ORIGINAL

SIDE ONE

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

Operator: License # 3122

Name: VINTAGE PETROLEUM, INC.

Address 4200 ONE WILLIAMS CENTER

City/State/Zip TULSA, OK 74172

Purchaser:

Operator Contact Person: Leann Ogee

Phone (918) 592-0101

Contractor: Name: VAL ENERGY, INC.

License: 5822

Wellsite Geologist:

Designate Type of Completion
X New Well ___ Re-Entry ___ Workover

___ Oil ___ SWD ___ Temp. Abd.
___ Gas ___ Inj ___ Delayed Comp.
X Dry ___ Other (Core, Water Supply, etc.)

If OWWO: old well info as follows:
Operator:

Well Name:

Comp. Date ___ Old Total Depth ___

Drilling Method:
X Mud Rotary ___ Air Rotary ___ Cable

4-1-91 Spud Date | 4-11-91 Date Reached TD | 4-13-91 Completion Date

RECEIVED
STATE CORPORATION COMMISSION
OCT 25 1991
CONSERVATION DIVISION
Wichita, Kansas

API NO. 15- 007-22,359-00-00

County Barber

CNE SW NW Sec. 28 Twp. 33 Rge. 12 ___ East XX West

3695 Ft. North from Southeast Corner of Section

4290 Ft. West from Southeast Corner of Section
(NOTE: Locate well in section plat below.)

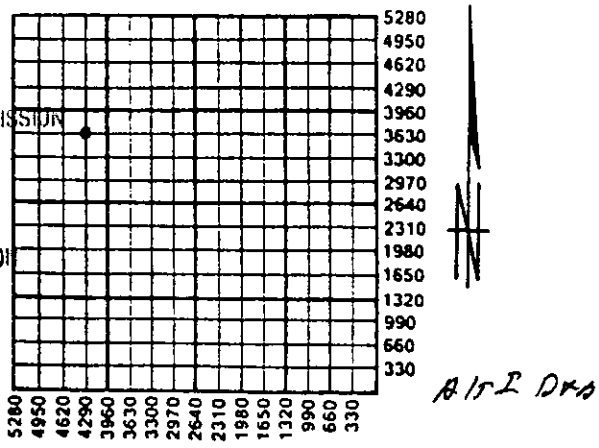
Lease Name R.M. WATTS Well # 1-28

Field Name Hardtner

Producing Formation Simpson Sand

Elevation: Ground 1544 KB 1549

Total Depth 5100 PBTD ----



A I & D

Amount of Surface Pipe Set and Cemented at 308 Feet

Multiple Stage Cementing Collar Used? ___ Yes X No

If yes, show depth set ___ Feet

If Alternate II completion, cement circulated from N/A

feet depth to ___ w/ ___ sx cmt.

INSTRUCTIONS: This form shall be completed in triplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date of any well. Rule 82-3-130, 82-3-107 and 82-3-106 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form. See rule 82-3-107 for confidentiality in excess of 12 months. **One copy of all wireline logs and drillers time log shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED.** Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells. Any recompletion, workover or conversion of a well requires filing of ACO-2 within 120 days from commencement date of such work.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature Leann Ogee

Title Supervisor, Regulatory Affairs Date 10-22-91

Subscribed and sworn to before me this 22 day of October, 19 91.

Notary Public Shelley A. Weiss

Date Commission Expires 4-6-95

K.C.C. OFFICE USE ONLY
F ___ Letter of Confidentiality Attached
C ✓ Wireline Log Received
C ___ Drillers Timelog Received

Distribution
✓ KCC ___ SWD/Rep ___ NGPA
___ KGS ___ Plug ___ Other (Specify)

Form ACO-1 (7-89)

SIDE TWO

Operator Name VINTAGE PETROLEUM, INC. Lease Name R.M. Watts Well # 1-28

Sec. 28 Twp. 33 Rge. 12 ☐ East ☒ West County Barber

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 (Attach Additional Sheets.) ☒ Yes ☐ No

Samples Sent to Geological Survey ☐ Yes ☐ No

Cores Taken ☐ Yes ☐ No

Electric Log Run (Submit Copy.) ☒ Yes ☐ No

Formation Description

☒ Log ☐ Sample

Name	Top	Bottom
Viola Lime	4818	4906
Simpson Sand	4910	4960
Arbuckle Dolo	5042	5058

CASING RECORD ☒ New ☐ 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 ¼	8 5/8	23	308	60-40 POZ	240	2%Gel 3%C.C

PERFORATION RECORD

Shots Per Foot	Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth

TUBING RECORD Size Set At Packer At Liner Run ☐ Yes ☐ No

N/A

Date of First Production N/A Producing Method ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (Explain)

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

Disposition of Gas:

☐ Vented ☐ Sold ☐ Used on Lease (If vented, submit ACO-18.)

METHOD OF COMPLETION

☐ Open Hole ☐ Perforation ☐ Dually Completed ☐ Commingled

☒ Other (Specify) Plug & Abandon

Production Interval

ORIGINAL

Kw watts #1-28
Eng well ~~File~~
OK?

Vintage Petroleum
Lease Watts 28-1

		Hr.	Min.
4/5/91	Eve Tour		
	Jet and clean #2 for displacement		15
	Clean suction pit		8
	Jet. #1 pit and clean for displace-ment		30
4/6/91	Day Tour		
	C.F.S. @ 3870	1	13
	C.F.S. @ 3914	2	55
	Short Trip		50
	C.T.C.H. @ 3914		10
	Eve Tour		
	C.T.C.H. @ 3914		50
	Trip Out W Bit & Strap Pipe & Survey	1	50
	Make up Tool	1	
	Go in Hole w/Tool		50
	DST #1 3898-3914	3	30
4/7/91	Morn Tour		
	Trip out w/Tool & Lay Down Same	1	45
	Trip in w/Bit	1	30
	Jet Water off Pits & C.T.C.H.		45
	C.F.S. @ 3981		12
	Day Tour		
	C.F.S. @ 3981	1	
	Trip Out s/Bit	1	45
	Make up Tool & Go in Hole	1	30
	DST #2 3948-3981	3	30
	Trip Out w/Tool		15
	Eve Tour		
	Trip Out w/Tool - Drop Bar. Displace Salt Water & Lay Down Tool	2	15
	Trip in w/Bit & Jet Water off Pits	2	15
4/8/91	Morn Tour		
	Jet Hole in Pit to Add Tank of Mud		7
	Day Tour		
	Jet #1 Pit		7
4/9/91	Morn Tour		
	C.F.S. @ 4556	1	
	Short Trip		45
	C.T.C.H.		60
	Trip Out w/Bit	1	10
	Day Tour		
	Trip Out w/Bit	1	
	Make up Tool & Go in Hole	2	
	DST #3 4536-4556	2	45
	Trip Out w/Tool & Lay Down Same	1	45
	Trip in w/Bit		30
	Eve Tour		
	Trip in w/Bit & Jet Water off Pits	1	45
4/10/91	Morn Tour		
	Jet #2 Pit		8
	Eve Tour		
	Jet #1 Pit		10
	Fill Premix		12
4/11/91	Morn Tour		
	C.F.S. @ 5067		53

ORIGINAL

4/11/91	Day Tour		
	C.F.S. @ 5100 RTD	1	
	Short Trip 27 Stands	1	30
	C.T.C.H. for Log @ 5100	1	
	Survey		15
	Trip Out w/Bit	2	30
	Logging	1	15
	Eve Tour		
	Logging	6	
	Trip in w/Bit	1	45
4/12/91	Morn Tour		
	Trip in w/Bit		15
	C.T.C.H.	2	15
	Trip Out w/Bit	2	
	Wait on Tester	1	45
	Make up Tool & Go in Hole	1	45
	Day Tour		
	Go in Hole w/Toole		30
	DST #4 Straddle Test. MisRun (Pkr. Failure)		45
	Out w/Tool & Lay Down Same	1	45
	Wait On Hook Wall Tool	3	
	Make up Tool & Go in Hole	1	30
	D.S.T. #5 Hook Wall MisRun		30
	Eve Tour		
	D.S.T. #5 Hook Wall MisRun		45
	Out w/Tool & Change Anchor	3	
	Go in Hole w/Tool	1	30
	DST #6 Hook Wall	2	45
4/13/91	Morn Tour		
	DST #6	1	15
	Out w/Tool & Dump Salt Water	2	15
	Wait on Orders	1	30
	Go in Hole w/Drill Pipe Open Ended to Plug Hole	1	30
	Circ. to Equalize Mud System	1	
	Set Bottom Plug		30

Started laying down dril pipe @ 7:00 a.m. 4/13/91

Hole plugged @ 1:30 p.m. by B. J. Titan
50 sx @ 5050'
50 sx @ 550'
50 sx @ 308'
10 sx @ 40'
15 sx in Rathole
60-40 Pozmix 6% Gel.
Plugging order from Glenn Barlow - Dodge City KCC Office

5100 - 5 KB = 5095 @ $5.50/ft = $28,022.50
93 hrs 25 min. @ $160.00/hr. = $14,920.00
$42,942.50

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

ORIGINAL

Drill-Stem Test Data

Well Name RM WATTS #28-1 Test No. 1 Date 4/6/91
Company VINTAGE PETROLEUM INC Zone Tested LANS-KS CITY
Address 4200 ONE WILLIAMS CENTER TULSA Elevation 1544
Co. Rep./Geo. OTIS HUGHES Cont. VAL ENERGY Est. Ft. of Pay
Location: Sec. 28 Twp. 33S Rge. 12W Co. BARBER State KS

Interval Tested 3898-3914 Drill Pipe Size 4.5 XH
Anchor Length 16 Wt. Pipe I.D. - 2.7 Ft. Run
Top Packer Depth 3893 Drill Collar — 2.25 Ft. Run
Bottom Packer Depth 3898
Total Depth 3914

Mud Wt. 8.9 lb / gal. Viscosity 39 Filtrate 18.4

Tool Open @ 7:28 PM Initial Blow (SLID TOOL 4' WHEN OPENED)-STRONG BLOW-TO BOTTOM OF BUCKET IN 1 MINUTE-(2" BLOW BACK ON SHUTIN)

Final Blow STRONG BLOW-TO BOTTOM OF BUCKET IMMEDIATELY-(NO BLOW BACK ON FINAL SHUTIN)

Recovery — Total Feet 30 Flush Tool? NO

Rec. 1180 Feet of GAS IN PIPE

Rec. 30 Feet of GASSY MUD W/ OIL SPECKS IN TOOL

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT 106 °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides ppm System

(A) Initial Hydrostatic Mud	1688.4 PSI	AK1 Recorder No.	24174	Range	3350
(B) First Initial Flow Pressure	26.9 PSI	@ (depth)	3913	w/Clock No.	17639
(C) First Final Flow Pressure	26.9 PSI	AK1 Recorder No.	13277	Range	4125
(D) Initial Shut-in Pressure	637.2 PSI	@ (depth	3900	w/Clock No.	27501
(E) Second Initial Flow Pressure	29 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	29 PSI	@ (depth)		w/Clock No.	
(G) Final Shut-in Pressure	936.4 PSI	Initial Opening	30	Final Flow	60
(H) Final Hydrostatic Mud	1622.5 PSI	Initial Shut-in	60	Final Shut-in	60

