

CHENEY TESTING COMPANY, INC.

P. O. Box 367

HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	Pan Canadian Petro. Co.	Test No.	1
Well Name & Number	Holsman #13-12-1	Zone Tested	K.C. 'A'
Company Address	Denver, Colo. 80202	Date	6-29-86
Company Rep.	Tom Rubis	Tester	Gary Hartwell
Contractor	Murfin #8	Elevation	2189 G.L.
Location: Sec. 12	Twp. 7	Rge. 21	Co. Graham State Kan.
			Est. Feet of Pay

Recorder No. 13371 Type AK-1 Range 3900 PSI

Recorder Depth 3436 Clock # 25825

(A) Initial Hydrostatic Mud 1737 PSI

(B) First Initial Flow Pressure 21 PSI

(C) First Final Flow Pressure 21 PSI

(D) Initial Shut-in Pressure 1062 PSI

(E) Second Initial Flow Pressure 32 PSI

(F) Second Final Flow Pressure 32 PSI

(G) Final Shut-in Pressure 987 PSI

(H) Final Hydrostatic Mud 1727 PSI

Temperature 118

Mud Weight 9.5 Viscosity 42

Fluid Loss 10.8

Interval Tested 3392-3442

Anchor Length 50'

Top Packer Depth 3387

Bottom Packer Depth 3392

Total Depth 3442

Drill Pipe Size 4½ F.H.

Wt. Pipe I. D. 2.7 Ft. Run 886

Recovery-Total Feet 90

Recovered 90 Feet Of Mud

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment 3 extra copies @ \$5.00 each

Recorder No. 10290 Type AK-1 Range 4250 PSI

Recorder Depth 3439 Clock # 25826

Tool Open Before I.S.I. 10 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 30 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 7:21 P.M.

Blow Remarks Weak ½-3/4" blow first open

No blow second open

Some plugging on second opening

Collars 2.25 238'

Price of Job \$365.00

CHENEY TESTING CO., INC.

P. O. BOX 367

HILL CITY, KANSAS 67642

FLUID SAMPLER DATA

Ticket No.	14073	Date	6-29-86
Company Name	Pan Canadian Petro. Co.		
Lease	Holsman # 13-12-1	Test No.	1
County	Graham Co. Kan.	Sec. 12	Twp. 7 Rge. 21

SAMPLER RECOVERY

Gas _____ ML
Oil _____ ML
Mud _____ 1900 ML
Water _____ 100 ML
Other _____ ML
Pressure _____ 50 P.S.I.
Total _____ 2000 ML

PIT MUD ANALYSIS

Chlorides _____ 4500 ppm
Resistivity _____ 0.95 ohms @ _____ 91 °F
Viscosity _____ 42
Wt. _____ 9.5
Filtrate _____ 10.8 cc
Other _____

SAMPLER ANALYSIS

Resistivity _____ 0.24 ohms @ _____ 81 °F
Chlorides _____ 20,000 ppm
Gravity _____ Corrected @ 60°F

PIPE RECOVERY

TOP:

