



KANSAS CORPORATION COMMISSION 1095946
OIL & GAS CONSERVATION DIVISION

Form ACO-1
June 2009

Form Must Be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 34357
Name: Atlas Operating LLC
Address 1: 15603 Kuykendahl, Ste 200
Address 2: _____
City: HOUSTON State: TX Zip: 77090 + 3655
Contact Person: James Quigg
Phone: (281) 893-9400
CONTRACTOR: License # 5822
Name: Val Energy, Inc.
Wellsite Geologist: Sean Deenihan
Purchaser: NCRA

API No. 15 - 15-055-22120-00-00
Spot Description: _____
E2 SW NW NW Sec. 20 Twp. 22 S. R. 33 East West
990 Feet from North / South Line of Section
370 Feet from East / West Line of Section
Footages Calculated from Nearest Outside Section Corner:
 NE NW SE SW
County: Finney
Lease Name: Garden City Well #: 14-20 R
Field Name: Damme
Producing Formation: St Louis
Elevation: Ground: 2900 Kelly Bushing: 2910
Total Depth: 4900 Plug Back Total Depth: 4862
Amount of Surface Pipe Set and Cemented at: 340 Feet
Multiple Stage Cementing Collar Used? Yes No
If yes, show depth set: 2710 Feet
If Alternate II completion, cement circulated from: 4890
feet depth to: 0 w/ 1000 sx cmt.

Designate Type of Completion:
 New Well Re-Entry Workover
 Oil WSW SWD SLOW
 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 #: _____
03/07/2012 03/14/2012 04/09/2012
Spud Date or Date Reached TD Completion Date or Recompletion Date

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: 0 ppm Fluid volume: 0 bbls
Dewatering method used: Evaporated
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: Deanna Garrison Date: 10/23/2012



1095946

Operator Name: Atlas Operating LLC Lease Name: Garden City Well #: 14-20 R
 Sec. 20 Twp. 22 S. R. 33 East West County: Finney

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 Wireline Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	HEEBNER	3808	-898
Electric Log Run	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	LANSING	3859	-949
Electric Log Submitted Electronically <i>(If no, Submit Copy)</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	KANSAS A	4200	-1290
List All E. Logs Run:		BKC	4340	-1430
Attached		MORR SHALE	4674	-1764
		ST GENEV	4718	-1808
		ST LOUIS	4764	-1854

CASING RECORD <input checked="" 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
SURFACE	12.25	8.63	23	340	A	275	3% CC, 2% GEL
PRODUCTION	7.88	4.25	10.5	4890	60/40/ POZ/KWC/ C	1000	Gel, Kol-seal, flo-seal

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
4	4764-67, 4787-90	Acidize :1250 GALS 7-1/2% Nefe	4764-67, 4787-90
		Frac:17,200 Gel & 12000 # Sd	4764-4790

TUBING RECORD: Size: <u>2.38</u> Set At: <u>4746</u> Packer At:	Liner Run: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Date of First, Resumed Production, SWD or ENHR. <u>04/15/2012</u>	Producing Method: <input type="checkbox"/> Flowing <input checked="" type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other (Explain) _____
Estimated Production Per 24 Hours	Oil Bbls. <u>14.5</u> Gas Mcf <u>0</u> Water Bbls. <u>132</u> Gas-Oil Ratio _____ Gravity <u>29</u>

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input checked="" 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 checked="" type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: <u>4764-90</u> <u>ST LOUIS</u>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------

Form	ACO1 - Well Completion
Operator	Atlas Operating LLC
Well Name	Garden City 14-20 R
Doc ID	1095946

All Electric Logs Run

DIL
CNL/CDL
MEL
PE
cbl-sonic



000330-00/250
CONSOLIDATED
 Oil Well Services, LLC

REMIT TO
 Consolidated Oil Well Services, LLC
 Dept. 970
 P.O. Box 4346
 Houston, TX 77210-4346

MAIN OFFICE
 P.O. Box 884
 Chanute, KS 66720
 620/431-9210 • 1-800/487-8676
 Fax 620/431-0012

