

OPERATOR

Company: Younger Energy Company
 Address: 9415 E. Harry
 Suite 403, Bldg 400
 Wichita, KS 67207

Contact Geologist:
 Contact Phone Nbr: 316-681-2542
 Well Name: Schartz #2-34
 Location: Sec. 34 - T21S - R15W
 API: 15-145-21814-0000
 Pool:
 State: Kansas

Field: Hurray
 Country: USA



Scale 1:240 Imperial

Well Name: Schartz #2-34
 Surface Location: Sec. 34 - T21S - R15W
 Bottom Location:
 API: 15-145-21814-0000
 License Number: 30705
 Spud Date: 12/1/2015 Time: 4:00 PM
 Region: Pawnee County
 Drilling Completed: 12/8/2015 Time: 3:15 PM
 Surface Coordinates: 1450' FSL & 1100' FEL
 Bottom Hole Coordinates:
 Ground Elevation: 1970.00ft
 K.B. Elevation: 1978.00ft
 Logged Interval: 3200.00ft To: 4000.00ft
 Total Depth: 4000.00ft
 Formation: Arbuckle
 Drilling Fluid Type: Chemical/Fresh Water Gel

SURFACE CO-ORDINATES

Well Type: Vertical
 Longitude:
 Latitude:
 N/S Co-ord: 1450' FSL
 E/W Co-ord: 1100' FEL

LOGGED BY

Keith Reavis
Consulting Geologist

Company: Keith Reavis, Inc.
 Address: 3420 22nd Street
 Great Bend, KS 67530

Phone Nbr: 620-617-4091
 Logged By: KLG #136

Name: Keith Reavis

CONTRACTOR

Contractor: Duke Drilling Company
 Rig #: 2
 Rig Type: mud rotary
 Spud Date: 12/1/2015 Time: 4:00 PM
 TD Date: 12/8/2015 Time: 3:15 PM
 Rig Release: Time:

ELEVATIONS

K.B. Elevation: 1978.00ft
K.B. to Ground: 8.00ft

Ground Elevation: 1970.00ft

NOTES

Due to favorable structural position and positive results of drill stem testing, the operator elected to set 5 1/2" production casing and further test the Arbuckle and Simpson Sand through perforation and stimulation.

A Bloodhound gas detection system operated by Bluestem Labs was employed on this well. The ROP and gas curves were imported into this log. The caliper and gamma ray curves from the electrical log suite were also imported.

Respectfully submitted,

Keith Reavis


Younger Energy Company
daily drilling report

DATE	7:00 AM DEPTH	REMARKS
12/05/2015		Geologist Keith Reavis on location @ 2020 hrs, 3237 ft, drilling ahead, Re-zero Bloodhound, reset extractor, drilling Queen Hill
12/06/2015	3524	drilling ahead, Heebner, Toronto, Douglas, Lansing, BKC, conglomerate, Viola
12/07/2015	3923	drilling Viola, tag Simpson, cfs, short trip, ctch, resume drilling Simpson, show in Simpson Sand warrants test, TOH for DST #1, conduct DST #1 complete DST #1, successful test, resume drilling, show and gas kick in Arbuckle warrants test, TOH for DST #2
12/08/2015	3931	conduct and complete DST #2, TIH, rathole for logs, TD @ 1515 hrs, TOH for logs, conduct and complete logging operations, geologist off loc @ 2200 hrs

