

# Preliminary Monthly Report

March 2004

Injection, total fluid production, and monitoring pressures points remain relatively constant with the last two months (see attached graphs). Continuous oil production has not been achieved but there is more frequent sporadic oil production. Measurable oil production was reported 77% of the days in February compared only 48% of the days in February and 25% in January. Oil production in March averaged 2.7 BOPD up from 1.6 BOPD in February. Some of the increased production in March was a result of pumping down CO<sub>2</sub> 12 and producing the oil that had been trapped in the casing tubing annulus. This accounts for around 12% of the production in March.

No gas production has yet been reported. Our original projection indicated measurable gas could be expected in the latter part of March. Normally a significant oil production increase coincides with the arrival of CO<sub>2</sub> at the production wells. Delay in CO<sub>2</sub> arrival could indicate better displacement but is also affected by the current higher loss of CO<sub>2</sub> out of the CO<sub>2</sub> PPV area.

Actual PPV injected within the pilot PPV area after adjusting for meter high side bias and losses out of the area is around 6.2%. At this rate a 10% PPV should be injected before July. This will allow a partial WAG if required during the hotter summer months if required to help control the vent.

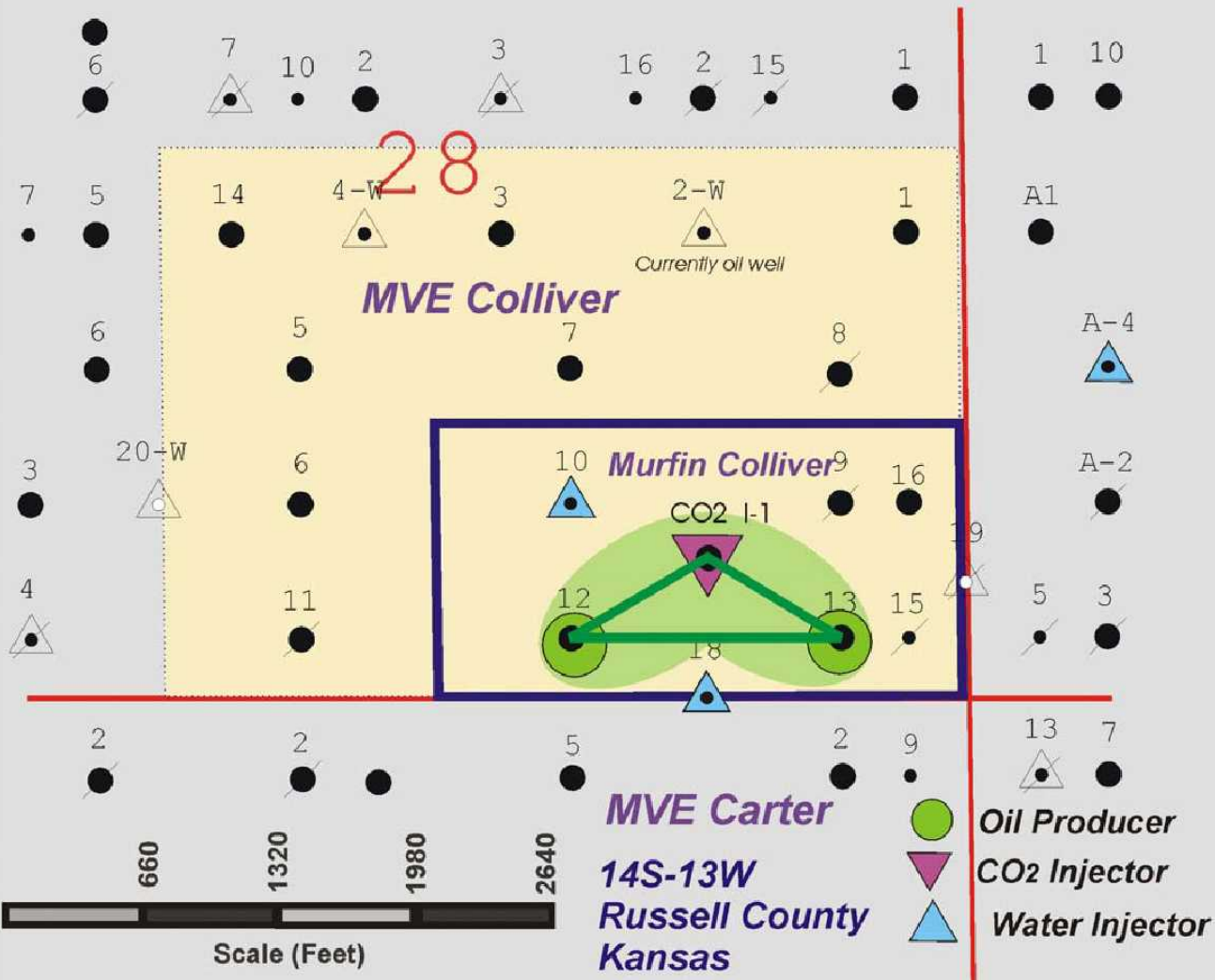
Current CO<sub>2</sub> injection rates are excessive based on current production rates. Injection withdrawal ratio after compensating for the expected 25-30% loss out of the pilot process area is over 1.2. Losses out of the pilot floodable area are currently over 40% as a result of the injection and production being out of balance this is an improvement from the previous 50%.

