OPERATOR

Company: TDI, INC

1310 BISON ROAD Address:

HAYS, KS

Contact Geologist: TOM DENNING Contact Phone Nbr: 785-259-3141 Well Name: HAROLD #1

> Location: SE SW NE Sec.31-14s-19w API: 15-051-26313-00-00

Pool: **WILDCAT** Field: State: **KANSAS** Country: USA



1310 BISON ROAD HAYS, KANSAS 67601 (785) 628-2593

Scale 1:240 Imperial

3:00 PM

8:18 AM

Time:

Time:

Latitude:

Well Name: HAROLD #1

SE SW NE Sec.31-14s-19w Surface Location:

Bottom Location:

API: 15-051-26313-00-00

License Number: 4787

Spud Date: 6/9/2012 Region: **ELLIS COUNTY**

Drilling Completed: 6/16/2012 Surface Coordinates: 2310' FNL & 1650' FEL

Bottom Hole Coordinates:

Ground Elevation: 2082.00ft K.B. Elevation: 2092.00ft

3000.00ft Logged Interval: To: 3779.00ft 3775.00ft

Total Depth: Formation: LANSING-KANSAS CITY Drilling Fluid Type: CHEMICAL/FRESH WATER GEL

SURFACE CO-ORDINATES

Well Type: Vertical

Longitude: N/S Co-ord: 2310' FNL

E/W Co-ord: 1650' FEL

LOGGED BY



Company: **SOLUTIONS CONSULTING**

108 W 35TH Address:

HAYS, KS 67601

(785) 639-1337 Phone Nbr:

Logged By: Geologist HERB DEINES Name:

CONTRACTOR

SOUTHWIND DRILLING INC. Contractor:

Rig #:

Rig Type: MUD ROTARY Spud Date: 6/9/2012

Time: 3:00 PM TD Date: 6/16/2012 8:18 AM Time: 6/16/2012 Rig Release: Time: 11:15 PM

ELEVATIONS

K.B. Elevation: 2092.00ft Ground Elevation: 2082.00ft

K.B. to Ground: 10.00ft

NOTES

RECOMMENDATION TO PLUG AND ABANDON WELL DUE TO NEGATIVE RESULTS OF THREE DSTs.

FORMATION TOPS SUMMARY

SE SW NE Sec.31-14s-19w

2082' GL 2092' KB

FORMATION	SAMPLE TOP	LOG TOP
Anhydrite	1348+ 744	1356+ 736
B-Anhydrite	1384+ 708	1391+ 701
Topeka	3074- 982	3080- 988
Heebner Shale	3340-1248	3346-1254
Toronto	3371-1279	3372-1280
LKC	3388-1296	3394-1302
ВКС	3639-1547	3642-1550
Arbuckle	3720-1628	3724-1632
RTD	3775-1683	
LTD		3779-1687

SUMMARY OF DAILY ACTIVITY AND DEPTH AT 7:00AM

6-09-12 RU, Spud, set surface casing to 213.76' w/150 sxs. Common, 2%gel, 3%CC, Slope survey ¼ degree, WOC 8 hrs. Plug down 6:15PM.

6-10-12	634'	drilling
6-11-12	2192'	drilling
6-12-12	2840'	drilling
6-13-12	3430'	drilling, DST # 1, down 13 hrs-draw works repairs
6-14-12	3430'	finish DST # 1, drill to 3460', DST # 2, stormy weather
6-15-12	3560'	drilled to 3590', DST # 3
6-16-12	3740'	drilling, RTD, Logs, P & A, plugging completed 11:15PM

DST # 1 TEST SUMMARY



DRILL STEM TEST REPORT

TDI Inc 31-14s-19w Ellis KS

 1310 Bison RD
 Harold #1

 Hays KS, 67601
 Job Ticket: 47194
 DST#:1

 ATTN: Herb D.
 Test Start: 2012.06.13 @ 11:42:00

ATTN: Herb D.

