



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET N^o 20128

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

Elevation _____ Formation Miss Eff. Pay _____ Ft.

District GREAT Bend Date 11-15-93 Customer Order No. _____

COMPANY NAME Oxy U.S.A., Inc.

ADDRESS 110 S. MAIN #800 WICHITA, Ks 67202

LEASE AND WELL NO. HARBAUGH "A" #1 COUNTY BARBER STATE Ks Sec. 22 Twp. 33 Rge. 14^W

Mail Invoice To SAME Co. Name _____ Address _____ No. Copies Requested Reg

Mail Charts To SAME Co. Name _____ Address _____ No. Copies Requested Reg

Formation Test No. 1 Interval Tested From 4636 ft. to 4696 ft. Total Depth 4696 ft.

Packer Depth 4631 ft. Size 6 5/8 in. Packer Depth _____ ft. Size _____ in.

Packer Depth 4636 ft. Size 6 5/8 in. Packer Depth _____ ft. Size _____ in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4688 ft. Recorder Number 10270 Cap. 4150

Bottom Recorder Depth (Outside) 4691 ft. Recorder Number 13550 Cap. 4175

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

Drilling Contractor Duke Drly rig 5 Drill Collar Length 180 I. D. 2.2 in.

Mud Type CHEMICAL Viscosity 42 Weight Pipe Length _____ I. D. _____ in.

Weight 8.8 Water Loss 9.6 cc. Drill Pipe Length 4429 I. D. 3.8 in.

Chlorides 8,000 P.P.M. Test Tool Length 27 ft. Tool Size 5 1/2 in.

Jars: Make WTC Serial Number 422 Anchor Length 60 ft. Size 5 1/2 in.

Did Well Flow? - Reversed Out _____ 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 XH in.

Blow: IF -
FF -

Recovered 210 ft. of Mud

Recovered _____ ft. of _____

Recovered _____ ft. of MISRUN packer failure

Recovered _____ ft. of _____

Recovered _____ ft. of _____

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

Time On Location 7:30 A.M. Time Pick Up Tool 2:00 P.M. Time Off Location _____ A.M.

Time Set Packer(s) _____ P.M. Time Started Off Bottom _____ P.M. Maximum Temperature _____

Initial Hydrostatic Pressure _____ (A) 2181 P.S.I.

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

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

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

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

Final Hydrostatic Pressure _____ (H) 2181 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 Timothy J. Joss 11-15-93
Signature of Customer or his authorized representative

Western Representative Ray Schwager THANK YOU

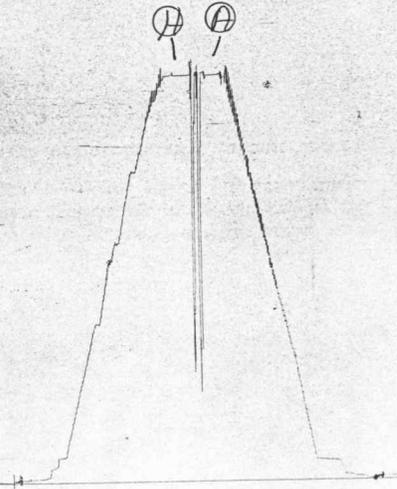
FIELD INVOICE

Open Hole Test	\$ <u>400.00</u>
Misrun	\$ <u>225.00</u>
Straddle Test	\$ _____
Jars	\$ <u>25.00</u>
Selective Zone	\$ _____
Safety Joint	\$ _____
Standby	\$ _____
Evaluation	\$ _____
Extra Packer	\$ _____
Circ. Sub.	\$ _____
Mileage	\$ _____
Fluid Sampler	\$ _____
Extra Charts	\$ _____
Insurance	\$ _____
Telecopier	\$ _____
TOTAL	\$ <u>650.00</u>