Our Representative MR PAUL SIMPSON TOTAL PRICE $ 600

RM WATTS #28-1DST #1
INITIAL SHUTIN

30 INITIAL FLOW TIME

Slope
P *

ORIGINAL

TIME(MIN)	Pws (psi)	Horn T	Log Horn T	<> PRESSURE
3	33.1	11	1.041	33.1
6	35.2	6	0.778	2.1
9	47.7	4	0.637	12.5
12	66.3	4	0.544	18.6
15	82.9	3	0.477	16.6
18	109.9	3	0.426	27.0
21	139.0	2	0.385	29.1
24	143.1	2	0.352	4.1
27	188.8	2	0.325	45.7
30	226.1	2	0.301	37.3
33	263.4	2	0.281	37.3
36	300.8	2	0.263	37.4
39	356.8	2	0.248	56.0
42	379.6	2	0.234	22.8
45	410.7	2	0.222	31.1
48	487.5	2	0.211	76.8
51	522.5	2	0.201	35.0
54	573.7	2	0.192	51.2
57	594.2	2	0.184	20.5
60	637.2	2	0.176	43.0

RM WATTS #28-1DST #1
FINAL SHUTIN

90 TOTAL FLOW TIME

Slope
P *

TIME(MIN)	Pws (psi)	Horn T	Log Horn T	<> PRESSURE
3	31.1	31	1.491	31.1
6	114.1	16	1.204	83.0
9	186.7	11	1.041	72.6
12	257.2	9	0.929	70.5
15	313.2	7	0.845	56.0
18	379.6	6	0.778	66.4
21	412.8	5	0.723	33.2
24	477.1	5	0.677	64.3
27	508.2	4	0.637	31.1
30	565.5	4	0.602	57.3
33	604.5	4	0.571	39.0
36	659.8	4	0.544	55.3
39	690.5	3	0.520	30.7
42	729.5	3	0.497	39.0
45	774.5	3	0.477	45.0
48	801.2	3	0.459	26.7
51	834	3	0.442	32.8
54	856.5	3	0.426	22.5
57	899.5	3	0.411	43.0
60	924.1	3	0.398	24.6
63	936.4	2	0.385	12.3

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Test Ticket ORIGINAL

Nº 3708

Well Name & No. R M Watts #28-1 Test No. 1 Date 4-6-91

Company Vintage Petroleum, INC Zone Tested LKC - Eaton

Address 4200 One Williams Center Tulsa OK Elevation 1544

Co. Rep./Geo. Otis Hughes Cont. Val Energy Est. Ft. of Pay

Location: Sec. 28 Twp. 33s Rge. 12w Co. Barber State Ks

No. of Copies 5 Distribution Sheet ____ Yes X No Turnkey ____ Yes X No ____ Evaluation

Interval Tested 3898-3914 Drill Pipe Size 4½ XH

Anchor Length 16 Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 3893 Hole Size — 7⅞" ____ Rubber Size — 6¾" ____

Bottom Packer Depth 3898 Wt. Pipe I.D. — 2.7 Ft. Run ____

Total Depth 3914 Drill Collar — 2.25 Ft. Run ____

Mud Wt. 8.9 lb / gal. Viscosity 39 Filtrate 18.4 ?

Tool Open @ 7:28 PM Initial Blow (slid tool 4' when opened) strong blow - to bottom of bucket in 1 minute (2" blow back on shut in)

Final Blow strong blow - to bottom of bucket immediately - (no blow back on final shut in)

Recovery — Total Feet 30 Feet of Gas in Pipe 1180 Flush Tool? No

Rec. 30 Feet Of	gassy Mud	%gas	%oil	%water	%mud
Rec. ____ Feet Of	(oil specks in tool)	%gas	%oil	%water	%mud
Rec. ____ Feet Of		%gas	%oil	%water	%mud
Rec. ____ Feet Of		%gas	%oil	%water	%mud
Rec. ____ Feet Of		%gas	%oil	%water	%mud

BHT 106 °F Gravity ____ °API @ ____ °F Corrected Gravity ____ °API

RW ____ @ ____ °F Chlorides ____ ppm Recovery Chlorides ____ ppm System

(A) Initial Hydrostatic Mud	1682 PSI	AK1 Recorder No.	24174	Range	3350
(B) First Initial Flow Pressure	16 PSI	@ (depth)	3913	w/Clock No.	12639
(C) First Final Flow Pressure	16 PSI	AK1 Recorder No.	13277	Range	4125
(D) Initial Shut-In Pressure	628 PSI	@ (depth)	3900	w/Clock No.	23501
(E) Second Initial Flow Pressure	16 PSI	AK1 Recorder No.	____	Range	____
(F) Second Final Flow Pressure	16 PSI	@ (depth)	____	w/Clock No.	____
(G) Final Shut-In Pressure	845 PSI	Initial Opening	30	Test	550
(H) Final Hydrostatic Mud	1623 PSI	Initial Shut-In	60	Jars	____
		Final Flow	60	Safety Joint	50
		Final Shut-In	60	Straddle	____
				Circ. Sub	____
				Sampler	____
				Extra Packer	____
				Other	____
				TOTAL PRICE $	600

Approved By Tony Rowe

Our Representative Paul Simpson

Printcraft Printers - Hays, KS

TRILOBITE TESTING COMPANY ORIGINAL

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name RM WATTS #28-1 Test No. 2 Date 4/7/91
Company VINTAGE PETROLEUM INC Zone Tested LANSING
Address 4200 ONE WILLIAMS CENTER TULSA Elevation 1544
Co. Rep./Geo. OTIS HUGHES Cont. VAL ENERGY Est. Ft. of Pay
Location: Sec. 28 Twp. 33S Rge. 12W Co. BARBER State KS

Interval Tested 3948-3981 Drill Pipe Size 4.5 XH
Anchor Length 33 Wt. Pipe I.D. - 2.7 Ft. Run
Top Packer Depth 3943 Drill Collar — 2.25 Ft. Run
Bottom Packer Depth 3948
Total Depth 3981

Mud Wt. 9.6 lb / gal. Viscosity 46 Filtrate 16.4

Tool Open @ 11:15 AM Initial Blow STRONG BLOW-TO BOTTOM OF BUCKET IMMEDIATELY-(GAS TO SURFACE 18 MINUTES INTO ISI
Final Blow GAUGING GAS-5.86 MCF/D AT END OF FINAL FLOW 7.88 MCF/DAY AT END OF FINAL SHUTIN

Recovery — Total Feet 2540 Flush Tool? NO

Rec. 2540 Feet of GSY MUDDY SALT WATER-NO SHOW OF OIL
Rec. Feet of
Rec. Feet of
Rec. Feet of
Rec. Feet of

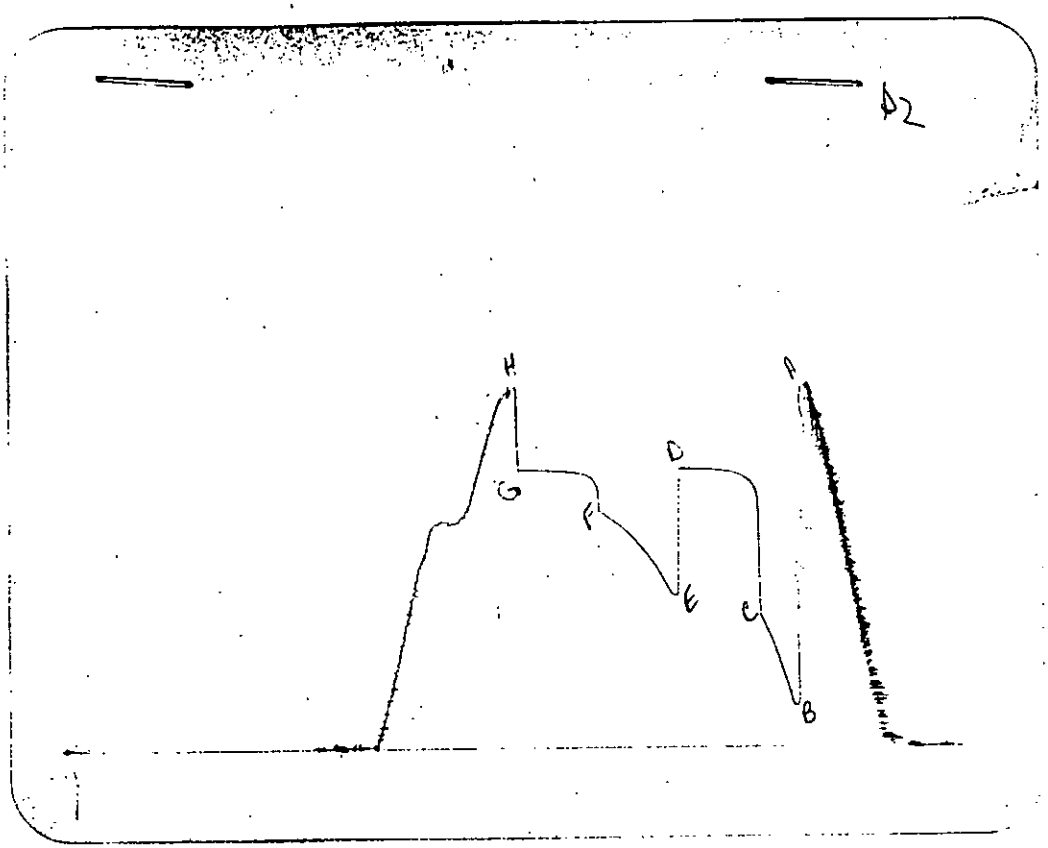
BHT 118 °F Gravity °API @ °F Corrected Gravity °API

RW 0.169 @ 90 °F Chlorides 32000 ppm Recovery Chlorides 11200 ppm System

(A) Initial Hydrostatic Mud	1915.6 PSI	AK1 Recorder No.	13277	Range	4125
(B) First Initial Flow Pressure	195 PSI	@ (depth)	3951	w/Clock No.	17652
(C) First Final Flow Pressure	674.1 PSI	AK1 Recorder No.	24174	Range	3350
(D) Initial Shut-in Pressure	1440.5 PSI	@ (depth	3980	w/Clock No.	25828
(E) Second Initial Flow Pressure	774.5 PSI	AK1 Recorder No.		Range	
(F) Second Final Flow Pressure	1215.1 PSI	@ (depth)		w/Clock No.	
(G) Final Shut-in Pressure	1442.6 PSI	Initial Opening	30	Final Flow	60
(H) Final Hydrostatic Mud	1894.5 PSI	Initial Shut-in	60	Final Shut-in	60

Our Representative MR PAUL SIMPSON TOTAL PRICE $ 635

ORIGINAL



This is an actual photograph of recorder chart

POINT	PRESSURE FIELD READING	PRESSURE OFFICE READING
(A) INITIAL HYDROSTATIC MUD	1907	1915.6
(B) FIRST INITIAL FLOW PRESSURE	239	195
(C) FIRST FINAL FLOW PRESSURE	653	674.1
(D) INITIAL CLOSED-IN PRESSURE	1448	1440.5
(E) SECOND INITIAL FLOW PRESSURE	770	774.5
(F) SECOND FINAL FLOW PRESSURE	1213	1215.1
(G) FINAL CLOSED-IN PRESSURE	1448	1442.6
(H) FINAL HYDROSTATIC MUD	1890	1894.5

COMPUTER EVALUATION BY TRILOBITE TESTING
VINTAGE PETROLEUM INC

ORIGINAL

REPORT FOR DST#2FOR THE RM WATTS #28-1
28-33S-12W
BARBER KANSAS

5555555555555555555555555555555555555555555555555555555555555555555555555555555555555555555555555

TEST PARAMETERS

ELEVATION:	1544 KB	EST. PAY:	5 FT
DATUM:	-2408	ZONE TESTED:	LANSING
TEST INTERVAL:	3948-3981		
		TIME INTERVALS:	30-60-60-60
RECORDER DEPTH:	3951	VISCOSITY:	.01453 CP
BOTTOM HOLE TEMP:	1470.173		
		HOLE SIZE:	7.875 IN
COMPRESSIBILITY :	.9977	GAS GRAVITY:	.6304

5555555555555555555555555555555555555555555555555555555555555555555555555555555555555555555555555

CALCULATIONS

TEMPERATURE RANKINE	578 &
TRANSMISSIBILITY	92.62114 Kh/%
THEORITICAL FLOW CAPICITY	1.345785 Kh
AVERAGE EFFECTIVE PERMEABILITY	.269157 K(md.)
RADIUS OF INVESTIGATION	4.921802 FT.
DAMAGE RATIO	2.195163
ABSOLUTE OPEN FLOW(MAX)	24.86625 MCFD
ABSOLUTE OPEN FLOW(MIN)	13.99807 MCFD
THEORITICAL OPEN FLOW(MAX)	54.58547 MCFD
THEORITICAL OPEN FLOW(MIN)	30.72805 MCFD
POTENTIOMETRIC SURFACE	1002.331 (FT.)

