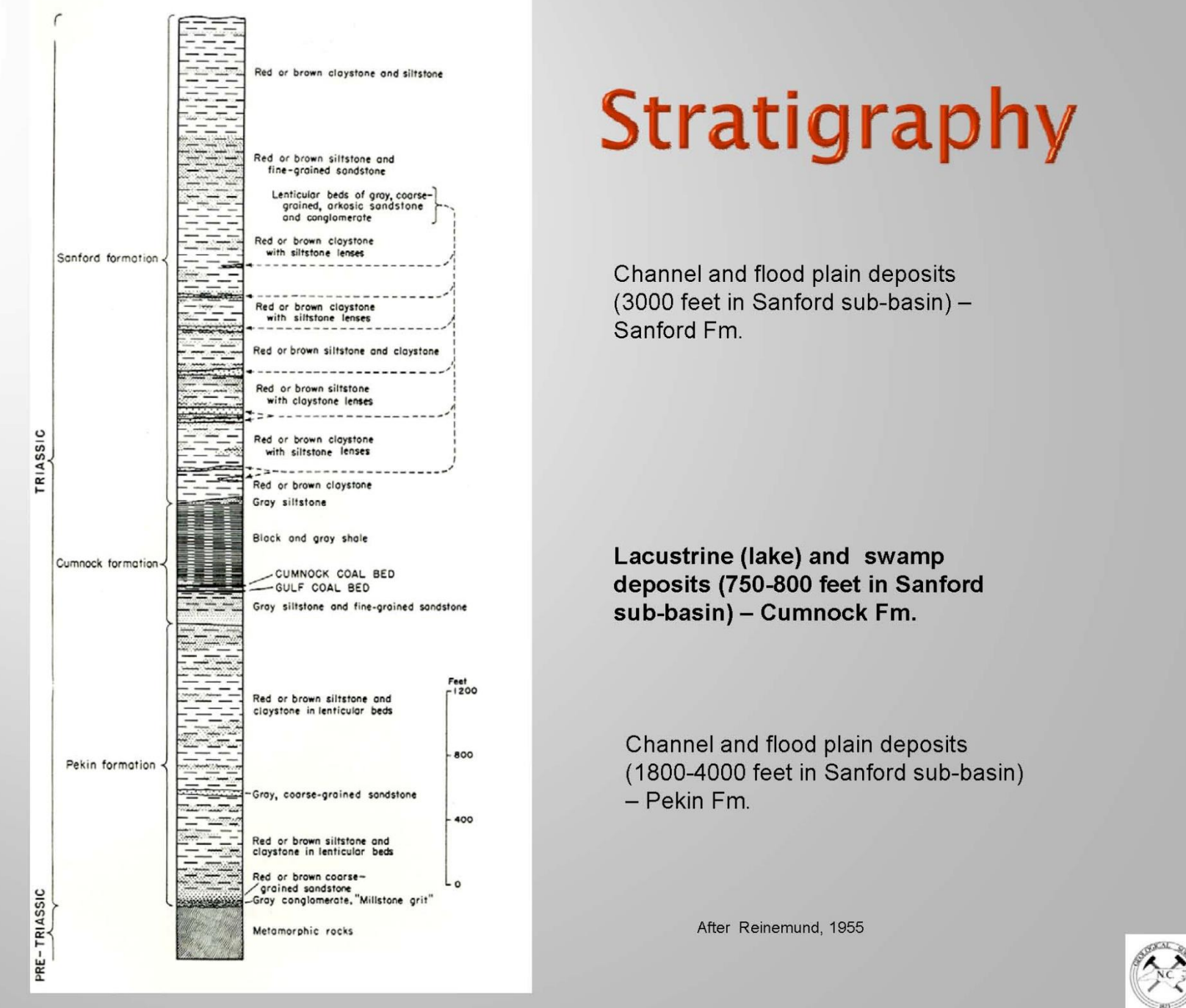
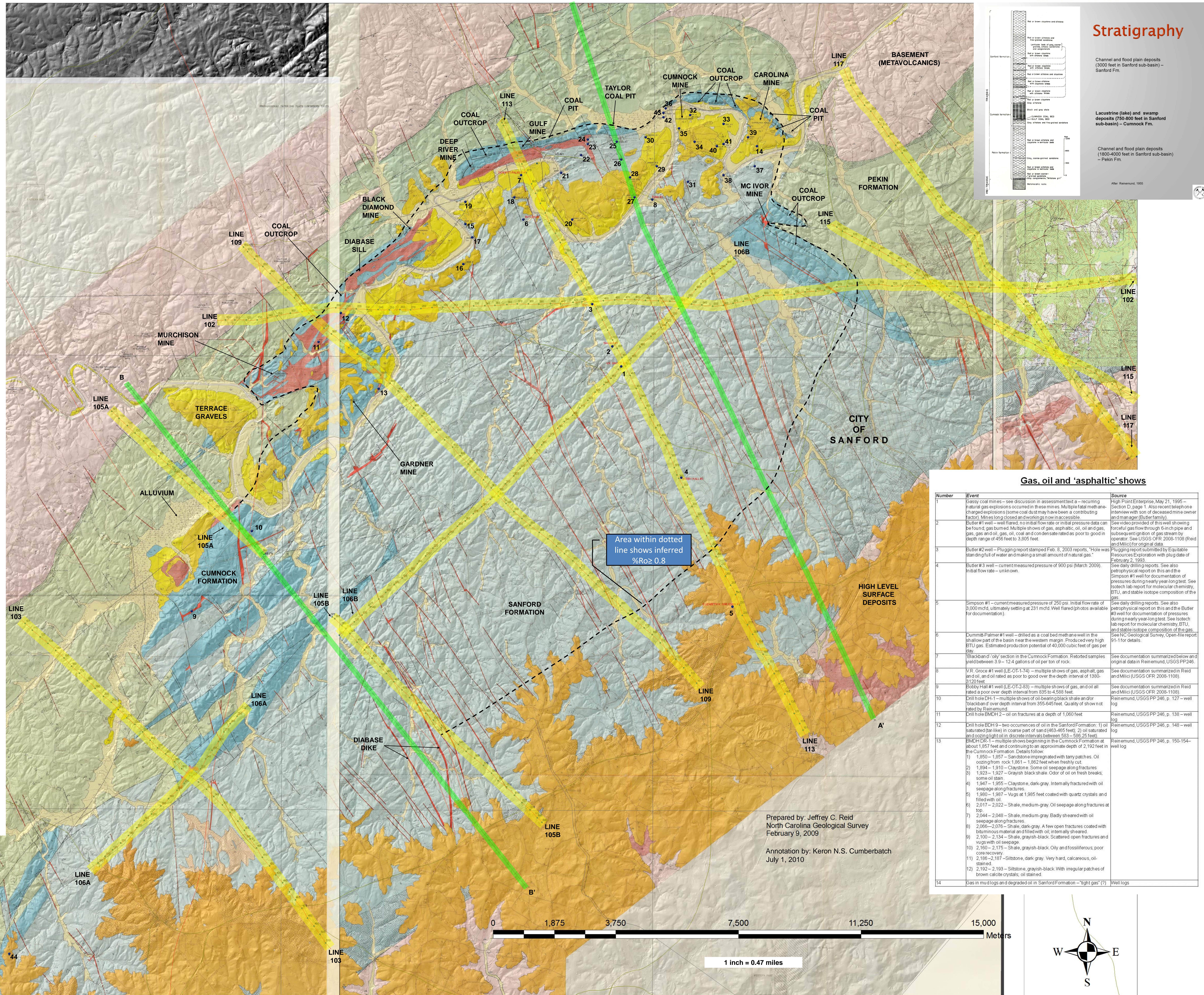
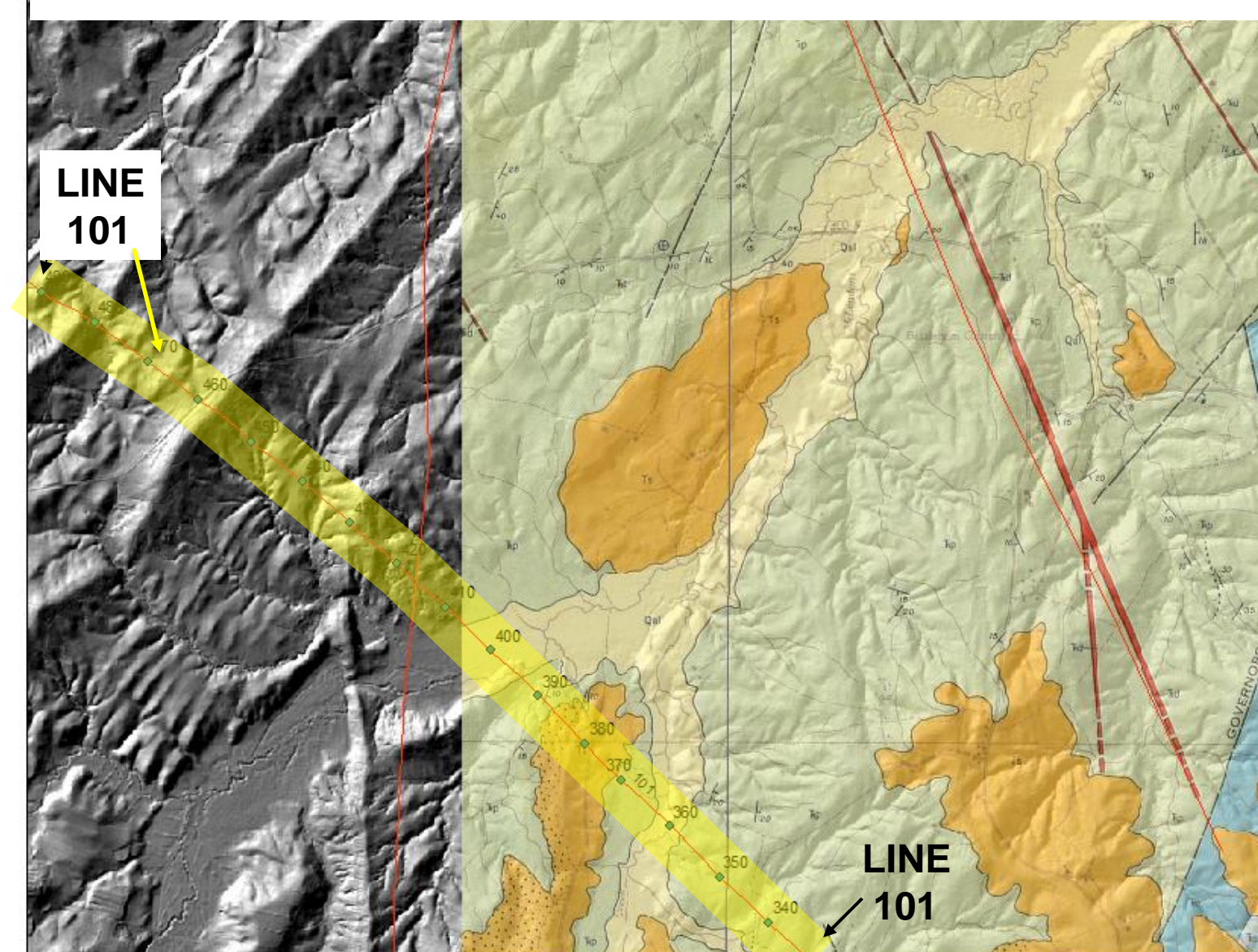


Point	Event	NCGS Code	Well Name	%Ro
1	S,G,O,A	LE-OT-01-74	V.R. GROCE #1	→ 0.8 - 0.9
2	S,G	LE-OT-01-98	SIMPSON #1	→ 0.8 - 0.9
3	S,G,O,A	LE-OT-01-83	BUTLER #1	
4	S,G,O	LE-OT-02-83	BOBBY HALL #1	→ 0.86 - 0.91
5		LE-OT-01-87	ELIZABETH K. GREGSON #1	
6	S,G	LE-OT-01-91	BUTLER #2	
7	S,G	LE-OT-01-82	DUMMIT-PALMER #1	→ 4.85 - 1.72
8	S,G	LE-OT-02-98	BUTLER #3	→ 0.8 - 0.99

Point	Event	NCGS Code	Well Name	%Ro
9		MO-C-01-81	NCMR-1	
10		MO-C-02-81	NCMR-2	→ 1.17 - 1.61
