Confidentiality Requested:
☑ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

1210949

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 34950
Name: Future Acquisition Company LLC
Address 1: PO BOX 1129
Address 2:
City: FULSHEAR State: TX Zip: 77441 + __ __ __ __
Contact Person: Carl Price
Phone: (832) 831-3700
CONTRACTOR: License # 34233
Name: Maverick Drilling LLC
Wellsite Geologist: Mary Bentley
Purchaser: Coffeyville Resources

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
☐ Plug Back ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ ENHR Permit #:
☐ GSW Permit #:

03/14/2014	03/21/2014	06/05/2014
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No. 15 - 15-035-24562-00-00
Spot Description:
__ - SW - NE - SW Sec. 11 Twp. 34 S. R. 3 ☑ East ☐ West
1692 Feet from ☐ North / ☑ South Line of Section
1671 Feet from ☐ East / ☑ West Line of Section

Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☐ SE ☑ SW

GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Cowley
Lease Name: Don Julio Well #: 1
Field Name: Harvey
Producing Formation: Bartlesville
Elevation: Ground: 1164 Kelly Bushing: 1180
Total Vertical Depth: 3900 Plug Back Total Depth: 3630
Amount of Surface Pipe Set and Cemented at: 349 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: 2200 ppm Fluid volume: 100 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

☑ **Confidentiality Requested**
Date: 06/24/2014
☑ **Confidential Release Date:** 06/23/2016
☑ **Wireline Log Received**
☑ **Geologist Report Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** NAOMI JAMES **Date:** 06/24/2014

[redacted] 1210949

Operator Name: Future Acquisition Company LLC Lease Name: Don Julio Well #: 1

Sec. 11 Twp. 34 S. R. 3 ☑ East ☐ West County: Cowley

INSTRUCTIONS: Show important tops 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.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken ☐ Yes ☑ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☑ Yes ☐ No

Cores Taken ☐ Yes ☑ No

Electric Log Run ☑ Yes ☐ No

List All E. Logs Run:

CBL

☑ Log Formation (Top), Depth and Datum ☐ Sample

Name: Attached Top: Attached Datum: Attached

CASING RECORD ☑ New ☐ 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	8.625	24	349	Class A	200	
Production	7.875	5.5	15.5	3630	Class A	250	

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	-			
	-			

Did you perform a hydraulic fracturing treatment on this well? ☑ Yes ☐ No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☑ No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth
3	3350-3362	Acid w/500 gal 10% HCL	
		Frac w/300 bbls fluid, 7000# sand	

TUBING RECORD: Size: 2.875 Set At: Packer At: Liner Run: ☐ Yes ☑ No

Date of First, Resumed Production, SWD or ENHR. 06/08/2014

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:
☐ Vented ☐ Sold ☐ Used on Lease
(If vented, Submit ACO-18.)

METHOD OF COMPLETION:
☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*
☐ Other *(Specify)*

PRODUCTION INTERVAL:
3350-3362

Form	ACO1 - Well Completion
Operator	Future Acquisition Company LLC
Well Name	Don Julio 1
Doc ID	1210949

Tops

Name	Top	Datum
Admire	823	(357)
Toronto Lime	2062	(-882)
Iatan	2185	(-1005)
Stalnaker	2202	(-1022)
Layton	2661	(-1484)
Cleveland	2981	(-1801)
Marmaton	3045	(-1865)
Mississippian	3389	(-2209)
Woodford	3761	(-2581)
Arbuckle	3843	(-2663)

Form	ACO1 - Well Completion
Operator	Future Acquisition Company LLC
Well Name	Don Julio 1
Doc ID	1210949

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	24	349	Class A	200	
Production	7.875	5.5	15.5	3630	Class A	250	

CONSOLIDATED
Oil Well Services, LLC

REMIT TO
FINV
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 • 1-800/467-8676
Fax 620/431-0012

INVOICE Invoice # 266597

Invoice Date: 03/18/2014 Terms: 0/30/10,n/30 Page 1

FUTURE ACQUISITION COMPANY,LLC
P.O. BOX 1129
FULSHEAR TX 77441
(832)831-3700

DON JULIO #1
43832
11-34-3
03-15-2014
KS

Part Number	Description	Qty	Unit Price	Total
1104S	CLASS "A" CEMENT (SALE)	200.00	15.7000	3140.00
1102	CALCIUM CHLORIDE (50#)	480.00	.7800	374.40
1118B	PREMIUM GEL / BENTONITE	400.00	.2200	88.00
1107	FLO-SEAL (25#)	100.00	2.4700	247.00
4432	8 5/8" WOODEN PLUG	1.00	84.0000	84.00

