

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical 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

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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

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

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 <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 Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No 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
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

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>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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FINAL AS-DRILLED PLAT

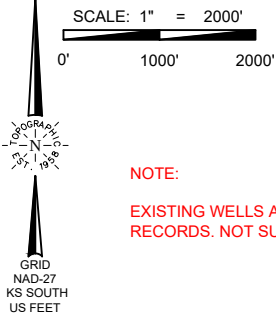
JMC 17/8-35-11 1H
 BCE-MACH III LLC
 SECTION 17, TOWNSHIP 35S, RANGE 11W, 6TH P.M.
 BARBER COUNTY, KANSAS

LEGEND

- SECTION LINE
- STATE/COUNTY/TOWNSHIP LINE
- QUARTER SECTION LINE
- 16TH LINE
- WELL BORE
- PLUGGED WELL
- ACTIVE WELL

NOTE:

EXISTING WELLS ARE PLATTED PER OCC RECORDS. NOT SURVEYED IN THE FIELD.

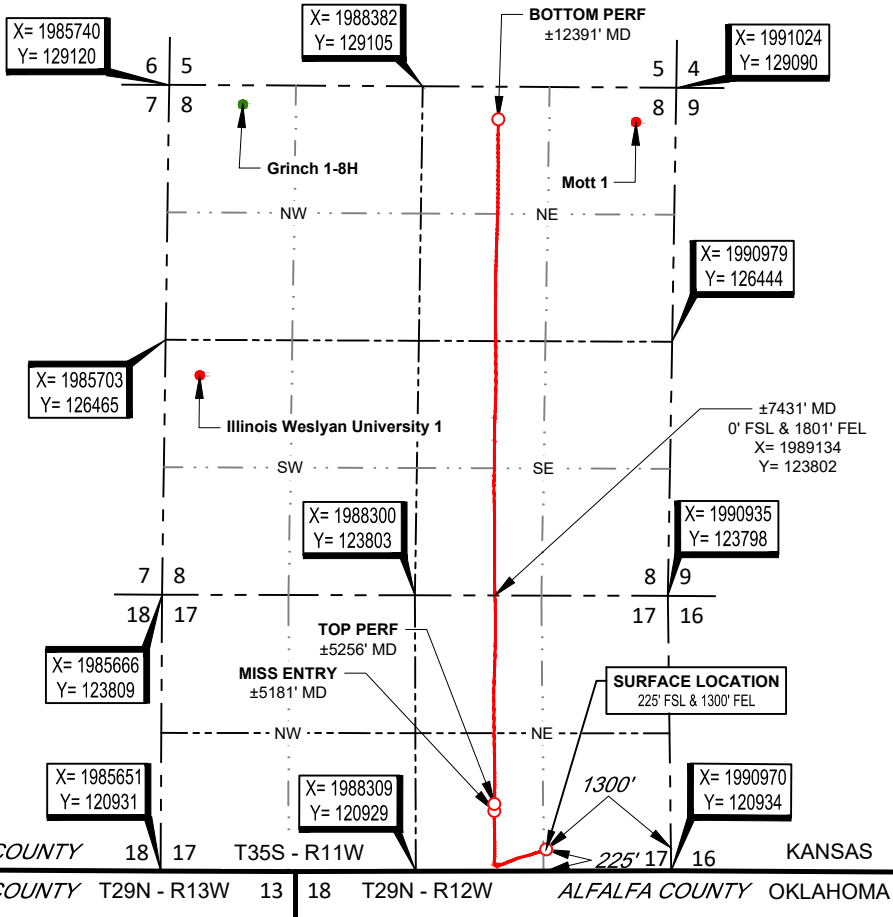


BOTTOM PERF
 340' FNL & 1850' FEL-SEC. 8
 MD: ±12391'
 NAD-27
 X= 1989168
 Y= 128760
 LAT.: 37°01'13.0" N
 LONG.: 98°32'13.6" W
 LAT.: 37.020279° N
 LONG.: 98.537098° W

