



WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Conv. to GSW
- Plug Back: _____ Plug Back Total Depth _____
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date Date Reached TD Completion Date or Recompletion Date

API No. 15 - _____

Spot Description: _____

_____-_____-_____- Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Letter of Confidentiality Received
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____



1088925

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach complete copy of all Electric Wire-line Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Submitted Electronically <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If no, Submit Copy)</i> List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
_____ Perforate _____ Protect Casing _____ Plug Back TD _____ Plug Off Zone				

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD: Size: _____ Set At: _____ Packer At: _____ Liner Run: Yes No

Date of First, Resumed Production, SWD or ENHR. _____ Producing Method:
 Flowing Pumping Gas Lift Other (Explain) _____

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
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DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <i>(Submit ACO-4)</i> <input type="checkbox"/> Other (Specify) _____	PRODUCTION INTERVAL: _____ _____
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Form	ACO1 - Well Completion
Operator	L. D. Drilling, Inc.
Well Name	HAROLD 1-4
Doc ID	1088925

Tops

Name	Top	Datum
ANHYDRITE	644	+1217
HEEBNER	3142	-1281
BROWN LIME	3275	-1414
LANSING	3288	-1427
BASE KANSAS CITY	3513	-1652
VIOLA	3529	-1668
SIMPSON	3577	-1716
ARBUCKLE	3635	-1774

Customer <i>L.D. Drilling</i>	Lease No.	Date <i>6-14-12</i>
Lease <i>Herald</i>	Well # <i>1-11</i>	
Field Order # <i>6117</i>	Station <i>Pratt</i>	Casing
Type Job <i>PTA-CNW</i>	Formation	Depth
		County <i>St. Louis</i>
		State <i>KS</i>
		Legal Description <i>4-22-12</i>

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
				<i>60/40 perc</i>				
Depth	Depth	From	To	Pre Pad	Max		5 Min.	
Volume	Volume	From	To	Pad	Min		10 Min.	
Max Press	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load	

Customer Representative <i>J.M.</i>	Station Manager <i>Dave Scott</i>	Treater <i>Steve G. Jones</i>
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Service Units	<i>07373</i>	<i>07463</i>	<i>17851/17862</i>					
Driver Names	<i>J.M.</i>	<i>M.L.H.</i>	<i>P.</i>					

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>1:30 AM</i>					<i>0.100 - Safety No. 13.8</i>
			<i>1.5</i>	<i>4</i>	<i>Plug @ 3641 w/ 50stk 60/40 perc</i>
	<i>300</i>		<i>3.0</i>	<i>4</i>	<i>1120</i>
	<i>200</i>		<i>12.7</i>	<i>4</i>	<i>Mod. Displacement @ 13.8#/hr</i>
	<i>100</i>		<i>14</i>	<i>4</i>	<i>1120 Displacement</i>
<i>2:30 AM</i>	<i>50</i>		<i>31</i>	<i>11</i>	<i>Mod. Displacement</i>
			<i>2nd Plug @</i>		<i>680' w/ 50stk 60/40 perc</i>
	<i>100</i>		<i>10</i>	<i>4</i>	<i>1120</i>
	<i>100</i>		<i>12.7</i>	<i>4</i>	<i>Mod. Displacement</i>
	<i>50</i>		<i>3</i>	<i>4</i>	<i>1120 Displacement</i>
<i>3:30</i>	<i>50</i>		<i>5</i>	<i>4</i>	<i>Mod. Displacement</i>
			<i>3rd Plug @</i>		<i>360' w/ 60/40 perc</i>
	<i>100</i>		<i>5</i>	<i>4</i>	<i>1120</i>
	<i>50</i>		<i>14</i>	<i>4</i>	<i>Mod. Displacement</i>
<i>4:00</i>	<i>5</i>		<i>17.7</i>	<i>4</i>	<i>1120 Displacement</i>
			<i>11th Plug @</i>		<i>60' w/ 20stk</i>
<i>4:20</i>	<i>5</i>		<i>6</i>	<i>3</i>	<i>Mod. Displacement @ 13.8#/hr</i>
<i>4:30</i>	<i>5</i>		<i>6</i>	<i>3</i>	<i>Plug Kill w/ 20stk</i>

*Job complete
Thank you Steve*

GENERAL INFORMATION

Client Information:

Company: L D DRILLING INC

Contact: L D DAVIS

Phone: Fax: e-mail:

Site Information:

Contact: KIM SHOEMAKER

Phone: Fax: e-mail:

Well Information:

Name: HAROLD 1-4

Operator: L D DRILLING INC

Location-Downhole:

Location-Surface: S4/22S/12W

Test Information:

Company: DIAMOND TESTING

Representative: JOHN RIEDL

Supervisor: KIM SHOEMAKER

Test Type: CONVENTIONAL Job Number: D1154

Test Unit:

Start Date: 2012/06/12 Start Time: 05:00:00

End Date: 2012/06/12 End Time: 11:30:00

Report Date: 2012/06/12 Prepared By: JOHN RIEDL

Remarks: Qualified By: KIM SHOEMAKER

RECOVERY: 250' GAS IN PIPE, 60' SLIGHTLY GAS CUT MUD



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: _____

TIME ON: _____
TIME OFF: _____

Company _____ Lease & Well No. _____
Contractor _____ Charge to _____
Elevation _____ Formation _____ Effective Pay _____ Ft. Ticket No. _____
Date _____ Sec. _____ Twp. _____ S Range _____ W County _____ State **KANSAS**
Test Approved By _____ Diamond Representative _____

