



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 3100

P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

Elevation _____ Formation Toronto Eff. Pay 9 Ft.

District 12 Date 1-19-84 Customer Order No. _____

COMPANY NAME McGuinness Oil Co

ADDRESS 1026 Union Center Bld. Wichita KS

LEASE AND WELL NO. McGuire #1-B COUNTY Barber STATE KS Sec. 13 Twp. 32S Rge. 11W

Mail Invoice To Same No. Copies Requested Reg

Co. Name #1 "B" McGuire Address _____

Mail Charts To Same No. Copies Requested Reg

Address _____

Formation Test No. 1 Interval Tested From 3618 ft. to 3652 ft. Total Depth 3652 ft.

Packer Depth 3613 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.

Packer Depth 3618 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3642 ft. Recorder Number 13402 Cap. 4025

Bottom Recorder Depth (Outside) 3645 ft. Recorder Number 1559 Cap. 4200

Below Saddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____

Drilling Contractor Dunne & Gardner #1 Drill Collar Length _____ I. D. _____ in.

Mud Type Chem Viscosity 39 Weight Pipe Length 360 I. D. 3.2 in.

Weight 9.2 Water Loss 9.5 cc. Drill Pipe Length 3238 I. D. 3.8 in.

Chlorides 24,000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.

Jars: Make WTC Serial Number 4 Anchor Length 34 ft. Size 5 1/2 OD in.

Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

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

Blow: Strong GTS 1 min See Gss Flow Report

Recovered 125 ft. of Gassy Distillate (sp) Cut mud

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Chlorides _____ P.P.M. Sample Jars used _____ Remarks: _____

Time On Location 11:45 A.M. Time Pick Up Tool 1:45 A.M. Time Off Location 6:30 A.M.

Time Set Packer(s) 3:00 A.M. Time Started Off Bottom 4:30 A.M. Maximum Temperature 112°F

Initial Hydrostatic Pressure _____ (A) 1744 P.S.I.

Initial Flow Period _____ Minutes 15 (B) 324 P.S.I. to (C) 334 P.S.I.

Initial Closed In Period _____ Minutes 30 (D) 1414 P.S.I.

Final Flow Period _____ Minutes 15 (E) 364 P.S.I. to (F) 364 P.S.I.

Final Closed In Period _____ Minutes 30 (G) 1414 P.S.I.

Final Hydrostatic Pressure _____ (H) 1744 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By [Signature]

Signature of Customer or his authorized representative

Western Representative [Signature] 1425

FIELD INVOICE

Open Hole Test \$ 550.00
Misrun \$ _____
Straddle Test \$ _____
Jars \$ _____
Selective Zone \$ _____
Safety Joint \$ _____
Standby \$ _____
Evaluation \$ _____
Extra Packer \$ _____
Circ. Sub. \$ _____
Mileage \$ _____
Fluid Sampler \$ _____
Extra Charts \$ _____
Insurance \$ _____
Telecopier \$ _____
TOTAL \$ _____

N^o 3734

GAS FLOW REPORT

Date 1-19-84 Ticket 3100 Company M'Guinness Oil Co.
 Well Name and No. M'Guire #1-B Dst No. 1 Interval Tested 3618-52
 County Barber State KS Sec. 13 Twp. 32s Rg. 11w

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
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PRE FLOW

GTS 1 min.

5	26	1 1/2			2,319,000 cfpd
10	26	1 1/2			2,319,000
15	26	1 1/2			2,319,000

SECOND FLOW

5	30	1 1/2			2,558,000 cfpd
10	30	1 1/2			2,558,000
15	30	1 1/2			2,558,000

GAS BOTTLE

Serial No. _____ Date Bottle Filled _____ Date to be Invoiced _____

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1 1/2% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME _____

Authorized by _____

WESTERN TESTING CO., INC.

Pressure Data

Date 1-19 Test Ticket No. 3100

Recorder No. 13402 Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1737</u> P.S.I.		M	
B First Initial Flow Pressure	<u>312</u> P.S.I.	First Flow Pressure	Mins.	Mins.
C First Final Flow Pressure	<u>328</u> P.S.I.	Initial Closed-in Pressure	Mins.	Mins.
D Initial Closed-in Pressure	<u>1402</u> P.S.I.	Second Flow Pressure	Mins.	Mins.
E Second Initial Flow Pressure	<u>358</u> P.S.I.	Final Closed-in Pressure	Mins.	Mins.
F Second Final Flow Pressure	<u>358</u> P.S.I.			
G Final Closed-in Pressure	<u>1396</u> P.S.I.			
H Final Hydrostatic Mud	<u>1730</u> P.S.I.			

