

Computer Generated


 17-26-34W
 State Geological Survey
 WICHITA, BRANCH

 Home Office: Wichita, Kansas 67201
 P.O. Box 1599 (316) 262-5861

Company Helmerich & Payne, Inc. Lease & Well No. Pleasant Prairie Unit #77
 Elevation 1980 from east line Formation Morrow-Line Effective Pay - Ft. Ticket No. 11471
 Date 1/1/82 Sec. 17 Twp. 26S Range 34W County Firney State Kansas
 Test Approved by Gary F Land Western Representative Darrell Claphan
 Formation Test No. 2 Interval Tested from 4818 ft. to 4928 ft. Total Depth 4928 ft.
 Packer Depth 4813 ft. Size 6 5/8 in. Packer Depth 4818 ft. Size 6 7/8 in.
 Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 4820 ft. Recorder Number 10980 Cap. 4200
 Bottom Recorder Depth (Outside) 4824 ft. Recorder Number 6233 Cap. 4000
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -
 Drilling Contractor Cheyenne Drilling Rig #1 Drill Collar Length 558 I. D. 2.2 in.
 Mud Type Chemical-Premix Viscosity 40 Weight Pipe Length - I. D. - in.
 Weight 9.5 Water Loss 11.6 cc. Drill Pipe Length 4228 I. D. 3.8 in.
 Chlorides 5800 P.P.M. Test Tool Length 32 ft. Tool Size 4.5 in.
 Jars: Make WTC Serial Number 421 Anchor Length 110 ft. Size 5.5 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 4.5 in.

Blow: Initial flow period weak blow slowly building to 1/2" to 8" back to 6 inches.
Final flow period weak blow slowly building then slowly dying (1/2 inch to 2 inches to 1 inch)
 Recovered 415 ft. of gas in pipe
 Recovered 15 ft. of mud Sampler adapter slipped causing loss of fluid
 Recovered 110 ft. of heavy mud cut oil
 Recovered 60 ft. of froggy oil (would not grind out on location - shop reading out
 Recovered 60 ft. of slightly frothy oil of sampler - 45% oil; 45% gas; 7% mud; 3% water)
 Remarks:

Partial plugging on both flow periods.

Time Set	Packer(s)	3:15	A.M.	P.M.	Time Started Off Bottom	7:45	A.M.	P.M.	Maximum Temperature	125
Initial Hydrostatic Pressure					(A)	2388		P.S.I.		
Initial Flow Period				Minutes	30	(B)	114*	P.S.I. to (C)	541*	P.S.I.
Initial Closed In Period				Minutes	60	(D)	1394	P.S.I.		
Final Flow Period				Minutes	60	(E)	321*	P.S.I. to (F)	1200*	P.S.I.
Final Closed In Period				Minutes	120	(G)	1350	P.S.I.		
Final Hydrostatic Pressure					(H)	2383		P.S.I.		

WESTERN TESTING CO., INC.
Pressure Data

17-26-34W

11471

Date 1/1/82

Recorder No. 10980

Capacity 4200

Test Ticket No. _____

Location 4820 Ft.

Clock No. - Elevation 1980 From East Line Well Temperature 125 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	2388 P.S.I.	3:15P	M
B First Initial Flow Pressure	114* P.S.I.	30 Mins.	30 Mins.
C First Final Flow Pressure	541* P.S.I.	60 Mins.	60 Mins.
D Initial Closed-in Pressure	1394 P.S.I.	60 Mins.	60 Mins.
E Second Initial Flow Pressure	321* P.S.I.	120 Mins.	120 Mins.
F Second Final Flow Pressure	1200* P.S.I.		
G Final Closed-in Pressure	1350 P.S.I.		
H Final Hydrostatic Mud	2383 P.S.I.		

*Pressures questionable due to plugging.

