

Formation Testing Service Report

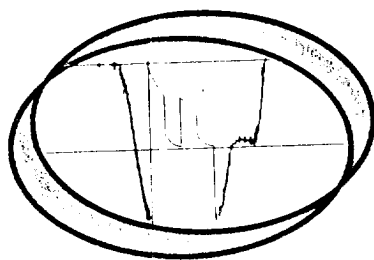
LAMBETH
Lease Name

1
Well No.

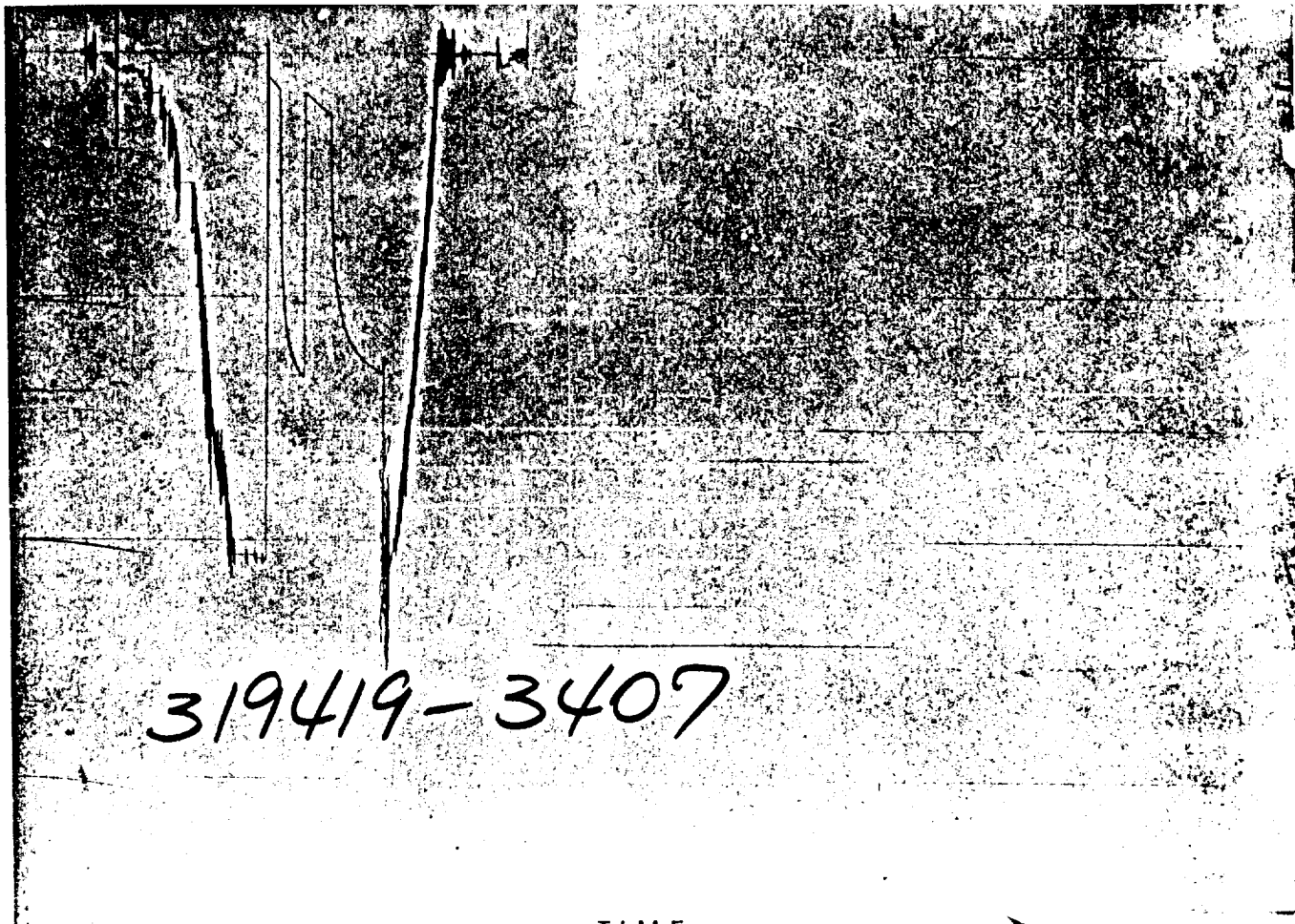
1
Test No.

3981 - 4140'
Tested Interval

ENSERCH EXPLORATION INCORPORATED
Lease Owner/Company Name



HALLIBURTON SERVICES
DUNCAN, OKLAHOMA



319419-3407

PRESSURE

TIME

Each Horizontal Line Equal to 1000 p.s.i.

Casing perf. _____ Bottom choke _____ Surf. temp. _____ °F Ticket No. 315415
 Gas gravity _____ Oil gravity _____ GOR _____
 Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F
 INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED _____

[illegible]

Gauge No.		3407		Depth		4136'		Clock No.		2314		24 hour		Ticket No.		319419	
First Flow Period		First Closed In Pressure		Second Flow Period		Second Closed In Pressure		Third Flow Period		Third Closed In Pressure		Time Defl. .000"		PSIG Temp. Corr.		PSIG Temp. Corr.	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t + \theta}{\theta}$	Time Defl. .000"	$\log \frac{t + \theta}{\theta}$	Time Defl. .000"	$\log \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.
0	.0000	98	.0000	.0000	172	.0000	.0000	.0000	.0000	.0000	.0000	.0000	255	.0000	.0000	.0000	
1	.0066	105	.0066*	.0199**	182	.0199**	.0236***	.0236***	.0236***	.0236***	.0236***	.0236***	966	.0236***	.0236***	.0236***	
2	.0131	115	.0166	.0366	198	.0366	.0439	.0439	.0439	.0439	.0439	.0439	1081	.0439	.0439	.0439	
3	.0197	123	.0265	.0532	215	.0532	.0642	.0642	.0642	.0642	.0642	.0642	1153	.0642	.0642	.0642	
4	.0263	130	.0364	.0698	228	.0698	.0844	.0844	.0844	.0844	.0844	.0844	1198	.0844	.0844	.0844	
5	.0329	137	.0463	.0864	242	.0864	.1047	.1047	.1047	.1047	.1047	.1047	1228	.1047	.1047	.1047	
6	.0394	146	.0563	.1030	255	.1030	.1249	.1249	.1249	.1249	.1249	.1249	1252	.1249	.1249	.1249	
7	.0460	152	.0662	.1281		.1281	.1452	.1452	.1452	.1452	.1452	.1452	1270	.1452	.1452	.1452	
8			.0761	.1297		.1297	.1655	.1655	.1655	.1655	.1655	.1655	1285	.1655	.1655	.1655	
9			.0861	.1312		.1312	.1857	.1857	.1857	.1857	.1857	.1857	1296	.1857	.1857	.1857	
10			.0960	.1324		.1324	.2060	.2060	.2060	.2060	.2060	.2060	1308	.2060	.2060	.2060	
11																	
12																	
13																	
14																	
15																	