Murfin has installed a larger pump in CO<sub>2</sub> 12. This is helping to reduce the losses from the pilot area by being able to pump the well down. This and increased injection in CO<sub>2</sub> 10 should reduce the losses out of the PPV area and hopefully bring them in line with the expected 25-30%. If losses out of the PPV pilot area cannot be reduced then the vent rate will need to be controlled more or we could run short of CO<sub>2</sub> for the project.

Attached:

- Pilot Map
- Monthly report
- Injection graph
- Production graph
- LKC Pilot monitoring pressure graph
- LKC Pilot monitoring wells pressures graph

# CO2 Pilot 10-Acre Pattern



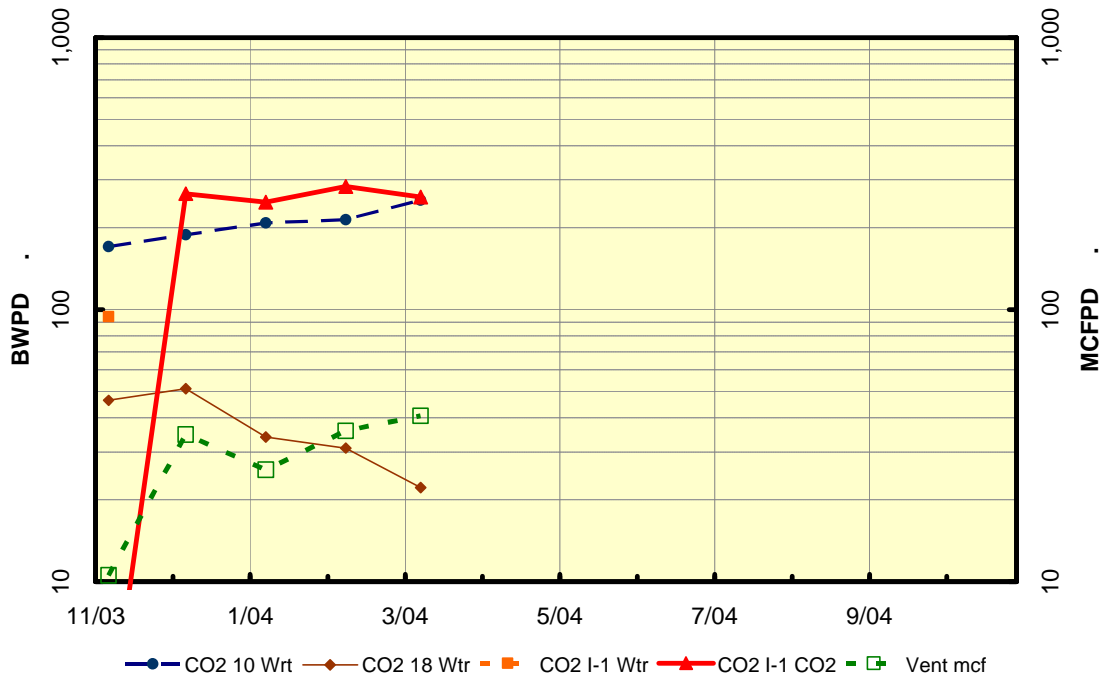


## LKC Pilot Preliminary Monthly Report

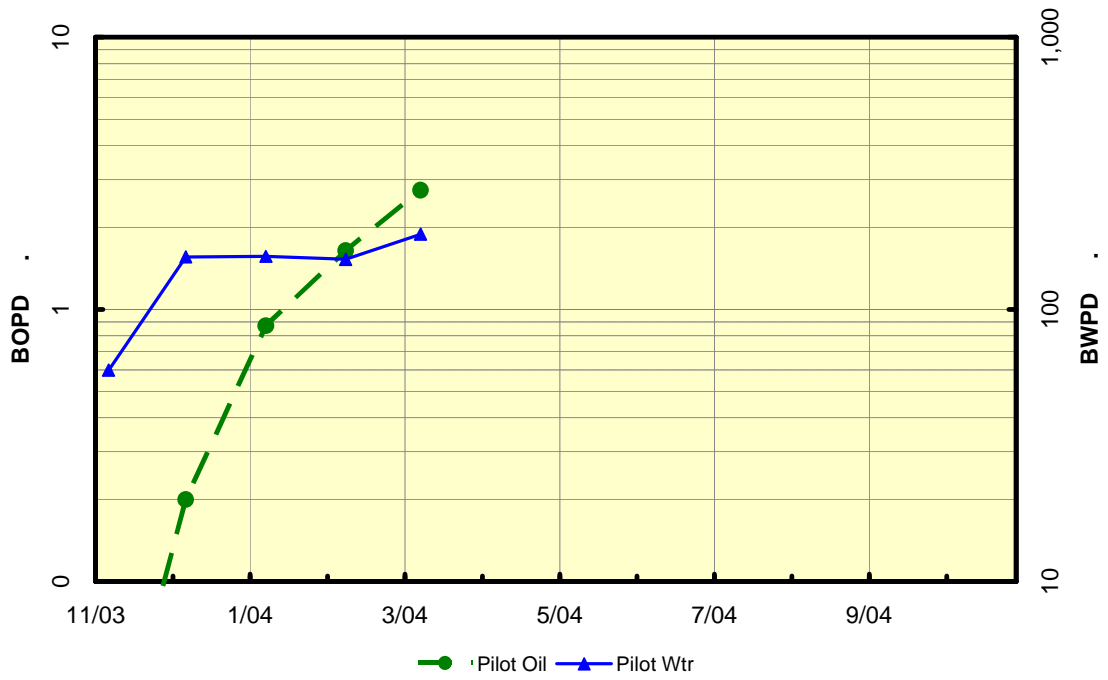
### Daily Values

Field			Nov 2003	Dec 2003	Jan 2004	Feb 2004	March 2004	April 2004	May 2004	June 2004	July 2004	Aug 2004	Sept 2004	Oct 2004
Production														
Oil	bbl		0.0	0.2	0.9	1.6	2.7	-	-	-	-	-	-	-
Wtr	bbl		59.8	155.8	156.7	152.8	188.8	-	-	-	-	-	-	-
Gas	mcf		0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-