TOP PERF
 699' FSL & 1834' FEL-SEC. 17
 MD: ±5256'
 NAD-27
 X= 1989127
 Y= 121629
 LAT.: 37°00'02.5" N
 LONG.: 98°32'14.0" W
 LAT.: 37.000694° N
 LONG.: 98.537229° W

MISS ENTRY
 626' FSL & 1836' FEL-SEC. 17
 MD: ±5181'
 NAD-27
 X= 1989126
 Y= 121556
 LAT.: 37°00'01.8" N
 LONG.: 98°32'14.0" W
 LAT.: 37.000495° N
 LONG.: 98.537231° W

SURFACE LOCATION
 225' FSL & 1300' FEL
 NAD-27
 X= 1989667
 Y= 121156
 LAT.: 36°59'57.8" N
 LONG.: 98°32'07.4" W
 LAT.: 36.999397° N
 LONG.: 98.535380° W
 ELEV.: 1345'



SURVEYOR'S CERTIFICATE:

I, STAN W. LLOYD, A KANSAS LICENSED LAND SURVEYOR AND AN AUTHORIZED AGENT OF TOPOGRAPHIC, CO., DO HEREBY CERTIFY TO THE INFORMATION SHOWN HEREIN.



Stan W. Lloyd
 Stan W. Lloyd, P.L.S. No. 827
 Authorized Agent of Topographic, Co.



1900 NORTHWEST EXPY, Ste. 1500 • OKLAHOMA CITY, OKLAHOMA 73118
 TELEPHONE: (405) 843-4847 OR (800) 654-3219
 FAX: (405) 843-0975
 CERTIFICATE OF AUTHORIZATION NO. LS-318
 WWW.TOPOGRAPHIC.COM

LEASE NAME & WELL NO. JMC 17/8-35-11 1H
 SECTION 17 TWP 35S RGE 11W MERIDIAN 6TH P.M.
 COUNTY BARBER STATE KANSAS
 DESCRIPTION 225' FSL & 1300' FEL

JMC 17/8-35-11 1H	REVISION:	
	INT	DATE
DATE: 01/17/2024		
FILE: AD_JMC_17-8_35-11_1H		
DRAWN BY: JPH		
SHEET: 1 OF 1		

- NOTES:**
- ORIGINAL DOCUMENT SIZE: 8.5" X 14"
 - ALL BEARINGS SHOWN HEREON ARE GRID ACCORDING TO THE RESULTS OF STATIC GPS OBSERVATIONS PROCESSED THROUGH OPUS ON THE CONTROL POINT OCCUPIED WHILE MEASURING SAID LINES. OPUS RESULTS ARE CORRELATED TO KANSAS, SOUTH ZONE, NAD 27 - HORIZONTAL AND THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
 - CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT/LOCATION, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY BCE-MACH III LLC. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT/LOCATION, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
 - LANDING POINT, BOTTOM HOLE, AND DRILL PATH INFORMATION PROVIDED BY OPERATOR AS SHOWN AND ARE NOT SURVEYED LOCATIONS.
 - THE INFORMATION SHOWN HEREIN IS FOR CONSTRUCTION PURPOSES ONLY



Prepared By: Tyler Howle

JMC 17/8-35-11 1H
Final 1/4/2023
Completion Procedure
Mississippi Formation

AFE#DC23112

Surface Location: 225' FSL and 1300' FEL in Section 17-35S-11W
 Bottom Hole Location: 341' FNL and 1854' FEL in Section 8-35S-11W
 Latitude 36.999397 Longitude -98.53538
 Barber County County, KS
 API #15-007-24487-01-00

KB: 16' AGL
GLE: 1345'
TD: 12391' MD (4848' TVD)
PBTD: 12139' MD (Landing Collar)

Casing Summary:

