



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET

Nº 4540

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

Elevation _____ Formation KC Eff. Pay _____ Ft.

WICHITA, KANSAS 67201

COMPANY NAME Glacier Petroleum Co. Inc. District Dodge City Date June 28, 1944 Customer Order No. PO Box 577
ADDRESS 825 Commercial Street Emporia, Kansas 66801
LEASE AND WELL NO. Hunter #1 COUNTY Clark STATE KS Sec. 18 Twp. 33 Rge. 21W
Mail Invoice To #1 HUNTER Co. Name Same Address _____ No. Copies Requested Reg
Mail Charts To Same Address _____ No. Copies Requested Reg

Formation Test No. 4834 Interval Tested From 4834 ft. to 4890 ft. Total Depth 4890 ft.
Packer Depth 4829 ft. Size 63/4 in. Packer Depth _____ ft. Size _____ in.
Packer Depth 4834 ft. Size 63/4 in. Packer Depth _____ ft. Size _____ in.
Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 4842 ft. Recorder Number 6233 Cap. 4000
Bottom Recorder Depth (Outside) 4845 ft. Recorder Number 13400 Cap. 3950
Below Saddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____

Drilling Contractor Glacier Rig # 2 Drill Collar Length 386 I. D. 2.2 in.
Mud Type Starch Viscosity 38 Weight Pipe Length _____ I. D. _____ in.
Weight 93 Water Loss 11c cc. Drill Pipe Length 4419 I. D. _____ in.
Chlorides 44.000 P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 OD in.
Jars: Make Western Serial Number 414 Anchor Length 56 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" FH in.

Blow: FFP - Weak blow - died 10 min.
FFP - No blow

Recovered 300 ft. of heavy mud - no show
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____

Chlorides _____ P.P.M. Sample Jars used _____ Remarks: Slid tool 8' to bottom
Temporary packer failed Had 20 min delay starting off bottom due to breakage

Time On Location 8:00 A.M. Time Pick Up Tool 3:00 P.M. Time Off Location 2:15 P.M.
Time Set Packer(s) 7:10 A.M. Time Started Off Bottom 9:40 A.M. Maximum Temperature 119
Initial Hydrostatic Pressure _____ (A) 2426 P.S.I.
Initial Flow Period _____ Minutes 15 (B) 203 P.S.I. to (C) 203 P.S.I.
Initial Closed In Period _____ Minutes 45 (D) 1611 P.S.I.
Final Flow Period _____ Minutes 30 (E) 203 P.S.I. to (F) 203 P.S.I.
Final Closed In Period _____ Minutes 60 (G) 946 P.S.I.
Final Hydrostatic Pressure _____ (H) 2396 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 Clark M. Kuhl
Signature of Customer or his authorized representative

Western Representative Mike Schubert 1940

FIELD INVOICE

Open Hole Test \$ 595
Misrun \$ _____
Straddle Test \$ _____
Jars \$ 300
Selective Zone \$ _____
Safety Joint \$ 65
Standby \$ _____
Evaluation \$ _____
Extra Packer \$ _____
Circ. Sub. \$ _____
Mileage \$ _____
Fluid Sampler \$ _____
Extra Charts \$ _____

WESTERN TESTING CO., INC.

Pressure Data

Date 6-28-84

Test Ticket No. 4540

Recorder No. 6233 Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2426</u> P.S.I.		M
B First Initial Flow Pressure	<u>193</u> P.S.I.		Mins. Mins.
C First Final Flow Pressure	<u>193</u> P.S.I.		Mins. Mins.
D Initial Closed-in Pressure	<u>1597</u> P.S.I.		Mins. Mins.
E Second Initial Flow Pressure	<u>198</u> P.S.I.		Mins. Mins.
F Second Final Flow Pressure	<u>198</u> P.S.I.		Mins. Mins.
G Final Closed-in Pressure	<u>934</u> P.S.I.		
H Final Hydrostatic Mud	<u>2388</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>16</u> Inc.		Breakdown: <u>7</u> Inc.		Breakdown: <u>27</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>193</u>	0	<u>193</u>	0	<u>198</u>	0	<u>198</u>
P 2 5		3	<u>375</u>	5		3	<u>205</u>
P 3 10		6	<u>537</u>	10		6	<u>211</u>
P 4 15	<u>193</u>	9	<u>682</u>	15		9	<u>228</u>
P 5 20		12	<u>820</u>	20		12	<u>247</u>
P 6 25		15	<u>944</u>	25		15	<u>268</u>
P 7 30		18	<u>1051</u>	30	<u>198</u>	18	<u>291</u>
P 8 35		21	<u>1149</u>	35		21	<u>312</u>
P 9 40		24	<u>1229</u>	40		24	<u>333</u>
P 10 45		27	<u>1306</u>	45		27	<u>360</u>
P 11 50		30	<u>1369</u>	50		30	<u>382</u>
P 12 55		33	<u>1429</u>	55		33	<u>407</u>
P 13 60		36	<u>1477</u>	60		36	<u>433</u>
P 14		39	<u>1528</u>	65		39	<u>462</u>
P 15		42	<u>1570</u>	70		42	<u>491</u>
P 16		45	<u>1597</u>	75		45	<u>520</u>
P 17		48		80		48	<u>552</u>
P 18		51		85		51	<u>586</u>
P 19		54		90		54	<u>619</u>
P 20		57				57	<u>651</u>
		60				60	<u>691</u>

(Cont.)

