TOPOGRAPHIC LAND SURVEYORS
6709 NORTH CLASSEN BLVD., OKLA. CITY, OKLA. 73116 \* LOCAL (405) 843-4847 \* OUT OF STATE (800) 654-3219

Certificate of Authorization No. LS-99, Exp. Dec. 31, 2013

CHAUTAUQUA

County, Kansas CHAUTAUQUA County, Kansas

100'FNL-1830'FWL Section 18 Township 34S Range 9E P.M. X 2597011 Y 163956 100' 259177 163909 765 Proposed Top Perforation 920 FNL-1830 FWL NAD-27 (US Feet) 3705 47.4" N 96 27 52.8" W 37.096510849 N 96.464657915 W 2597073 FS7. 1958 175'FSL-1830 NAD-27 (US ) 37'05'06.0" N 96'27'53.0" W 37.085002893 96.464732712 **GRID** Scale: = 1000'Bottom Hole 500' 1000' 165'FSL-1830'FWL NAD-27 (US Feet) 37'05'05.9" N 96'27'53.0" W 37.084975429 96.464732891 X=2593693 Y=158795 X 2591866 Y 158613 Bottom Hole Information Provided by Operator Listed, NOT Surveyed. Corner Coordinates are Taken from Points Surveyed in the Field, Distances shown in (parenthesis) are calculated based upon the Quarter Section being 2640 feet, those shown in [brackets] are based on GLO (General Land Office) distances and have NOT been measured on the ground. Operator: NEMAHA OIL AND GAS **ELEVATION:** Well No.: 1A-18-34-9H Lease Name: MASSEY 946' Gr. at Stake Topography & Vegetation Loc. fell in rolling pasture Reference Stakes or Alternate Location Yes Stakes Set None Good Drill Site? \_\_\_\_\_ From East off county road Best Accessibility to Location \_ Distance & Direction LS-1 From Cedar Vale, KS, go East ±2.0 mi, then ±1.0 mi South to from Hwy Jct or Town \_\_ arrive at the Northeast corner of Sec. 18-T34S-R9E Date of Drawing: Nov. 27, 2012 Revision X C DATUM: NAD-27 LAT: 37'05'55.5"N Invoice # 192525 Date Staked: Nov. 13, 2012 LONG: 96°27'52.7"W **CERTIFICATE:** LAT: 37.098762864 I, <u>Michael Blake Brown</u> a Kansas Licensed Land Surveyor and an authorized agent of Topographic Land LONG: 96.464640974 STATE PLANE Surveyors, do hereby certify that the above described 11-28-12. HANSAS. SURVEYORIHI COORDINATES: (US Feet) well location was surveyed and staked on the ground ZONE: KANSAS SOUTH as shown herein. X: 2593610

Y: 163815

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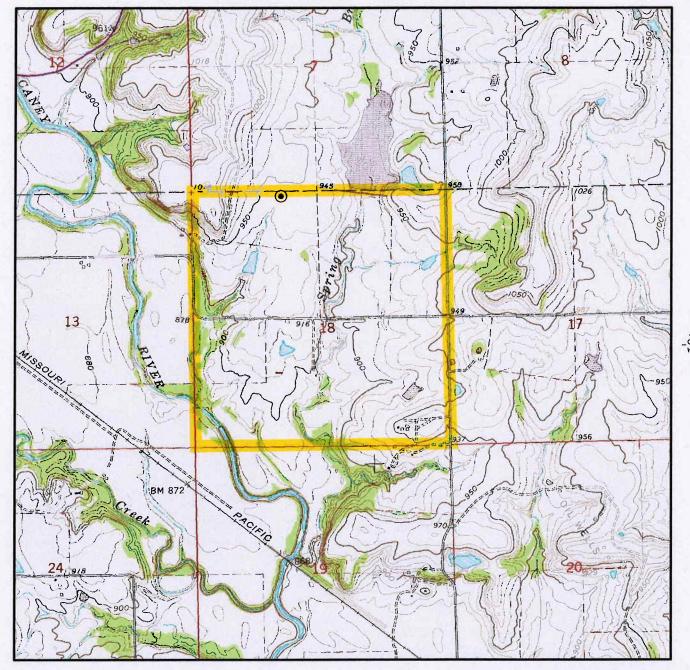
CHAUTAUQUA