INVOICE

Invoice # 248311

Invoice Date: 03/09/2012 Terms: 10/10/30,n/30 Page 1

ATLAS OPERATING, LLC
 15603 KUYKENDAHL, SUITE 200
 HOUSTON TX 77090-3655
 (281)893-9400

GARDEN CITY 14-20-R
 33930
 20-228-33W
 3-8-2012
 KS

*Surface
 8 5/8"*

Part Number	Description	Qty	Unit Price	Total
1104S	CLASS "A" CEMENT (SALE)	275.00	17.6500	4853.75
1102	CALCIUM CHLORIDE (50#)	776.00	.8900	690.64
1118B	PREMIUM GEL / BENTONITE	517.00	.2500	129.25
4432	8 5/8" WOODEN PLUG	1.00	96.0000	96.00

Sublet Performed	Description	Total
9999-130	CASH DISCOUNT	-576.96
9999-130	CASH DISCOUNT	-267.76

Description	Hours	Unit Price	Total
456 CEMENT PUMP (SURFACE)	1.00	1085.00	1085.00
456 EQUIPMENT MILEAGE (ONE WAY)	60.00	5.00	300.00
460 TON MILEAGE DELIVERY	774.00	1.67	1292.58

160015

Amount Due 8877.05 if paid after 04/08/2012

Parts:	5769.64	Freight:	.00	Tax:	386.85	AR	7989.35
Labor:	.00	Misc:	.00	Total:	7989.35		
Sublt:	-844.72	Supplies:	.00	Change:	.00		

Signed _____

Date _____

BARTLESVILLE, OK 918/338-0606 EL DORADO, KS 316/322-7022 EUREKA, KS 620/583-7664 PONCA CITY, OK 580/762-2303 OAKLEY, KS 785/672-2227 OTTAWA, KS 785/242-4044 THAYER, KS 620/839-5289 GILLETTE, WY 307/686-4914



CONSOLIDATED
Oil Well Services, LLC



TICKET NUMBER 33930

LOCATION Quincy

FOREMAN Fuzzy

PO Box 884, Chanute, KS 66720
820-451-9210 or 800-457-8578

FIELD TICKET & TREATMENT REPORT
CEMENT

KS

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
3-8-12	1226	Gardlocity 14-20-R	20	22S	33W	Finney
CUSTOMER Antias Operating			Barlow + Dishon Ads 114S 6-10			
MAILING ADDRESS			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY			456	MILOS S		
STATE			460	CORY D		
ZIP CODE						

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH 340' CASING SIZE & WEIGHT 8 7/8 55LBS
 CASING DEPTH 341' DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 14.7 SLURRY VOL 1.36 WATER gal/ok 6.5 CEMENT LEFT IN CASING 20'
 DISPLACEMENT 20.4 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety meeting on 04/14, Rig up and circulate. Mix 275 gals
Class 'A' 399cc 29ccal. Dip plug and displace 20.4 @ 415 gals/ok.
Cement did circulate approx 7 ft to depth.

Thanks Fuzzy & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54015	1	PUMP CHARGE	1085.00	1085.00
5406	60	MILEAGE	5.00	300.00
5407A	12.9 tons	Tow mileage Delivery	16.1	1292.21
11045	275 gals	Class 'A' cement	17.42	4853.12
1102	776 #	Calcium chloride	1.89	690.64
1118B	517 #	Bentonite	2.25	1292.25
4452	1	8 7/8 wood cup plug	96.00	96.00
		subtotal		8447.22
		1255.00 discount		8447.22
		subtotal		7602.50
		SALES TAX		386.85
		ESTIMATED TOTAL		7989.35

248311

Form 5787

AUTHORIZATION [Signature]

TITLE Foreman

DATE 3-8-12

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.



CONSOLIDATED
Oil Well Services, LLC

601005

REMIT TO
Consolidated Oil Well Services, LLC
Dept. 970
P.O. Box 4346
Houston, TX 77210-4346

MAIN OFFICE
P.O. Box 884
Chenute, KS 66720
620/431-9210 • 1-800/467-8878
Fax 620/431-0012

INVOICE

Invoice # 248455

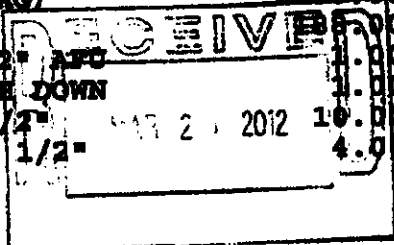
Invoice Date: 03/19/2012 Terms: 10/10/30, n/30 Page 1