All Table Values Are Listed Without Safety Factor

Size	Depth (ft)	Weight #/ft	Grade PSI	Connection	ID (in)	Drift (in)	Burst (psi)	Collapse (psi)	Tension (lbs)	Capacity (bbl/ft)
9 5/8"	334'	36	J-55	LTC	8.921	8.765	3,520	2,020	453,000	0.0773
7"	5,256'	26	P-110	BPN	6.276	6.151	9,950	6,230	693,000	0.0383
4-1/2"	5120' - 12391'	13.5	P-110	BTC	3.920	3.795	12,410	10,670	422,000	0.0149
2-7/8"	TBD	6.5	J-55	EUE	2.441	2.347	7680	7260	99660	0.00579

Maximum allowable pressure during frac is 5,000 psi

Surface: 9 5/8" 36# J-55 LTC (50 bbl cement to surface)
 Intermediate: 7" 26# P-110 BPN (Cemented w/ full returns.)
 Prod Liner: 4-1/2" 13.5# P-110 BTC (OH packers, no cement)

Wellhead:

9-5/8" SOW X 11" 5k Casing Head (A Section)

Direction To Location:

From Kiowa, KS. South on Hwy 81.25 mi to State Line Rd, west 2.5 mi, north into.

Directional:

Horizontal well. KOP at 4288'. Build Section from 4288' - 5400' MD. TD at 12391' MD ; 4848' TVD. Average TVD in lateral is ~4861'.
 Bottom Hole Location: 341' FNL and 1854' FEL in Section 8-35S-11W
Heel hard line is 330' FSL. Toe Hard line is 330' FNL. Based on the final directional drilling survey, the wellbore does not cross either heel or toe hard line.

Current Well Status:

Newly drilled well ready for completion.

Objective:

Complete Mississippian lateral with 15 stages of OH packer/slickwater frac.

First Responder Emergency Contacts

Alfalfa/Woods County Emergency Contacts

	Kiowa	Alva
Fire	620-825-4886	580-328-5510
Ambulance	911 or 620-825-4112	911 or 580-327-2300
Sheriff	620-886-5678	580-327-3434

Hospital: Share Medical Center
 Hwy 60. ~0.1 mi North and East of Hwy 270 and Hwy 60 Jct
 Alva, OK 73717
 ph: (580) 327-2800

Mach Emergency Contacts

Notify one of the individuals listed below, as soon as reasonably possible, for any injury incident requiring transport for medical attention, any incident which has impacted or has the potential to impact the public, any spill in excess of 10 bbl which has breached containment, or any property damage expected to exceed \$100,000. Continue notification attempts in sequential order until someone has been reached. Voicemail, email, and text are not acceptable means of notification.

<u>Contact</u>	<u>Cell Number</u>
Justin Flanagan	405-435-1100
Randy Summers	405-423-3367
Tyler Howle	405-234-0004
Clarence Watts	405-546-9694
Dustin Elmore	580-747-6691
Rick Hughes	405-249-0484

The **SAFETY** of **OUR TEAM** and the **PROTECTION** of **OUR ENVIRONMENT** is **OUR RESPONSIBILITY**

Stop work authority

- Each of us have not only the authority but the responsibility to stop any operation, at any time, if we feel the potential exists for either ourselves or our team to be exposed to unsafe conditions.
- No operation should be resumed until all involved are satisfied that it can be done safely.
- What if you saw an operation that you knew was unsafe, you decided to look the other way, and one of your team members was seriously injured or killed--how would that affect the rest of your life!

Accountability

- Working safely is something each of us must commit to do every day. It is our responsibility.
- Make it your priority to constantly be aware of hazards that could put your personal safety or the safety of our team at risk.
- If you or your team are working in an unsafe manner and have not improved behavior after counseling, you may be asked not to return to work.

Family Matters

- Serious injuries and fatalities have occurred in operations just like ours.
- It can happen to you.
- How would your family's lives be changed if you were no longer able to provide for them due to injury or death?

Evaluate

- Every job can be performed safely.
- Unnecessary risks are not to be taken to complete any job.
- Complete a job safety analysis prior to beginning any task. Take the time to ask what could happen? What can be done to ensure that the job will be completed without incident?