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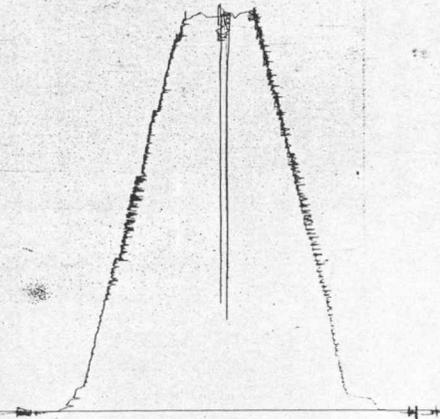
OST #1
10230



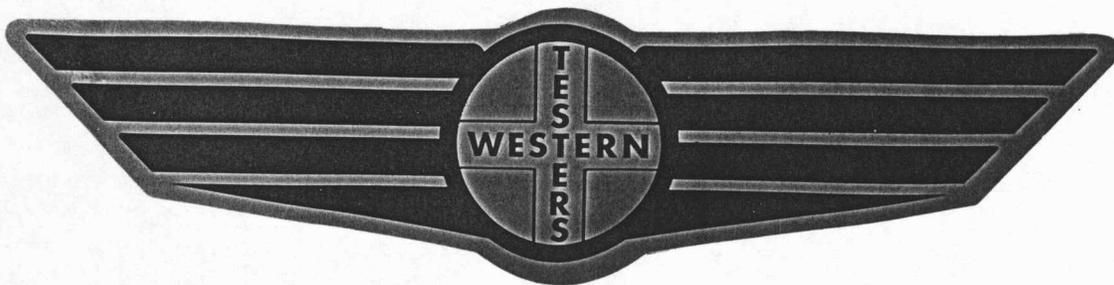
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OST #1
13536



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-637-021

DST REPORT

GENERAL INFORMATION

DATE : 11/15/93	TICKET : 20128
CUSTOMER : OXY USA, INC.	LEASE : HARBAUGH A OWWO
WELL : #1 TEST: 1	GEOLOGIST: VOSS
ELEVATION:	FORMATION: MISSISSIPPI
SECTION : 22	TOWNSHIP : 33S
RANGE : 14W COUNTY: BARBER	STATE : KS
GAUGE SN#: 10270 RANGE : 4150	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4636.00 ft	TO: 4696.00 ft	TVD: 4696.0 ft
DEPTH OF SELECTIVE ZONE:		TEST TYPE: OIL
DEPTH OF RECORDERS: 4688.0 ft	4691.0 ft	
TEMPERATURE: 0.0		
DRILL COLLAR LENGTH: 180.0 ft	I.D.:	2.200 in
WEIGHT PIPE LENGTH : 0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH : 4429.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH : 27.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH : 60.0 ft	ANCHOR SIZE:	5.500 in
SURFACE CHOKE SIZE : 0.750 in	BOTTOM CHOKE SIZE:	0.750 in
MAIN HOLE SIZE : 7.875 in	TOOL JOINT SIZE :	4.5XH
PACKER DEPTH: 4631.0 ft	SIZE:	6.630 in
PACKER DEPTH: 4636.0 ft	SIZE:	6.630 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. : DUKE DRLG RIG 5	VISCOSITY : 42.00 cp
MUD TYPE : CHEMICAL	WATER LOSS: 9.600 cc
WEIGHT : 8.800 ppg	
CHLORIDES : 8000 ppm	SERIAL NUMBER: 422
JARS-MAKE : WTC	REVERSED OUT?: NO
DID WELL FLOW?: NO	

COMMENTS

Comment

MISRUN.
PACKER FAILURE.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
210.0	0.0	0.0	0.0	100.0	DRILLING MUD

RATE INFORMATION

OIL VOLUME: 0.0000 STB	TOTAL FLOW TIME: No Events Created
GAS VOLUME: 0.0000 SCF	AVERAGE OIL RATE: 0.0000 STB/D
MUD VOLUME: 1.2670 STB	AVERAGE WATER RATE: 0.0000 STB/D
WATER VOLUME: 0.0000 STB	
TOTAL FLUID : 1.2670 STB	

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 0.00

Description	Duration	p1	p End
INITIAL FLOW	0.00	0.00	0.00
INITIAL SHUT-IN	0.00		0.00
FINAL FLOW	0.00	0.00	0.00
FINAL SHUT-IN	0.00		0.00

FINAL HYDROSTATIC PRESSURE: 0.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2181.00

Description	Duration	p1	p End
INITIAL FLOW	0.00	0.00	0.00
INITIAL SHUT-IN	0.00		0.00

FINAL HYDROSTATIC PRESSURE: 2181.00



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 20129

Last

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

Elevation N/A Formation Miss Eff. Pay Ft.

