

Company Imperial Oil Company Lease & Well No. Winklepleck #3-12
Elevation - Formation Marmaton Effective Pay - Ft. Ticket No. 14705
Date 1/26/82 Sec. 12 Twp. 27S Range 16W County Kiowa State Kansas
Test Approved by Hal Clark Western Representative Louis Spencer
Formation Test No. 1 Interval Tested from 4369 ft. to 4415 ft. Total Depth 4415 ft.
Packer Depth 4364 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Packer Depth 4369 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 4380 ft. Recorder Number 1560 Cap. 4500
Bottom Recorder Depth (Outside) 4412 ft. Recorder Number 11019 Cap. 4500
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
Drilling Contractor White & Ellis Rig #8 Drill Collar Length 300 I. D. 2.25 in.
Mud Type - Viscosity 69 Weight Pipe Length - I. D. - in.
Weight 9.3 Water Loss 21.2 cc. Drill Pipe Length 4041 I. D. 3.8 in.
Chlorides 18,000 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 in.
Jars: Make WTC Serial Number 402 Anchor Length 46 ft. Size 5 1/2 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 3 1/2 in.

Blow: Initial flow period good - off bottom of bucket in 5 minutes. Final flow period gas to surface in 40 minutes.

Recovered 70 ft. of mud with oil spots
Recovered 180 ft. of slightly oil cut mud - 2% oil
Recovered 60 ft. of oil cut mud - 8% oil
Recovered ft. of
Recovered ft. of

Remarks:

Time Set Packer(s) 7:10 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 11:10 ~~P.M.~~ ^{A.M.} Maximum Temperature 120
Initial Hydrostatic Pressure 2139 P.S.I.
Initial Flow Period 60 Minutes (B) 62 P.S.I. to (C) 88 P.S.I.
Initial Closed In Period 60 Minutes (D) 1182 P.S.I.
Final Flow Period 60 Minutes (E) 104 P.S.I. to (F) 108 P.S.I.
Final Closed In Period 60 Minutes (G) 1177 P.S.I.
Final Hydrostatic Pressure 2119 P.S.I. (H)

GAS FLOW REPORT

Date 1/26/82 Ticket 14705 Company Imperial Oil Company
 Well Name and No. Winklepleck #3-12 Dst No. 1 Interval Tested 4369-4415
 County Kiowa State Kansas Sec. 12 Twp. 27S Rg. 16W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
PRE FLOW						
		NO GAS				

SECOND FLOW						
	40 Min	3" water	1/4" Orifice			2,920 C.F.P.D.
	50 Min	4" water	1/4" Orifice			3,370 C.F.P.D.
	60 Min	5" water	1/4" Orifice			3,710 C.F.P.D.

GAS BOTTLE

Serial No. Date Bottle Filled Date to be Invoiced 1/26/82

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% per month, equal to 12% 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 Imperial Oil Company

Authorized by Hal Clark

WESTERN TESTING CO., INC.

Pressure Data

Date 1-26-82 Test Ticket No. 14705
 Recorder No. 1560 Capacity 4500 Location 4380 Ft.
 Clock No. ---- Elevation ----- Well Temperature 120 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2139 P.S.I.	Open Tool	7:10 A M	
B First Initial Flow Pressure	62 P.S.I.	First Flow Pressure	60 Mins.	60 Mins.
C First Final Flow Pressure	88 P.S.I.	Initial Closed-in Pressure	60 Mins.	60 Mins.
D Initial Closed-in Pressure	1182 P.S.I.	Second Flow Pressure	60 Mins.	60 Mins.
E Second Initial Flow Pressure	104 P.S.I.	Final Closed-in Pressure	60 Mins.	60 Mins.
F Second Final Flow Pressure	108 P.S.I.			
G Final Closed-in Pressure	1177 P.S.I.			
H Final Hydrostatic Mud	2119 P.S.I.			