Pre Job Checklist:

- 1) Insure all ratholes and ditches used in the drilling operation have been filled and that location is free of slip/trip/fall hazards. Ensure portable toilets and trash trailers are made available as required. Keep location and surrounding areas free of debris. **Report any existing safety or environmental issues prior to beginning job.**
- 2) Install anchors and/or pull test as required. Install riser and ball valve with bull plug and 2000# gauge on surface casing to above ground level. **Open surface casing valve in cellar** and fill cellar as required to eliminate/minimize confined space risk.
- 3) Evaluate wellhead height and provide work platforms, man lifts, and fall protection as needed to provide safe access.
- 4) Check and monitor surface casing, intermediate casing, and tubing pressures. Record pressures on report daily.

Procedure

Frac Operations EH&S Focus

A high percentage of EH&S incidents in frac operations are related to RU and RD activity. Please focus on the following during frac ops:

- Ensuring that everyone understands they are responsible for their own safety plus the safety of those working around them
- Ensuring that everyone is familiar with and understands their responsibility regarding Stop Work Authority
- Ensuring that everyone is familiar with and understands the 10 Rules to Protect Ourselves and our Team
- Discuss the importance of wearing PPE, lifting hazards, chemical hazards, weather hazards, simultaneous operations hazards, overhead load hazards and live perf gun hazards during safety meetings and JSAs
- Keep all unnecessary personnel away from overhead loads, pressurized lines and perforating guns at all times
- Adjust work pace or shut down ops as weather conditions dictate (heat, cold, storms, etc)

Notify OCC 48 hours prior to beginning frac operations.

- 1) Set 8 frac tanks and 2 acid tanks on location. RU water transfer with transfer line(s) from the frac pit to the frac tanks on location. Be prepared to transfer fresh water at a rate of 65 bpm throughout frac. Inspect tanks and verify that caps are installed in all frac tanks prior to filling. Inspect tanks for leaks during and after filling and monitor for leaks from the time frac tanks are filled until emptied.
- 2) NU 7-1/16" 5k frac stack. Pressure test lines and frac head to 5,000 psi. Set electronic kick-out to 4,800 psi. **Maximum allowable surface pressure is 5,000 psi.**
- 3) **Open well and pressure up on casing to 2,500 psi. Hold 2 minutes. Increase pressure to 3,000 psi and hold 2 min (ensuring OH packers set). Increase pressure until P-sleeve shifts open (pinned to open ~4,000 psi).**

4) Frac the MISSISSIPPI (Stage 1) as follows:

NOTE: FR concentration should be kept as low as possible throughout job in order to obtain a minimum rate of 65 bpm. Do not exceed 0.75 gal/1000 concentration of FR without prior discussion with engineer.

STAGE 1

Top Perf @		12,139'					
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop, lbs	Time, min
Slickwater	20	2,500	60				0.7
15% HCL	80	1,000	24				0.3
Slickwater	100	124,200	2957				37.0
TOTAL		127,700	3,040			-	38

Drop Stage 2 ball according to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 2) as follows:

STAGE 2

Top Perf @		11,686'					
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop, lbs	Time, min
Slickwater	20	2,500	60				0.7
15% HCL	80	1,000	24				0.3
Slickwater	100	124,200	2957				37.0
TOTAL		127,700	3,040			-	38

Drop Stage 3 ball according to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 3) as follows:

STAGE 3

Top Perf @		11,192'					
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop, lbs	Time, min
Slickwater	20	2,500	60				0.7
15% HCL	80	1,000	24				0.3
Slickwater	100	124,200	2957				37.0
TOTAL		127,700	3,040			-	38

Drop Stage 4 ball according to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 4) as follows:

STAGE 4

Top Perf @		10,698'					
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop, lbs	Time, min
Slickwater	20	2,500	60				0.7
15% HCL	80	1,000	24				0.3
Slickwater	100	124,200	2957				37.0
TOTAL		127,700	3,040			-	38

Drop Stage 5 ball according to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 5) as follows:

STAGE 5

Top Perf @		10,205'					
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop, lbs	Time, min
Slickwater	20	2,500	60				0.7
15% HCL	80	1,000	24				0.3
Slickwater	100	124,200	2957				37.0
TOTAL		127,700	3,040			-	38