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INITIAL SHUT-IN VALUES:
THEORETICAL STATIC PRESSURE 1458.815
SLOPE 53101.5

FINAL SHUT-IN VALUES
THEORETICAL STATIC PRESSURE 1470.173
SLOPE 80314.25

DRAWDOWN FACTOR -.7785797 (%)

ORIGINAL

INITIAL FLOW

RECORDER # 13277
DST #2

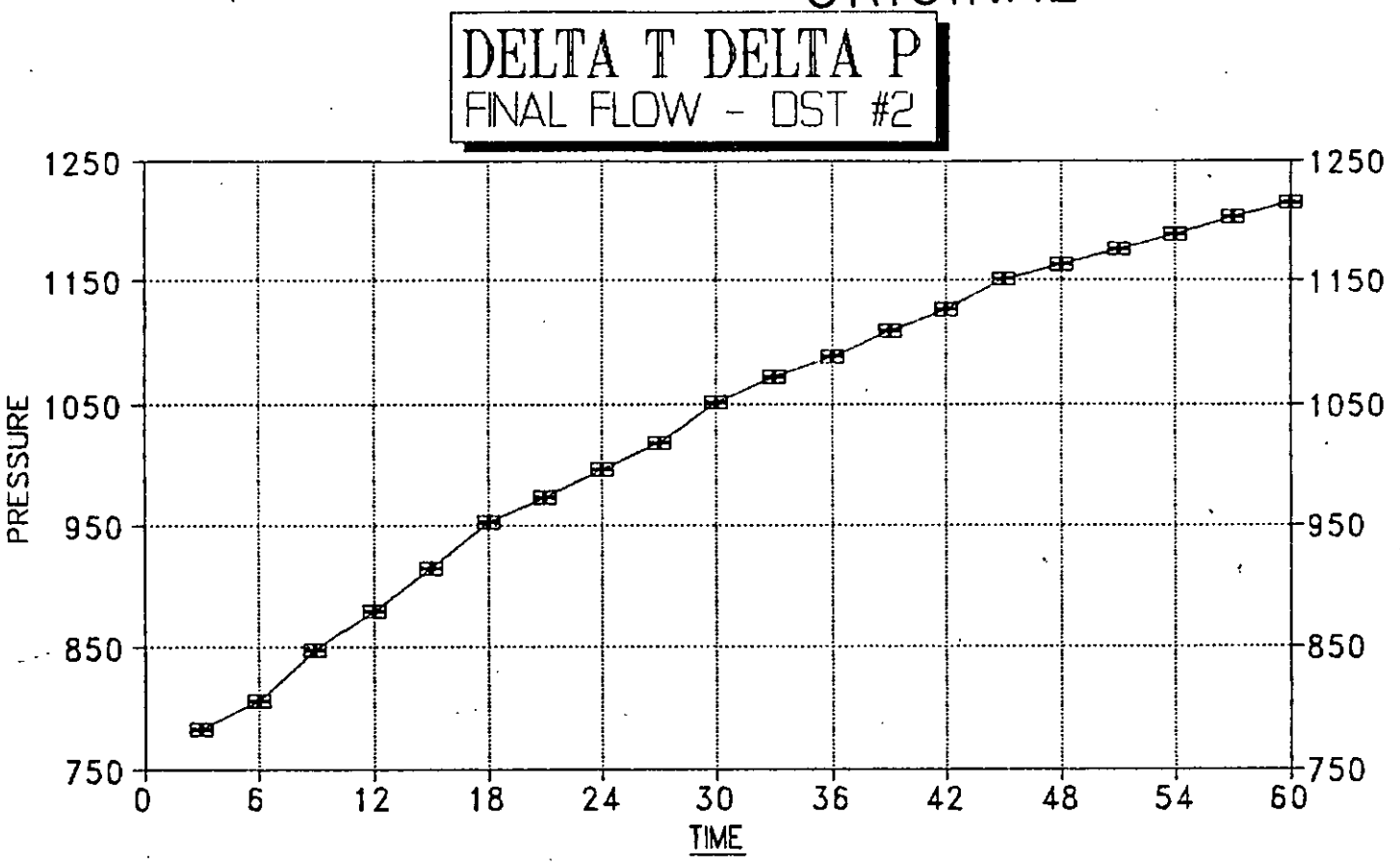
DT(MIN)	PRESSURE	<> PRESSURE
0	195	195
3	207.4	12.39999
6	290.4	83
9	352.7	62.30002
12	396.2	43.5
15	473	76.79999
18	528.6	55.59998
21	596.3	67.70001
24	674.1	77.79999

FINAL FLOW

RECORDER # 13277
DST #2

DT(MIN)	PRESSURE	<> PRESSURE
0	774.5	774.5
3	782.7	8.200013
6	805.3	22.59998
9	846.3	41
12	879.1	32.79999
15	913.9	34.80005
18	952.8	38.89996
21	973.3	20.5
24	995.9	22.60004
27	1018.4	22.5
30	1051.2	32.79993
33	1071.7	20.5
36	1088.1	16.40003
39	1108.6	20.5
42	1127	18.40003
45	1151.6	24.59998
48	1163.9	12.30005
51	1176.2	12.29993
54	1188.5	12.30005
57	1202.8	14.30005
60	1215.1	12.29993

ORIGINAL


DELTA T DELTA P
FINAL FLOW - DST #2
PRESSURE
1250
1150
1050
950
850
750
0
6
12
18
24
30
36
42
48
54
60
TIME

ORIGINAL

RM WATTS #28-1DST #2
INITIAL SHUTIN
30 INITIAL FLOW TIME

Slope psi/cycle
P * 1,457 psi

	TIME(MIN)	Pws (psi)	Horn T	Log Horn T	<> PRESSURE
	3	1235.6	11	1.041	1235.6
	6	1342.2	6	0.778	106.6
	9	1377.0	4	0.637	34.8
	12	1387.2	4	0.544	10.2
	15	1401.6	3	0.477	14.4
	18	1411.8	3	0.426	10.2
	21	1415.9	2	0.385	4.1
X	24	1424.1	2	0.352	8.2
	27	1426.2	2	0.325	2.1
	30	1428.2	2	0.301	2.0
	33	1430.3	2	0.281	2.1
	36	1431.3	2	0.263	1.0
	39	1432.3	2	0.248	1.0
	42	1433.4	2	0.234	1.1
	45	1434.4	2	0.222	1.0
	48	1435.4	2	0.211	1.0
	51	1436.4	2	0.201	1.0
	54	1437.5	2	0.192	1.1
	57	1438.5	2	0.184	1.0
X	60	1440.5	2	0.176	2.0

RM WATTS #28-1DST #2
FINAL SHUTIN
90 TOTAL FLOW TIME

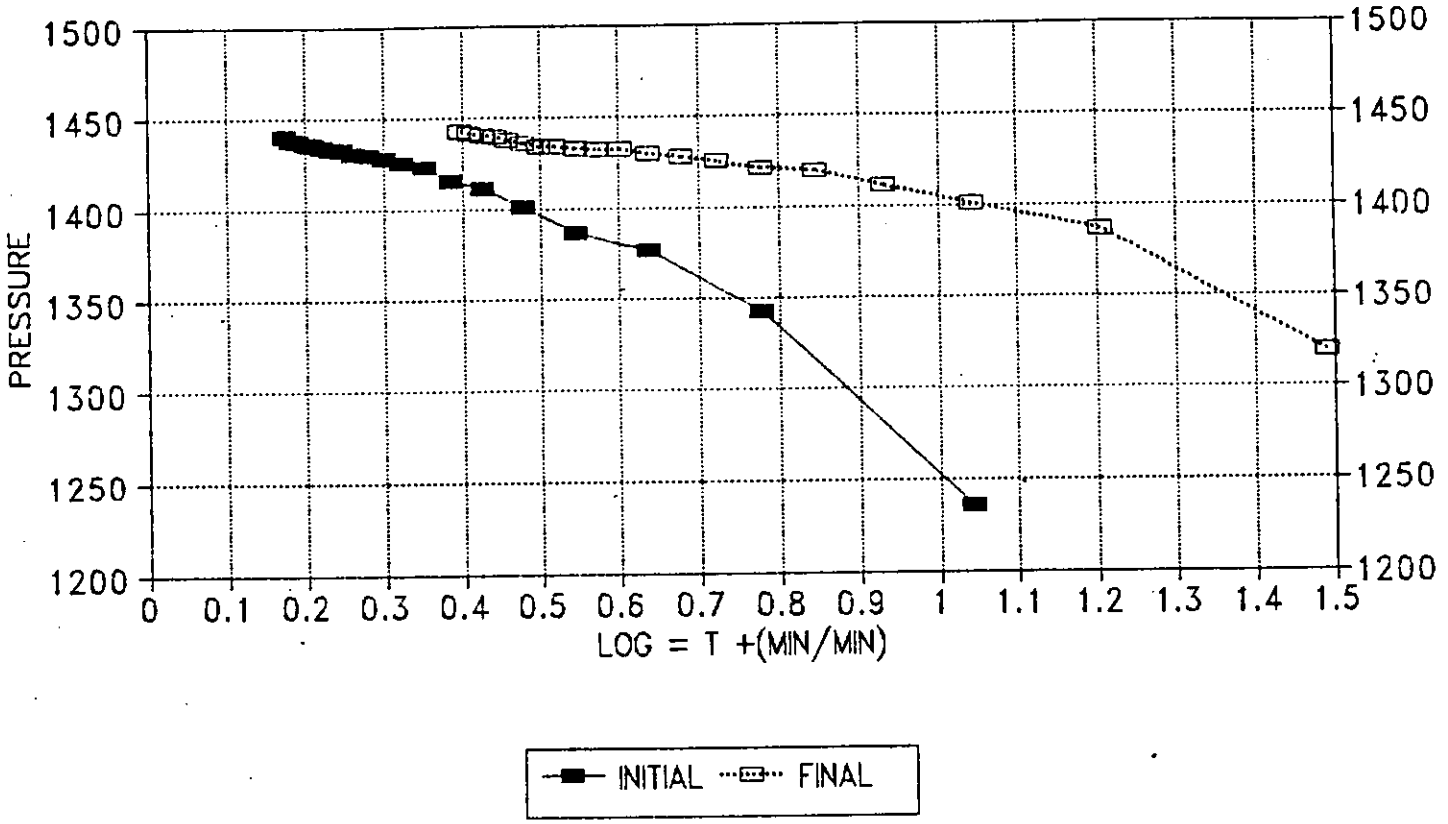
Slope psi/cycle
P * 1,469 psi

	TIME(MIN)	Pws (psi)	Horn T	Log Horn T	<> PRESSURE
	3	1319.6	31	1.491	1319.6
	6	1387.2	16	1.204	67.6
	9	1401.6	11	1.041	14.4
	12	1411.8	9	0.929	10.2
	15	1420.0	7	0.845	8.2
	18	1422.1	6	0.778	2.1
	21	1426.2	5	0.723	4.1
	24	1428.2	5	0.677	2.0
	27	1430.3	4	0.637	2.1
	30	1432.3	4	0.602	2.0
	33	1432.3	4	0.571	0.0
	36	1433.3	4	0.544	1.0
X	39	1434.4	3	0.520	1.1
	42	1434.4	3	0.497	0.0
	45	1436.4	3	0.477	2.0
	48	1438.5	3	0.459	2.1
	51	1439.5	3	0.442	1.0
	54	1440.5	3	0.426	1.0
	57	1441.6	3	0.411	1.1
X	60	1442.6	3	0.398	1.0