PRESSURE BREAKDOWN

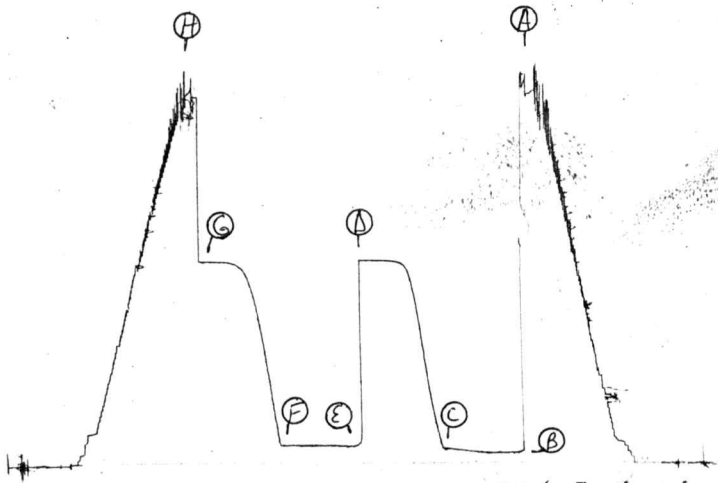
First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>12</u> Inc.		Breakdown: <u>20</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>20</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</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	62	0	88	0	104	0	108
P 2 5	62	3	169	5	104	3	243
P 3 10	62	6	266	10	104	6	387
P 4 15	62	9	377	15	105	9	532
P 5 20	62	12	505	20	106	12	685
P 6 25	62	15	669	25	107	15	802
P 7 30	64	18	818	30	108	18	921
P 8 35	67	21	950	35	108	21	1005
P 9 40	69	24	1059	40	108	24	1070
P10 45	75	27	1126	45	108	27	1117
P11 50	80	30	1155	50	108	30	1142
P12 55	86	33	1171	55	108	33	1158
P13 60	88	36	1176	60	108	36	1166
P14		39	1178			39	1171
P15		42	1179			42	1175
P16		45	1180			45	1175
P17		48	1181			48	1176
P18		51	1182			51	1177
P19		54	1182			54	1177
P20		57	1182			57	1177
		60	1182			60	1177

TKT # 14705

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DST #1

1560



Company Imperial Oil Company Lease & Well No. Winklepleck #3-12
 Elevation --- Formation --- Effective Pay --- Ft. Ticket No. 14706
 Date 1/27/82 Sec. 12 Twp. 27S Range 16W County Kiowa State Kansas
 Test Approved by H. Clark Western Representative L. G. Spencer
 Formation Test No. 2 Interval Tested from 4441 ft. to 4510 ft. Total Depth 4510 ft.
 Packer Depth 4436 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 4441 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 4486 ft. Recorder Number 1500 Cap. 4500
 Bottom Recorder Depth (Outside) 4507 ft. Recorder Number 11019 Cap. 4500
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
 Drilling Contractor White & Ellis Drlg. Rig #8 Drill Collar Length 300 I. D. 2.25 in.
 Mud Type --- Viscosity 57 Weight Pipe Length - I. D. - in.
 Weight 9.6 Water Loss 8.4 cc. Drill Pipe Length 4113 I. D. 3.8 in.
 Chlorides 22,000 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 in.
 Jars: Make WTC Serial Number 403 Anchor Length 69 ft. Size 5 1/2 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 3 1/2 in.

Blow: Good blow off bottom in three minutes throughout test.

