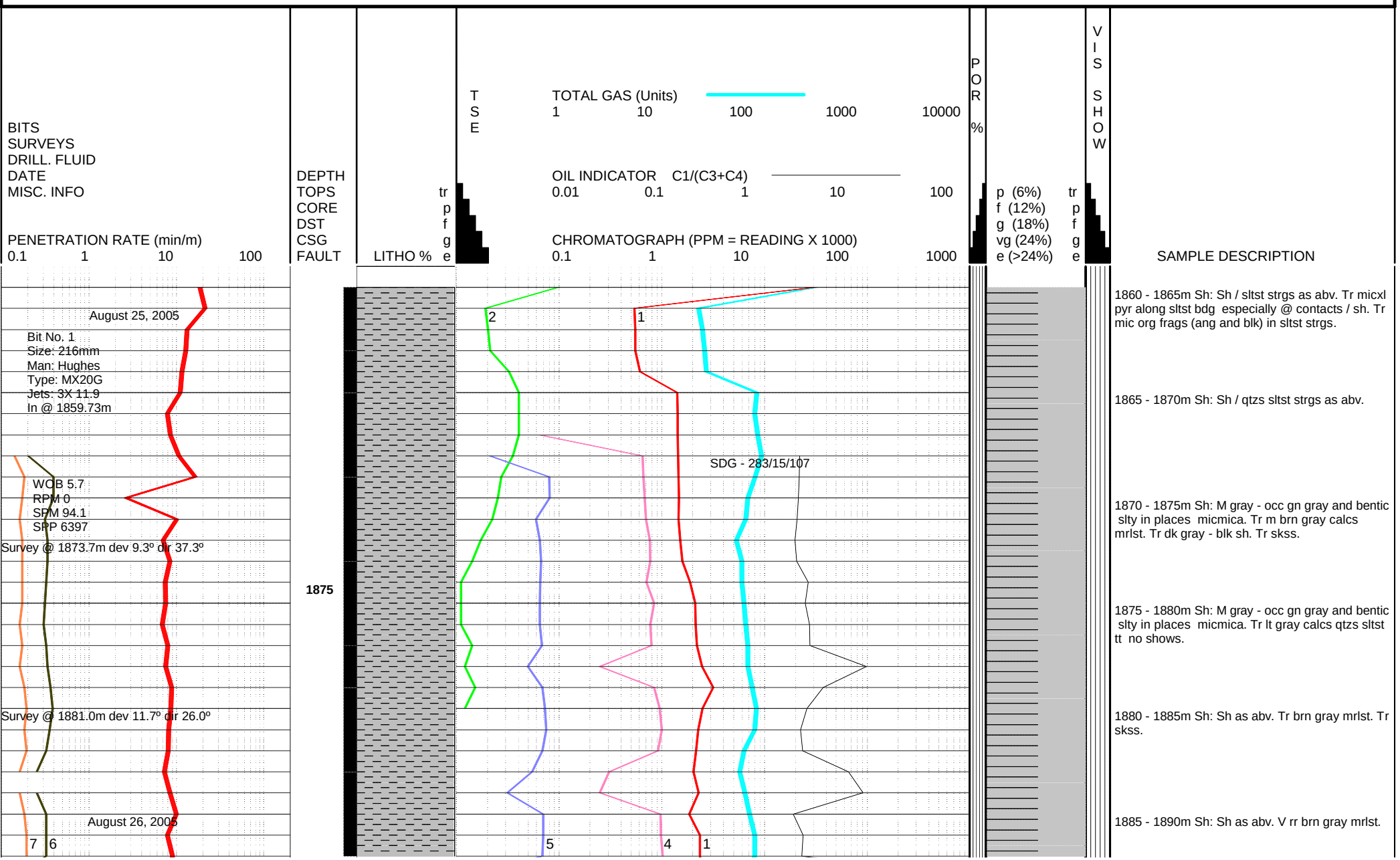

2420 m
2430 m
2440 m
245
Sep 17, 2005

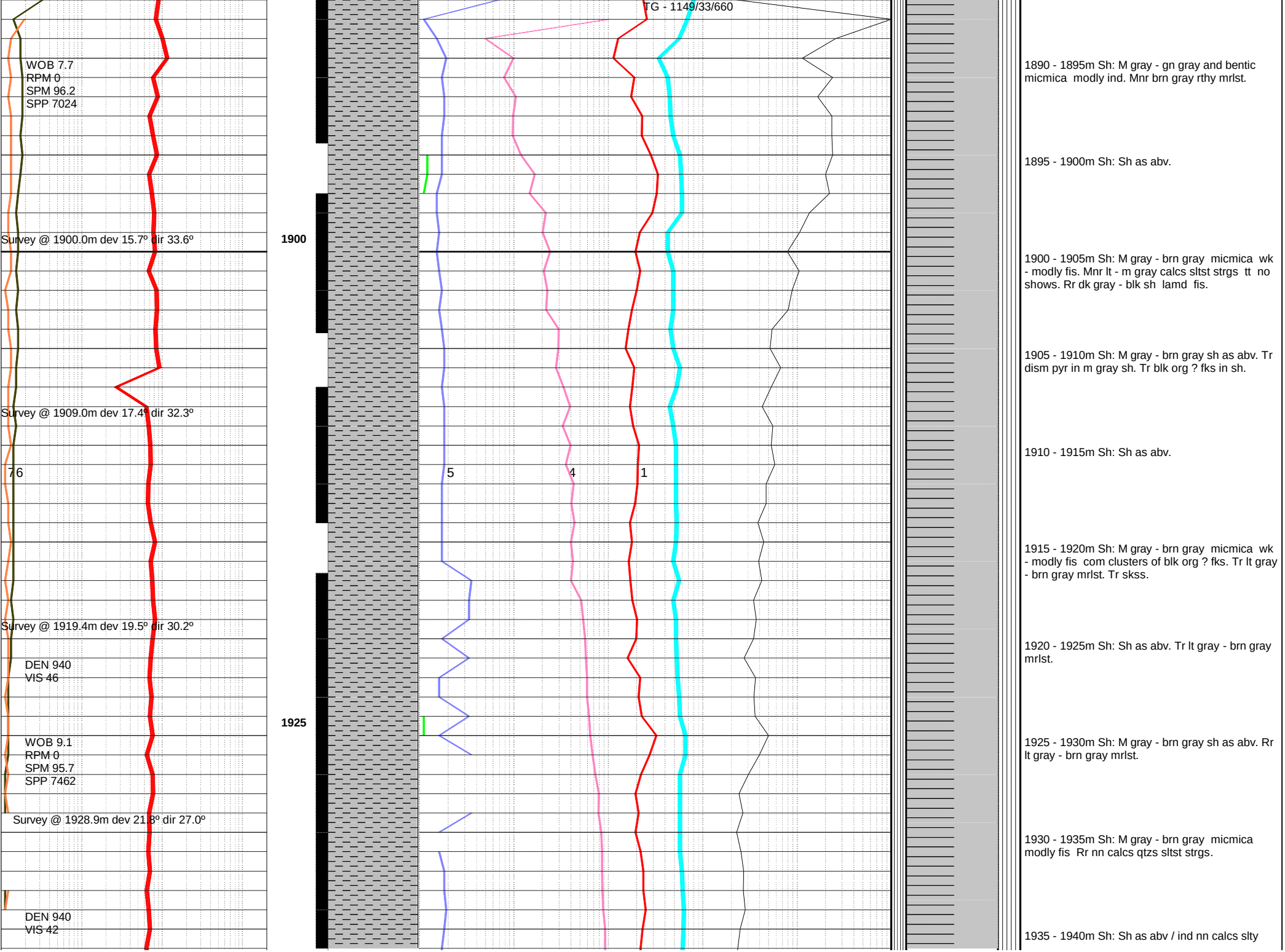
Continental Laboratories Ltd.

Hydrocarbon Well Log

WELL NAME:	Paramount et al West Liard K-29		
LOCATION:	60º 28’41" 123º 35’41"		
COMPANY:	Paramount Resources Limited		
PROVINCE:	Northwest Territories	FILE:	11435
ELEVATION K.B.:	418.0 m	HOLE SIZE:	216 mm from 1860 m to m
ELEVATION G.L.:	409.6 m		
LOGGING INTERVAL:	1860 m to m		
LOGGING DATES:	24/ 8/2005 to	MUD SYSTEM:	Invert from: 1860 m to: m
PERSONNEL:	Dave Rideout		
INSTRUMENTATION:	MP2300, MTI#13, Mud Duck		

ALL LITHOLOGIC SYMBOLS ARE CANSTRAT COMPATIBLE





1890 - 1895m Sh: M gray - gn gray and bentic micmica modly ind. Mnr brn gray rthy mrlst.

1895 - 1900m Sh: Sh as abv.

1900 - 1905m Sh: M gray - brn gray micmica wk - modly fis. Mnr lt - m gray calcs sltst strgs tt no shows. Rr dk gray - blk sh lamd fis.

1905 - 1910m Sh: M gray - brn gray sh as abv. Tr dism pyr in m gray sh. Tr blk org ? fks in sh.

1910 - 1915m Sh: Sh as abv.

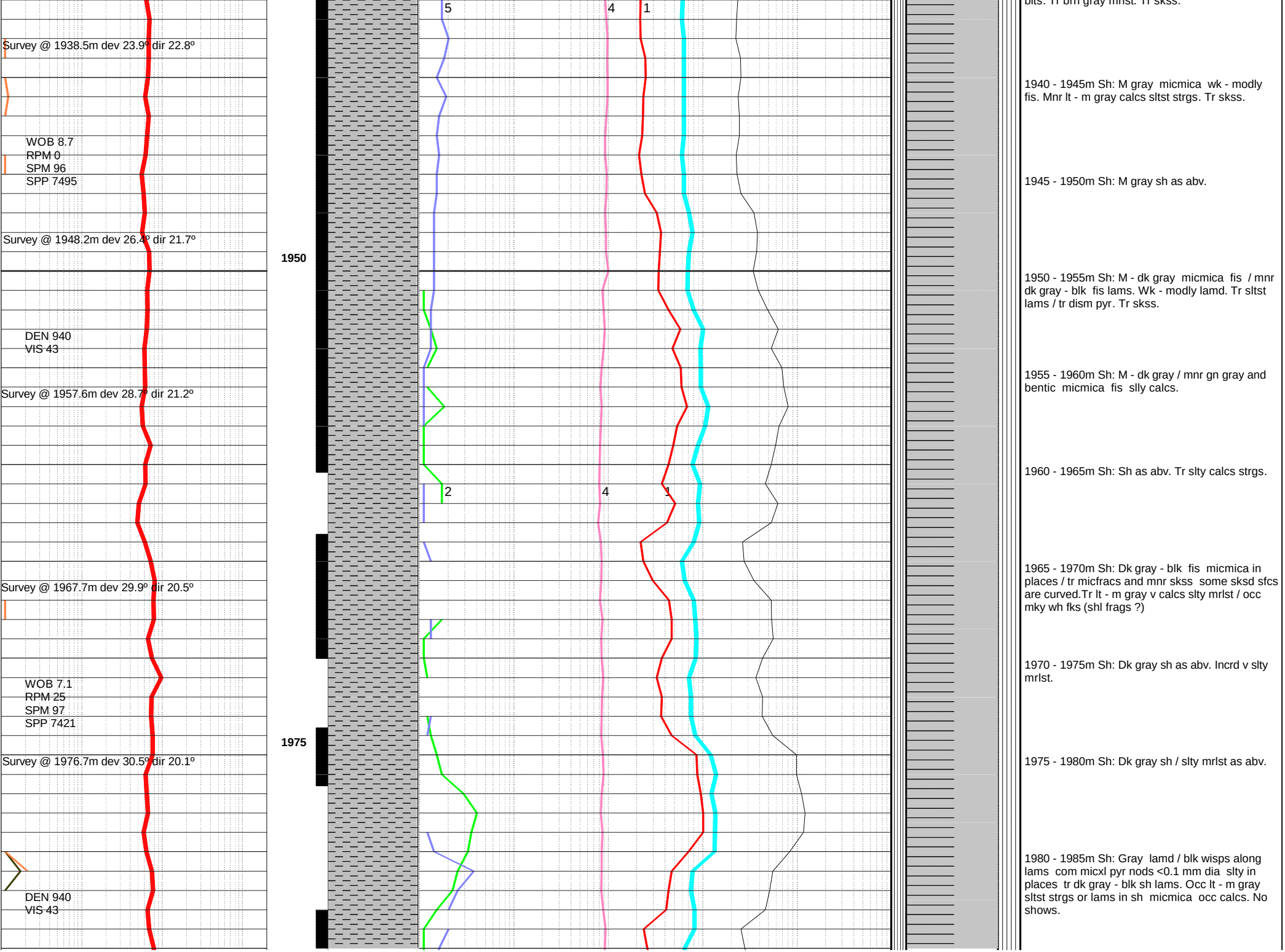
1915 - 1920m Sh: M gray - brn gray micmica wk - modly fis com clusters of blk org ? fks. Tr lt gray - brn gray mrlst. Tr skss.

