15-063-21584

DIAMOND TESTING

P.O. Box 157
HOISINGTON, KANSAS 67544
(620) 653-7550 • (800) 542-7313
STC 21098.D63

Company Ritchie Exploration, Inc. Lease & Well No. Herl 8C No. 1

Elevation 2539 KB Formation Lansing/Kansas City ("H" & "I") Effective Pay --Ft. Ticket No. J1464

Date 2-4-04 Sec. 8 Twp. 14S Range 26W County Gove State Kansas

Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 1 Interval Tested from 3,912 ft. to 3,984 ft. Total Depth 3,984 ft.

Packer Depth 3,907 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 3,912 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 3,915 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 3,981 ft. Recorder Number 13556 Cap. 5,475 psi

Below Straddle Recorder Depth ft. Recorder Number Cap. psi

Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 47 Weight Pipe Length -- ft. I.D. -- in.

Weight 9.2 Water Loss 8.8 cc. Drill Pipe Length 3,892 ft. I.D. 3½ in.

Chlorides 2,000 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 72 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2-XH in.

Blow: 1st Open: Weak blow slowly building to 1 in.
2nd Open: Very weak, ¼ in., blow throughout.

Recovered 25 ft. of oil specked drilling mud = .256500 bbls.

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks

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CONSERVATION DIVISION
WICHITA, KS

Time Set Packer(s) 9:26 ~~A~~P.M. Time Started Off Bottom 11:26 ~~A~~P.M. Maximum Temperature 109°

Initial Hydrostatic Pressure ..... (A) 1882 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 12 P.S.I. to (C) 15 P.S.I.

Initial Closed In Period ..... Minutes 30 (D) 997 P.S.I.

Final Flow Period ..... Minutes 30 (E) 17 P.S.I. to (F) 18 P.S.I.

Final Closed In Period ..... Minutes 30 (G) 948 P.S.I.

Final Hydrostatic Pressure ..... (H) 1879 P.S.I.

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FLUID SAMPLE DATA

Company Ritchie Exploration, Inc.

Lease & Well No. Herl 8C No. 1

Date 2-4-04 Sec. 8 Twp. 14 S Range 26 W

Formation Test No. 1 Interval Tested From 3,912 ft. to 3,984 ft. Total Depth 3,984 ft.

Formation Lansing/Kansas City ("H" & "I")

	MUD PIT	RECOVERY
Viscosity	47 CP	49 CP
Weight	9.2	9.3
Water Loss	8.8 CC	7.0 CC
PH Factor	10.5	10.5

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	--	@	-- °F.	-- ppm
Recovery Mud	2.50	@	60 °F.	3,100 ppm
Recovery Mud Filtrate	3.40	@	63 °F.	2,300 ppm
Mud Pit Sample	3.50	@	65 °F.	2,000 ppm
Mud Pit Sample Filtrate	3.30	@	64 °F.	2,200 ppm

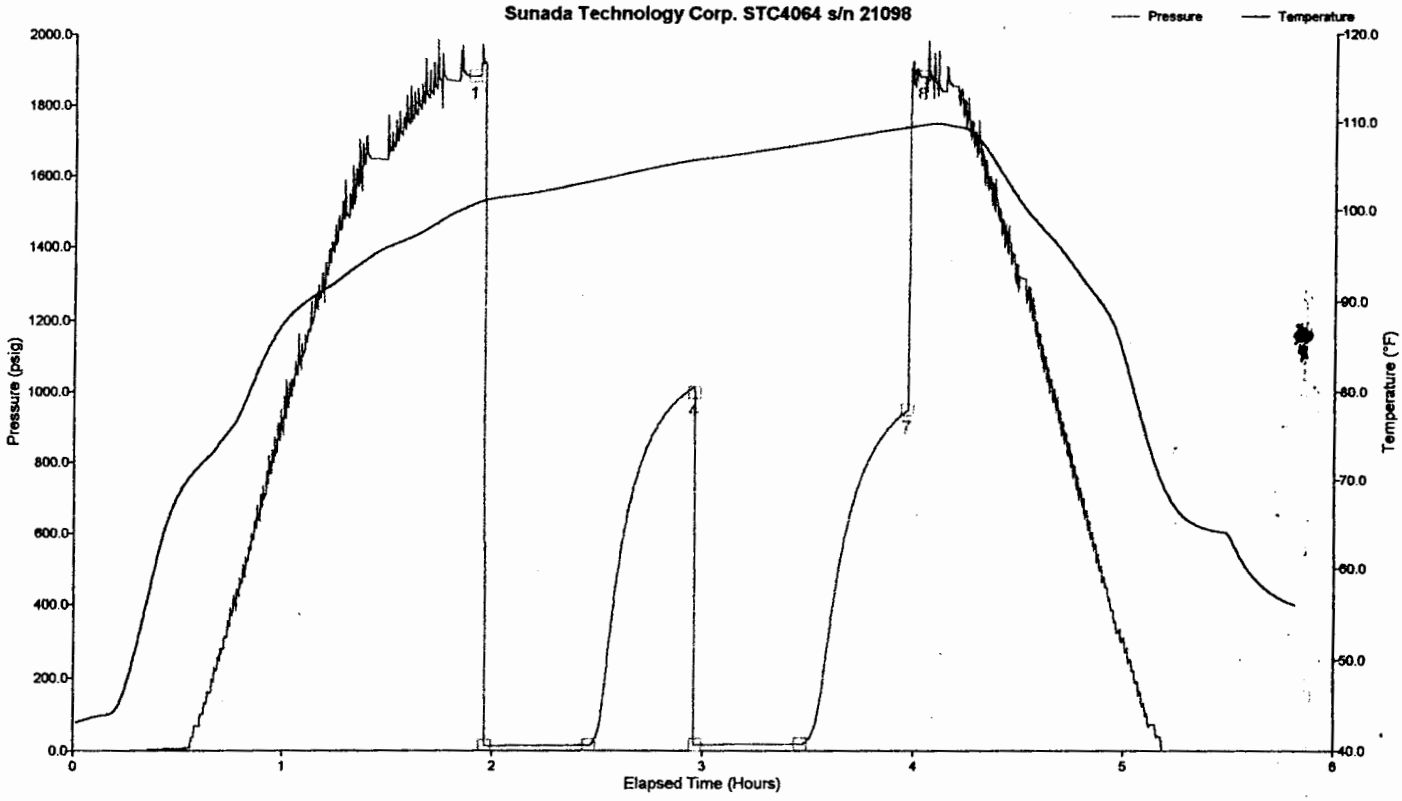
Sample Taken By JOHN C. RIEDL

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 2,000 Ppm.
Recovery filtrate triton dish chlorides were 3,000 Ppm.