Younger Energy Company
well comparison sheet

DRILLING WELL					COMPARISON WELL				COMPARISON WELL			
Schartz #2-34 1450' FSL & 1100' FBL Sec 34-T21S-R15W					F & M - Shartz #1 C N/2 SB SB Sec 34-T21S-R15W				Schartz #1-34 770' FSL & 1405' FBL Sec 34-T21S-R15W			
1978 KB					1975 KB				1978 KB			
					Structural Relationship				Structural Relationship			
Formation	Sample	Sub-Sea	Log	Sub-Sea	Log	Sub-Sea	Sample	Log	Log	Sub-Sea	Sample	Log
Queen Hill	3278	-1300	3273	-1295	3268	-1293	-7	-2	3266	-1288	-12	-7
Heebner	3382	-1404	3378	-1400	3372	-1397	-7	-3	3371	-1393	-11	-7
Douglas	3414	-1436	3412	-1434	3405	-1430	-6	-4	3404	-1426	-10	-8
Brown Lime	3488	-1510	3488	-1510	3482	-1507	-3	-3	3482	-1504	-6	-6
Lansing	3500	-1522	3498	-1520	3491	-1516	-6	-4	3492	-1514	-8	-6
BKC	3730	-1752	3730	-1752	3724	-1749	-3	-3	3722	-1744	-8	-8
Cherty Cong.	3821	-1843	3824	-1846	3810	-1835	-8	-11	3810	-1832	-11	-14
Viola	3841	-1863	3842	-1864	3834	-1859	-4	-5	3832	-1854	-9	-10
Simpson	3867	-1889	3866	-1888	3864	-1889	0	1	3858	-1880	-9	-8
Simp. Sand	3919	-1941	3918	-1940	3916	-1941	0	1	3914	-1936	-5	-4
Arbuckle	3924	-1946	3923	-1945	3919	-1944	-2	-1	3918	-1940	-6	-5
Total Depth	4000	-2022	3993	-2015	3920	-1945	-77	-70	3959	-1981	-41	-34
					Note, depths in red are driller/sample tops							

Drill Stem Test #1

	DRILL STEM TEST REPORT	
	YOUNGER ENERGY COMPANY 9415 E HARRY SUITE 403 BUILDING 400 WICHITA, KANSAS 67207 ATTN: KEITH REAVIS	34-21S-15W PAWNEE SCHARTZ 2-34 Job Ticket: 01203 DST#: 1 Test Start: 2015.12.07 @ 10:11:00

GENERAL INFORMATION:

Formation: SIMPSON SAND	Test Type: Conventional Bottom Hole (Initial)
Deviated: No Whipstock ft (KB)	Tester: GENE BUDG
Time Tool Opened: 11:54:00	Unit No: 1-56
Time Test Ended: 17:25:00	

Interval: 3728.00 ft (KB) To 3923.00 ft (KB) (TVD)
 Total Depth: 3923.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair

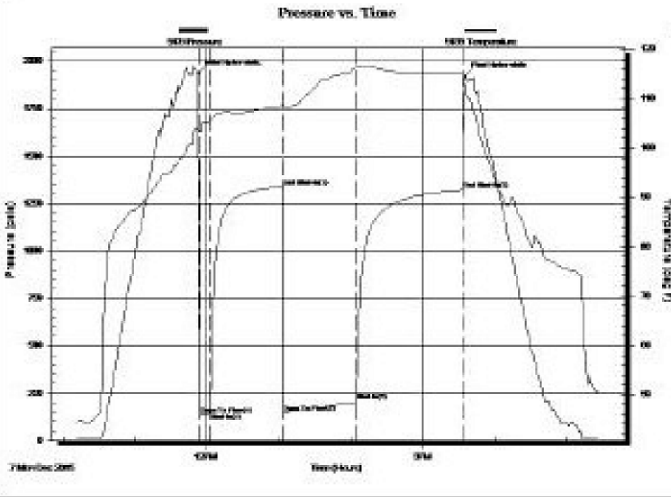
Reference Elevations: 1978.00 ft (KB)
 1970.00 ft (CF)
 KB to GR/CF: 8.00 ft

Serial #: 9139

Outside

Press@RunDepth: 1321.29 psia @ 3918.18 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.12.07 End Date: 2015.12.07 Last Calib.: 2015.12.07
 Start Time: 10:11:00 End Time: 17:26:30 Time On Btm: 2015.12.07 @ 11:54:00
 Time Off Btm: 2015.12.07 @ 15:35:30

TEST COMMENT: 1ST OPENING 10 MINUTES WEAK BLOW BUILT TO 4 INCHES INTO THE WATER
 1ST SHUT-IN 60 MINUTES-NO BLOW BACK
 2ND OPENING 60 MINUTES WEAK BUILDING BLOW BUILT TO BOTTOM OF THE BUCKET IN 40 MINUTES
 2ND SHUT-IN 90 MINUTES