Formation: KC "C"

Deviated: No Whipstock: ft (KB)

Test Type: Conventional Bottom Hole (Initial)

Time Tool Opened: 03:13:00 Tester: Cody Bloedorn

Time Test Ended: 07:42:30 Unit No: 42

 Interval:
 3406.00 ft (KB) To
 3430.00 ft (KB) (TVD)
 Reference Elevations:
 2092.00 ft (KB)

 Total Depth:
 3406.00 ft (KB) (TVD)
 2087.00 ft (CF)

 Hole Diameter:
 7.88 inchesHole Condition: Fair
 KB to GR/CF:
 5.00 ft

Serial #: 8700 Outside

GENERAL INFORMATION:

3407.00 ft (KB) Press@RunDepth: 34.29 psig @ Capacity: 8000.00 psig Start Date: 2012.06.13 2012.06.14 2012.06.14 End Date: Last Calib.: Start Time: 11:42:05 07:42:29 2012.06.14 @ 03:12:00 End Time: Time On Btm: Time Off Btm: 2012.06.14 @ 05:58:00

TEST COMMENT: 30 - IF- 3 1/2" Blow

45 - ISI- No blow back 45 - FF- No blow for 9 Min, then surface blow throughout.

45 - FSI- No blow back

Pressure vs. Time	PRESSURE SUMMARY
1700 (700 Fressure (700 Fressu	Time (Min.) Pressure (psig) (deg F) 0 1705.75 109.96 Initial Hydro-static 1 47.19 109.90 Open To Flow (1) 12 141.69 110.38 Shut-In(1) 75 949.68 110.20 End Shut-In(1) 76 43.99 109.65 Open To Flow (2) 120 34.29 110.33 Shut-In(2) 165 884.42 110.63 End Shut-In(2) 166 1685.35 110.88 Final Hydro-static
Recovery	Gas Rates

Length (ft)	Description	Volume (bbl)
45.00	VSOCM, 2%O, 98%M	0.63

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d
Crioke (inches)	Pressure (psig)	Gas Rate (MCI

Printed: 2012.06.14 @ 08:31:57

DST # 2 TEST SUMMARY



DRILL STEM TEST REPORT

TDI Inc

31-14s-19w Ellis KS

Job Ticket: 47195

1310 Bison RD

Harold #1

Unit No:

DST#: 2

Hays KS, 67601 ATTN: Herb D.

ft (KB)

Test Start: 2012.06.14 @ 14:06:00

GENERAL INFORMATION:

Formation: KC "C-F"

Deviated: No Whipstock: Time Tool Opened: 16:18:30

Tester:

Test Type: Conventional Bottom Hole (Reset)

Cody Bloedorn

Time Test Ended: 22:01:30 Interval:

3404.00 ft (KB) To 3460.00 ft (KB) (TVD)

2092.00 ft (KB) Reference Bevations: 2087.00 ft (OF)

Total Depth: 3460.00 ft (KB) (TVD) 7.88 inchesHole Condition: Fair Hole Diameter:

KB to GR/CF:

5.00 ft

Serial #: 8700 Outside

Press@RunDepth: 45.78 psig @ Start Date: 2012.06.14 Start Time: 14:06:05

3441.00 ft (KB) End Date: End Time:

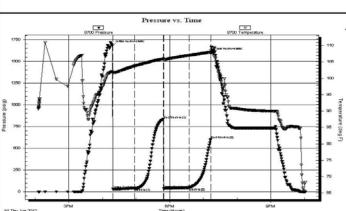
Capacity: 2012.06.14 22:01:29

8000.00 psig Last Calib.: 2012.06.14 Time On Btm: 2012.06.14 @ 16:18:00

Time Off Btm: 2012.06.14 @ 19:13:30

TEST COMMENT: 45 - IF- Surface blow

45 - ISI- No blow back 45 - FF- 1/4" blow 45 - FSI- No blow back



PRESSURE SUMMARY Temp Annotation (Min.) (psig) (deg F) 1677.89 0 102.08 Initial Hydro-static 30.24 101.55 Open To Flow (1) 40.58 103.74 Shut-In(1) 91 835.34 105.93 End Shut-In(1) 34.75 105.75 Open To Flow (2) 137 45.78 107.03 Shut-In(2) 108.03 End Shut-In(2) 175 601.63 1594.52 108.46 Final Hydro-static 176

Gas Rates

Length (ft)	Description	Volume (bbl)
30.00	Mud -Oil scum, 100%M	0.42

Printed: 2012.06.15 @ 03:20:34

Choke (inches) Pressure (psig) Gas Rate (Mcf/d)

Trilobite Testing, Inc.