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WICHITA, KS

Well LSD: DST 1 LKC H+I 3912-3984
Well Name: 1 HERL 8C
Company: RITCHIE EXPLORATION INC
Battery on: Feb 4, 2004 at 19:30:00
Notes: REC 25' OIL SPECKED DRILLING MUD



Tag	Pressure	Temperature	Comment
1	1881.65 psig	100.76 °F	2004-02-04 21:24:30
2	12.42 psig	101.23 °F	2004-02-04 21:28:00
3	15.10 psig	103.30 °F	2004-02-04 21:57:40
4	996.53 psig	105.76 °F	2004-02-04 22:27:20
5	16.67 psig	105.80 °F	2004-02-04 22:28:00
6	18.48 psig	107.53 °F	2004-02-04 22:58:00
7	947.64 psig	109.47 °F	2004-02-04 23:28:00
8	1879.41 psig	109.71 °F	2004-02-04 23:32:00

(H) Final Hydrostatic Mud ..... 1879 ..... 1879 ..... PSI

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STC 21098.D64

Company Ritchie Exploration, Inc. Lease & Well No. Herl 8C No. 1

Elevation 2539 KB Formation Fort Scott Effective Pay 6 Ft. Ticket No. J1465

Date 2-6-04 Sec. 8 Twp. 14S Range 26W County Gove State Kansas

Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 2 Interval Tested from 4,240 ft. to 4,300 ft. Total Depth 4,300 ft.

Packer Depth 4,235 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 4,240 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 4,243 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 4,297 ft. Recorder Number 13556 Cap. 5,475 psi

Below Straddle Recorder Depth ft. Recorder Number Cap. psi

Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 54 Weight Pipe Length -- ft. I.D. -- in.

Weight 9.2 Water Loss 8.8 cc. Drill Pipe Length 4,220 ft. I.D. 3½ in.

Chlorides 2,400 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 60 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2-XH in.

Blow: 1st Open: Strong blow. Off bottom of bucket in 9 mins. Very weak blow back during shut-in.
2nd Open: Strong blow. Off bottom of bucket in 12 mins. No blow back during shut-in.

Recovered 700 ft. of gas in pipe

Recovered 5 ft. of free oil = .051300 bbls. (Gravity: 41 @ 60°)

Recovered 115 ft. of mud & gas cut oil = 1.179900 bbls. (Grind out: 40%-mud; 10%-gas; 50%-oil)

Recovered 120 ft. of TOTAL FLUID = 1.231200 bbls.

Recovered ft. of

Remarks

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WICHITA, KS

Time Set Packer(s) 7:38 ~~A.M.~~ P.M. Time Started Off Bottom 10:38 ~~A.M.~~ P.M. Maximum Temperature 122°

Initial Hydrostatic Pressure ..... (A) 2087 P.S.I.

Initial Flow Period ..... Minutes 30 (B) 20 P.S.I. to (C) 37 P.S.I.

Initial Closed In Period ..... Minutes 45 (D) 359 P.S.I.

Final Flow Period ..... Minutes 45 (E) 37 P.S.I. to (F) 59 P.S.I.

Final Closed In Period ..... Minutes 60 (G) 292 P.S.I.

Final Hydrostatic Pressure ..... (H) 2069 P.S.I.

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FLUID SAMPLE DATA

Company Ritchie Exploration, Inc.

Lease & Well No. Herl 8C No. 1

Date 2-6-04 Sec. 8 Twp. 14 S Range 26 W

Formation Test No. 2 Interval Tested From 4,240 ft. to 4,300 ft. Total Depth 4,300 ft.

Formation Fort Scott

	MUD PIT	RECOVERY
Viscosity	54 CP	-- CP
Weight	9.2	--
Water Loss	8.8 CC	-- CC
PH Factor	10.0	--

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	--	@ --	°F.	-- ppm
Recovery Mud	--	@ --	°F.	-- ppm
Recovery Mud Filtrate	--	@ --	°F.	-- ppm
Mud Pit Sample	2.40	@ 65	°F.	2,800 ppm
Mud Pit Sample Filtrate	2.60	@ 67	°F.	2,600 ppm

