

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name JOHNSON #1 Test No. 1 Date 1/26/95
Company NOBEL PETROLEUM, INC Zone MISSISSIPPI
Address 3101 N. ROCK ROAD #125, WICHITA, KS 67226 Elevation 2531
Co. Rep./Geo. JERRY HONAS Cont. DUKE #4 Est. Ft. of Pay 3
Location: Sec. 27 Twp. 18S Rge. 26W Co. NESS State KS

Interval Tested 4417-4443 Drill Pipe Size 4.5" XH
Anchor Length 26 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 4412 Drill Collar - 2.25 Ft. Run _____
Bottom Packer Depth 4417 Mud Wt. 9.4 lb/Gal.
Total Depth 4443 Viscosity 45 Filtrate 8.8

Tool Open @ 7:15PM Initial Blow ONE INCH BLOW, BUILT TO BOTTOM OF BUCKET IN 15 MINUTES.
(ONE INCH BLOW ON SHUT IN).
Final Blow SURFACE BLOW, BUILDING TO BOTTOM OF BUCKET IN 20 MINUTES.

Recovery - Total Feet 540 Flush Tool? NO

Rec. 420 Feet of GAS IN PIPE
Rec. 480 Feet of CLEAN GASSY OIL. 10% GAS; 90% OIL.
Rec. 60 Feet of GASSY MUD CUT OIL. 20% GAS; 50% OIL; 30% MUD.
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 126 °F Gravity 38 °API @ 70 °F Corrected Gravity 37 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System

(A) Initial Hydrostatic Mud 2187.70 PSI AK1 Recorder No. 22150 Range 3925

(B) First Initial Flow Pressure 68.00 PSI @ (depth) 4420 w / Clock No. 22339

(C) First Final Flow Pressure 121.70 PSI AK1 Recorder No. 24174 Range 3050

(D) Initial Shut-in Pressure 1232.50 PSI @ (depth) 4437 w / Clock No. 23839

(E) Second Initial Flow Pressure 156.10 PSI AK1 Recorder No. _____ Range _____

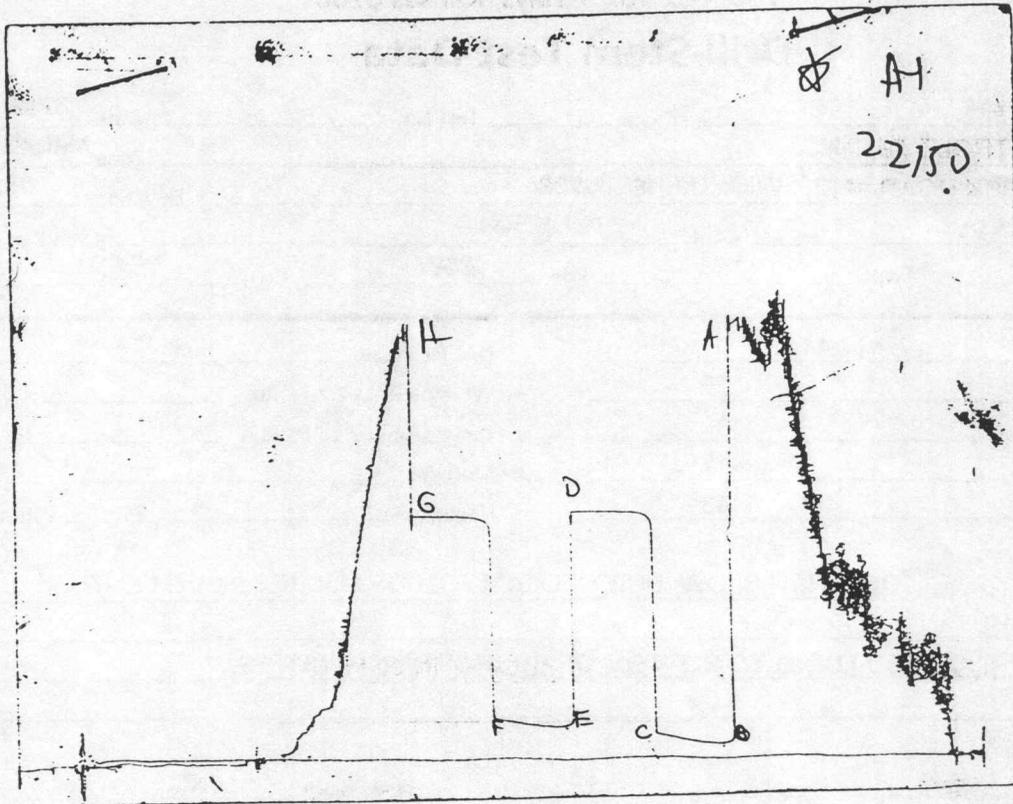
(F) Second Final Flow Pressure 204.00 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1213.00 PSI Initial Opening 60 Final Flow 60