Formation Test No. _____ Interval Tested from _____ ft. to _____ ft. Total Depth _____ ft.
Packer Depth _____ ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth _____ ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Depth of Selective Zone Set _____

Top Recorder Depth (Inside) _____ ft. Recorder Number _____ Cap. _____ P.S.I.
Bottom Recorder Depth (Outside) _____ ft. Recorder Number _____ Cap. _____ P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type _____ Viscosity _____ Drill Collar Length _____ ft. I.D. 2 1/4 in.
Weight _____ Water Loss _____ cc. Weight Pipe Length _____ ft. I.D. 2 7/8 in.
Chlorides _____ P.P.M. Drill Pipe Length _____ ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number _____ Test Tool Length _____ ft. Tool Size 3 1/2-IF in.
Did Well Flow? _____ Reversed Out _____ Anchor Length _____ ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

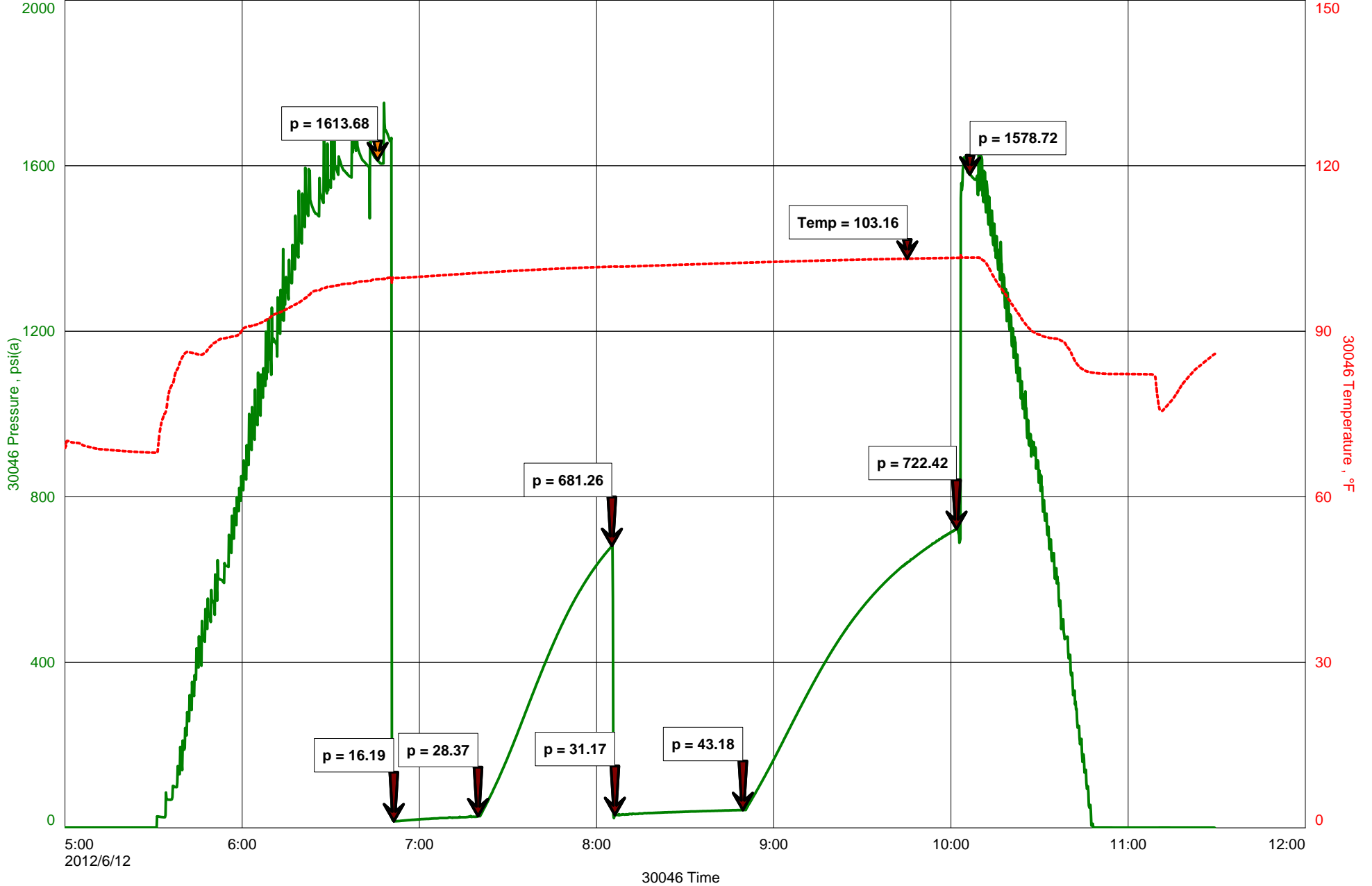
Blow: 1st Open: _____
2nd Open: _____

Recovered _____ ft. of _____	Price Job Other Charges Insurance Total
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Remarks: _____	

Time Set Packer(s) _____ A.M. P.M. Time Started Off Bottom _____ A.M. P.M. Maximum Temperature _____
Initial Hydrostatic Pressure..... (A) _____ 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) _____ P.S.I.