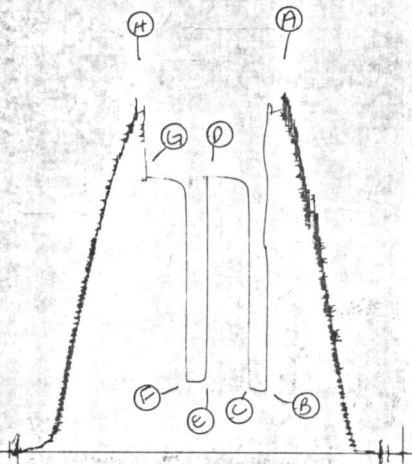
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>4</u> Inc.		Breakdown: <u>11</u> Inc.		Breakdown: <u>4</u> Inc.		Breakdown: <u>11</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>312</u>	0	<u>328</u>	0	<u>358</u>	0	<u>358</u>
P 2 5	<u>312</u>	3	<u>1369</u>	5	<u>7</u>	3	<u>1357</u>
P 3 10	<u>325</u>	6	<u>1382</u>	10		6	<u>1373</u>
P 4 15	<u>328</u>	9	<u>1390</u>	15	<u>358</u>	9	<u>1381</u>
P 5 20		12	<u>1394</u>	20		12	<u>1387</u>
P 6 25		15	<u>1397</u>	25		15	<u>1390</u>
P 7 30		1 18 1.83	<u>1398</u>	30		1 18 1.83	<u>1392</u>
P 8 35		2 21 1.71	<u>1399</u>	35		2 21 1.71	<u>1393</u>
P 9 40		3 24 1.62	<u>1400</u>	40		3 24 1.62	<u>1394</u>
P10 45		4 27 1.55	<u>1401</u>	45		4 27 1.55	<u>1395</u>
P11 50		5 30 1.5	<u>1402</u>	50		5 30 1.5	<u>1396</u>
P12 55		38		55		38	
P13 60		36		60		36	
P14		39		65		39	
P15		42		70		42	
P16		45		75		45	
P17		48		80		48	
P18		51		85		51	
P19		54		90		54	
P20		57				57	
		60				60	

15902
DST #1

TC# 3100

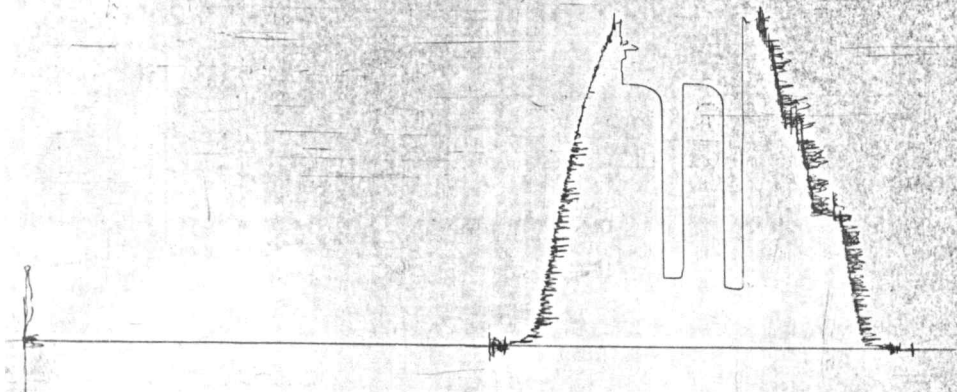
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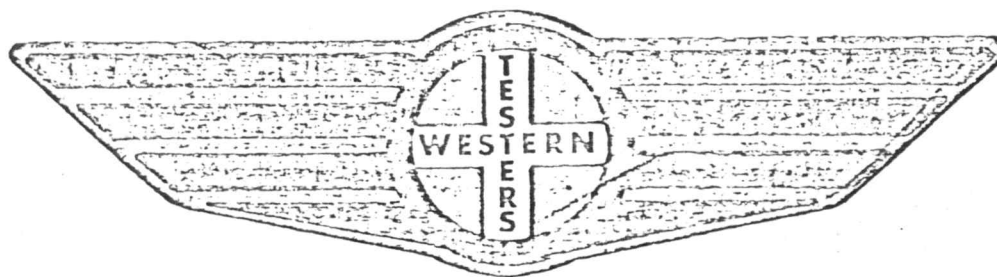
1559
DST#1