Drop Stage 6 ball accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 6) as follows:

STAGE 6

Fluid	Top Perf @		9,714'		Prop	Prop Con	Prop, lbs	Time, min
	Rate	Vol, gal	Vol, bbl	Prop				
Slickwater	20	2,500	60				0.7	
15% HCL	80	1,000	24				0.3	
Slickwater	100	124,200	2957				37.0	
TOTAL		127,700	3,040			-	38	

Drop Stage 7 ball accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 7) as follows:

STAGE 7

Fluid	Top Perf @		9,220'		Prop	Prop Con	Prop, lbs	Time, min
	Rate	Vol, gal	Vol, bbl	Prop				
Slickwater	20	2,500	60				0.7	
15% HCL	80	1,000	24				0.3	
Slickwater	100	124,200	2957				37.0	
TOTAL		127,700	3,040			-	38	

Drop Stage 8 ball accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 8) as follows:

STAGE 8

Fluid	Top Perf @		8,728'		Prop	Prop Con	Prop, lbs	Time, min
	Rate	Vol, gal	Vol, bbl	Prop				
Slickwater	20	2,500	60				0.7	
15% HCL	80	1,000	24				0.3	
Slickwater	100	124,200	2957				37.0	
TOTAL		127,700	3,040			-	38	

Drop Stage 9 ball accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 9) as follows:

STAGE 9

Fluid	Top Perf @		8,234'		Prop	Prop Con	Prop, lbs	Time, min
	Rate	Vol, gal	Vol, bbl	Prop				
Slickwater	20	2,500	60				0.7	
15% HCL	80	1,000	24				0.3	
Slickwater	100	124,200	2957				37.0	
TOTAL		127,700	3,040			-	38	

Drop Stage 10 ball accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 10) as follows:

STAGE 10

Fluid	Top Perf @		7,741'		Prop	Prop Con	Prop, lbs	Time, min
	Rate	Vol, gal	Vol, bbl	Prop				
Slickwater	20	2,500	60				0.7	
15% HCL	80	1,000	24				0.3	
Slickwater	100	124,200	2957				37.0	
TOTAL		127,700	3,040			-	38	

Drop Stage 10 ball accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 11) as follows:

STAGE 11

Fluid	Top Perf @		7,287'		Prop	Prop Con	Prop, lbs	Time, min
	Rate	Vol, gal	Vol, bbl	Prop				
Slickwater	20	2,500	60				0.7	
15% HCL	80	1,000	24				0.3	
Slickwater	100	124,200	2957				37.0	
TOTAL		127,700	3,040			-	38	

Drop Stage 10 ball accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 12) as follows:

STAGE 12

Top Perf @		6,793'					
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop, lbs	Time, min
Slickwater	20	2,500	60				0.7
15% HCL	80	1,000	24				0.3
Slickwater	100	124,200	2957				37.0
TOTAL		127,700	3,040			-	38

Drop Stage 10 ball accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 13) as follows:

STAGE 13

Top Perf @		6,301'					
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop, lbs	Time, min
Slickwater	20	2,500	60				0.7
15% HCL	80	1,000	24				0.3
Slickwater	100	124,200	2957				37.0
TOTAL		127,700	3,040			-	38

Drop Stage 10 ball accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 14) as follows:

STAGE 14

Top Perf @		5,808'					
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop, lbs	Time, min
Slickwater	20	2,500	60				0.7
15% HCL	80	1,000	24				0.3
Slickwater	100	124,200	2957				37.0
TOTAL		127,700	3,040			-	38

Drop Stage 10 ball accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 15) as follows:

Top Perf @		5,314'					
Fluid	Rate	Vol, gal	Vol, bbl	Prop	Prop Con	Prop, lbs	Time, min
Slickwater	20	2,500	60				0.7
15% HCL	80	1,000	24				0.3
Slickwater	100	124,200	2957				37.0
TOTAL		127,700	3,040			-	38

Total Frac Job Volumes: 45,607 bbls - lbs

5) RDMO frac crew. Release all support equipment not needed during tube-up.

