ORIGINAL

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Geological Report
BEREXCO INC.
#1-30 Stonestreet
S/2 SW/4 SW/4 Sec. 30
T31S-R32W
Seward County, Kansas

15-175-21279

Spud Date: 10/23/92
Comp Date: 11/6/92
Report Date: 11/7/92

Tops:

		BEREXCO INC. #1-30 Stonestreet S/2 SW SW Sec. 30 T31S-R32W KB 2875'	BEREXCO INC. #1-31 Hatfield 3300'FSL&660FWL Sec. 31-T31S-R32W KB 2872'
	Sample	Log	Log
Base Heebner	4219	4219 - 1344	4218 - 1346
Toronto	4231	4229 - 1354	4230 - 1358
Lansing Fm	4323	4322 - 1447	4325 - 1453
Lansing "F"	4520	4522 - 1647	4520 - 1645
Kansas City "A"	4798	4797 - 1922	4805 - 1933
Kansas City "B"	4830	4828 - 1953	4837 - 1965
Marmaton	4926	4930 - 2055	4932 - 2060
Pawnee	5047	5051 - 2176	5052 - 2180
Ft. Scott	5092	5091 - 2216	5095 - 2223
Cherokee Fm	5111	5110 - 2235	5114 - 2242
Atoka	5324	5322 - 2447	5339 - 2467
Morrow Fm	5439	5433 - 2558	5454 - 2582
Morrow Sdst	5535	5533 - 2658	5547 - 2675
Chester	5598	5598 - 2723	5560 - 2688
St. Genevieve	5725	5729 - 2854	5753 - 2881
St. Louis	5754	5753 - 2878	5810 - 2938
TD	5984	5980 --	5951 --

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Sample and gas shows of significance and DST's:

Topeka:

4104 - 4133
Lmst. abn. wht. to crm. - chlk & gryish tan to tan; crypto. to fn. & med. xln.; sub-chlk to sub-sucro. - tight & sucro; dull lt. to brt. lt. yell. fluor.; no cut; sucro. has poor to fair micro - p.p. to interxln. porosity

No Gas Increase

4139 - 4173
Lmst. abn. wht. to crm. - chlk & grnish. tan, lt. tan to tan; crypto. to v. fn. xln.; sub-chlk, sub-sucro. to sucro.; trs. oolites; dull lt. to lt. w/trs. brt. lt. yellow fluor.; no cut; traces very poor pin point porosity in part

No Gas Increase

Toronto:

4242 - 4247 and 4250 - 4263
Lmst. v. abn. wht. to crm. - chlk & tan, v. fn. xln.; sub-sucro. to v. sucro.; lt. yell. fluor.; no cut; abn. pr. to fr. w/hvy. trs. gd. micro - p.p. to interxln. porosity

No Gas Increase

Lansing Fm.:

4324 - 4332
Lmst. tr. wht - chlk; crm. to v. lt. tan; v. fn. to fn. xln.; hvy. tr. foss.; sub-sucro to sucro.; brt. lt. yell. fluor.; no cut; sli. tr. pr. p.p. por. in foss & v. sli. tr. pr. micro - p.p. por., no perm., trs. chert crm. to tan; opque

No Gas Increase

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4346 - 4363

Lmst. trs. wht. to crm. - chlk & crm. to lt. tan.; v. fn. to fn. xln.; sub-sucro. to sucro.; lt. to brt. lt. yell. fluor.; no cut; trs. pr. to sli. tr. fr. micro - p.p. por.; w/trs. chert; wht. to gry.; transl. to opque

No Gas Increase

4408 - 4432 and 4435 - 4441

Lmst. tan; crypto. to v. fn. xln.; sub-sucro to sucro tr. oolites; brt. lt. yell. fluor.; no cut; no vis. por. interbedded w/wht. to crm. - chlk

No Gas Increase

4465 - 4481

Lmst. v. abn. wht. to crm. - chlk & crm. to lt. tan; crypto. to v. fn. xln.; trs. sub-chlk, sub-sucro. to sucro w/trs. packstn.; sli. oolitic in pt.; brt. lemon yell. fluor; no cut; trs. poor micro - pin point porosity

No Gas Increase

4481 - 4510

Lmst. abn. wht. to crm. - chlk & crm., lt. tan to tan; crypto. to v. fn. xln.; sli. to v. oolitic in pts.; sub-chlk, sub-sucro & trs. chlk; hvy. tr. sucro.; lt. yellow fluor. no cut; tr. poor micro - pin point por. in pt.