Recovered 85 ft. of drilling mud Chlorides 25,000 ppm

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 4:50 ~~P.M.~~ A.M. Time Started Off Bottom 10:50 ~~P.M.~~ A.M. Maximum Temperature 123°
 Initial Hydrostatic Pressure 2181 (A) 2181 P.S.I.
 Initial Flow Period 60 Minutes (B) 66 P.S.I. to (C) 66 P.S.I.
 Initial Closed In Period 111 Minutes (D) 756 P.S.I.
 Final Flow Period 60 Minutes (E) 50 P.S.I. to (F) 53 P.S.I.
 Final Closed In Period 111 Minutes (G) 781 P.S.I.
 Final Hydrostatic Pressure 2181 (H) 2181 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 1/27/82 Test Ticket No. 14706
 Recorder No. 1560 Capacity 4500 Location 4486 Ft.
 Clock No. -- Elevation --- Well Temperature 123 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2181	P.S.I.	4:50A	M
B First Initial Flow Pressure	66	P.S.I.	60	Mins.
C First Final Flow Pressure	66	P.S.I.	120	Mins.
D Initial Closed-in Pressure	756	P.S.I.	60	Mins.
E Second Initial Flow Pressure	50	P.S.I.	120	Mins.
F Second Final Flow Pressure	53	P.S.I.		
G Final Closed-in Pressure	781	P.S.I.		
H Final Hydrostatic Mud	2181	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>12</u> Inc.		Breakdown: <u>37</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>37</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 <u>0</u>	<u>66</u>	<u>0</u>	<u>66</u>	<u>0</u>	<u>50</u>	<u>0</u>	<u>53</u>
P 2 <u>5</u>	<u>66</u>	<u>3</u>	<u>79</u>	<u>5</u>	<u>50</u>	<u>3</u>	<u>86</u>
P 3 <u>10</u>	<u>66</u>	<u>6</u>	<u>99</u>	<u>10</u>	<u>50</u>	<u>6</u>	<u>109</u>
P 4 <u>15</u>	<u>66</u>	<u>9</u>	<u>125</u>	<u>15</u>	<u>50</u>	<u>9</u>	<u>141</u>
P 5 <u>20</u>	<u>66</u>	<u>12</u>	<u>146</u>	<u>20</u>	<u>50</u>	<u>12</u>	<u>174</u>
P 6 <u>25</u>	<u>66</u>	<u>15</u>	<u>169</u>	<u>25</u>	<u>50</u>	<u>15</u>	<u>198</u>
P 7 <u>30</u>	<u>66</u>	<u>18</u>	<u>193</u>	<u>30</u>	<u>51</u>	<u>18</u>	<u>227</u>
P 8 <u>35</u>	<u>66</u>	<u>21</u>	<u>217</u>	<u>35</u>	<u>51</u>	<u>21</u>	<u>248</u>
P 9 <u>40</u>	<u>66</u>	<u>24</u>	<u>238</u>	<u>40</u>	<u>51</u>	<u>24</u>	<u>275</u>
P10 <u>45</u>	<u>66</u>	<u>27</u>	<u>257</u>	<u>45</u>	<u>52</u>	<u>27</u>	<u>295</u>
P11 <u>50</u>	<u>66</u>	<u>30</u>	<u>279</u>	<u>50</u>	<u>52</u>	<u>30</u>	<u>318</u>
P12 <u>55</u>	<u>66</u>	<u>33</u>	<u>300</u>	<u>55</u>	<u>53</u>	<u>33</u>	<u>350</u>
P13 <u>60</u>	<u>66</u>	<u>36</u>	<u>321</u>	<u>60</u>	<u>53</u>	<u>36</u>	<u>368</u>
P14		<u>39</u>	<u>343</u>			<u>39</u>	<u>393</u>
P15		<u>42</u>	<u>366</u>			<u>42</u>	<u>413</u>
P16		<u>45</u>	<u>388</u>			<u>45</u>	<u>432</u>
P17		<u>48</u>	<u>407</u>			<u>48</u>	<u>457</u>
P18		<u>51</u>	<u>426</u>			<u>51</u>	<u>477</u>
P19		<u>54</u>	<u>444</u>			<u>54</u>	<u>494</u>
P20		<u>57</u>	<u>463</u>			<u>57</u>	<u>514</u>
		<u>60</u>	<u>480</u>			<u>60</u>	<u>536</u>

WESTERN TESTING CO., INC.