Sublet Performed	Description	Total
9996-180	CEMENT MATERIAL DISCOUNT	-1154.82

	Description	Hours	Unit Price	Total
446	CEMENT PUMP (SURFACE)	1.00	870.00	870.00
446	EQUIPMENT MILEAGE (ONE WAY)	63.00	4.20	264.60
446	EQUIPMENT STAND-BY ON LOCATION	6.00	90.00	540.00
539	EQUIPMENT STAND-BY ON LOCATION	6.00	90.00	540.00
681	TON MILEAGE DELIVERY	1.00	888.30	888.30
681	EQUIPMENT STAND-BY ON LOCATION	6.00	90.00	540.00

RECEIVED
MAR 25 2014
KCC WICHITA

9285

Amount Due 7828.04 if paid after 03/28/2014

Parts:	3933.40	Freight:	.00	Tax:	177.83 AR		6599.31
Labor:	.00	Misc:	.00	Total:	6599.31		
Sublt:	-1154.82	Supplies:	.00	Change:	.00		

Signed _____ Date _____

CONSOLIDATED
Oil Well Services, LLC
PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

266597

TICKET NUMBER 43832
LOCATION 120
FOREMAN Jeff Stall

FIELD TICKET & TREATMENT REPORT

CEMENT API # 15-035-24562-00-00

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
3/15/14	5014	Don Julio #1	11	34	3	Cowley

CUSTOMER: Future Acquisition Co.
MAILING ADDRESS: PO Box 1129
CITY: Fulshear | STATE: TX | ZIP CODE: 77441

TRUCK #	DRIVER	TRUCK #	DRIVER
446	Jeremy M		
681	Dustin K		
539	Jeff S.		

JOB TYPE Surface | HOLE SIZE 12 1/4 | HOLE DEPTH | CASING SIZE & WEIGHT 8 5/8
CASING DEPTH 349.52 | DRILL PIPE | TUBING | OTHER
SLURRY WEIGHT 14.8 | SLURRY VOL 48.44 | WATER gal/sk | CEMENT LEFT in CASING
DISPLACEMENT 20.5 | DISPLACEMENT PSI 200 | MIX PSI 100 | RATE 4.8

REMARKS: Safety meeting, broke circ, pumped 200 SKS class A cement 3% calcium 2% Gel ½ lb Polyflake displaced to surface with 20½ bbls freshwater

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401S	1	PUMP CHARGE	870.00	870.00
5406	63	MILEAGE	4.20	264.60
1104S	200SKS	Class A cement	15.70	3140.00
1102	480Lbs	calcium chloride	.78	374.40
1118B	400Lbs	Gel	.22	88.00
1107	100Lbs	Polyflake	2.47	247.00
5407A	10Ton	Ton Mileage delivery	1.41	888.30
4432	1	8 5/8 wooden Plug	84.00	84.00
5404	6 hrs	Personnel Standby on location	270.00	1620.00
			Subtotal	7576.30
			Minus Discount	-1154.82
		completed		
			Subtotal	6421.48
			SALES TAX	177.83
			ESTIMATED TOTAL	6599.31

Ravin 3737

AUTHORIZTION Stephen Ball for Future Acq TITLE DATE

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 for

CONSOLIDATED
Oil Well Services, LLC

REMIT TO
FINV
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 • 1-800/467-8676
Fax 620/431-0012

INVOICE Invoice # 266753

Invoice Date: 03/24/2014 Terms: 0/30/10,n/30 Page 1

FUTURE ACQUISITION COMPANY,LLC
P.O. BOX 1129
FULSHEAR TX 77441
(832)831-3700

DON JULIO #1
42937
11-34-3E
03-21-2014
KS

Description	Hours	Unit Price	Total
TON MILEAGE DELIVERY	1.00	532.98	532.98

Part Number	Description	Qty	Unit Price	Total
1104S	CLASS "A" CEMENT (SALE)	250.00	15.7000	3925.00
1131	60/40 POZ MIX	50.00	13.1800	659.00
1118B	PREMIUM GEL / BENTONITE	1200.00	.2200	264.00
1110A	KOL SEAL (50# BAG)	2000.00	.4600	920.00
1102	CALCIUM CHLORIDE (50#)	400.00	.7800	312.00
1144G	MUD FLUSH (SALE)	500.00	.0000	.00
4136	TURBOLIZER 5 1/2"	6.00	75.7500	454.50
4104	CEMENT BASKET 5 1/2"	2.00	290.0000	580.00
4253	TYPE A PACKER SHOE61/2X6	1.00	1663.0000	1663.00
4454	5 1/2" LATCH DOWN PLUG	1.00	266.7500	266.75