No Gas Increase

4520 - 4530

Lmst. abn. wht. - chlk & tan w/gry; crypto. to v. fn. xln.; v. oolitic (tan to hvy. trs. gry.) to abn. frly. oolicastic; matrix sub-chlk, sub-sucro. & abn. sucro. w/tr. packstn.; brt. lt. yell. fluor. no cut; abn. pr. to fr. w/tr. gd. oolicastic & p.p. por.

No Gas Increase

4545 - 4572

Lmst. abn. crm. to trs. wht. - chlk & tan; crypto. to v. fn. xln.; sub-chlk, sub-sucro; dull lt. to lt. yell. fluor.; no cut; no visible por.

No Gas Increase

4623 - 4628

Lmst. tan; crypto. to v. fn. xln.; tr. sub-chlk, sub-sucro, & sucro.; dull lt. to lt. yell. fluor.; no cut; v. sli. trs. v. pr. micro - pin point porosity

No Gas Increase

4638 - 4648

Lmst. tan; crypto. to v. fn. xln.; v. oolitic; matrix sub-chlk; to sub-sucro.; dull lt. to lt. yell. fluor.; no cut; tr. v. pr. micro - pin point porosity

No Gas Increase

Kansas City:

4836 - 4855

Lmst. abn. wht. - chlk trs. w/chlk oolites & tan; crypto. to v. fn. xln.; extr. oolicastic grading straignt line to extr. oolitic; matrix sub-sucro. & packstn. w/sli. tr. sucro.; dull lt. yell to yellow mottled fluor.; no cut; pr to fr w. trs. gd. oolicastic porosity

No Gas Increase

Marmaton:

4948 - 4964

Lmst. lt. tan to tan; crypto. to v. fn. xln.; extr. oolicastic to v. oolitic; trs. foss. frags.; matrix sub-sucro & packstn. w/tr. sucro.; fr.

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oil oder; sptd to satur. tan to v. lt. brn. oil stn.; w/brt. lt. grnish yell. to brt. yell. fluor. flush to gd. strming cut; 50% pr., 25% fr. to 25% gd. oolicastic por.; trs. pr. to fr. micro - p.p. to interxln. por.; questionable permeability, show decrs w/depth

Gas Increase
4948 - 4964
178 Total - 15 BG = 163 Unit Increase
47-C_1; 20-C_2; 25-C_3; 4-IC_4; 6-C_4

DST #1
Marmaton
4942 - 4954
Strong blow both opens
GTS 24 min 2nd open TSTM
Rec: 110' fluid

	% Gas	% Oil	% Mud	% Wtr
20'	5	5	90	-
30'	30	5	65	
60'	60	5	-	35

Chl. wtr. 72,000 ppm pit chl 1400 ppm
Max Temp 118° F
IHP 2393#
IFP 55-44# in 15 min
ISIP 1039# in 30 min
FFP 33-33# in 60 min
FSIP 1247# in 120 min
FHP 2263#

5010 - 5027
Lmst. lt. tan to tan; crypto. to v. fn. xln.; extr. oolicastic to v. oolitic; matrix sub-sucro & packstn.; trs. foss. frags.; lt. yell to golden yell fluor; no cut; pr. grading straight line to excellent oolicastic porosity; prob. no permeability; no show; tr. chert gry. to wht., replaced oolitic in pt; transl to opque

No Gas Increase

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Pawnee:

5059 - 5068

Lmst. extrly. abn. wht. to crm. chlk and crm., lt. tan to trs. tan; crypto. to v. fn. xln.; hvy. tr. oolitic; sub-chlk sub-sucro.; sli. tr. sli. oolicastic; tr. foss frags; dull lt. yell fluor.; no cut tr. w/pr. micro - p.p. por; sli. tr w/v. pr. to pr. oolicastic por.; hvy. tr. chert gry. w/trs. drk tan, transl - opq.