KE# 3100

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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 1/19/84
CUSTOMER: MCGINNESS OIL COMPANY
WELL: 1 TEST: 1
ELEVATION (KB): 0
SECTION: 13
RANGE: 11W
GAUGE SN #13402
FORMATION: TORONTO
TOWNSHIP: 32S
COUNTY: BARBER
RANGE: 4025
STATE: KANSAS
CLOCK: 12
TICKET #3100
LEASE: "B" MCGUIRE
GEOLOGIST: MCGINNESS
INTERVAL TEST FROM: 3618 FT TO: 3652 FT TOTAL DEPTH: 3652 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 3613 FT SIZE: 6 3/4 IN PACKER DEPTH: 3618 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: DUNNE & GARDNER #1
MUD TYPE: CHEM VISCOSITY: 39
WEIGHT: 9.2 WATER LOSS (CC): 9.5
CHLORIDES (P.P.M.): 24000
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: FT I.D.: IN
WEIGHT PIPE LENGTH: 360 FT I.D.: 3.2 IN
DRILL PIPE LENGTH: 3238 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 O.D. IN
ANCHOR LENGTH: 34 FT SIZE: 5 1/2 O.D. IN
SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 IN
MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 1/2 FH IN

BLOW: STRONG GAS TO SURFACE IN 1 MINUTE.

RECOVERED: 125	FT	OF: GASSY DISTILLATE CUT MUD.
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:

REMARKS:

TIME SET PACKER(S): 3:00 P.M.	TIME STARTED OFF BOTTOM: 4:30 P.M.
WELL TEMPERATURE: 112 °F	
INITIAL HYDROSTATIC PRESSURE:	(A) 1737 PSI
INITIAL FLOW PERIOD MIN: 15	(B) 312 PSI TO (C) 328 PSI
INITIAL CLOSED IN PERIOD MIN: 30	(D) 1402 PSI
FINAL FLOW PERIOD MIN: 15	(E) 358 PSI TO (F) 358 PSI
FINAL CLOSED IN PERIOD MIN: 30	(G) 1396 PSI
FINAL HYDROSTATIC PRESSURE	(H) 1730 PSI

WESTERN TESTING CO. INC.
GAS FLOW REPORT

DATE: 1/19/84

CUSTOMER: MCGINNESS OIL COMPANY

WELL: 1

TEST: 1

ELEVATION (KB): 0

SECTION: 13

RANGE: 11W

GAUGE SN #13402

COUNTY: BARBER

RANGE: 4025

TICKET #3100

LEASE: "B" MCGUIRE

GEOLOGIST: MCGINNESS

FORMATION: TORONTO

TOWNSHIP: 32S

STATE: KANSAS

CLOCK: 12

TIME GAUGE (MIN)	TESTER TYPE	ORIFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
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PRE FLOW

1				GAS TO SURFACE IN 1 MINUTE.
5	MERLA	1 1/2	26 PSIG	2319000 CFPD
10		1 1/2	26 PSIG	2319000 " "
15		1 1/2	26 PSIG	2319000 " "

SECOND FLOW

5	MERLA	1 1/2	30 PSIG	2558000 CFPD
10		1 1/2	30 PSIG	2558000 " "
15		1 1/2	30 PSIG	255800 " "

GAS BOTTLE SN #:

DATE BOTTLE FILLED:

DATE TO BE INVOICED:

Gas Production

B.T. Gauge Numbers			13402	Ticket Number	3100
Initial Hydrostatic			Pressure 1737	Elevation	— ft.
Final Hydrostatic			1730	Production Rate	Initial 2319 m cu. ft.
1st Flow	Initial	Time — — — —	312		Final 2558 m cu. ft.
	Final	15	328	Hole Size	7.875 in.
Initial Closed In Pressure			30	1402	Footage Tested 34 (6) ft.
2nd Flow	Initial	— — — —	358	Mud Weight	9.5 lbs. gal.
	Final	15	358	Gas Viscosity	cp
Final Closed In Pressure			30	1396	Gas Gravity —
Extrapolated Static Pressure	Initial		1409 - 1364	Gas Compressibility	—
	Final		1403 - 1358		
Slope Psi ² /cycle	Initial		45.580		
	Final		45.579		

Remarks: _____

SUMMARY		BT Gauge Number Depth		
Product	Equation	Initial	Final	Units
Transmissability	$\frac{Kh}{\mu} = \frac{1637 Q_r ZT}{m}$	14269.111	15808.118	md. ft. cp
Theoretical Flow Capacity	$Kh = \frac{Kh}{\mu} \mu$	256.844	284.546	md. ft.
Average Effective Permeability	$K = \frac{Kh}{h}$	42.807	47.424	md.
Permeability	$K_1 = \frac{Kh}{h_1}$	—	—	md.
Indicated Flow Capacity	$(Kh)_s = \frac{3200 Q_r \mu ZT \log(0.472 b/r_w)}{P_s^2 - P_r^2}$	53.199	60.729	md. ft.
Damage Ratio	$DR = \frac{\text{Theo. Flow Cap}}{\text{Indicated Flow Cap}} \frac{Kh}{(Kh)_s}$	4.827	4.685	—
Indicated Flow Rate	$OF_1 = \frac{Q_r}{P_s^2 - P_r^2} \frac{P_s^2}{P_r^2}$	2,451,868	2,736,152	MCFD
		2,384,509	2,645,576	MCFD
Theoretical Potential Rate	$OF_3 = OF_1 DR \quad \text{Max.}$	11,837,508	12,820,217	MCFD
	$OF_4 = OF_2 DR \quad \text{Min.}$	11,512,299	12,395,828	MCFD
Approx. Radius of Investigation	$b \approx \sqrt{Kt} \text{ or } \sqrt{Kt_0}$	25,339	26,671	ft.
	$b_1 \approx \sqrt{K_1 t} \text{ or } \sqrt{K_1 t_0}$	—	—	ft.
Potentiometric Surface *	$Pot. = (EI - GD) + (2.319 P_s)$			ft.