Gauge No.	Depth	Clock No.	hour	Minutes
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
Reading Interval	2	3	5	6

REMARKS: *First interval is equal to 2 minutes. ** = 6 minutes. *** = 7 minutes.

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing	6 1/8"	3 1/8"	1'	
Reversing Sub				
Water Cushion Valve				
Drill Pipe	4"	3.240"	3527'	
Drill Collars	6 1/8"	2 1/4"	434'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler	5.03"	.87"	7.50'	3961'
Hydro-Spring Tester	5"	.75"	5'	3966'
Multiple CIP Sampler				
Extension Joint				
AP Running Case				
Hydraulic Jar	5.03"	1.75"	5'	
VR Safety Joint	5"	1"	2.49'	
Pressure Equalizing Crossover				
Packer Assembly				
Distributor				
Packer Assembly				
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly	6 3/4"	1.53"	5'	3976'
Distributor				
Packer Assembly	6 3/4"	1.53"	5'	3981'
Anchor Pipe Safety Joint	5 3/4"	1.50"	4'	
Side Wall Anchor				
Drill Collars	6 1/4"	2 1/4"	117'	
Flush Joint Anchor	5 3/4"	2.87"	34'	
Blanked-Off B.T. Running Case	5 3/4"	2.50"	4'	4136'
Total Depth				4140'

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
$D.R.$	= Damage Ratio	—
EI	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot ($Psi^2/cycle$ Gas)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_f	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water *)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100 °F.

Formation Testing Service Report

LAMBIRTH

Lease Name

1

Well No.

2

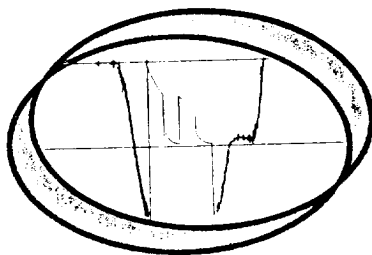
Test No.

7630-7800'

Tested Interval

ENSERCH EXPLORATION INCORPORATED

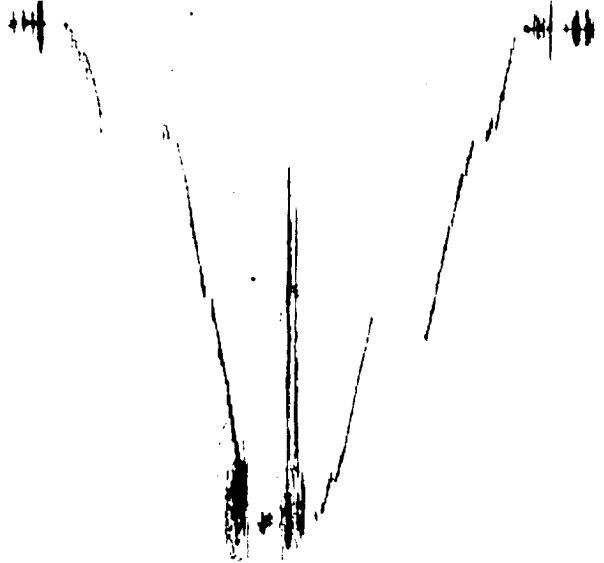
Lease Owner/Company Name



HALLIBURTON SERVICES

DUNCAN, OKLAHOMA

4

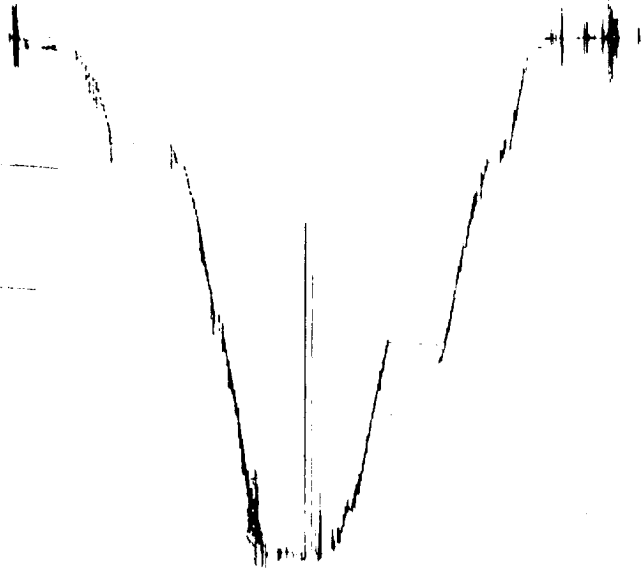


319934-3645

This graph shows a pressure profile over time. The pressure starts at a high level, drops sharply to a minimum, and then rises back to the initial level. The profile is noisy, with several small fluctuations. A vertical line marks the start of the pressure drop, and another vertical line marks the end of the pressure rise.

PRESSURE

TIME



319934-3644

This graph shows a pressure profile over time, similar to the one above. The pressure starts at a high level, drops sharply to a minimum, and then rises back to the initial level. The profile is noisy, with several small fluctuations. A vertical line marks the start of the pressure drop, and another vertical line marks the end of the pressure rise.