WESTERN TESTING CO., INC.
Pressure Data

Date _____ Test Ticket No. 4540
Recorder No. _____ Capacity _____ Location _____ Ft.
Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud _____	P.S.I.	Open Tool _____	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 _____	P.S.I.			

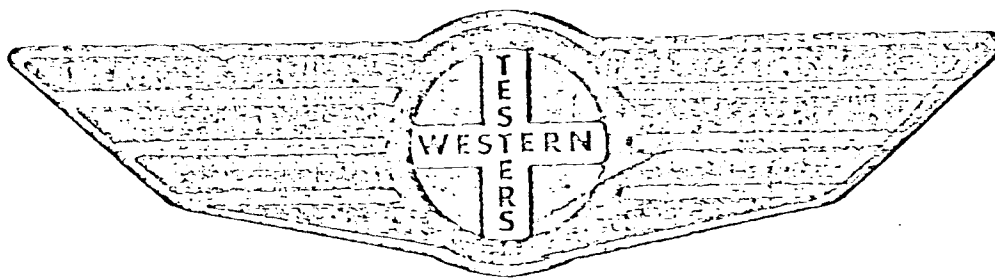
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		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 _____		63 _____				63 _____	733
P 2 _____		66 _____				66 _____	778
P 3 _____		69 _____				69 _____	822
P 4 _____		72 _____				72 _____	867
P 5 _____		75 _____				75 _____	913
P 6 _____		78 _____				78 _____	934
P 7 _____		81 _____				81 _____	
P 8 _____		84 _____				84 _____	
P 9 _____		87 _____				87 _____	
P10 _____		90 _____				90 _____	
P11 _____		93 _____				93 _____	
P12 _____		96 _____				96 _____	
P13 _____		99 _____				99 _____	
P14 _____		102 _____				102 _____	
P15 _____		105 _____				105 _____	
P16 _____		108 _____				108 _____	
P17 _____		111 _____				111 _____	
P18 _____		114 _____				114 _____	
P19 _____		117 _____				117 _____	
P20 _____		120 _____				120 _____	

FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

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GLACIER PETROLEUM CO., INC. Lease and Well No. #1 HUNTER

Sec. 18 Twp. 33S Rge. 21W Test No. 1 Date 6/28/84

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 6/28/84
CUSTOMER: GLACIER PETROLEUM CO. INC.
WELL: 1 TEST: 1
ELEVATION (KB): 0 FORMATION: KANSAS CITY
SECTION: 18 TOWNSHIP: 33S
RANGE: 21W COUNTY: CLARK STATE: KANSAS
GAUGE SN #6233 RANGE: 4000 CLOCK: 12

TICKET #4540
LEASE: HUNTER
GEOLOGIST: ?

INTERVAL TEST FROM: 4834 FT TO: 4890 FT TOTAL DEPTH: 4890 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 4829 FT SIZE: 6 3/4 IN PACKER DEPTH: 4834 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: GLACIER DRLG
MUD TYPE: STARCH VISCOSITY: 38
WEIGHT: 9.3 WATER LOSS (CC):
CHLORIDES (P.P.M.): 44000
JARS - MAKE: WTC SERIAL NUMBER: 414
DID WELL FLOW? NO REVERSED BOOT? NO

DRILL COLLAR LENGTH: 386 FT I.D.: 2.2 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 4419 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 29 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 56 FT SIZE: 5 1/2 OD IN
SURFACE CHOKE SIZE: 3/4 IN BOTTOM CHOKE SIZE: 3/4 IN
MAIN HOLE SIZE: 7 7/8 IN TOOL JOINT SIZE: 4 FH IN

BLOW: INITIAL FLOW PERIOD WEAK BLOW.
DIED IN 10 MINUTES.
FINAL FLOW PERIOD NO BLOW.

RECOVERED: 300 FT OF: HEAVY MUD. NO SHOW.
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 8 FEET TO BOTTOM.
TEMPORARY PACKER FAILURE.
HAD 20 MINUTE DELAY STARTING OFF
BOTTOM; DUE TO BREAKDOWN.