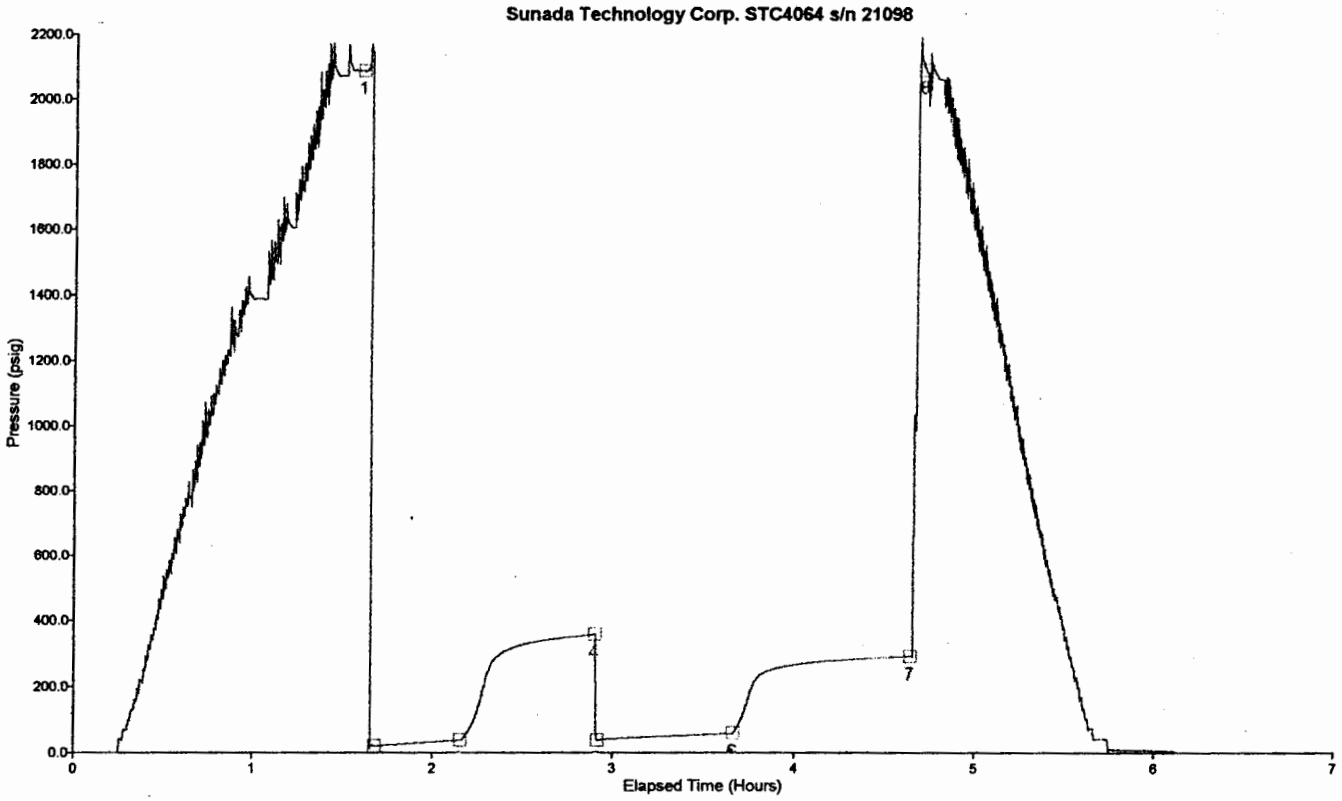
Sample Taken By JOHN C. RIEDL

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 2,400 Ppm.

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WICHITA, KS

Well LSD: DST 2 FORT SCOTT 4240-4300
Well Name: 1 HERL 8C
Company: RITCHIE EXPLORATION INC
Battery on: Feb 6, 2004 at 05:59:00
Notes: 700' GIP 5' FREE OIL 115' HVYMCGO 40%MUD10%GAS50%OIL



Tag	Pressure	Temperature	Comment
1	2086.58 psig	111.03 °F	2004-02-06 07:35:20
2	20.36 psig	112.15 °F	2004-02-06 07:39:50
3	37.32 psig	116.85 °F	2004-02-06 08:08:30
4	359.33 psig	118.75 °F	2004-02-06 08:53:10
5	37.46 psig	118.77 °F	2004-02-06 08:54:00
6	59.29 psig	120.12 °F	2004-02-06 09:39:00
7	292.15 psig	121.94 °F	2004-02-06 10:37:40
8	2089.28 psig	122.35 °F	2004-02-06 10:41:40

(H) Final Hydrostatic Mud.....PSI

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STC 21098.D65

Company Ritchie Exploration, Inc. Lease & Well No. Herl 8C No. 1

Elevation 2539 KB Formation Mississippi Effective Pay 8 Ft. Ticket No. J1466

Date 2-7-04 Sec. 8 Twp. 14S Range 26W County Gove State Kansas

Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 3 Interval Tested from 4,303 ft. to 4,361 ft. Total Depth 4,361 ft.

Packer Depth 4,298 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Packer Depth 4,303 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 4,306 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 4,358 ft. Recorder Number 13556 Cap. 5,475 psi

Below Straddle Recorder Depth ft. Recorder Number Cap. psi

Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 55 Weight Pipe Length -- ft. I.D. -- in.

Weight 9.1 Water Loss 8.8 cc. Drill Pipe Length 4,283 ft. I.D. 3¼ in.

Chlorides 2,500 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 58 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2-XH in.

Blow: 1st Open: Fair blow slowly building to 2 3/4 ins.
2nd Open: Weak, 1 in., blow.

Recovered 70 ft. of gas in pipe

Recovered 10 ft. of free oil = .102600 bbls. (Grind out: 10%-gas; 90%-oil) Gravity: 40 @ 60°

Recovered 40 ft. of gassy muddy oil = .410400 bbls. (Grind out: 10%-gas; 30%-mud; 60%-oil)

Recovered 50 ft. of TOTAL FLUID = .513000 bbls.

Recovered ft. of

Remarks

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CONSERVATION DIVISION
WICHITA, KS

Time Set Packer(s) 2:06 ~~A.M.~~ XXX P.M. Time Started Off Bottom 5:06 ~~A.M.~~ XXX P.M. Maximum Temperature 118°

Initial Hydrostatic Pressure		(A)	2106 P.S.I.		
Initial Flow Period	Minutes 30	(B)	15 P.S.I.	to (C)	22 P.S.I.
Initial Closed In Period	Minutes 45	(D)	1171 P.S.I.		
Final Flow Period	Minutes 45	(E)	25 P.S.I.	to (F)	36 P.S.I.
Final Closed In Period	Minutes 60	(G)	1086 P.S.I.		
Final Hydrostatic Pressure		(H)	2096 P.S.I.		

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FLUID SAMPLE DATA

Company Ritchie Exploration, Inc.

Lease & Well No. Herl 8C No. 1

Date 2-7-04 Sec. 8 Twp. 14 S Range 26 W

Formation Test No. 3 Interval Tested From 4,303 ft. to 4,361 ft. Total Depth 4,361 ft.

Formation Mississippi

	MUD PIT	RECOVERY
Viscosity	55 CP	-- CP
Weight	9.1	--
Water Loss	8.8 CC	-- CC
PH Factor	10.0	--

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	--	@ --	°F.	-- ppm
Recovery Mud	--	@ --	°F.	-- ppm
Recovery Mud Filtrate	--	@ --	°F.	-- ppm
Mud Pit Sample	3.00	@ 55	°F.	2,500 ppm
Mud Pit Sample Filtrate	2.90	@ 57	°F.	2,700 ppm

Sample Taken By JOHN C. RIEDL

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 2,500 Ppm.