1920 - 1925m Sh: Sh as abv. Tr lt gray - brn gray mrlst.

1925 - 1930m Sh: M gray - brn gray sh as abv. Rr lt gray - brn gray mrlst.

1930 - 1935m Sh: M gray - brn gray micmica modly fis Rr nn calcs qtzs sltst strgs.

1935 - 1940m Sh: Sh as abv / ind nn calcs slty



bits. Tr brn gray mrlst. Tr skss.

1940 - 1945m Sh: M gray micmica wk - modly fis. Mnr lt - m gray calcs sltst strgs. Tr skss.

1945 - 1950m Sh: M gray sh as abv.

1950 - 1955m Sh: M - dk gray micmica fis / mnr dk gray - blk fis lams. Wk - modly lamd. Tr sltst lams / tr dism pyr. Tr skss.

1955 - 1960m Sh: M - dk gray / mnr gn gray and bentic micmica fis slly calcs.

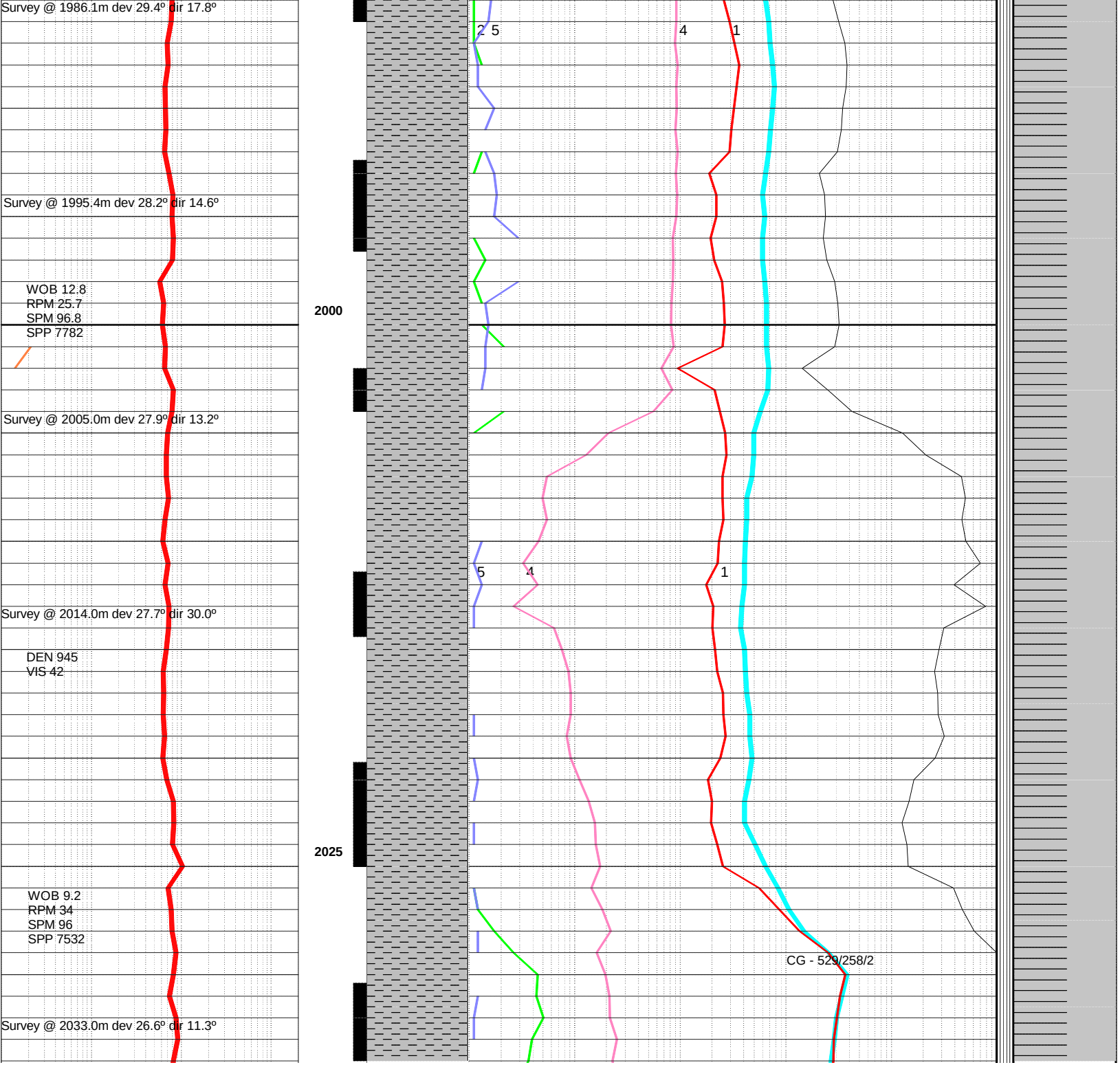
1960 - 1965m Sh: Sh as abv. Tr slty calcs strgs.

1965 - 1970m Sh: Dk gray - blk fis micmica in places / tr micfracs and mnr skss some sksd sfcs are curved.Tr lt - m gray v calcs slty mrlst / occ mky wh fks (shl frags ?)

1970 - 1975m Sh: Dk gray sh as abv. Incrd v slty mrlst.

1975 - 1980m Sh: Dk gray sh / slty mrlst as abv.

1980 - 1985m Sh: Gray lamd / blk wisps along lams com micxl pyr nods <0.1 mm dia slty in places tr dk gray - blk sh lams. Occ lt - m gray sltst strgs or lams in sh micmica occ calcs. No shows.



1985 - 1990m Sh: Gray sh as abv but / incrd dk gray - blk sh lams. Tr micfracs. One vis calc frac fl shows some calc mnrl clvg 0.5 mm thickness pres in ctc / sh has assoc ireg micfracs emanating from a sm and regular prim frac sfc.

1990 - 1995m Sh: M gray - gn gray and bentic / mnr brn gray micmica occ lamd tr blk sh.

1995 - 2000m Sh: Sh as abv. Slly calcs in places.

2000 - 2005m Sh: Sh as abv.

2005 - 2010m Sh: M gray - gn gray and bentic - mnr brn gray micmica occ lamd. Com blk org fks.Tr v thn (<0.05 mm thk) calc healed micfracs.

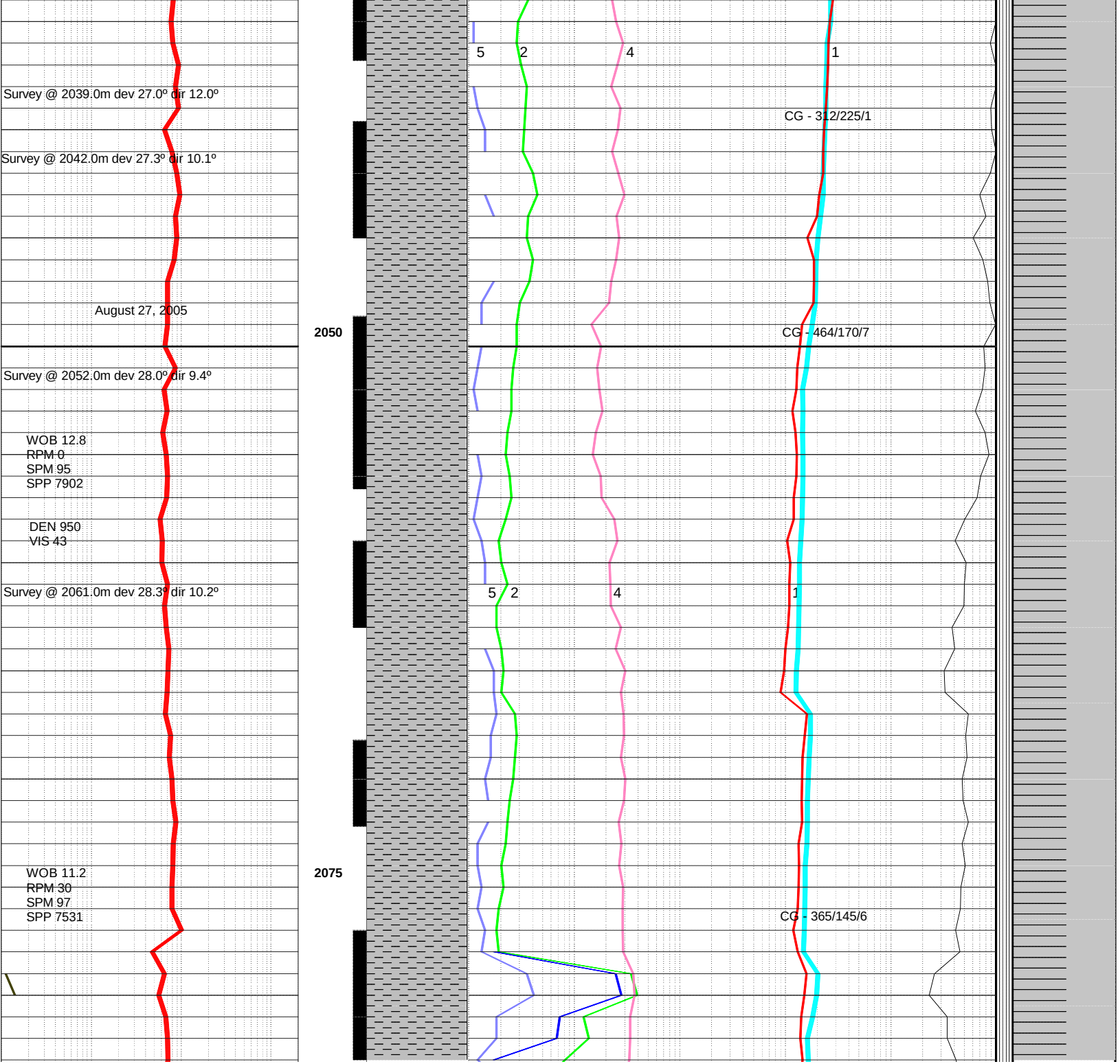
2010 - 2015m Sh: Sh as abv.

2015 - 2020m Sh: M gray dk gray in places v thn (0.05 mm thk) lt gray sltst lam in places micmica in places modly fis

2020 - 2025m Sh: As abv. Incrg dk gray sh usually lamd. Tr curvilinear sksd sfcs

2025 - 2030m Sh: M - dk gray / occ blk sh. Rr calc frac fl up - 0.2 mm thk trnsl / a sm undul sfc. Tr clacareous lt gray sltst.

2030 - 2035m Sh: As abv. Incrg fy lamd fis blk sh. Tr dolic lt gray sltst..



2035 - 2040m Sh: M gray - blk variably lamd variably fis occly micmica. Tr micxl pyr. Tr calc frac fl up - 0.2 mm thk.

2040 - 2045m Sh: As abv. Tr lt gray sft mrlst.

2045 - 2050m Sh: M gray / tr dk gray sh occly micmica weakly fis. Tr wtr sensitive lt gray nn calcs sh / wisps of blk organics. Tr calcs.

2050 - 2055m Sh: As abv / incrg dk gray sh.

2055 - 2060m Sh: As abv.