ORIGINAL

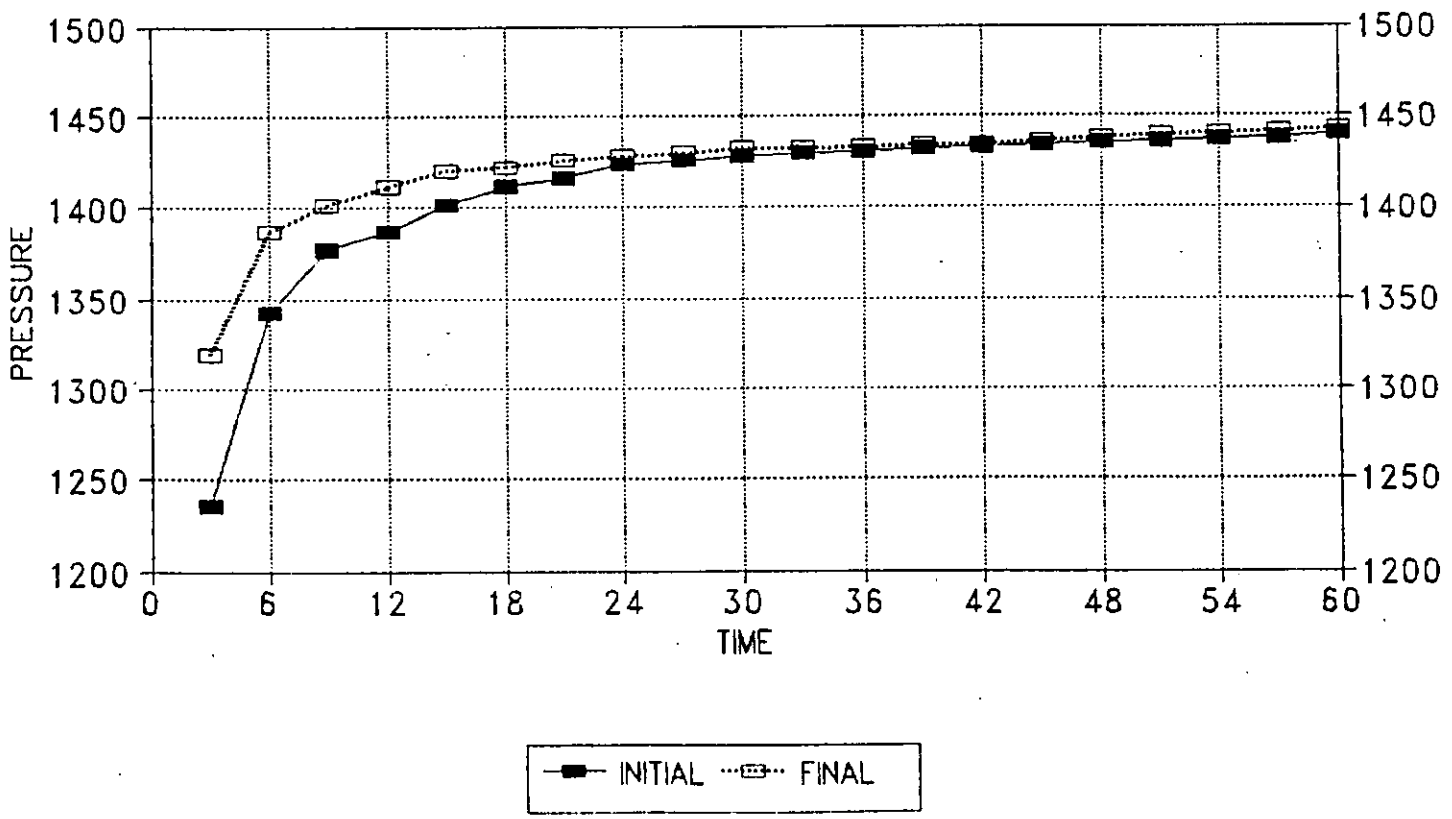
HORNER PLOT

RM WATTS #28-1-DST #2

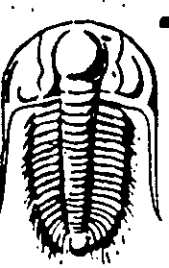


DELTA T DELTA P

RM WATTS #28-1-DST #2



ORIGINAL



TRILOBITE TESTING

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

VINTAGE PETROLEUM INC — OPERATOR

RM WATTS #28-1 — WELL NAME AND NO.

2 — DST NO.

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
20	24	0.25	8.22	10	12	0.25	5.86
30	24	0.25	8.22	20	20	0.125	2.36
				25	26	0.125	2.69
				30	28	0.125	2.79
				40	40	0.125	3.34
				45	62	0.125	4.16
				50	10	0.25	5.33
				60	12	0.25	5.86
				15	24	0.25	8.22
				30	24	0.25	8.22
				40	22	0.25	7.88
				55	22	0.25	7.88
				60	22	0.25	7.88

Remarks:

ORIGINAL

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

№ 3709

Test Ticket

Well Name & No. R. M. Watts #28-1 Test No. 2 Date 4-7-91

Company Vintage Petroleum Inc Zone Tested Lansing

Address 4200 One Williams Center Tulsa OK 74172 Elevation

Co. Rep./Geo. Chris Hughes/Evan Cont. Val Energy Est. Ft. of Pay

Location: Sec. 28 Twp. 33s Rge. 12w Co. Barber State Ks

No. of Copies 5 Distribution Sheet ____ Yes ____ No ✓ Turnkey ____ Yes ✓ No ____ Evaluation

Interval Tested 3948-3981 Drill Pipe Size 4½ XH

Anchor Length 33 Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 3943 Hole Size — 7⅞" ____ Rubber Size — 6¾" ____

Bottom Packer Depth 3948 Wt. Pipe I.D. — 2.7 Ft. Run ____

Total Depth 3981 Drill Collar — 2.25 Ft. Run ____

Mud Wt. 9.6 lb / gal. Viscosity 46 Filtrate 16.4

Tool Open @ 11:15AM Initial Blow strong blow - to bottom of bucket immediately (gas to surface 18 Minutes into ISI)

Final Blow gauging gas - 5.86 MCFD at end of final flow
7.88 MCFD at end of final shutin

Recovery — Total Feet 2540 Feet of Gas in Pipe ____ Flush Tool? ____

Rec. 2540	Feet Of gassy, Muddy salt water	%gas	%oil	%water	%mud
Rec. ____	Feet Of (no show of oil)	%gas	%oil	%water	%mud
Rec. ____	Feet Of ____	%gas	%oil	%water	%mud
Rec. ____	Feet Of ____	%gas	%oil	%water	%mud
Rec. ____	Feet Of ____	%gas	%oil	%water	%mud

BHT 118 °F Gravity ____ °API @ ____ °F Corrected Gravity ____ °API

RW .169 @ 90 °F Chlorides 32,000 ppm Recovery Chlorides 11,200 ppm System
.122 @ 83 53,000

(A) Initial Hydrostatic Mud 1907 PSI AK1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 239 PSI @ (depth) 3951 w/Clock No. 17652

(C) First Final Flow Pressure 653 PSI AK1 Recorder No. 24174 Range 3350

(D) Initial Shut-In Pressure 1448 PSI @ (depth) 3980 w/Clock No. 25828

(E) Second Initial Flow Pressure 770 PSI AK1 Recorder No. ____ Range ____

(F) Second Final Flow Pressure 1213 PSI @ (depth) ____ w/Clock No. ____

(G) Final Shut-In Pressure 1448 PSI Initial Opening 30 Test 550

(H) Final Hydrostatic Mud 1890 PSI Initial Shut-In 60 Jars ____

Final Flow 60 Safety Joint 50

Final Shut-In 60 Straddle ____

Circ. Sub 35

Sampler ____

Extra Packer ____

Other ____

625

Approved By Chris Hughes

Our Representative Paul Simpson

ORIGINAL

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name RM WATTS #28-1 Test No. 3 Date 4/9/91

Company VINTAGE PETROLEUM INC Zone Tested MISSISSIPPI

Address 4200 ONE WILLIAMS CENTER TULSA Elevation 1549

Co. Rep./Geo. OTIS HUGHES Cont. VAL ENERGY Est. Ft. of Pay

Location: Sec. 28 Twp. 33S Rge. 12W Co. BARBER State KS

Interval Tested 4536-4556 Drill Pipe Size 4.5 XH

Anchor Length 20 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 4531 Drill Collar — 2.25 Ft. Run

Bottom Packer Depth 4536

Total Depth 4556

Mud Wt. 9.2 lb / gal. Viscosity 44 Filtrate 13

Tool Open @ 10:06 AM Initial Blow WEAK 1/2" BLOW DECREASING TO SURFACE

Final Blow 1/2" BLOW DECREASED & DIED IN 16 MINUTES

Recovery — Total Feet 10 Flush Tool? NO

Rec. 10 Feet of MUD

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT 115 °F Gravity °API @ °F Corrected Gravity °AP

RW @ °F Chlorides ppm Recovery Chlorides ppm Syster

(A) Initial Hydrostatic Mud 2288.9 PSI AK1 Recorder No. 13277 Range 4125

(B) First Initial Flow Pressure 21.2 PSI @ (depth) 4538 w/Clock No. 17652

(C) First Final Flow Pressure 21.2 PSI AK1 Recorder No. 24174 Range 3350

(D) Initial Shut-In Pressure 44.6 PSI @ (depth 4555 w/Clock No. 25828

(E) Second Initial Flow Pressure 21.2 PSI AK1 Recorder No. Range

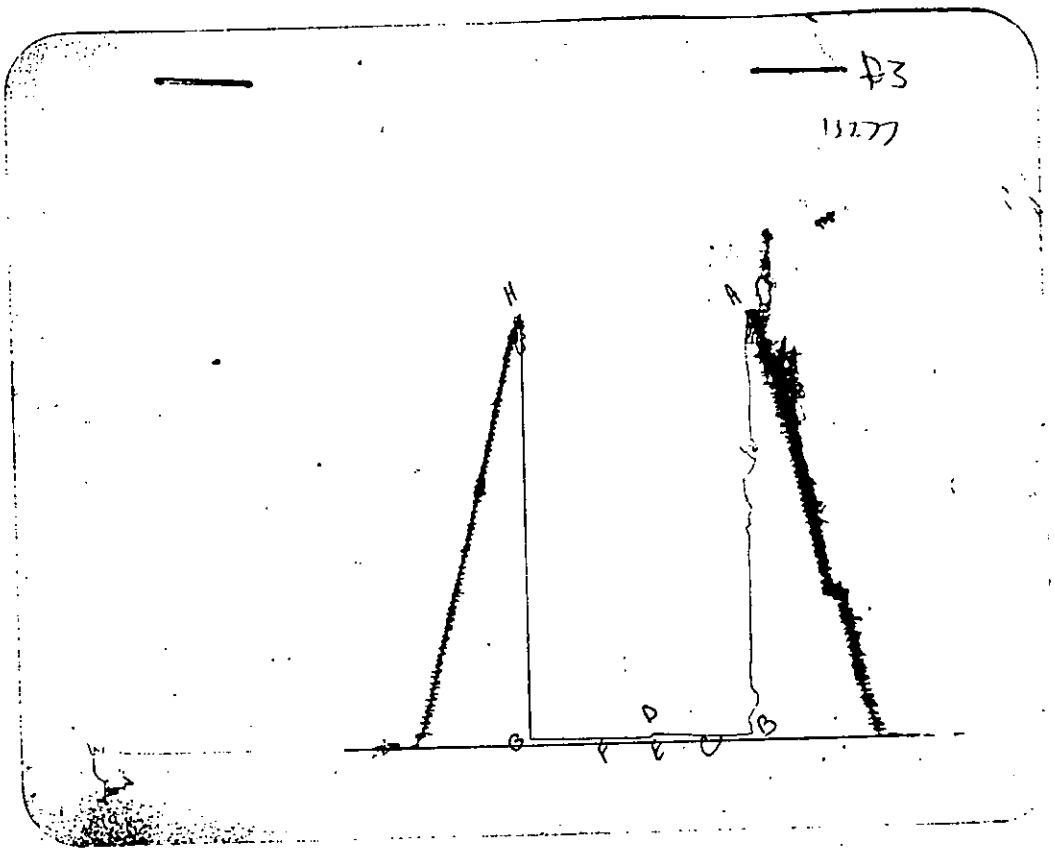
(F) Second Final Flow Pressure 21.2 PSI @ (depth) w/Clock No.