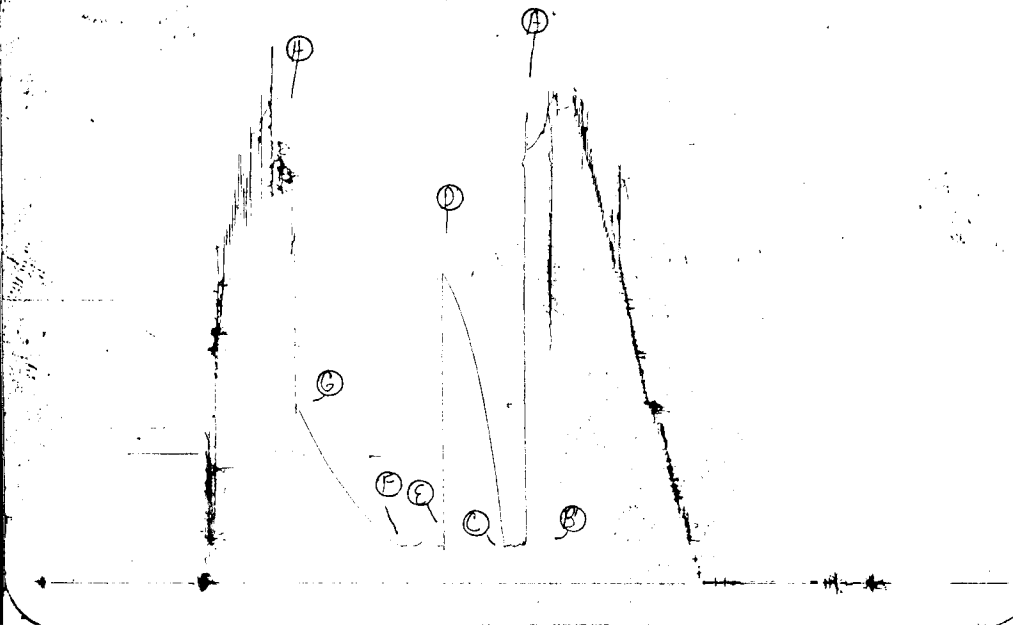
TIME SET PACKER(S): 7:10 AM TIME STARTED OFF BOTTOM: 9:40 AM
WELL TEMPERATURE: 119 °F

INITIAL HYDROSTATIC PRESSURE:		(A) 2426	PSI	
INITIAL FLOW PERIOD	MIN: 15	(B) 193	PSI TO (C) 193	PSI
INITIAL CLOSED IN PERIOD	MIN: 45	(D) 1597	PSI	
FINAL FLOW PERIOD	MIN: 30	(E) 198	PSI TO (F) 198	PSI
FINAL CLOSED IN PERIOD	MIN: 78	(G) 934	PSI	
FINAL HYDROSTATIC PRESSURE		(H) 2388	PSI	

6233

TKI # 4540

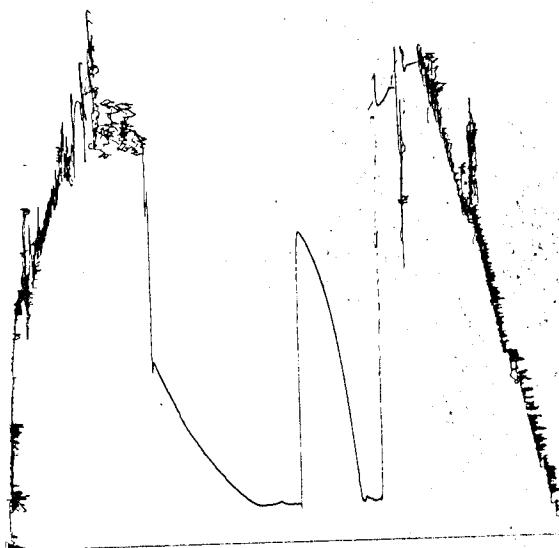
I.



13400

TKT #4540

Q





WESTERN TESTING CO., INC.
FORMATION TESTING
TICKET

Nº 4541

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

Elevation 1886 GS- Formation Morrow Eff. Pay Ft.

District Dodge City Date 6-30-84 Customer Order No.
COMPANY NAME Glacier Petroleum Co. Inc. 10 Box 577
ADDRESS 825 Commerical Street Emporia, Kansas 66801
LEASE AND WELL NO. Hunter #1 COUNTY Clark STATE KS. Sec. 18 Twp. 33 Rge. 21W
Mail Invoice To #1 Hunter, Same No. Copies Requested Reg
Co. Name Address
Mail Charts To 1 Copy to Kull Same 608 One main place No. Copies Requested Reg
Address

Formation Test No. 2 Interval Tested From 5221 ft. to 5260 ft. Total Depth 5260 ft.
Packer Depth 5216 ft. Size 6 3/4 in. Packer Depth ft. Size in.
Packer Depth 5221 ft. Size 6 3/4 in. Packer Depth ft. Size in.
Depth of Selective Zone Set

Top Recorder Depth (Inside)	5249 ft.	Recorder Number	6233	Cap.	4.000
Bottom Recorder Depth (Outside)	5252 ft.	Recorder Number	13400	Cap.	3.950
Below Saddle Recorder Depth	ft.	Recorder Number		Cap.	
Drilling Contractor	Glacier Rig # 2	Drill Collar Length	386	I. D.	2.2 in.
Mud Type	Starch Viscosity 48	Weight Pipe Length		I. D.	in.
Weight	9.5 Water Loss 9.8 cc.	Drill Pipe Length	4806	I. D.	in.
Chlorides	45,000 P.P.M.	Test Tool Length	29 ft.	Tool Size	5 1/2 OD in.
Jars: Make	Western Serial Number 414	Anchor Length	39 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" FH in.