11		USGS PP246	SDH	
12		USGS PP246	SDH	
13		MO-C-03-81	NCMR-3	
14		CH-C-01-81	NCCM-1	→ 0.8 - 0.96
15		LE-C-01-45	BDH 6	
16		LE-C-03-45	BDH 8	
17		LE-C-02-45	BDH 7	
18	S,O	LE-C-04-45	BDH 9	
19		USGS PP246	BDH 1	
20		USGS PP246	BMDH DR-2	
21		CH-C-02-45	BDH 3	→ 1.19
22		USGS PP246	BDH 2	
23		CH-C-03-45	BDH 4	
24		CH-C-04-45	BDH 5	
25		USGS PP246	BMDH E-1	
26	S,O	CH-C-01-45	BMDH 2	
27	S,O,A	USGS PP246	BMDH DR-1	
28		USGS PP246	BMDH E-2	
29		USGS PP246	BMDH D-2	
30		CH-C-01-44	BMDH D-1	→ 0.9 - 3.1
31		USGS PP246	DH A-5	
32		USGS PP246	DH-4	
33		USGS PP246	DH A-1	
34		USGS PP246	DH-2	→ 1.0
35	S,O	USGS PP246	DH-1	
36		USGS PP246	BMDH 1	
37		USGS PP246	DH A-2	
38		USGS PP246	DH A-3	
39		USGS PP246	CPDH	
40		USGS PP246	DH A-4	
41		USGS PP246	DH-3	
42		CH-C-06-45	BDH 11	
43		CH-C-05-45	BDH 10	
44		MO-C-04-81	NCMR-4	

Event Key
 S - Show
 G - Gas
 O - Oil
 A - Asphaltic



Number	Event	Source
1	V.R. Groce #1 well (LE-OT-174) - multiple shows of gas, asphaltic, and oil, and rated as poor to good over the depth interval of 1380-3120 feet.	See documentation summarized below and Reid and Milco (USGS OFR 2006-1108).