(G) Final Shut-In Pressure 35.4 PSI Initial Opening 30 Final Flow 45

(H) Final Hydrostatic Mud 2249.7 PSI Initial Shut-In 45 Final Shut-In 45

Our Representative MR PAUL SIMPSON TOTAL PRICE $ 800

ORIGINAL



This is an actual photograph of recorder chart

POINT	PRESSURE FIELD READING	PRESSURE OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2284	2288.9
(B) FIRST INITIAL FLOW PRESSURE	16	21.2
(C) FIRST FINAL FLOW PRESSURE	16	21.2
(D) INITIAL CLOSED-IN PRESSURE	41	44.6
(E) SECOND INITIAL FLOW PRESSURE	16	21.2
(F) SECOND FINAL FLOW PRESSURE	16	21.2
(G) FINAL CLOSED-IN PRESSURE	33	35.4
(H) FINAL HYDROSTATIC MUD	2251	2249.7

ORIGINAL

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601

Nº 3

Test Ticket

Well Name & No. R.M. Watts 28-1 Test No. 3 Date 4/9/91

Company Vintage Petroleum Inc Zone Tested Mississippi

Address 4200 One Williams Center Tulsa OK 74172 Elevation 1549

Co. Rep./Geo. Otis Hughes Cont. Val Energy Est. Ft. of Pay

Location: Sec. 28 Twp. 33s Rge. 12w Co. Barber State Ks

No. of Copies 5 Distribution Sheet ____ Yes ____ No Turnkey ____ Yes ____ No ____ Evalu

Interval Tested 4536-4556 Drill Pipe Size 4½ XH

Anchor Length 20 Top Choke — 1" ____ Bottom Choke — ¾" ____

Top Packer Depth 4531 Hole Size — 7⅞" ____ Rubber Size — 6¾" ____

Bottom Packer Depth 4536 Wt. Pipe I.D. — 2.7 Ft. Run ____

Total Depth 4556 Drill Collar — 2.25 Ft. Run ____

Mud Wt. 9.2 lb/gal. Viscosity 44 Filtrate 13

Tool Open @ 10:06 AM Initial Blow weak ½" blow decreasing to surface

Final Blow ¼" blow decreased & died in 16 Minutes

Recovery — Total Feet 10 Feet of Gas In Pipe — Flush Tool? N

Rec. 10 Feet Of Mud %gas %oil %water %

Rec. ____ Feet Of ____ %gas %oil %water %

Rec. ____ Feet Of ____ %gas %oil %water %

Rec. ____ Feet Of ____ %gas %oil %water %

Rec. ____ Feet Of ____ %gas %oil %water %

BHT 115 °F Gravity ____ °API @ ____ °F Corrected Gravity ____

RW ____ @ ____ °F Chlorides ____ ppm Recovery Chlorides ____ ppm

(A) Initial Hydrostatic Mud	2284 PSI	AK1 Recorder No.	13277	Range	4125
(B) First Initial Flow Pressure	16 PSI	@ (depth)	4538	w/Clock No.	27501
(C) First Final Flow Pressure	16 PSI	AK1 Recorder No.	24174	Range	3350
(D) Initial Shut-In Pressure	41 PSI	@ (depth)	4555	w/Clock No.	17652
(E) Second Initial Flow Pressure	16 PSI	AK1 Recorder No.	____	Range	____
(F) Second Final Flow Pressure	16 PSI	@ (depth)	____	w/Clock No.	____
(G) Final Shut-In Pressure	33 PSI	Initial Opening	30	Test	550
(H) Final Hydrostatic Mud	2251 PSI	Initial Shut-In	45	Jars	20
		Final Flow	45	Safety Joint	50
		Final Shut-In	45	Straddle	____
				Circ. Sub	____
				Sampler	____
				Extra Packer	____
				Other	____
				TOTAL PRICE $	800

TRILOBITE TESTING COMPANY SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUBSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By [signature]

Our Representative Paul Simpson

Printcraft Printers - Hays, KS

TRILOBITE TESTING COMPANY ORIGINAL

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name RM WATTS #28-1 Test No. 4 Date 4/12/91

Company VINTAGE PETROLEUM INC Zone Tested N/A

Address 4200 ONE WILLIAMS CENTER TULSA Elevation 1532 GL

Co. Rep./Geo. OTIS HUGHES Cont. VAL ENERGY Est. Ft. of Pay

Location: Sec. 28 Twp. 33S Rge. 12W Co. BARBER State KS

Interval Tested 4205-4227 Drill Pipe Size 4.5 XH

Anchor Length 22 Wt. Pipe I.D. - 2.7 Ft. Run

Top Packer Depth 4205 Drill Collar — 2.25 Ft. Run

Bottom Packer Depth 4227

Total Depth 5100

Mud Wt. 9.3 lb / gal. Viscosity 44 Filtrate 12

Tool Open @ 8:00 AM Initial Blow PACKER FAILURE

Final Blow

Recovery — Total Feet Flush Tool?

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides ppm System

(A) Initial Hydrostatic Mud PSI Ak1 Recorder No. 13851 Range 4425

(B) First Initial Flow Pressure PSI @ (depth) 4210 w/Clock No. 31154

(C) First Final Flow Pressure PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-In Pressure PSI @ (depth 4222 w/Clock No. 27585

(E) Second Initial Flow Pressure PSI AK1 Recorder No. 1055 Range 4025

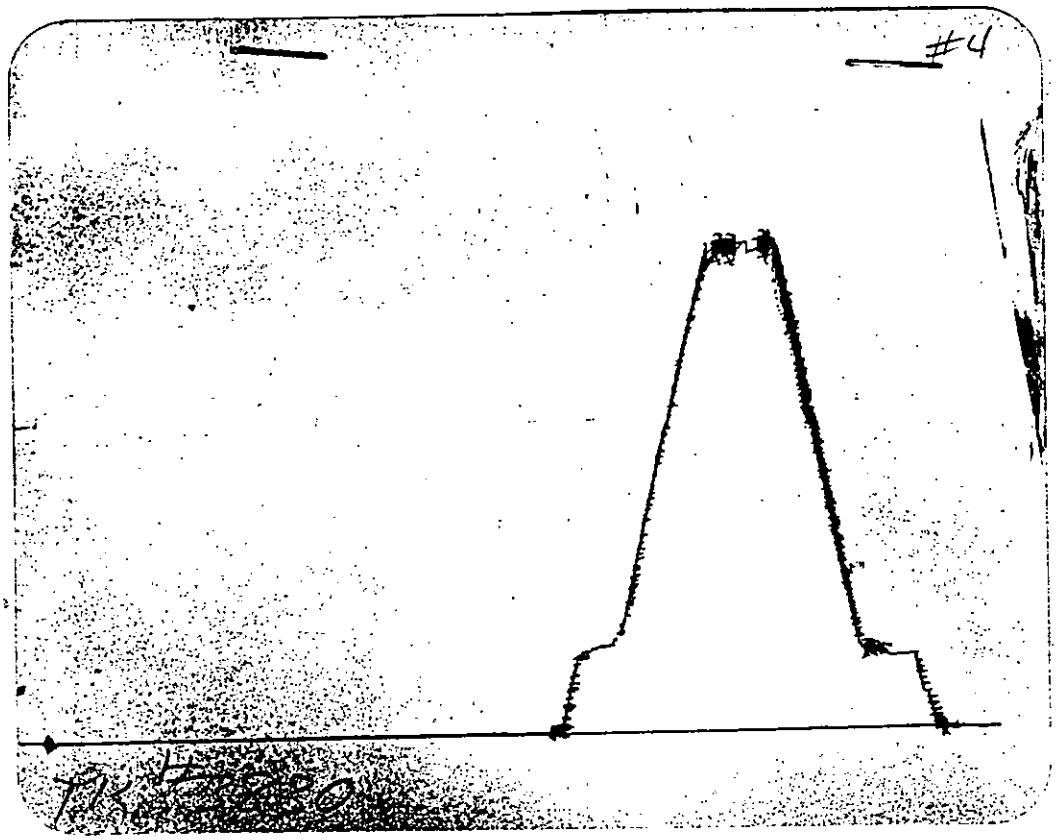
(F) Second Final Flow Pressure PSI @ (depth) 5100 w/Clock No. 20272

(G) Final Shut-In Pressure PSI Initial Opening Final Flow

(H) Final Hydrostatic Mud PSI Initial Shut-In Final Shut-In

Our Representativve MR HARRY SCHMIDT TOTAL PRICE $ 1050

ORIGINAL



This is an actual photograph of recorder chart

POINT	PRESSURE FIELD READING	PRESSURE OFFICE READING

(A) INITIAL HYDROSTATIC MUD

(B) FIRST INITIAL FLOW PRESSURE

(C) FIRST FINAL FLOW PRESSURE

(D) INITIAL CLOSED-IN PRESSURE

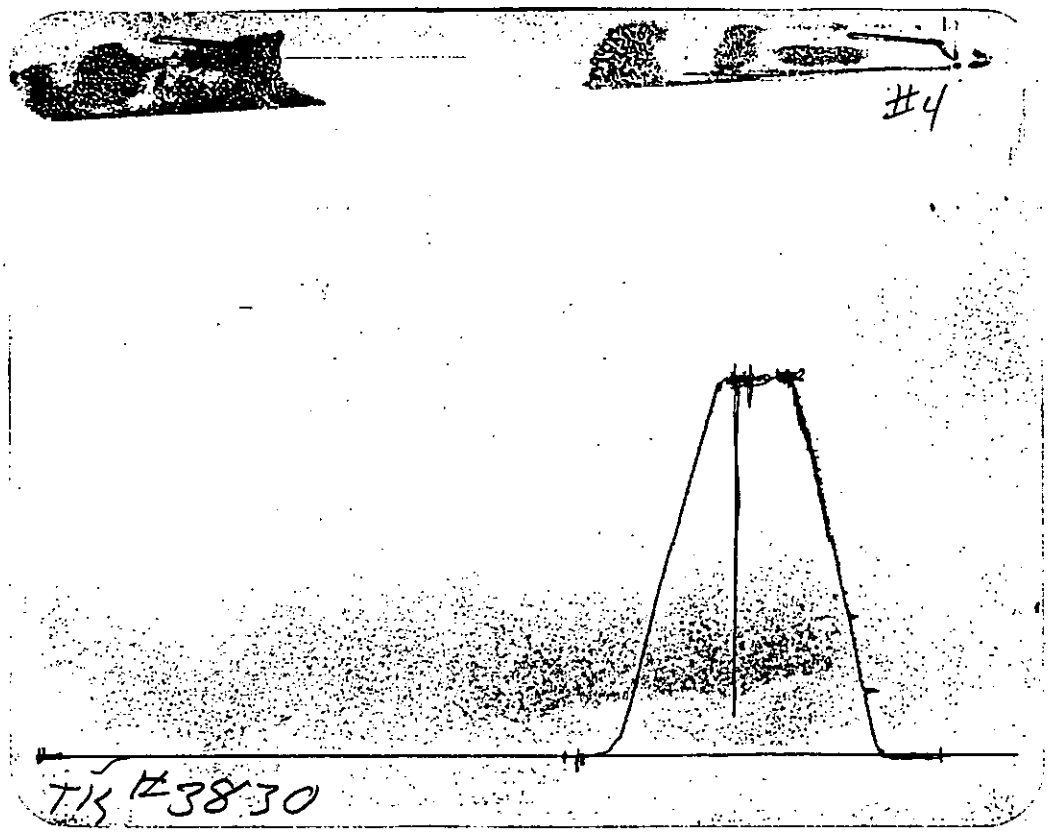
(E) SECOND INITIAL FLOW PRESSURE

(F) SECOND FINAL FLOW PRESSURE

(G) FINAL CLOSED-IN PRESSURE

(H) FINAL HYDROSTATIC MUD

ORIGINAL



This is an actual photograph of recorder chart

POINT	PRESSURE	
	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD		
(B) FIRST INITIAL FLOW PRESSURE		
(C) FIRST FINAL FLOW PRESSURE		
(D) INITIAL CLOSED-IN PRESSURE		
(E) SECOND INITIAL FLOW PRESSURE		
(F) SECOND FINAL FLOW PRESSURE		
(G) FINAL CLOSED-IN PRESSURE		
(H) FINAL HYDROSTATIC MUD		