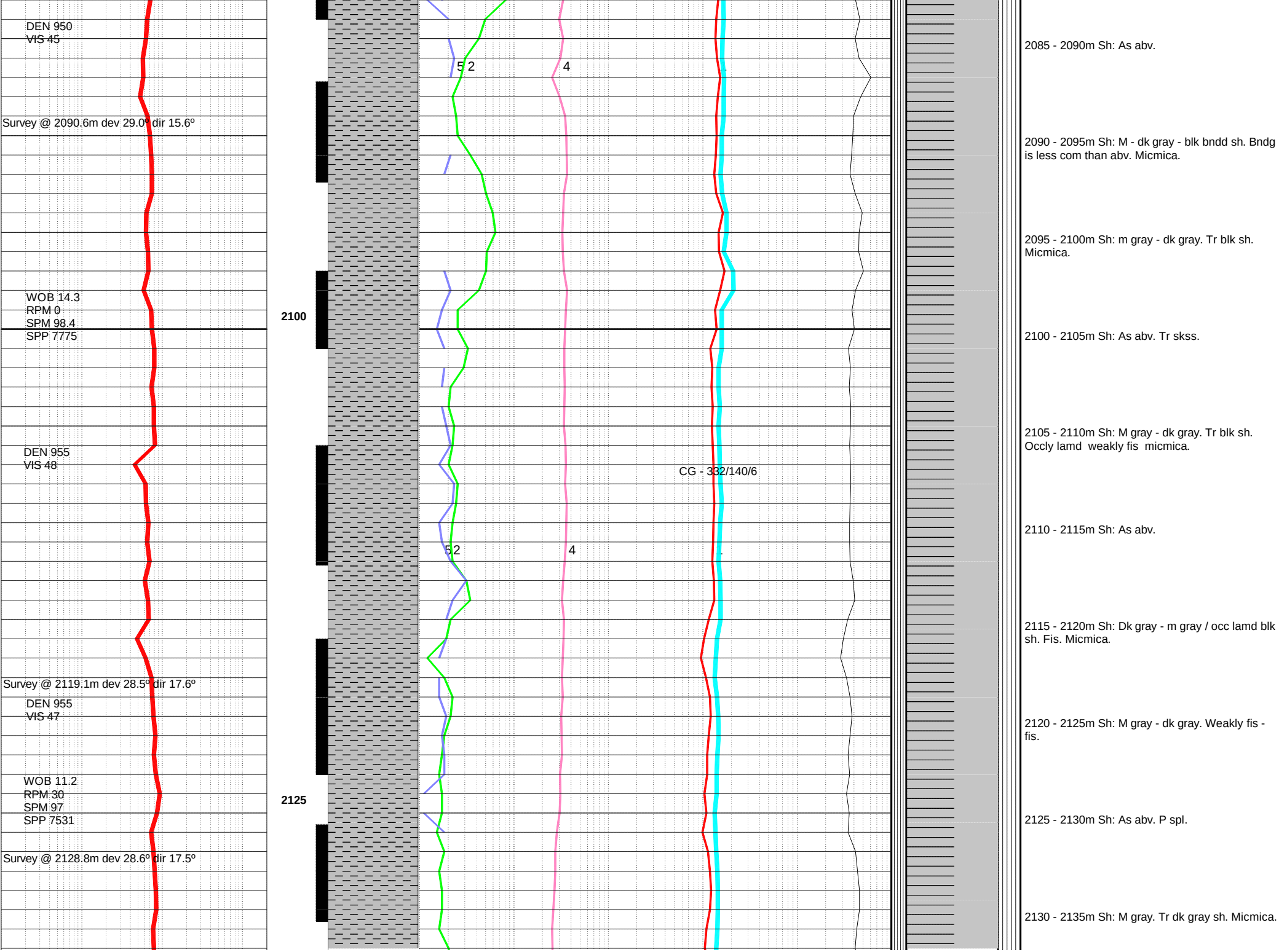
2060 - 2065m Sh: M - dk gray weakly fis micmica. Tr calc healed micfracs. tr dism pyr. Tr fis v fy lamd blk sh.

2065 - 2070m Sh: As abv.

2070 - 2075m Sh: As abv. Incrg blk sh.

2075 - 2080m Sh: As abv.

2080 - 2085m Sh: M gray lamd / 0.05 - 0.1 mm thk lams of m gray and blk and dk gray sh bnds. Fis micmica. Tr v s (<0.05 mm dia) mky wh nods in bndg.



2085 - 2090m Sh: As abv.

2090 - 2095m Sh: M - dk gray - blk bndd sh. Bndg is less com than abv. Micmica.

2095 - 2100m Sh: m gray - dk gray. Tr blk sh. Micmica.

2100 - 2105m Sh: As abv. Tr skss.

2105 - 2110m Sh: M gray - dk gray. Tr blk sh. Occly lamd weakly fis micmica.

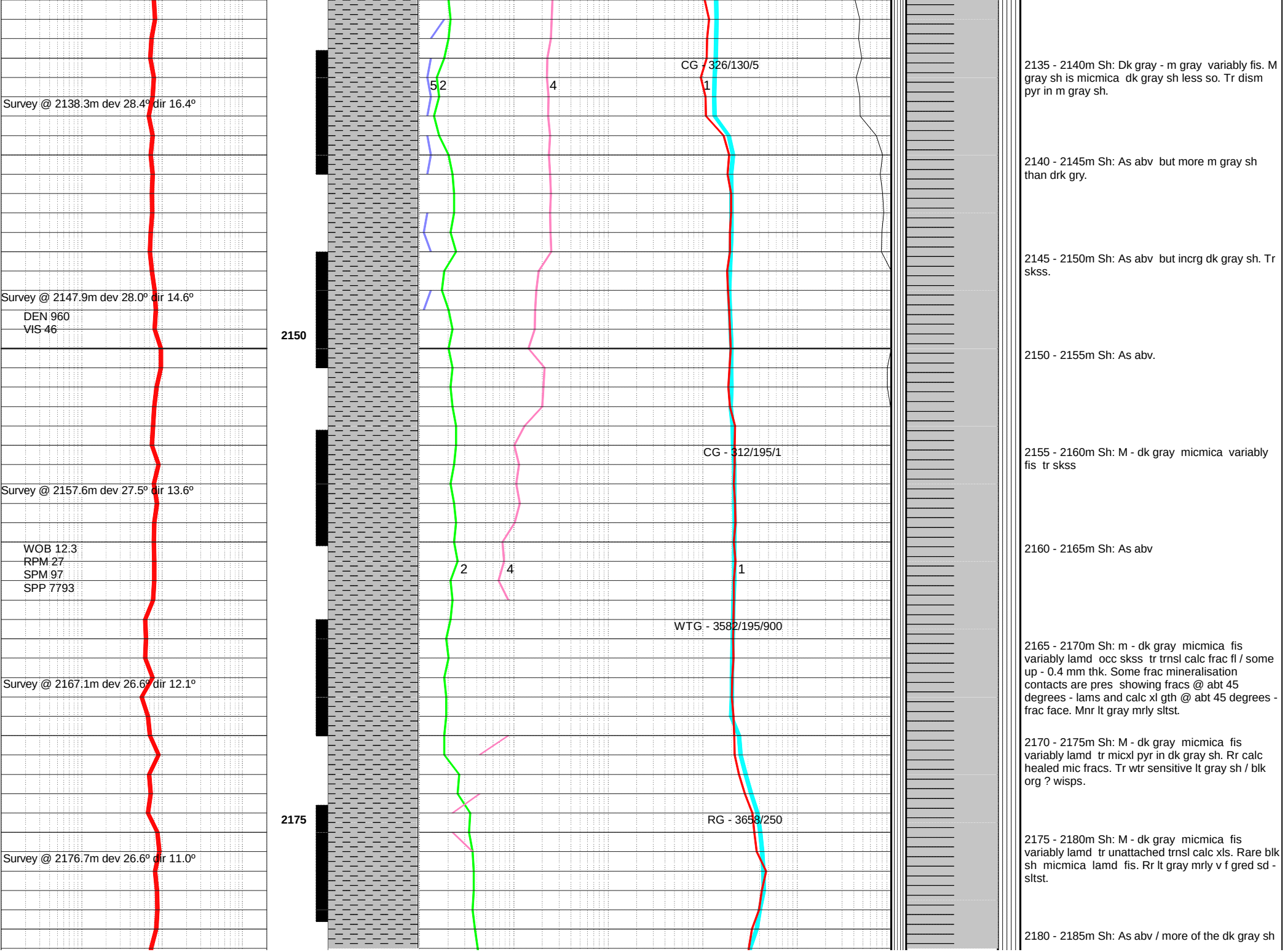
2110 - 2115m Sh: As abv.

2115 - 2120m Sh: Dk gray - m gray / occ lamd blk sh. Fis. Micmica.

2120 - 2125m Sh: M gray - dk gray. Weakly fis - fis.

2125 - 2130m Sh: As abv. P spl.

2130 - 2135m Sh: M gray. Tr dk gray sh. Micmica.



2135 - 2140m Sh: Dk gray - m gray variably fis. M gray sh is micmica dk gray sh less so. Tr dism pyr in m gray sh.

2140 - 2145m Sh: As abv but more m gray sh than drk gry.

2145 - 2150m Sh: As abv but incrg dk gray sh. Tr skss.

2150 - 2155m Sh: As abv.

2155 - 2160m Sh: M - dk gray micmica variably fis tr skss

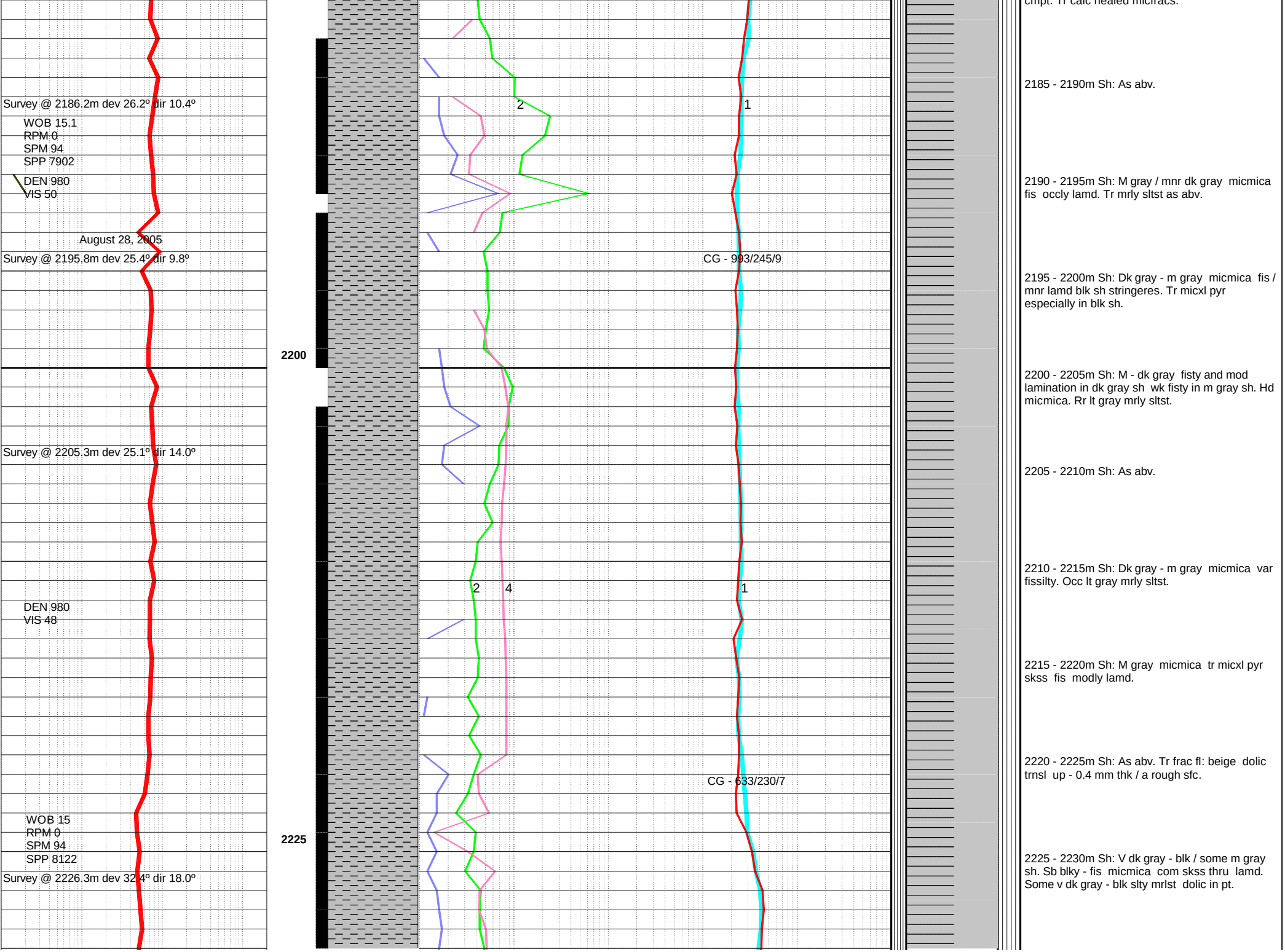
2160 - 2165m Sh: As abv

2165 - 2170m Sh: m - dk gray micmica fis variably lamd occ skss tr trnsl calc frac fl / some up - 0.4 mm thk. Some frac mineralisation contacts are pres showing fracs @ abt 45 degrees - lams and calc xl gth @ abt 45 degrees - frac face. Mnr lt gray mrly sltst.