District GREAT Bend Date 11-15-93 Customer Order No.

COMPANY NAME Oxy U.S.A. Inc. ADDRESS 110 S. MAIN #800 WICHITA, KS 67202 LEASE AND WELL NO Harbaugh 'A' #1 COUNTY Barber STATE KS Sec. 22 Twp. 33 Rge. 14 Mail Invoice To SAME Co. Name Address No. Copies Requested Reg Mail Charts To SAME #1 Harbaugh A DWWO Address No. Copies Requested Reg

Formation Test No. 2 Interval Tested From 4626 ft. to 4696 ft. Total Depth 4696 ft. Packer Depth 4621 ft. Size 6 5/8 in. Packer Depth 4626 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set Top Recorder Depth (Inside) 4688 ft. Recorder Number 10270 Cap. 4150 Bottom Recorder Depth (Outside) 4691 ft. Recorder Number 13550 Cap. 4125 Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Duke Orlg rigs Mud Type Chemical Viscosity 42 Weight 8.8 Water Loss 9.6 cc. Chlorides 8,000 P.P.M. Test Tool Length 27 ft. Tool Size 5 1/2 in. Anchor Length 70 ft. Size 5 1/2 in. Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in. Main Hole Size 7/8 in. Tool Joint Size 4 1/2 x 14 in.

Blow: IF - WEAR building TO A STRONG BLOW IN 8 MIN FF - WEAR building TO A STRONG BLOW IN 8 MIN

Recovered 340 ft. of GAS in Pipe Recovered 80 ft. of Mud Recovered ft. of Recovered ft. of Recovered ft. of Chlorides P.P.M. Sample Jars used 2 Remarks: Geo. has BOTTOM chart

Time On Location 8:40 A.M. Time Pick Up Tool 7:00 A.M. Time Off Location 11:17 P.M. Time Set Packer(s) 8:40 P.M. Time Started Off Bottom 10:55 P.M. Maximum Temperature 117 Initial Hydrostatic Pressure (A) 2160 P.S.I. Initial Flow Period (B) 15 Minutes (C) 104 P.S.I. Initial Closed In Period (D) 30 Minutes (E) 406 P.S.I. Final Flow Period (F) 30 Minutes (G) 104 P.S.I. Final Closed In Period (H) 60 Minutes (H) 551 P.S.I. Final Hydrostatic Pressure (H) 2149 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 Timothy J. Voss 11-16-93 Signature of Customer or his authorized representative

Western Representative Ray Schwager THANK YOU

FIELD INVOICE

Open Hole Test \$600.00 Misrun \$ Straddle Test \$ Jars \$225.00 Selective Zone \$ Safety Joint \$250.00 Standby \$ Evaluation \$ Extra Packer \$ Circ. Sub. \$ Mileage \$ Fluid Sampler \$ Extra Charts \$ Insurance \$ Telecopier \$ TOTAL \$850.00

WESTERN TESTING CO., INC.