Diamond Testing 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, or its statement or opinion concerning the result of any test. Tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

HAROLD 1-4



GENERAL INFORMATION

Client Information:

Company: L D DRILLING INC

Contact: L D DAVIS

Phone: Fax: e-mail:

Site Information:

Contact: KIM SHOEMAKER

Phone: Fax: e-mail:

Well Information:

Name: HAROLD 1-4

Operator: L D DRILLING INC

Location-Downhole:

Location-Surface: S4/22S/12W

Test Information:

Company: DIAMOND TESTING

Representative: JOHN RIEDL

Supervisor: KIM SHOEMAKER

Test Type: CONVENTIONAL Job Number: D1155

Test Unit:

Start Date: 2012/06/12 Start Time: 20:00:00

End Date: 2012/05/13 End Time: 04:20:00

Report Date: 2012/06/13 Prepared By: JOHN RIEDL

Remarks: Qualified By: KIM SHOEMAKER

RECOVERY: 60' GAS IN PIPE, 60' SLIGHTLY GAS+OIL CUT MUD



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: _____

TIME ON: _____
TIME OFF: _____

Company _____ Lease & Well No. _____
Contractor _____ Charge to _____
Elevation _____ Formation _____ Effective Pay _____ Ft. Ticket No. _____
Date _____ Sec. _____ Twp. _____ S Range _____ W County _____ State **KANSAS**
Test Approved By _____ Diamond Representative _____

Formation Test No. _____ Interval Tested from _____ ft. to _____ ft. Total Depth _____ ft.
Packer Depth _____ ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth _____ ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Depth of Selective Zone Set _____

Top Recorder Depth (Inside) _____ ft. Recorder Number _____ Cap. _____ P.S.I.
Bottom Recorder Depth (Outside) _____ ft. Recorder Number _____ Cap. _____ P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type _____ Viscosity _____ Drill Collar Length _____ ft. I.D. 2 1/4 in.
Weight _____ Water Loss _____ cc. Weight Pipe Length _____ ft. I.D. 2 7/8 in.
Chlorides _____ P.P.M. Drill Pipe Length _____ ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number _____ Test Tool Length _____ ft. Tool Size 3 1/2-IF in.
Did Well Flow? _____ Reversed Out _____ Anchor Length _____ ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