(H) Final Hydrostatic Mud 2161.60 PSI Initial Shut-in 60 Final Shut-in 60

Our Representative PAUL SIMPSON

CHART PAGE



This is an actual photograph of an AK1 recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2241	2187.70
(B) FIRST INITIAL FLOW PRESSURE	58	68.00
(C) FIRST FINAL FLOW PRESSURE	105	121.70
(D) INITIAL CLOSED-IN PRESSURE	1235	1232.50
(E) SECOND INITIAL FLOW PRESSURE	153	156.10
(F) SECOND FINAL FLOW PRESSURE	192	204.00
(G) FINAL CLOSED-IN PRESSURE	1216	1213.00
(H) FINAL HYDROSTATIC MUD	2211	2161.60

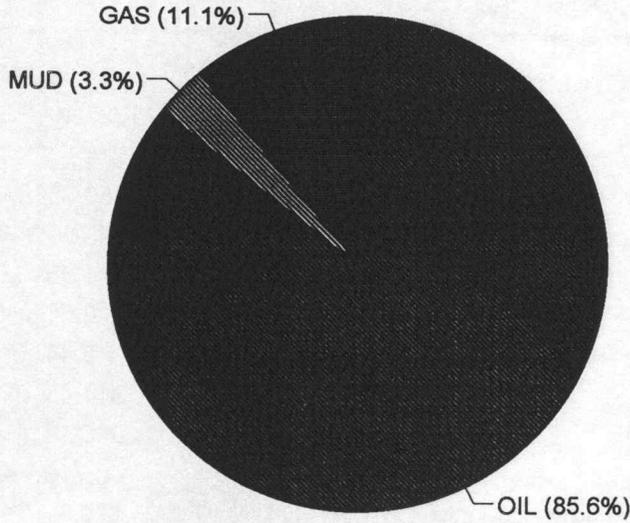
CALCULATED RECOVERY ANALYSIS DRILL PIPE

DST # 1

TICKET # 8391

SAMPLE #	TOTAL FEET	GAS		OIL		WATER		MUD	
		%	FEET	%	FEET	%	FEET	%	FEET
1	480	10	48	90	432	0	0	0	0
2	60	20	12	50	30		0	30	18
3			0		0		0		0
4			0		0		0		0
5			0		0		0		0
6			0		0		0		0
TOTAL	540	11.11111	60	85.55556	462	0	0	3.333333	18

		HRS OPEN	BBL/DAY
BBL OIL=	6.56964	*	2.00
BBL WATER=	0	*	0.00
BBL MUD=	0.25596		
BBL GAS	0.8532		



COMPUTER OIL EVALUATION BY TRILOBITE TESTING, L.L.C.