Blow: IFP - Weak blow - died 15 min
FFP - Strong blow - bottom of bucket 5 min

Recovered 30 ft. of mud - no show

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides 48,000 P.P.M. Sample Jars used Remarks: Slid tool 5' to bottom

Plugging in IFP - Could not read pressure

Time On Location	3:00 A.M.	Time Pick Up Tool	5:45 P.M.	Time Off Location	4:30 A.M.
Time Set Packer(s)	9:05 A.M.	Time Started Off Bottom	12:05 P.M.	Maximum Temperature	122
Initial Hydrostatic Pressure	(A) 2666 P.S.I.				
Initial Flow Period	Minutes 30 (B) — P.S.I. to (C) — P.S.I.				
Initial Closed In Period	Minutes 45 (D) 335 P.S.I.				
Final Flow Period	Minutes 45 (E) 71 P.S.I. to (F) 71 P.S.I.				
Final Closed In Period	Minutes 60 (G) 101 P.S.I.				
Final Hydrostatic Pressure	(H) 2656 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 Chas M Kull
Signature of Customer or his authorized representative

Western Representative Mike Shulert 1940

FIELD INVOICE

Open Hole Test	\$ 650
Misrun	\$
Straddle Test	\$
Jars	\$ 300
Selective Zone	\$
Safety Joint	\$ 65
Standby	\$
Evaluation	\$
Extra Packer	\$
Circ. Sub.	\$
Mileage	\$
Fluid Sampler	\$
Extra Charts	\$

WESTERN TESTING CO., INC.

Pressure Data

Date 4/30/84 Recorder No. 6233 Capacity _____ Location _____ Ft. Test Ticket No. 4541
Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2480</u> P.S.I.		M
B First Initial Flow Pressure	<u>- 67</u> P.S.I.		Mins. _____ Mins. _____
C First Final Flow Pressure	<u>- 50</u> P.S.I.		Mins. _____ Mins. _____
D Initial Closed-in Pressure	<u>327</u> P.S.I.		Mins. _____ Mins. _____
E Second Initial Flow Pressure	<u>65</u> P.S.I.		Mins. _____ Mins. _____
F Second Final Flow Pressure	<u>65</u> P.S.I.		Mins. _____ Mins. _____
G Final Closed-in Pressure	<u>108</u> P.S.I.		
H Final Hydrostatic Mud	<u>2480</u> P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: 7 Inc. of 5 mins. and a final inc. of 0 Min.

Initial Shut-In Breakdown: 17 Inc. of 3 mins. and a final inc. of 0 Min.

Second Flow Pressure Breakdown: 10 Inc. of 5 mins. and a final inc. of 0 Min.

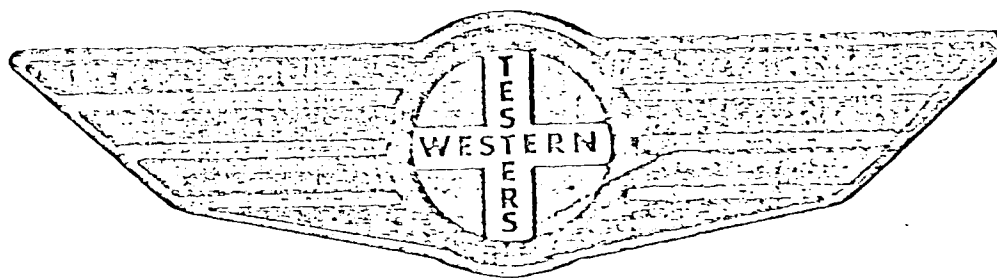
Final Shut-In Breakdown: 2 Inc. of 3 mins. and a final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>50</u>	0	<u>87</u>	0	<u>65</u>	0	<u>65</u>
P 2 5	<u>52</u>	3	<u>191</u>	5		3	<u>67</u>
P 3 10	<u>62</u>	6	<u>195</u>	10		6	<u>69</u>
P 4 15	<u>99</u>	9	<u>226</u>	15		9	<u>71</u>
P 5 20	<u>115</u>	12	<u>239</u>	20		12	<u>73</u>
P 6 25	<u>193</u>	15	<u>251</u>	25		15	<u>75</u>
P 7 30	<u>87</u>	18	<u>262</u>	30		18	<u>77</u>
P 8 35		21	<u>270</u>	35		21	<u>79</u>
P 9 40		24	<u>278</u>	40		24	<u>81</u>
P10 45		27	<u>284</u>	45	<u>65</u>	27	<u>83</u>
P11 50		30	<u>293</u>	50		30	<u>85</u>
P12 55		33	<u>299</u>	55		33	<u>87</u>
P13 60		36	<u>306</u>	60		36	<u>89</u>
P14		39	<u>311</u>	65		39	<u>91</u>
P15		42	<u>317</u>	70		42	<u>93</u>
P16		45	<u>323</u>	75		45	<u>95</u>
P17		48	<u>327</u>	80		48	<u>97</u>
P18		51		85		51	<u>99</u>
P19		54		90		54	<u>100</u>
P20		57				57	<u>101</u>
		60				60	<u>102</u>

FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

GLACIER PETROLEUM CO., INC. Lease and Well No. #1 HUNTER Sec. 18 Twp. 33S Rge. 41W Test No. 2 Date 01/20/04

WESTERN TESTING COMPANY INC.
SUBSURFACE PRESSURE SURVEY

DATE: 6/30/84
CUSTOMER: GLACIER PETROLEUM INC.
WELL: 1 TEST: 2
ELEVATION (KB): 1891 FORMATION: MORROW
SECTION: 18 TOWNSHIP: 33S
RANGE: 21W COUNTY: CLARK STATE: KANSAS
GAUGE SN #6233 RANGE: 4000 CLOCK: 12