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: 6 Inc. of 5 mins. and a final inc. of 0 Min.		Initial Shut-In Breakdown: 20 Inc. of 3 mins. and a final inc. of 0 Min.		Second Flow Pressure Breakdown: 12 Inc. of 5 mins. and a final inc. of 0 Min.		Final Shut-In Breakdown: 40 Inc. of 3 mins. and a final inc. of 0 Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	114*	0	541*	0	321*	0	1200*
P 2 5	157*	3	953	5	767*	3	1297
P 3 10	333*	6	1184	10	1088*	6	1306
P 4 15	333*	9	1316	15	1040*	9	1308
P 5 20	423*	12	1344	20	1237*	12	1310
P 6 25	468*	15	1357	25	1214*	15	1312
P 7 30	541*	18	1363	30	1286*	18	1314
P 8		21	1368	35	1295*	21	1316
P 9		24	1372	40	1298*	24	1318
P10		27	1376	45	1301*	27	1320
P11		30	1378	50	1304*	30	1321
P12		33	1380	55	1308*	33	1322
P13		36	1382	60	1200*	36	1323
P14		39	1384			39	1324
P15		42	1386			42	1325
P16		45	1388			45	1326
P17		48	1390			48	1328
P18		51	1391			51	1329
P19		54	1392			54	1331
P20		57	1393			57	1332
		60	1394			60	1433

WESTERN TESTING CO., INC.
Pressure Data

17-26-34W

11471

Date 1/1/82

Test Ticket No. _____

Recorder No. 10980

4200

Location 4820

Clock No. - Elevation 1980 From East Line Well Temperature 125

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2388	P.S.I.	3:15P	M
B First Initial Flow Pressure	114*	P.S.I.	30	Mins. 30 Min
C First Final Flow Pressure	541*	P.S.I.	60	Mins. 60 Min
D Initial Closed-in Pressure	1394	P.S.I.	60	Mins. 60 Min
E Second Initial Flow Pressure	321*	P.S.I.	120	Mins. 120 Min
F Second Final Flow Pressure	1200*	P.S.I.		
G Initial Closed-in Pressure	1350	P.S.I.		
H Final Hydrostatic Mud	2383	P.S.I.		

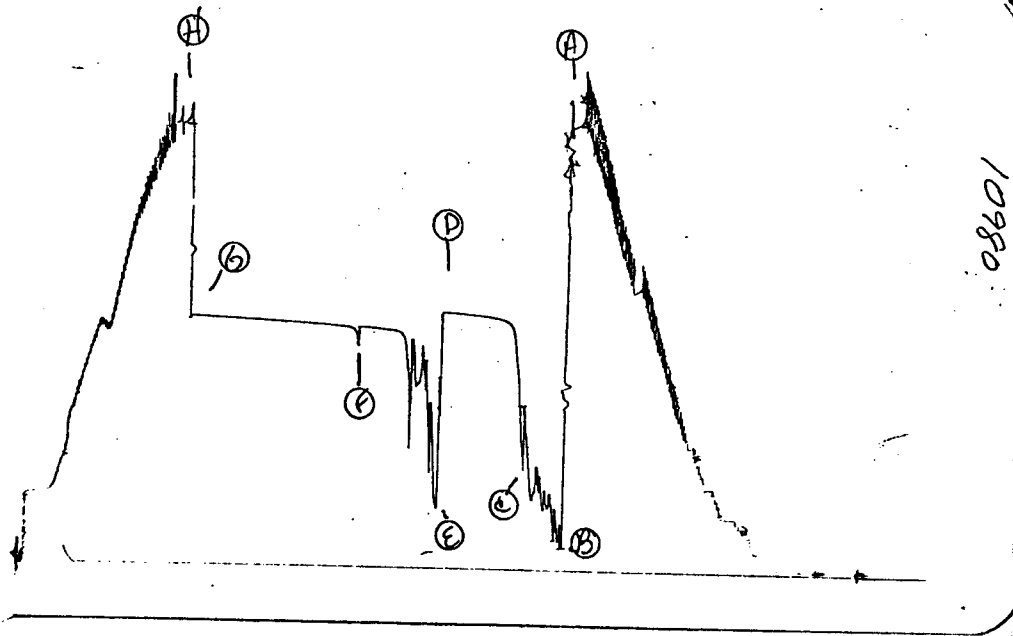
*Pressures questionable due to plugging.