The Ft. Scott and Cherokee Formations appear to have no zones of interest

Atoka:

5419 - 5421

Silt stn. grding to v. fn. gr. sdst.; drk tan to lt. brn. & brn. from saturated oil stn.; silt to v. fn. gr.; ang.; prly sorted; sli. micacious; sli. shly in pt.; trs. sli. calc.; oil oder; yellish grn, fluor.; pr. to fr. strming cut to excell. ring cut; hvy. tr. pr. micro - p.p. por. especially along frac.; quest. prem.

Gas Increase
5419 - 5421
73 Total - 29 BG = 44 Units Increase
32-C_1; 12-C_2; 11-C_3; No IC_4 or C_4

Morrow Fm.:

5444 - 5450

Sdst. lm. grs.; gry. gryish. tan to tan & lt. brn.; fn. to coarse gr., (crypto. to fn. xln.); tr. glauc.; trs. w/sptd. brn. oil stn.; yellish. grn. fluor.; fr. to gd. strming cut tr. silt stn. brn. from oil stn.; grnish yell. fluor.; gd. ring cut; no visible porosity in lm sdst. or siltstn.

Gas Increase

5447 - 5449

76 Total - 30 BG = 46 Units Increase

32-C_1; 11-C_2; 11-C_3; No IC_4 or C_4

5465 - 5469

Sdst. 98 to 100% lm gr.; gry. gryish tan to tan; w/hvy. tr. sptd. tan to lt. brn. oil stn.; v. fn. to coarse gr. (crypto. to v. fn. xln.) ang.; prly sort.; foss in pt; tr. glauc.; faint oil oder.; stn. has yellish grn. fluor.; fr. to gd. strming cut; trs. poor pin point, vuggular, & interfoss por.; v. quest. perm.

Gas Increase

5465 - 5469

104 Total - 24 BG = 80 Unit Increase

41-C_1; 12-C_2; 11-C_3; No IC_4 or C_4

5533 - 5551

Sdst. 70 to 100% qtz. gr. & 0 to 30% lm gr.; qtz. abn. v. fn. gr. gry., tr. glauc.; v. friable; grnish yell. fluor.; faint strming cut; rest. v. fn. to fn. w/abn. med gr.; ang. to sub-rnded; prly sorted w/tr. to abn. lm. grs. & foss. frags.; fr to coarse gr. (crypto to v. fn. xln.); silty in pt.; dull golden yell. fluor.; trs. v. faint ring cut; sli. tr. v. poor pin point porosity

Gas Increase

5533 - 5548

695 Total - 19 BG - 676 Unit Increase

444-C_1; 48-C_2; 40-C_3; No IC_4; 6-C_4

DST #2

Morrow Sandstone

5535 - 5548

Strong blow both opens

GTS 4 min 1st open

Max flow 473 MCFPD prob a low flow rate to actual flow caused by oil mist damaging the gauge

Rec: 15' 15% gas 5% oil & 80% mud

Max Temp. 125° F

IHP 2665#

IFP 398-409# in 15 min

ISIP 1696# in 30 min

FFP 420-508# in 60 min

FSIP 1696# in 120 min

FHP 2524#

5551 - 5555

Sdst. qtz. gry; v. fn. to tr. fn. to tr. med gr.; ang., pr. to fr. sorting v. abn., fnly desiminated pyr.; abn. w/fr to coarse grs lm & foss frgs. tr. grding to 100% lm sdst; tr. to hvy. tr. glauc.; friable in pt.; tr. sh &/or carbonaeious partings; tr grnish. yell to dull golden yell. fluor.; v. sli. tr. faint strming cut to fr. ring cut, no vis por