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1936.76	103.76	Initial Hydro-static
1	134.17	103.36	Open To Flow (1)
10	143.86	105.52	Shut-h(1)
70	1336.36	108.59	End Shut-h(1)
71	147.49	108.31	Open To Flow (2)
131	210.03	116.40	Shut-h(2)
220	1321.29	114.99	End Shut-h(2)
222	1921.47	111.90	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bb)
60.00	GAS IN THE PIPE	0.84
20.00	MUDDY OIL 60 OIL 40 MUD	0.28
60.00	OIL OUT MUD 35 OIL 65 MUD	0.84
60.00	OIL OUT MUD 25 OIL 75 MUD	0.84
60.00	OIL OUT MUD 20 OIL 80 MUD	0.84

Gas Rates

	Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)

Drill Stem Test #2



DRILL STEM TEST REPORT

YOUNGER ENERGY COMPANY
 9415 E HARRY SUITE 403
 BUILDING 400
 WCHITA, KANSAS 67207
 ATTN: KEITH REAVIS

34-215-15W PAWNEE
 SCHARTZ 2-34
 Job Ticket: 01204 DST#: 2
 Test Start: 2015.12.08 @ 01:20:00

GENERAL INFORMATION:

Formation: ARBUCKLE
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:23:00
 Time Test Ended: 09:02:00
 Test Type: Conventional Bottom Hole (Initial)
 Tester: GENE BUDIG
 Unit No: 1
 Interval: 3925.00 ft (KB) To 3931.00 ft (KB) (TVD)
 Total Depth: 3931.00 ft (KB) (TVD)
 Reference Elevations: 1978.00 ft (KB)
 1970.00 ft (CF)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 KB to GR/CF: 8.00 ft

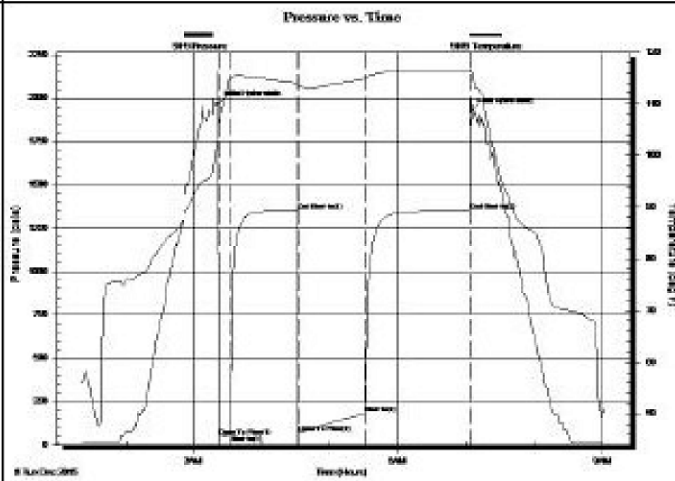
Serial #: 9119

Inside

Press@RunDepth: 1351.62 psia @ 3926.00 ft (KB) Capacity: 5000.00 psia
 Start Date: 2015.12.08 End Date: 2015.12.08 Last Calib.: 2015.12.08
 Start Time: 01:20:00 End Time: 09:01:00 Time On Btm: 2015.12.08 @ 03:21:30
 Time Off Btm: 2015.12.08 @ 07:04:30

TEST COMMENT: 1ST OPENING 10 MINUTES WEAK BUILDING BLOW BUILT TO 10 INCHES INTO THE WATER
 1ST SHUT-IN 60 MINUTES-NO BLOW BACK

1ST SHUT-IN 60 MINUTES NO BLOW BACK
 2ND OPENING 60 MINUTES WEAK BUILDING BLOW BUILT TO BOTTOM OF THE BUCKET IN 25 MINUTES
 2ND L SHUT-IN 90 MINUTES WEAK BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1965.83	102.72	Initial Hydro-static
1	46.89	103.81	Open To Flow (1)
12	59.22	115.09	Shut-h(1)
70	1352.04	114.03	End Shut-h(1)
71	68.71	113.56	Open To Flow (2)
130	180.66	114.90	Shut-h(2)
222	1351.62	116.38	End Shut-h(2)
223	1920.70	116.41	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	GAS IN THE PIPE	0.84
110.00	CLEAN GASSY OIL GAS 85 OIL	1.54
60.00	OIL CUT MUDDY WATER	0.84
0.00	20 OIL 15 MUD 65 WATER	0.00
120.00	SLIGHTLY OIL AND MUD CUT WATER	1.68
0.00	1 OIL 6 MUD 93 WATER	0.00

Gas Rates

Choke (inches)	Pressure (psia)	Gas Rate (Mcf/d)
----------------	-----------------	------------------