TICKET #4541
LEASE: HUNTER
GEOLOGIST: KUHL

INTERVAL TEST FROM: 5221 FT TO: 5260 FT TOTAL DEPTH: 5260 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 5216 FT SIZE: 6 3/4 IN PACKER DEPTH: 5221 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: GLACIER
MUD TYPE: STARCH VISCOSITY: 48
WEIGHT: 9.5 WATER LOSS (CC): 9.8
CHLORIDES (P.P.M.): 45000
JARS - MAKE: W.T.C. SERIAL NUMBER: 414
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 386 FT I.D.: 2.25 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 4806 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 29 FT TOOL SIZE: 5 1/2 O.D. IN
ANCHOR LENGTH: 39 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 F.H. IN

BLOW: INITIAL FLOW PERIOD; WEAK BLOW; DIED IN 15 MINUTES
FINAL FLOW PERIOD; STRONG BLOW; BOTTOM OF BUCKET
IN 5 MINUTES.

RECOVERED: 30 FT OF: MUD; NO SHOW
RECOVERED: FT OF: CHLORIDES 48000 PPM
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

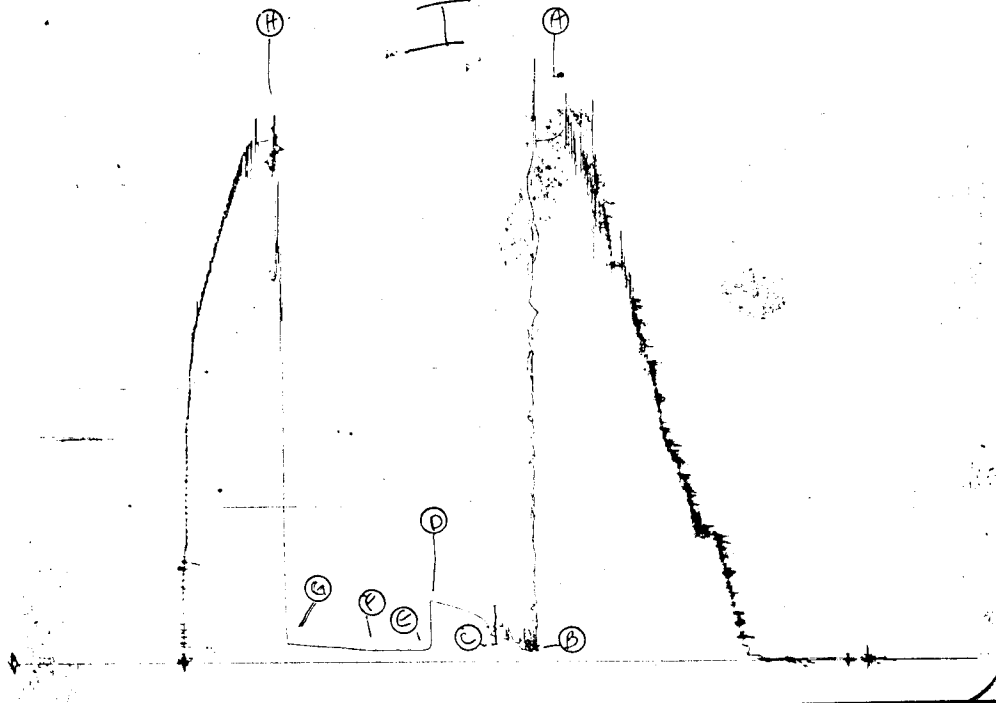
REMARKS: SLID TOOL 5 FEET TO BOTTOM. PLUGGING ACTION
IN INITIAL FLOW PERIOD.

TIME SET PACKER(S): 9:05 P.M. TIME STARTED OFF BOTTOM: 12:05 A.M.
WELL TEMPERATURE: 122 °F
INITIAL HYDROSTATIC PRESSURE: (A) 2680 PSI
INITIAL FLOW PERIOD MIN: 30 (B) 50 PSI TO (C) 87 PSI
INITIAL CLOSED IN PERIOD MIN: 48 (D) 327 PSI
FINAL FLOW PERIOD MIN: 45 (E) 65 PSI TO (F) 65 PSI
FINAL CLOSED IN PERIOD MIN: 60 (G) 102 PSI
FINAL HYDROSTATIC PRESSURE (H) 2680 PSI

6233

ICK# 4541

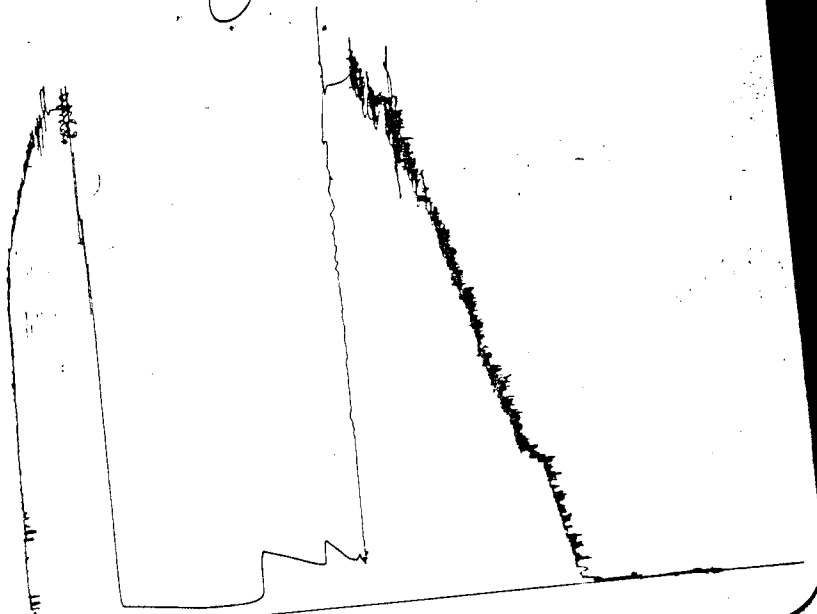
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13400