Each Horizontal Line Equal to 1000 p.s.i.

FLUID SAMPLE DATA				Date 5 -10-78		Ticket Number 319934	
Sampler Pressure _____ P.S.I.G. at Surface Recovery: Cu. Ft. Gas _____ cc. Oil _____ cc. Water _____ cc. Mud _____ Tot. Liquid cc. _____				Kind of Job OPEN HOLE		Halliburton District HOBBS	
				Tester C. L. CASTELLOW		Witness BRUCE LAWRENCE	
Gravity _____ ° API @ _____ °F.				Drilling Contractor ARD DRILLING COMPANY DR			
Gas/Oil Ratio _____ cu. ft./bbl.				EQUIPMENT & HOLE DATA			
RESISTIVITY				Formation Tested Pennsylvania			
CHLORIDE CONTENT				Elevation 4428' KB Ft.			
				Net Productive Interval 20' Ft.			
Recovery Water _____ @ _____ °F. _____ ppm				All Depths Measured From Rotary Table			
Recovery Mud _____ @ _____ °F. _____ ppm				Total Depth 7800' Ft.			
Recovery Mud Filtrate _____ @ _____ °F. _____ ppm				Main Hole/Casing Size 7 7/8"			
Mud Pit Sample _____ @ _____ °F. _____ ppm				Drill Collar Length 430' I.D. 2.25"			
Mud Pit Sample Filtrate _____ @ _____ °F. _____ ppm				Drill Pipe Length 7160' I.D. 3.340"			
Mud Weight 9.6 vis 43 sec				Packer Depth(s) 7623-7630' Ft.			
				Depth Tester Valve 7590' Ft.			
Cushion		TYPE	AMOUNT	Depth Back Pres. Valve	Surface Choke	Bottom Choke	
					1" Adj.	3/4"	
Recovered		Feet of		Meq. From Tester Valve			
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Remarks Misrun, no packer seat							
2401-Started tools in hole							
610-Opened tool, no packer seat, started out of hole.							
TEMPERATURE		Gauge No. 3645	Gauge No. 3644	Gauge No.		TIME	
		Depth: 7610 Ft.	Depth: 7796 Ft.	Depth: _____ Ft.			
Calc. _____ °F.		24 Hour Clock		24 Hour Clock		Hour Clock	
Est. 150 °F.		Blanked Off NO		Blanked Off YES		Blanked Off	
Actual _____ °F.		Pressures		Pressures		Pressures	
		Field	Office	Field	Office	Field	Office
Initial Hydrostatic			4068		4163		
First Period	Flow Initial						
	Flow Final						
	Closed in						
Second Period	Flow Initial						
	Flow Final						
	Closed in						
Third Period	Flow Initial						
	Flow Final						
	Closed in						
Final Hydrostatic			4068		4163		

 Legal Location
 Sec. - Twp. - Rng.

31-5S-33E

Lease Name

Well No.

Test No.

Tested Interval

 Field Area
WILDCAT

County

ROOSEVELT

State

NEW MEXICO

Lease Owner/Company Name

TICKET NO.

319934

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	6.00"	2.50"	1.00'	
Water Cushion Valve				
Drill Pipe	4.00"	3.340"	7160'	
Drill Collars	6.37"	2.25"	430'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler				
Hydro-Spring Tester	5.00"	.75"	4.00'	7590'
Multiple CIP Sampler	5.00"	.75"	4.00'	
Extension Joint	5.00"	.87"	10.00'	
AP Running Case	5.00"	3.06"	5.00'	7610'
Hydraulic Jar	5.00"	1.75"	5.00'	
VR Safety Joint	5.00"	1.00"	3.00'	
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	5.00'	7623'
Distributor	5.00"	1.68"	2.00'	
Packer Assembly	6.75"	1.53"	5.00'	7630'
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint	5.75"	1.50"	4.00'	
Side Wall Anchor				
Drill Collars	6.37"	2.25"	144.00'	
Flush Joint Anchor	5.75"	3.50"	14.00'	
Blanked-Off B.T. Running Case	5.75"	3.50 "	4.00'	7796'
Total Depth				7800'