NOBEL PETROLEUM, INC

	JOHNSON #1		DST 1
27	18S	26W	NESS KS

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ELEVATION:                2531    KB          EST. PAY                3 FT
DATUM:                    -2156          ZONE TESTED:           MISSISSIPPI
TEST INTERVAL:            4417-4443      TIME INTERVALS:        30-45-60-45
RECORDER DEPTH:           4686          VISCOSITY:              5.49 CP
BOTTOM HOLE TEMP:         126           HOLE SIZE:              7.875 IN
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CUBIC FEET OF GAS IN PIPE:                34
TOTAL FEET OF RECOVERY:                   540.00 CORRECTED PIPE FILLUP:           560.440
TOTAL BARRELS OF RECOVERY:                 7.68 CORR. BARRELS OF RECOVERY:       7.969 BBL
BARRELS IN DRILL PIPE:                    7.68 API GRAVITY:                   37
BARRELS IN WEIGHT PIPE:                   0.00 FLUID GRADIENT:                 0.364
BARRELS IN DRILL COLLARS:                 0.00
GAS OIL RATIO:                            4.37 CU.FT/BBL
BUBBLE POINT PRESSURE:                    42
UNCORRECTED INITIAL PRODUCTION:                                     92.15 BBL
INITIAL PRODUCTION CORRECTED TO FINAL FLOW PRESSURE:               95.63 BBL/DAY
INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE:         85.001
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INITIAL SLOPE                0.00 PSI/CYCLE  FINAL SLOPE                34.53 PSI/CYCLE
INITIAL P*                   1238.32 PSI   FINAL P*                   1229.49 PSI
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TRANSMISSIBILITY                450.38 (MD.-FT./CP.)
PERMEABILITY                    823.99 (MD.)
INDICATED FLOW CAPACITY         2471.98 (MD.FT)
PRODUCTIVITY INDEX              0.51 (BBL/DAY/PSI)
DAMAGE RATIO                    5.44
RADIUS OF INVESTIGATION         314.45 (FT.)
POTENTIOMETRIC SURFACE         696.19 (FT.)
DRAWDOWN FACTOR                 0.713 (%)
THEORETICAL POTENTIAL FROM FINAL FLOW PRESSURE 519.81
THEORETICAL POTENTIAL FROM PSEUDO STEADY FLOW STATE 462.02
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INITIAL FLOW

DST # 1
RECORDER 22150

<u>TIME(MIN)</u>	<u>PRESSURE</u>	<u>PRESSURE</u>
0	68.0	68.0
3	68.0	0.0
6	68.0	0.0
9	69.0	1.0
12	71.8	2.9
15	71.8	0.0
18	76.6	4.8
21	76.6	0.0
24	83.3	6.7
27	84.3	1.0
30	87.2	2.9
33	92.0	4.8
36	93.9	1.9
39	99.6	5.7
42	103.5	3.8
45	108.2	4.8
48	112.1	3.8
51	118.8	6.7
54	121.7	2.9