ROCK TYPES

Cht vari	Lmst fw7>	Carbon Sh	Ss
Dolprim	shale, grn	shale, red	
Lmst fw<7	shale, gry	Shcol	

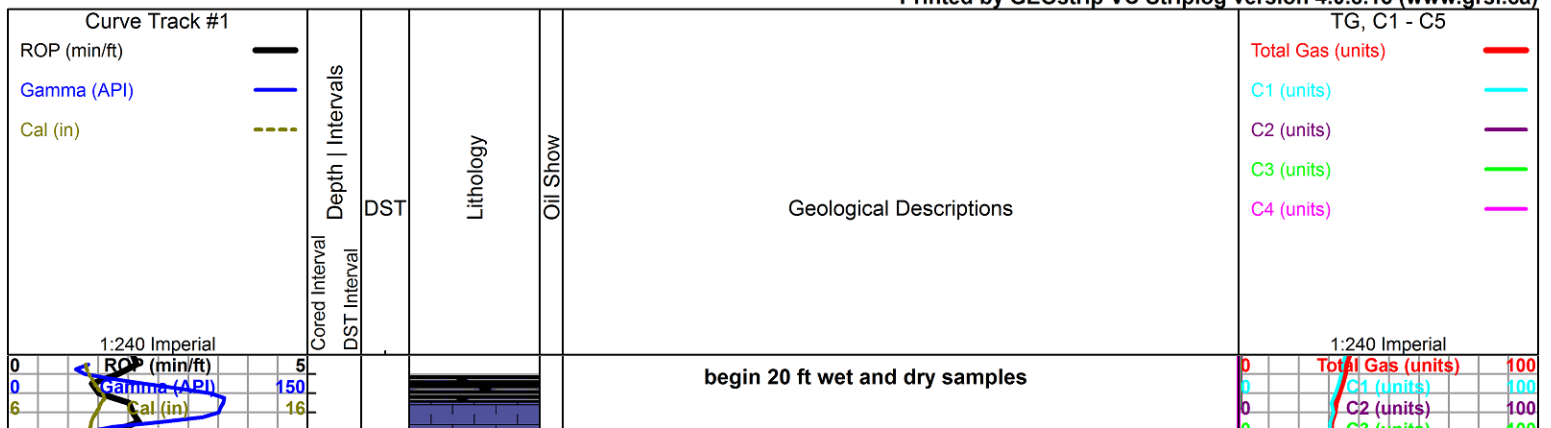
ACCESSORIES

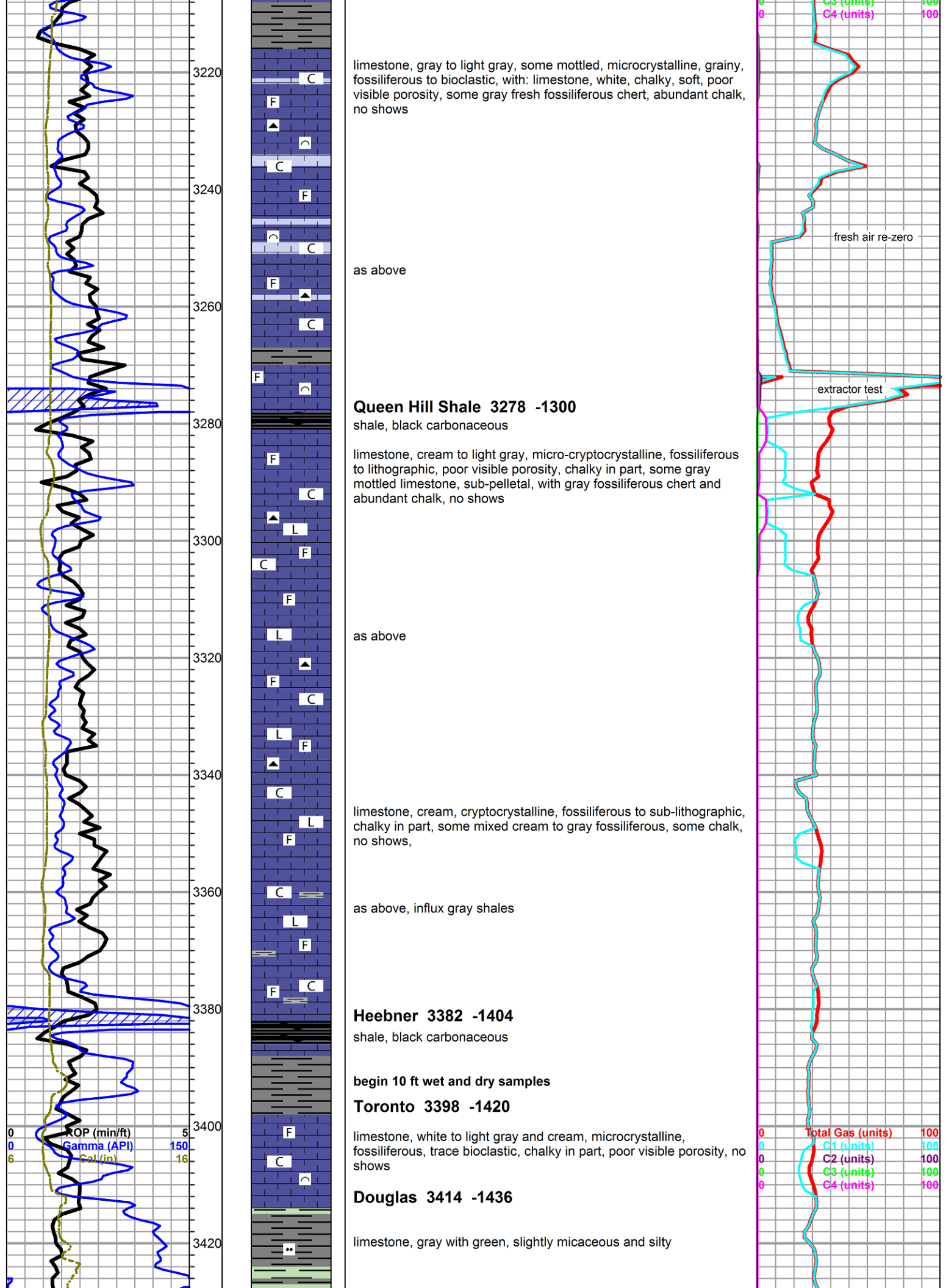
MINERAL	FOSSIL	STRINGER	TEXTURE
▲ Chert, dark	∩ Bioclastic or Fragments	■ Limestone	C Chalky
P Pyrite	F Fossils < 20%	■ Sandstone	L Lithogr
• Sandy	∅ Oolite	■ Shale	
• Silty	⊕ Oomoldic	■ carb shale	
Mc Mica			

OTHER SYMBOLS

Oil Show	DST
● Good Show	■ DST Int
● Fair Show	■ DST alt
● Poor Show	■ Core
○ Spotted or Trace	tail pipe
○ Questionable Stn	
D Dead Oil Stn	
■ Fluorescence	
* Gas	

Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)





limestone, gray to light gray, some mottled, microcrystalline, grainy, fossiliferous to bioclastic, with: limestone, white, chalky, soft, poor visible porosity, some gray fresh fossiliferous chert, abundant chalk, no shows

as above

Queen Hill Shale 3278 -1300

shale, black carbonaceous

limestone, cream to light gray, micro-cryptocrystalline, fossiliferous to lithographic, poor visible porosity, chalky in part, some gray mottled limestone, sub-pelletal, with gray fossiliferous chert and abundant chalk, no shows

as above

limestone, cream, cryptocrystalline, fossiliferous to sub-lithographic, chalky in part, some mixed cream to gray fossiliferous, some chalk, no shows,