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Initial Shut-In Breakdown: <u>20</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>12</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>40</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1						63	1335
P 2						66	1336
P 3						69	1337
P 4						72	1338
P 5						75	1339
P 6						78	1340
P 7						81	1341
P 8						84	1342
P 9						87	1343
P10						90	1344
P11						93	1344
P12						96	1345
P13						99	1345
P14						102	1346
P15						105	1347
P16						108	1348
P17						113	1349
P18						114	1350
P19						117	1350
P20						120	1350

State Geological Survey
WICHITA, BRANCH

RT # 11471
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This is an actual photograph of recorder chart.

POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2506	2388	PSI
(B) First Initial Flow Pressure	107	114*	PSI
(C) First Final Flow Pressure	536	541*	PSI
(D) Initial Closed-in Pressure	1380	1394	PSI
(E) Second Initial Flow Pressure	321	321*	PSI
(F) Second Final Flow Pressure	643	1200*	PSI
(G) Final Closed-in Pressure	1348	1350	PSI
(H) Final Hydrostatic Mud	2453	2383	PSI

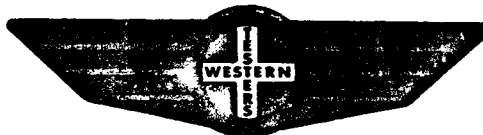
State Geological Survey
WICHITA, BRANCH

17-26-34W

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b¹	= 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
h¹	= Net Pay Thickness	Feet
K	= Permeability	md
K¹	= Permeability (From Net Pay Zone h ¹)	md
m	= Slope Extrapolated Pressure Plot (Psi ² /cycle Gas)	psi/cycle
OF¹	= Maximum Indicated Flow Rate	MCF/D
OF²	= Minimum Indicated Flow Rate	MCF/D
OF³	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF⁴	= 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
Q¹	= 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	—
u	= Viscosity Gas or Liquid	CP
Log	= Common Log	

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



17-26-3440
State Geological Survey
WICHITA, BRANCH

Home Office: Wichita, Kansas 67201
P.O. Box 1599 (316) 262-5861

Company Helmerich & Payne, Inc. Lease & Well No. Pleasant Prairie Unit #77
Elevation 1980 from east line Formation St Louis "C" Effective Pay - Ft. Ticket No. 11472
Date 1/4/82 Sec 17 Twp 26S Range 34W County Finney State Kansas
Test Approved by Gary F Land Western Representative Darrell Claphan
Formation Test No. 3 Interval Tested from 5124 ft. to 5140 ft. Total Depth 5203 ft.
Packer Depth 5119 ft. Size 6 5/8 in. Packer Depth 5124 ft. Size 6 7/8 in.
Packer Depth 5140 ft. Size - in. Packer Depth - ft. Size - in.
Depth of Selective Zone Set -
Top Recorder Depth (Inside) 5126 ft. Recorder Number 10980 Cap. 4200
Bottom Recorder Depth (Outside) 5130 ft. Recorder Number 6233 Cap. 4000
Below Straddle Recorder Depth 5202 ft. Recorder Number H & T Cap. -
Drilling Contractor Cheyenne Drilling Rig #1 Drill Collar Length 558 I. D. 2.2 in.
Mud Type Chemical-Premix Viscosity 43 Weight Pipe Length - I. D. - in.
Weight 9.4 Water Loss 12.2 cc. Drill Pipe Length 4597 I. D. 3.8 in.
Chlorides 4800 P.P.M. Test Tool Length 32 ft. Tool Size 4.5 in.
Jars: Make WTC Serial Number 421 Anchor Length 16 ft. Size 5.5 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 4.5 in.
Blow: Initial flow period weak blow - died in 27 minutes. Final flow period no blow.

Recovered 100 ft. of mud - no water
Recovered 30 ft. of slightly oil stained mud - more oil stained than specked - less than 1% oil
Recovered - ft. of -
Recovered - ft. of -
Recovered - ft. of -
Remarks: had trouble setting slips on tool joint to rotate.