Gas Increase

58 Total - 45 BG = 13 Unit Increase

29-C_1; 6-C_2; 3-C_3; No IC_4 or C_4

5555 - 5567

Morrow Shale - drilled similar to sandstone 5533-51 saw similar sand to sandstone 5533-51 new bit & vis over 60

Gas Increase

5558 - 5567

70 Total - 34 BG = 36 Unit Increase

38-C_1; 9-C_2; 3-C_3; No IC_4 or C_4

Voltage to trailer was only 87 volts

DST #3

5558 - 5569

I.O. weak blow died 11 min

F.O. no blow

Rec: 5' mud

Max Temp 125° F

IHP 44-11# in 15 min

ISIP 33# in 30 min

FFP 23-33# in 30 min

FSIP 99# in 60 min

FHP 2534#

5599 - 5602

Sdst. 100% qtz. tan from oil stn.; v. fn. to fn. gr.; ang.; prly. sort.; trs. glauc. in pt.; trs. finely desiminated pyrite; grnish. yell. fluor.; fr. strming cut; no vis. por.

No Gas Increase

The Chester & St. Genevieve Formation appear to have no zones of interest

St. Louis:

5854 - 5863

Lmst., trs. wht. - chlk & lt. tan to tan; crypto. to v. fn. xln.; extrly oolitic (lg w/tr. med); hvy. tr. foss. frags.; matrix sub-chlk, sub-sucro & trs. sucro to no matrix; faint oil oder; sptd. drk tan oil stn. dry samp. w/brt. golden yell fluor dry samp.; gd strming cut dry sample; pr to fr interoolitic, inter foss & interxln. por.; only had 12 clusters; very abn loose oolites

Gas Increase

5854 - 5863

49 Total - 15 BG = 34 Unit Increase

20-C_1; 5-C_2; 5 1/2-C_3; Trs IC_4 & C_4

DST #4

St. Louis

5848 - 5865

I.O. v weak to 4 1/2 in. in bucket in 15 min

F.O. strong blow built to bottom bucket 2 min

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Rec: 1605' GIP
30' muddy oil
90' G&MCO 10% mud, 50% oil, 40% gas

Max Temp 130° F

IHP 2897#

IFP 40-40# in 15 min

ISIP 1336# in 30 min

FFP 50-81# in 90 min

FSIP 1576# in 120 min

FHP 2618#

5967 - 5973

Dolomite lt. grn. to lt. gryish crm.; v. fn. xln.; sucro.; v. brt. lt. yell. fluor; no cut; no vis por.; friable in pt

No Gas Increase

Remarks:

1. Sample log depth appear to be near to 2 feet low to E-log depths

2. All zones of interest requiring a test were tested

Recommendation:

There appear to be two zones of economic interest in this well:

Morrow Sandstone	5533-5551
St. Louis Limestone	5855-5563

It is recommended casing be run so as to be able to production test the two above mentioned zones.

Thank you,

Edwin H. Grieves
Geologist

ORIGINAL

To: Mr. Robert M. Beren

From: Edwin H. Grieves

Re: DST Lengths
BEREXCO INC.
#1-30 Stonestreet
S/2 SW SW Sec. 30
T31S-R32W
Seward County, Kansas

Spud Date: 10/23/92
Comp Date: 11/6/92
Memo Date: 11/7/92

DST #1	19 hrs 7 min	1. First DST Long Short Trip back to surface casing 2. Mud system contaminated with salt coming from below surface casing and gas from zone tested 3. Junk on bottom that had to be drilled up
DST #2	22 hrs 3 min	1. Morrow longer test 2. Mud system contaminated with salt coming from below surface casing and gas from zone tested
DST #3	17 hrs 4 min	
DST #4	23 hrs 44 min	1. Longer test times 2. Generator and power problems after test

NOTE: All test longer due to formation being deeper in this part of Kansas (ie 1000 feet more pipe to move in and out of hole).

Thank you,

Edwin E. Grieves

RELEASED

MAY 2 4 1995

FROM CONFIDENTIAL

FEB 2 4

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