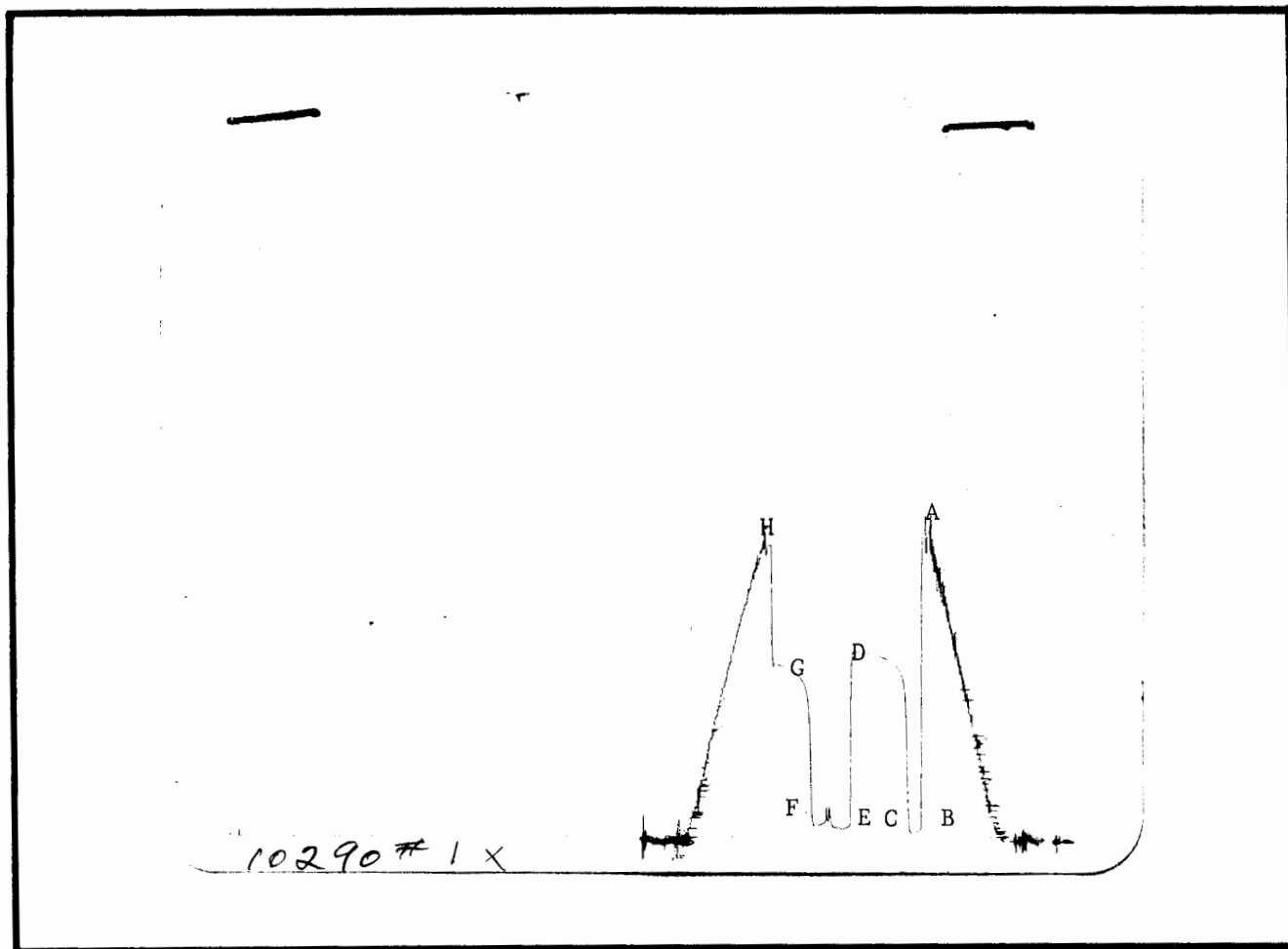
Resistivity _____ ohms @ _____ °F
Chlorides _____ ppm

MIDDLE:

Resistivity _____ ohms @ _____ °F
Chlorides _____ ppm

BOTTOM:

Resistivity _____ 0.84 ohms @ _____ 81 °F
Chlorides _____ 6,000 ppm



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1737	PSI
(B) First Initial Flow Pressure	21	PSI
(C) First Final Flow Pressure	21	PSI
(D) Initial Closed-in Pressure	1062	PSI
(E) Second Initial Flow Pressure	32	PSI
(F) Second Final Flow Pressure	32	PSI
(G) Final Closed-in Pressure	987	PSI
(H) Final Hydrostatic Mud	1727	PSI

CHENEY TESTING COMPANY, INC.