FINAL SHUT-IN

JOHNSON #1

DST # 1

TOTAL FLOW TIME 120

SLOPE

34.5

PSI/CYCLE

P*

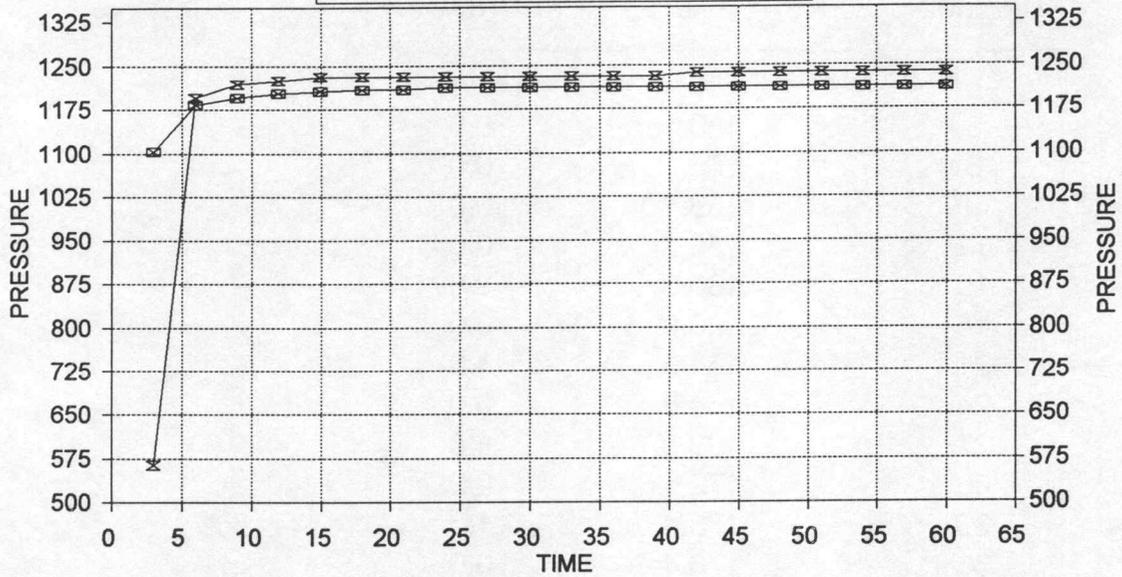
1229.49

PSI

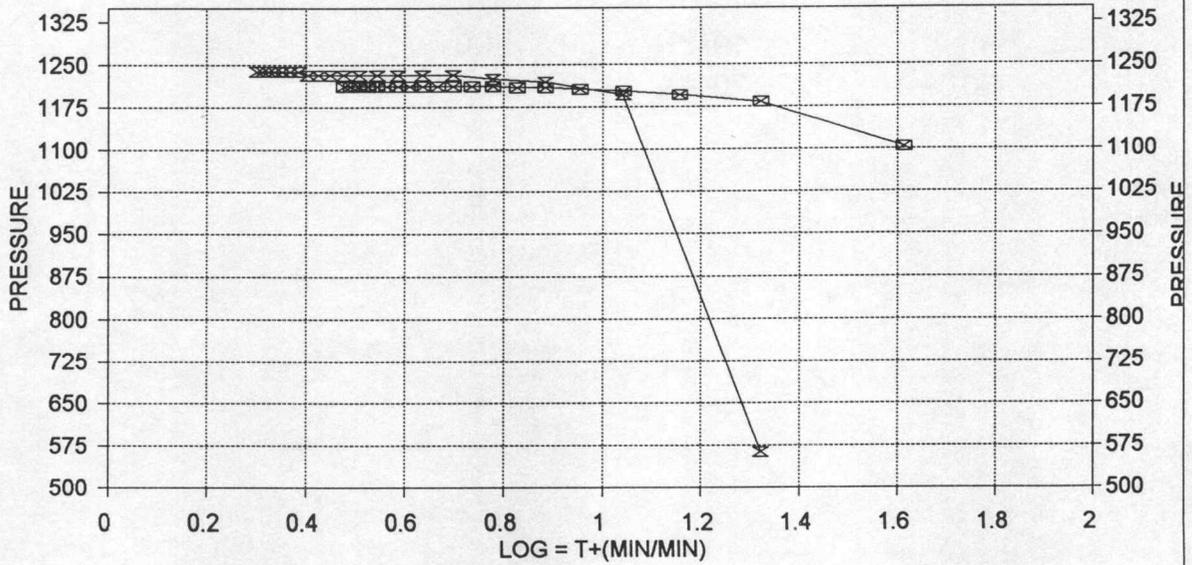
	<u>TIME(MIN)</u>	<u>Pws (psi)</u>	<u>Log Horn T</u>	<u><> PRESSURE</u>	<u>Horn T</u>
	3	1104.1	1.613	1104.1	41
	6	1183.8	1.322	79.8	21
X	9	1196.5	1.156	12.6	14
	12	1204.3	1.041	7.8	11
	15	1207.2	0.954	2.9	9
	18	1210.1	0.885	2.9	8
	21	1210.1	0.827	0.0	7
	24	1213.0	0.778	2.9	6
	27	1213.0	0.736	0.0	5
	30	1213.0	0.699	0.0	5
	33	1213.0	0.666	0.0	5
	36	1213.0	0.637	0.0	4
	39	1213.0	0.610	0.0	4
	42	1213.0	0.586	0.0	4
	45	1213.0	0.564	0.0	4
	48	1213.0	0.544	0.0	4
	51	1213.0	0.525	0.0	3
	54	1213.0	0.508	0.0	3
	57	1213.0	0.492	0.0	3
X	60	1213.0	0.477	0.0	3