ICC# 4541

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WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET

Nº 4542

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

Elevation 1886 GS Formation Morrow Eff. Pay Ft.

COMPANY NAME Glacier Petroleum Co. Inc. District Dodge City Date 7-4-84 Customer Order No. PO Box 577
ADDRESS 825 Commerical St. Emporia KS. 66801
LEASE AND WELL NO. Hunter #1 COUNTY Clark STATE KS Sec. 18 Twp. 33S R. 21W
Mail Invoice To #1 Hunter Co. Name Same Address Same No. Copies Requested Reg
Mail Charts To See Instr Address Same No. Copies Requested Reg

Formation Test No. 3 Interval Tested From 5252 ft. to 5309 ft. Total Depth 5400 ft.
Packer Depth 5247 ft. Size 63/4 in. Packer Depth 5309 ft. Size 63/4 in.
Packer Depth 5252 ft. Size 63/4 in. Packer Depth ft. Size in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) <u>5255</u> ft.	Recorder Number <u>6233</u> Cap. <u>4,000</u>
Bottom Recorder Depth (Outside) <u>5258</u> ft.	Recorder Number <u>13400</u> Cap. <u>3,950</u>
Below Saddle Recorder Depth <u>5397</u> ft.	Recorder Number <u>11019</u> Cap. <u>4,500</u>
Drilling Contractor <u>Glacier Rig #2</u>	Drill Collar Length <u>386</u> I. D. <u>2.2</u> in.
Mud Type <u>Starch</u> Viscosity <u>67</u>	Weight Pipe Length <u> </u> I. D. <u> </u> in.
Weight <u>9.6</u> Water Loss <u>15</u> cc.	Drill Pipe Length <u>4837</u> I. D. <u> </u> in.
Chlorides <u>38,000</u> P.P.M.	Test Tool Length <u>29</u> ft. Tool Size <u>5/200</u> in.
Jars: Make <u>Western</u> Serial Number <u>414</u>	Anchor Length <u>57</u> ft. Size <u>5/200</u> in.
Did Well Flow? <u>no</u> Reversed Out <u>no</u>	Surface Choke Size <u>3/4</u> in. Bottom Choke Size <u>3/4</u> in.
	Main Hole Size <u>7/8</u> in. Tool Joint Size <u>4" FH</u> in.

Blow: IFP- Strong blow
FFP- Strong blow - bottom of bucket in min
Recovered 160 ft. of slightly gassy frothy mud
Recovered ft. of
Recovered ft. of
Recovered ft. of
Recovered ft. of

Chlorides 46000 P.P.M. Sample Jars used 3 Remarks: Plugging in IFP - could not get accurate reading

Time On Location <u>8:15 (7-3)</u> <u>A.M.</u>	Time Pick Up Tool <u>7:00</u> <u>A.M.</u>	Time Off Location <u>9:30</u> <u>A.M.</u>
Time Set Packer(s) <u>11:45</u> <u>A.M.</u>	Time Started Off Bottom <u>3:45</u> <u>A.M.</u>	Maximum Temperature <u>121</u>
Initial Hydrostatic Pressure <u> </u> (A) <u>2867</u> P.S.I.	Initial Flow Period <u>45</u> (B) <u> </u> P.S.I. to (C) <u> </u> P.S.I.	Initial Closed In Period <u>60</u> (D) <u>284</u> P.S.I.
Final Flow Period <u>45</u> (E) <u>111</u> P.S.I. to (F) <u>111</u> P.S.I.	Final Closed In Period <u>90</u> (G) <u>426</u> P.S.I.	Final Hydrostatic Pressure <u>2746</u> (H) 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 Chas M. Hill
Signature of Customer or his authorized representative

FIELD INVOICE

Open Hole Test	\$ <u>650</u>
Misrun	\$ <u> </u>
Straddle Test	\$ <u>300</u>
Jars	\$ <u>300</u>
Selective Zone	\$ <u> </u>
Safety Joint	\$ <u>65</u>
Standby	\$ <u>50</u>
Evaluation	\$ <u> </u>
Extra Packer	\$ <u>225</u>
Circ. Sub.	\$ <u> </u>
Mileage <u>Ins.</u>	\$ <u>50</u>
Fluid Sampler	\$ <u> </u>