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WICHITA, KS

Oil Well Test - Buildup
Radial Flow Analysis



Analysis Results

Total Sandface Rate ($q_t B_t$)	6.094 bbl/d	Apparent Skin (s')	-0.887
Semilog Slope (m)	551.86	Skin - Damage	-0.887
Gas Permeability (k_g)	md	Skin - Inclination	0.000
Oil Permeability (k_o)	0.411 md	Skin - Partial Penetration	
Water Permeability (k_w)	md	Pressure Drop Due to Skin (Δp_s)	psi
Flow Capacity (kh)	3.291 md.ft	Damage Ratio (DR)	0.837
Total Mobility (k/μ_t)	0.22 md/cp	Flow Efficiency (FE)	1.194
Total Transmissivity(kh/μ_t)	1.80 md.ft/cp		

Reservoir Parameters

Net Pay (h)	8.000 ft
Total Porosity (ϕ_t)	10.00%
Water Saturation (S_w)	20.00%
Oil Saturation (S_o)	80.00%
Gas Saturation (S_g)	0.00%
Wellbore Radius (r_w)	0.30 ft
Formation Temperature (T)	120.0 °F
Formation Compressibility (c_f)	4.862e-6 psi^{-1}
Total Compressibility (c_t)	1.366e-5 psi^{-1}

Pressures

Initial Pressure (p_i)	2224.60 psi
Extrapolated Pressure (p*)	1252.21 psi
Ave. Reservoir Press	1252.20 psi
Final Flowing Pressure (p_{wfo})	35.29 psi

Production and Times

Corrected Flow Time (t_c)	0.8800 hr
Cumulative Oil Production	0.183 bbl
Final Oil Rate	5.000 bbl/d

Fluid Properties

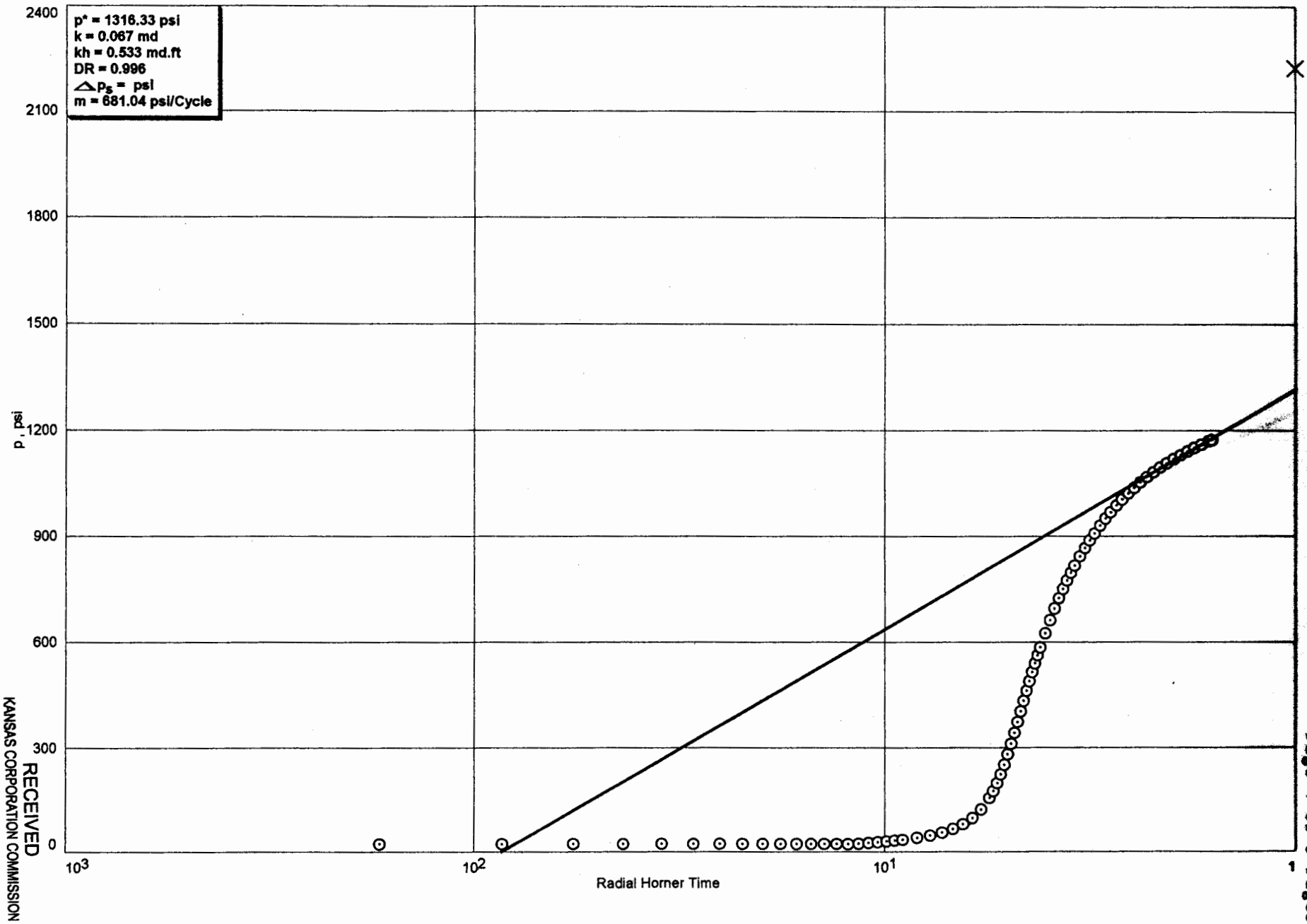
Oil Compressibility (c_o)	1.02612e-5 psi^{-1}
Oil Formation Volume Factor (B_o)	1.219
Oil Viscosity (μ_o)	1.833 cp
Solution Gas Ratio (R_s)	408 scf/bbl
Oil Gravity (γ_o)	30.00° API
Gas Gravity (G)	0.650
PVT Reference Pressure (p_{PVT})	2224.60 psi