NOTICE:

These calculations are based upon information furnished by you and taken from Drill Stem Tests pressure charts, and are furnished you for your information. In furnishing such calculations and evaluations based thereon, Western Testing Co., Inc., is merely expressing its opinion. You agree that Western Testing Co., Inc., make no warranty express or implied as to the accuracy of such calculations or opinions, and that Western Testing Co., Inc., shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.

Gas Production

B.T. Gauge Numbers			13402	Ticket Number	3100
Initial Hydrostatic			Pressure 1737	Elevation	— . ft.
Final Hydrostatic			1730	Production Initial	2319 m cu. ft.
1st Flow	Initial	Time — — — —	312	Rate	Final
	Final	15	328	Hole Size	7.875 in.
Initial Closed In Pressure		30	1402	Footage Tested	34 (6) ft.
2nd Flow	Initial	— — — —	358	Mud Weight	9.5 lbs. gal.
	Final	15	358	Gas Viscosity	cp
Final Closed In Pressure		30	1396	Gas Gravity	—
Extrapolated Static Pressure		Initial	1409 - 1364	Gas Compressibility	—
		Final	1403 - 1358		
Slope Psi ² /cycle		Initial	45.580		
		Final	45.579		

Remarks: _____

SUMMARY		BT Gauge Number Depth	990	990	
Product	Equation	Initial	Final	Units	
Transmissability	$\frac{K_h}{\mu} = \frac{1637 Q_r ZT}{m}$	14269.111	15808.118	md. ft. cp	
Theoretical Flow Capacity	$K_h = \frac{K_h}{\mu} \mu$	256.844	284.546	md. ft.	
Average Effective Permeability	$K = \frac{K_h}{h}$ $K_1 = \frac{K_h}{h_1}$	42.807 —	47.424 —	md. md.	
Indicated Flow Capacity	$(K_h)_s = \frac{3200 Q_r \mu ZT \text{Log}(0.472 b/r_w)}{P_s^2 - P_r^2}$	53.199	60.729	md. ft.	
Damage Ratio	$DR = \frac{\text{Theo. Flow Cap}}{\text{Indicated Flow Cap}} \frac{K_h}{(K_h)_s}$	4.827	4.685	—	
Indicated Flow Rate	$OF_1 = \frac{Q_r}{P_s^2 - P_r^2} P_s^2$	2,451,868 2,384,509	2,736,152 2,645,576	MCFD MCFD	
Theoretical Potential Rate	$OF_3 = OF_1 DR \quad \text{Max.}$ $OF_4 = OF_2 DR \quad \text{Min.}$	11,837,508 11,551,277 ^{12,299}	12,820,217 12,395,828	MCFD MCFD	
Approx. Radius of Investigation	$b \approx \sqrt{Kt} \text{ or } \sqrt{Kt_0}$ $b_1 \approx \sqrt{K_1 t} \text{ or } \sqrt{K_1 t_0}$	25,339 —	26,671	ft. ft.	
Potentiometric Surface *	Pot. = (EI - GD) + (2.319 Ps)			ft.	

NOTICE:

These calculations are based upon information furnished by you and taken from Drill Stem Tests pressure charts, and are furnished you for your information. In furnishing such calculations and evaluations based thereon, Western Testing Co., Inc., is merely expressing its opinion. You agree that Western Testing Co., Inc., make no warranty express or implied as to the accuracy of such calculations or opinions, and that Western Testing Co., Inc., shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.

INTERPRETATIONS AND CALCULATIONS



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 4226

P. O. BOX 1599 PHONE (316) 262-5861

WICHITA, KANSAS 67201

Elevation _____ Formation Lansing Eff. Pay _____ Ft.