Injection														
Wtr	bbl		311.1	239.8	242.4	245.0	274.7	-	-	-	-	-	-	-
CO2	mcf		2.7	266.7	248.4	283.5	259.4	-	-	-	-	-	-	-
	MIb		0.3	30.9	28.8	32.9	30.1	-	-	-	-	-	-	-
CO2 Delivered														
	mcf		24.9	303.4	268.1	320.5	300.1	-	-	-	-	-	-	-
	MIb		2.9	35.2	31.1	37.2	34.8	-	-	-	-	-	-	-
Tank Vent														
	mcf		10.6	34.7	25.8	35.9	40.7	-	-	-	-	-	-	-
	MIb		1.2	4.0	3.0	4.2	4.7	-	-	-	-	-	-	-
	% of Injection		387.4%	13.0%	10.4%	12.6%	15.7%	-	-	-	-	-	-	-
Wells														
Production														
CO2 12 Oil	bbl		0.0	0.2	0.3	0.7	2.5	-	-	-	-	-	-	-
Wtr	bbl		50.9	100.1	97.7	93.5	133.6	-	-	-	-	-	-	-
Gas	mcf		0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-
CO2 13 Oil														
CO2 13 Oil	bbl		0.0	0.0	0.5	1.0	0.3	-	-	-	-	-	-	-
Wtr	bbl		8.9	55.3	59.0	59.4	55.2	-	-	-	-	-	-	-
Gas	mcf		0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-
Injection														
CO2 10 Wtr	bbl		170.4	188.6	208.4	214.0	252.5	-	-	-	-	-	-	-
CO2 18 Wtr	bbl		46.4	51.1	34.0	31.0	22.2	-	-	-	-	-	-	-
CO2 I-1 Wtr	bbl		94.3	0.0	0.0	0.0	0.0	-	-	-	-	-	-	-