2170 - 2175m Sh: M - dk gray micmica fis variably lamd tr micxl pyr in dk gray sh. Rr calc healed mic fracs. Tr wtr sensitive lt gray sh / blk org ? wisps.

2175 - 2180m Sh: M - dk gray micmica fis variably lamd tr unattached trnsl calc xls. Rare blk sh micmica lamd fis. Rr lt gray mrly v f gred sd - sltst.

2180 - 2185m Sh: As abv / more of the dk gray sh



cmpt. Tr calc healed microfracs.

2185 - 2190m Sh: As abv.

2190 - 2195m Sh: M gray / mnr dk gray micmica fis occly lamd. Tr mrly sltst as abv.

2195 - 2200m Sh: Dk gray - m gray micmica fis / mnr lamd blk sh stringeres. Tr micxl pyr especially in blk sh.

2200 - 2205m Sh: M - dk gray fisty and mod lamination in dk gray sh wk fisty in m gray sh. Hd micmica. Rr lt gray mrly sltst.

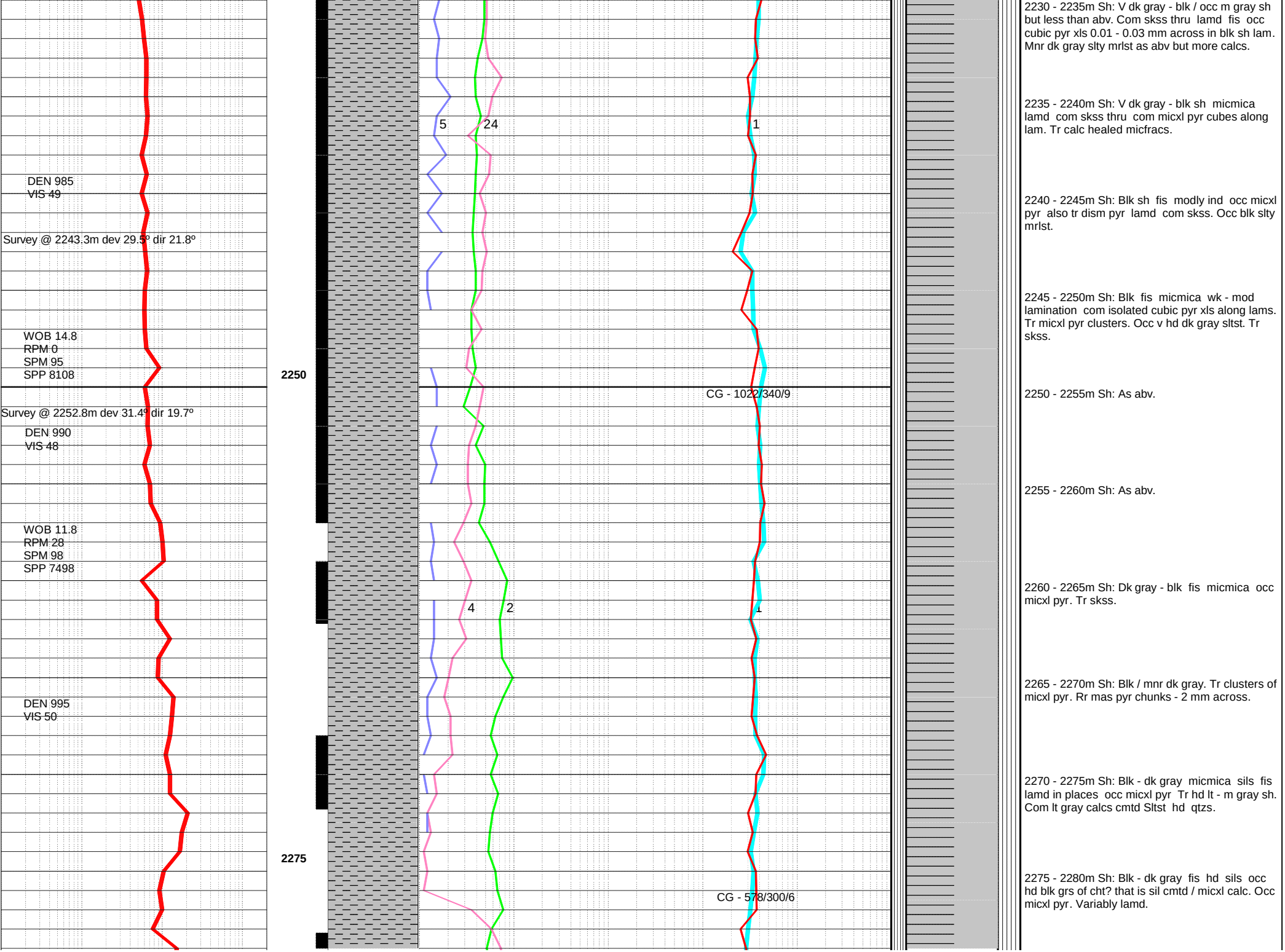
2205 - 2210m Sh: As abv.

2210 - 2215m Sh: Dk gray - m gray micmica var fissilty. Occ lt gray mrly sltst.

2215 - 2220m Sh: M gray micmica tr micxl pyr skss fis modly lamd.

2220 - 2225m Sh: As abv. Tr frac fl: beige dolic trnsl up - 0.4 mm thk / a rough sfc.

2225 - 2230m Sh: V dk gray - blk / some m gray sh. Sb blky - fis micmica com skss thru lamd. Some v dk gray - blk slty mrlst dolic in pt.



2230 - 2235m Sh: V dk gray - blk / occ m gray sh but less than abv. Com skss thru lamd fis occ cubic pyr xls 0.01 - 0.03 mm across in blk sh lam. Mnr dk gray slty mrlst as abv but more calcs.

2235 - 2240m Sh: V dk gray - blk sh micmica lamd com skss thru com micxl pyr cubes along lam. Tr calc healed micfracs.

2240 - 2245m Sh: Blk sh fis modly ind occ micxl pyr also tr dism pyr lamd com skss. Occ blk slty mrlst.

2245 - 2250m Sh: Blk fis micmica wk - mod lamination com isolated cubic pyr xls along lams. Tr micxl pyr clusters. Occ v hd dk gray sltst. Tr skss.

2250 - 2255m Sh: As abv.

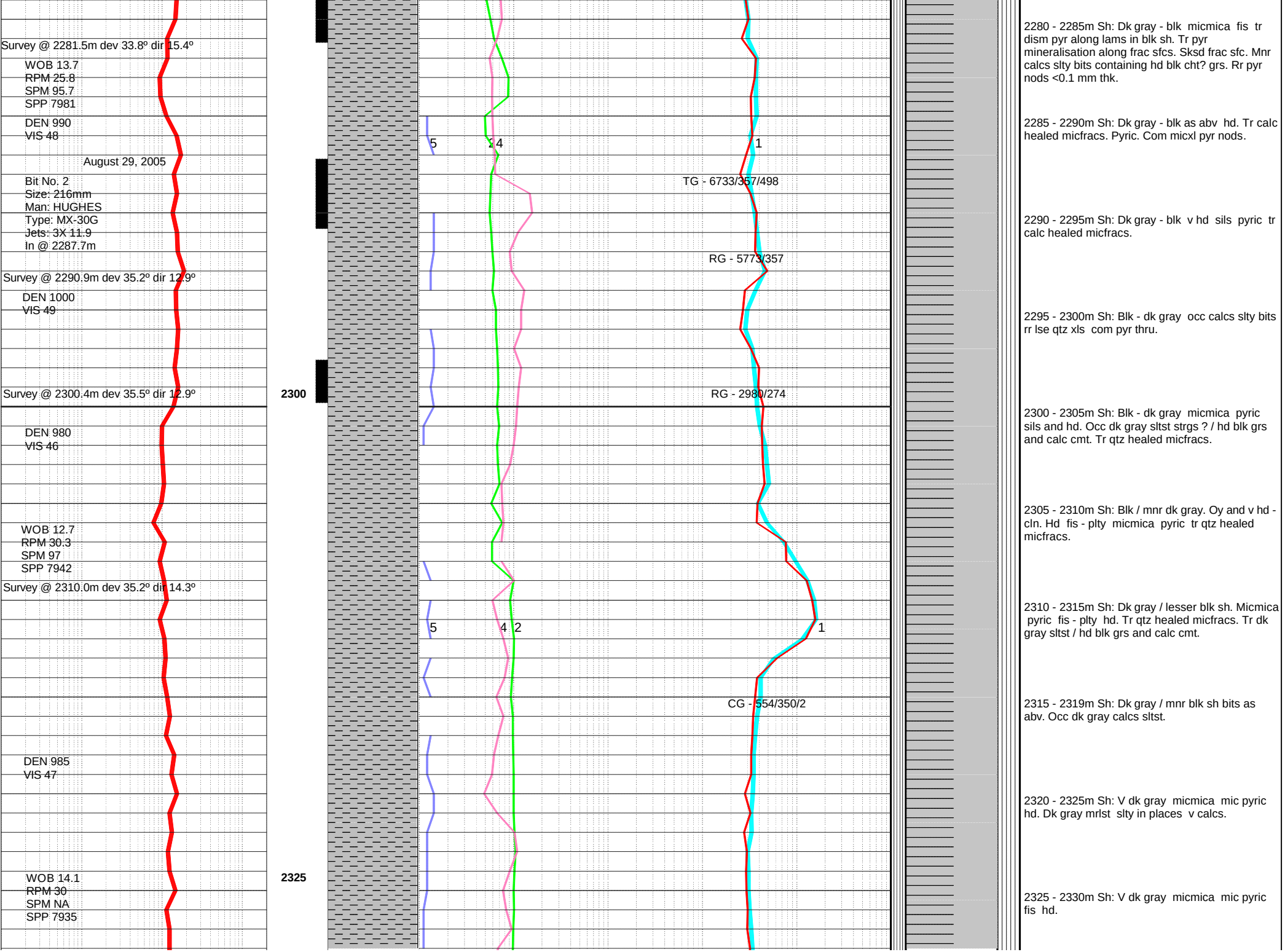
2255 - 2260m Sh: As abv.

2260 - 2265m Sh: Dk gray - blk fis micmica occ micxl pyr. Tr skss.

2265 - 2270m Sh: Blk / mnr dk gray. Tr clusters of micxl pyr. Rr mas pyr chunks - 2 mm across.

2270 - 2275m Sh: Blk - dk gray micmica sils fis lamd in places occ micxl pyr Tr hd lt - m gray sh. Com lt gray calcs cmtd Sltst hd qtzs.

2275 - 2280m Sh: Blk - dk gray fis hd sils occ hd blk grs of cht? that is sil cmtd / micxl calc. Occ micxl pyr. Variably lamd.



2280 - 2285m Sh: Dk gray - blk micmica fis tr dism pyr along lams in blk sh. Tr pyr mineralisation along frac sfcs. Sksd frac sfc. Mnr calcs slty bits containing hd blk cht? grs. Rr pyr nods <0.1 mm thk.

2285 - 2290m Sh: Dk gray - blk as abv hd. Tr calc healed micfracs. Pyric. Com micxl pyr nods.

2290 - 2295m Sh: Dk gray - blk v hd sils pyric tr calc healed micfracs.

2295 - 2300m Sh: Blk - dk gray occ calcs slty bits rr lse qtz xls com pyr thru.

2300 - 2305m Sh: Blk - dk gray micmica pyric sils and hd. Occ dk gray sltst strgs ? / hd blk grs and calc cmt. Tr qtz healed micfracs.

