

Geological Report

Palmer Oil, Inc.

Hatcher #12-1

335' FSL & 335' FWL

Sec 12, T34s, R33w

Seward County, Kansas



Palmer Oil, Inc.

General Data

Well Data: Palmer Oil, Inc.
Hatcher #12-1
335' FSL & 335' FWL
Sec. 12, T34s, R33w
Seward County, Kansas
API # 15-175-22237-00-00

Drilling Contractor: Duke Drilling Co. Rig #5

Geologist: Luke Thompson

Spud Date: June 3, 2015

Completion Date: June 21, 2015

Elevation 2847' G.L.
2858' K.B.

Directions: From the North side of Liberal, KS go north on Highway 83 approx. 2 miles to road 7, east 2 miles to road K, north 1 mile to road 8, east 1 mile to road L, north 200 feet, east into.

Casing: 1700' 8 5/8" #24 Surface Casing
6479' 5 1/2" #15.5 Production Casing

Samples: 4300' to RTD 10' Wet & Dry

Drilling Time: 1550' – 1700' & 4200' to RTD

Electric Logs: Pioneer Energy Services "D. Schmidt"
Full Sweep

Drillstem Tests: Three-Trilobite Testing "Leal Cason"

Problems: Lost Circulation @ 3185' (loss 60 bbls)
Lost Circulation @ 3538 & 3550' (loss 210 bbls)

Formation Tops

Hatcher #12-1

Sec. 12, T34s, R33w

335' FSL & 335' FWL

Anhydrite	1595' +1263
Base	1664 +1194
Heebner	4360' -1502
Lansing	4518' -1660
BKC	5204' -2346
Marmaton	5216' -2358
Cherokee	5440' -2582
Morrow	5806' -2948
Keyes	5953' -3095
Chester Lime	6060' -3202
St. Gen	6394' -3536
RTD	6500' -3642
LTD	6496' -3638

Sample Zone Descriptions

Toronto (4450, -1592): Covered in DST #1

Limestone, tan, fine crystalline, occasionally sucrosic, poor inter-crystalline porosity, slight odor, scattered bright green fluorescence, slow milky cut when broke. Gas 75 units hotwire.

Chester (6340, -3482): Covered in DST #2 & 3

Sandstone, white/grey, fine grain, sub-round, well sorted, poor cement, dead oil stain, no fluorescence, slight odor, good flush cut, excellent flush cut when broke. Gas 250 units hotwire.

Drill Stem Tests
Trilobite Testing
“Leal Cason”

DST #1

Toronto

Interval (4430' – 4490') Anchor Length 60'

IHP - 2371 #

IFP - 30" – wsb 25-35 #

ISI - 30" – no return 438 #

FFP - 10" – no blow 42-54 #

FSIP - pulled tool

FHP - 2197 #

BHT - 109° F

Recovery: 5' mud

DST #3

Chester

Interval (6210' – 6410') Anchor Length 200'

Details: N/A

Packer Failure

DST #2

Chester

Interval (6312' – 6410') Anchor Length 98'

IHP - 3344 #

IFP - 30" – wsb died in 27 min 166-491 #

ISI - 30" – no return 617 #

FFP - 10" – no blow 618#

FSIP - Pulled tool

FHP - 3255 #

BHT - 138 ° F

Recovery: 5' mud

Structural Comparison

	Palmer Oil, Inc. Hatcher #12-1 Sec. 12, T34s, R33w 335' FSL & 335' FWL		EOG Resources Wilson #13-1 Sec. 13, T34s, R33w 660' FNL & 330' FEL		Dunne Equities Hatcher #1-12 Sec. 12, T34s, R33w 3300' FSL & 1980' FWL
Formation					
Heebner	4360' -1502	+1	4333' -1503	-2	4334' -1500
Lansing	4518' -1660	+7	4497' -1667	+8	4502' -1668
BKC	5204' -2346	+8	5184' -2354	+4	5184' -2350
Marmaton	5216' -2358	+7	5195' -2365	+6	5198' -2364
Cherokee	5440' -2582	+4	5416' -2586	-3	5413' -2579
Morrow	5806' -2948	-4	5774' -2944	-7	5775' -2941
Keyes	5953' -3095	+1	5916' -3096	-24	5905' -3071
Chester Lm	6060' -3202	+8	6040' -3210	-32	6004' -3170
St. Gen	6394' -3536	-26	6342' -3510	-49	6321' -3487

Summary

The location for the Hatcher #12-1 well was found via 3-D seismic survey. The new well ran structurally as expected. Three drill stem tests were conducted, none of which recovered commercial quantities of gas and oil. After all the gathered data had been examined, the decision was made to run 5 ½" casing to further evaluate the Hatcher #12-1 well.

Perforations:

Primary:	Chester	(6337' – 6344')
Secondary:	Chester	(6305' – 6312')
Gas:	Herrington	(2654' – 2664')
	Krider	(2689' – 2709')
Disposal:	Lansing	(5040' – 5060')

Respectfully Submitted,

Lukas Thompson (Palmer Oil, Inc.)