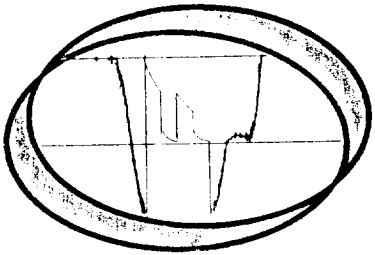
NOMENCLATURE

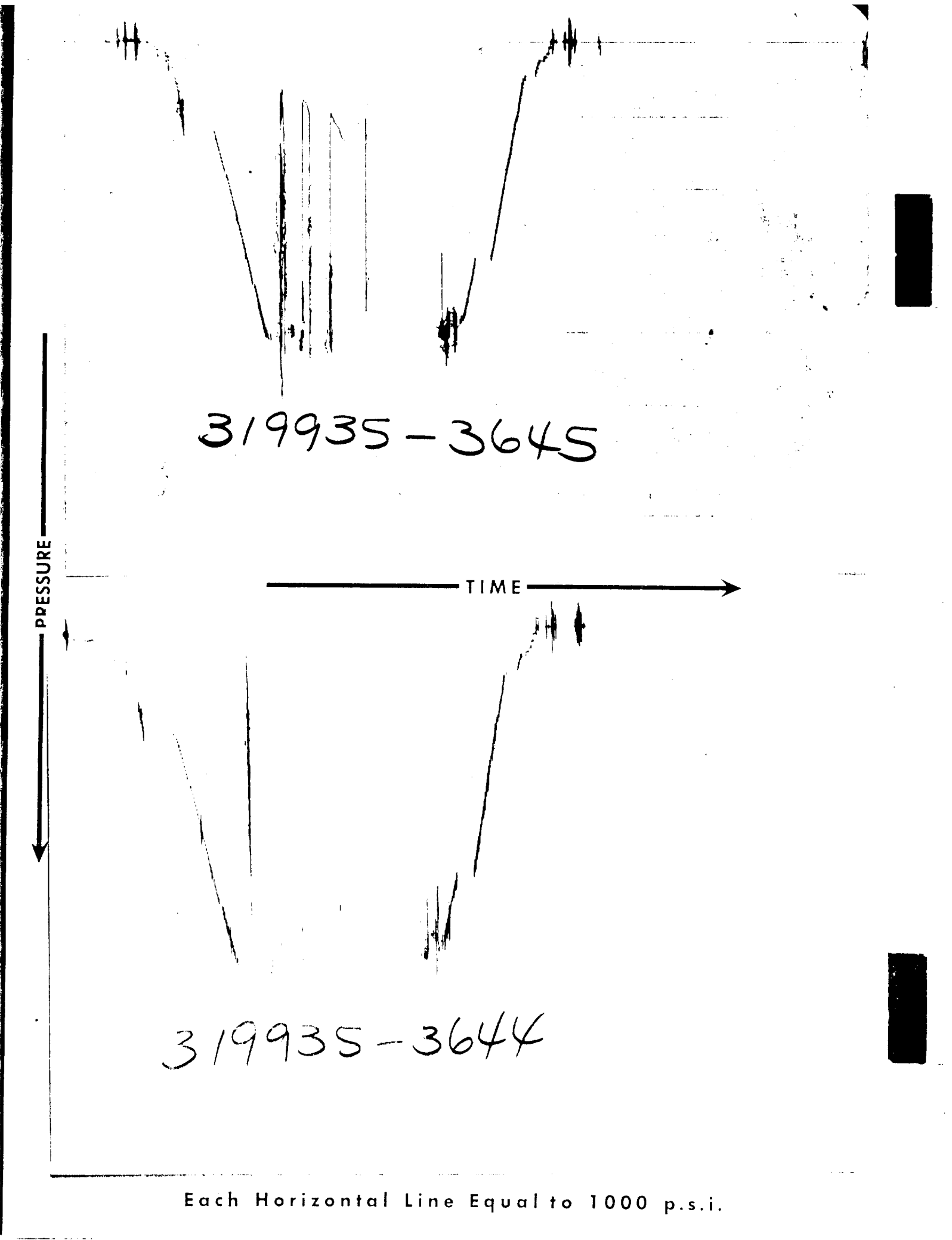
b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
$D.R.$	= Damage Ratio	—
EI	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot ($Psi^2/cycle$ Gas)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_f	= Final Flow Pressure	Psig.
P_o	= Potentiometric Surface (Fresh Water *)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
μ	= Viscosity Gas or Liquid	CP
$\log$	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given,
Fresh Water Corrected to 100 °F.

Information Testing Service Report

LAMBIRTH
Lease Name
1
Well No.
3
Test No.
7666' - 7814'
Tested Interval
ENSERCH EXPLORATION, INCORPORATED
Lease Owner/Company Name





319935-3645

PRESSURE

TIME

319935-3644

Each Horizontal Line Equal to 1000 p.s.i.

FLUID SAMPLE DATA				Date		Ticket Number	
Sampler Pressure 2800 P.S.I.G. at Surface				5-11-78		319935	
Recovery: Cu. Ft. Gas 11.6				Kind of Job OPEN HOLE		Halliburton District HOBBS	
cc. Oil 100				Tester MR. CASTELLOW		Witness MR. BRASHER	
cc. Water				Drilling Contractor ARD DRILLING COMPANY BC			
cc. Mud 50				EQUIPMENT & HOLE DATA			
Tot. Liquid cc. 150				Formation Tested Pennsylvania			
Gravity * API @ °F.				Elevation 4428' KB Ft.			
Gas/Oil Ratio cu. ft./bbl.				Net Productive Interval 20' Ft.			
RESISTIVITY CHLORIDE CONTENT				All Depths Measured From Rotary Table			
Recovery Water @ °F. ppm				Total Depth 7814' Ft.			
Recovery Mud @ °F. ppm				Main Hole/Casing Size 7 7/8"			
Recovery Mud Filtrate @ °F. ppm				Drill Collar Length 460' I.D. 2.25"			
Mud Pit Sample @ °F. ppm				Drill Pipe Length 7166' I.D. 3.340"			
Mud Pit Sample Filtrate @ °F. ppm				Packer Depth(s) 7659' - 7666' Ft.			
Mud Weight 9.7 vis 45 sec				Depth Tester Valve 7626' Ft.			
TYPE		AMOUNT		Depth Back		Surface	
Cushion				Ft. Pres. Valve		Choke 1" ADJ. Bottom Choke 3/4"	
Recovered 289 Feet of Heavily gas cut mud with a trace of oil							
Recovered 573 Feet of Gas cut muddy water							
Recovered Feet of							
Recovered Feet of							
Recovered Feet of							
Remarks SEE PRODUCTION TEST DATA SHEET.							
Closed in pressures highly questionable.....							
UTR = Unable to read							
TEMPERATURE		Gauge No. 3645		Gauge No. 3644		Gauge No.	
		Depth: 7644' Ft.		Depth: 7810' Ft.		Depth: Ft.	
Est. 136 °F.		24 Hour Clock		24 Hour Clock		Hour Clock	
Blanked Off No		Blanked Off Yes		Blanked Off		Tool A.M.	
Actual °F.		Pressures		Pressures		Opened 9:10 P.M.	
		Field Office		Field Office		Opened A.M.	
		Field Office		Field Office		Bypass 2:15 P.M.	
		Field Office		Field Office		Reported Computed	
		Field Office		Field Office		Minutes Minutes	
Initial Hydrostatic		3978 4020		4131 4090			
Flow Initial		-		660		UTR	
Flow Final		-		851		UTR	
Closed in		-		-		5	
Second Period Flow Initial		740 797		891 975			
Flow Final		915 937		1019 1072		15	
Closed in		3274 3332		3401 3399		40	
Third Period Flow Initial		915 932		1019 1068			
Flow Final		958 1002		1061 1100		65	
Closed in		2879 2867		2929 2930		145	
Final Hydrostatic		3934 4020		4088 4090			