ATLAS OPERATING, LLC
15603 KUYKENDAHL, SUITE 200
HOUSTON TX 77090-3655
(281)893-9400

GARDEN CITY 15.20
33932
20-228-33W
3-15-2012
KS

Should be 14-20 R
4 1/2" Prdn

Part Number	Description	Qty	Unit Price	Total
1131	60/40 POZ MIX	750.00	15.1000	11325.00
1126	OIL WELL CEMENT	200.00	22.5500	4510.00
1104CS	CLASS "C" CEMENT (SALE)S	150.00	18.7000	2805.00
1118B	PREMIUM GEL / BENTONITE	5160.00	.2500	1290.00
1110A	KOL SEAL (50# BAG)	4750.00	.5600	2660.00
1107	FLO-SEAL (25#)	185.00	2.8200	530.16
4161	FLOAT SHOE 4 1/2" AFE	1.00	342.0000	342.00
4283	DV TOOL W/ LATCH DOWN	1.00	3850.0000	3850.00
4129	CENTRALIZER 4 1/2"	10.00	46.0000	460.00
4103	CEMENT BASKET 4 1/2"	4.00	261.0000	1044.00



Sublet Performed	Description	Total
9999-130	CASH DISCOUNT	-2881.62
9999-130	CASH DISCOUNT	-819.97

Description	DESCRIPTION	Hours	Unit Price	Total
456	SINGLE PUMP	1.00	3020.00	3020.00
466	TON MILEAGE DELIVERED	2922.00	1.67	4879.74
528	EQUIPMENT MILEAGE (ONE WAY)	60.00	5.00	300.00

DATE _____ APPROVED _____

Amount Due 39162.72 if paid after 04/18/2012

Parts:	28816.16	Freight:	.00	Tax:	1932.14	AR	35246.45
Labor:	.00	Misc:	.00	Total:	35246.45		
Sublt:	-3701.59	Supplies:	.00	Change:	.00		

Signed _____

Date _____

BARTLESVILLE, OK
918/338-0808

EL DORADO, KS
316/322-7022

EUREKA, KS
620/583-7664

PONCA CITY, OK
580/762-2303

OAKLEY, KS
785/672-2227

OTTAWA, KS
785/242-4044

THAYER, KS
620/839-5289

GILLETTE, WY
307/686-4914



CONSOLIDATED
Oil Well Services, LLC

PO Box 894, Chanute, KS 6720
620-431-8210 or 800-487-8878



TICKET NUMBER 33932
LOCATION Oxley
FOREMAN Furry

FIELD TICKET & TREATMENT REPORT
CEMENT

Should be 14-20 R
16s

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
3-15-12	1226	Garden City 15-20	20	22S	23W	Finney
CUSTOMER Atlas Operating LLC			TRUCK # DRIVER TRUCK # DRIVER			
MAILING ADDRESS			456 Mack S. Lane S.			
CITY STATE ZIP CODE			328 Maple			
			566 Maple S			
			466 Cody R			

JOB TYPE 2-stage HOLE SIZE 7 7/8 HOLE DEPTH 4999 CASING SIZE & WEIGHT 4 1/2 10.5
CASING DEPTH 4975 DRILL PIPE _____ TUBING _____ OTHER DU Tool @ 2714'
SLURRY WEIGHT 12.5-13.8 SLURRY VOL 1.9-1.42 WATER 10.9-6.7 CEMENT LEFT IN CASING _____
DISPLACEMENT _____ DISPLACEMENT PBI _____ MIX PBI _____ RATE _____

REMARKS: 5 Safety markings on UOI #7 Flat main Cont. 1, 2.5, 7, 12, 18, 23, 39, 57, 53. Baskets 17, 40, 45, 75. DU Tool #50. Rig up class 1 hr
Pump 5 846 water mix 225 sks 6040 + 200 sks 5% Kolcol, 1/4" class. Tail
with 200 sks owc 5% Kolcol. Wash pump and hose. Drop plug and displace 2400L
water 44" 846 and 1154 press 1100' land @ 1600'. Drop DU Tool with 15 min
Operated @ 1000' (see 2 hrs. Mix 20 sks RM, Mix 20 sks AM, Mix 475 sks 6040
9% gel 5% Kolcol 1/4" class Tail with 150 sks C' wash pump and hose. Drop plug and displace
43 3/4 846 water. 1000' lift 1700' land @ 1600'. Cemented @ 1600' c.s. 1000'
Line @ 12.5", owc @ 13.8", class @ 14.5") 5000' top