Pressure Data

Date 1/27/82 Test Ticket No. 14706
 Recorder No. 1560 Capacity 4500 Location 4486 Ft.
 Clock No. -- Elevation --- Well Temperature 123 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2181	P.S.I.	4:50A	M
B First Initial Flow Pressure	66	P.S.I.	60	Mins.
C First Final Flow Pressure	66	P.S.I.	120	Mins.
D Initial Closed-in Pressure	756	P.S.I.	60	Mins.
E Second Initial Flow Pressure	50	P.S.I.	120	Mins.
F Second Final Flow Pressure	53	P.S.I.		
G Final Closed-in Pressure	781	P.S.I.		
H Final Hydrostatic Mud	2181	P.S.I.		

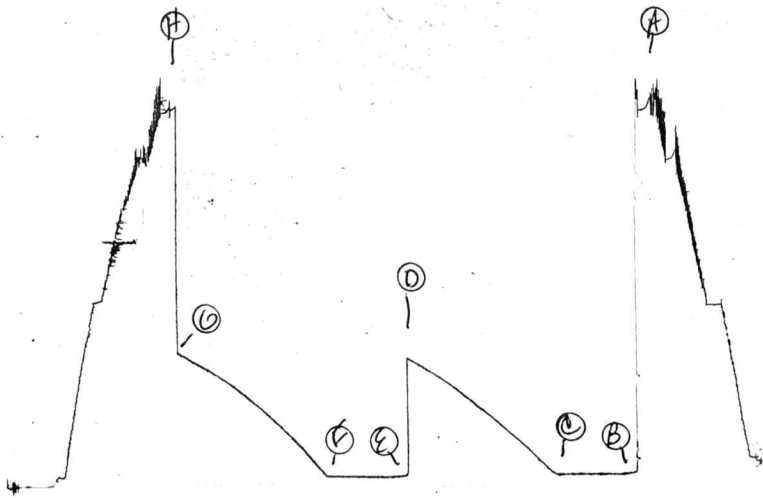
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>12</u> Inc.		Breakdown: <u>37</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>37</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		63	504			63	551
P 2		66	520			66	570
P 3		69	536			69	588
P 4		72	555			72	601
P 5		75	577			75	617
P 6		78	590			78	633
P 7		81	605			81	649
P 8		84	623			84	664
P 9		87	640			87	684
P10		90	654			90	695
P11		93	671			93	707
P12		96	687			96	721
P13		99	700			99	732
P14		102	715			102	748
P15		105	726			105	761
P16		108	740			108	775
P17		111	756			111	781
P18							
P19							
P20							

ST #2

1560

JK # 14706
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Company Imperial Oil Company Lease & Well No. Winklepleck #3-12
 Elevation -- Formation Kinderhook Effective Pay - Ft. Ticket No. 14707
 Date 1/27/82 Sec. 12 Twp. 27S Range 16W County Kiowa State Kansas
 Test Approved by Hal Clark Western Representative L. G. Spencer
 Formation Test No. 3 Interval Tested from 4515 ft. to 4574 ft. Total Depth 4574 ft.
 Packer Depth 4510 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 4515 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 4535 ft. Recorder Number 1560 Cap. 4500
 Bottom Recorder Depth (Outside) 4571 ft. Recorder Number 11019 Cap. 4500
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
 Drilling Contractor White & Ellis Drlg. Rig #8 Drill Collar Length 300 I. D. 2.25 in.
 Mud Type chemical Viscosity 58 Weight Pipe Length - I. D. - in.
 Weight 9.5 Water Loss 14.8 cc. Drill Pipe Length 4187 I. D. 3.8 in.
 Chlorides 18,000 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 in.
 Jars: Make WTC Serial Number 403 Anchor Length 59 ft. Size 5 1/2 in.
 Did Well Flow? No Reversed Out - Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 3 1/2 in.

Blow: Initial flow period weak building to fair. Final flow period weak.