Ref. No: 47195

DST # 3 TEST SUMMARY



DRILL STEM TEST REPORT

TDI Inc

31-14s-19w Ellis KS

1310 Bison RD

Harold #1

Hays KS, 67601

Job Ticket: 47196

ATTN: Herb D.

Test Start: 2012.06.15 @ 12:58:00

GENERAL INFORMATION:

Formation: H,I,JDeviated:

Whipstock No

ft (KB)

Test Type: Conventional Bottom Hole (Reset)

Tester: Cody Bloedorn Unit No:

Time Tool Opened: 15:48:30 Time Test Ended: 19:21:30

Reference ⊟evations:

2092.00 ft (KB)

DST#: 3

Interval: Total Depth: Hole Diameter:

Press@RunDepth:

Start Date:

3503.00 ft (KB) To 3590.00 ft (KB) (TVD) 3590.00 ft (KB) (TVD)

KB to GR/CF:

2087.00 ft (CF) 5.00 ft

7.88 inchesHole Condition: Fair Serial #: 8700

Outside 53.26 psig @

3572.00 ft (KB) End Date:

2012.06.15 19:21:29 Capacity:

Last Calib .:

Time On Btm:

Time Off Btm:

8000.00 psig 2012.06.15

2012.06.15 @ 15:48:00

2012.06.15 @ 18:03:00

Start Time: End Time: 12:58:05

TEST COMMENT: 30 - IF- 1/4" Blow, died back to surface blow 45 - ISI- No blow back 30 - FF- 1/4" blow 30 - FSI- No blow back

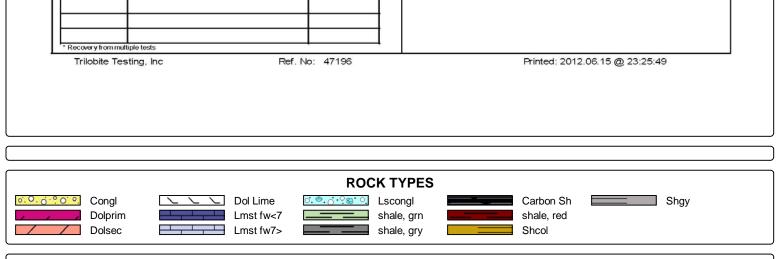
2012.06.15

	Pressure vs. Time	
1750	6700 Pressure 8700 Temperature	
1500		100
1250		
1000		
760		~ 1°
500		85
250		¥ 7 1 ∞
(Total Street Str	75

	PRESSURE SUMMARY				
	Time	Pressure	Temp	Annotation	
	(Min.)	(psig)	(deg F)		
105	0	1737.64	105.85	Initial Hydro-static	
	1	47.53	105.37	Open To Flow (1)	
100	31	51.95	105.56	Shut-In(1)	
es 5	75	349.22	106.41	End Shut-In(1)	
empe	76	47.54	106.38	Open To Flow (2)	
Temperature (deg F,	105	53.26	106.89	Shut-In(2)	
(deg	135	100.51	107.36	End Shut-In(2)	
36 86	135	1691.93	107.90	Final Hydro-static	
80					
75					
			0-	- Dotos	

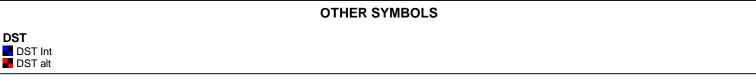
Recovery		
Length (ft)	Description	Volume (bbl)
20.00	Mud - Oil Scum, 100%M	0.28