Pressure Data

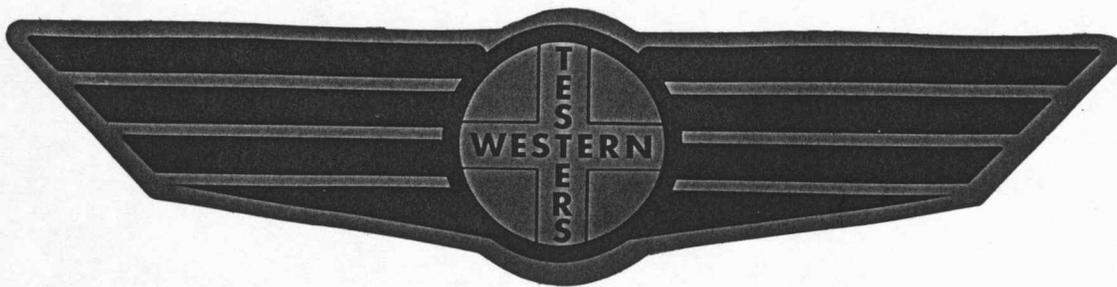
Date 11-15-90 Test Ticket No. 20129
 Recorder No. 10270 Capacity _____ Location _____ Ft. _____
 Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2177</u> P.S.I.	_____	_____	M _____
B First Initial Flow Pressure	_____ P.S.I.	First Flow Pressure	_____ Mins.	_____ Mins.
C First Final Flow Pressure	_____ P.S.I.	Initial Closed-in Pressure	_____ Mins.	_____ Mins.
D Initial Closed-in Pressure	_____ P.S.I.	Second Flow Pressure	_____ Mins.	_____ Mins.
E Second Initial Flow Pressure	_____ P.S.I.	Final Closed-in Pressure	_____ Mins.	_____ Mins.
F Second Final Flow Pressure	_____ P.S.I.			
G Final Closed-in Pressure	_____ P.S.I.			
H Final Hydrostatic Mud	<u>2167</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ 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>116</u>	0	<u>116</u>	0	<u>118</u>	0	<u>118</u>
P 2 5	<u>116</u>	3	<u>127</u>	5	<u>118</u>	3	<u>129</u>
P 3 10	<u>116</u>	6	<u>159</u>	10	<u>118</u>	6	<u>148</u>
P 4 15	<u>116</u>	9	<u>196</u>	15	<u>118</u>	9	<u>166</u>
P 5 20		12	<u>233</u>	20	<u>118</u>	12	<u>188</u>
P 6 25		15	<u>252</u>	25	<u>118</u>	15	<u>200</u>
P 7 30		18	<u>287</u>	30	<u>118</u>	18	<u>246</u>
P 8 35		21	<u>317</u>	35		21	<u>271</u>
P 9 40		24	<u>347</u>	40		24	<u>300</u>
P10 45		27	<u>377</u>	45		27	<u>322</u>
P11 50		30	<u>405</u>	50		30	<u>350</u>
P12 55		33		55		33	<u>373</u>
P13 60		36		60		36	<u>394</u>
P14 65		39		65		39	<u>417</u>
P15 70		42		70		42	<u>440</u>
P16 75		45		75		45	<u>459</u>
P17 80		48		80		48	<u>483</u>
P18 85		51		85		51	<u>501</u>
P19 90		54		90		54	<u>518</u>
P20 95		57		95		57	<u>537</u>
100		60		100		60	<u>558</u>

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-637-021

COMPANY OXY USA, INC. LEASE & WELL NO. #1 HARBAUGH A OWM SEC. 22 TWP. 33S RGE. 14W TEST NO. 2 DATE 11/15/93

DST REPORT

GENERAL INFORMATION

DATE : 11/15/93
CUSTOMER : OXY USA, INC.
WELL : #1 TEST: 2
ELEVATION:
SECTION : 22
RANGE : 14W COUNTY: BARBER
GAUGE SN#: 10270 RANGE : 4150
TICKET : 20129
LEASE : HARBAUGH A OWWO
GEOLOGIST: VOSS
FORMATION: MISSISSIPPI
TOWNSHIP : 33S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4626.00 ft TO: 4696.00 ft TVD: 4696.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 4688.0 ft 4691.0 ft
TEMPERATURE: 117.0
DRILL COLLAR LENGTH: 180.0 ft I.D.: 2.200 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 4419.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 27.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 70.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
PACKER DEPTH: 4621.0 ft SIZE: 6.630 in
PACKER DEPTH: 4626.0 ft SIZE: 6.630 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : DUKE DRLG RIG 5
MUD TYPE : CHEMICAL VISCOSITY : 42.00 cp
WEIGHT : 8.800 ppg WATER LOSS: 9.600 cc
CHLORIDES : 8000 ppm
JARS-MAKE : WTC SERIAL NUMBER: 422
DID WELL FLOW?: NO REVERSED OUT?: NO