TRILOBITE TESTING COMPANY

ORIGINAL

P.O. Box 362 • Hays, Kansas 67601

№ 3830

Test Ticket

Well Name & No. R.M. WATTS Test No. FOUR Date 4-12-91

Company VINTAGE PET. INC. Zone Tested

Address 4200 ONE WILLIAMS CENTER TULSA OK. 74172 Elevation 1532 GL

Co. Rep./Geo. Cont. Est. Ft. of Pay

Location: Sec. 28 Twp. 33S Rge. 12 W Co. BARBER State KS

No. of Copies Distribution Sheet Yes No Turnkey Yes No Evaluation

Interval Tested 4205 TO 4227 Drill Pipe Size 4½" X.H.

Anchor Length 22' Top Choke — 1" Bottom Choke — ¼"

Top Packer Depth 4205 Hole Size — 7⅞" Rubber Size — 6¾"

Bottom Packer Depth 4227 Wt. Pipe I.D. — 2.7 Ft. Run

Total Depth 5100 Drill Collar — 2.25 Ft. Run

Mud Wt. 9.3 lb/gal. Viscosity 44 Filtrate 12

Tool Open @ 8:00 A Initial Blow PKR'S FAILED

Final Blow

Recovery — Total Feet Feet of Gas in Pipe Flush Tool?

Rec. Feet Of %gas %oil %water %mud

Rec. Feet Of %gas %oil %water %mud

Rec. Feet Of %gas %oil %water %mud

Rec. Feet Of %gas %oil %water %mud

Rec. Feet Of %gas %oil %water %mud

BHT °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides ppm System

(A) Initial Hydrostatic Mud PSI AK1 Recorder No. 13851 Range 4425

(B) First Initial Flow Pressure PSI @ (depth) 4210 w/Clock No. J1154

(C) First Final Flow Pressure PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-In Pressure PSI @ (depth) 4222 w/Clock No. 27585

(E) Second Initial Flow Pressure PSI AK1 Recorder No. 10555 Range 4025

(F) Second Final Flow Pressure PSI @ (depth) 5100 w/Clock No. 20272

(G) Final Shut-In Pressure PSI Initial Opening Test M/R 400.00

(H) Final Hydrostatic Mud PSI Initial Shut-In Jars 200.00

Final Flow Safety Joint 50.00

Final Shut-In Straddle 250.00

Circ. Sub

Sampler

Extra Packer 150.00

Other

TOTAL PRICE $ 1,050.00

TRILOBITE TESTING COMPANY SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUBSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Gary Rowe

Our Representative

Printcraft Printers - Hays, KS

TRILOBITE TESTING COMPANY ORIGINAL

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name RM WATTS #28-1 Test No. 5 Date 4/12/91
Company VINTAGE PETROLEUM INC Zone Tested LANS-KS CITY
Address 4200 ONE WILLIAMS CENTER TULSA Elevation 1532 GL
Co. Rep./Geo. OTIS HUGHES Cont. VAL ENERGY Est. Ft. of Pay
Location: Sec. 28 Twp. 33S Rge. 12W Co. BARBER State KS

Interval Tested 4205-4227 Drill Pipe Size 4.5 XH
Anchor Length 22 Wt. Pipe I.D. - 2.7 Ft. Run
Top Packer Depth 4205 Drill Collar — 2.25 Ft. Run
Bottom Packer Depth 4227
Total Depth 5100

Mud Wt. 9.3 lb / gal. Viscosity 44 Filtrate 12

Tool Open @ 3:15 PM Initial Blow PACKER FAILURE

Final Blow

Recovery — Total Feet Flush Tool?

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT °F Gravity °API @ °F Corrected Gravity °API

RW @ °F Chlorides ppm Recovery Chlorides ppm System

(A) Initial Hydrostatic Mud PSI AK1 Recorder No. 13851 Range 4425

(B) First Initial Flow Pressure PSI @ (depth) 4210 w/Clock No. 31154

(C) First Final Flow Pressure PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-In Pressure PSI @ (depth 4222 w/Clock No. 27585

(E) Second Initial Flow Pressure PSI AK1 Recorder No. 1055 Range 4025

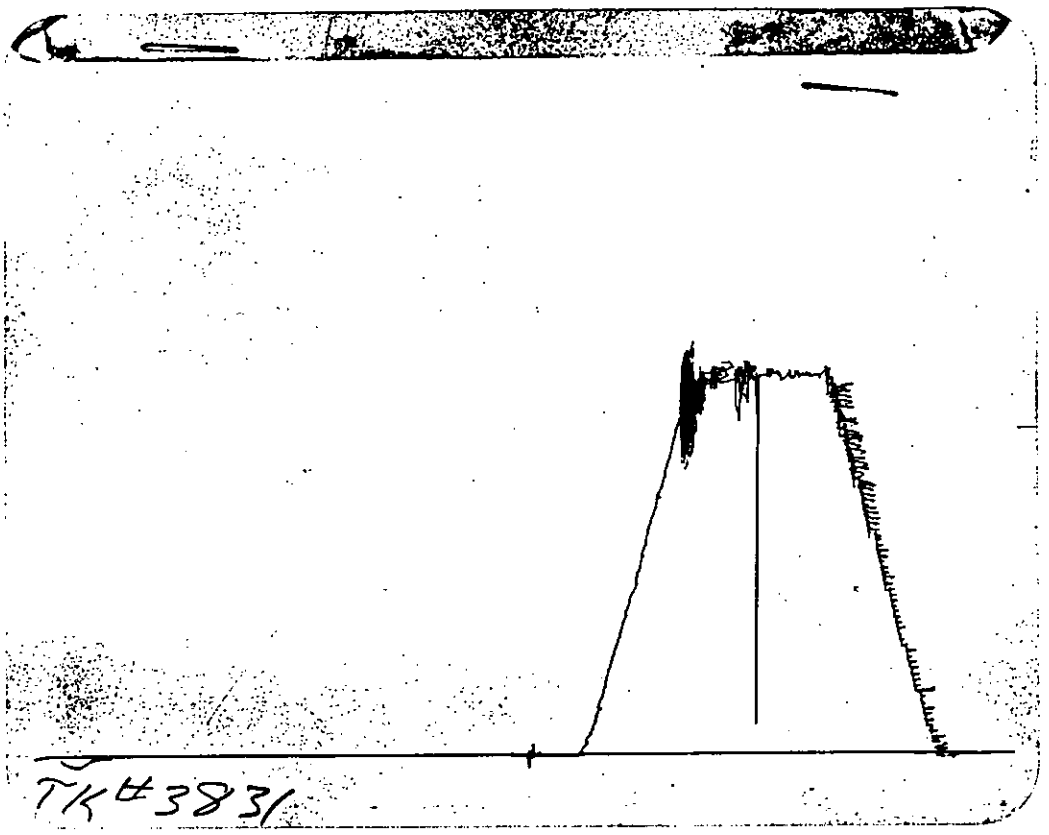
(F) Second Final Flow Pressure PSI @ (depth) 4237 w/Clock No. 20272

(G) Final Shut-In Pressure PSI Initial Opening Final Flow

(H) Final Hydrostatic Mud PSI Initial Shut-In Final Shut-In

Our Representativve MR HARRY SCHMIDT TOTAL PRICE $ 1350

ORIGINAL



This is an actual photograph of recorder chart

POINT	PRESSURE	
	FIELD READING	OFFICE READING

(A) INITIAL HYDROSTATIC MUD

(B) FIRST INITIAL FLOW PRESSURE

(C) FIRST FINAL FLOW PRESSURE

(D) INITIAL CLOSED-IN PRESSURE

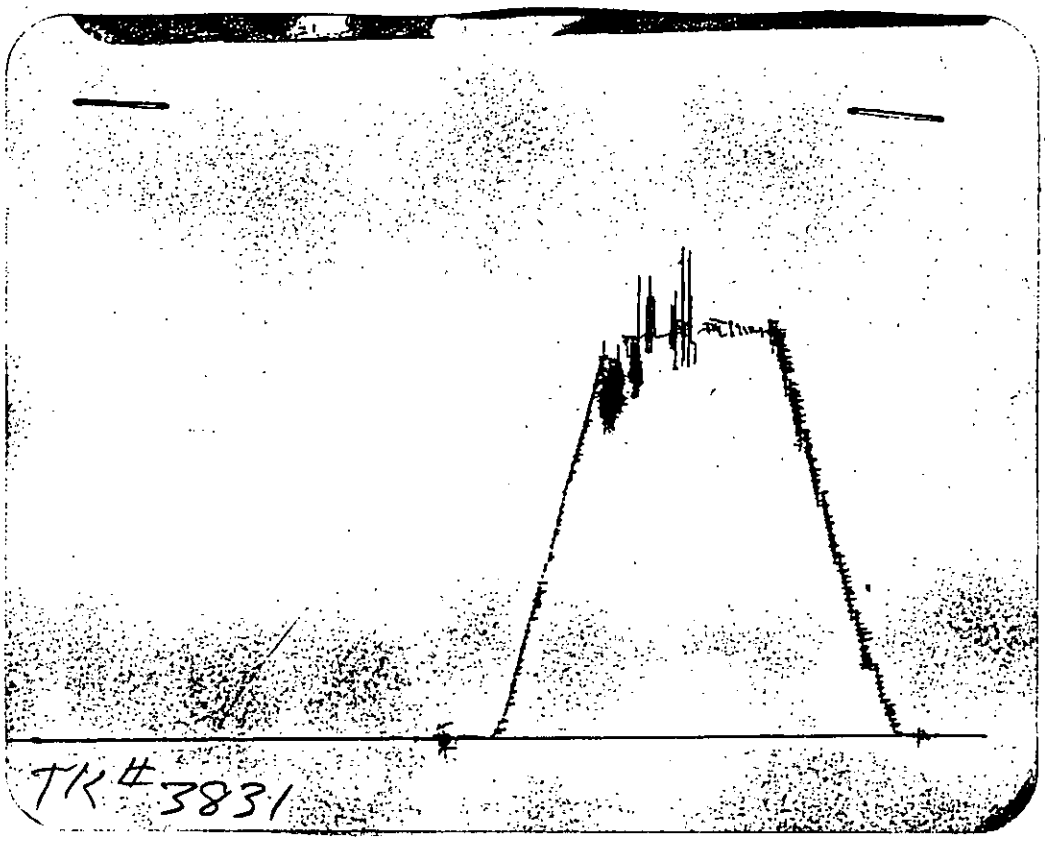
(E) SECOND INITIAL FLOW PRESSURE

(F) SECOND FINAL FLOW PRESSURE

(G) FINAL CLOSED-IN PRESSURE

(H) FINAL HYDROSTATIC MUD

ORIGINAL



This is an actual photograph of recorder chart

POINT	PRESSURE	FIELD READING	OFFICE READING
(A)	INITIAL HYDROSTATIC MUD		
(B)	FIRST INITIAL FLOW PRESSURE		
(C)	FIRST FINAL FLOW PRESSURE		
(D)	INITIAL CLOSED-IN PRESSURE		
(E)	SECOND INITIAL FLOW PRESSURE		
(F)	SECOND FINAL FLOW PRESSURE		
(G)	FINAL CLOSED-IN PRESSURE		
(H)	FINAL HYDROSTATIC MUD		

TRILOBITE TESTING COMPANY

P.O. Box 362 • Hays, Kansas 67601 ORIGINAL

Nº 3831

Test Ticket

Well Name & No. R.M. WATTS Test No. 5 Date 4-12-91

Company VINTAGE PET. INC. Zone Tested LKC

Address 4200 ONE WILLIAMS CENTER TULSA 74172 Elevation 1532 G.L.