as above, influx gray shales

Heebner 3382 -1404

shale, black carbonaceous

begin 10 ft wet and dry samples

Toronto 3398 -1420

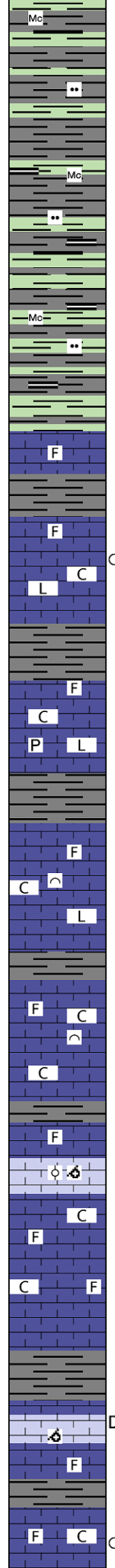
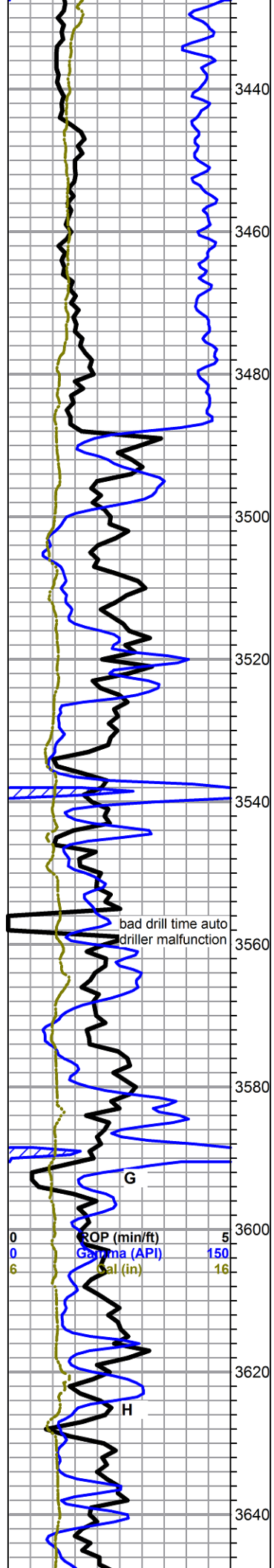
limestone, white to light gray and cream, microcrystalline, fossiliferous, trace bioclastic, chalky in part, poor visible porosity, no shows

Douglas 3414 -1436

limestone, gray with green, slightly micaceous and silty

ROP (min/ft) 5
 Gamma (API) 150
 Cal (in) 16

Total Gas (units) 100
 C1 (units) 100
 C2 (units) 100
 C3 (units) 100
 C4 (units) 100



as above, some dense brown/black dense carbonaceous shale

Brown Lime 3488 -1510

limestone, gray to brown, cryptocrystalline, fossiliferous, dense, cherty, no shows

Lansing 3500 -1522

limestone, white to cream and light gray, mostly cryptocrystalline, lithographic to fossiliferous, cherty to chalky, few small pieces with secondary calcite and leached pin-point porosity, slight stain, slight sheen on break, no odor, poor fluorescence

limestone, white to cream, mostly cryptocrystalline, lithographic to fossiliferous, cherty to chalky, some gray fossiliferous and pyritic limestone, no shows

limestone, white to cream, mostly cryptocrystalline, sub-lithographic to fossiliferous, chalky in part, with trace grainy bioclastic, poor visible porosity, no shows

limestone, a.a. with limestone, light gray, microcrystalline, fossiliferous to bioclastic, dense, poor visible porosity, increase in chalk, no shows

limestone, light gray, oolitic to sub-oomoldic, some fair mold porosity, some secondary calcite, no shows or odor