WESTERN TESTING COMPANY INC.
SUBSURFACE PRESSURE SURVEY

DATE: 7/4/84
CUSTOMER: GLACIER PETROLEUM COMPANY INC.
WELL: 1 TEST: 3
ELEVATION (KB): 1891 FORMATION: MORROW
SECTION: 18 TOWNSHIP: 33S
RANGE: 21W COUNTY: CLARK STATE: KANSAS
GAUGE SN #6233 RANGE: 4000 CLOCK: 12

TICKET #4542
LEASE: HUNTER
GEOLOGIST: KUHL

INTERVAL TEST FROM: 5252 FT TO: 5309 FT TOTAL DEPTH: 5400 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 5247 FT SIZE: 6 3/4 IN PACKER DEPTH: 5252 FT SIZE: 6 3/4 IN
PACKER DEPTH: 5309 FT SIZE: 6 3/4 IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: GLACIER
MUD TYPE: STARCH VISCOSITY: 67
WEIGHT: 9.6 WATER LOSS (CC): 15
CHLORIDES (P.P.M.): 38000
JARS - MAKE: W.T.C. SERIAL NUMBER: 414
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 386 FT I.D.: 2.25 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 4837 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 29 FT TOOL SIZE: 5 1/2 O.D. IN
ANCHOR LENGTH: 57 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 F.H. IN

BLOW: INITIAL FLOW PERIOD; STRONG BLOW. FINAL FLOW
PERIOD; STRONG BLOW; BOTTOM OF BUCKET IN 1
MINUTE.

RECOVERED: 160	FT	OF: SLIGHTLY GASSY FROTHY MUD
RECOVERED:	FT	OF: CHLORIDES 46000 PPM
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:
RECOVERED:	FT	OF:

REMARKS: PLUGGING ACTION IN INITIAL FLOW PERIOD.
Clock stopped on final shut-in.

TIME SET PACKER(S): 11:45 A.M.	TIME STARTED OFF BOTTOM: 3:45 P.M.
WELL TEMPERATURE: 121 °F	
INITIAL HYDROSTATIC PRESSURE:	(A) 2764 PSI
INITIAL FLOW PERIOD MIN: 45	(B) 93 PSI TO (C) 98 PSI
INITIAL CLOSED IN PERIOD MIN: 60	(D) 278 PSI
FINAL FLOW PERIOD MIN: 45	(E) 105 PSI TO (F) 111 PSI
FINAL CLOSED IN PERIOD MIN: 51	(G) 415 PSI
FINAL HYDROSTATIC PRESSURE	(H) 2764 PSI

WESTERN TESTING CO., INC.

Pressure Data

Date: 7/4/86 Recorder No. 6233 Capacity _____ Location _____ Ft. _____
 Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2764</u> P.S.I.		M _____
B First Initial Flow Pressure	<u>93</u> P.S.I.	_____ Mins.	_____ Mins.
C First Final Flow Pressure	<u>98</u> P.S.I.	_____ Mins.	_____ Mins.
D Initial Closed-in Pressure	<u>278</u> P.S.I.	_____ Mins.	_____ Mins.
E Second Initial Flow Pressure	<u>105</u> P.S.I.	_____ Mins.	_____ Mins.
F Second Final Flow Pressure	<u>111</u> P.S.I.	_____ Mins.	_____ Mins.
G Final Closed-in Pressure	<u>415</u> P.S.I.		
H Final Hydrostatic Mud	<u>2764</u> P.S.I.		

pluggin at 2 IFP

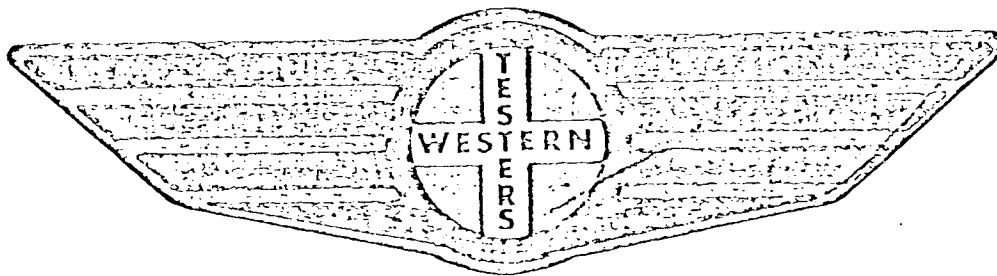
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>10</u> Inc.		Breakdown: <u>21</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>18</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>93</u>	0	<u>98</u>	0	<u>105</u>	0	<u>111</u>
P 2 5	<u>104</u>	3	<u>104</u>	5	<u>105</u>	3	<u>116</u>
P 3 10	<u>117</u>	6	<u>111</u>	10	<u>106</u>	6	<u>130</u>
P 4 15	<u>104</u>	9	<u>117</u>	15	<u>107</u>	9	<u>145</u>
P 5 20	<u>104</u>	12	<u>123</u>	20	<u>107</u>	12	<u>164</u>
P 6 25	<u>111</u>	15	<u>131</u>	25	<u>108</u>	15	<u>184</u>
P 7 30	<u>113</u>	18	<u>140</u>	30	<u>109</u>	18	<u>203</u>
P 8 35	<u>104</u>	21	<u>148</u>	35	<u>110</u>	21	<u>220</u>
P 9 40	<u>98</u>	24	<u>157</u>	40	<u>111</u>	24	<u>240</u>
P10 45	<u>98</u>	27	<u>165</u>	45	<u>111</u>	27	<u>259</u>
P11 50		30	<u>175</u>	50		30	<u>279</u>
P12 55		33	<u>185</u>	55		33	<u>299</u> 279
P13 60		36	<u>194</u>	60		36	<u>317</u>
P14		39	<u>203</u>	65		1 39 2.30	<u>338</u>
P15		42	<u>213</u>	70		2 42 2.21	<u>359</u>
P16		45	<u>224</u>	75		3 45 2.13	<u>377</u>
P17		48	<u>235</u>	80		4 48 2.06	<u>397</u>
P18		51	<u>246</u>	85		5 51 2	<u>415</u>
P19		54	<u>257</u>	90		54	
P20		57	<u>268</u>			57	
		60	<u>278</u>			60	