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HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	Pan Canadian Petro. Co.	Test No.	2
Well Name & Number	Holsman # 13-12-1	Zone Tested	K.C.
Company Address	Denver, Colo.	Date	6-30-86
Company Rep.	Tom Rubis	Tester	Gary Hartwell
Contractor	Murfin #8	Elevation	2189 G.L.
Location: Sec. 12	Twp. 7	Rge. 21	Co. Graham State Kan
		Est. Feet of Pay	

Recorder No. 13371 Type AK-1 Range 3900 PSI

Recorder Depth 3526 Clock # 25825

(A) Initial Hydrostatic Mud 1780 PSI

(B) First Initial Flow Pressure 78 PSI

(C) First Final Flow Pressure 78 PSI

(D) Initial Shut-in Pressure 882 PSI

(E) Second Initial Flow Pressure 137 PSI

(F) Second Final Flow Pressure 285 PSI

(G) Final Shut-in Pressure 882 PSI

(H) Final Hydrostatic Mud 1760 PSI

Temperature 124

Mud Weight 9.6 Viscosity 46

Fluid Loss 9.2

Interval Tested 3493-3532

Anchor Length 39'

Top Packer Depth 3488

Bottom Packer Depth 3493

Total Depth 3532

Drill Pipe Size 4 1/2 F.H.

Wt. Pipe I. D. 2.7 Ft. Run 886

Recovery-Total Feet 620

Recovered 248 Feet Of W. M.

Recovered 186 Feet Of M.W.

Recovered 186 Feet Of S.W.

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment 3 Extra copies @ \$5.00 each

Recorder No. 10290 Type AK-1 Range 4250 PSI

Recorder Depth 3529 Clock # 25826

Tool Open Before I.S.I. 10 Mins.

Initial Shut-in 45 Mins.

Flow Period 60 Mins.

Final Shut-in 90 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 12:38 P.M.

Blow Remarks Good building blow 7" 1st open

Good building blow bottom of bucket in

20 minutes 2nd open

Collars 2.25 238'

Price of Job \$365.00

CHENEY TESTING CO., INC.

P. O. BOX 367

HILL CITY, KANSAS 67842

FLUID SAMPLER DATA

Ticket No.	14074	Date	6-30-86
Company Name	Pan Canadian Petro. Co.		
Lease	Holsman # 13-12-1	Test No.	2
County	Graham Co. Kan.	Sec12	Twp. 7 Rge.21

SAMPLER RECOVERY

Gas _____ ML
Oil _____ ML
Mud _____ 400 ML
Water _____ 1600 ML
Other _____ ML
Pressure _____ 80 P.S.I.
Total _____ 2000 ML

PIT MUD ANALYSIS

Chlorides _____ 4,000 ppm
Resistivity _____ 1.11 ohms @ 78 °F
Viscosity _____ 46
Wt. _____ 9.6
Filtrate _____ 9.2 cc
Other _____

SAMPLER ANALYSIS

Resistivity _____ 0.07 ohms @ 82 °F
Chlorides _____ 85,000 ppm
Gravity _____ Corrected @ 60°F

PIPE RECOVERY

TOP:

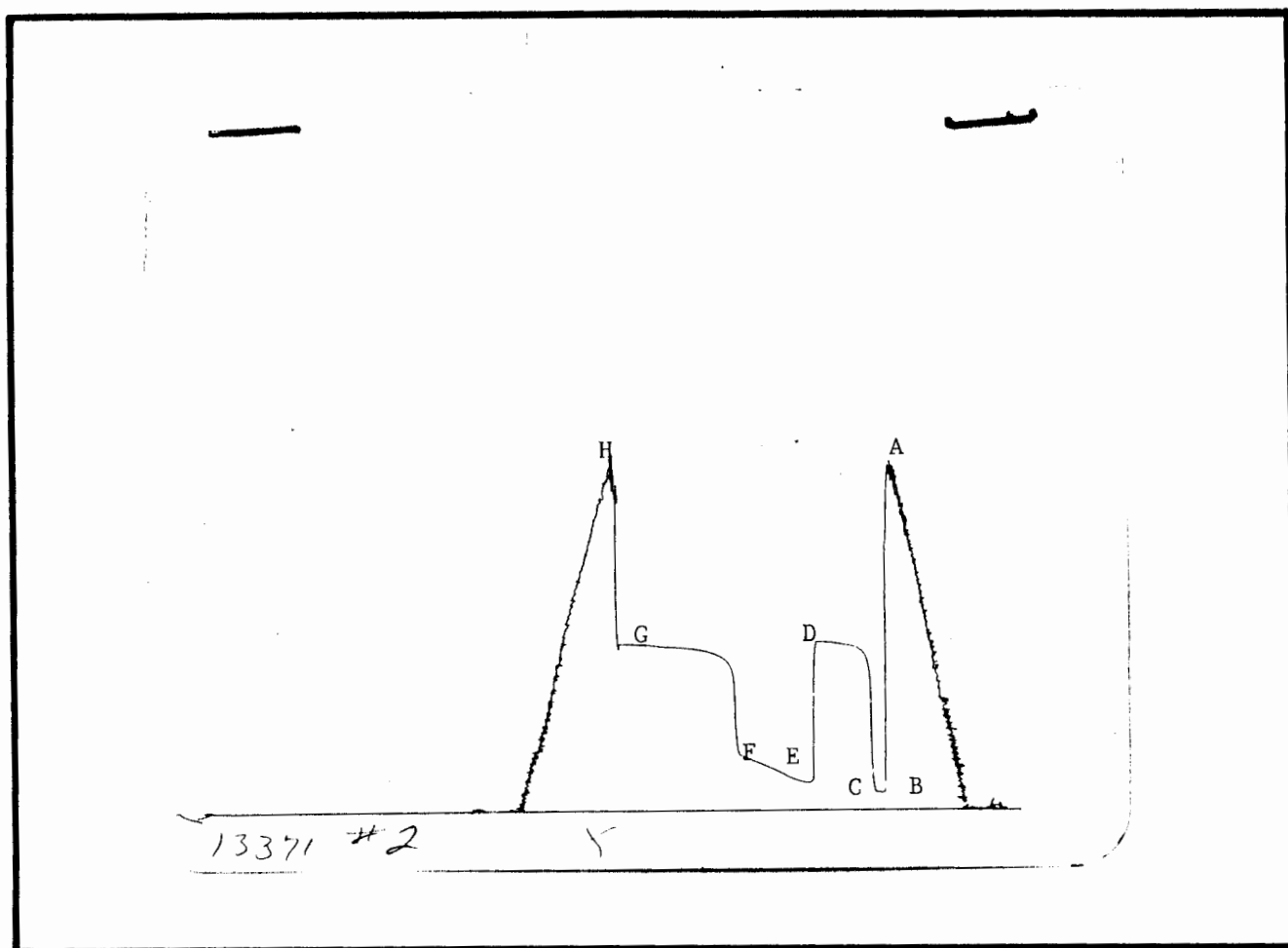
Resistivity _____ 0.14 ohms @ 77 °F
Chlorides _____ 45,000 ppm

MIDDLE:

Resistivity _____ 0.08 ohms @ 82 °F
Chlorides _____ 80,000 ppm

BOTTOM:

Resistivity _____ 0.07 ohms @ 82 °F
Chlorides _____ 85,000 ppm



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1780	PSI
(B) First Initial Flow Pressure	78	PSI
(C) First Final Flow Pressure	78	PSI
(D) Initial Closed-in Pressure	882	PSI
(E) Second Initial Flow Pressure	137	PSI
(F) Second Final Flow Pressure	285	PSI
(G) Final Closed-in Pressure	882	PSI
(H) Final Hydrostatic Mud	1760	PSI

CHENEY TESTING COMPANY, INC.