Recovered 70 ft. of mud with oil spots

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

Time Set Packer(s) 11:00 ~~A.M.~~ P.M. Time Started Off Bottom 5:00 ~~A.M.~~ P.M. Maximum Temperature 123°
 Initial Hydrostatic Pressure 2377 (A) P.S.I.
 Initial Flow Period 60 Minutes (B) 69 P.S.I. to (C) 69 P.S.I.
 Initial Closed In Period 108 Minutes (D) 308 P.S.I.
 Final Flow Period 60 Minutes (E) 83 P.S.I. to (F) 83 P.S.I.
 Final Closed In Period 111 Minutes (G) 262 P.S.I.
 Final Hydrostatic Pressure 2321 (H) P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 1/27/82 Recorder No. 1560 Capacity 4500 Test Ticket No. 14707 Location 4535 Ft.
 Clock No. - Elevation -- Well Temperature 123 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2377	P.S.I.	11:00A	M
B First Initial Flow Pressure	69	P.S.I.	60	Mins. 60 Mins.
C First Final Flow Pressure	69	P.S.I.	120	Mins. 108 Mins.
D Initial Closed-in Pressure	308	P.S.I.	60	Mins. 60 Mins.
E Second Initial Flow Pressure	83	P.S.I.	120	Mins. 111 Mins.
F Second Final Flow Pressure	83	P.S.I.		
G Final Closed-in Pressure	262	P.S.I.		
H Final Hydrostatic Mud	2321	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>12</u> Inc.		Breakdown: <u>36</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>37</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	69	0	69	0	83	0	83
P 2 5	69	3	69	5	83	3	83
P 3 10	69	6	69	10	83	6	83
P 4 15	69	9	70	15	83	9	83
P 5 20	69	12	72	20	83	12	86
P 6 25	69	15	77	25	83	15	88
P 7 30	69	18	81	30	83	18	90
P 8 35	69	21	86	35	83	21	93
P 9 40	69	24	90	40	83	24	97
P10 45	69	27	95	45	83	27	102
P11 50	69	30	100	50	83	30	104
P12 55	69	33	106	55	83	33	113
P13 60	69	36	111	60	83	36	114
P14		39	114			39	118
P15		42	121			42	123
P16		45	126			45	127
P17		48	132			48	130
P18		51	137			51	137
P19		54	142			54	139
P20		57	148			57	146
		60	153			60	149

WESTERN TESTING CO., INC.

Pressure Data

Date 1/27/82 Test Ticket No. 14707
 Recorder No. 1560 Capacity 4500 Location 4535 Ft.
 Clock No. - Elevation -- Well Temperature 123 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2377</u> P.S.I.	Open Tool	<u>11:00A</u> M	
B First Initial Flow Pressure	<u>69</u> P.S.I.	First Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
C First Final Flow Pressure	<u>69</u> P.S.I.	Initial Closed-in Pressure	<u>120</u> Mins.	<u>108</u> Mins.
D Initial Closed-in Pressure	<u>308</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>83</u> P.S.I.	Final Closed-in Pressure	<u>120</u> Mins.	<u>111</u> Mins.
F Second Final Flow Pressure	<u>83</u> P.S.I.			
G Final Closed-in Pressure	<u>262</u> P.S.I.			
H Final Hydrostatic Mud	<u>2321</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>12</u> Inc.		Breakdown: <u>36</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>37</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		63	160			63	155
P 2		66	167			66	160
P 3		69	176			69	167
P 4		72	183			72	171
P 5		75	191			75	176
P 6		78	199			78	183
P 7		81	208			81	190
P 8		84	215			84	194
P 9		87	225			87	201
P10		90	236			90	211
P11		93	249			93	218
P12		96	260			96	225
P13		99	271			99	231
P14		102	282			102	238
P15		105	296			105	245
P16		108	308			108	255
P17						111	262
P18							
P19							
P20							

DST #3

1560

KA #14707
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