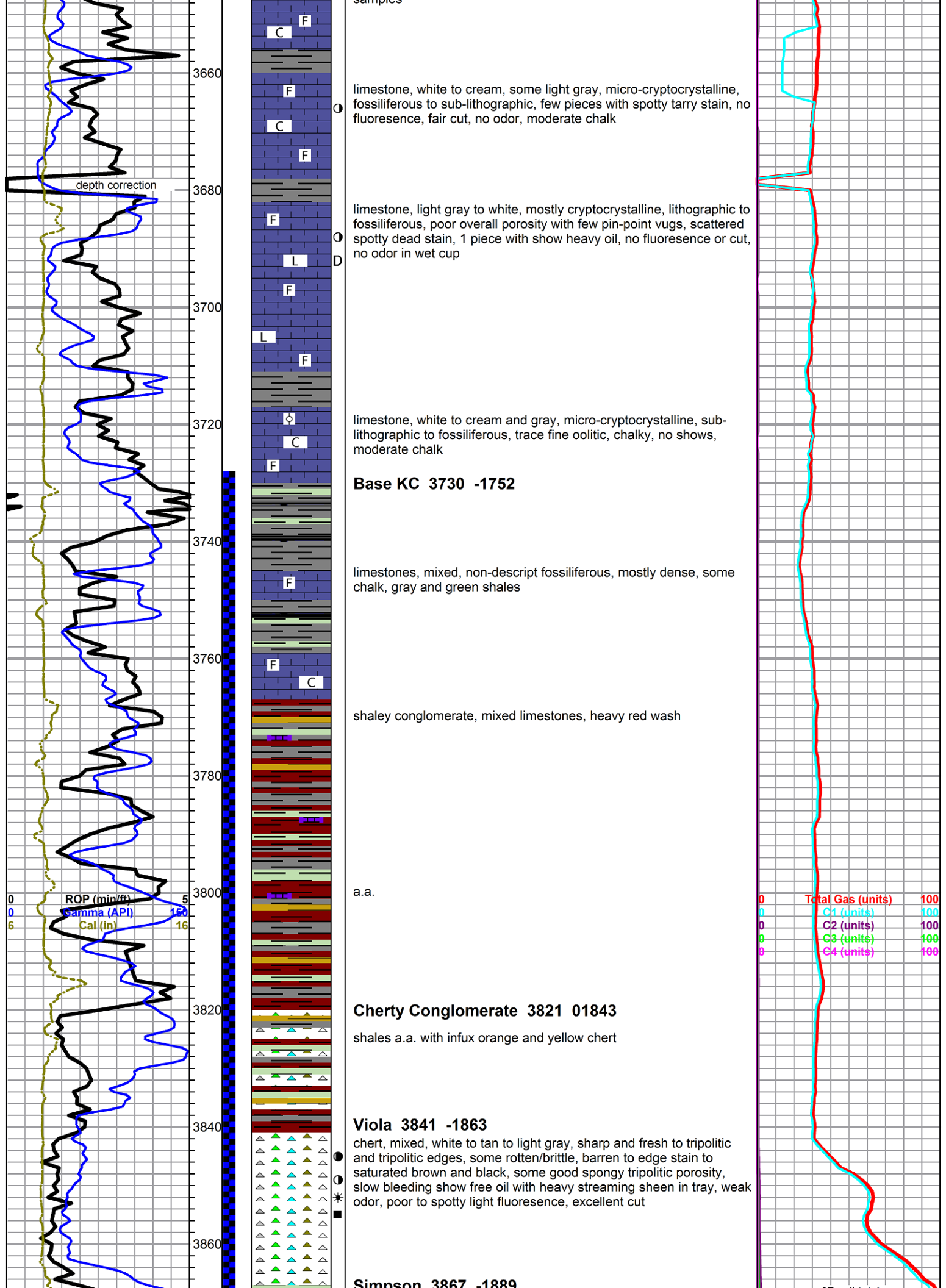
grades to limestone, mixed white to light gray and cream, lithographic to fossiliferous, moderate chalk, no shows

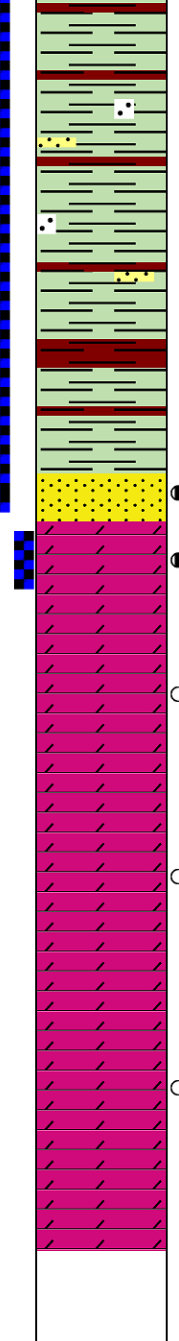
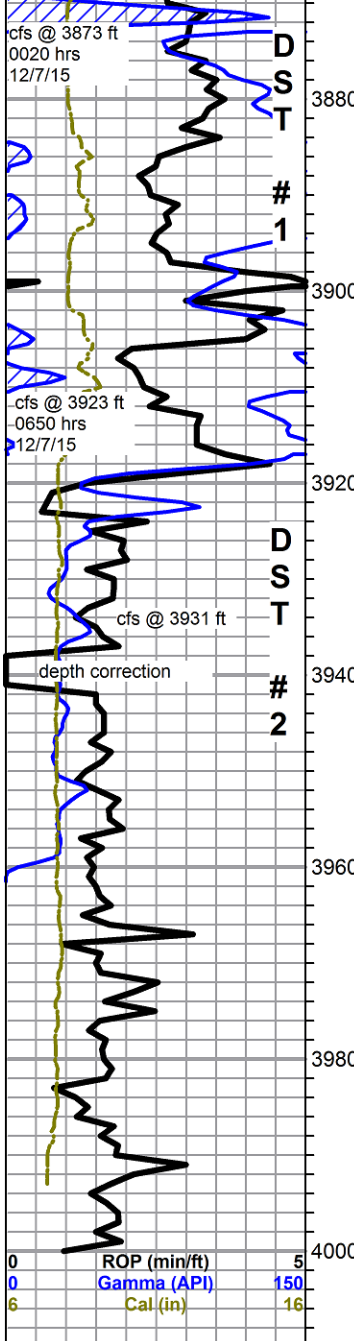
limestone, white to light gray, cryptocrystalline, fossiliferous to oomoldic and sub, oomoldic, some good small mold porosity, trace asphaltic dead stain, some sharp fresh smokey gray chert, fossiliferous, no other shows noted

