

# CIMARRON DRILLERS, INC.

Geologist - Petroleum - Geophysicist

P. O. Box 854

GREAT BEND, KANSAS 67530

23-18-15W

LEWIS O. CHUBB  
Phone 793-6749

January 2, 1986

Pan Western Energy Corp.  
324 South Main, Suite 711  
Tulsa, Oklahoma 74013

Re: Pan Western Energy  
Nordman GJP 1-23  
SW NW NE  
Sec. 23-18s-15w  
Barton County, Kansas

Gentlemen:

The following is the geological report for the above captioned well:

CONTRACTOR:	Mohawk Drilling Rig 7
DATE COMMENCED:	December 6, 1985
DATE COMPLETED:	December 13, 1985
ROTARY TOTAL DEPTH:	3608'
SURFACE CASING:	Set 8 5/8 @ 939'
ELEVATIONS:	1927' KB; 1917' GL
DEPTH MEASURED FROM:	1927' KB
DRILLING TIME PLOTTED:	1700-1900' & 2900-3608'
SAMPLES EXAMINED:	1800-1900' & 2800-3608'
DST: (Halliburton)	2 - Arbuckle
LOG: (Welex)	D11; MFSL; CD; CN; GR
COMPLETION:	Plugged and abandoned

Pan Western Energy Corp., Nordman GJP 1-23

FORMATION DATA

<u>FORMATION</u>	<u>DEPTH (Log)</u>	<u>SUBSEA</u>
Anhydrite	930'	997'
<u>Chase Krider</u>	1921'	100'
Winfield	1875'	48'
<u>Shawnee Topeka</u>	2926'	-1099'
Heebner	3165'	-1253'
Douglas	3197'	-1270'
Iatan (B.Im)	3236'	-1309'
<u>Lansing</u>	3244'	-1317'
Base Kansas City	3474'	-1447'
Eroded Arbuckle	3488'	-1561'
Solid Arbuckle	3608'	-1573'
RTD	3608'	-1581'
LTD	3612'	-1685'

STRUCTURAL POSITION IN RELATION TO NEARBY TESTS

<u>FORMATION</u>	<u>Pan Western Nordman 1-23 SW NW NE</u>	<u>Imperial Nordman #1 NW NW SE 23</u>	<u>Imperial Nordman #2 NW NW SE 23</u>
Anhydrite	997'	1007'	995'
Heebner	+1238'	-1233'	-1240'
Iatan	-1309'	-1303'	-1312'
Lansing	-1317'	-1313'	-1322'
Base Kansas City	-1449'	-1545'	NA
Arbuckle	-1573'	-1557'	-1626'
RTD	-1685'	-1628'	-1649'

Pan Western Energy Corp., Nordman GJP 1-23

ZONES OF INTEREST

<u>FORMATION</u>	<u>DEPTH</u>	<u>DESCRIPTION</u>	
(Chase) Krider	1827'-1840'	Dolomite, tan, gray, fine grained sucrosic anhydrite, poor porosity. No show. Log: 17% porosity, 60% water.	
Winfield	1875'-1888'	Dolomite, tan, gray, fine grained sucrosic, good well developed porosity. No show. 15-23% porosity, 60-90% water.	
(Shawnee) Topeka	2967'-2972'	Limestone, tan, cream, chalky, poor porosity. No show. Log: 12% porosity, 97% water.	
	3042'-3056'	Limestone, tan, cream, chalky, slightly fossiliferous, poor porosity. No show. Log: 12% porosity, 6-80% water.	
	3109'-3115'	Limestone, white, oolitic, crystalline matrix, good porosity. No show. Log: 23% porosity, 10% water.	
Totonto	3180'-3190'	Limestone, tan, brown, crystalline, trace crystalline and fossiliferous porosity. No show. Log: 13% porosity, 80-90% water.	
Lansing "A"	3246'-3248'	Limestone, gray, white, oolitic, slightly oolitic, dense trace oolitic porosity, gilsonitic. Log: 12% porosity, 25-59% water.	
	"B"	3158'-3182'	Limestone, tan, brown, medium crystalline oolitic, good crystalline and oolitic porosity. No show. Log: 15-22% porosity, 23% water.
	"G"	3334'-3352'	Limestone, tan, gray, oolitic, oolitic, dense matrix, good porosity. poor permeability. No show. Log: 18-23% porosity, 23% water.
	"J"	3422'-3426'	Limestone, white, oolitic, with dense matrix, trace oolitic porosity, gilsonitic. Log: 10% porosity, 25% water.

Pan Western Energy Corp., Nordman GJP 1-23

ZONES OF INTEREST (cont.)

<u>FORMATION</u>	<u>DEPTH</u>	<u>DESCRIPTION</u>
Arbuckle Eroded	3488'-3498'	Dolomite, tan, brown, fine crystalline, dense poor crystalline, porosity dirty believed eroded, re-worked, good odor, show oil cherty.
	3500'-3523'	Dolomite, tan, gray, fine crystalline sucrosic, slight show oil - fair odor, poor crystalline and vugular porosity.
DST No. 1	3483'-3523'	Weak blow - died. Rec. 15' mud IHP 1873# IFP 18-18# (30) ISIP 91# (30) FFP 36-36# (30) FSIP 73# (30) Temp. 109°
	3523'-3545'	Dolomite, white, medium crystalline, partly dense, good crystalline and vugualr proostiy, slight show free oil, fair odor, gilsonitic. Log: 10% porosity, 90% water.
	3545'-3600'	Dolomite, white, fine medium crystalline, partly dense, gilsonitic, good porosity, much barron, No show. Log: 10% porosity, 100% water.
DST No. 2	3527'-3545'	Weak blow. Rec. 45' muddy water IHP 1873# IFP 18-18# (15) FSIP 1126# (60) FFP 36-36# (60) FSIP 1089# (120) FHP 18;9# Temp. 109°

Pan Western Energy Corp., Nordam GJP 1-23

SUMMARY

The subject well was under geological supervision from 3000' to 3608' RTD. The upper Chase group was also observed.

Structurally the well ran slightly lower to adjacent dry holes.

The only shows of free oil were noted in the eroded dolomite and in the top of the Arbuckle. Drillstem test covering these zones proved negative.

The well was plugged and abandoned on the basis of the low structural position, the negative drillstem tests, and the log calculations by Welex.

Respectfully submitted,

Cimarron Drillers, Inc.

A handwritten signature in cursive script, appearing to read "L.O. Chubb".

L.O. Chubb, Geologist