Co. Rep./Geo. _____ Cont. _____ Est. Ft. of Pay _____

Location: Sec. 28 Twp. 33S Rge. 12W Co. BARBER State KS

No. of Copies _____ Distribution Sheet _____ Yes _____ No Turnkey _____ Yes _____ No _____ Evaluation

Interval Tested 4205' TO 4227' Drill Pipe Size 4 1/2" X.H.

Anchor Length 22' Top Choke — 1" _____ Bottom Choke — ¾" _____

Top Packer Depth 4205' Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____

Bottom Packer Depth 4227' Wt. Pipe I.D. — 2.7 Ft. Run _____

Total Depth 5100' Drill Collar — 2.25 Ft. Run _____

Mud Wt. 9.3 lb/gal. Viscosity 44 Filtrate 12

Tool Open @ 3:15 P Initial Blow PKR'S FAILED

Final Blow _____

Recovery — Total Feet _____ Feet of Gas in Pipe _____ Flush Tool? _____

Rec. _____ Feet Of	%gas	%oil	%water	%mud
Rec. _____ Feet Of	%gas	%oil	%water	%mud
Rec. _____ Feet Of	%gas	%oil	%water	%mud
Rec. _____ Feet Of	%gas	%oil	%water	%mud
Rec. _____ Feet Of	%gas	%oil	%water	%mud

BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API

RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud _____ PSI	AK1 Recorder No. 13851	Range 4425
(B) First Initial Flow Pressure _____ PSI	@ (depth) 4210	w/Clock No. 31154
(C) First Final Flow Pressure _____ PSI	AK1 Recorder No. 13850	Range 4325
(D) Initial Shut-In Pressure _____ PSI	@ (depth) 4222	w/Clock No. 27585
(E) Second Initial Flow Pressure _____ PSI	AK1 Recorder No. 1055	Range 4025
(F) Second Final Flow Pressure _____ PSI	@ (depth) 4237	w/Clock No. 20272
(G) Final Shut-In Pressure _____ PSI	Initial Opening _____	Test M/R 400.00
(H) Final Hydrostatic Mud _____ PSI	Initial Shut-In _____	Jars 200.00
	Final Flow _____	Safety Joint 50.00
	Final Shut-In _____	Straddle 250.00
		Circ. Sub _____
		Sampler _____
		Extra Packer 150.00
		Other WALL HOOK 300.00
		TOTAL PRICE $ 1350.00

TRILOBITE TESTING COMPANY SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUBSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Gary Rowe

Our Representative _____

Printcraft Printers - Hays, KS

TRILOBITE TESTING COMPANY ORIGINAL

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name RM WATTS #28-1 Test No. 6 Date 4/12/91
Company VINTAGE PETROLEUM INC Zone Tested LANS-KS CITY
Address 4200 ONE WILLIAMS CENTER TULSA Elevation 1532 GL
Co. Rep./Geo. OTIS HUGHES Cont. VAL ENERGY Est. Ft. of Pay
Location: Sec. 28 Twp. 33S Rge. 12W Co. BARBER State KS

Interval Tested 4221-4230 Drill Pipe Size 4.5 XH
Anchor Length 9 Wt. Pipe I.D. - 2.7 Ft. Run
Top Packer Depth 4221 Drill Collar — 2.25 Ft. Run
Bottom Packer Depth 4230
Total Depth 5100

Mud Wt. 9.3 lb / gal. Viscosity 44 Filtrate 12

Tool Open @ 8:17 PM Initial Blow VERY GOOD - BOTTOM OF BUCKET IN 5 MINUTES

Final Blow SAME AS INITIAL

Recovery — Total Feet 1050 Flush Tool? NO

Rec. 1050 Feet of SALT WATER

Rec. Feet of

Rec. Feet of

Rec. Feet of

Rec. Feet of

BHT N/A °F Gravity °API @ °F Corrected Gravity °API

RW 0.22 @ 63 °F Chlorides 36000 ppm Recovery Chlorides 54000 ppm System

(A) Initial Hydrostatic Mud 2214.6 PSI AK1 Recorder No. 13851 Range 4425

(B) First Initial Flow Pressure 61.2 PSI @ (depth) 4223 w/Clock No. 31154

(C) First Final Flow Pressure 225.8 PSI AK1 Recorder No. 13850 Range 4325

(D) Initial Shut-In Pressure 1620.4 PSI @ (depth 4211 w/Clock No. 27585

(E) Second Initial Flow Pressure 304.5 PSI AK1 Recorder No. 1055 Range 4025

(F) Second Final Flow Pressure 556.5 PSI @ (depth) 4240 w/Clock No. 20272

(G) Final Shut-In Pressure 1617.6 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2201.3 PSI Initial Shut-In 60 Final Shut-In 80

Our Representativve MR HARRY SCHMIDT TOTAL PRICE $ 1500

TRILOBITE TESTING COMPANY ORIGINAL

P.O. Box 362 • Hays, Kansas 67601

№ 3832

Test Ticket

Well Name & No. R.M. WATTS "E" Test No. SIX Date 4-12-91

Company VINTAGE PET. INC. Zone Tested LKC

Address 4200 ONE WILLIAMS CENTER TULSA 74172 Elevation 1532 G.L.

Co. Rep./Geo. GARY ROWE Cont. VAL ENERGY Est. Ft. of Pay

Location: Sec. 28 Twp. 33S Rge. 12W Co. BARBER State KS.

No. of Copies Distribution Sheet Yes No Turnkey Yes No Evaluation

Interval Tested 4221 TO 4230 Drill Pipe Size 4½" XH.

Anchor Length 9' Top Choke — 1" Bottom Choke — ¼"

Top Packer Depth 4221 Hole Size — 7⅞" Rubber Size — 6¾"

Bottom Packer Depth 4230 Wt. Pipe I.D. — 2.7 Ft. Run

Total Depth 5100 Drill Collar — 2.25 Ft. Run

Mud Wt. 9.3 lb/gal. Viscosity 44 Filtrate 12.0

Tool Open @ 8:17 P Initial Blow VERY GOOD BOT. BUCKET IN 5 MIN.

Final Blow SAME AS INITIAL

Recovery — Total Feet 1,050 Feet of Gas in Pipe — Flush Tool? NO

Rec. 1,050	Feet Of SALT WATER	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud
Rec.	Feet Of	%gas	%oil	%water	%mud

BHT °F Gravity °API @ °F Corrected Gravity °API

RW 0.22 @ 63 °F Chlorides 36,000 ppm Recovery Chlorides 54,000 ppm System

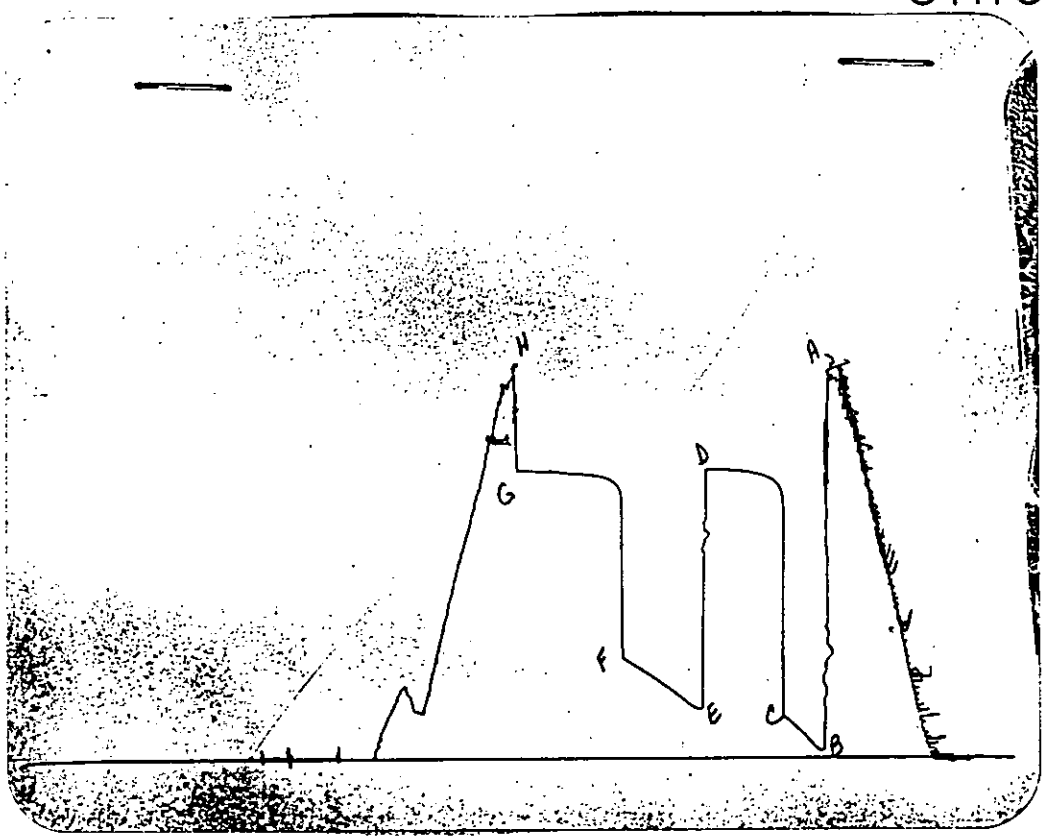
(A) Initial Hydrostatic Mud	2207 PSI	AK1 Recorder No. 13851		Range 4425	
(B) First Initial Flow Pressure	55 PSI	@ (depth) 4223		w/Clock No. 31154	
(C) First Final Flow Pressure	222 PSI	AK1 Recorder No. 13850		Range 4325	
(D) Initial Shut-in Pressure	1619 PSI	@ (depth) 4211		w/Clock No. 27585	
(E) Second Initial Flow Pressure	300 PSI	AK1 Recorder No. 1055		Range 4025	
(F) Second Final Flow Pressure	554 PSI	@ (depth) 4240		w/Clock No. 20272	
(G) Final Shut-in Pressure	1619 PSI	Initial Opening 30		Test	550.00
(H) Final Hydrostatic Mud	2207 PSI	Initial Shut-in 60		Jars	200.00
		Final Flow 60		Safety Joint	50.00
		Final Shut-in 80		Straddle	250.00
		RAIN RAIN RAIN		Circ. Sub	
				Sampler	
				Extra Packer	150.00
				Other WALL HOOK	300.00
				TOTAL PRICE $	1500.00