limestone, mixed non-descript fossiliferous, all very fine samples, noted 1 piece small gray fossiliferous, pin-point porosity, trace stain, slight bleeding sheen, no odor in wet cup, abundant chalk in samples

Andys Mud chk
 @ 3588 ft.
 0930 hrs. 12/6/15
 Vis. 44 Wt. 9.1
 PV 14 YP 16
 WL 8.8
 Cake 1/32,
 pH 10.0
 CHL 10,000 ppm
 Ca 18 ppm
 Sol 4.1 LCM 2.5#
 DMC \$1303.70
 CMC \$9760.50

0	Total Gas (units)	100
0	C1 (units)	100
0	C2 (units)	100
0	C3 (units)	100
0	C4 (units)	100





shale, green with maroon and green/maroon mottled, some sandy, trace sand clusters, white well rounded quartz sand, no shows

influx waxy green pyritic shale, still carrying abundant chert from above

Simpson Sand 3919 -1941 Arbuckle 3924 -1946

sandstone, quartz, fine to very fine grain, fair to poor sorting, sub-rounded, fair cemented to slightly friable, some fair inter-granular and porosity, light gray/brown stain, slight show free oil, fair odor, light fluorescence, slow fair cut, good cut on break

dolomite, light gray to white, cryptocrystalline, dense and barren with microcrystalline, rhombic to sub-rhombic, some good intercrystalline and small vuggy porosity, spotty light brown to black stain, fair show oil, weak odor, good white fluorescence, excellent cut

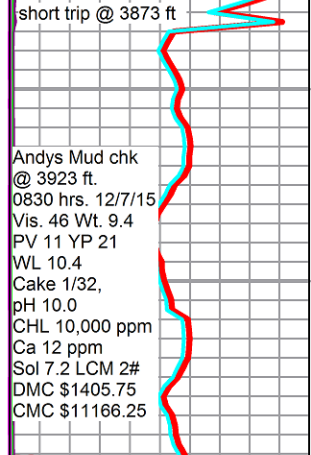
3941-3960 samples, dolomite, white to light gray, cryptocrystalline, dense, lithographic, slight scattered weathering with dead stain, white sucrosic, barren, white microcrystalline rhombic, fair intercrystalline porosity, spotty black stain, trace heavy black oil on break, no bleeding oil, yellow fluorescence, faint odor in wet cup @ 41, drops off to sulfur odor at 3960 sample

3870 - 3990 sample, a.a., trace oomoldic, some fossiliferous chert

4000 dolomite, light gray to light tan, micro-fine crystalline, rhombic to recrystallized, some good intercrystalline porosity, 1 piece bleeding heavy tarry oil, 1 piece with light stain, rest is barren, no odor in wet cups

cfs samples, as above, more recrystallized, trace stain, flood chalk and caliche

Rotary TD 4000 ft @ 1515 hrs 12/8/15
CJ Cased Hole Sol. Log TD 3993 ft
complete logging operations @ 1945 hrs 12/8/15



SC	Total Gas (units)	200
0	C1 (units)	200
0	C2 (units)	200
0	C3 (units)	200
0	C4 (units)	200

Arbuckle gas kick 180 unit total

0	Total Gas (units)	200
0	C1 (units)	200
0	C2 (units)	200
0	C3 (units)	200
0	C4 (units)	200