Casing perms. _____ Bottom choke _____ Surf. temp. _____ °F Ticket No. 319935
 Gas gravity _____ Oil gravity _____ GOR _____
 Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F
 INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED _____

Date Time	a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
0300						Started tool in hole
0400						Rig broke down
0910		Bubble Hose 1/16"				Opened tool, slid 7'
0912		"	10#			Opened tool with a good blow
0915		"	40			Lost packer seat
						Pulled tool loose
0917		3/8"	80			Gas to surface, bled off pressure
0950		"	0			Opened tool with a good blow, annulus fluid went down
1005		"	230	PACKER HOLDING.....		Closed tool
1045		"	60			Opened tool, gas
1057		"	270			Spray of gas, mud & water
1100		"	400			"
1102		1/2"	400			Changed choke
1115		"	410			Gas
1130		"	430			Light spray of gas & water
1140		"	450			"
1150		"	390			Closed tool. Annulus fluid went down
1415						Pulled tool loose, started out of hole

HALLIBURTON DIVISION LABORATORY

HALLIBURTON COMPANY
LOVINGTON, NEW MEXICO

LABORATORY WATER ANALYSIS

No. W78-435

TICKET # 319935

To ENSERCH EXPLORATION, INCORPORATED

Date

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by Date Rec. 5-12-78

Well No. Lambirth #1 Depth 7814' Formation Pennsylvania

County Roosevelt Field Wildcat Source DST #3

	SAMPLER	TOOL TOP	120' ABOVE TOOL TOP
Resistivity	0.074 @ 74°	0.074 @ 74°	0.074 @ 74°
Specific Gravity	1.071		
pH	6.8		
Calcium (Ca)	21.5 10,750		*MPL
Magnesium (Mg)	Nil		
Chlorides (Cl)	12.0 60,000 12.0 60,000 12.0 60,000		
Sulfates (SO ₄)	2100		
Bicarbonates (HCO ₃)	3.4 415		
Soluble Iron (Fe)	90		
	Res.	Chlorides	API Gravity @ 60°
Top recovery	0.074 @ 74°	12.0 60,000	61.6
Top water	0.074 @ 74°	12.0 60,000	
Pit sample	0.048 @ 74°	12.4 124,000	

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: CC:

HALLIBURTON COMPANY

By CHEMIST

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

14

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	6"	2.50"	1'	
Water Cushion Valve				
Drill Pipe	4"	3.340"	7166'	
Drill Collars	6.37"	2.25"	460'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	4'	7626'
Multiple CIP Sampler	5"	.75"	4'	
Extension Joint	5"	.87"	10'	
AP Running Case	5"	3.06"	5'	7644'
Hydraulic Jar	5"	1.75"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	5'	7659'
Distributor	5"	1.68"	2'	
Packer Assembly	6.75"	1.53"	5'	7666'
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint	5.75"	1.50"	4'	
Side Wall Anchor				
Drill Collars	6.37"	2.25"	116'	
Flush Joint Anchor	5.75"	3.50"	18'	
Blanked-Off B.T. Running Case	5.75"	3.50"	4'	7810'
Total Depth				7814'

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
D.R.	= Damage Ratio	—
El	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
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P_s	= Extrapolated Static Pressure	Psig.
P_f	= Final Flow Pressure	Psig.
P_{or}	= Potentiometric Surface (Fresh Water *)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
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Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given,
Fresh Water Corrected to 100 °F.

Formation Testing Service Report

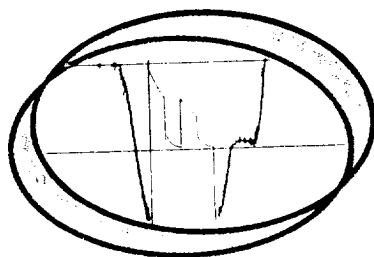
LAMBIRTH
Lease Name

1
Well No.

4
Test No.

Tested Interval

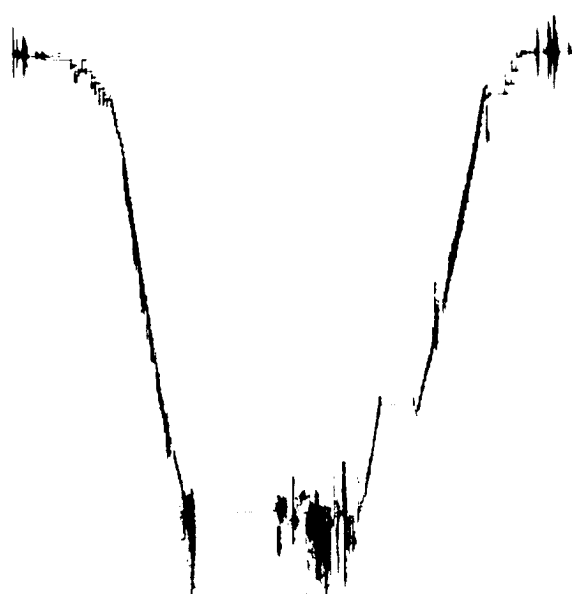
ENSERCH EXPLORATION INCORPORATED
Lease Owner/Company Name



MALLINATHAN SERVICES
DUNCAN, OKLAHOMA



319936-3645



319936-3644

Each Horizontal Line Equal to 1000 p.s.i.