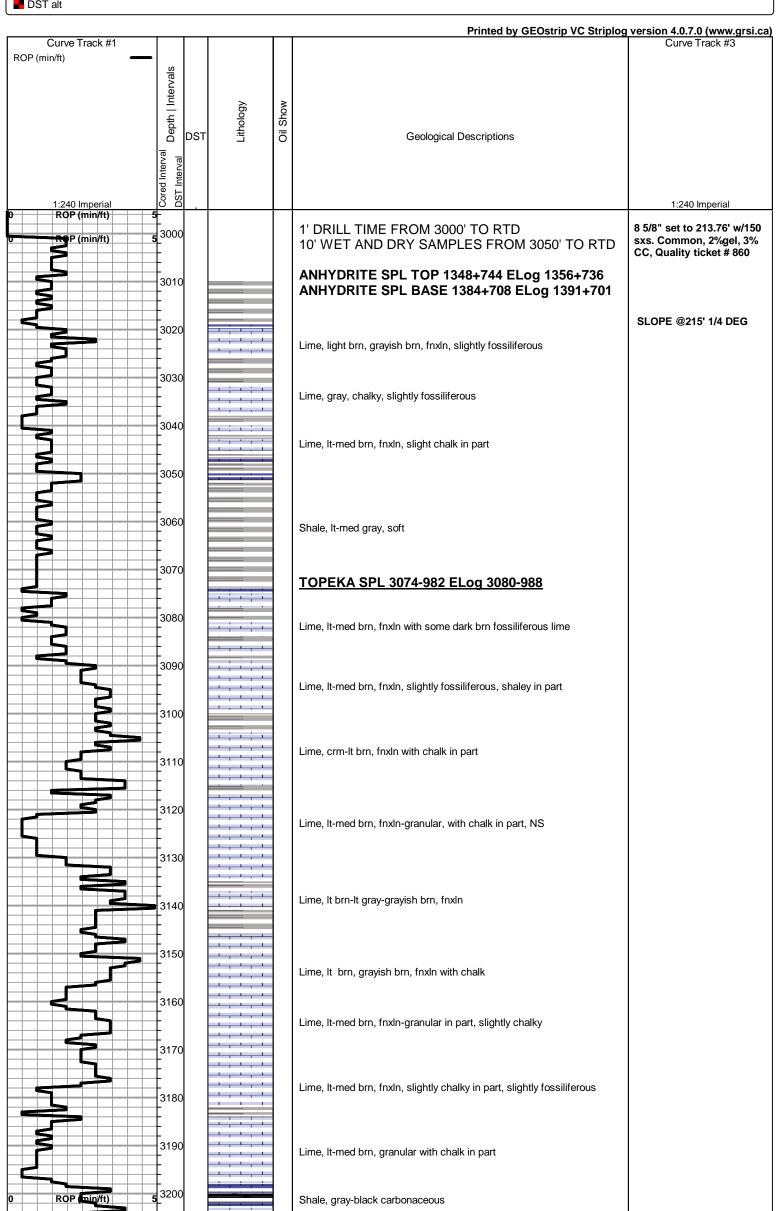
Gas Rates Choke (inches) Pressure (psig) Gas Rate (Mcf/d)