Sublet Performed	Description	Total
9996-180	CEMENT MATERIAL DISCOUNT	-1824.00

RECEIVED
APR 03 2014
BY:

	Description	Hours	Unit Price	Total
502	TON MILEAGE DELIVERY	1.00	532.98	532.98
603	CEMENT PUMP (SURFACE)	1.00	1085.00	1085.00
603	EQUIPMENT MILEAGE (ONE WAY)	54.00	4.20	226.80
603	CASING FOOTAGE	2000.00	.23	460.00

Amount Due 12460.85 if paid after 04/03/2014

Parts:	9044.25	Freight:	.00	Tax:	462.10 AR	10520.11
Labor:	.00	Misc:	.00	Total:	10520.11	
Sublt:	-1824.00	Supplies:	.00	Change:	.00	

9389

Signed _____ Date _____

CONSOLIDATED
Oil Well Services, LLC

2666753

TICKET NUMBER 42937
LOCATION 180
FOREMAN Jacob Storm

PO Box 884, Chanute, KS 66720
620-431-9210 or 800-467-8676

FIELD TICKET & TREATMENT REPORT
CEMENT

API 15-035-24562-00-00

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
3-21-14	5014	Don Julio #1	11	34	3E	Cowley

CUSTOMER: Future acquisitions co
MAILING ADDRESS: PO Box 1129
CITY: Fulshear | STATE: tx | ZIP CODE: 77441

JG JM dg mg

TRUCK #	DRIVER	TRUCK #	DRIVER
603	Jeramy A		
713	Josh		
502	Mark		
702	Jacob		

JOB TYPE Longstring B | HOLE SIZE 7 7/8 | HOLE DEPTH 3850 | CASING SIZE & WEIGHT 5 1/2 15.5 lb
CASING DEPTH 3630 | DRILL PIPE | TUBING | OTHER
SLURRY WEIGHT 15 lb | SLURRY VOL 67.23 | WATER gal/sk | CEMENT LEFT in CASING 14ft Shoe
DISPLACEMENT 86.39 | DISPLACEMENT PSI 1000 | MIX PSI 300 | RATE 6.2 bpm

REMARKS: Safety meeting. Run pipe to 3630 circulate for 30 min drop ball open packer Shoe. pump 5bbl water 500 gal dv 1100 5bbl water, mix 250 sks class A 4% gel 2% cc 8# Kol-seal displaced with 86.39 bbl landing plug at 1500 psi check float float held. plug Rat hole with 38 sks 60/40 4% gel mouse hole with 20 sks 60/40 poz 4% gel Job complete. RD@ 18:15

ACCOUNT CODE	QUANITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
5401S	1	PUMP CHARGE	1085.00	1085.00
5406	54	MILEAGE	4.2	226.80
5407 A	54	14 ton mileage	1.41	1065.96
5402	2000	footage	.23	460.00
1104 S	250	class A	15.70	3925.00
1131	50	60/40	13.18	659.00
1118 B	1200	gel	.22	264.00
1110 A	2000	Kol-Seal	.46	920.00
1102	400	Calcium chloride	.78	312.00
1144 G	500	Dv 1100	1.10	N/C
4136	6	5 1/2 turbolizer	75.75	454.50
4104	2	5 1/2 Baskets	290.00	580.00
4253	1	5 1/2 type A packer shoe	1663.00	1663.00
4454	1	5 1/2 Latch down plug	266.75	266.75
		completed	Subtotal	11882.01
			discount	1824.00
				10058.01
		6.4%	SALES TAX	462.10
Ravin 3737			ESTIMATED TOTAL	10520.11

AUTHORIZTION Stephen Ball Jr. TITLE Future Acq DATE

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.