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HILL CITY, KANSAS 67642

DRILL-STEM TEST DATA

Company	Pan Canadian Petro. Co.	Test No.	3
Well Name & Number	Holsman # 13-12-1	Zone Tested	K.C.
Company Address	Denver, Colo. 80202	Date	7-1-86
Company Rep.	Tom Rubis	Tester	Gary Hartwell
Contractor	Murfin #8	Elevation	2189 G.L.
Location: Sec. 12 Twp. 7 Rge. 21 Co.Graham StateKan		Est. Feet of Pay	

Recorder No. 13371 Type AK-1 Range 3900 PSI

Recorder Depth 3610 Clock # 25825

(A) Initial Hydrostatic Mud 1829 PSI

(B) First Initial Flow Pressure 59 PSI

(C) First Final Flow Pressure 49 PSI

(D) Initial Shut-in Pressure 746 PSI

(E) Second Initial Flow Pressure 39 PSI

(F) Second Final Flow Pressure 29 PSI

(G) Final Shut-in Pressure 619 PSI

(H) Final Hydrostatic Mud 1809 PSI

Temperature

Mud Weight 9.7 Viscosity 50

Fluid Loss 9.2

Interval Tested 3578-3616

Anchor Length 38'

Top Packer Depth 3573

Bottom Packer Depth 3578

Total Depth 3616

Drill Pipe Size 4 1/2 F.H.

Wt. Pipe I. D. 2.7 Ft. Run 886

Recovery-Total Feet 10

Recovered 10 Feet Of Slightly Oil Cut Mud 2% Oil 98% Mud

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Recovered Feet Of

Extra Equipment 3 extra copies @ \$5.00 each Price of Job \$365.00

Recorder No. 10290 Type AK-1 Range 4250 PSI

Recorder Depth 3613 Clock # 25826

Tool Open Before I.S.I. 10 Mins.

Initial Shut-in 45 Mins.

Flow Period 30 Mins.

Final Shut-in 30 Mins.

Top Choke Size 1" Hole Size 7 7/8"

Bottom Choke Size 3/4" Rubber Size 6 3/4"

Tool Open @ 4:48 A.M.

Blow Remarks Weak 1" blow 1st open

weak surface blow died in 8 min., 2nd open

Collars 2.25 238"

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HILL CITY, KANSAS 67642

FLUID SAMPLER DATA

Ticket No.	14075	Date	7-1-86
Company Name	Pan Canadian Petro. Co.		
Lease	Holsman # 13-12-1	Test No.	3
County	Graham Co. Kansas	Sec. 12	Twp. 7 Rge. 21

SAMPLER RECOVERY

Gas	-	ML
Oil	100	ML
Mud	1900	ML
Water	-	ML
Other	-	ML
Pressure	10	P.S.I.
Total	2,000	ML

PIT MUD ANALYSIS

Chlorides	5,000	ppm
Resistivity	1.12	ohms @ 71 °F
Viscosity	50	
Wt.	9.7	
Filtrate	9.2	cc
Other		

SAMPLER ANALYSIS

Resistivity	1.38	ohms @ 64 °F
Chlorides	4,500	ppm
Gravity		Corrected @ 60°F

PIPE RECOVERY

TOP:

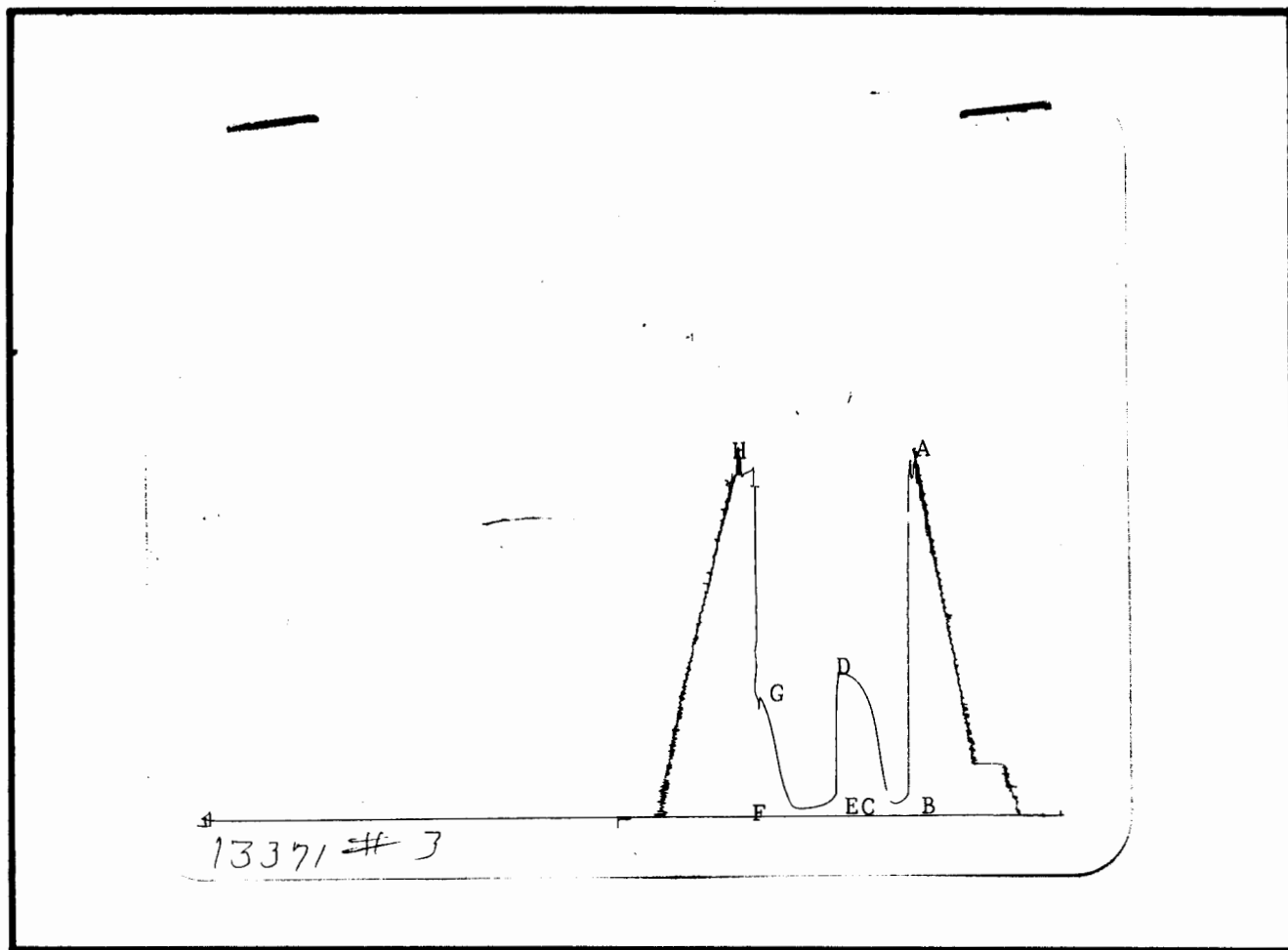
Resistivity	1.38	ohms @ 64 °F
Chlorides		ppm

MIDDLE:

Resistivity		ohms @ °F
Chlorides		ppm

BOTTOM:

Resistivity		ohms @ °F
Chlorides		ppm



This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1829	PSI
(B) First Initial Flow Pressure	59	PSI
(C) First Final Flow Pressure	49	PSI
(D) Initial Closed-in Pressure	746	PSI
(E) Second Initial Flow Pressure	39	PSI
(F) Second Final Flow Pressure	29	PSI
(G) Final Closed-in Pressure	619	PSI
(H) Final Hydrostatic Mud	1809	PSI