County, Kansas County, Kansas 100'FNL-1830'FWL Section 18 Township 345 <u>9E</u> P.M. \_\_ Range X 2597011 Y 163956 X 2591778 Y 163909 165' |HARDLINE X 259437 Y 163917 765 ( HARDLINE 165 2534 Proposed Top Perforation 920'FNL—1830'FWL NAD—27 (US Feet) 37'05'47.4" N 37°05'47.4" N 96°27'52.8" W 37.096510849 N 96.464657915 W X=2593623 Y=162995 X 2597073 18 557 1950 X 2591822 Y 161261 HARDLINE Proposed bottom Perforation 175'FSL-1830'FWL NAD-27 (US Feet) 37'05'06.0" N 96'27'53.0" W 37.085002893 N 96.464732712 W X=2593693 11 11 165 11 2486 Y=158805 **GRID** Scale: = 1000'Bottom Hole 165'FSL-1830'FWL NAD-27 (US Feet) 37'05'05.9" N 96'27'53.0" W 500' 1000" 37.084975429 96.464732891 X=2593693 865 2594512 158638 Y=158795 1780 X 2597148 Y 158663 2591866 X 2591866 Y 158613 Bottom Hole Information Provided by Operator Listed, NOT Surveyed, Corner Coordinates are Taken from Points Surveyed in the Field, Distances shown in (parenthesis) are calculated based upon the Quarter Section being 2640 feet, those shown in [brackets] are based on GLO (General Land Office) distances and have NOT been measured on the ground. Operator: NEMAHA OIL AND GAS **ELEVATION:** Well No.: <u>1A-18-34-9H</u> Lease Name: MASSEY 946' Gr. at Stake Topography & Vegetation Loc. fell in rolling pasture Reference Stakes or Alternate Location Yes Stakes Set None Good Drill Site? \_\_\_ From East off county road Best Accessibility to Location \_ Distance & Direction From Cedar Vale, KS, go East ±2.0 mi, then ±1.0 mi South to LC BLAKE BLAKE CENSES OF LS-157 from Hwy Jct or Town arrive at the Northeast corner of Sec. 18-T34S-R9E Revision X C Nov. 27, 2012 Date of Drawing: \_ Invoice # 192525 Date Staked: Nov. 13, 2012 NAD-27 DATUM:\_\_ LAT: 37'05'55.5"N LONG: 96°27'52.7"W **CERTIFICATE:** LAT: 37.098762864 <u>I, Michael Blake Brown</u> a Kansas Licensed Land Surveyor and an authorized agent of Topographic Land LONG: 96.464640974 STATE PLANE Surveyors, do hereby certify that the above described 11-28-12. KANSAS. SURVEYORIHI COORDINATES: (US Feet) well location was surveyed and staked on the ground ZONE: KANSAS SOUTH as shown herein. 2593610 Y: 163815

## TOPOGRAPHIC LAND SURVEYORS

Surveying and Mapping for the Energy Industry
6709 North Classen Blvd. Oklahoma City, OK 73116 www.topographic.com
Telephone Numbers: Local (405) 843-4847 Toll Free (800) 654-3219

## LOCATION & ELEVATION VERIFICATION MAP



Sec. 18 Twp. 34S Rng. 9E

County CHAUTAUQUA State KS

Operator NEMAHA OIL AND GAS

Description 100'FNL-1830'FWL

Lease MASSEY 1A-18-34-9H

Elevation 946' Gr. at Stake

U.S.G.S. Topographic Quadrangle Map CEDAR VALE EAST, KS

Above Background Data from U.S.G.S. Topographic Map Scale: 1"=2000'

Contour Interval 10'

This location has been very carefully staked on the ground according to the best official survey records, maps and photographs available to us, but its accuracy is not guaranteed. When elevation is shown hereon it is the ground elevation of the location stake.

Review this plat and inform us immediately of any possible discrepancy.

TOPOGRAPHIC

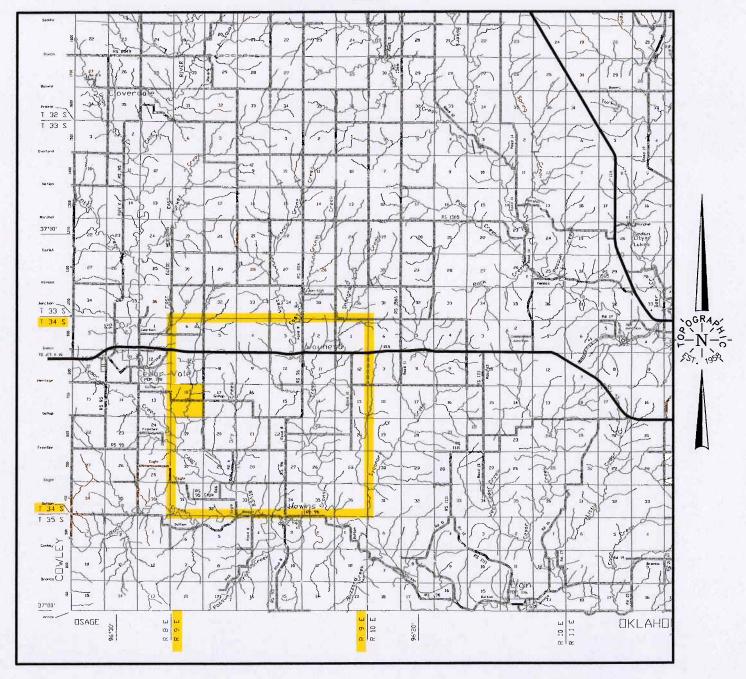
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LAND SURVEYORS

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## **VICINITY MAP**



Scale: 1'' = 3 Miles

Sec	18	_Twp	345	Rng	9E	
County_	CH	łautauqu.	A	State	KS	_
Operator	r	NEMAHA (	OIL AN	D GAS		