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401C	1	PUMP CHARGE	3020 ⁰⁰	3020 ⁰⁰
5406	60	MILEAGE	5 ⁰⁰	300 ⁰⁰
5407A	48.7 ton	Top mileage Delivery	10.2	4979.24
1131	750 sks	6040 pos	15 ¹⁰	1125 ⁰⁰
1126	200 sks	OWC	22 ⁵⁰	4500 ⁰⁰
1104cs	150 sks	class C	18 ²⁰	2730 ⁰⁰
1118B	5160	2nd stage	.25	1290 ⁰⁰
1110A	4750*	Kol. soil	.56	2660 ⁰⁰
1107	185*	2h. soil	2 ⁰⁰	530 ⁰⁰
4161	1	4 1/2" RFU Flash shoe	342 ⁰⁰	342 ⁰⁰
4283	1	4 1/2" DU Tool w/ lockdown	3850 ⁰⁰	3850 ⁰⁰
4129	10	4 1/2" Controlizers	46 ⁰⁰	460 ⁰⁰
4103	4	4 1/2" Baskets	261 ⁰⁰	1044 ⁰⁰
Sub total				37015 ⁰⁰
less 1090			discount	37015 ⁰⁰
Sub total				38314 ⁰⁰
248455			SALES TAX	1932.14

Form 5787 AUTHORIZATION [Signature] TITLE Foreman DATE 3-15-12
ESTIMATED TOTAL 35246.45

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

Sean Deenihan & Saman Sharifaie

Petroleum Geologists

15-055-22120

15-055-22120

GEOLOGIST'S REPORT DRILLING TIME AND SAMPLE LOG

COMPANY Atlas Operating LLC
 LEASE Garden City #14-20 R
 FIELD Damme
 LOCATION 990' ENL & 370' FWL
 SEC 20 TWSP 22S RGE 33W
 COUNTY Finney STATE Kansas
 CONTRACTOR Val Energy Rlg #7
 SPUD 3/07/12 COMP 3/14/12
 RTD 4900' LTD 4898'
 MUD UP 3500' TYPE MUD Chemical
 SAMPLES SAVED FROM 3700' TO RTD
 DRILLING TIME KEPT FROM 3700' TO RTD
 SAMPLES EXAMINED FROM 3700' TO RTD
 GEOLOGICAL SUPERVISION FROM 2400'
 REFERENCE WELL GC# 10-20

ELEVATIONS

KB 2910'
 DF _____
 GL 2900'
 Measurements Are All
 From Kelly Bushing

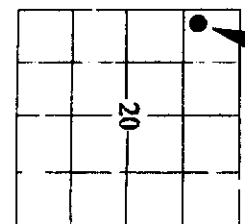
CASING

CONDUCTOR _____
 SURFACE 8-5/8" @ 337'
 PRODUCTION 4.5" @ 4890'

ELECTRICAL SURVEYS

MICRO
 SUPERIOR

Formation	Sample Tops	E-log Tops	Strat Pos.
Krider	2552 (+358)	2540 (+370)	
Hebner Shale	3810 (-900)	3808 (-898)	
Lansing	3856 (-946)	3859 (-949)	
Starik Sh.	4196 (-1286)	4194 (-1284)	
Cherokee Sh.	4466 (-1556)	4484 (-1564)	
St. Genevieve	4720 (-1810)	4718 (-1808)	
St. Louis	4760 (-1850)	4764 (-1854)	