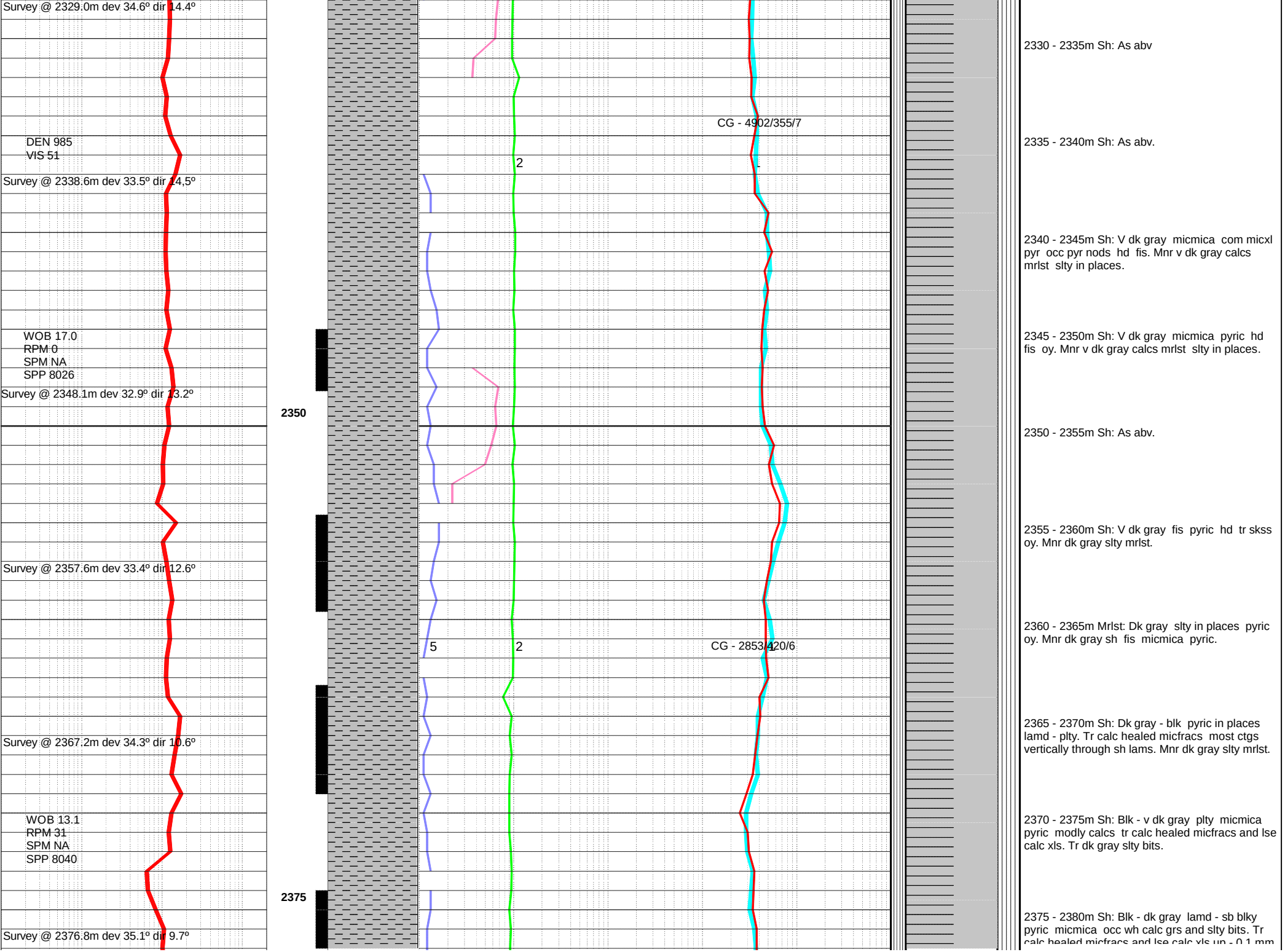
2305 - 2310m Sh: Blk / mnr dk gray. Oy and v hd - cln. Hd fis - plty micmica pyric tr qtz healed micfracs.

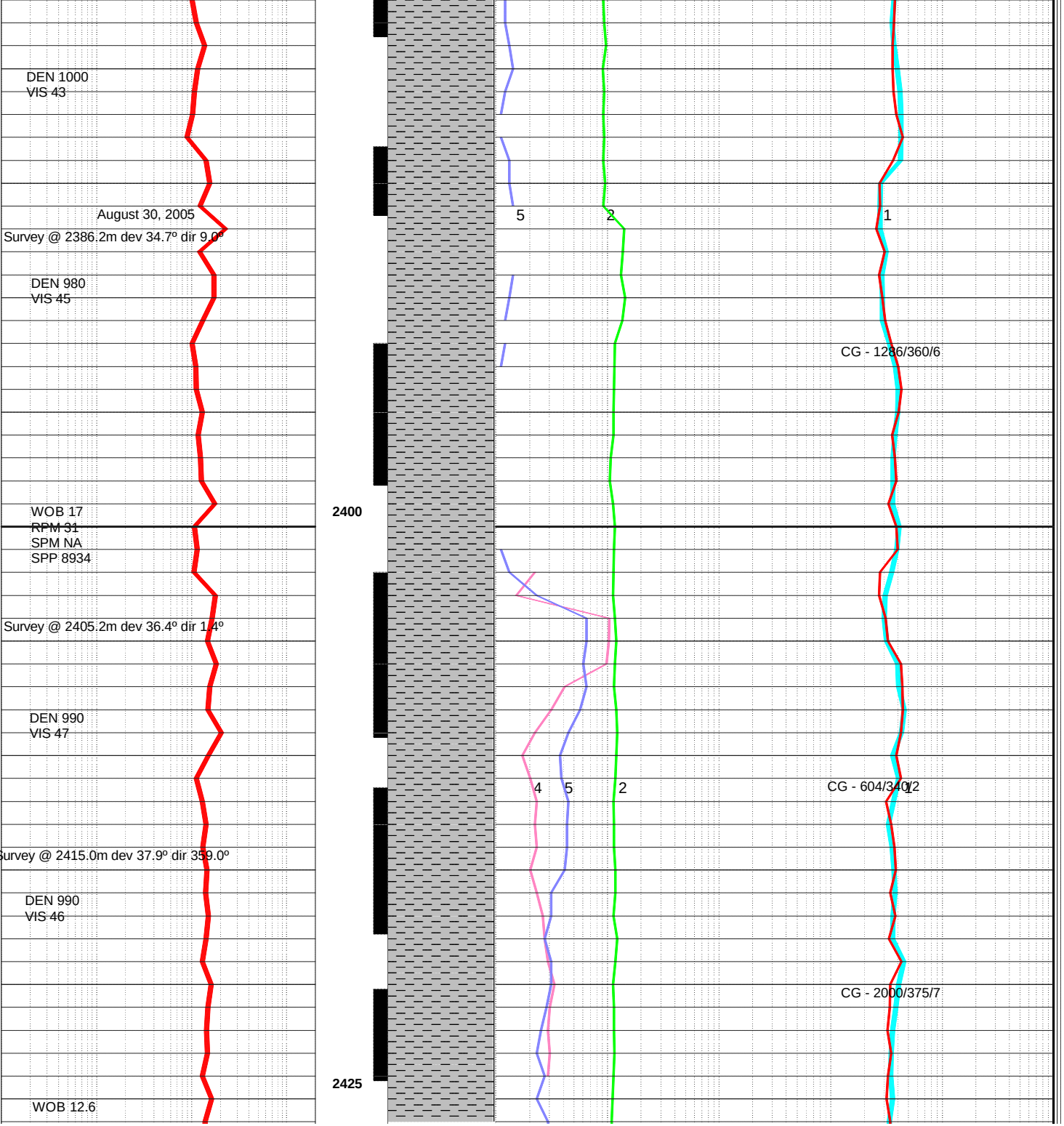
2310 - 2315m Sh: Dk gray / lesser blk sh. Micmica pyric fis - plty hd. Tr qtz healed micfracs. Tr dk gray sltst / hd blk grs and calc cmt.

2315 - 2319m Sh: Dk gray / mnr blk sh bits as abv. Occ dk gray calcs sltst.

2320 - 2325m Sh: V dk gray micmica mic pyric hd. Dk gray mrlst slty in places v calcs.

2325 - 2330m Sh: V dk gray micmica mic pyric fis hd.


Survey @ 2329.0m dev 34.6º dir 14.4º
DEN 985
VIS 51
Survey @ 2338.6m dev 33.5º dir 14,5º
WOB 17.0
RPM 0
SPM NA
SPP 8026
Survey @ 2348.1m dev 32.9º dir 13.2º
2350
Survey @ 2357.6m dev 33.4º dir 12.6º
Survey @ 2367.2m dev 34.3º dir 10.6º
WOB 13.1
RPM 31
SPM NA
SPP 8040
2375
Survey @ 2376.8m dev 35.1º dir 9.7º
CG - 4902/355/7
CG - 2853/420/6
2330 - 2335m Sh: As abv
2335 - 2340m Sh: As abv.
2340 - 2345m Sh: V dk gray micmica com micxl pyr occ pyr nods hd fis. Mnr v dk gray calcs mrlst slty in places.
2345 - 2350m Sh: V dk gray micmica pyric hd fis oy. Mnr v dk gray calcs mrlst slty in places.
2350 - 2355m Sh: As abv.
2355 - 2360m Sh: V dk gray fis pyric hd tr skss oy. Mnr dk gray slty mrlst.
2360 - 2365m Mrlst: Dk gray slty in places pyric oy. Mnr dk gray sh fis micmica pyric.
2365 - 2370m Sh: Dk gray - blk pyric in places lamd - plty. Tr calc healed micfracs most ctgs vertically through sh lams. Mnr dk gray slty mrlst.
2370 - 2375m Sh: Blk - v dk gray plty micmica pyric modly calcs tr calc healed micfracs and lse calc xls. Tr dk gray slty bits.
2375 - 2380m Sh: Blk - dk gray lamd - sb blky pyric micmica occ wh calc grs and slty bits. Tr calc healed micfracs and lse calc xls up - 0.1 mm



thk.

2380 - 2385m Sh: Dk gray - blk calcs - v calcs micmica pyric lamd - sb blky tr calc healed micfracs up - 0.5 mm thk.

2385 - 2390m Sh: Blk - dk gray traceblacky lse pyr cls calcs micmica tr skss tr slty bits intbd / mnr dk - m gray mrlst occly slty v calcs occ v f lam of op wh calc.

2390 - 2395m Sh: As abv but only mnr mrlst intbds. Tr lse calc xls.

2395 - 2400m Sh: V dk gray micmica pyric tr lse calc xls tr skss tr calc healed micfracs v calcs tr wh calcs specs.

2400 - 2405m Sh: V dk gray micmica pyric in places tr lse calc xls rr lse sbrdd qtz xls. Mnr blk sh micmica pyric fis lamd - plty calcs.

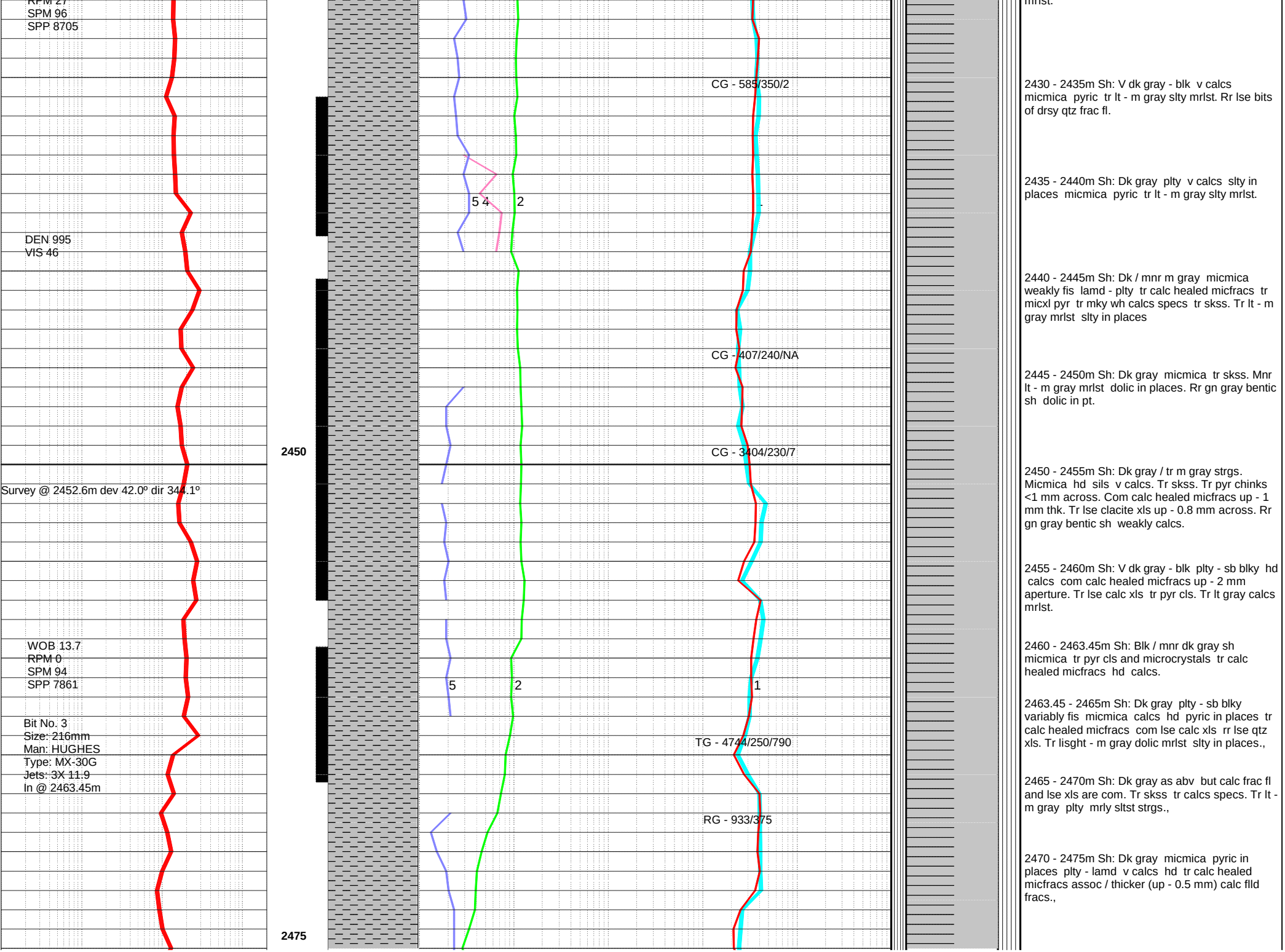
2405 - 2410m Sh: Blk. fis lamd - plty v calcs pyric micmica tr lse sbrdd qtz xls tr skss tr slty bits.