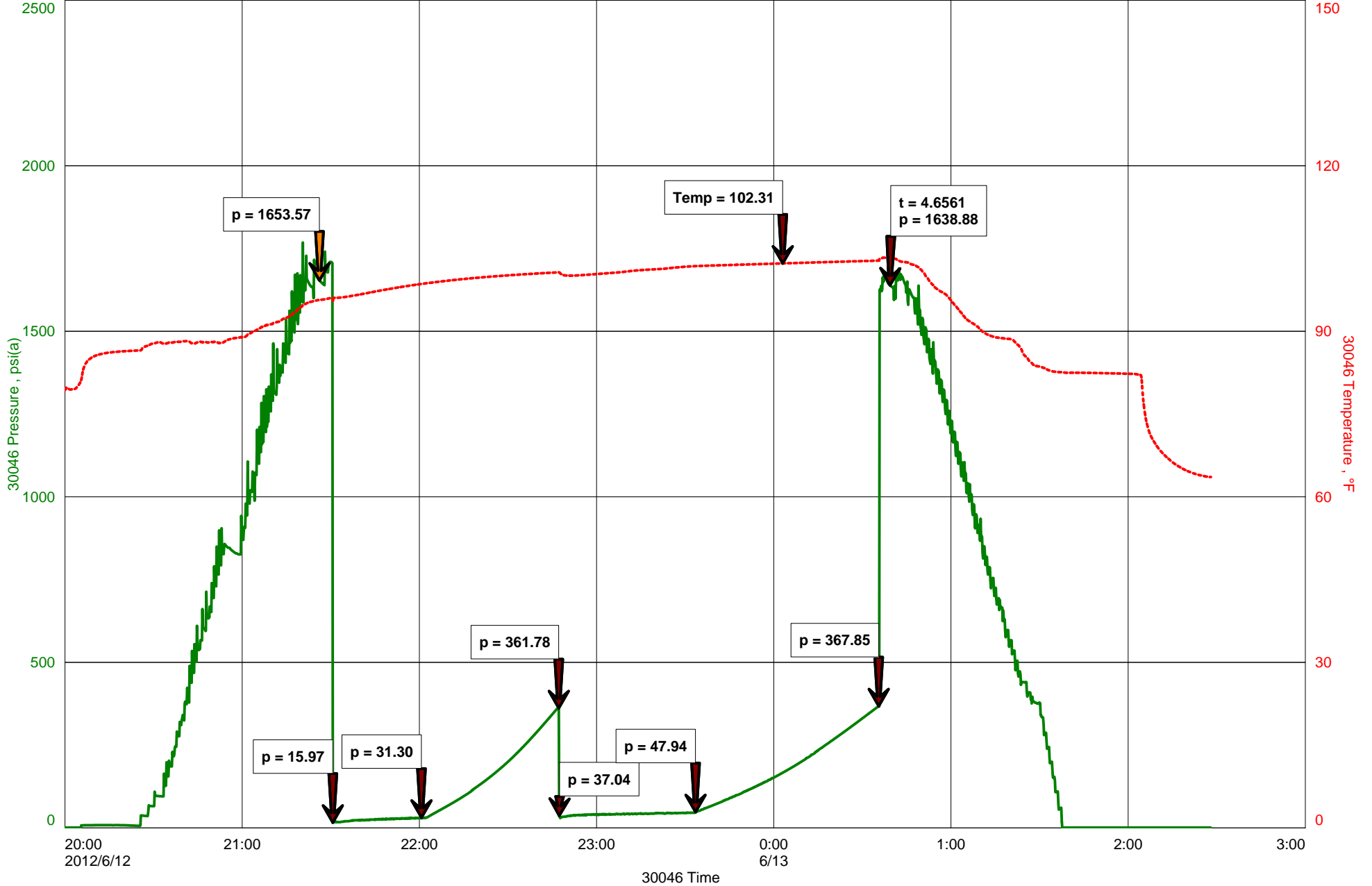
Blow: 1st Open: _____
2nd Open: _____

Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
	Total

Time Set Packer(s) _____ A.M. P.M. Time Started Off Bottom _____ A.M. P.M. Maximum Temperature _____
Initial Hydrostatic Pressure..... (A) _____ 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) _____ P.S.I.

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HAROLD 1-4



GENERAL INFORMATION

Client Information:

Company: L D DRILLING INC

Contact: L D DAVIS

Phone: Fax: e-mail:

Site Information:

Contact: KIM SHOEMAKER

Phone: Fax: e-mail:

Well Information:

Name: HAROLD 1-4

Operator: L D DAVIS

Location-Downhole:

Location-Surface: S4/22S/12W

Test Information:

Company: DIAMOND TESTING

Representative: JOHN RIEDL

Supervisor: KIM SHOEMAKER

Test Type: CONVENTIONAL Job Number: D1156

Test Unit:

Start Date: 2012/06/13 Start Time: 13:00:00

End Date: 2012/06/13 End Time: 20:00:00

Report Date: 2012/06/13 Prepared By: JOHN RIEDL

Remarks: Qualified By: KIM SHOEMAKER

RECOVERY: 90' GAS IN PIPE, 30' SLIGHTLY GAS CUT MUD



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: _____

TIME ON: _____
TIME OFF: _____

Company _____ Lease & Well No. _____
Contractor _____ Charge to _____
Elevation _____ Formation _____ Effective Pay _____ Ft. Ticket No. _____
Date _____ Sec. _____ Twp. _____ S Range _____ W County _____ State **KANSAS**
Test Approved By _____ Diamond Representative _____

Formation Test No. _____ Interval Tested from _____ ft. to _____ ft. Total Depth _____ ft.
Packer Depth _____ ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth _____ ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Depth of Selective Zone Set _____

Top Recorder Depth (Inside) _____ ft. Recorder Number _____ Cap. _____ P.S.I.
Bottom Recorder Depth (Outside) _____ ft. Recorder Number _____ Cap. _____ P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type _____ Viscosity _____ Drill Collar Length _____ ft. I.D. 2 1/4 in.
Weight _____ Water Loss _____ cc. Weight Pipe Length _____ ft. I.D. 2 7/8 in.
Chlorides _____ P.P.M. Drill Pipe Length _____ ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number _____ Test Tool Length _____ ft. Tool Size 3 1/2-IF in.
Did Well Flow? _____ Reversed Out _____ Anchor Length _____ ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