COMMENTS

Comment

WEAK BUILDING TO A STRONG BLOW IN 8 MINUTES ON BOTH FLOW PERIODS.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	340 FT GAS ABOVE FLUID MUD
80.0	0.0	0.0	0.0	100.0	

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	45.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.3761	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.3761	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2160.00

Description	Duration	p1	p End
INITIAL FLOW	15.00	104.00	104.00
INITIAL SHUT-IN	30.00		406.00
FINAL FLOW	30.00	104.00	104.00
FINAL SHUT-IN	60.00		551.00

FINAL HYDROSTATIC PRESSURE: 2149.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2177.00

Description	Duration	p1	p End
INITIAL FLOW	15.00	116.00	116.00
INITIAL SHUT-IN	30.00		405.00
FINAL FLOW	30.00	118.00	118.00
FINAL SHUT-IN	60.00		558.00

FINAL HYDROSTATIC PRESSURE: 2167.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 11/15/93	TICKET	: 20129
CUSTOMER	: OXY USA, INC.	LEASE	: HARBAUGH A OWWO
WELL	: #1	TEST:	2
ELEVATION:		GEOLOGIST:	VOSS
SECTION	: 22	FORMATION:	MISSISSIPPI
RANGE	: 14W	TOWNSHIP	: 33S
GAUGE SN#:	10270	STATE	: KS
		CLOCK	: 12
		COUNTY:	BARBER
		RANGE	: 4150

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	116.00	116.00
5.00	116.00	0.00
10.00	116.00	0.00
15.00	116.00	0.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	127.00	127.00	0.00
6.00	159.00	32.00	0.00
9.00	196.00	37.00	0.00
12.00	232.00	36.00	0.00
15.00	253.00	21.00	0.00
18.00	287.00	34.00	0.00
21.00	317.00	30.00	0.00
24.00	347.00	30.00	0.00
27.00	377.00	30.00	0.00
30.00	405.00	28.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	118.00	118.00
5.00	118.00	0.00
10.00	118.00	0.00
15.00	118.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
20.00	118.00	0.00
25.00	118.00	0.00
30.00	118.00	0.00

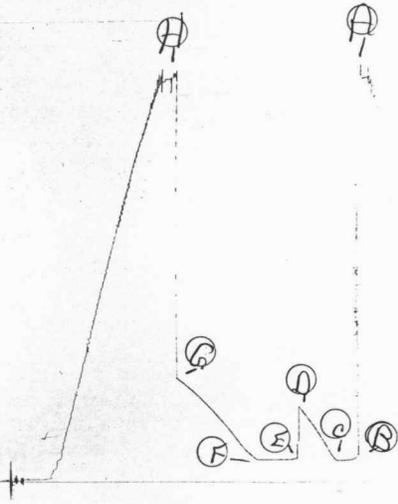
FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	129.00	129.00	0.00
6.00	148.00	19.00	0.00
9.00	166.00	18.00	0.00
12.00	188.00	22.00	0.00
15.00	220.00	32.00	0.00
18.00	246.00	26.00	0.00
21.00	271.00	25.00	0.00
24.00	300.00	29.00	0.00
27.00	322.00	22.00	0.00
30.00	350.00	28.00	0.00
33.00	373.00	23.00	0.00
36.00	394.00	21.00	0.00
39.00	417.00	23.00	0.00
42.00	440.00	23.00	0.00
45.00	459.00	19.00	0.00
48.00	483.00	24.00	0.00
51.00	501.00	18.00	0.00
54.00	518.00	17.00	0.00
57.00	537.00	19.00	0.00
60.00	558.00	21.00	0.00

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