

SIDE TWO

Operator Name Graves Drilling Co., Inc. Lease Name Packard Well # 2

Sec. 15 Twp. 31 Rge. 13 East West County Barber

WELL LOG

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken Yes No
 Samples Sent to Geological Survey Yes No
 Cores Taken Yes No

Formation Description
 Log Sample

DST #1 - 4203-4243'. op30, si45, op90, si60, Rec 240' muddy water. 1180' of salt water. IHP 2243#, IFP 971-1477#, FFP 1679-1679#. IBHP 1679, FSIP 1679, BHT 126°.

Name	Top	Bottom
Indian Cave	2624	(-1016)
Topeka	3378	(-1770)
Heebner	3550	(-1942)
L/Douglas Sd	3722	(-2114)
Lansing I Zone	3951	(-2343)
Mississippian	4212	(-2604)
Kinderhook Shale	4422	(-2814)
Viola	4504	(-2896)
RTD	4550	(-2942)
LTD	4550	(-2942)

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs/Ft.	Setting Depth	Type of Cement	#Sacks Used	Type and Percent Additives
Surface	12 1/4	8-5/8	23#	305'	60/40	190	2% Gel, 3% CC
PERFORATION RECORD				Acid, Fracture, Shot, Cement Squeeze Record			
Shots Per Foot	Specify Footage of Each Interval Perforated			(Amount and Kind of Material Used)		Depth	
TUBING RECORD				Liner Run <input type="checkbox"/> Yes <input type="checkbox"/> No			
Date of First Production	Producing Method <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (explain).....						
Estimated Production Per 24 Hours	Oil	Gas	Water	Gas-Oil Ratio	Gravity		
	Bbls	MCF	Bbls	CFPB			

METHOD OF COMPLETION

Production Interval

Disposition of gas: Vented Open Hole Perforation
 Sold Other (Specify)
 Used on Lease Dually Completed
 Commingled

15-31-13W

DRILLERS WELL LOG

Date Commenced: November 7, 1987

Date Completed: November 15, 1987

- 0 - 3551 Surface, Soil, Sand, Red Bed
- 3551 - 3556 Shale
- 3556 - 3678 Lime, Shale
- 3678 - 3703 Sand, Shale
- 3703 - 3720 Lime, Shale
- 3720 - 4130 Lime
- 4130 - 4176 Shale, Lime
- 4176 - 4213 Chert, Lime, Shale
- 4213 - 4431 Lime, Chert
- 4431 - 4510 Shale, Lime
- 4510 - 4550 Chert
- 4550 RTD

Graves Drilling Co., Inc. &
 Lee Banks
 PACKARD #2
 NE NE SE
 Sec. 15-31S-R13W
 Barber Co., KS

Elevation:

Formation Data:

- Heebner 3551
- Douglas Sd 3678
- Brown Lime 3703
- Kansas City 3720
- Base K.C. 4130
- Marmaton 4176
- Mississippi 4213
- Kinderhook 4431
- Viola 4510
- RTD 4550

Surface Pipe:

Set new 8 5/8" surface casing,
 23# at 306' w/190 sacks 60/40
 Pozmix, 2% gel, 3% C.C.

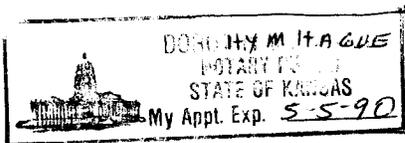
A F F I D A V I T

STATE OF KANSAS
 COUNTY OF BARTON) ss

John Armbruster of lawful age, does swear and state that the facts and statements herein are true and correct to the best of his knowledge.

John Armbruster
 John Armbruster

SUBSCRIBED AND SWORN to before me this 18 day of Nov, 1987.



Dorothy M. Itaque
 Notary Public