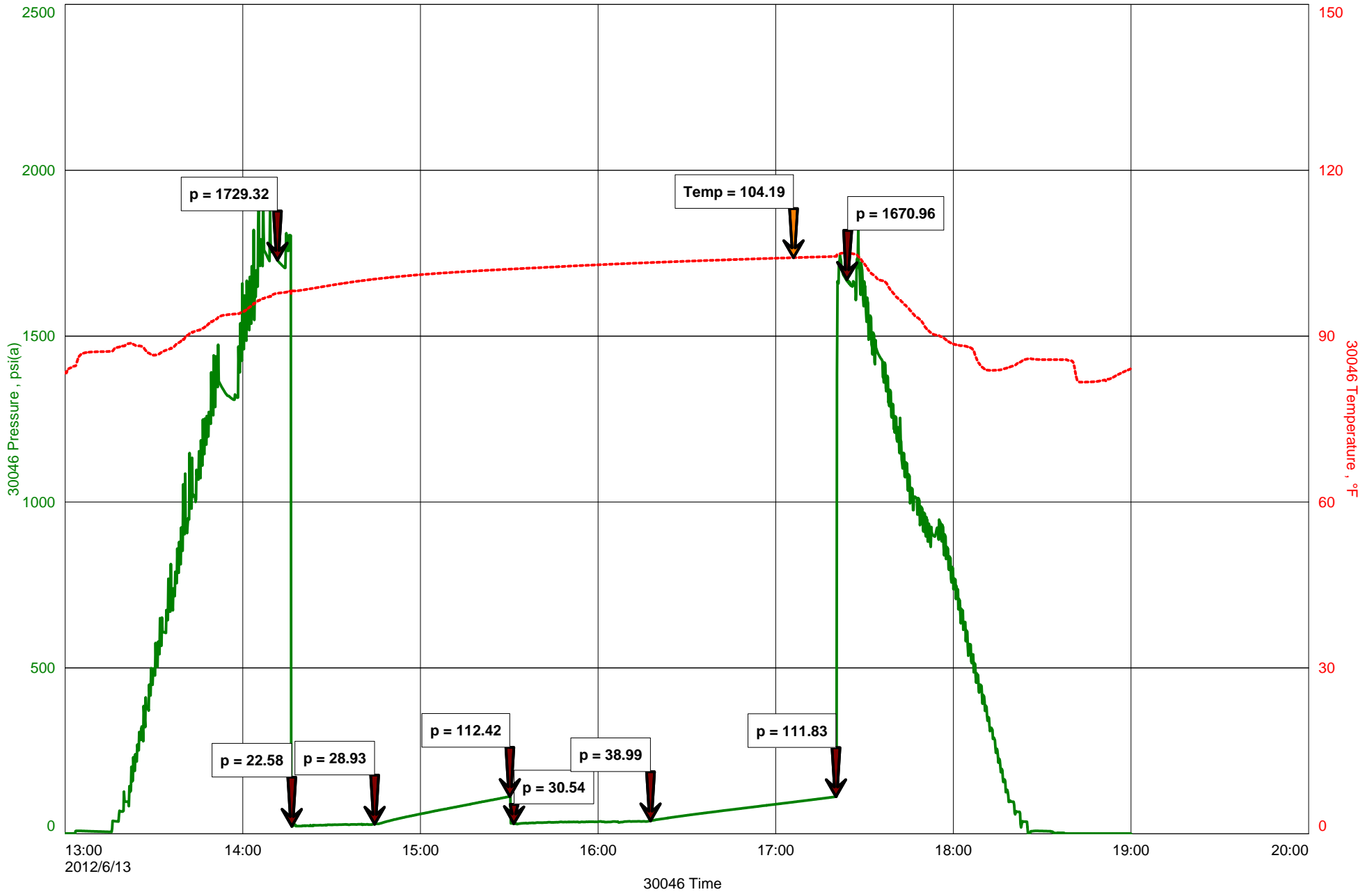
Blow: 1st Open: _____
2nd Open: _____

Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
	Total

Time Set Packer(s) _____ A.M. P.M. Time Started Off Bottom _____ A.M. P.M. Maximum Temperature _____
Initial Hydrostatic Pressure..... (A) _____ 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) _____ P.S.I.

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HAROLD 1-4



GENERAL INFORMATION

Client Information:

Company: L D DRILLING INC

Contact: L D DAVIS

Phone: Fax: e-mail:

Site Information:

Contact: KIM SHOEMAKER

Phone: Fax: e-mail:

Well Information:

Name: HAROLD 1-4

Operator: L D DRILLING INC.

Location-Downhole:

Location-Surface: S4/22S/12W

Test Information:

Company: DIAMOND TESTING

Representative: JOHN RIEDL

Supervisor: KIM SHOEMAKER

Test Type: CONVENTIONAL Job Number: D1157

Test Unit:

Start Date: 2012/06/14 Start Time: 03:00:00

End Date: 2012/06/14 End Time: 09:30:00

Report Date: 2012/06/14 Prepared By: JOHN RIEDL

Remarks: Qualified By: KIM SHOEMAKER

RECOVERY: 370' GAS IN PIPE, 100' GAS+OIL CUT MUD, 180' MUDDY WATER



DIAMOND TESTING
P.O. Box 157
HOISINGTON, KANSAS 67544
(800) 542-7313
DRILL-STEM TEST TICKET
FILE: _____

TIME ON: _____
TIME OFF: _____

Company _____ Lease & Well No. _____
Contractor _____ Charge to _____
Elevation _____ Formation _____ Effective Pay _____ Ft. Ticket No. _____
Date _____ Sec. _____ Twp. _____ S Range _____ W County _____ State **KANSAS**
Test Approved By _____ Diamond Representative _____

Formation Test No. _____ Interval Tested from _____ ft. to _____ ft. Total Depth _____ ft.
Packer Depth _____ ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Packer Depth _____ ft. Size 6 3/4 in. Packer depth _____ ft. Size 6 3/4 in.
Depth of Selective Zone Set _____

Top Recorder Depth (Inside) _____ ft. Recorder Number _____ Cap. _____ P.S.I.
Bottom Recorder Depth (Outside) _____ ft. Recorder Number _____ Cap. _____ P.S.I.
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____ P.S.I.

Mud Type _____ Viscosity _____ Drill Collar Length _____ ft. I.D. 2 1/4 in.
Weight _____ Water Loss _____ cc. Weight Pipe Length _____ ft. I.D. 2 7/8 in.
Chlorides _____ P.P.M. Drill Pipe Length _____ ft. I.D. 3 1/2 in.
Jars: Make STERLING Serial Number _____ Test Tool Length _____ ft. Tool Size 3 1/2-IF in.
Did Well Flow? _____ Reversed Out _____ Anchor Length _____ ft. Size 4 1/2-FH in.
Main Hole Size 7 7/8 Tool Joint Size 4 1/2 in. Surface Choke Size 1 in. Bottom Choke Size 5/8 in.