GEOLOGIC REPORT

API: 15-035-24562
KID: 1044787605
Lease: Don Julio
Well 1
Original operator: Future Acquisition Company LLC
Field: Harvey
Location: T34S R3E, Sec. 11
1692' FSL & 1671' FWL
X: 2416940
Y: 162509
Longitude: -97.0703577
Latitude: 37.1041966
County: Cowley

Permit Date: Mar-11-2014
Spud Date: Mar-14-2014
Total Depth: 3900'
Elevation: 1170 GL, 1180 KB
Tops from CBL:
Admire: 823 (357)
Toronto Lime: 2062 (-882)
Iatan: 2185 (-1005)
Stalnaker: 2202 (-1022)
Layton: 2661 (-1484)
Cleveland: 2981 (-1801)
Marmaton: 3045 (-1865)
Mississippian: 3389 (-2209)
Woodford: 3761 (-2581)
Arbuckle: 3843 (-2663)

350-390 30%LS: WHT LT TN BUFF TRNSL HD MICXLN-XLN SME SUCR DNSE; 70% SH: GY LT GY MED GY RD BRN BLKY FRM SLTY

390-475 80% LS: WHT LT TN BUFF TRNSL HD MICXLN-XLN SME SUCR DNSE; 20% SH: GY LT GY RD BRN BLKY FRM SLTY

475-570 30% LS: LT TN BUFF WHT FRST TRNSL FRM MICXLN-XLN DNSE; 80% SH: RD BRN LT GY LT TN GRN PURP BLKY FRM SLTY

570-630 50% LS: LT TN BUFF WHT FRST TRNSL FRM MICXLN-XLN DNSE; 50% SH: RD BRN LT GY LT TN GRN PURP BLKY FRM SLTY

630-690 40% LS: LT TN BUFF WHT FRST TRNSL FRM MICXLN-XLN DNSE; 60% SH: RD BRN LT GY LT TN GRN PURP BLKY FRM SLTY

690-810 20% LS: LT TN BUFF WHT FRST TRNSL FRM MICXLN-XLN DNSE; 80% SH: RD BRN LT GY LT TN GRN PURP BLKY FRM SLTY

810-860 40% LS: LT TN BUFF WHT FRST TRNSL FRM MICXLN-XLN DNSE; 50% SH: RD BRN LT GY LT TN GRN PURP BLKY FRM SLTY; 10% SD: GY LT GY VFG CONS FRM-FRI SUBRND W SRTD SLTY-ARGIL

860-900 40% LS: LT TN BUFF WHT FRST TRNSL FRM MICXLN-XLN DNSE; 60% SH: RD BRN LT GY LT TN GRN PURP BLKY FRM SLTY

900-925 30% LS: LT TN BUFF WHT FRST TRNSL FRM MICXLN-XLN DNSE; 50% SH: RD BRN LT GY LT TN GRN PURP BLKY FRM SLTY; 10% SD: GY LT GY VFG CONS FRM-FRI SUBRND W SRTD SLTY-ARGIL; 10% SLTSTN: LT GY BLKY FRM

925-1020 15% LS: LT TN BUFF WHT FRST TRNSL FRM MICXLN-XLN DNSE; 75% SH: RD BRN LT GY LT TN GRN PURP BLKY FRM SLTY; 15% SLTSTN: LT GY BLKY FRM

1020-1050 50% LS: LT TN BUFF WHT FRST TRNSL FRM MICXLN-XLN DNSE; 40% SH: RD BRN LT GY LT TN GRN PURP BLKY FRM SLTY; 5% SLTSTN: LT GY BLKY FRM

1050-1110 15% LS: LT TN BUFF WHT FRST TRNSL FRM MICXLN-XLN DNSE; 75% SH: RD BRN LT GY LT TN GRN PURP BLKY FRM SLTY; 15% SLTSTN: LT GY BLKY FRM

1110-1140 5% LS: WHT LT TN BUFF TRNSL HD MICXLN-XLN SME DNSE R TR PYR NOD; 80% SH: LT GY GY LT GRN RED BRN BLKY FRM OCC SFT SLTY R TR PYR; 10% SLTSTN: LT GY BLKY FRM MICA LIG TR PYR NODS R TR PYRR; 10% SD: GY LT GY OCC FRST CLR VF VFG CONS FRM-FRI SUBRND W SRTD SLTY

1140-1160 25% LS: WHT LT TN BUFF TRNSL HD MICXLN-XLN SME DNSE R TR PYR NOD; 25% SH: LT GY GY LT GRN RED BRN BLKY FRM OCC SFT SLTY R TR PYR; 25% SLTSTN: LT GY BLKY FRM MICA LIG TR PYR NODS R TR PYRR; 25% SD: GY LT GY OCC FRST CLR VF VFG CONS FRM-FRI SUBRND W SRTD SLTY

1160-1200 20% LS: WHT LT TN BUFF TRNSL HD MICXLN-XLN SME DNSE R TR PYR NOD; 40% SH: LT GY GY LT GRN RED BRN BLKY FRM OCC SFT SLTY R TR PYR; 20% SLTSTN: LT GY BLKY FRM MICA LIG TR PYR NODS R TR PYRR; 20% SD: GY LT GY OCC FRST CLR VF VFG CONS FRM-FRI SUBRND W SRTD SLTY