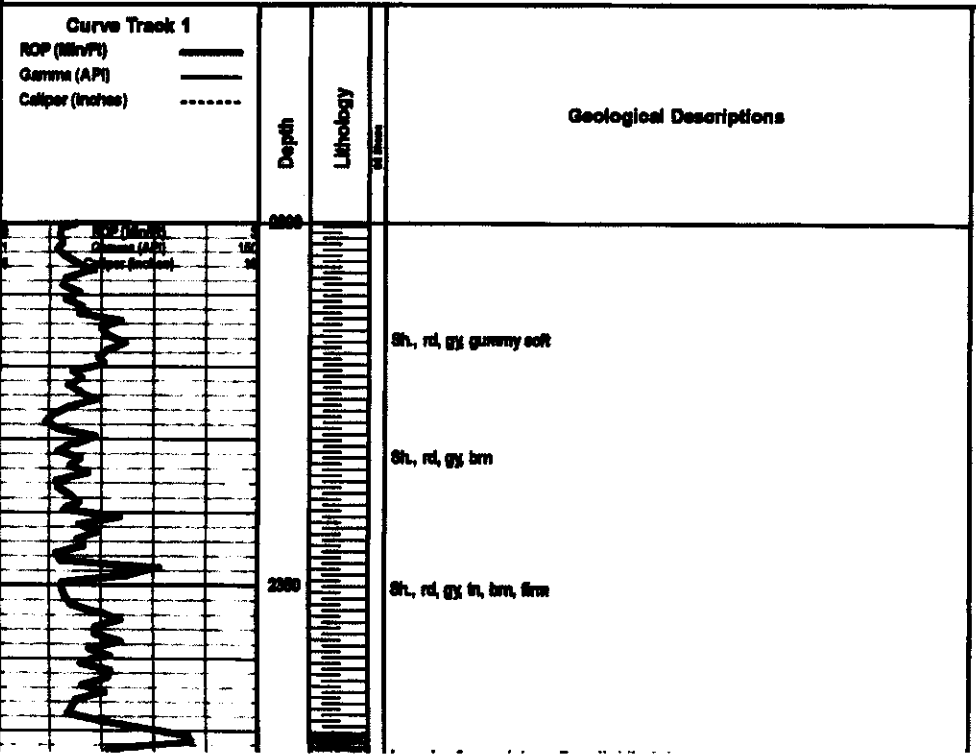


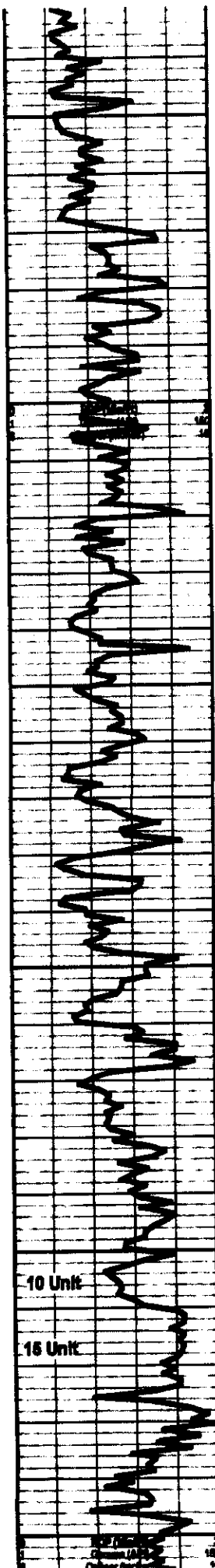
REMARKS The Garden City #14-20 will be further evaluated through casing based on sample and log analysis.

Respectfully Submitted,

Sean Deenihan
Saman Sharifaie

15-055-22120





Sh., rd, gy, brn

2350 Sh., rd, gy, ls, brn, firm

La., wh, vf gr, vp Ingran Por, all chily, hd, n/s

Sh., rd, gy, brn,

2400 La., orn, wh, vf gr, p Ingran Por, rr p.p. wug Por, n/s

Sh., gy

La., orn, wh, gy, vf gr, p Ingran Por, rr cong, MVP, n/s

2450 La., s.s.

Sh., gy, vf gr, p Ingran Por, abd acc min, shaly, n/s

Sh., gy, wh, vf gr, p Ingran Por, ally, firm, rr unconsolidated sd, n/s

2500 La., wh, vf gr, all chily, firm, n/s

Sh., gy, ls, rr La. s.s.

Sh., gy, rd

2550 **Krider 2652 (+358)**

Sh., gy, orn, vf gr, ally, Sh show gas upon crush, slow bubble, rr dd O str, v R odor