FLUID SAMPLE DATA				Date 5-13-78		Ticket Number 319936	
Sampler Pressure _____ P.S.I.G. at Surface				Kind of Job OPEN HOLE		Halliburton District HOBBS	
Recovery: Cu. Ft. Gas _____				Tester C. L. CASTELLOW Witness PERRY BRASHER			
cc. Oil _____				Drilling Contractor ARD DRILLING COMPANY DR			
cc. Water _____				EQUIPMENT & HOLE DATA			
cc. Mud _____				Formation Tested Pennsylvania			
Tot. Liquid cc. _____				Elevation 4428' KB Ft.			
Gravity _____ ° API @ _____ °F.				Net Productive Interval - Ft.			
Gas/Oil Ratio _____ cu. ft./bbl.				All Depths Measured From Rotary Table			
RESISTIVITY CHLORIDE CONTENT				Total Depth 7850' Ft.			
Recovery Water @ _____ °F. _____ ppm				Main Hole/Casing Size 7 7/8"			
Recovery Mud @ _____ °F. _____ ppm				Drill Collar Length 565' I.D. 2.25"			
Recovery Mud Filtrate @ _____ °F. _____ ppm				Drill Pipe Length -- I.D. 3.340"			
Mud Pit Sample @ _____ °F. _____ ppm				Packer Depth(s) - Ft.			
Mud Pit Sample Filtrate @ _____ °F. _____ ppm				Depth Tester Valve - Ft.			
Mud Weight 9.8 vis 47 sec							
TYPE		AMOUNT		Depth Back		Surface	
Cushion				Ft. Pres. Valve		Choke 1" Adj. Bottom Choke 3/4"	
Recovered		Feet of		Meo. From Tester Valve			
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Remarks MISRUN, HIT BRIDGE 1000' OFF BOTTOM							
2401-Started tools in hole							
0430-Pulled tools out of hole							
TEMPERATURE		Gauge No. 3645		Gauge No. 3644		Gauge No.	
		Depth: - Ft.		Depth: - Ft.		Depth: - Ft.	
		24 Hour Clock		24 Hour Clock		Hour Clock	
Est. °F.		Blanked Off NO		Blanked Off YES		Blanked Off	
Actual °F.		Pressures		Pressures		Pressures	
		Field Office		Field Office		Field Office	
Initial Hydrostatic						Reported Minutes	
First Period Flow Initial						Computed Minutes	
Flow Final							
Closed in		NO READINGS AVAILABLE, COULD NOT GET TO BOTTOM					
Second Period Flow Initial							
Flow Final							
Closed in							
Third Period Flow Initial							
Flow Final							
Closed in							
Final Hydrostatic							

Legal Location Sec. - Twp. - Rng. **31-55-33E**

Lease Name **LAMBIRTH**

Well No. **1**

Test No. **4**

Tested Interval **-----**

County **ROOSEVELT**

State **NEW MEXICO**

Field Area **WILDCAT**

Lease Owner/Company Name **ENSERCH EXPLORATION INCORPORATED**

TICKET NO.

319936

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing	6.00"	2.50"	1.00'	
Reversing Sub				
Water Cushion Valve				
Drill Pipe	4.00"	3.340"		
Drill Collars	6.37"	2.25"	565'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler				
Hydro-Spring Tester	5.00"	.75"	4.00'	
Multiple CIP Sampler	5.00"	.75"	4.00'	
Extension Joint	5.00"	.87"	10.00'	
AP Running Case	5.00"	3.06"	5.00'	
Hydraulic Jar	5.00"	1.75"	5.00'	
VR Safety Joint	5.00"	1.00"	3.00'	
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	5.00'	
Distributor	5.00"	1.68"	2.00'	
Packer Assembly	6.75"	1.53"	5.00'	
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor	5.75"	3.50"	24.00'	
Blanked-Off B.T. Running Case	5.75"	3.50"	4.00'	
Total Depth				7850'

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
$D.R.$	= Damage Ratio	—
E_l	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot (Psi ² /cycle Gas)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_f	= Final Flow Pressure	Psig.
P_{o1}	= Potentiometric Surface (Fresh Water *)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
μ	= Viscosity Gas or Liquid	CP
$\log$	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100 °F.