1200-1230 50% LS: WHT LT TN BUFF TRNSL HD MICXLN-XLN SME DNSE R TR PYR NOD; 40% SH: LT GY GY LT GRN RED BRN BLKY FRM OCC SFT SLTY R TR PYR; 5% SLTSTN: LT GY BLKY FRM MICA LIG TR PYR NODS R TR PYRR; 5% SD: GY LT GY OCC FRST CLR VF VFG CONS FRM-FRI SUBRND W SRTD SLTY

1230-1260 15% LS: WHT LT TN BUFF TRNSL HD MICXLN-XLN SME DNSE R TR PYR NOD; 70% SH: LT GY GY LT GRN RED BRN BLKY FRM OCC SFT SLTY R TR PYR; 5% SLTSTN: LT GY BLKY FRM MICA LIG TR PYR NODS R TR PYRR; 10% SD: GY LT GY OCC FRST CLR VF VFG CONS FRM-FRI SUBRND W SRTD SLTY

1260-1290 40% LS: WHT LT TN BUFF TRNSL HD MICXLN-XLN SME DNSE R TR PYR NOD; 50% SH: LT GY GY LT GRN RED BRN BLKY FRM OCC SFT SLTY R TR PYR; 5% SLTSTN: LT GY BLKY FRM MICA LIG TR PYR NODS R TR PYRR; 5% SD: GY LT GY OCC FRST CLR VF VFG CONS FRM-FRI SUBRND W SRTD SLTY

1290-1310 30% LS: WHT LT TN BUFF TRNSL HD MICXLN-XLN SME DNSE R TR PYR NOD; 50% SH: LT GY GY LT GRN RED BRN BLKY FRM OCC SFT SLTY R TR PYR; 10% SLTSTN: LT GY BLKY FRM MICA LIG TR PYR NODS R TR PYRR; 10% SD: GY LT GY OCC FRST CLR VF VFG CONS FRM-FRI SUBRND W SRTD SLTY

1310-1350 30% LS: WHT LT TN BUFF TRNSL HD MICXLN-XLN SME DNSE R TR PYR NOD; 50% SH: LT GY GY LT GRN RED BRN BLKY FRM OCC SFT SLTY R TR PYR; 5% SLTSTN: LT GY BLKY FRM MICA LIG TR PYR NODS R TR PYRR; 15% SD: GY LT GY OCC FRST CLR VF VFG CONS FRM-FRI SUBRND W SRTD SLTY

1350-1380 70% SH: LT GY GY LT GRN RED BRN BLKY FRM OCC SFT SLTY R TR PYR; 30% SLTSTN: LT GY BLKY FRM MICA LIG TR PYR NODS R TR PYRR

1380-1525 10% LS: WHT LT TN BUFF TRNSL HD MICXLN-XLN SME DNSE R TR PYR NOD; 80% SH: LT GY GY LT GRN RED BRN BLKY FRM OCC SFT SLTY R TR PYR; 5% SLTSTN: LT GY BLKY FRM MICA LIG TR PYR NODS R TR PYRR; 5% SD: GY LT GY OCC FRST CLR VF VFG CONS FRM-FRI SUBRND W SRTD SLTY

1525-1710 30% LS: LT TN BUFF TRNSL HD MICXLN-XLN SME DNSE; 50% SH: LT GY GY RED BRN BLKY FRM SLTY

1710-1800 90% SH: LT GY GY LT GRN BRN DK GY RED BRN BLKY FLKY FRM SLTY MICA 15% LS: LT TN BUFF WHT FRST TRNSL HD MICXLN-XLN SME SUCR DNSE

1800-1890 50% SH: LT GY GY LT GRN BRN DK GY RED BRN PURP GLD BLKY FLKY FRM SLTY MICA; 25% SD: WHT FRST TN VFG CONS FRI SUBRND W SRTD SLTY IP; 25% SLTSTN: LT GY GY BLKY FRM MICA

1890-1920 50% LS: LT TN BUFF WHT FRST GY BRN HD MICXLN-XLN DNSE OOL IP; 50% SH: DK GY GY RD-BRN GRNSH-GY BLKY FRM SLTY MICA IP PYR

1920-1950 55% SH: DK GY GY RD-BRN GRNSH-GY BLKY FRM SLTY MICA IP PYR; 25% SD: GRNSH GY VFG CONS FRI SUBRND W SRTD SLTY; 25% LS: LT TN BUFF WHT FRST GY BRN HD MICXLN-XLN DNSE OOL IP