2410 - 2415m Sh: Dk gray / blk fis pyric micmica sh strgs v calcs pyric tr calc healed micfracs tr lse calc xls tr op ang qtz xls. Occ slty bits.

2415 - 2420m Sh: Dk gray lamd - plty modly fis v calcs micmica pyric tr skss slty in places rr calc healed micfracs. Mnr strgs of m gray mrlst slty in places.

2420 - 2425m Sh: Blk sb blky - plty micmica pyric hd tr skss tr slty bits calcs - v calcs.

2425 - 2430m Sh: As abv but softer and less



mrlst.

2430 - 2435m Sh: V dk gray - blk v calcs micmica pyric tr lt - m gray slty mrlst. Rr lse bits of drsy qtz frac fl.

2435 - 2440m Sh: Dk gray plty v calcs slty in places micmica pyric tr lt - m gray slty mrlst.

2440 - 2445m Sh: Dk / mnr m gray micmica weakly fis lamd - plty tr calc healed micfracs tr micxl pyr tr mky wh calcs specs tr skss. Tr lt - m gray mrlst slty in places

2445 - 2450m Sh: Dk gray micmica tr skss. Mnr lt - m gray mrlst dolic in places. Rr gn gray bentic sh dolic in pt.

2450 - 2455m Sh: Dk gray / tr m gray strgs. Micmica hd sils v calcs. Tr skss. Tr pyr chinks <1 mm across. Com calc healed micfracs up - 1 mm thk. Tr lse clacite xls up - 0.8 mm across. Rr gn gray bentic sh weakly calcs.

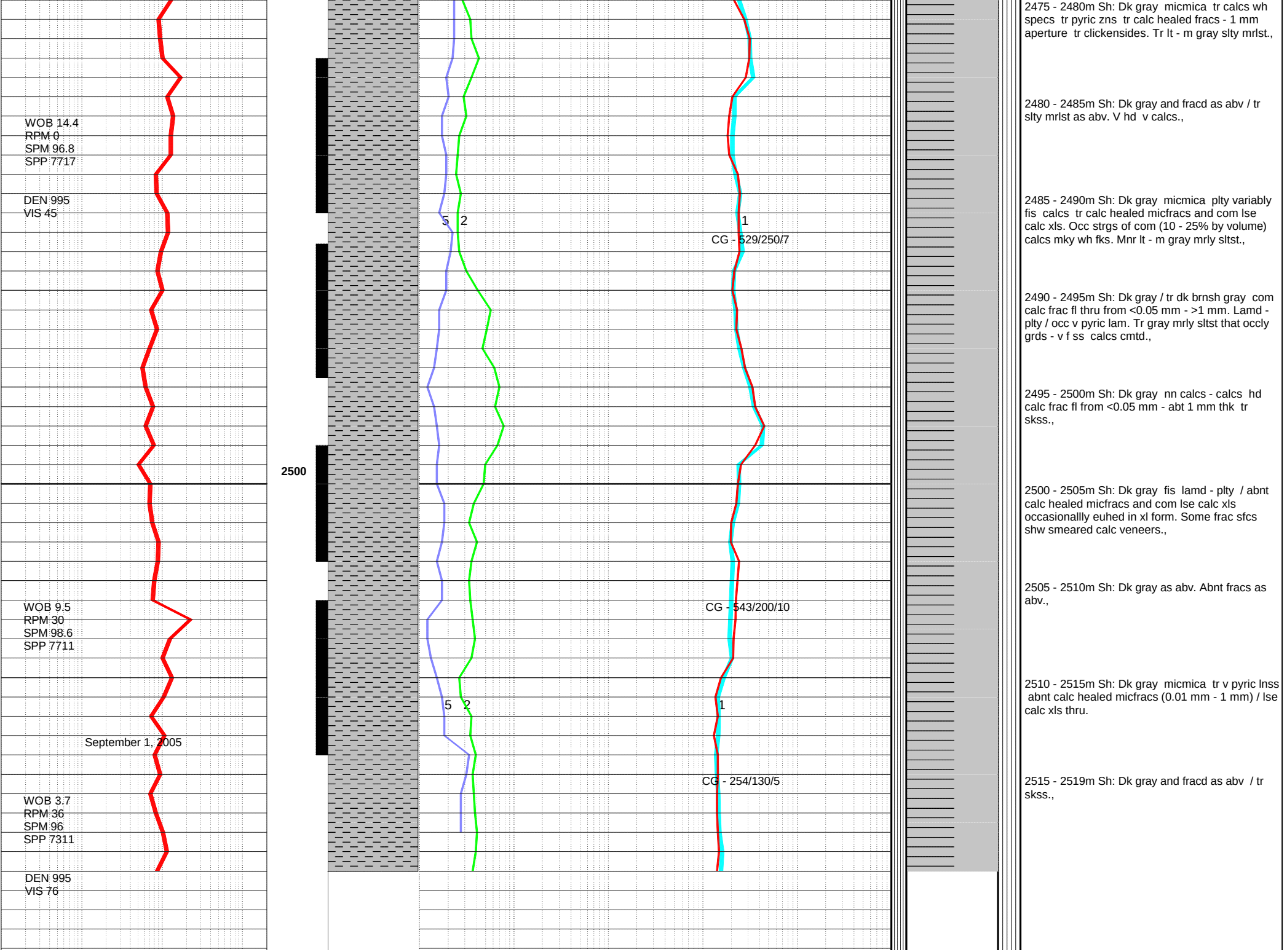
2455 - 2460m Sh: V dk gray - blk plty - sb blky hd calcs com calc healed micfracs up - 2 mm aperture. Tr lse calc xls tr pyr cls. Tr lt gray calcs mrlst.

2460 - 2463.45m Sh: Blk / mnr dk gray sh micmica tr pyr cls and microcrystals tr calc healed micfracs hd calcs.

2463.45 - 2465m Sh: Dk gray plty - sb blky variably fis micmica calcs hd pyric in places tr calc healed micfracs com lse calc xls rr lse qtz xls. Tr lisght - m gray dolic mrlst slty in places.,

2465 - 2470m Sh: Dk gray as abv but calc frac fl and lse xls are com. Tr skss tr calcs specs. Tr lt - m gray plty mrly sltst strgs.,

2470 - 2475m Sh: Dk gray micmica pyric in places plty - lamd v calcs hd tr calc healed micfracs assoc / thicker (up - 0.5 mm) calc flld fracs.,



2475 - 2480m Sh: Dk gray micmica tr calcs wh specs tr pyric zns tr calc healed fracs - 1 mm aperture tr clickensides. Tr lt - m gray slty mrlst.,

2480 - 2485m Sh: Dk gray and fracd as abv / tr slty mrlst as abv. V hd v calcs.,

2485 - 2490m Sh: Dk gray micmica plty variably fis calcs tr calc healed micfracs and com lse calc xls. Occ strgs of com (10 - 25% by volume) calcs mky wh fks. Mnr lt - m gray mrly sltst.,

2490 - 2495m Sh: Dk gray / tr dk brnsh gray com calc frac fl thru from <0.05 mm - >1 mm. Lamd - plty / occ v pyric lam. Tr gray mrly sltst that occly grds - v f ss calcs cmtd.,

2495 - 2500m Sh: Dk gray nn calcs - calcs hd calc frac fl from <0.05 mm - abt 1 mm thk tr skss.,

2500 - 2505m Sh: Dk gray fis lamd - plty / abnt calc healed micfracs and com lse calc xls occasionallly euhed in xl form. Some frac sfcs shw smeared calc veneers.,

2505 - 2510m Sh: Dk gray as abv. Abnt fracs as abv.,

2510 - 2515m Sh: Dk gray micmica tr v pyric lnss abnt calc healed micfracs (0.01 mm - 1 mm) / lse calc xls thru.

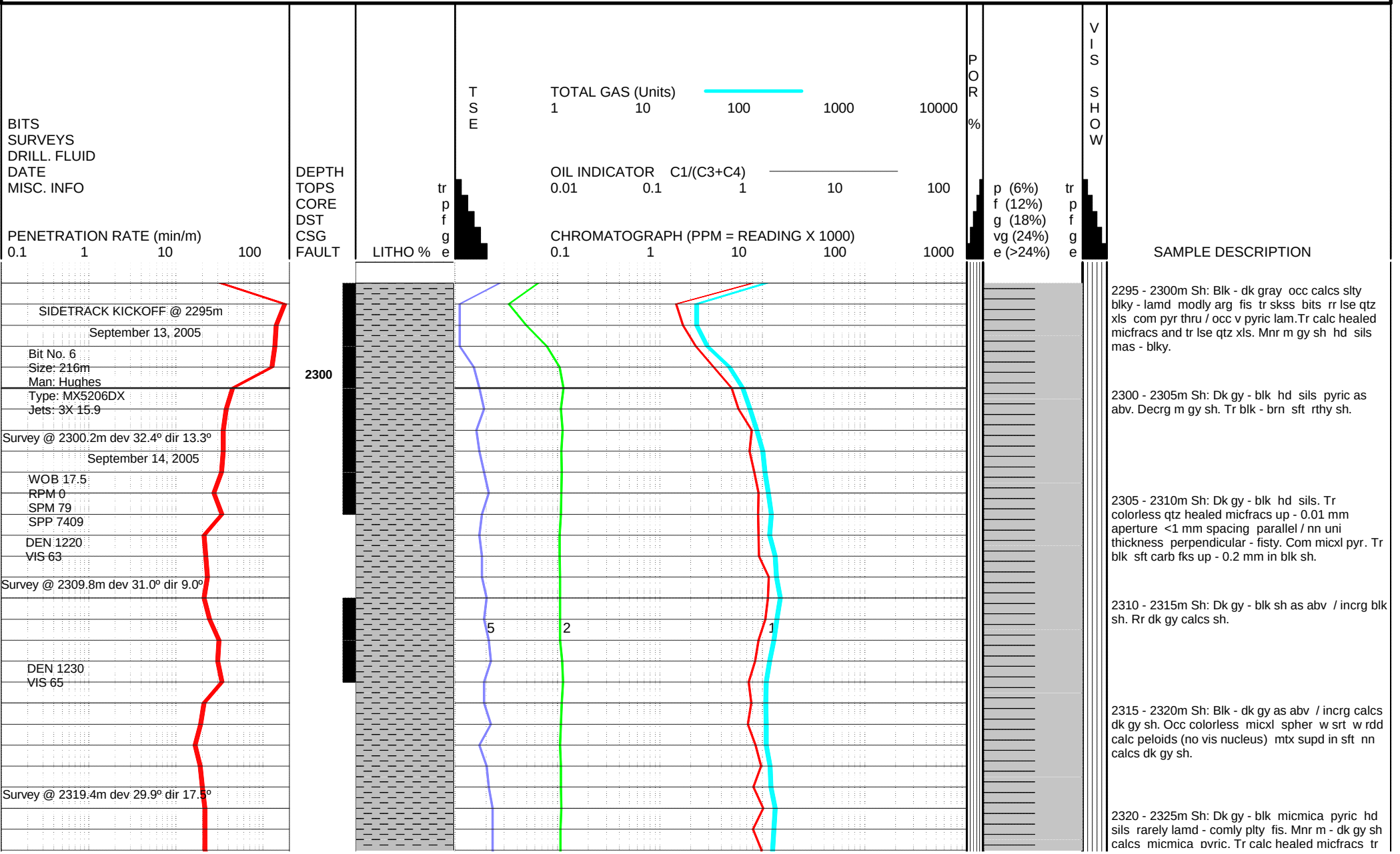
2515 - 2519m Sh: Dk gray and fracd as abv / tr skss.,

Continental Laboratories Ltd.

