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GEOLOGICAL REPORT

BEREXCO INC. Turrentine #1-21

C SW/4 SW/4 Sec. 21-23s-34w

Finney County, Kansas

API #15-055-21247

Spud date: 9-30-93

Drilling completed: 10-7-93

Elevations: 2972 KB

2970 DF

2960 GL

KCC

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Comparison well: BEREXCO INC. Gardco #1-21  
C NW/4 SE/4 NE/4 Sec. 21-23s-34w  
(Dry hole 4960 feet northeast)

<u>Formation</u>	<u>Sample Top</u>	<u>E-Log Top</u>	<u>Datum</u>	<u>Compared to Gardco #1-21</u>
Base/Heebner	3763	3765	( -793)	12' high
Toronto	3780	3782	( -810)	13' high
Lansing	3812	3808	( -836)	19' high
Lansing "C"	3865	3860	( -888)	18' high
Lansing "D"	3899	3894	( - 922)	10' high
Lansing "E"	3929	3925	( - 953)	10' high
Lansing "G"	4025	4026	(-1054)	18' high
Lansing "H"	4056	4052	(-1080)	14' high
Lansing "I"	4088	4082	(-1110)	28' high
Kansas City "A"	4165	4160	(-1188)	8' high
Kansas City "B"	4202	4199	(-1227)	4' high
Kansas City "C"	4248	4248	(-1276)	4' high
BKC	4296	4294	(-1322)	6' high
Marmaton	4314	4320	(-1348)	2' low
Pawnee	4405	4404	(-1432)	2' low
Fort Scott	4437	4434	(-1462)	2' low
Cherokee	4450	4446	(-1474)	3' low
Morrow	4662	4659	(-1687)	7' low
St. Genevieve	4748	4741	(-1769)	2' low
St. Louis	4792	4782	(-1810)	2' high
Total Depth	4930	4928	(-1956)	---

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**Zones of Interest and DST's**  
(All measurements corrected to E-log measurements)

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**Toronto 3783 - 3794**

Limestone, white, finely crystalline, cherty, tripolitic, good intercrystal and pinpoint vuggy porosity. No show.

**Lansing "A" 3811 - 3820**

Dolomite, snow white, finely crystalline, oomoldic with medium sized unlined molds, excellent intercrystal and oomoldic porosity. No show.

**Drill Stem Test #2 (Straddle) 3806 - 3820 (Lansing "A")**

Tool open 45 minutes.

Very weak blow first opening.

No blow second opening.

Recovered: 90 feet of mud, no show

IFP	60-60	15"
ISIP	1074	30"
FFP	70-70	30"
FSIP	1135	60"
HH	1957/1844	
BHT	108 degrees	

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**Lansing "C" 3872 - 3984**

Limestone, gray to buff, very finely crystalline, very fossiliferous, oolitic, very soft, incompetent, good interoolitic porosity. No show.

**Lansing "D" 3896 - 3902**

Dolomite, buff, finely crystalline, oomoldic with medium lined and unlined molds, excellent intercrystal and oomoldic porosity. No show.

**Lansing "E", "F" 3926 - 3936**

Limestone, buff, very finely crystalline, oolitic, oomoldic with poor intercrystal porosity and fair interoolitic porosity and good oomoldic porosity. No show.

**3942 - 3960**

Dolomite, white to cream, finely crystalline, sugary, fossiliferous, oolitic, oomoldic, good intercrystal, interfossil and oomoldic porosity. No show.

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3982 - 4000

Dolomite, snow white, finely crystalline, oomoldic with variesized unlined molds, excellent intercrystal and oomoldic porosity. No show.

Lansing "G" 4027 - 4033

Limestone, white, very finely crystalline, soft, oolitic, fossiliferous, slightly oomoldic, fair to good interoolitic and oomoldic porosity. No show.

Lansing "H" 4054 - 4062

Limestone, white to buff, finely crystalline, fossiliferous, oolitic and oomoldic with good interoolitic, fossil mold and oomoldic porosity. No show.

Lansing "I" 4082 - 4146

Dolomite, buff, finely crystalline, clastic, fossiliferous, oomoldic, excellent intercrystal, interfragment, fossil mold and jagged oomoldic porosity. No show.

Kansas City "A" 4169 - 4176

Dolomite, snow white, very fine to finely crystalline, fossiliferous, oolitic with very large oolites, excellent interfossil and interoolitic porosity. No show.

Kansas City "B" 4213 - 4221

Limestone, white, finely crystalline, dolomitic, fossiliferous, good intercrystal, interfossil and vuggy porosity. No show.

Kansas City "C" 4250 - 4268

Dolomite, white to cream, very fine to finely crystalline, oomoldic with small unlined molds, good to excellent oomoldic porosity; spotted staining on a few pieces only. No other show.

Fort Scott 4450 - 4546

Limestone, white to gray to light buff, polished lustre, soft and incompetent, oolitic with variesized, mostly small oolites, fossiliferous with abundant chambered coral, very slightly oomoldic, poor interoolitic porosity, scattered fair oomoldic porosity, good interfossil and excellent intrafossil porosity; very slight light brown discolor, no other visible show. 77 unit gas increase.

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Morrow 4714 - 4724

Sand, gray, very fine to fine grained, angular to well rounded, fluoritic, very glauconitic, well sorted, soft, friable, poor to fair to scattered good intergrain porosity; light brown even stain, "washed out" appearance, good show of free oil, no odor, very faint yellow fluorescence, flush cut. 46 unit gas increase.

**Drill Stem Test #1 4654 - 4726 (Morrow)**  
Tool open 45 minutes.

Recovered: 30 feet of drilling mud, no show

IFP	91-101	15"
ISIP	506	30"
FFP	101-101	30"
FSIP	607	60"
HH	2348/2228	
BHT	114 degrees	

**Remarks and Recommendations**

It was recommended that this test be plugged and abandoned as a dry hole.

Charles B. Spradlin  
October 10, 1993

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