10 Unit

La., gy, med gr, vf matrix, rr fr Ingran Por, all show of gas, no odor

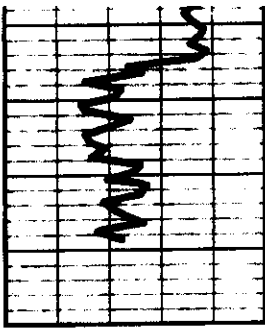
15 Unit

Sh., gy, brn, soft

La., gy, molled, vf gr, p Ingran Por, hd, n/s

Sh., rd, gy, brn, dk gy

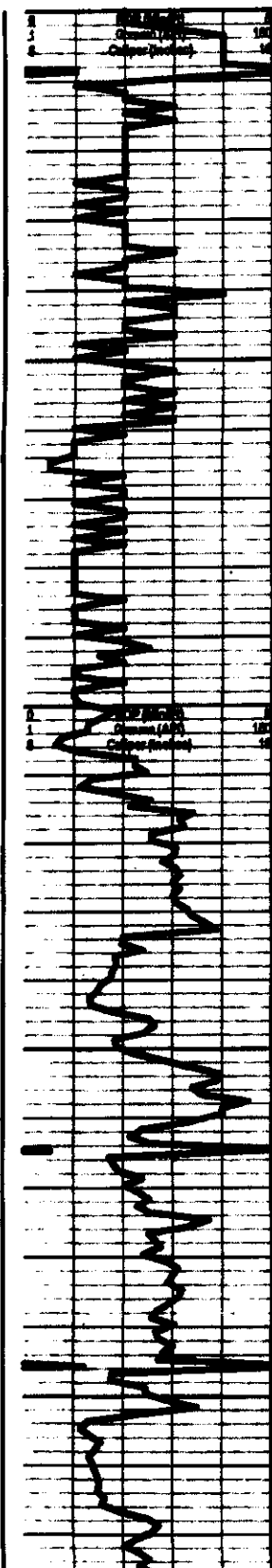
2600



La., gr, vgr, modded, p intran Por, n/s

Sh., silty-vf gr, gr, wh, modded, p-tr Intran Por, n/s

Sh., gr, rd, brn



La., orn, vf gr, p intran por, sing, firm, n/s

La., s.s.

La., orn, vf gr, p intran Por, chily, fr, n/s

Hebner 3810 (-900)

Sh., blk carb

Sh., gr, brn

Toronto 3832 (-922)

La., wh, orn, v chily, sil silt, p-tr Intran Por, fr, n/s

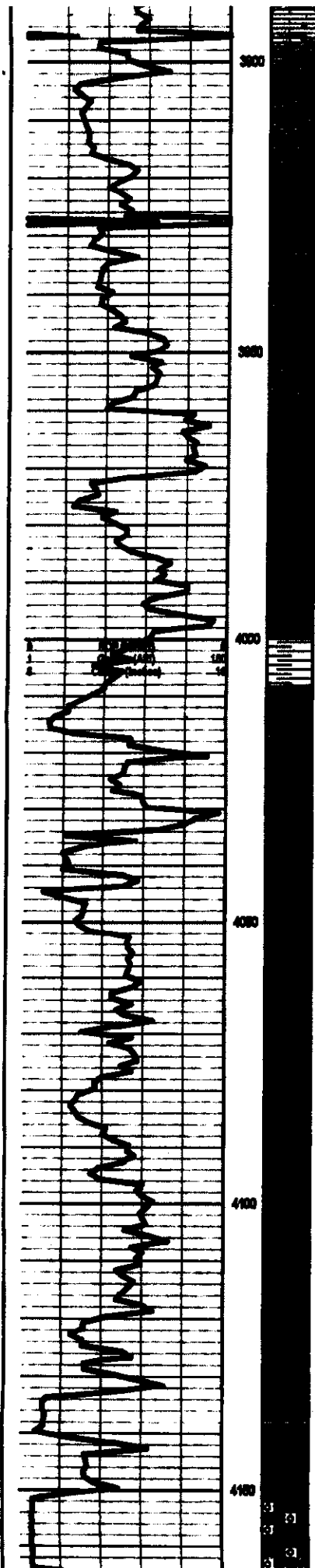
Lansing 3856 (-946)

La., orn, vf gr, p intran por, sil chily, r r pp vug Por, no odor

La., orn, vf gr, p intran Por, sil chily, firm, n/s

La., wh-orn, vf gr, p intran Por, firm-td, n/s

La., orn, vf gr, p vie Por, chily



La., wh-orm, vf gr, p Ingran Por, firm-hd, n/s

La., orm, vf gr, p vis Por, chily

La., orm, vf gr, p Ingran Por, all chily, sing, tr n/s

La., a.s.

La., orm, vf gr, p Ingran Por, lss frag, all mottled, n/s

La., orm, vf gr, P Ingran Por, firm-hd n/s

La., wh, v chily, p vis Por, soft, n/s

La., orm, tr, vf gr, p Por, hd, n/s

La., orm, wh, vf gr, v chily, sing, all dolio, soft, n/s

La., orm, gy, vf gr, p Ingran Por, firm, n/s

La., orm, wh, vf gr, all chily, p Ingran Por, n/s

La., orm, vf gr, p Ingran Por, sma lss Frag, all chery, n/s

La., a.s.