Extended Rates Calculations

Specified Flowing Pressure	35.29 psi
Specified Reservoir Pressure	1252.20 psi
Drainage Area	160.0 acres
3 - Month Constant Rate	1.968 bbl/d
6 - Month Constant Rate	1.867 bbl/d
Stabilized Rate @ Current Skin	1.693 bbl/d
Stabilized Rate @ Skin of 0	1.514 bbl/d
Stabilized Rate @ Skin of -4	2.894 bbl/d
PI / II (Total Liquids - Actual)	0.004 bbl/d/psi
PI / II (Total Liquids - Ideal)	0.003 bbl/d/psi
Stab. PI / II (Total Liquids - Actual)	0.001 bbl/d/psi
Stab. PI / II (Total Liquids - Ideal)	0.001 bbl/d/psi

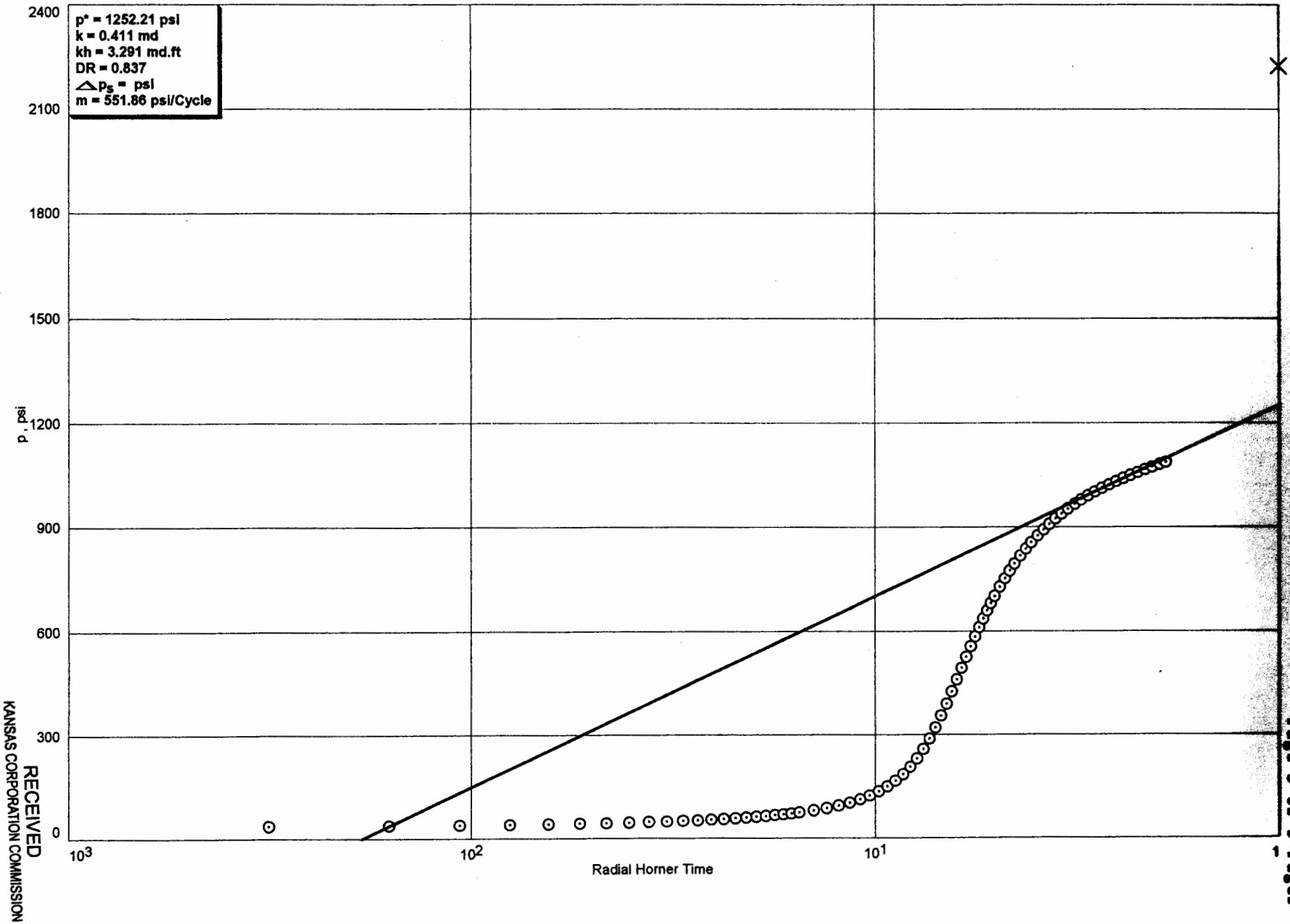
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HERL HORNER DST #3 INITIAL



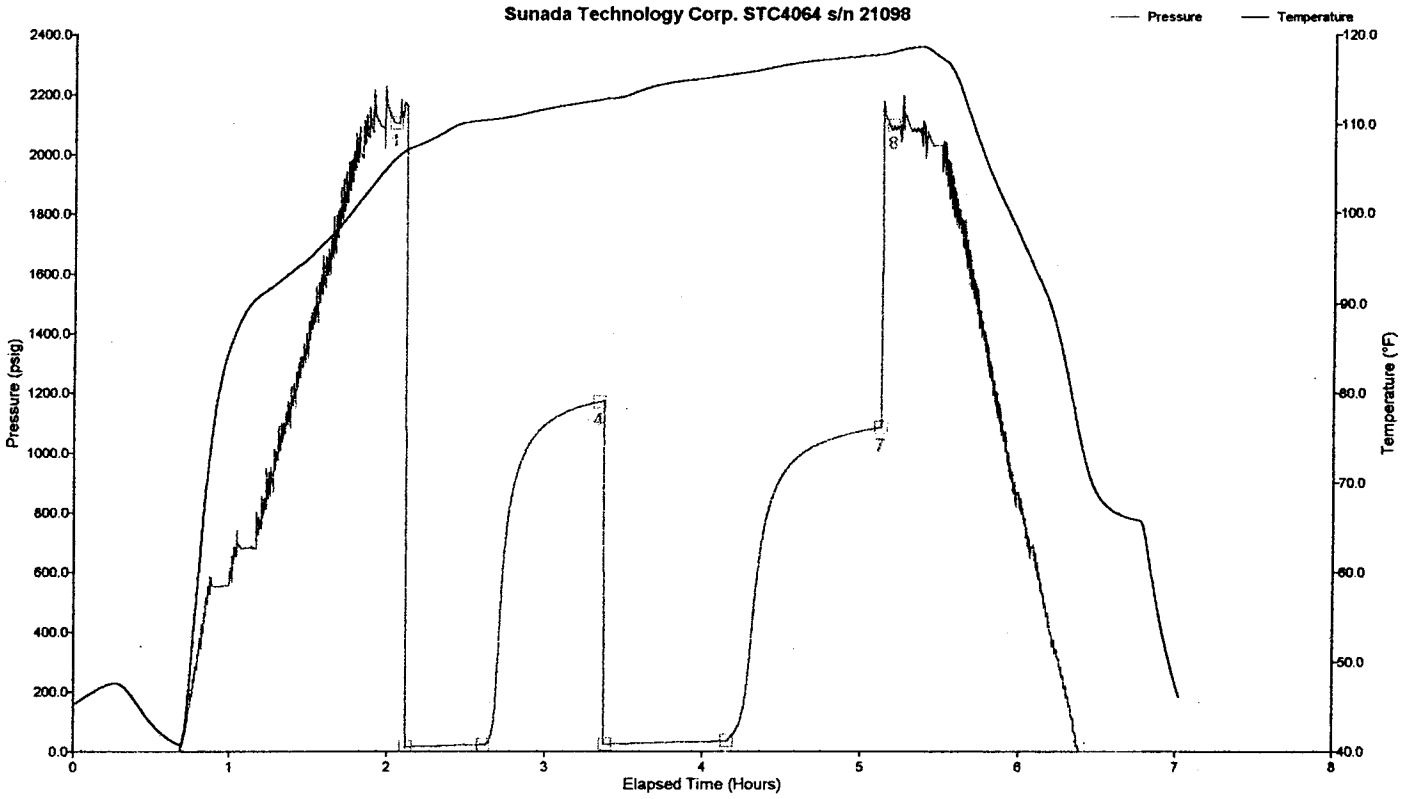
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HERL DST #3 FINAL SHUT IN