Well Service Unit Operations EH&S Focus

WSU operations account for a high percentage of EH&S incidents in Miss completion operations. Please focus on the following prior to and during WSU ops:

- Ensuring that everyone understands they are responsible for their own safety plus the safety of those working around them
 - Ensuring that everyone is familiar with and understands their responsibility regarding Stop Work Authority
 - Ensuring that everyone is familiar with and understands the 10 Rules to Protect Ourselves and our Team
 - Conducting rig inspections and correcting any deficiencies identified
 - Adjusting work pace or shut down ops as weather conditions dictate (heat, cold, storms, etc)
- 6) Set and/or pull test rig anchors as required. MIRU WSU and supporting equipment.
 - 7) Unload and talley +/- 5,090' of 2-7/8" 6.5# L-80 EUE tbg.
 - 8) TIH with ESP as per designed. (Bottom of ESP at +/-5,090')
 - 9) NU 7-1/16" 5k x 2-7/8" 5k production tree.
 - 10) Send flowback reports to flowback distribution list at the following times: 6 am, 1 pm, and 9 pm.

Lease :	JMC 17/8-35-11 1H										
API No:	15-007-24487-01-00										
		Size	Weight	Grade	Thread	Depth (ft)	ID (in)	Drift	Collapse	Burst	BBL/Ft
KB :	16'	9 5/8"	36.0	J-55	LTC	334	8.921	8.765	2020	3520	0.0773
GL:	1,345'	7"	26.0	P-110	BPN	5256	6.276	6.151	6230	9950	0.0383
Legals :											
		4-1/2"	13.5	P-110	BTC	5120' - 12391'	3.920	3.795	10670	12410	0.0149
County:	Barber County										
State:	KS										
Spud:											
RR:		Size	Weight	Grade	Thread	Depth	ID	Drift	Collapse	Burst	BBL/Ft
		2-7/8"	6.5	J-55	EUE	TBD	2.441	2.347	7680	7260	0.00579
Latitude:	36.999397000										
Longitude:	-98.535380000										

Current WBD xx/xx/15 TJH

Key Depths	(ft)
TD	12,391
TVD	4,861
PBTD	12,139
Kick Off Points	4,288
Landing Point	5,400
Radius of Curve	708
EST. top of Cement	
Comments on the Cement Job	

Highlights

Est. BHT	130	F
Est. BHP	1,701	psi
Completed Lat Length	7,135	ft
Fluid in the wellbore	8.33	ppg Water