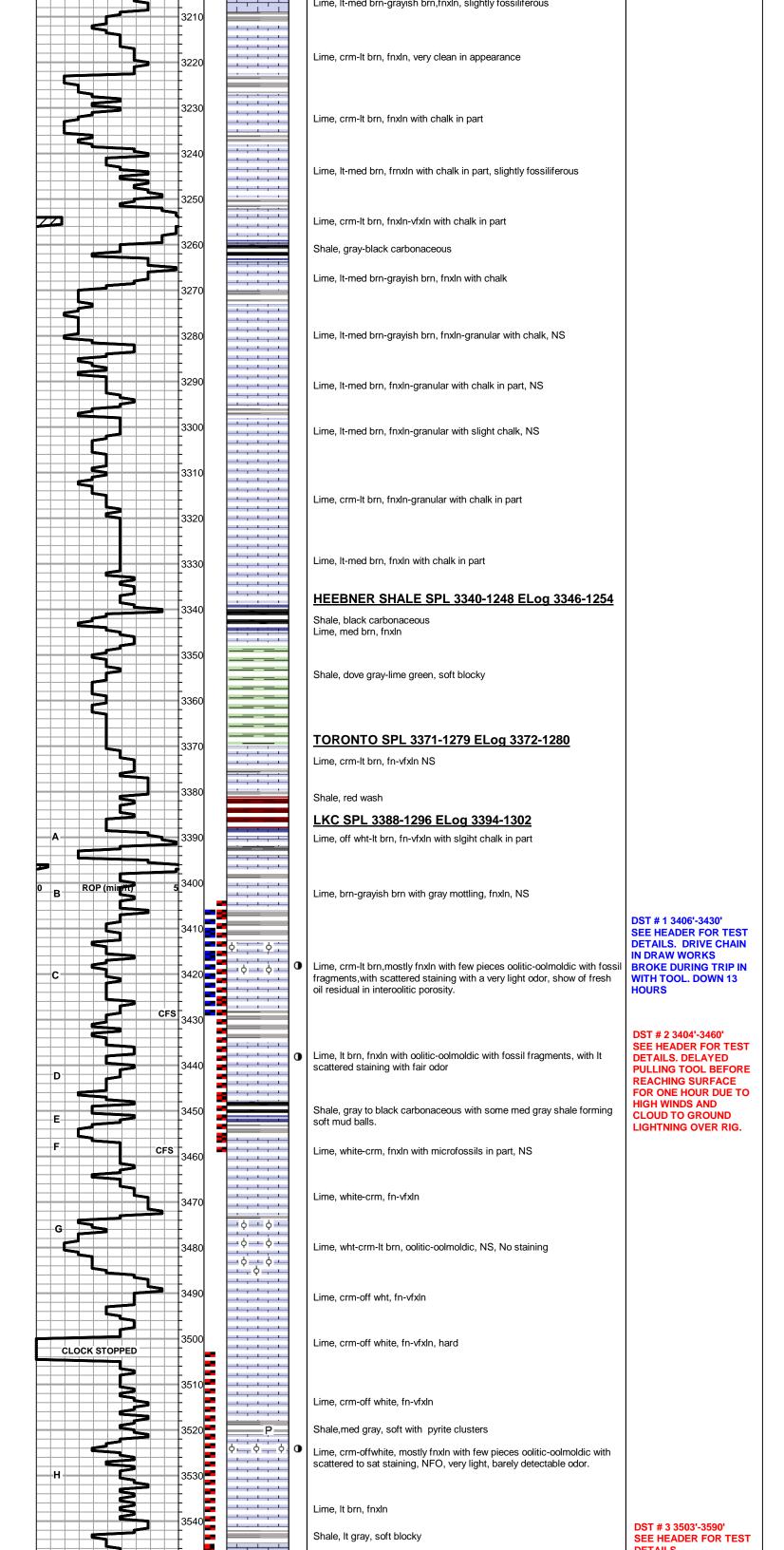


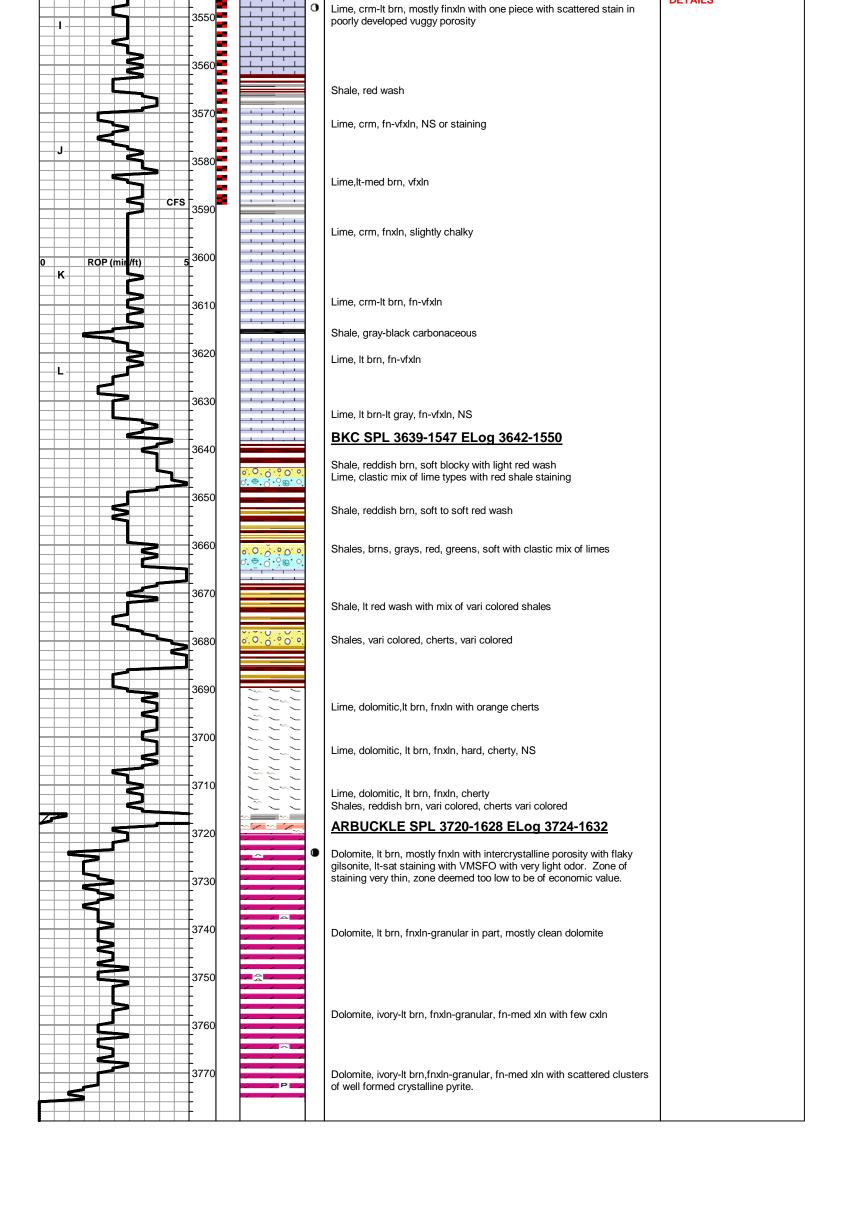


FOSSIL MINERAL P Pyrite Oolite Váricolored chert △ Chert White









QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Cell 785-324-1041 Home Office P.O. Box 32 Russell, KS 67665

No. 860

Finish State On Location County Range Sec. Well No. **CINTILLY** To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. T.D. Charge Depth Depth Tbg. Size State KS Depth Tool The above was done to satisfaction and supervision of owner agent or contractor. Shoe Joint Cement Left in Csg Cement Amount Ordered Displace Meas Line **EQUIPMENT** Cementer N. Common Helper Driver BR Driver Poz. Mix Driver C Gel. **JOB SERVICES & REMARKS** Calcium Hulls Remarks: Salt Rat Hole Flowseal Mouse Hole Kol-Seal Centralizers Mud CLR 48 Baskets CFL-117 or CD110 CAF 38 D/V or Port Collar-Sand Handling Mileage FLOAT EQUIPMENT Guide Shoe Centralizer Baskets AFU Inserts Float Shoe Latch Down Pumptrk Charge Mileage Tax Discount Total Charge Signature

QUALITY OILWELL CEMENTING, INC.

Federal Tax I.D.# 20-2886107

Phone 785-483-2025 Cell 785-324-1041 Home Office P.O. Box 32 Russell, KS 67665

No. 685

On Location Finish State County Twp. Range Sec. Well No. Owner To Quality Oilwell Cementing, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed. T.D. 3225 Hole Size Charge To Depth Csg. Depth Street Tbg. Size Depth State City Tool The above was done to satisfaction and supervision of owner agent or contractor. Shoe Joint Cement Left in Csg. Cement Amount Ordered 244-6-1 Displace Meas Line **EQUIPMENT** Cementer Helper Common Pumptrk No. Driver Poz. Mix Bulktrk Driver Driver Gel. Bulktrk Driver **JOB SERVICES & REMARKS** Calcium Hulls Remarks: Salt Rat Hole Flowseal Mouse Hole Kol-Seal Centralizers Mud CLR 48 Baskets D/V or Port Collar CFL-117 or CD110 CAF 38 57 Handling Mileage FLOAT EQUIPMENT Guide Shoe Centralizer Baskets 898 weeden Pl AFU Inserts Float Shoe Latch Down Pumptrk Charge Mileage Tax Discount Total Charge Signature