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WICHITA, KS

Well Name: 1 HERL 8C
Company: RITCHIE EXPLORATION INC
Battery on: Feb 7, 2004 at 00:01:00
Notes: REC. 70'GIP 10'GO 10%GAS 90%OIL 40'GMO 10%GAS 30%MUD 60%OIL



Tag	Pressure	Temperature	Comment
1	2105.74 psig	106.25 °F	2004-02-07 02:03:40
2	14.73 psig	107.24 °F	2004-02-07 02:08:20
3	22.49 psig	110.49 °F	2004-02-07 02:37:50
4	1170.80 psig	112.76 °F	2004-02-07 03:21:30
5	24.64 psig	112.85 °F	2004-02-07 03:24:10
6	36.37 psig	115.50 °F	2004-02-07 04:10:20
7	1086.49 psig	117.80 °F	2004-02-07 05:08:30
8	2096.16 psig	118.10 °F	2004-02-07 05:12:40

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STC 21098.D66

Company Ritchie Exploration, Inc. Lease & Well No. Herl 8C No. 1

Elevation 2539 KB Formation Mississippi Effective Pay 4 Ft. Ticket No. J1467

Date 2-7-04 Sec. 8 Twp. 14S Range 26W County Gove State Kansas

Test Approved By Kim B. Shoemaker Diamond Representative John C. Riedl

Formation Test No. 4 Interval Tested from 4,359 ft. to 4,371 ft. Total Depth 4,371 ft.

Packer Depth 4,354 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- --in.

Packer Depth 4,359 ft. Size 6 3/4 in. Packer Depth -- ft. Size -- --in.

Depth of Selective Zone Set ft.

Top Recorder Depth (Inside) 4,362 ft. Recorder Number Elec. Cap. 5,000 psi

Bottom Recorder Depth (Outside) 4,368 ft. Recorder Number 13556 Cap. 5,475 psi

Below Straddle Recorder Depth ft. Recorder Number Cap. psi

Drilling Contractor L. D. Drilling, Inc. - Rig 1 Drill Collar Length -- ft. I.D. -- in.

Mud Type Chemical Viscosity 54 Weight Pipe Length -- ft. I.D. -- in.

Weight 9.1 Water Loss 8.8 cc. Drill Pipe Length 4,339 ft. I.D. 3½ in.

Chlorides 3,000 P.P.M. Test Tool Length 20 ft. Tool Size 3 1/2 - IF in.

Jars: Make Bowen Serial Number Not Run Anchor Length 12 ft. Size 4 1/2 - FH in.

Did Well Flow? No Reversed Out No Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2-XH in.

Blow: 1st Open: Fair blow slowly building to 3½ ins. Surface blow back during shut-in.
2nd Open: Fair blow slowly building to 3½ ins. Surface blow back during shut-in.

Recovered 10 ft. of gas in pipe

Recovered 5 ft. of clean oil = .051300 bbls. (Grind out: 10%-gas; 90%-oil) Gravity: 40 @ 60°

Recovered 45 ft. of slightly mud cut gassy oil = .461700 bbls. (Grind out: 10%-mud; 10%-gas; 80%-oil)

Recovered 50 ft. of TOTAL FLUID = .513000 bbls.

Recovered ft. of

Remarks

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CONSERVATION DIVISION
WICHITA, KS

Time Set Packer(s) 3:08 ~~A.M.~~ P.M. Time Started Off Bottom 6:08 ~~A.M.~~ P.M. Maximum Temperature 122°

Initial Hydrostatic Pressure		(A)	2160 P.S.I.		
Initial Flow Period	Minutes 30	(B)	12 P.S.I.	to (C)	21 P.S.I.
Initial Closed In Period	Minutes 45	(D)	1048 P.S.I.		
Final Flow Period	Minutes 45	(E)	19 P.S.I.	to (F)	30 P.S.I.
Final Closed In Period	Minutes 60	(G)	976 P.S.I.		
Final Hydrostatic Pressure		(H)	2123 P.S.I.		

DIAMOND TESTING
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FLUID SAMPLE DATA

Company Ritchie Exploration, Inc.

Lease & Well No. Herl 8C No. 1

Date 2-7-04 Sec. 8 Twp. 14 S Range 26 W

Formation Test No. 4 Interval Tested From 4,359 ft. to 4,371 ft. Total Depth 4,371 ft.