District Pratt Date 1-20-84 Customer Order No. _____

COMPANY NAME McGuire Oil Company

ADDRESS 1026 Union Center Bld. Wichita KS 67202

LEASE AND WELL NO. McGuire #1-B COUNTY Barber STATE KS Sec. 13 Twp. 32s Rge. 11w

Mail Invoice To Same No. Copies Requested Reg

Co. Name #1-B McGuire Address _____ No. Copies Requested Reg

Mail Charts To Same Address _____

Formation Test No. 2 Interval Tested From 3751 ft. to 3760 ft. Total Depth 3760 ft.

Packer Depth 3746 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.

Packer Depth 3751 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 3754 ft. Recorder Number 13402 Cap. 4025

Bottom Recorder Depth (Outside) 3757 ft. Recorder Number 1559 Cap. 4200

Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____

Drilling Contractor Dunne & Gardner #1 Drill Collar Length _____ I. D. _____ in.

Mud Type Chem. Viscosity 39 Weight Pipe Length 360 I. D. 3.2 in.

Weight 9.2 Water Loss 9.5 cc. Drill Pipe Length 3371 I. D. 3.8 in.

Chlorides 24000 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.

Jars: Make _____ Serial Number _____ Anchor Length 9 ft. Size 5 1/2 OD in.

Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

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

Blow: Strong - GTS 8min - See Gas Flow Report

Recovered 45 ft. of Gas Cut Oil

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Chlorides _____ P.P.M. Sample Jars used _____ Remarks: Slid tool 5 ft to Bottom.

Time On Location 3:00 A.M. Time Pick Up Tool 4:30 A.M. Time Off Location 10:30 A.M.

Time Set Packer(s) 5:50 A.M. Time Started Off Bottom 7:50 A.M. Maximum Temperature 112°

Initial Hydrostatic Pressure _____ (A) 1835 P.S.I.

Initial Flow Period _____ Minutes 15 (B) 59 P.S.I. to (C) 49 P.S.I.

Initial Closed In Period _____ Minutes 30 (D) 1414 P.S.I.

Final Flow Period _____ Minutes 30 (E) 49 P.S.I. to (F) 37 P.S.I.

Final Closed In Period _____ Minutes 45 (G) 1414 P.S.I.

Final Hydrostatic Pressure _____ (H) 1835 P.S.I.

COMPANY TERMS

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All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By [Signature] Signature of Customer or his authorized representative

Western Representative [Signature]

FIELD INVOICE

Open Hole Test \$ 550
Misrun \$ _____
Straddle Test \$ _____
Jars \$ _____
Selective Zone \$ _____
Safety Joint \$ _____
Standby \$ _____
Evaluation \$ ✓
Extra Packer \$ _____
Circ. Sub. \$ _____
Mileage \$ _____
Fluid Sampler \$ _____
Extra Charts \$ _____
Insurance \$ _____
Telecopier \$ _____
TOTAL \$ _____

WICHITA, KANSAS 67201

Nº 3735

GAS FLOW REPORT

Date 1-20-84 Ticket 4226 Company McGinness Oil Co
Well Name and No. McGuire #1-B Dst No. 2 Interval Tested 3751-60
County Barber State KS Sec. 13 Twp. 32S Rg. 11W

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
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PRE FLOW

[illegible]

SECOND FLOW

[illegible]

GAS BOTTLE

Serial No. _____ Date Bottle Filled _____ Date to be Invoiced _____

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1½% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME _____

Authorized by _____

WESTERN TESTING CO., INC.

Pressure Data

Date 1-20 Test Ticket No. 4226

Recorder No. 13402 Capacity _____ Location _____ Ft. _____

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1837</u> P.S.I.		
B First Initial Flow Pressure	<u>71</u> P.S.I.		
C First Final Flow Pressure	<u>49</u> P.S.I.		
D Initial Closed-in Pressure	<u>1414</u> P.S.I.		
E Second Initial Flow Pressure	<u>36</u> P.S.I.		
F Second Final Flow Pressure	<u>43</u> P.S.I.		
G Final Closed-in Pressure	<u>1407</u> P.S.I.		
H Final Hydrostatic Mud	<u>1831</u> P.S.I.		