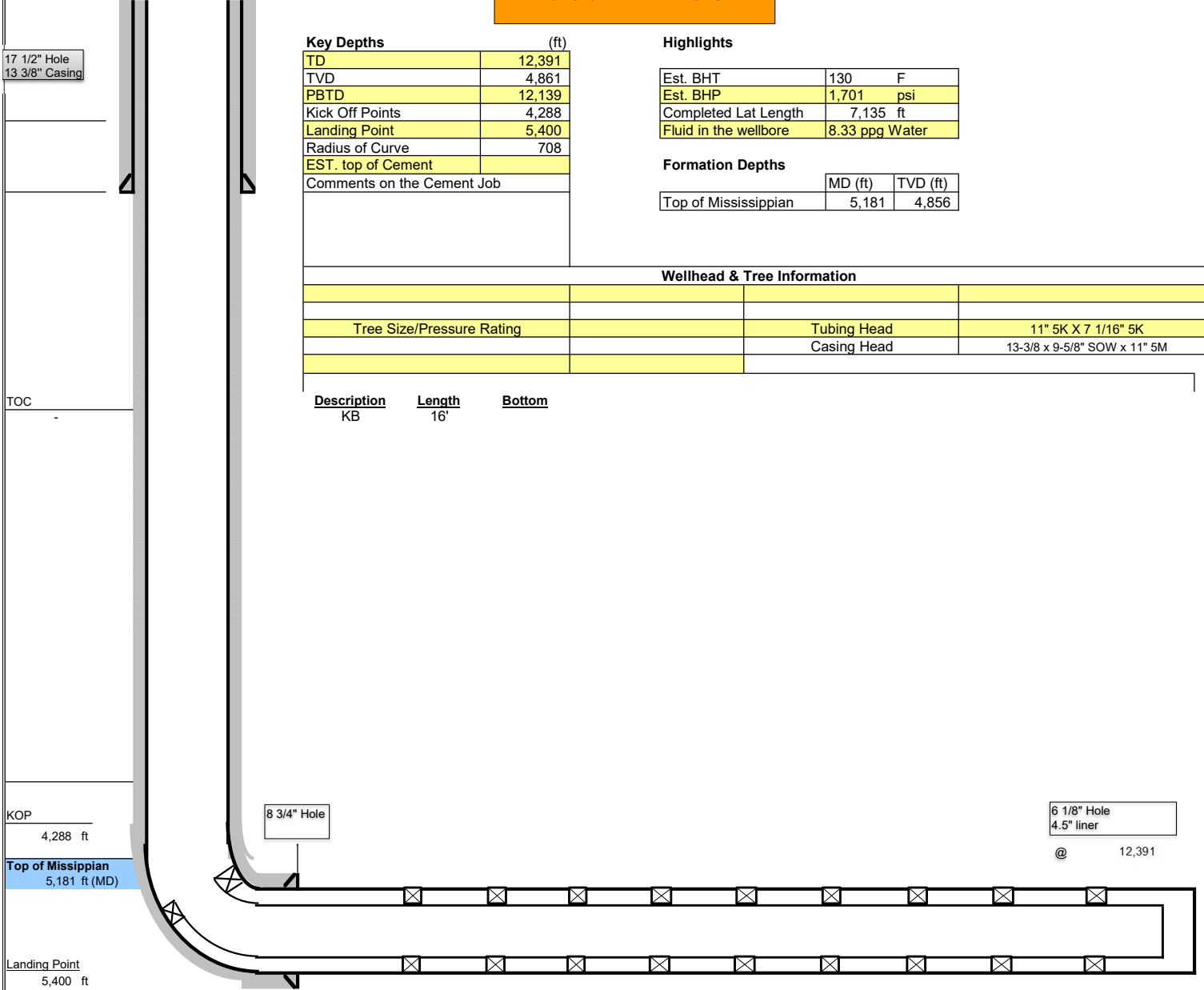
Formation Depths

	MD (ft)	TVD (ft)
Top of Mississippian	5,181	4,856

Wellhead & Tree Information

Tree Size/Pressure Rating	Tubing Head	Casing Head
	11" 5K X 7 1/16" 5K	13-3/8 x 9-5/8" SOW x 11" 5M

Description	Length	Bottom
KB	16'	



17 1/2" Hole
13 3/8" Casing

TOC

KOP
4,288 ft

Top of Mississippian
5,181 ft (MD)