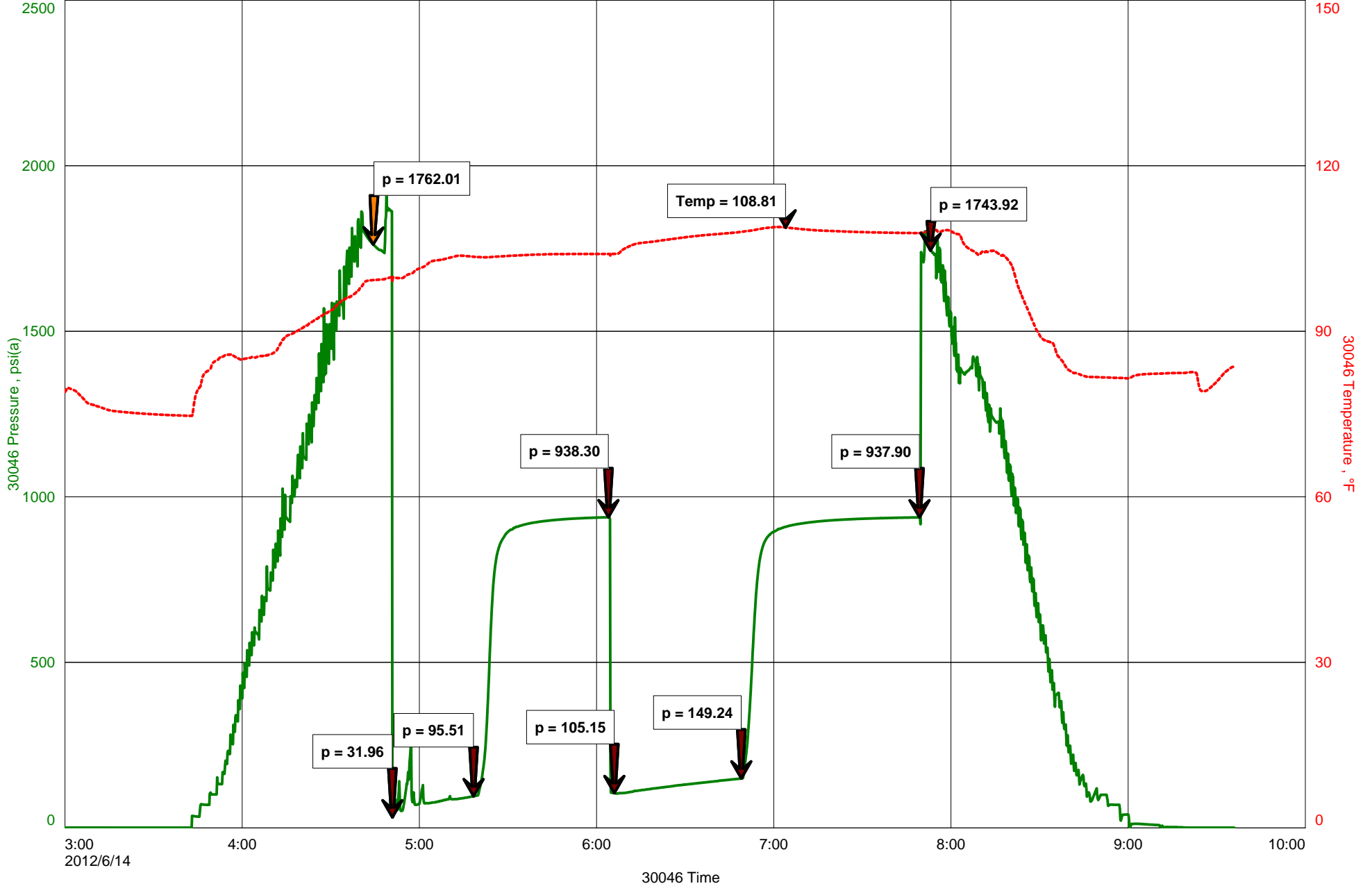
Blow: 1st Open: _____
2nd Open: _____

Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	
Recovered _____ ft. of _____	Price Job
Recovered _____ ft. of _____	Other Charges
Remarks: _____	Insurance
	Total

Time Set Packer(s) _____ A.M. P.M. Time Started Off Bottom _____ A.M. P.M. Maximum Temperature _____
Initial Hydrostatic Pressure..... (A) _____ 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) _____ P.S.I.

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HAROLD 1-4



KIM B. SHOEMAKER

CONSULTING GEOLOGIST

316-684-9709 * WICHITA, KS

GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY L. D. DRILLING, INC.

LEASE # 1-4 HAROLD

FIELD GERMAN VALLEY

LOCATION 385' FNL & 745' FEL

SEC 4 TWP 22s RGE 12W

COUNTY STAFFORD STATE KANSAS

CONTRACTOR PETROMARK DRILLING, RIG 2

SPUD 6-8-12 COMP 6-14-12

RTD 3642 LTD

MUD WT 2800 TYPE MUD CHEMICAL

ELEVATIONS

KB 1861

DF

GL 1856

Measurements Are All From 1861 KB

CASING SURFACE 8 5/8" @ 327'

PRODUCTION

ELECTRICAL SURVEYS

NONE

SAMPLES SAVED FROM 3000 TO 3642

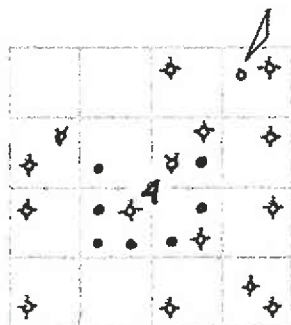
DRILLING TIME KEPT FROM 2800 TO 3642

SAMPLES EXAMINED FROM 3000 TO 3642

GEOLOGICAL SUPERVISION FROM 3200 TO 3642

GEOLOGIST ON WELL KIM B. SHOEMAKER

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE		644 + 1217
HEEBNER		3142 - 1281
BROWN LIME		3275 - 1414
LANSING		3288 - 1427
B/KC		3513 - 1652
VIOLA		3529 - 1668
SIMPSON		3577 - 1716
ARBUCKLE		3635 - 1774