Formation Mississippi

	MUD PIT	RECOVERY
Viscosity	54 CP	-- CP
Weight	9.1	--
Water Loss	8.8 CC	-- CC
PH Factor	10.0	--

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	--	@ --	°F.	-- ppm
Recovery Mud	--	@ --	°F.	-- ppm
Recovery Mud Filtrate	--	@ --	°F.	-- ppm
Mud Pit Sample	3.00	@ 57	°F.	2,400 ppm
Mud Pit Sample Filtrate	3.00	@ 57	°F.	2,400 ppm

Sample Taken By JOHN C. RIEDL

Witness By Kim B. Shoemaker

Remarks Pit filtrate triton dish chlorides were 3,000 Ppm.

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CONSERVATION DIVISION
WICHITA, KS

Oil Well Test - Buildup
Radial Flow Analysis

RITCHIE EXPLORATION, INC.

#1 HERL 8C

DST #4 4,359'-4,371'

Analysis Results

Total Sandface Rate (q_tB_t)	1.318bbl/d	Apparent Skin (s')	-0.625
Semilog Slope (m)	627.40	Skin - Damage	-0.625
Gas Permeability (k_g)	md	Skin - Inclination	0.000
Oil Permeability (k_o)	0.064md	Skin - Partial Penetration	
Water Permeability (k_w)	md	Pressure Drop Due to Skin (Δp_s)	psi
Flow Capacity (kh)	0.255md.ft	Damage Ratio (DR)	0.869
Total Mobility (k/μ_t)	0.09md/cp	Flow Efficiency (FE)	1.151
Total Transmissivity(kh/μ_t)	0.34md.ft/cp		

Reservoir Parameters

Net Pay (h)	4.000ft
Total Porosity (Φ_t)	17.00%
Water Saturation (S_w)	20.00%
Oil Saturation (S_o)	80.00%
Gas Saturation (S_g)	0.00%
Wellbore Radius (r_w)	0.30ft
Formation Temperature (T)	121.0°F
Formation Compressibility (c_f)	3.901e-6psi^{-1}
Total Compressibility (c_t)	1.606e-5psi^{-1}

Pressures

Initial Pressure (p_i)	2293.20psi
Extrapolated Pressure (p*)	1199.89psi
Ave. Reservoir Press	1199.89psi
Final Flowing Pressure (p_{wfo})	30.08psi

Production and Times

Corrected Flow Time (t_c)	1.2500hr
Cumulative Oil Production	0.052bbl
Final Oil Rate	1.000bbl/d

Fluid Properties

Oil Compressibility (c_o)	1.44649e-5psi^{-1}
Oil Formation Volume Factor (B_o)	1.318
Oil Viscosity (μ_{o})	0.746cp
Solution Gas Ratio (R_s)	586scf/bbl
Oil Gravity (γ_o)	40.00° API
Gas Gravity (G)	0.650
PVT Reference Pressure (p_{PVT})	2293.20psi

Extended Rates Calculations

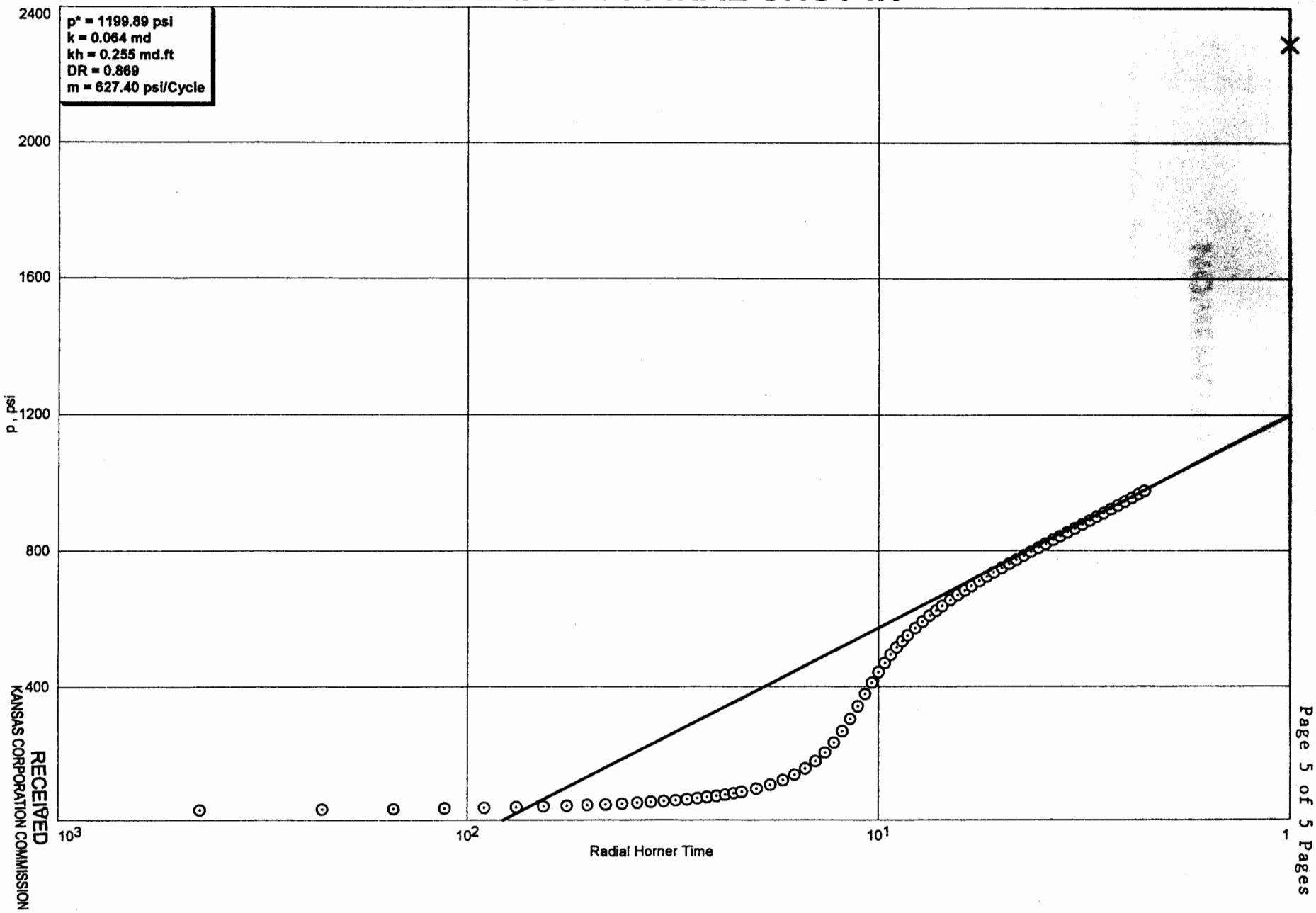
Specified Flowing Pressure	30.08psi
Specified Reservoir Pressure	1199.89psi
Drainage Area	160.0acres
3 - Month Constant Rate	0.365bbl/d
6 - Month Constant Rate	0.345bbl/d
Stabilized Rate @ Current Skin	0.277bbl/d
Stabilized Rate @ Skin of 0	0.256bbl/d
Stabilized Rate @ Skin of -4	0.489bbl/d
PI / II (Total Liquids - Actual)	0.001bbl/d/psi
PI / II (Total Liquids - Ideal)	0.001bbl/d/psi
Stab. PI / II (Total Liquids - Actual)	0.000bbl/d/psi
Stab. PI / II (Total Liquids - Ideal)	0.000bbl/d/psi