La., orm, vf gr, p Ingran Por, firm, n/s

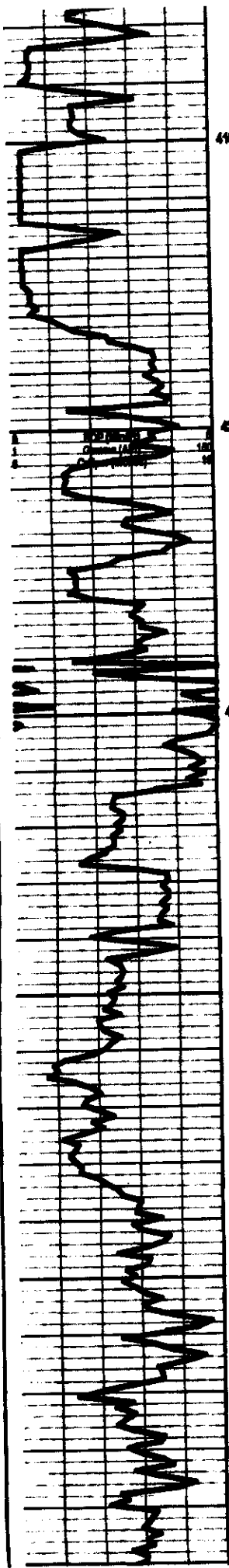
La., a.s. (no Ch), n/s

La., wh, chily, r Ool, Fr Oom Por, n/s

La., orm, tr, Ool, fr-gel Oom Por, tr, bright Fluor, all gassy Ool?, no stain

MUDCO
Mud @ 3948'

Wt: 9.0
Vis: 44
Chi: 2300
LCM 6#



La., wh, chily, r Ool, Fr Oom Por, n/s

La., orn, tn, Ool., fr-gd Oom Por, fri, bright Fluor, all gassy Odr?, no stain

La. orn, Ool., fr-gd Oom Por, fri, all dolts, brittle, fluor, no odor

La., wh, orn, vf gr, sing, p Ingran Por, firm-hd,

Stark Sh 4196 (-1286)

Sh., blk

La., tn, Ool, fr-gd Ool Por, fri, n/s

La., orn, vf gr, fr Ingran Por, all chily, shaly, n/s

Hushpuckney Sh 4239 (-1329)

Sh., blk

La., orn, vf, gr, p Por, hd, n/s

La., orn, wh, f gr, gran, p Por, chily, n/s

La., orn, wh, vf gr, p Ingran por, dnea, n/s

La., a.a.

La., orn, vf gr, p Ingran Por, p-oco fr vug Por, all show free Oil, fl odor

Chl., gg, sharp

La., orn, vf gr, chily, p Ingran Por, fr, n/s

La., orn, vf gr, all chily, v all str, NSFO, no odor

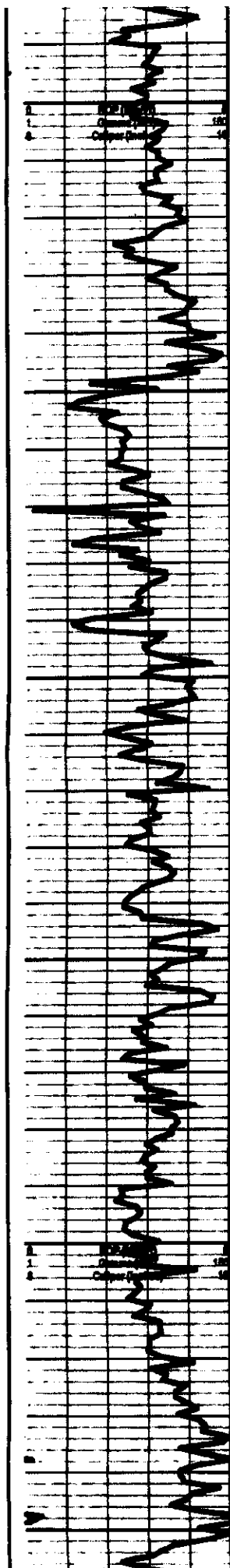
BKC 4342 (-1432)