REMARKS

API: 15-185-23732

6-8-12 SPUD
6-9 @ 333'
6-10 @ 2060'
6-11 @ 2977'
6-12 @ 3370'
6-13 @ 3492'
6-14 @ 3641'

LEGEND

- Dolomite
- Chert
- Oil Lime
- Limestone
- Curt sh
- Shale
- Sandstone
- Salt
- Anhydrite

DRILLING TIME IN MINUTES
Rate of Penetration Inches



LITHOLOGY

REMARKS

2800

2900

3000

TOPEKA 2850-989

Samples are tagged

OK

4. Top. 151. 150s.

4. Top. 150. 150s. 50. 151.

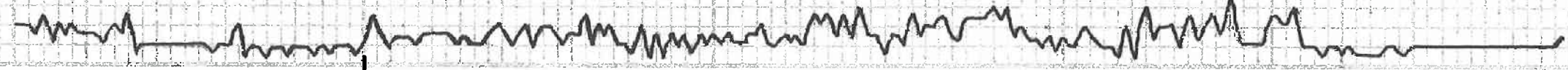
15. 53

15. 91

15. 80

15. Top. 150. 150s. 50. 151.

15. Top. 150. 150s. 50. 151.



Wc. 8.9
Cm. 5000

3100

ls. sh. red. sil. clay
ls. to red. sil. foss. sh. a
ls. to clay. Dm.

HEEGER 3142-1281
Sh. Sil. Clay

Sh. Clay

TORONTO

ls. sh. sil. foss. sh. clay

DOUGLAS

Sh. Rd.

Sh. to silty sdy

3200

Sh. clay. silty

Sh. dk. clay. silty

Sh. dk. clay. silty

BROWN LIME 3275-1919
ls. to dk. sil. foss.

Sh. dk. clay. silty
LANSING 3288-1927

ls. to wh. sil. foss. P. Am. P. B.
Sand. clay. sil. foss. to P. B. sil. foss. No. 100

3300

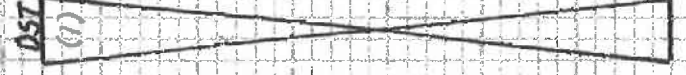
DST (1) 3304-3370
Bottom bucket 10 min.
2 WIPES

30' 45" 45' 60"

Rec. 250 G.I.P.
60' 56cm (10) G. 90' M

RP: 16.28 31.43
SIP: 681-722

Temp. 103°F



Vis. 65

WT. 9.2

Wc. 8.8

Cm. 10,000

3400

ls. sh. clay. silty

ls. to clay. Dm.

ls. to sh. clay

Sh. Clay

ls. to clay. sil. foss. P. B. sil. foss.

DST (2) 3404-3487

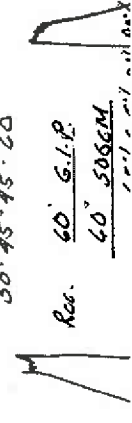
Bottom bucket 29 min.
12"

30' 45" 45' 60"