DELTA T DELTA P

JOHNSON #1/ DST #1



HORNER PLOT



-x- INITIAL -x- FINAL

FINAL FLOW

DST # 1
RECORDER 22150

TIME(MIN)	PRESSURE	<> PRESSURE
0	156.1	156.1
3	156.1	0.0
6	156.1	0.0
9	156.1	0.0
12	156.1	0.0
15	160.0	3.8
18	160.0	0.0
21	164.8	4.8
24	164.8	0.0
27	169.5	4.8
30	172.4	2.9
33	173.4	1.0
36	173.4	-0.0
39	179.1	5.7
42	182.0	2.9
45	185.8	3.8
48	189.7	3.8
51	190.6	1.0
54	190.6	-0.0
57	191.6	1.0
60	204.0	12.5

INITIAL SHUT-IN

JOHNSON #1

DST # 1

INITIAL FLOW TIME 60

SLOPE

0.0

PSI/CYCLE

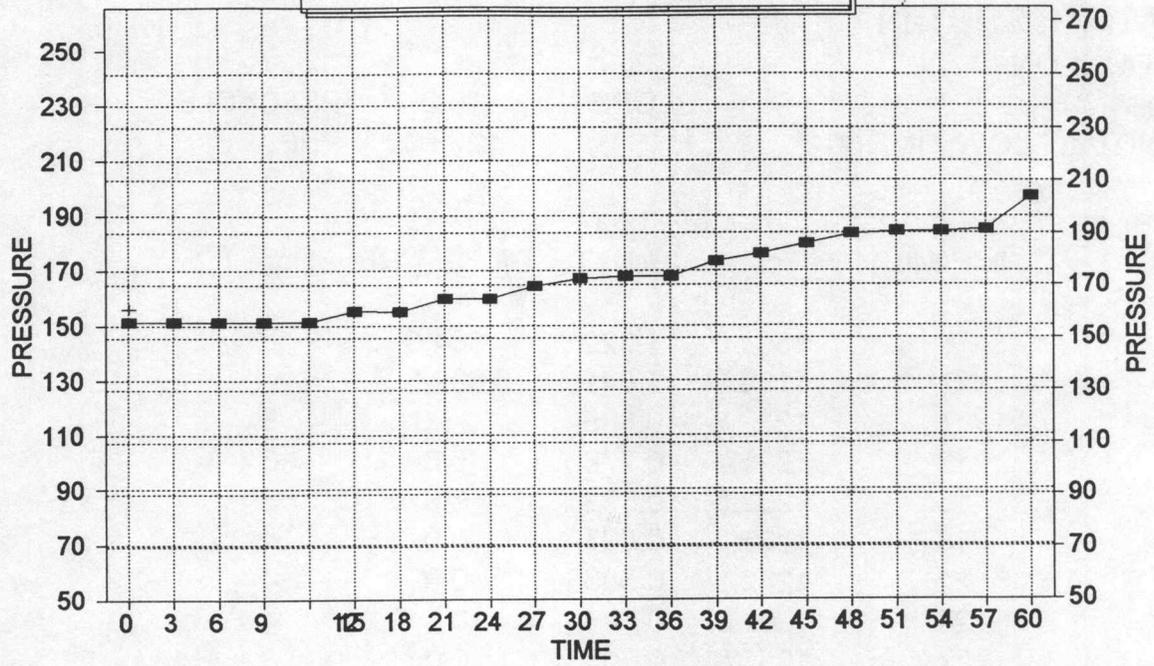
P*

1238.32

PSI

	<u>TIME(MIN)</u>	<u>Pws (psi)</u>	<u>Log Horn T</u>	<u><> PRESSURE</u>	<u>Horn T</u>
	3	564.0	1.322	564.0	21
	6	1196.5	1.041	632.5	11
	9	1219.8	0.885	23.3	8
	12	1225.7	0.778	5.8	6
	15	1232.5	0.699	6.8	5
	18	1232.5	0.637	0.0	4
	21	1232.5	0.586	0.0	4
	24	1232.5	0.544	0.0	4
	27	1232.5	0.508	0.0	3
	30	1232.5	0.477	0.0	3
	33	1232.5	0.450	0.0	3
	36	1232.5	0.426	0.0	3
	39	1232.5	0.405	0.0	3
X	42	1238.3	0.385	5.8	2
	45	1238.3	0.368	0.0	2
	48	1238.3	0.352	0.0	2
	51	1238.3	0.338	0.0	2
	54	1238.3	0.325	0.0	2
	57	1238.3	0.312	0.0	2
X	60	1238.3	0.301	0.0	2

DELTA T DELTA P FINAL FLOW / DST #1



INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE:

85.00064

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No. 7821

Well Name & No. Johnson #1 Test No. 1 Date 1-26-94
Company Nobel Petroleum, Inc Zone Tested MDS
Address 3101 N Rock Rd #125 Wichita Ks 67226 Elevation 25316.2
Co. Rep./Geo. Jerry Hongs Cont. Duke #4 Est. Ft. of Pay 3
Location: Sec. 27 Twp. 18S Rge. 26W Co. Ness State Ks
No. of Copies 5 Distribution Sheet _____ Yes _____ No _____ Turnkey X Yes _____ No X Evaluation _____

Interval Tested 4417-4443 Drill Pipe Size 4 1/2 YH