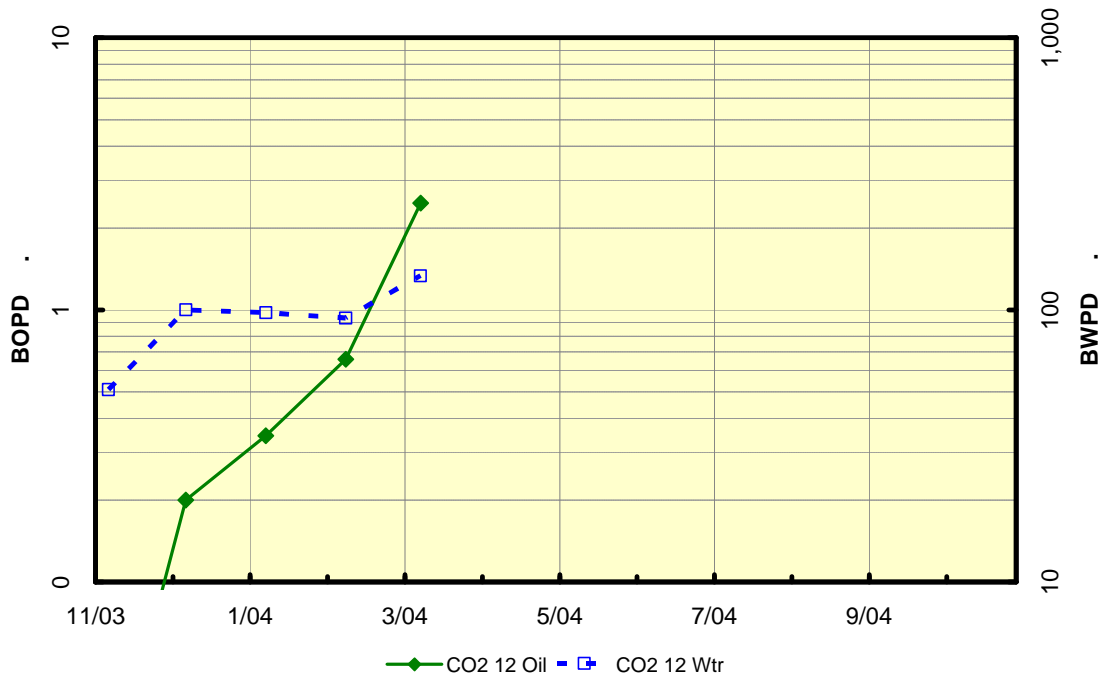
### LKC Pilot Injection



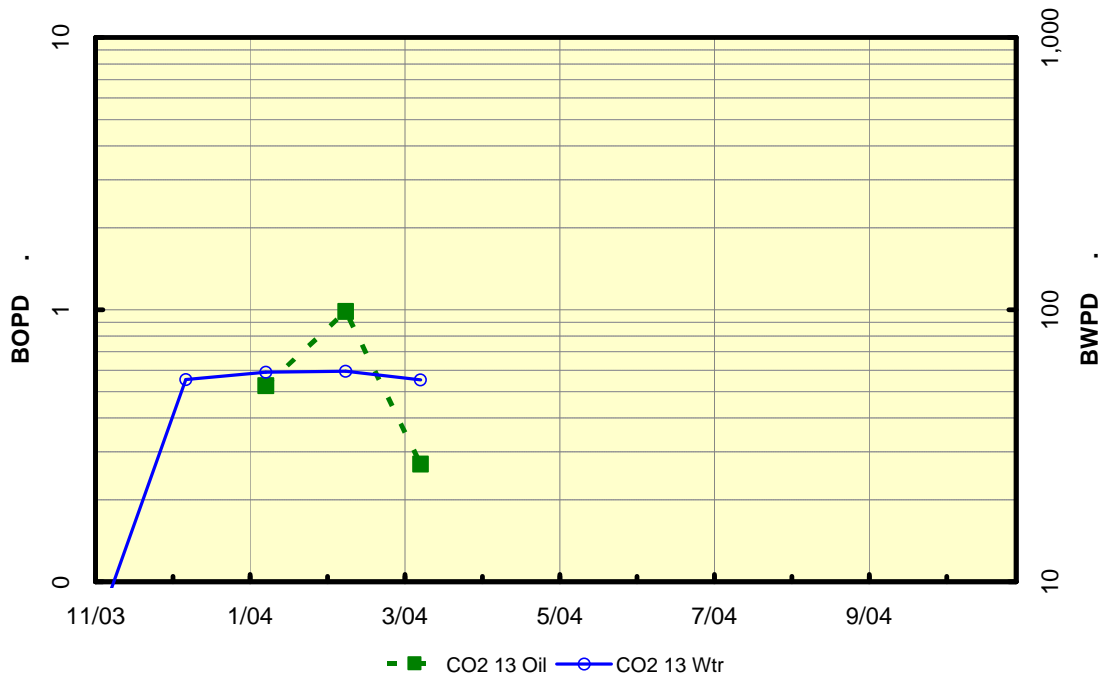
### LKC Pilot Production



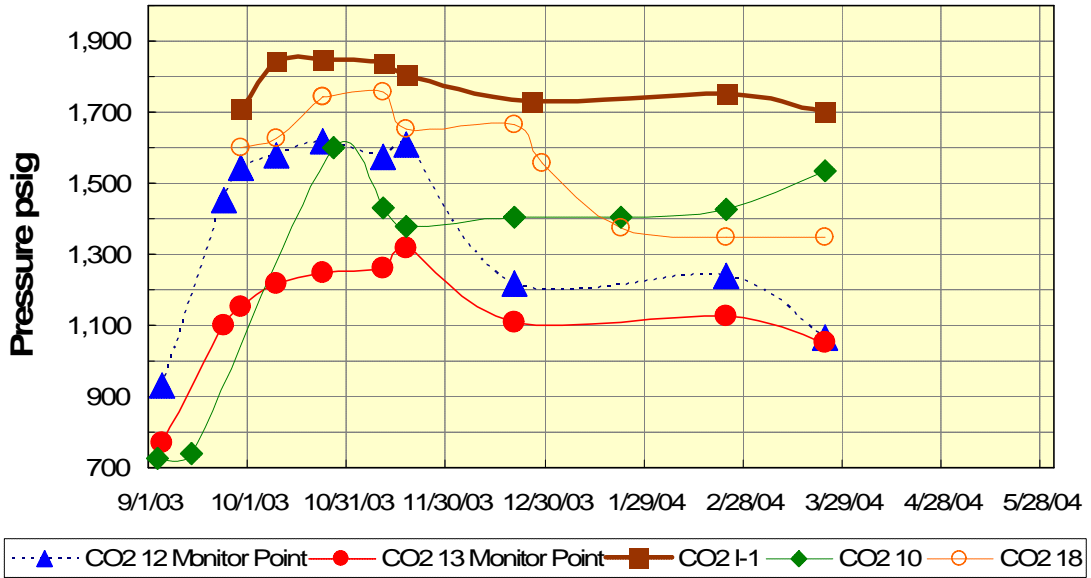
### LKC CO2 12 Production



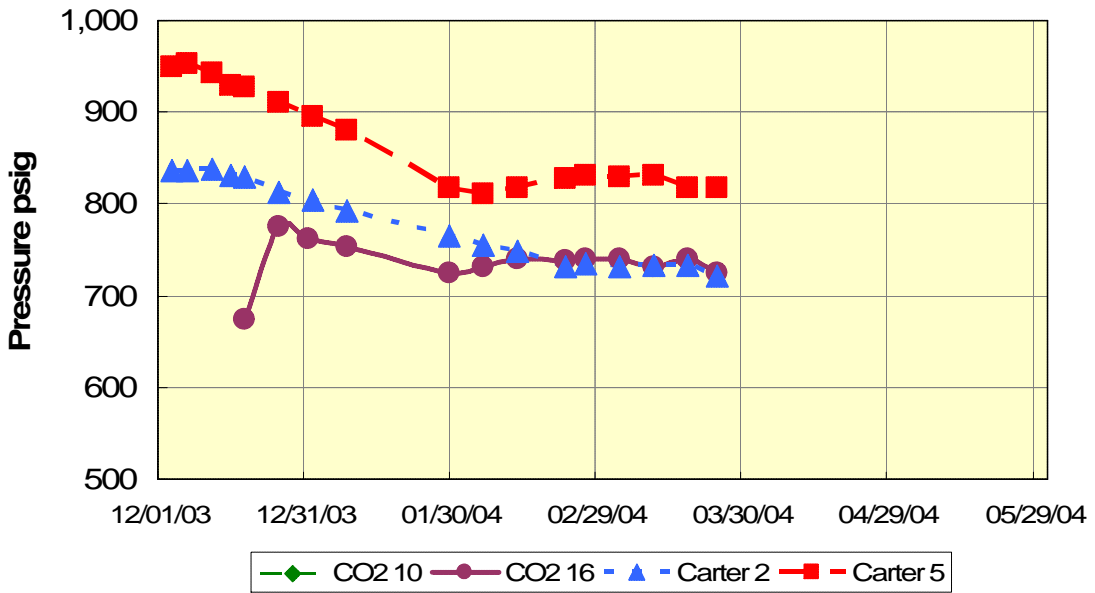
### LKC CO2 13 Production



### LKC Pilot Monitor Pressures



### LKC Pilot Monitor Wells



## **Appendix March 2004 Preliminary Monthly Report**

- I/W ratio determined based on the average gas saturation weighted volumetric average pressure within the CO<sub>2</sub> PPV envelope of 1,257.8psig (1,272.5psia) determined from the February pressure survey and 99°F reservoir temperature. This should be the average volumetric pressure of the CO<sub>2</sub> after we have production. Given that we currently do not have CO<sub>2</sub> production we have estimated the current average CO<sub>2</sub> pressure is 1,388psig based on the Bg required for a unity I/W.
- Injection pressure for CO<sub>2</sub> I-1 is frequently less than the maximum indicating that there is additional injection capacity that can be utilized if injection pressure can be controlled better.
- March production was allocated using the reported well test plus the implied test on CO<sub>2</sub> 13 when CO<sub>2</sub> 12 was SI for its workover.