PRESSURE BREAKDOWN

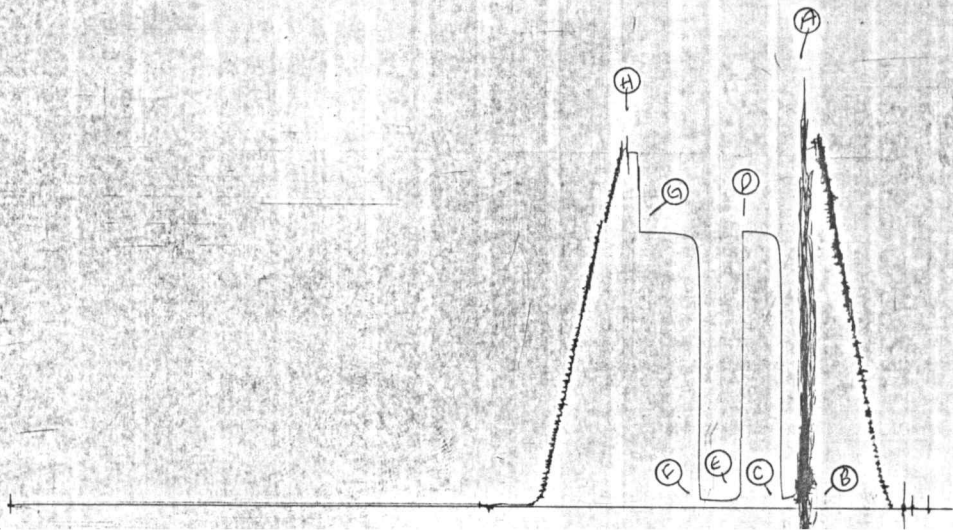
First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>4</u> Inc.		Breakdown: <u>11</u> Inc.		Breakdown: <u>7</u> Inc.		Breakdown: <u>16</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>71</u>	0	<u>49</u>	0	<u>36</u>	0	<u>43</u>
P 2 5	<u>71</u>	3	<u>1315</u>	5	<u>1</u>	3	<u>1289</u>
P 3 10	<u>54</u>	6	<u>1380</u>	10		6	<u>1366</u>
P 4 15	<u>49</u>	9	<u>1397</u>	15	<u>36</u>	9	<u>1384</u>
P 5 20		12	<u>1405</u>	20	<u>39</u>	12	<u>1391</u>
P 6 25		15	<u>1407</u>	25	<u>41</u>	15	<u>1396</u>
P 7 30		18 <u>1.83</u>	<u>1409</u>	30	<u>43</u>	18	<u>1398</u>
P 8 35		21 <u>1.71</u>	<u>1411</u>	35		21	<u>1400</u>
P 9 40		24 <u>1.62</u>	<u>1412</u>	40		24	<u>1402</u>
P10 45		27 <u>1.55</u>	<u>1413</u>	45		27	<u>1403</u>
P11 50		30 <u>1.5</u>	<u>1414</u>	50		30 <u>1.42</u>	<u>1404</u>
P12 55		33		55		33 <u>1.90</u>	<u>1405</u>
P13 60		36		60		36 <u>1.83</u>	<u>1406</u>
P14		39		65		39 <u>1M</u>	<u>140</u>
P15		42		70		42	<u>140</u>
P16		45		75		45 <u>1.26</u>	<u>1407</u>
P17		48		80		48	
P18		51		85		51	
P19		54		90		54	
P20		57				57	
		60				60	

13402
DST#2

DST#2

TCR# 4226

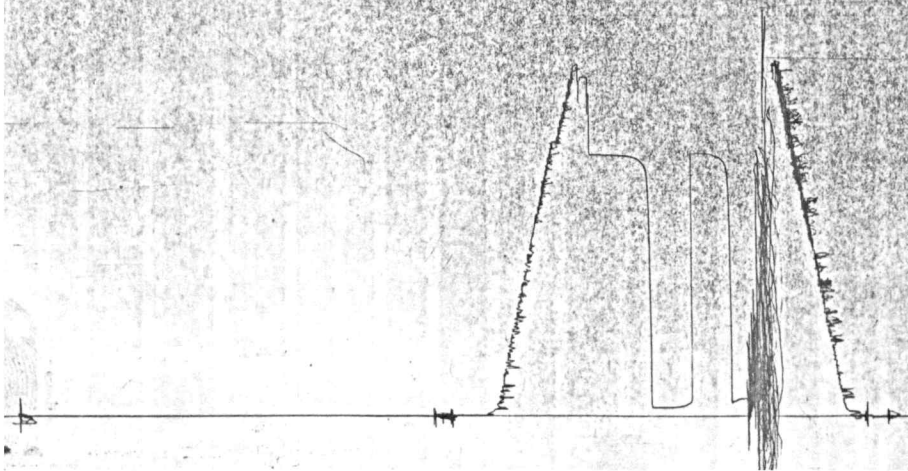
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1559
DST #2

tick # 4226

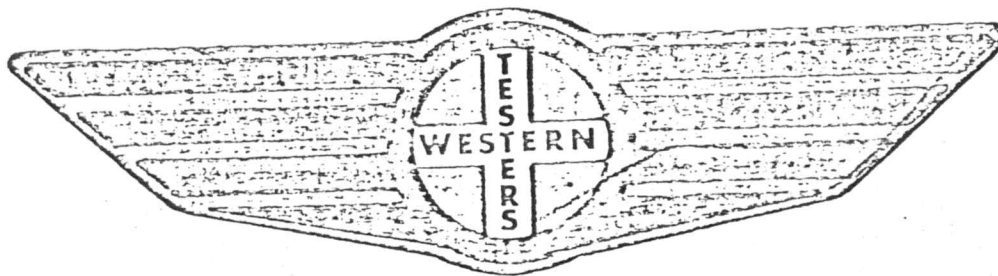
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FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