2	Bobby Hall #1 well (LE-OT-233) - multiple shows of gas, asphaltic, and oil, and rated as poor to good over the depth interval of 335-4350 feet.	See documentation summarized in Reid and Milco (USGS OFR 2006-1108).
3	Butler #1 well - well failed, no initial flow rate or initial pressure data can be found; gas burned. Multiple shows of gas, asphaltic, oil, and gas, gas, and oil, gas, oil, coal and condensate rated as poor to good in depth range of 453 feet to 3,925 feet.	See video provided of the well showing forerun gas flow through 6 inch pipe and subsequent ignition of gas stream by forerun. See USGS OFR 2006-1106 (Reid and Milco) for original data.
4	Butler #2 well - Plugging report submitted Feb. 8, 2003 reports, 'Hole was standing full of water and making a small amount of natural gas.'	Plugging report submitted by Equitable Resources Exploration with plug date of February 2, 1993.
5	Butler #3 well - current measured pressure of 900 psi (March 2009). Initial flow rate - unknown.	See daily drilling reports. See also petrophysical report on this and the Simpson #1 well for documentation of pressures during nearly year-long test. See isotach lab report for molecular chemistry, BTU, and stable isotope composition of the gas.
6	Simpson #1 - current measured pressure of 250 psi. Initial flow rate of 3,000 mcf/d, volumetrically seeping at 231 mcf/d. Well failed (photos available for documentation).	See daily drilling reports. See also petrophysical report on this and the Butler #3 well for documentation of pressures during nearly year-long test. See isotach lab report for molecular chemistry, BTU, and stable isotope composition of the gas.
7	Dummit-Palmer #1 well - drilled as a coal bed methane well in the shallow part of the basin near the western margin. Produced very high BTU gas. Estimated production potential of 40,000 cubic feet of gas per day.	See NC Geological Survey, Open-file report 91-119 details.
8	Blackband - only section in the Cumcock-Formation. Reported samples yield between 3.9 - 12.4 gallons of oil per ton of rock.	See documentation summarized below and original data in Reinemund, USGS PP246.
9	Blackband - only section in the Cumcock-Formation. Reported samples yield between 3.9 - 12.4 gallons of oil per ton of rock.	See documentation summarized below and original data in Reinemund, USGS PP246.
10	Blackband - only section in the Cumcock-Formation. Reported samples yield between 3.9 - 12.4 gallons of oil per ton of rock.	See documentation summarized below and original data in Reinemund, USGS PP246.
11	Blackband - only section in the Cumcock-Formation. Reported samples yield between 3.9 - 12.4 gallons of oil per ton of rock.	See documentation summarized below and original data in Reinemund, USGS PP246.
12	Blackband - only section in the Cumcock-Formation. Reported samples yield between 3.9 - 12.4 gallons of oil per ton of rock.	See documentation summarized below and original data in Reinemund, USGS PP246.
13	Blackband - only section in the Cumcock-Formation. Reported samples yield between 3.9 - 12.4 gallons of oil per ton of rock.	See documentation summarized below and original data in Reinemund, USGS PP246.
14	Gas in mudlogs and degraded oil in Sanford Formation - 'tight gas' (?)	Well logs

Prepared by: Jeffrey C. Reid
 North Carolina Geological Survey
 February 9, 2009
 Annotation by: Keron N.S. Cumberbatch
 July 1, 2010