1950-2100 60% SH: DK GY GY RD-BRN GRNSH-GY BLKY FRM SLTY MICA IP PYR; 25% SD: GRNSH GY VFG CONS FRI SUBRND W SRTD SLTY; 15% LS: LT TN BUFF WHT FRST GY BRN HD MICXLN-XLN DNSE OOL IP
2100-2125 50% SH: LT GY GY BLKY FRM SLTY MICA IP TR PYR LIG; 30% SD: WHT GRN LT GY VFG CONS FRI SUBRND W SRTD SLTY; 20% SLTSTN: LT GY GY BLKY FRM MICA

2125-2160 90% SH: LT GY GY BLKY FRM SLTY MICA IP TR PYR LIG; 10% SLTSTN: LT GY GY BLKY FRM MICA

2160-2190 40% SH: LT GY GY BLKY FRM SLTY MICA IP TR PYR LIG; 20% SD: WHT GRN LT GY VFG CONS FRI SUBRND W SRTD SLTY; 20% SLTSTN: LT GY GY BLKY FRM MICA; 20% LS: LT TN BUFF BRN WHT HD MICXLN-XLN DNSE SME SUCR

2190-2220 80% SH: LT GY GY BLKY FRM SLTY MICA IP TR PYR LIG; 10% SD: WHT GRN LT GY VFG CONS FRI SUBRND W SRTD SLTY; 10% SLTSTN: LT GY GY BLKY FRM MICA

2220-2430 80% SD: WHT CLR FRST VF-FG MOD HD SUBANG SUBRND MOD SRTD MOD SLTY CONS; 20% SH: LT GY GY RED BRN BLKY FRM OCC SFT SLTY

2430-2460 30% SD: WHT CLR OCC LT GY FRST VF-FG MOD HD SUBANG SUBRND MOD SRTD MOD SLTY CONS; 70% SH: LT GY GY RED BRN BLKY FRM OCC SFT SLTY

2460-2520 10% LS: TN WHT MLKY WHT TRNSL BUFF HD MICXLN-XLN SME DNSE; 30% SD: WHT CLR OCC LT GY FRST VF-FG SUBANG SUBRND MOD SRTD MOD SLTY W CONS; 10% SLTSTN: LT GY GY BLKY FRM MICA; 50% SH: LT GY GY OCC DK GY BLKY FRM OCC SFT SLTY

2550-2610 90% SH: LT GY GY OCC DK GY BLKY FRM OCC SFT SLTY; 10% LTSTN: LT GY GY BLKY FRM MICA LIG R TR GLAUC

2610-2640 100% SH: LT GY GY OCC DK GY BLKY MD FRM OCC SFT SLTY IP

2640-2660 10% SD: WHT CLR OCC LT GY FRST VF-FG SUBANG SUBRND MOD SRTD MOD SLTY W CONS; 90% SH: LT GY GY OCC DK GY BLKY MD FRM OCC SFT SLTY IP

2660-2700 20% SD: WHT CLR OCC LT GY FRST VF-FG SUBANG SUBRND MOD SRTD MOD SLTY W CONS; 80% SH: LT GY GY OCC DK GY BLKY MD FRM OCC SFT SLTY IP

2700-2760 30% SD: WHT CLR OCC LT GY FRST VF-FG SUBANG SUBRND MOD SRTD MOD SLTY W CONS; 70% SH: LT GY GY OCC DK GY BLKY MD FRM OCC SFT SLTY IP

2760-2850 25% LS: TN WHT MLKY WHT TRNSL BUFF HD MICXLN-XLN SME DNSE R TR PYR; 10% SLTSTN: GY LT GY BLKY FRM-SFT MICA TR LI; 25% SD: WHT CLR OCC LT GY FRST VFG SUBANG SUBRND MOD SRTD MOD SLTY W CONS; 40% SH: LT GY GY MED GY BLKY FRM SLTY MICA PYR TR LIG

2850-2910 30% LS: TN WHT MLKY WHT TRNSL BUFF HD MICXLN-XLN SME DNSE R TR PYR; 10% SLTSTN: GY LT GY BLKY FRM-SFT MICA TR LI; 30% SD: WHT CLR OCC LT GY FRST VFG SUBANG SUBRND MOD SRTD MOD SLTY W CONS; 30% SH: LT GY GY MED GY BLKY FRM SLTY MICA PYR TR LIG

