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**WELL REPORT**

Clute Oil Dave Welch #1  
Sec. 32-T22S-R17W  
Pawnee County, KS

Well Location: N/2NW (660' fnl & 1320' fwl)

Total Depth: 4300' Viola Fm. RTD & LTD

Drillstem Tests: DST #1 4135-4190' Herington & Krider Fm Chase Group  
Rec 20' Mud  
IF 30" Weak Surface Blow IFP 20-36#  
ISI 30" Dead ISIP 620#  
FF 30" Dead FFP 37-47#  
FSI 30" Dead FSIP 585#

DST #2 3713-3760' "A" & "B" Lansing/Kansas City Fm  
Rec 620' MCW  
IF 30" BOB 7" IFP 37-219#  
ISI 60" Wk Blow Back ISIP 1254#  
FF 30" BOB 10" FFP 222-314#  
FSI 60" Dead FSIP 1249#

DST #3 4131-4179' Mississippian  
Rec 400' GIP, 3.09 bbls GCM and 2.02 bbls MCW  
IF 30" BOB 5" IFP 136-516# Tool Plugging  
ISI 60" Dead ISIP 1331#  
FF 60" BOB 24" FFP 194-261# Tool Plugging for first 15"  
FSI 120" Gd Blow Back FSIP 822#

DST #4 4203-4230' Kinderhook Fm (Meyer Zone) & Viola Fm  
Rec 860' GIP, 280' SG&OCM (12% gas, 8% oil and 80% mud) and 1' Oil  
IF 30" BOB 5" IFP 75-113#  
ISI 60" Wk Blow Back ISIP 1076#  
FF 60" BOB 8" FFP 119-134#  
FSI 120" Gd Blow Back FSIP 1100#

Geological Services: Supervision and Sample Examination 2000' -TD

Surface Casing: 827' - 8-5/8"

Tops:	SESWNW	N/2NW	
	Sec. 29	Sec. 32	
	Meyer #1	Dave Welch #1	
KB	2070	2080	
		Sample	Log
Anhydrite	1099 (971)	1115	1110 (970)
Herington (Chase)	2111 (-41)	2134	2132 (-52)
Base Florence	2374 (-304)	2394	2388 (-308)
Wabaunsee	2886 (-816)	2904	2901 (-821)
Topeka	3216 (-1146)	3236	3230 (-1150)
Heebner	3591 (-1521)	3608	3605 (-1525)

Tops: (Cont)

Meyer #1

Dave Welch #1

	Meyer #1	Dave Welch #1	Log
Lansing/Kansas City	3698 (-1628)	3714	3712 (-1632)
Base Kansas City	3981 (-1911)	4007	4002 (-1922)
Conglomerate Shale	4107 (-2037)	4132	4130 (-2050)
Cgl/Mississippian Chert	Absent	4142	4140 (-2060)
Kinderhook	4117 (-2047)	4163	4161 (-2081)
Meyer Zone	4167 (-2097)	4210	4207 (-2127)
Viola	4174 (-2104)	4224	4222 (-2142)
TD	4280	4300	4300

**Discussion:** The Dave Welch #1 encountered at least 4 potential pay zones below the Conglomerate Shale. From bottom to top these are the Viola Fm., the Meyer Zone (Kinderhook Fm.), the North Garfield Zone and the Cgl./Mississippian Chert.

The Viola Fm. (~~4022'~~ - ~~4036'~~) has excellent sample shows and excellent porosity. This zone has not been evaluated in the area, although it is present in some wells. The fact that NO WATER was recovered in DST#4, which covered at least the top 6 feet of this zone is encouraging. This zone should be perforated and tested.

The Meyer Zone (4007' - 4011') has the best gas kick, @ 51Units above background, in the Dave Welch #1. The zone is thinner than in the Meyer #1 but should still be viable as a gas producing horizon. The Chert unit above the Meyer Zone (4200' - 4204') may also be prospective as both zones were covered by DST #4, which recovered NO WATER. These zones should be perforated and tested.

The North Garfield Zone (4155' - 4161') has excellent sample shows, although the presence of dead oil stain is worrying. This zone was responsible for most of the nearly 220,000 BO produced at Garfield North. Results from DST #3 indicate it is likely that the North Garfield Zone is at least partially depleted. This zone should be perforated and tested, in that the Dave Welch #1 is approximately 1/4 of mile from the nearest productive well and the highest well in Section 32 on the Cgl. Shale.

The Cgl./Mississippian Chert (4140' - 4152') has fair to good sample shows. This zone was produced in several of the wells at Garfield North although apparently not in the NW/4 of Section 32. The gas recovered in DST #3 either came from the North Garfield Zone or from the Chert. Based on the results obtained from perforating and testing the North Garfield Zone the Chert should be perforated and tested.

The Dave Welch #1 encountered interesting zones in the Chase Group. While DST #1(Herington Fm. & Krider Fm.) did not recover gas the formation pressure was high at 585-620#. This kind of pressure usually indicates that the zones, including the Winfield Fm. (2148'), are prospective. The Fort Riley (2308' -2315') had an excellent drilling break, good sample shows and a 12 Unit gas kick. The Chase Group is structurally highest in the Meyer #1 and should be considered as potentially productive in the prospect area.