Anchor Length 26 Top Choke — 1" Bottom Choke — 1/4"
Top Packer Depth 4412 Hole Size — 7 7/8" Rubber Size — 6 3/4"
Bottom Packer Depth 4417 Wt. Pipe I.D. — 2.7 Ft. Run
Total Depth 4443 Drill Collar — 2.25 Ft. Run
Mud Wt. 9.4 lb/gal. Viscosity 45 Filtrate 88
Tool Open @ 2:15 PM Initial Blow 1" blow built to bottom of bucket in 15 minutes (1" blow on shut-in)
Final Blow surface blow building to bottom of bucket in 20 minutes
Recovery — Total Feet 540 Feet of Gas In Pipe 420 Flush Tool? _____
Rec. 480 Feet Of cl gassy oil 10 %gas 90 %oil %water %mud
Rec. 60 Feet Of gassy MCO 20 %gas 50 %oil %water 30 %mud
Rec. _____ Feet Of _____ %gas %oil %water %mud
Rec. _____ Feet Of _____ %gas %oil %water %mud
Rec. _____ Feet Of _____ %gas %oil %water %mud

BHT 126 °F Gravity 38 °API @ 70 °F Corrected Gravity 37 °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides _____ ppm System
(A) Initial Hydrostatic Mud 2241 PSI AK1 Recorder No. 22150 Range 3925
(B) First Initial Flow Pressure 58 PSI @ (depth) 4420 w/Clock No. 22339
(C) First Final Flow Pressure 105 PSI AK1 Recorder No. 24174 Range 3650
(D) Initial Shut-In Pressure 1235 PSI @ (depth) 4437 w/Clock No. 23839
(E) Second Initial Flow Pressure 153 PSI AK1 Recorder No. _____ Range _____
(F) Second Final Flow Pressure 192 PSI @ (depth) _____ w/Clock No. _____
(G) Final Shut-In Pressure 1216 PSI Initial Opening 60 Test 600
(H) Final Hydrostatic Mud 2211 PSI Initial Shut-In 60 Jars _____

Final Flow 60 Safety Joint _____
Final Shut-In 60 Straddle _____
Circ. Sub _____
Sampler _____
Extra Packer _____
Other _____

Approved By _____
Our Representative Paul Simpson

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