Time Set Packer(s) 11:10 ~~A.M.~~ P.M. Time Started Off Bottom 2:10 ~~A.M.~~ P.M. Maximum Temperature 126
Initial Hydrostatic Pressure (A) 2490 P.S.I.
Initial Flow Period Minutes 30 (B) 64 P.S.I. to (C) 67 P.S.I.
Initial Closed In Period Minutes 57 (D) 277 P.S.I.
Final Flow Period Minutes 25 (E) 86 P.S.I. to (F) 86 P.S.I.
Final Closed In Period Minutes 57 (G) 267 P.S.I.
Final Hydrostatic Pressure (H) 2466 P.S.I.

Phone (316) 793-7903



P. O. Box 793 - Great Bend, Kansas

Fluid Sample Report

State Geological Survey
WICHITA, BRANCH

Date 1/4/82 Ticket No. 11472
Company Helmerich & Payne, Inc.
Well Name & No. Pleasant Prairie Unit #77 DST No. 3
County Finney State Kansas
Sampler No. 2 Test Interval 5124-5140

Pressure in Sampler 5 PSIG BHT 126 OF

Total Volume of Sampler 3100 cc.

Total Volume of Sample: 2100 cc.

Oil: I cc.

Water: - cc.

Mud: 2000 cc.

Gas: - cu. ft.

Other: -

Resistivity

Water: @ of Chloride Content 5000 ppm.

Mud Pit Sample @ of Chloride Content 4800 ppm.

Gas/Oil Ratio Gravity °API @ OF

Where was sample drained Dodge City Shop

Remarks: No gas in sampler

WESTERN TESTING CO., INC.
Pressure Data

17-26-34W

Date 1/4/82

Test Ticket No. 11472

Recorder No. 10980

Capacity 4200

Location 5126 Ft.

Clock No. - Elevation 1980 From East Line

Well Temperature 126 °F

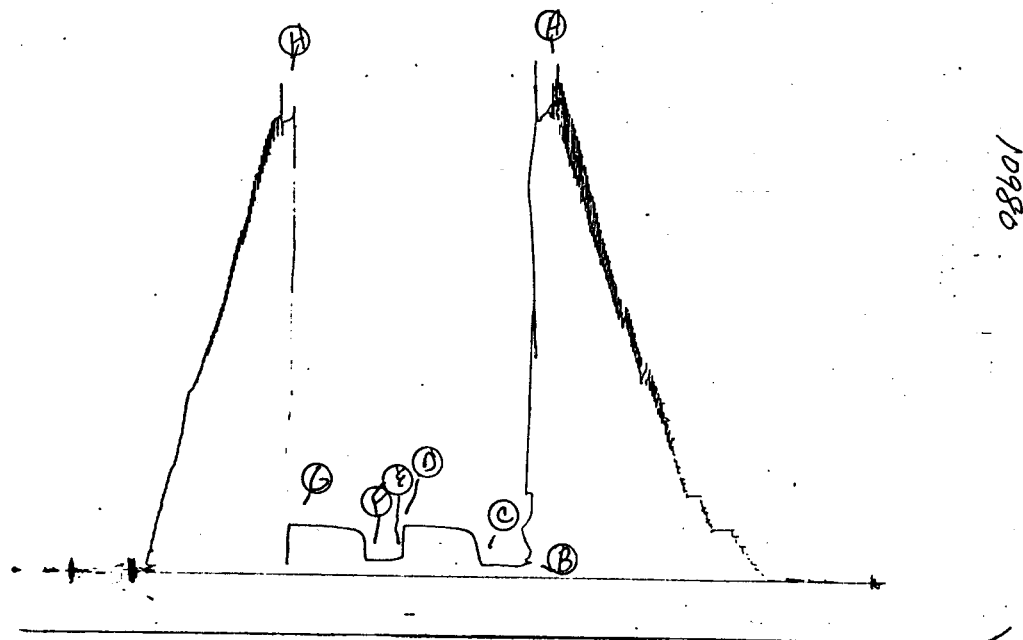
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2490</u>	P.S.I.	<u>11:10A</u>	<u>M</u>
B First Initial Flow Pressure	<u>64</u>	P.S.I.	<u>30</u>	<u>30</u> Mins.
C First Final Flow Pressure	<u>67</u>	P.S.I.	<u>60</u>	<u>57</u> Mins.
D Initial Closed-in Pressure	<u>277</u>	P.S.I.	<u>30</u>	<u>25</u> Mins.
E Second Initial Flow Pressure	<u>86</u>	P.S.I.	<u>60</u>	<u>57</u> Mins.
F Second Final Flow Pressure	<u>86</u>	P.S.I.		
G Final Closed-in Pressure	<u>267</u>	P.S.I.		
H Final Hydrostatic Mud	<u>2466</u>	P.S.I.		