Sh., gg, firm

La., orn, vf gr, fca Frag, NVP hd

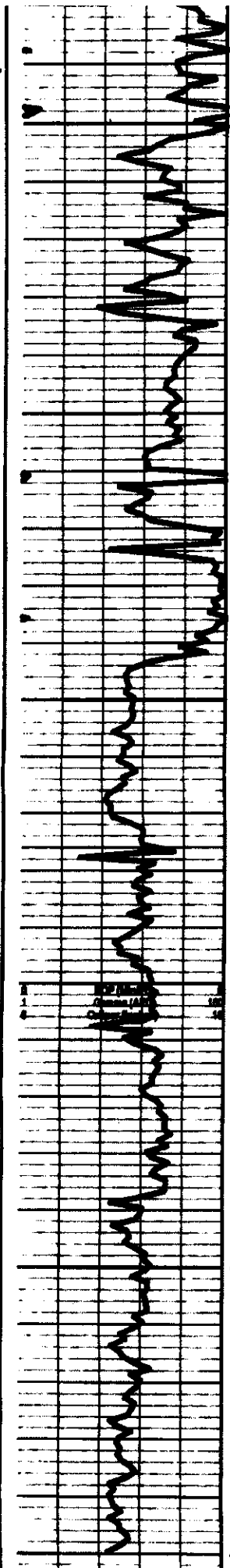
La., orn, tn, vf gr, fca frag, fr Inlles Por, p Ingran Por, all chily, all Pyr, no fluor, no odor

La., orn, vf gr, all ady, oco fca, firm, n/s



Ls., orn, vf gr, sil sty, oca fca, firm, n/s
 4400
 Sh., gy
 Ls., tr, gy, v shaly, mottled, firm-hd, n/s
 Sh., gy-dk gy, brn
 Ls., Gry/lan-Sing-Crypto-sin-charly, n/s
 4480
 Sh., Blk
 Ls., orn-tan, vf gr, sil fluor, sil show, no odor
 Sh., blk-dk gry, vf gr, sil show, no odor
 4500
 Ls., wht to orn, orange flint, crylo-sin, no odor
 Sh., Dk Gry; Gry Argil and Blk
 4580
 Ls., gy/ln, Sing, Dense, Firm, sil chng, n/s
 Sh., Dk Gry to Blk, Abund. of vari-color
 4600
 Ls., Lt orn to Gry, vf gr, p Poc, n/s
 Ls., gy-lan, Sing, Dense, f gr, p Poc, n/s

MUDCO
 Mud @ 4443'
 Wt: 9.0
 Vis: 59
 Chl: 2000
 LCM 5#



Ls., gy-Bn,Slng,Dense, f gr, p Por, n/s
 Sh., gy blk
Morrow Sh. 4670 (-1780)
 Sh., gy blk, brn
 Sh., blk brn, gy
 Sh., blk brn, gy
 Sh., blk brn, gm, gy
St. Gen 4720 (-1810)
 Ls., wh, lt gm, silty, all glauc IP, fl, n/s
 Ls., wh-gy, silty, fl, p Ingran Por, ool gas bubble, r rdy Cong-NVP, no fluor
 Ls., orn, wh, chily, v f gr, p Ingran Por, n/s
St. Louis 4784 (-1854)
 Ls., wh, gy, ame cherty, p Ingran Por, firm, SSPD, v fl ool, all fluor
 Ls., orn, gy, ame cherty, p Ingran Por, pred chily, firm, n/s
 Ls., orn, v f gr, micro fca, fca frags, p-f Intra Por, SSPD, r r str, all ool, all fluor
 Ls., orn, br, v f gr, p Ingran Por, firm, r Ostr, NSPD, no fluor
 Ls., orn, rd gr, firm-hd, p Por, chily IP, n/s
 Ls., ss
 Ls., orn, v f gr, firm, dense, easily, p Por, n/s
 Ls., orn, v f gr, all Pyr, P Ingran Por, all chily, trao, no odor
 Chert-Gry/ltm-Fresh to all weath. Lt. Gry to Gry Chally Ls. No show
 Chert-Wht to Cr
 Ls., orn to gry and green, Cryto-str, Tra. of poor Fac to all-ool Por. Chally-Slat.
 Abund. of vari-color Sh.

MUDCO
Mud @ 4865'
 Wt: 9.1
 Vis: 62
 Chl: 1800
 LCM 7#

RTD: 4900'
 LTD: 1800'