Formation Testing Service Report

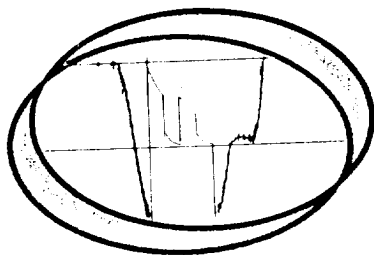
LAMBIRTH
Lease Name

1
Well No.

5
Test No.

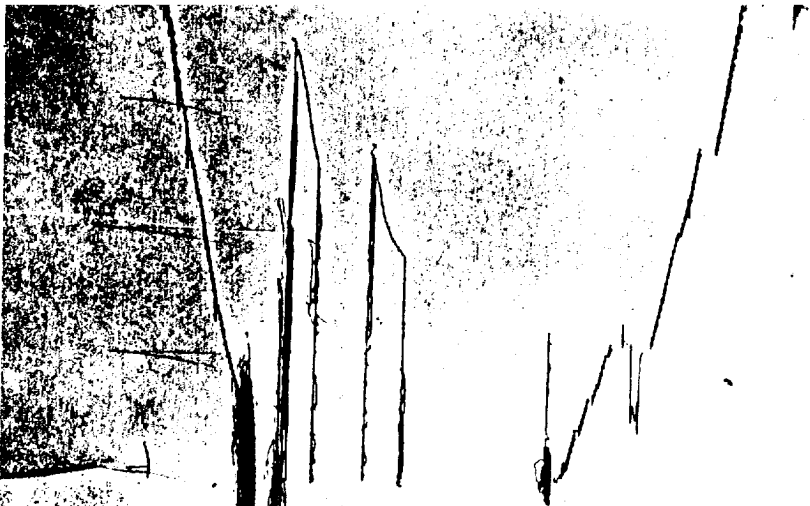
7820 - 7850'
Tested Interval

ENSERCH EXPLORATION INCORPORATED
Lease Owner/Company Name



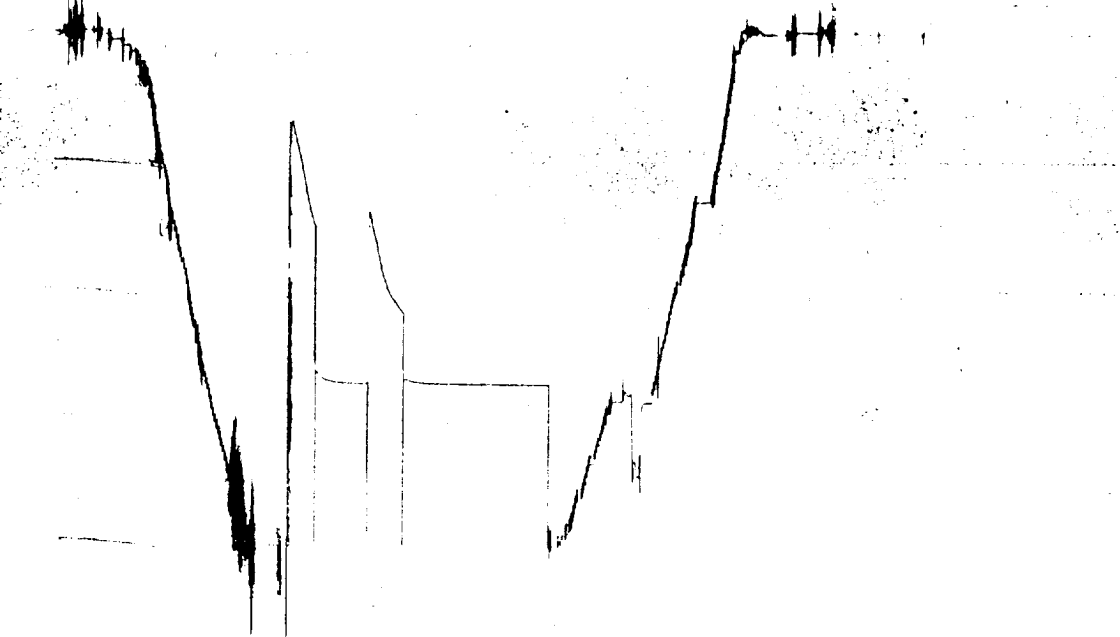
WALLMART SERVICES
DUNCAN, OKLAHOMA

+



319937-3645

This graph shows pressure response over time for well 319937-3645. The y-axis is labeled 'PRESSURE' with a downward arrow, and the x-axis is labeled 'TIME' with a rightward arrow. The plot shows a series of sharp, vertical pressure spikes, indicating intermittent high-pressure events. The baseline pressure is relatively stable but shows a slight downward trend over time.



319937-3644

This graph shows pressure response over time for well 319937-3644. The y-axis is labeled 'PRESSURE' with a downward arrow, and the x-axis is labeled 'TIME' with a rightward arrow. The plot shows a series of sharp, vertical pressure spikes, indicating intermittent high-pressure events. The baseline pressure is relatively stable but shows a slight downward trend over time.

Each Horizontal Line Equal to 1000 p.s.i.

[illegible]

Gauge No.		3645		Depth		7797'		Clock No.		2493		24 hour		Ticket No.		319937	
First Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Third Flow Period		Closed In Pressure		Third Flow Period	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.
0	.0000	523	.0000	.0000	1462	.0000	.0000	.0000	2184	.0000	.0000	.0000	2184	.0000	.0000	.0000	2184
1	.0135*	599	.0100**	.0300**	1647	.0300**	.0300**	.0262	2729	.0262	.0262	.0262	2729	.0262	.0262	.0262	2729
2	.0304	769	.0233	.0500	1860	.0500	.0500	.0525	2740	.0525	.0525	.0525	2740	.0525	.0525	.0525	2740
3	.0473	926	.0366	.0700	1987	.0700	.0700	.0787	2744	.0787	.0787	.0787	2744	.0787	.0787	.0787	2744
4	.0642	1139	.0498	.0900	2070	.0900	.0900	.1050	2746	.1050	.1050	.1050	2746	.1050	.1050	.1050	2746
5	.0811	1322	.0631	.1100	2136	.1100	.1100	.1312	2748	.1312	.1312	.1312	2748	.1312	.1312	.1312	2748
6	.0980	1462	.0764	.1300	2184	.1300	.1300	.1574	2751	.1574	.1574	.1574	2751	.1574	.1574	.1574	2751
7			.0897		2740			.1837	2753	.1837	.1837	.1837	2753	.1837	.1837	.1837	2753
8			.1030		2742			.2100	2753	.2100	.2100	.2100	2753	.2100	.2100	.2100	2753
9			.1163		2744			.2919	2753	.2919	.2919	.2919	2753	.2919	.2919	.2919	2753
10			.1296		2746			.3739	2753	.3739	.3739	.3739	2753	.3739	.3739	.3739	2753
11			.1429		2748			.4560	2753	.4560	.4560	.4560	2753	.4560	.4560	.4560	2753
12			.1562		2751			.5380	2753	.5380	.5380	.5380	2753	.5380	.5380	.5380	2753
13			.1695		2751												
14			.1827		2751												
15			.1960		2751												

Gauge No.		3644		Depth		7846'		Clock No.		7275		24hour	
First Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Third Flow Period	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.
0	.0000	711	.0000	.0000	1409	.0000	.0000	.0000	2191	.0000	.0000	.0000	2191
1	.0131*	726	.0098**	.0295**	1667	.0295**	.0295**	.0262	2731	.0262	.0262	.0262	2731
2	.0295	883	.0229	.0492	1881	.0492	.0492	.0524	2745	.0524	.0524	.0524	2745
3	.0459	1038	.0360	.0689	2004	.0689	.0689	.0786	2749	.0786	.0786	.0786	2749
4	.0622	1231	.0491	.0886	2081	.0886	.0886	.1048	2753	.1048	.1048	.1048	2753
5	.0786	1388	.0621	.1083	2140	.1083	.1083	.1310	2753	.1310	.1310	.1310	2753
6	.0959	1519	.0752	.1280	2191	.1280	.1280	.1571	2755	.1571	.1571	.1571	2755
7			.0883		2747			.1833	2755	.1833	.1833	.1833	2755
8			.1014		2749			.2095	2757	.2095	.2095	.2095	2757
9			.1145		2751			.2914	2757	.2914	.2914	.2914	2757
10			.1275		2753			.3732	2757	.3732	.3732	.3732	2757
11			.1406		2753			.4551	2760	.4551	.4551	.4551	2760
12			.1537		2753			.5370	2760	.5370	.5370	.5370	2760
13			.1668		2755								
14			.1799		2755								
15			.1930		2755								