State Geological Survey
WICHITA, BRANCH

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Initial Shut-In Breakdown: <u>19</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.		Second Flow Pressure Breakdown: <u>5</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.		Final Shut-In Breakdown: <u>19</u> Inc. of <u>3</u> mins. and a 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>64</u>	<u>0</u>	<u>67</u>	<u>0</u>	<u>86</u>	<u>0</u>	<u>86</u>
P 2 <u>5</u>	<u>64</u>	<u>3</u>	<u>118</u>	<u>5</u>	<u>86</u>	<u>3</u>	<u>226</u>
P 3 <u>10</u>	<u>64</u>	<u>6</u>	<u>204</u>	<u>10</u>	<u>86</u>	<u>6</u>	<u>243</u>
P 4 <u>15</u>	<u>65</u>	<u>9</u>	<u>240</u>	<u>15</u>	<u>86</u>	<u>9</u>	<u>251</u>
P 5 <u>20</u>	<u>69</u>	<u>12</u>	<u>253</u>	<u>20</u>	<u>86</u>	<u>12</u>	<u>253</u>
P 6 <u>25</u>	<u>69</u>	<u>15</u>	<u>258</u>	<u>25</u>	<u>86</u>	<u>15</u>	<u>257</u>
P 7 <u>30</u>	<u>67</u>	<u>18</u>	<u>263</u>			<u>18</u>	<u>258</u>
P 8		<u>21</u>	<u>264</u>			<u>21</u>	<u>260</u>
P 9		<u>24</u>	<u>267</u>			<u>24</u>	<u>262</u>
P10		<u>27</u>	<u>269</u>			<u>27</u>	<u>264</u>
P11		<u>30</u>	<u>271</u>			<u>30</u>	<u>266</u>
P12		<u>33</u>	<u>272</u>			<u>33</u>	<u>267</u>
P13		<u>36</u>	<u>273</u>			<u>36</u>	<u>267</u>
P14		<u>39</u>	<u>274</u>			<u>39</u>	<u>267</u>
P15		<u>42</u>	<u>275</u>			<u>42</u>	<u>267</u>
P16		<u>45</u>	<u>276</u>			<u>45</u>	<u>267</u>
P17		<u>48</u>	<u>277</u>			<u>48</u>	<u>267</u>
P18		<u>51</u>	<u>277</u>			<u>51</u>	<u>267</u>
P19		<u>54</u>	<u>277</u>			<u>54</u>	<u>267</u>
P20		<u>57</u>	<u>277</u>			<u>57</u>	<u>267</u>

PK # 11472
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This is an actual photograph of recorder chart.

POINT	PRESSURE		
	Field Reading	Office Reading	
(A) Initial Hydrostatic Mud	2495	2490	PSI
(B) First Initial Flow Pressure	64	64	PSI
(C) First Final Flow Pressure	64	67	PSI
(D) Initial Closed-in Pressure	268	277	PSI
(E) Second Initial Flow Pressure	75	86	PSI
(F) Second Final Flow Pressure	75	86	PSI
(G) Final Closed-in Pressure	257	267	PSI
(H) Final Hydrostatic Mud	2485	2466	PSI

State Geological Survey
WICHITA, BRANCH

17-26-34W

State Geological Survey
WICHITA, BRANCH

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 ($\text{Psi}^2/\text{cycle Gas}$)	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	$^{\circ}\text{R}$
Z	= Compressibility Factor	—
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Log	= Common Log	

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