any
MCGINNNESS OIL COMPANY
Lease and Well No. #1 B. MCGINNNESS
Sec. 40 W.P. 1599

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 1/20/84
CUSTOMER: MCGINNESS OIL COMPANY
WELL: 1 TEST: 2
ELEVATION (KB): 0 FORMATION: LANSING
SECTION: 13 TOWNSHIP: 32S
RANGE: 11W COUNTY: BARBER STATE: KANSAS
GAUGE SN #13402 RANGE: 4025 CLOCK: 12

INTERVAL TEST FROM: 3751 FT TO: 3760 FT TOTAL DEPTH: 3760 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 3746 FT SIZE: 6 3/4 IN Packer DEPTH: 3751 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN Packer DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: DUNNE & GARDNER #1
MUD TYPE: CHEM VISCOSITY: 39
WEIGHT: 9.2 WATER LOSS (CC): 9.5
CHLORIDES (P.P.M.): 24000

JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO

DRILL COLLAR LENGTH: FT I.D.: IN
WEIGHT PIPE LENGTH: 360 FT I.D.: 3.2 IN
DRILL PIPE LENGTH: 3371 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 O.D. IN
ANCHOR LENGTH: 9 FT SIZE: 5 1/2 O.D. IN
SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 IN
MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 1/2 FH IN

BLOW: STRONG BLOW GAS TO SURFACE IN 8 MINUTES.

RECOVERED: 45 FT OF: GAS CUT MUD.
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS: SLID TOOL 5' TO BOTTOM.

TIME SET PACKER(S): 5:50 A.M. TIME STARTED OFF BOTTOM: 7:50 A.M.
WELL TEMPERATURE: 112 °F
INITIAL HYDROSTATIC PRESSURE: (A) 1837 PSI
INITIAL FLOW PERIOD MIN: 15 (B) 71 PSI TO (C) 49 PSI
INITIAL CLOSED IN PERIOD MIN: 30 (D) 1414 PSI
FINAL FLOW PERIOD MIN: 30 (E) 36 PSI TO (F) 43 PSI
FINAL CLOSED IN PERIOD MIN: 45 (G) 1407 PSI
FINAL HYDROSTATIC PRESSURE (H) 1831 PSI

WESTERN TESTING CO. INC.
GAS FLOW REPORT

DATE: 1/20/84
CUSTOMER: MCGINNESS OIL COMPANY
WELL: 1
ELEVATION (KB): 0
SECTION: 13
RANGE: 11W
GAUGE SN #13402

TEST: 2
FORMATION: LANSING
TOWNSHIP: 32S
COUNTY: BARBER
RANGE: 4025

TICKET #4226
LEASE: "B" MCGUIRE
GEOLOGIST: MCGINNESS
STATE: KANSAS
CLOCK: 12

TIME GAUGE (MIN)	TESTER TYPE	ORIFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
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PRE FLOW

8				GAS TO SURFACE IN 8 MINUTES.
10	MERLA	3/4	2 PSIG	108000 CFPD
15		3/4	2.5 PSIG	121000 " "

SECOND FLOW

10	MERLA	3/4	3 PSIG	133000 CFPD
20		3/4	2.5 PSIG	121000 " "
30		3/4	2.5 PSIG	121000 " "

GAS BOTTLE SN #:
DATE BOTTLE FILLED:
DATE TO BE INVOICED:

Gas Production

B.T. Gauge Numbers			13402	Ticket Number	4226
Initial Hydrostatic			Pressure 1837	Elevation	. ft.
Final Hydrostatic			1831	Production Initial	121 m cu. ft.
1st Flow	Initial	Time — — — —	71	Rate Final	121 m cu. ft.
	Final	15	49	Hole Size	7.875 in.
Initial Closed In Pressure			30	1414	Footage Tested 9 (6) ft.
2nd Flow	Initial	— — — —	36	Mud Weight	9.2 lbs. gal.
	Final	30	43	Gas Viscosity	cp
Final Closed In Pressure			45	1407	Gas Gravity —
Extrapolated Static Pressure	Initial		1427 - 1367	Gas Compressibility	—
	Final		1416 - 1376		
Slope Psi ² /cycle	Initial		55.775		
	Final		40.109		