2910-2960 80% LS: WHT LT GY GY TN HD MICXLN-XLN DNSE FOSS; 20% SH: GY GY MED GY BLKY FRM SLTY MICA

2960-3000 80% SD: WHT LT GY FRST VFG CONS HD-FRI SUBRND W SRTD SLTY; 15% LS: WHT LT GY GY TN HD MICXLN-XLN DNSE FOSS; 5% SH: GY LT GY MED GY BLKY FRM SLTY MICA

3000-3060 20% SD: WHT LT GY FRST VFG CONS HD-FRI SUBRND W SRTD SLTY; 5% LS: WHT LT GY GY TN HD MICXLN-XLN DNSE FOSS; 5% SH: GY LT GY MED GY BLKY FRM SLTY MICA; 60% SLTSTN: LT GY GY BLKY FRM-SFT

MICA LIG

3060-3170 60% LS: WHT LT GY GY TN HD MICXLN-XLN DNSE FOSS; 40% SH: GY LT GY MED GY DK GY BLKY FRM SLTY MICA

3170-3210 70% SLTSTN: GY LT GY BLKY FRM-SFT MICA; 20% SH: DK GY BLK GY BLKY FLKY SME ELONG FRM SLTY; 10% LS: TN LT GY GY HD MICXLN-XLN DNSE

3210-3245 40% SLTSTN: GY LT GY BLKY FRM-SFT MICA; 10% LS: TN LT GY GY HD MICXLN-XLN DNSE; 50% SH: DK GY GY BLKY FLKY FRM SLTY

3245-3275 40% SD: LT GY LT BRN VFG W CONS SUBRND W SRTD; 25% SLTSTN: GY LT GY BLKY FRM-SFT MICA; 25% SH: DK GY GY BLKY FLKY FRM SLTY

3275-3325 90% SH: DK GY GY BLKY FLKY FRM SLTY; 10% LS: TN LT GY GY HD MICXLN-XLN DNSE

3325-3375 50% SD: LT GY CLR WHT OCC LT BRN VFG W CONS SUBRND W SRTD SLTY; 50% SH: DK GY GY RD OCC BRN BLKY FLKY FRM SLTY

3375-3420 30% CHT: WHT CRM WHT AMOR V HD ; 50% SH: DK GY GY RD OCC BRN BLKY FLKY FRM SLTY; 20% SD: CLR WHT LT GY LT BRN OCC GRN VFG W CONS SUBRND W SRTD

3420-3450 23.6% Quartz;7.6% Na Feldspar;6.2% K Feldspar;10.1% Calcite;3.4% Dolomite;3.8% Ankerite;1.4% Magnetite;15.6% Muscovite;17.9% Illite;6.1% Kaolinite;4.1% Chlorite

3450-3480 34.6% Quartz;5.9% Na Feldspar;6.3% K Feldspar;9.3% Calcite;3.1% Dolomite;3.4% Ankerite;1% Magnetite;15.8% Muscovite;12.9% Illite;4.9% Kaolinite;2.8% Chlorite

3480-3490 25.3% Quartz;8.7% Na Feldspar;6.7% K Feldspar;12.6% Calcite;3.3% Dolomite;3.7% Ankerite;1% Magnetite;16.8% Muscovite;12.8% Illite;4.7% Kaolinite;4.4% Chlorite

3490-3500 18.7% Quartz;9.5% Na Feldspar;8.6% K Feldspar;9.8% Calcite;2.2% Dolomite;2.4% Ankerite;1.3% Magnetite;19.4% Muscovite;16.4% Illite;6.2% Kaolinite;5.4% Chlorite
3500-3502 19.5% Quartz;6.7% Na Feldspar;6.4% K Feldspar;12.7% Calcite;3.1% Dolomite;3.5% Ankerite;1.6% Magnetite;18.4% Muscovite;19.7% Illite;5% Kaolinite;3.5% Chlorite

3502-3510 21% Quartz;7.1% Na Feldspar;5.4% K Feldspar;13.4% Calcite;4.6% Dolomite;5.1% Ankerite;1.3% Magnetite;15.7% Muscovite;18.4% Illite;4.6% Kaolinite;3.4% Chlorite

3510-3540 19.6% Quartz;9.9% Na Feldspar;7.7% K Feldspar;13.6% Calcite;2.6% Dolomite;2.9% Ankerite;1.2% Magnetite;18.5% Muscovite;17% Illite;3.6% Kaolinite;3.4% Chlorite

3540-3550 23.7% Quartz;8.1% Na Feldspar;6.3% K Feldspar;13.7% Calcite;4.5% Dolomite;5% Ankerite;1.2% Magnetite;13.4% Muscovite;17.5% Illite;3.3% Kaolinite;3.3% Chlorite