Approved By Gary Rowe

Our Representative John Schmitt

Printcraft Printers - Hays, KS

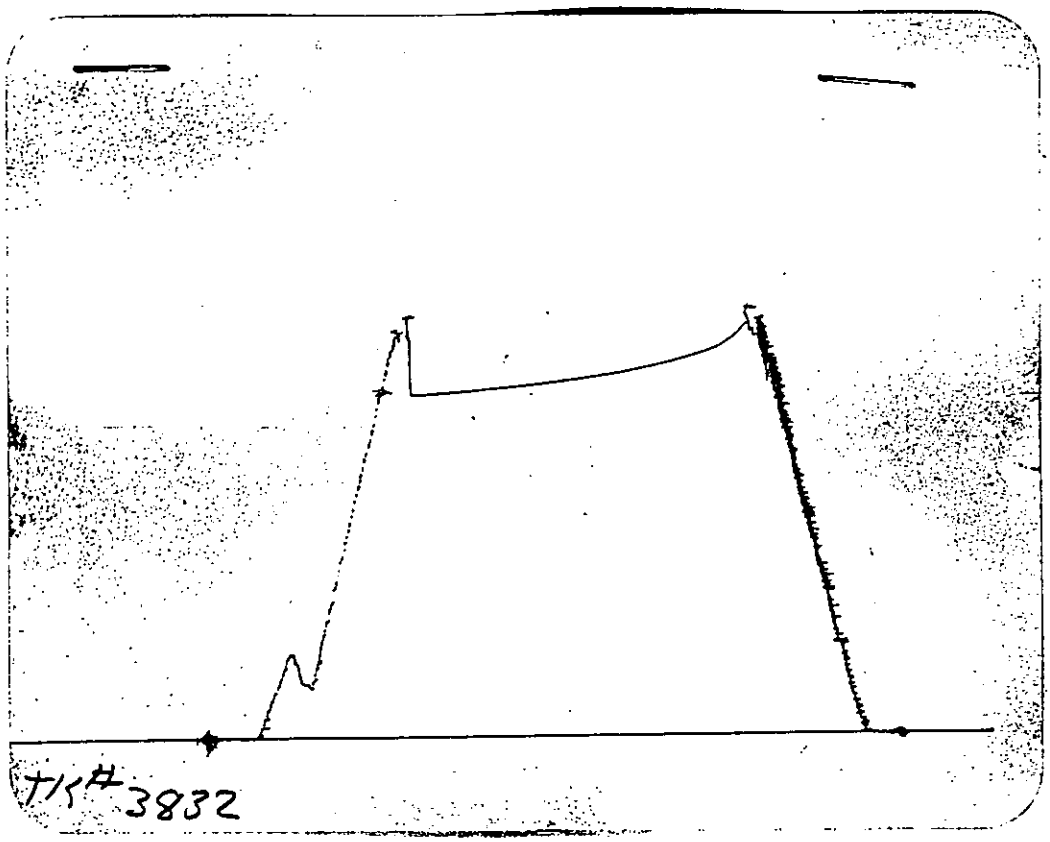
ORIGINAL



This is an actual photograph of recorder chart

POINT	PRESSURE FIELD READING	PRESSURE OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2207	2214.6
(B) FIRST INITIAL FLOW PRESSURE	55	61.2
(C) FIRST FINAL FLOW PRESSURE	222	225.8
(D) INITIAL CLOSED-IN PRESSURE	1619	1620.4
(E) SECOND INITIAL FLOW PRESSURE	300	304.5
(F) SECOND FINAL FLOW PRESSURE	554	556.5
(G) FINAL CLOSED-IN PRESSURE	1619	1617.6
(H) FINAL HYDROSTATIC MUD	2207	2201.3

ORIGINAL



This is an actual photograph of recorder chart

POINT	PRESSURE	
	FIELD READING	OFFICE READING

(A) INITIAL HYDROSTATIC MUD

(B) FIRST INITIAL FLOW PRESSURE

(C) FIRST FINAL FLOW PRESSURE

(D) INITIAL CLOSED-IN PRESSURE

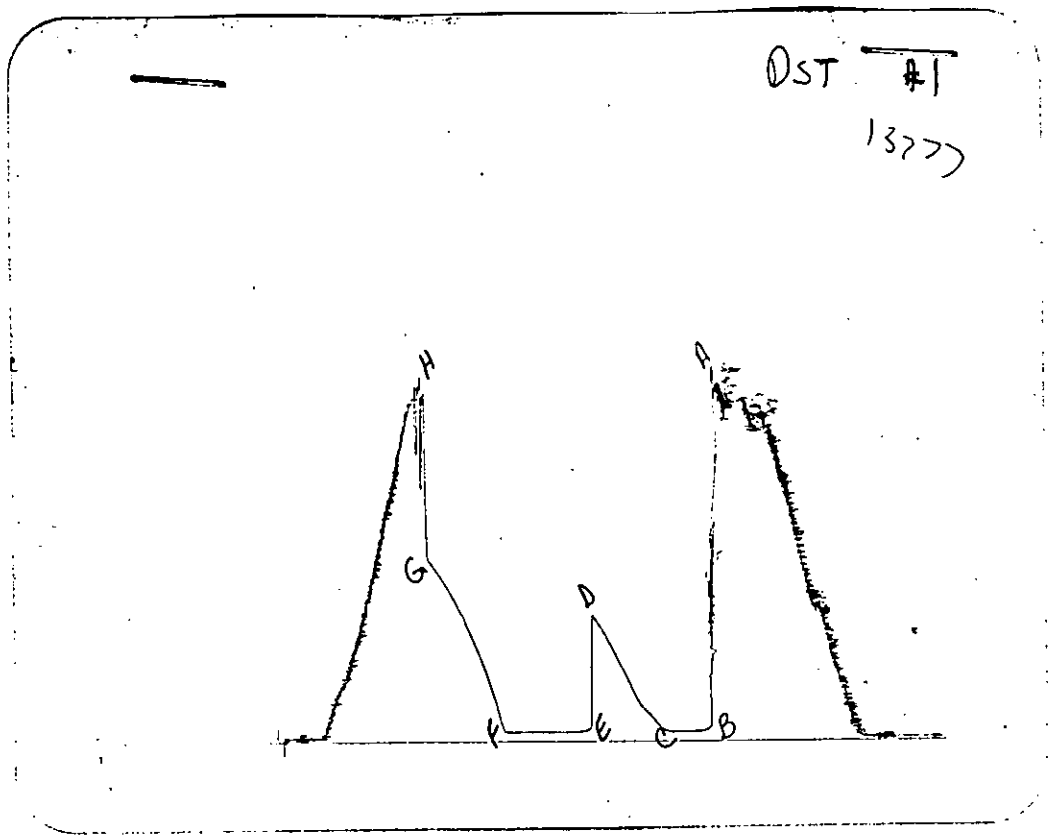
(E) SECOND INITIAL FLOW PRESSURE

(F) SECOND FINAL FLOW PRESSURE

(G) FINAL CLOSED-IN PRESSURE

(H) FINAL HYDROSTATIC MUD

ORIGINAL



This is an actual photograph of recorder chart

POINT	PRESSURE	FIELD READING	OFFICE READING
(A)	INITIAL HYDROSTATIC MUD	1682	1688.4
(B)	FIRST INITIAL FLOW PRESSURE	16	26.9
(C)	FIRST FINAL FLOW PRESSURE	16	26.9
(D)	INITIAL CLOSED-IN PRESSURE	628	637.2
(E)	SECOND INITIAL FLOW PRESSURE	16	29
(F)	SECOND FINAL FLOW PRESSURE	16	29
(G)	FINAL CLOSED-IN PRESSURE	945	936.4
(H)	FINAL HYDROSTATIC MUD	1623	1622.5

EFFECTIVE DATE: 3-25-91 3/25 55

FORM MUST BE TYPED

FORM C-1 4/90

State of Kansas 007-22,359

NOTICE OF INTENTION TO DRILL

Must be approved by the K.C.C. five (5) days prior to commencing well

FORM MUST BE SIGNED
ALL BLANKS MUST BE FILLED

Expected Spud Date: 03/22/91 (month day year)

C/NESW NW Sec 28 Twp 33 S Rg 12 W East/West

~~3830~~ 3695 feet from South Line of Section
4290 feet from East Line of Section
(Note: Locate well on Section Plat on Reverse Side)

OPERATOR: License #: 3122
Name: VINTAGE PETROLEUM, INC.
Address: 4200 ONE WILLIAMS CENTER
City/State/Zip: TULSA OK 74172
Contact Person: C.A. HELMS
Phone: (918) 592-0101

583 868 / 1792-1056 ship

County: BARBER
Lease Name: R.M. WATTS Well #: 28-1
Field Name: HARDTNER

CONTRACTOR: License #:
Name: WILL ADVISE ON ACO-1
VAL Energy ... 316 522 1560
P.O. Box 322 Haysville 67060

Well Drilled For: XX Oil ....Inj ....Gas ....Storage ....OWWO ....Disposal ....Seismic; ....# of Holes

Well Class: ....Infield ....Pool Ext XX Wildcat

Type Equipment: XX Mud Rotary ....Air Rotary ....Cable

Is this a Prorated Field? ....yes XX no
Target Formation(s): SIMPSON SAND
Nearest lease or unit boundary: 990'
Ground Surface Elevation: 1532 feet MSL
Domestic well within 330 feet: ....yes XX no
Municipal well within one mile: ....yes XX no
Depth to bottom of fresh water: 100'
Depth to bottom of usable water: 180'
Surface Pipe by Alternate: XX 1 2
Length of Surface Pipe Planned to be set: 300'
Length of Conductor Pipe required: ******
Projected Total Depth: 5100'
Formation at Total Depth:
Water Source for Drilling Operations: ....well ....farm pond XX other
DWR Permit#:
Will Cores Be Taken? ....yes XX no
If yes, proposed zone:

If OWWO; old well information as follows:
Operator:
Well Name:
Comp Date: ....Old Total Depth

Directional, Deviated or Horizonal Wellbore? ....yes XX no
If yes, total depth location:

Exp. 9/20/91

200' Alt. I Req.

AFFIDAVIT

The undersigned hereby affirms that the drilling, completion and eventual plugging of this well will comply with K.S.A.

Pusher ___ Tooth/Hall 359
SPUD DATE 4-1-91 INIT. Sm
LENGTH SURFACE PLANNED 300
RESERVE PIT STATUS- REMOVE FLUID___ LINED___
after salt sect.___bbls.___ when done___bbls.___
RATHOLED AHEAD? Y___ N___ SIZE HOLE___
SURFACE PIPE 8 5/8 @ 308 CONDUCTOR___
ANHYDRITE T-___ B-___ ELEVATION___
TD 5100 FORMATION___
RAN PIPE___ @___ DV TOOL___ ALT II DONE
___SX ___SX Y___ N___
___Arbuckle Plug @ 5100 (5050) Ft. W/ 50 SX
___Hug./Council @ ___ Ft. W/ ___ SX
___Anhydrite Base @ 550 Ft. W/ 50 SX
___1/2 Base Anyh. @ ___ Ft. W/ ___ SX
___1/2, 1/2 Plug @ ___ Ft. W/ ___ SX
___Bottom Surface @ 300 (308) Ft. W/ 50 SX
___40' Plug @ 40 Ft. W/ 10 SX
RAT HOLE CIRC/W 15 SX MOUSE HOLE W/___ SX
WATER WELL ___ SX (Irr. Well ___ Pond ___)
TECHNICIAN ___ DATE ___ Hauling ___
TYPE OF CEMENT 60/40 poz 6%
STARTING TIME 5:30 (AM/PM) DATE 4-13
COMPLETION TIME 1:30 (AM/PM) DATE 4-15
CEMENT COMPANY BJ