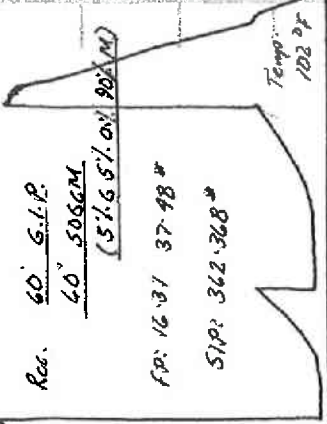
Rec. 60 G.I.P.
60' 506cm

88: 460

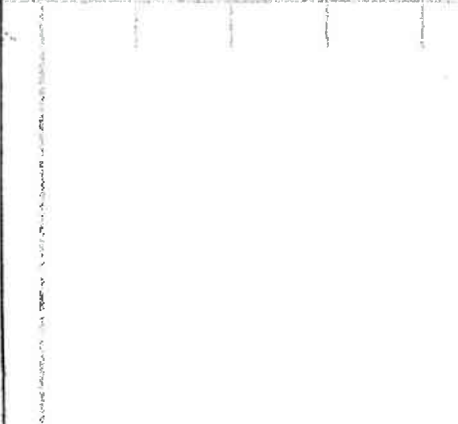
88: 4



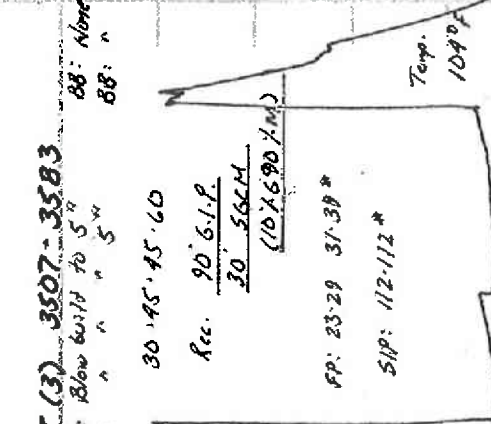
Sh. Gch



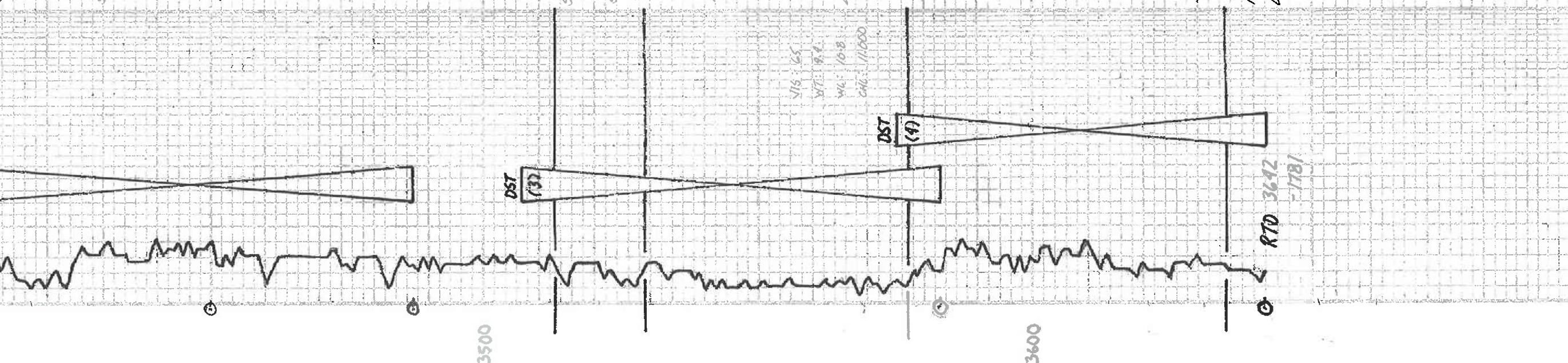
As. Tan G. 60' SI. 20'. P.F. 60' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 60' 6.I.P.
 Sh. G. 60' SI. 20'. P.F. 60' 6.I.P.
 As. w/ Sl. 60' SI. 20'. P.F. 60' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 60' 6.I.P.
 Sh. G. 60' SI. 20'. P.F. 60' 6.I.P.



As. Tan G. 90' SI. 20'. P.F. 90' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 90' 6.I.P.
 Sh. G. 90' SI. 20'. P.F. 90' 6.I.P.
 As. w/ Sl. 90' SI. 20'. P.F. 90' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 90' 6.I.P.
 Sh. G. 90' SI. 20'. P.F. 90' 6.I.P.



As. Tan G. 370' SI. 20'. P.F. 370' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 370' 6.I.P.
 Sh. G. 370' SI. 20'. P.F. 370' 6.I.P.
 As. w/ Sl. 370' SI. 20'. P.F. 370' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 370' 6.I.P.
 Sh. G. 370' SI. 20'. P.F. 370' 6.I.P.



As. Tan G. 60' SI. 20'. P.F. 60' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 60' 6.I.P.
 Sh. G. 60' SI. 20'. P.F. 60' 6.I.P.
 As. w/ Sl. 60' SI. 20'. P.F. 60' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 60' 6.I.P.
 Sh. G. 60' SI. 20'. P.F. 60' 6.I.P.
 As. Tan G. 90' SI. 20'. P.F. 90' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 90' 6.I.P.
 Sh. G. 90' SI. 20'. P.F. 90' 6.I.P.
 As. w/ Sl. 90' SI. 20'. P.F. 90' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 90' 6.I.P.
 Sh. G. 90' SI. 20'. P.F. 90' 6.I.P.
 As. Tan G. 370' SI. 20'. P.F. 370' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 370' 6.I.P.
 Sh. G. 370' SI. 20'. P.F. 370' 6.I.P.
 As. w/ Sl. 370' SI. 20'. P.F. 370' 6.I.P.
 DE BL. 50' SI. 20'. P.F. 370' 6.I.P.
 Sh. G. 370' SI. 20'. P.F. 370' 6.I.P.

3500

3600

3700

DST (33)

DST (4)

RTD 3612 -1781

DST (3) 3507-3583

1st OPEN: Blow with to 5" 88' 88'

30' 145' 45' 60

Rec. 90' 6.I.P. 30' 56CM (10' x 6.90' M)

FP: 23.29 31.39

SIP: 112.112

Temp: 109.97

As. Tan G. 90' SI. 20'. P.F. 90' 6.I.P.

Sh. G. 90' SI. 20'. P.F. 90' 6.I.P.

As. Tan G. 370' SI. 20'. P.F. 370' 6.I.P.

Sh. G. 370' SI. 20'. P.F. 370' 6.I.P.

As. Tan G. 60' SI. 20'. P.F. 60' 6.I.P.

Sh. G. 60' SI. 20'. P.F. 60' 6.I.P.

As. Tan G. 370' SI. 20'. P.F. 370' 6.I.P.

Sh. G. 370' SI. 20'. P.F. 370' 6.I.P.

DST (4) 3575-3612

1st OPEN: Bottom bucket 25 mins 88' 88'

30' 45' 45' 60

Rec. 370' 6.I.P. 100' 96CM (20' x 6)

FP: 32.96 105.199

SIP: 938.938

Temp: 102.97

As. Tan G. 370' SI. 20'. P.F. 370' 6.I.P.

Sh. G. 370' SI. 20'. P.F. 370' 6.I.P.

As. Tan G. 60' SI. 20'. P.F. 60' 6.I.P.

Sh. G. 60' SI. 20'. P.F. 60' 6.I.P.

As. Tan G. 370' SI. 20'. P.F. 370' 6.I.P.

Sh. G. 370' SI. 20'. P.F. 370' 6.I.P.