Gauge No.		3644		Depth		7846'		Clock No.		7275		24hour	
First Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Third Flow Period	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.
0	.0000	711	.0000	.0000	1409	.0000	.0000	.0000	2191	.0000	.0000	.0000	2191
1	.0131*	726	.0098**	.0295**	1667	.0295**	.0295**	.0262	2731	.0262	.0262	.0262	2731
2	.0295	883	.0229	.0492	1881	.0492	.0492	.0524	2745	.0524	.0524	.0524	2745
3	.0459	1038	.0360	.0689	2004	.0689	.0689	.0786	2749	.0786	.0786	.0786	2749
4	.0622	1231	.0491	.0886	2081	.0886	.0886	.1048	2753	.1048	.1048	.1048	2753
5	.0786	1388	.0621	.1083	2140	.1083	.1083	.1310	2753	.1310	.1310	.1310	2753
6	.0959	1519	.0752	.1280	2191	.1280	.1280	.1571	2755	.1571	.1571	.1571	2755
7			.0883		2747			.1833	2755	.1833	.1833	.1833	2755
8			.1014		2749			.2095	2757	.2095	.2095	.2095	2757
9			.1145		2751			.2914	2757	.2914	.2914	.2914	2757
10			.1275		2753			.3732	2757	.3732	.3732	.3732	2757
11			.1406		2753			.4551	2760	.4551	.4551	.4551	2760
12			.1537		2753			.5370	2760	.5370	.5370	.5370	2760
13			.1668		2755								
14			.1799		2755								
15			.1930		2755								

Gauge No.		3644		Depth		7846'		Clock No.		7275		24hour	
First Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Third Flow Period	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.
0	.0000	711	.0000	.0000	1409	.0000	.0000	.0000	2191	.0000	.0000	.0000	2191
1	.0131*	726	.0098**	.0295**	1667	.0295**	.0295**	.0262	2731	.0262	.0262	.0262	2731
2	.0295	883	.0229	.0492	1881	.0492	.0492	.0524	2745	.0524	.0524	.0524	2745
3	.0459	1038	.0360	.0689	2004	.0689	.0689	.0786	2749	.0786	.0786	.0786	2749
4	.0622	1231	.0491	.0886	2081	.0886	.0886	.1048	2753	.1048	.1048	.1048	2753
5	.0786	1388	.0621	.1083	2140	.1083	.1083	.1310	2753	.1310	.1310	.1310	2753
6	.0959	1519	.0752	.1280	2191	.1280	.1280	.1571	2755	.1571	.1571	.1571	2755
7			.0883		2747			.1833	2755	.1833	.1833	.1833	2755
8			.1014		2749			.2095	2757	.2095	.2095	.2095	2757
9			.1145		2751			.2914	2757	.2914	.2914	.2914	2757
10			.1275		2753			.3732	2757	.3732	.3732	.3732	2757
11			.1406		2753			.4551	2760	.4551	.4551	.4551	2760
12			.1537		2753			.5370	2760	.5370	.5370	.5370	2760
13			.1668		2755								
14			.1799		2755								
15			.1930		2755								

Gauge No.		3644		Depth		7846'		Clock No.		7275		24hour	
First Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Third Flow Period	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.
0	.0000	711	.0000	.0000	1409	.0000	.0000	.0000	2191	.0000	.0000	.0000	2191
1	.0131*	726	.0098**	.0295**	1667	.0295**	.0295**	.0262	2731	.0262	.0262	.0262	2731
2	.0295	883	.0229	.0492	1881	.0492	.0492	.0524	2745	.0524	.0524	.0524	2745
3	.0459	1038	.0360	.0689	2004	.0689	.0689	.0786	2749	.0786	.0786	.0786	2749
4	.0622	1231	.0491	.0886	2081	.0886	.0886	.1048	2753	.1048	.1048	.1048	2753
5	.0786	1388	.0621	.1083	2140	.1083	.1083	.1310	2753	.1310	.1310	.1310	2753
6	.0959	1519	.0752	.1280	2191	.1280	.1280	.1571	2755	.1571	.1571	.1571	2755
7			.0883		2747			.1833	2755	.1833	.1833	.1833	2755
8			.1014		2749			.2095	2757	.2095	.2095	.2095	2757
9			.1145		2751			.2914	2757	.2914	.2914	.2914	2757
10			.1275		2753			.3732	2757	.3732	.3732	.3732	2757
11			.1406		2753			.4551	2760	.4551	.4551	.4551	2760
12			.1537		2753			.5370	2760	.5370	.5370	.5370	2760
13			.1668		2755								
14			.1799		2755								
15			.1930		2755								

Gauge No.		3644		Depth		7846'		Clock No.		7275		24hour	
First Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Third Flow Period	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\log \frac{t+\theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.
0	.0000	711	.0000	.0000	1409	.0000	.0000	.0000	2191	.0000	.0000	.0000	2191
1	.0131*	726	.0098**	.0295**	1667	.0295**	.0295**	.0262	2731	.0262	.0262	.0262	2731
2	.0295	883	.0229	.0492	1881	.0492	.0492	.0524	2745	.0524	.0524	.0524	2745
3	.0459	1038	.0360	.0689	2004	.0689	.0689	.0786	2749	.0786	.0786	.0786	2749
4	.0622	1231											

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	6"	2.50"	1'	
Water Cushion Valve				
Drill Pipe	4"	3.340"	7214'	
Drill Collars	6.37"	2.25"	565'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	4'	7779'
Multiple CIP Sampler	5"	.75"	4'	
Extension Joint	5"	.87"	10'	
AP Running Case	5"	3.06"	5'	7797'
Hydraulic Jar	5"	1.75"	5'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	6'	7812'
Distributor	5"	1.68"	2'	
Packer Assembly	6.75"	1.53"	6'	7820'
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor	5.75"	3.50"	23'	
Blanked-Off B.T. Running Case	5"	2.62"	5'	7846'
Total Depth				7850'

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
D.R.	= Damage Ratio	—
El	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot ($\text{Psi}^2/\text{cycle Gas}$)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_f	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water *)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	—
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100 °F.