Remarks: _____

SUMMARY

Product		Equation	Initial	Final	Units
Transmissability		$\frac{Kh}{\mu} = \frac{1637 Q_r ZT}{m}$	554.199	831.895	md. ft. cp
Theoretical Flow Capacity		$Kh = \frac{Kh}{\mu} \mu$	9.975	14.974	md. ft.
Average Effective Permeability		$K = \frac{Kh}{h}$	1.662	2.495	md.
		$K_1 = \frac{Kh}{h_1}$	—	—	md.
Indicated Flow Capacity		$(Kh)_s = \frac{3200 Q_r \mu ZT \log(0.472 b/r_w)}{P_s^2 - P_r^2}$	1.405	1.824	md. ft.
Damage Ratio		$DR = \frac{\text{Theo. Flow Cap}}{\text{Indicated Flow Cap}} \frac{Kh}{(Kh)_s}$	4.0	8.207	—
Indicated Flow Rate		$OF_1 = \frac{Q_r}{P_s^2 - P_r^2} \frac{P_s^2}{P_r^2}$	86.212	121.111	MCFD
			121.071	121.055	MCFD
Theoretical Potential Rate		$OF_3 = OF_1 DR \quad \text{Max.}$	344.849	994.028	MCFD
		$OF_4 = OF_2 DR \quad \text{Min.}$	484.285	993.570	MCFD
Approx. Radius of Investigation	b	$b \approx \sqrt{Kt} \text{ or } \sqrt{Kt_0}$	4.993	8.652	ft.
	b ₁	$b_1 \approx \sqrt{K_1 t} \text{ or } \sqrt{K_1 t_0}$			ft.
Potentiometric Surface	*	Pot. = (EI - CD) + (2.319 Ps)			ft.

NOTICE:

These calculations are based upon information furnished by you and taken from Drill Stem Tests pressure charts, and are furnished you for your information. In furnishing such calculations and evaluations based thereon, Western Testing Co., Inc., is merely expressing its opinion. You agree that Western Testing Co., Inc., make no warranty express or implied as to the accuracy of such calculations or opinions, and that Western Testing Co., Inc., shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.

INTERPRETATIONS AND CALCULATIONS

Gas Production

B.T. Gauge Numbers			13402	Ticket Number	4226
Initial Hydrostatic			Pressure 1837	Elevation	ft.
Final Hydrostatic			1831	Production Initial	121 m cu. ft.
1st Flow	Initial	Time -----	71	Rate Final	121 m cu. ft.
	Final	15	49	Hole Size	7.875 in.
Initial Closed In Pressure			30	1414	Footage Tested 9 (6) ft.
2nd Flow	Initial	-----	36	Mud Weight	9.2 lbs. gal.
	Final	30	43	Gas Viscosity	cp
Final Closed In Pressure			45	1407	Gas Gravity —
Extrapolated Static Pressure	Initial	1427 - 1367		Gas Compressibility	—
	Final	1416 - 1376			
Slope Psi ² /cycle	Initial	55.775			
	Final	40.109			

Remarks: _____

SUMMARY		BT Gauge Number Depth	996	951	Units
Product	Equation	Initial	Final		
Transmissability	$\frac{Kh}{\mu} = \frac{1637 Q_r ZT}{m}$	554,199	831.895		md. ft. cp
Theoretical Flow Capacity	$Kh = \frac{Kh}{\mu} \mu$	9.975	14.974		md. ft.
Average Effective Permeability	$K = \frac{Kh}{h}$	1.662	2.495		md.
	$K_1 = \frac{Kh}{h_1}$	—	—		md.
Indicated Flow Capacity	$(Kh)_s = \frac{3200 Q_r \mu ZT \log(0.472 b/r_w)}{P_s^2 - P_r^2}$	1.405	1.824		md. ft.
Damage Ratio	$DR = \frac{\text{Theo. Flow Cap}}{\text{Indicated Flow Cap}} \frac{Kh}{(Kh)_s}$	4.0	8.207		—
Indicated Flow Rate	$OF_1 = \frac{Q_r}{P_s^2 - P_r^2} \frac{P_s^2}{h^2}$	86.212	121.111		MCFD
		121.071	121.055		MCFD
Theoretical Potential Rate	$OF_3 = OF_1 DR \quad \text{Max.}$	344.849	994.028		MCFD
	$OF_4 = OF_2 DR \quad \text{Min.}$	484.285	993.570		MCFD
Approx. Radius of Investigation	$b \approx \sqrt{Kt} \text{ or } \sqrt{Kt_0}$	4.993	8.652		ft.
	$b_1 \approx \sqrt{K_1 t} \text{ or } \sqrt{K_1 t_0}$				ft.
Potentiometric Surface *	Pot. = (EI - GD) + (2.319 Ps)				ft.

NOTICE:

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