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Fast

RITCHIE EXPLORATION, INC.
#1 HERL 8C
DST #4 4,359'-4,371'

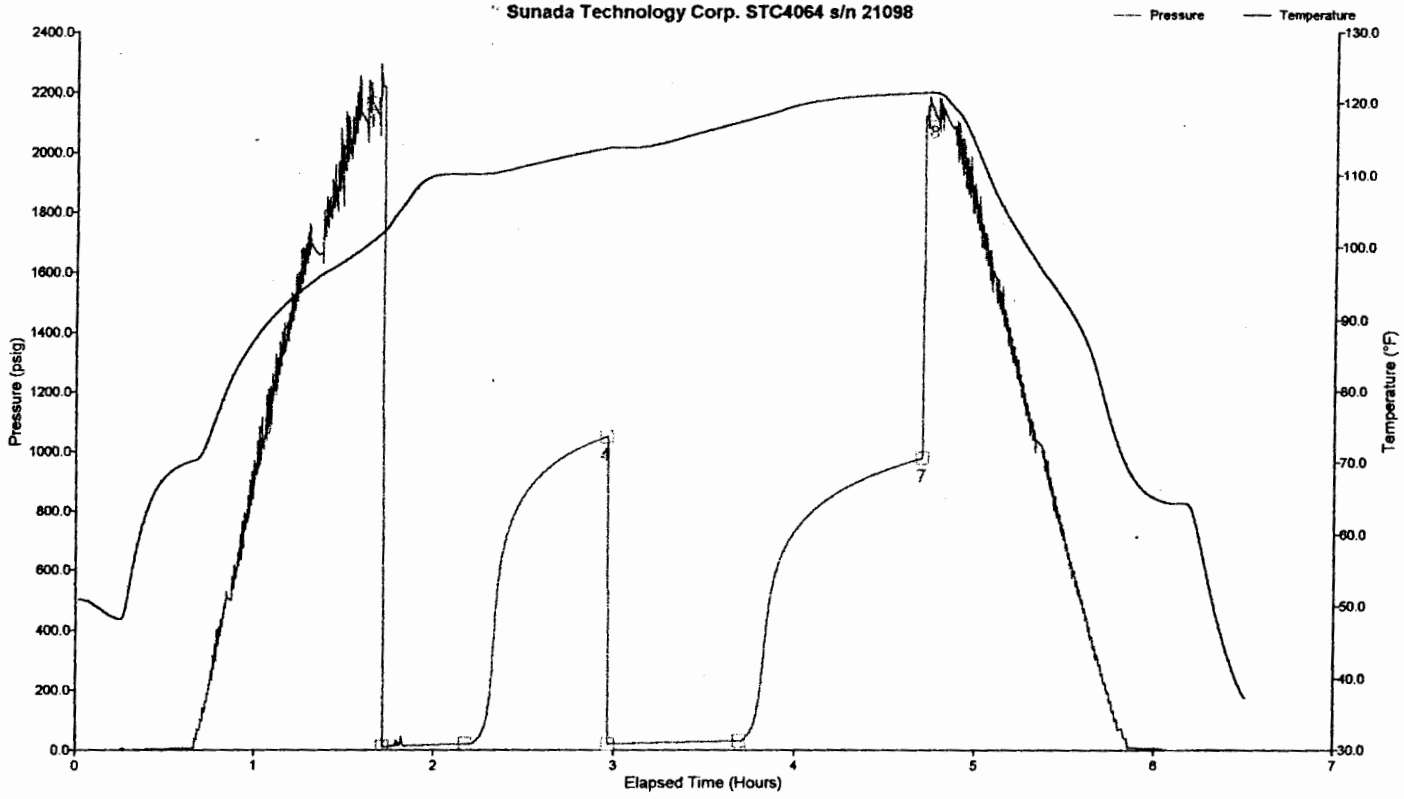
HERL DST #4 FINAL SHUT IN



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WICHITA, KS

08-Feb-04 Ver 4.107

Well LSD: DST 4 MISS 4359-4371
Well Name: 1 HERL 8C
Company: RITCHIE EXPLORATION INC
Battery on: Feb 7, 2004 at 13:25:00
Notes: REC. 10'GIP 5'CLEAN OIL 45'SLMUD+GAS CUT OIL



Tag	Pressure	Temperature	Comment
1	2160.46 psig	100.91 °F	2004-02-07 15:03:40
2	11.74 psig	102.54 °F	2004-02-07 15:08:10
3	20.51 psig	110.22 °F	2004-02-07 15:35:50
4	1047.80 psig	113.87 °F	2004-02-07 16:22:20
5	19.09 psig	113.93 °F	2004-02-07 16:23:10
6	30.02 psig	117.55 °F	2004-02-07 17:06:50
7	975.99 psig	121.53 °F	2004-02-07 18:07:20
8	2123.47 psig	121.55 °F	2004-02-07 18:10:50

(H) Final Hydrostatic Mud ..... 2123 ..... 2123 ..... PSI

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