Hydrocarbon Well Log

WELL NAME:	PARA et al West Liard K-29A SIDETRACK		
LOCATION:	60º 28’41" 123º 35’41"		
COMPANY:	Paramount Resources Limited		
PROVINCE:	Northwest Territories	FILE:	11435ST
ELEVATION K.B.:	418.0 m	HOLE SIZE:	216 mm from 1860 m to m
ELEVATION G.L.:	409.6 m		
LOGGING INTERVAL:	1860 m to m		
LOGGING DATES:	24/08/2005 to	MUD SYSTEM:	Invert from: 1860 m to: m
PERSONNEL:	Dave Rideout		
INSTRUMENTATION:	MP2300, MTI#13, Mud Duck		

ALL LITHOLOGIC SYMBOLS ARE CANSTRAT COMPATIBLE



skss. Tr peloidal sh as abv.

2325 - 2330m Sh: Dk gy micmica brit but not v hd pyric in places fis lamd - blky tr skss. Rr lse crmy wh calc xls up - 0.4 mm.

2330 - 2335m Sh: Dk gy as abv. Tr calc healed micfracs. Slly calcs in places.

2335 - 2340m Sh: As abv. Occ lse calc xls. Mnr brn gy sh calcs sft rdd ctgs. Tr skss.

2340 - 2345m Sh: As abv / decrg brn gy sh. Rr lt gy sh micmica slly arg pyric modly hd.

2345 - 2350m Sh: As abv but modly calcs in places. Rr lse drsy wh qtz xls - 1 mm.

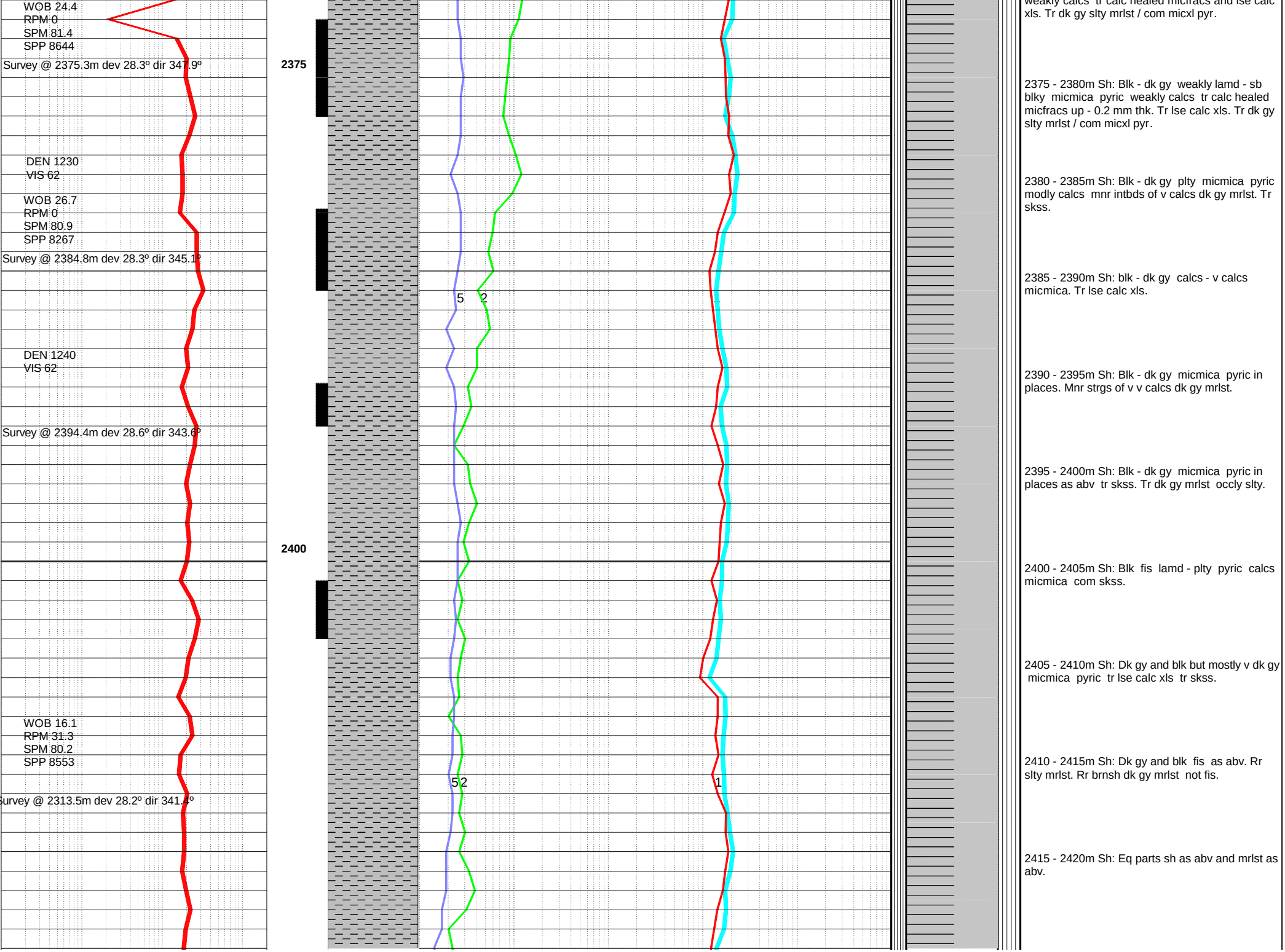
2350 - 2355m Sh: Dk gy micmica occ dism pyr bnds fis tr skss occly lamd modly calcs in places but mostly sils. Mnr brn gy mrlst sft rthy calcs / v wk fisty.

2355 - 2360m Sh: Lithologies as abv / decrg brn gy sh. Rr wh nn calcs specs.

2360 - 2365m Sh: Dk gy micmica tr dism pyr bnds tr brn gy mrly sh sft rthy calcs. Rr lt gy sils micmica sh / a slaty lstr.

2365 - 2370m Sh: Dk gy - blk plty micmica micxl pyr - dism in lnss parallel - bdg. Tr calc healed micfracs. Tr lt gy pyric arg sh as abv.

2370 - 2375m Sh: Blk - dk gy plty micmica pyric



2375 - 2380m Sh: Blk - dk gy weakly lamd - sb blky micmica pyric weakly calcs tr calc healed micfracs up - 0.2 mm thk. Tr lse calc xls. Tr dk gy slty mrlst / com micxl pyr.

2380 - 2385m Sh: Blk - dk gy plty micmica pyric modly calcs mnr intbds of v calcs dk gy mrlst. Tr skss.

2385 - 2390m Sh: blk - dk gy calcs - v calcs micmica. Tr lse calc xls.

2390 - 2395m Sh: Blk - dk gy micmica pyric in places. Mnr strgs of v v calcs dk gy mrlst.

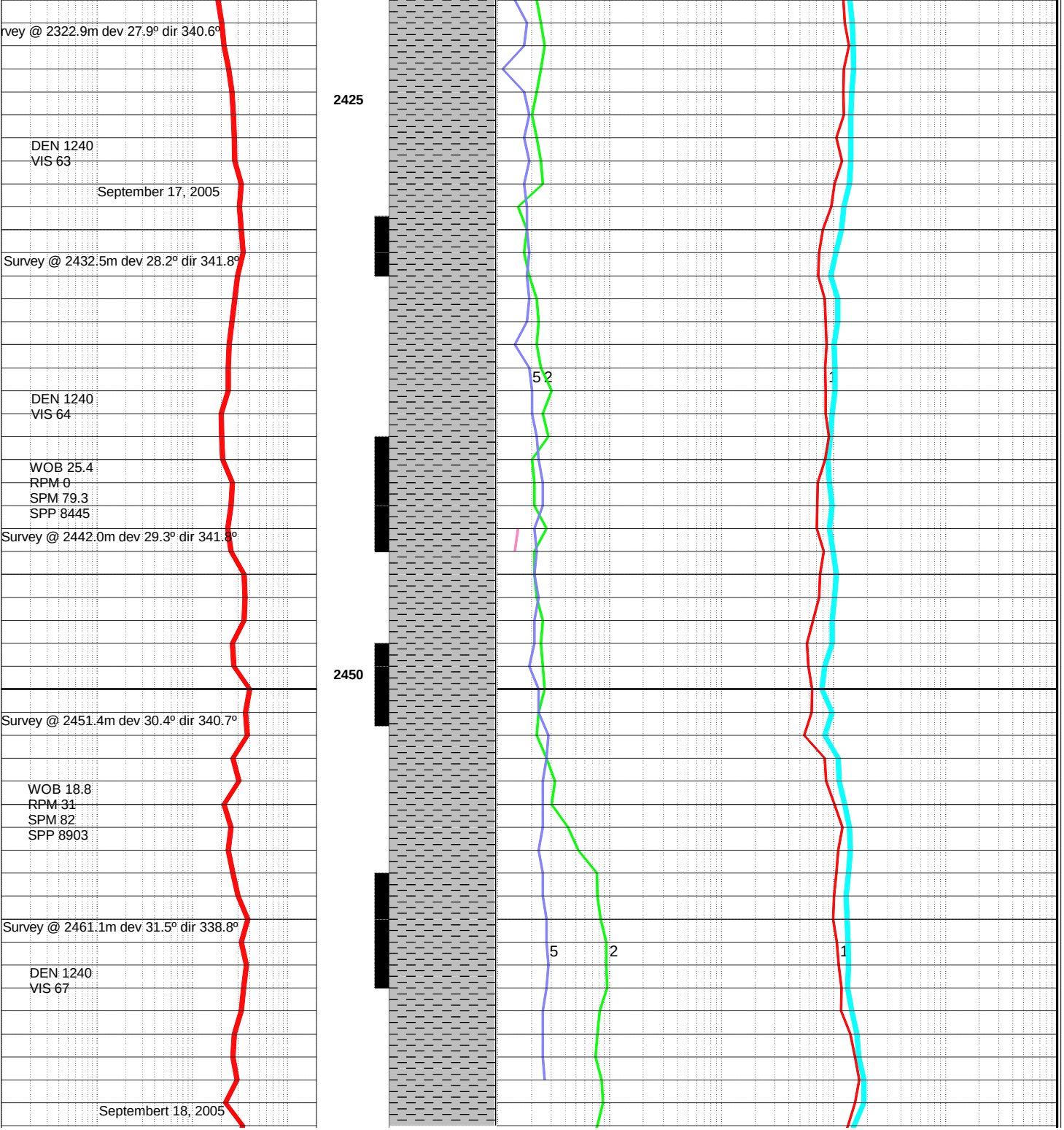
2395 - 2400m Sh: Blk - dk gy micmica pyric in places as abv tr skss. Tr dk gy mrlst occly slty.

2400 - 2405m Sh: Blk fis lamd - plty pyric calcs micmica com skss.

2405 - 2410m Sh: Dk gy and blk but mostly v dk gy micmica pyric tr lse calc xls tr skss.

2410 - 2415m Sh: Dk gy and blk fis as abv. Rr slty mrlst. Rr brnsh dk gy mrlst not fis.

2415 - 2420m Sh: Eq parts sh as abv and mrlst as abv.



2420 - 2425m Sh: Dk gy calcs fis plty - blky pyric tr skss. Also brnsh dk gy mrlst softer v calcs rarely slty.

2425 - 2430m Sh: Dk gy - blk fis calcs hd pyric / occ micxl pyr cubes. Lesser brnsh gy mrlst pyric in places v calcs. Occ slt sized calcs rdd wh specs in mrlst. Tr slty zns. Tr skss. Tr calc healed micfracs in blk sh up - 0.4 mm thk.

2430 - 2435m Sh: Sh as abv. Mnr strgs of dk gy mrlst sft. Rr gnsh m gy sh bentic lstr wxy looking.

2435 - 2440m Sh: Dk gy - blk fis pyric micmica v calcs. Incrg strgs of v calcs gy mrlst. Rr rdd trnsl lse qtz xls. Tr calc healed micfracs mainly in sh. Rr biege micxl dolic pieces comprising <<1% of ctgs tr intstl por.

2440 - 2445m Mrlst: Gy as abv. Occ wh fks as abv also tr mky wh calcs shl frags or fos frags as wisps parallel - bdg plns. Lesser dk gy sh as abv / tr clacite healed micfracs / occ euhed xln habit.