3550-3560 20.3% Quartz;8.4% Na Feldspar;6.5% K Feldspar;8.3% Calcite;3.3% Dolomite;3.6% Ankerite;1.6% Magnetite;21.1% Muscovite;20.5% Illite;3% Kaolinite;3.4% Chlorite

3560-3570 19.3% Quartz;11.4% Na Feldspar;8.8% K Feldspar;10.7% Calcite;3.1% Dolomite;3.5% Ankerite;1.5% Magnetite;14.6% Muscovite;19.4% Illite;4.3% Kaolinite;3.4% Chlorite

3570-3580 24.2% Quartz;7.9% Na Feldspar;6.1% K Feldspar;12.7% Calcite;3.2% Dolomite;3.6% Ankerite;1.2% Magnetite;16% Muscovite;15.3% Illite;5.3% Kaolinite;4.4% Chlorite

3580-3590 24.2% Quartz;10.4% Na Feldspar;8% K Feldspar;13.8% Calcite;3.5% Dolomite;3.9% Ankerite;1% Magnetite;13.7% Muscovite;12.3% Illite;5.3% Kaolinite;4% Chlorite

3590-3600 31.2% Quartz;7.8% Na Feldspar;6.1% K Feldspar;14.6% Calcite;5.5% Dolomite;6.1% Ankerite;0% Magnetite;11.8% Muscovite;11.7% Illite;3.5% Kaolinite;1.7% Chlorite

3600-3610 26.2% Quartz;9% Na Feldspar;6.9% K Feldspar;12.3% Calcite;4.6% Dolomite;5.1% Ankerite;1.1% Magnetite;14.5% Muscovite;13.3% Illite;2.9% Kaolinite;4.1% Chlorite

3610-3620 25.1% Quartz;8.6% Na Feldspar;6.6% K Feldspar;14.2% Calcite;5.2% Dolomite;5.7% Ankerite;1% Magnetite;14.2% Muscovite;12.7% Illite;3.6% Kaolinite;3% Chlorite

3620-3630 24.7% Quartz;8% Na Feldspar;6.4% K Feldspar;14.4% Calcite;5.4% Dolomite;6% Ankerite;1% Magnetite;14% Muscovite;12.5% Illite;4.6% Kaolinite;3.1% Chlorite

3630-3640 26.5% Quartz;6.8% Na Feldspar;5.3% K Feldspar;12.8% Calcite;5.4% Dolomite;6% Ankerite;1% Magnetite;15% Muscovite;13.1% Illite;4.7% Kaolinite;3.3% Chlorite

3640-3700 29.3% Quartz;7.6% Na Feldspar;5.8% K Feldspar;10% Calcite;6.9% Dolomite;7.6% Ankerite;1.1% Magnetite;13.3% Muscovite;11.1% Illite;3.3% Kaolinite;3.9% Chlorite

3700-3730 30% Quartz; 15% LS: TN LT BRN CRM BUFF TRNSL MICXLN-XLN DNSE DOLO; 55% SH: GY LT GY OCC DK GY BRN GRN IP BLKY FLKY FRM

3730-3750 30% Quartz; 20% LS: TN LT BRN CRM BUFF TRNSL MICXLN-XLN DNSE DOLO; 50% SH: GY LT GY OCC DK GY BRN GRN IP BLKY FLKY FRM

3750-3780 50% Quartz; 20% LS: TN LT BRN CRM BUFF TRNSL MICXLN-XLN DNSE DOLO; 30% SH: GY LT GY OCC DK GY BRN GRN IP BLKY FLKY FRM

3780-3805 80% SH: DK GY BLK GY BRN BLKY FLKY FRM-HD MICA; 10 % LS: WHT CRM BUFF TN LT BRN MICXLN-XLN DNSE DOLO; 10% QUARTZ WHT LT GY LT GRNSH-GY VFG CONS FRM-FRI SUBRND SLTY PYR

3805-3850 70% SH: DK GY BLK GY BRN BLKY FLKY FRM-HD MICA; 5% LS: WHT CRM BUFF TN LT BRN MICXLN-XLN DNSE DOLO; 20% QUARTZ WHT LT GY LT GRNSH-GY VFG CONS FRM-FRI SUBRND SLTY PYR; 5% DOL: TN BRN MICXLN HD DNSE

3850-3900 90% DOL: TN BRN MICXLN HD DNSE; 5% SH: DK GY BLK GY LT GRN BLKY FLKY FRM-HD MICA PYR; 5% CHT: TAN WHT CRM TRANS AMOR V HD