FORMATION

TEST

REPORT



Home Office:

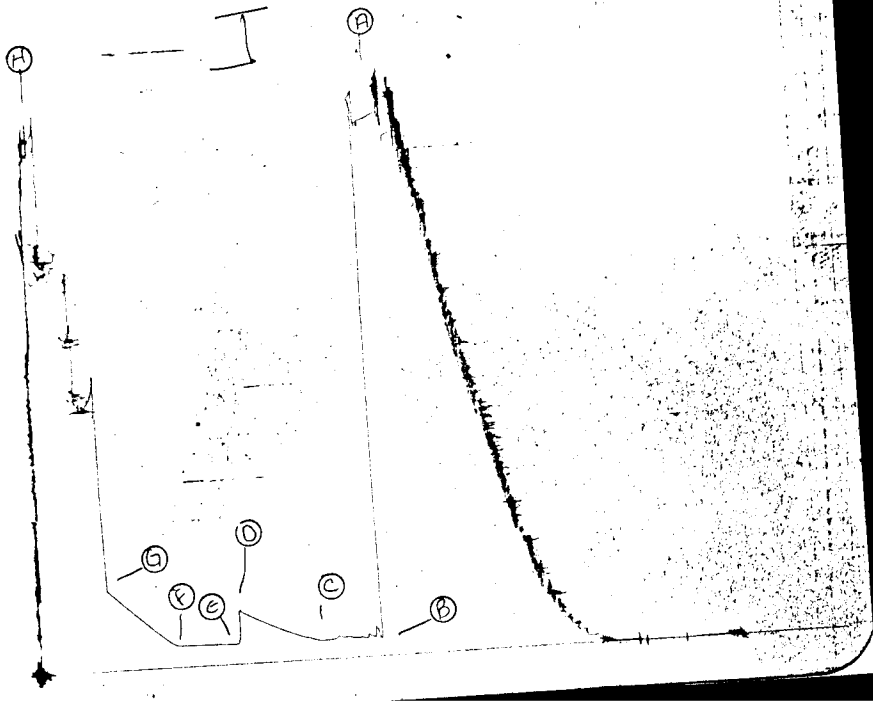
Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

400# 4542

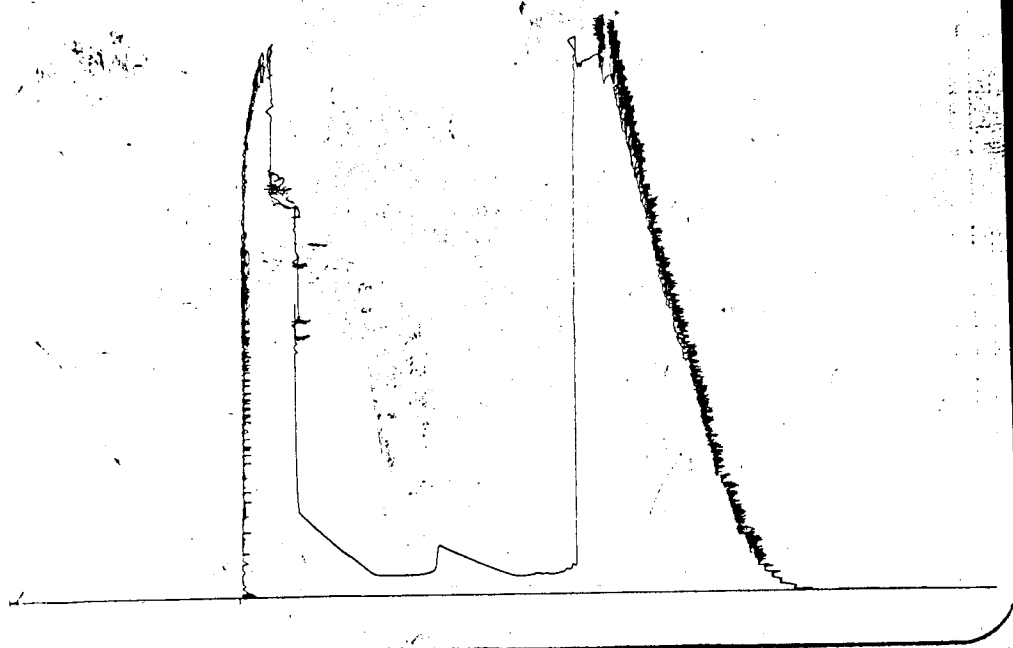
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UC# 4542
Below Straddle