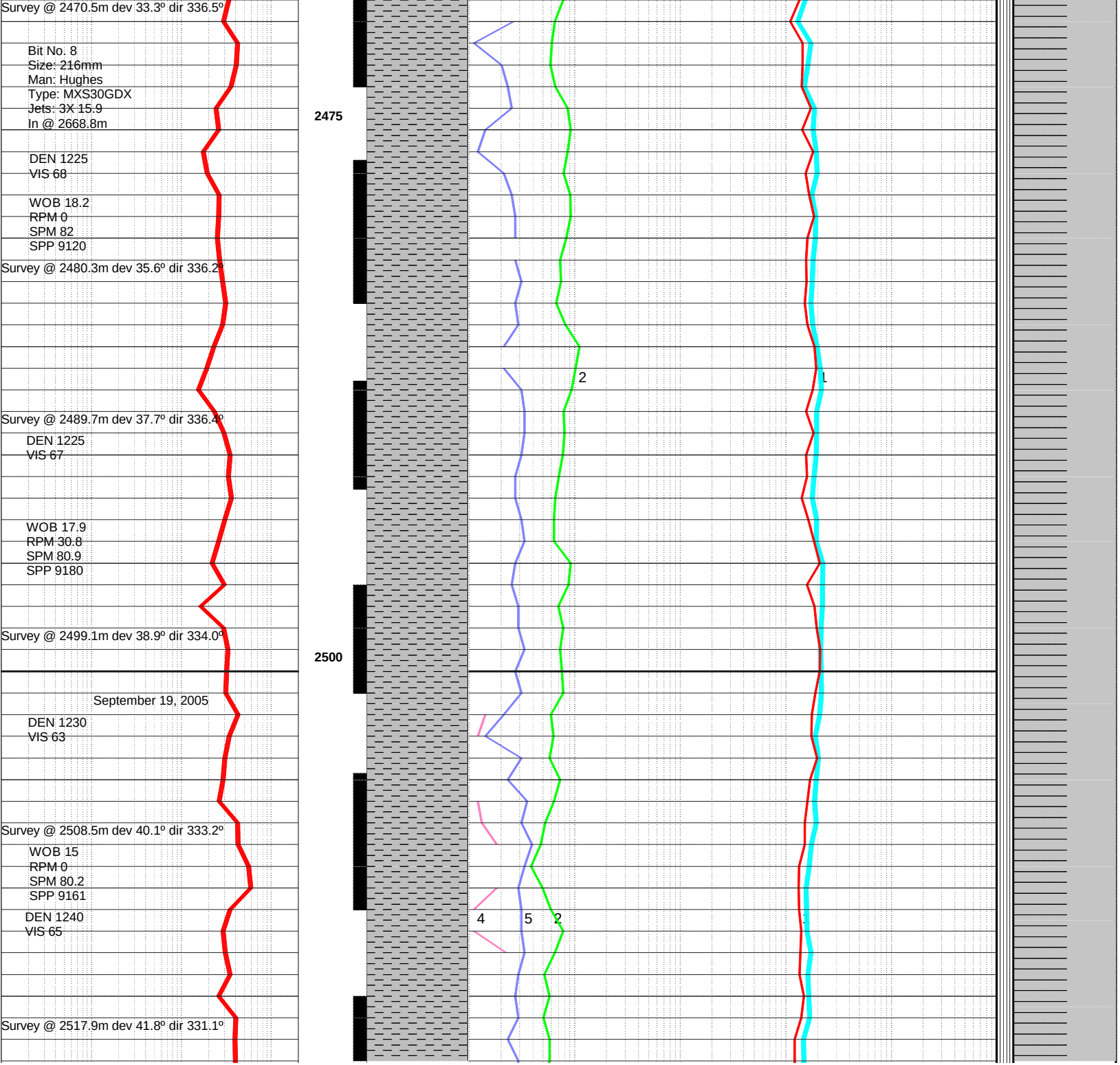
2445 - 2450m Mrlst: Gy - dk gy micmica in places weakly fis in places com slt sized rdd wh calcs fks comprising up - 10% of the rk. Tr calc healed micfracs but more comly lse mky wh calc xls.

2450 - 2455m Mrlst: M - lt gy v calcs comly / wh slt sized calcs fks tr pyr fks of sim sz and distribution pattern. Tr wispy fos frags. Tr skss.

2455 - 2460m Sh: Dk gy micmica pyric v calcs - mrly in places. Tr m gy mrlst as abv. Tr skss. Tr calc healed micfracs. Rr lt gy micmica nn calcs wtr sensitive sh.

2460 - 2465m Mrlst: M gy v calcs rdd - plty calc healed micfracs bcmng more com. Lesser dk gy sh as abv. Rr drsy lse qtz xls.

2465 - 2470m Sh: Dk gy - blk fis micmica rr micxl pyr plty - sb blky calcs occ calc healed micfracs up - 0.4 mm aperture. Lse cacite xls. Tr mky wh calc lam parallel - bdg. Com skss. Gy - dk gy mrlst strgs calcs slt sized frags in places. Tr foss. Rr lse qtz xls.



2470 - 2475m Sh: Dk gy - blk as abv. V calcs. Decrg mrlst strgs as abv.

2475 - 2480m Mrlst: M gy - dk gy v calcs skss slty in places com calc frac fl and lse pieces / smeared edges. Rr euhed calc xls in fracs. Mnr dk gy - blk calcs sh as abv.

2480 - 2485m Mrlst: Lithologies as abv / incrg sh. Less calcs slty frags.

2485 - 2490m Sh: Blk - v dk gy micmica rarely lamd - sb blky micxl pyr in places skss v calcs com fracs cmtd / calc up - 0.4 mm thk also lse calc xls and xl agglomerates. Tr brnsh gy mrlst v calcs / calcs fos frags up - 0.01 mm dia.

2490 - 2495m Sh: Dk gy - blk micmica pyric in places rarely lamd - sb blky v calcs com calc mineralised fracs and occ lse xls. Com skss. Mnr mrlst strgs / occ foss frags.

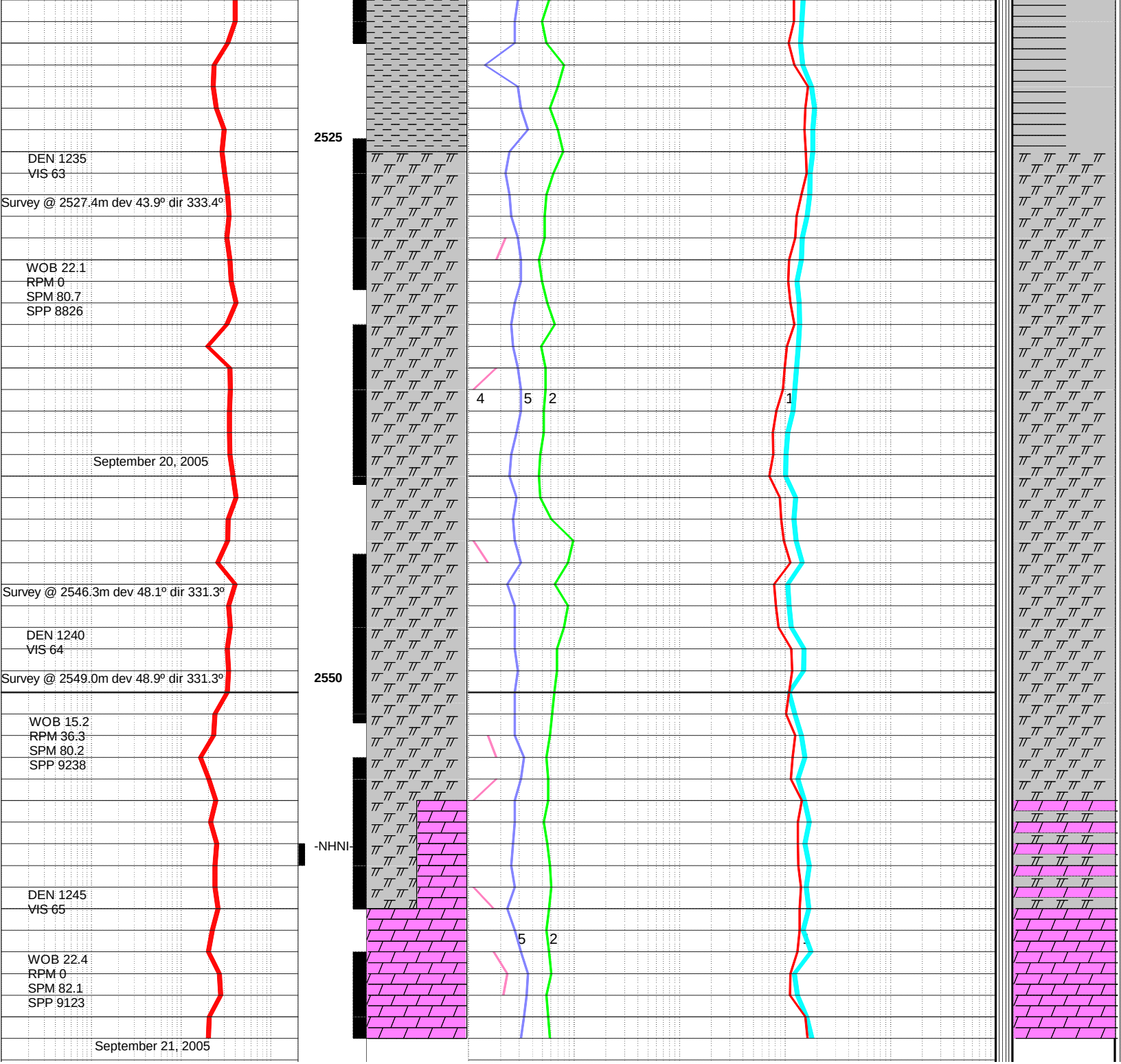
2495 - 2500m Sh: As abv / less fracg.

2500 - 2505m Sh: Dk gy v calcs - mrly micmica hd com calc healed micfracs skss. Mnr ltr gy mrly strgs tr chky calcs lnss up - 2 mm wide.

2505 - 2510m Sh: Dk gy - blk micmica pyric / occ micxl pyr v calcs lamd - sb blky skss tr calc healed micfracs tr lse calc xls up - 3 mm. Mnr strgs of ltr brnsh gy mrlst v calcs tr calcs wh specs.

2510 - 2515m Sh: As abv / tr blk shiny carb? ang frags. Slly less mrlst than abv.

2515 - 2520m Sh: Dk gy fis micmica pyric hd calcs mrly in places grdg - mrlst. Tr calc healed micfracs. Lesser mrlst brnsh gy softer v calcs.



2520 - 2525m Sh: As abv plty - blky frac fl more com. Rr rdd lse qtz xls. Lesser distinct dk gy mrlst v calcs foss in places calcs wh specs tr skss.

2525 - 2530m Mrlst: Brnsh gy - dk gy sft tr sft chky wh calcs wisps tr skss. Mnr dk gy sh as abv.

2530 - 2335m Mrlst: M - dk gy v calcs sft foss in places com sft chky wh calcs fks. Mnr dk brnsh gy mrlst rarely foss. Occ calc healed micfracs. Mnr hd fis dk gy sh as abv.

2535 - 2540m Mrlst: Brnsh gy - dk gy foss in places occ calcs wh specs. Mnr sft gy foss mrlst / occ sft chky wh calcs specs. Mnr hd fis dk gy sh as abv.

2540 - 2545m Mrlst: Mxd calcs marlstones as abv. Mnr hd fis dk gy sh as abv.

2545 - 2550m Mrlst: Dirty dk gy v calcs occ chky calcs wh fks - foss. Mnr dk gy hd calcs micmica pyric. Rr lse calc xls? wk acid response but stains dk red.

2550 - 2555m Mrlst: M - dk sirty gy v mnr dk gy fis sh. Mnr dol f - c xln bit (inv?) plugging intxl por. Tr c xln dol rhmbs cmtd into weakly calcareous/dolomitic mrl.

2555 - 2560m Marlstone/dolomite: Mrlst / mnr dk gy fis sh as abv. Mnr dol lt - m gy micxl - c xln tr c xln lse rhmbs p - fr intxl por mostly bit flld.

2560 - 2566m Dol: Lt - m gy micxl - c xln m - c xln dol rhmbs p intxl por / bit partially filg pore space (may be gil from inv in some cases). Tr pinpoint por. Tr lse clr hex qtz xls. Mnr ctgs of calcs dk gy fis sh and mrlst presumed - be cvgs.