Landing Point
5,400 ft

8 3/4" Hole

6 1/8" Hole
4.5" liner
@ 12,391

TD: 12,391 ft
PBTD: 12,139 ft
TVD: 4,861 ft

	Designed			Actual	Ball	Stage
	Bottom	Length	Top			
TD	12,391'					
P-Sleeve #1	12,155'	3'	12,152'	12,139'		1
Packer #1	11,932'	4'	11,928'	11,893'		
Sleeve #2	11,712'	4'	11,708'	11,686'	2.813"	2
Packer #2	11,488'	4'	11,484'	11,398'		
Sleeve #3	11,268'	4'	11,264'	11,192'	2.875"	3
Packer #3	11,044'	4'	11,040'	10,945'		
Sleeve #4	10,824'	4'	10,820'	10,698'	2.938"	4
Packer #4	10,600'	4'	10,596'	10,452'		
Sleeve #5	10,380'	4'	10,376'	10,205'	3.000"	5
Packer #5	10,156'	4'	10,152'	9,961'		
Sleeve #6	9,936'	4'	9,932'	9,714'	3.063"	6
Packer #6	9,712'	4'	9,707'	9,467'		
Sleeve #7	9,492'	4'	9,488'	9,220'	3.125"	7
Packer #7	9,267'	4'	9,263'	8,974'		
Sleeve #8	9,047'	4'	9,043'	8,728'	3.188"	8
Packer #8	8,823'	4'	8,819'	8,481'		
Sleeve #9	8,603'	4'	8,599'	8,234'	3.250"	9
Packer #9	8,379'	4'	8,375'	7,987'		
Sleeve #10	8,159'	4'	8,155'	7,741'	3.313"	10
Packer #10	7,935'	4'	7,931'	7,493'		
Sleeve #11	7,715'	4'	7,711'	7,287'	3.375"	11
Packer #11	7,491'	4'	7,487'	7,040'		
Sleeve #12	7,271'	4'	7,267'	6,793'	3.438"	12
Packer #12	7,047'	4'	7,043'	6,548'		
Sleeve #13	6,827'	4'	6,823'	6,301'	3.500"	13
Packer #13	6,603'	4'	6,599'	6,054'		
Sleeve #14	6,383'	4'	6,379'	5,808'	3.563"	14
Packer #14	6,159'	4'	6,155'	5,561'		
Sleeve #15	5,939'	4'	5,935'	5,314'	3.625"	15
7" Shoe	5,256'					

Directional Survey Calculations	Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (ft)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
	SHL	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7942	223	4014
BHL	12391	90.59	0.77	4848.62	7603.32	-498.76	7603.32	0.00	341	7826	3432	1854
Mississippian Entry	5181	71.99	52.24	4856.00	399.74	-540.54	399.74	10.76	7545	623	3469	1848
Top OH	5256	78.29	0.56	4874.94	472.23	-539.77	472.23	8.22	7473	695	3469	1847
Bottom OH	12391	90.59	0.77	4848.62	7603.32	-498.76	7603.32	0.00	341	7826	3432	1854

Survey Points	NW Corner XY Coord	X	Y	Surface XY	1989667	121156	m	
							North Line slope	-0.00568
	SW Corner XY Coord	1985651	120931				East Line slope	0.006621
	NE Corner XY Coord	1991024	129090				South Line slope	0.000564
	SE Corner XY Coord	1990970	120934				West Line slope	0.010868

	Measured Depth (ft)	Sub-Sea Incl. (deg)	Vertical Azim. (deg)	True Vert Depth (ft)	Northings (+) Southings (-) (ft)	Eastings (+) Westings (-) (ft)	Vert Section (ft)	DLS deg/100' (deg)	FNL	FSL	FWL	FEL
	137.00	0.79	200.90	137.00	-0.88	-0.34	-0.88	0.58	7943	222	4013	1305
	228.00	0.40	179.19	227.99	-1.79	-0.56	-1.79	0.49	7943	221	4013	1305
	283.00	0.75	194.18	282.99	-2.33	-0.64	-2.33	0.69	7944	220	4013	1305
	350.00	0.40	185.34	349.98	-2.98	-0.77	-2.98	0.54	7945	220	4013	1305
	407.00	1.27	211.14	406.98	-3.72	-1.12	-3.72	1.63	7945	219	4012	1306
	494.00	2.68	240.67	493.93	-5.55	-3.39	-5.55	1.95	7947	217	4010	1308
	582.00	3.43	244.45	581.80	-7.69	-7.56	-7.69	0.88	7949	215	4006	1312
	672.00	6.07	251.57	671.48	-10.35	-14.50	-10.35	3.00	7952	212	3999	1319
	762.00	8.26	254.82	760.78	-13.55	-25.26	-13.55	2.47	7955	209	3988	1330
	853.00	10.64	254.47	850.53	-17.51	-39.66	-17.51	2.62	7959	205	3974	1344
	947.00	12.26	255.35	942.66	-22.36	-57.68	-22.36	1.73	7964	200	3956	1362
	1,037.00	13.93	255.79	1,030.32	-27.44	-77.43	-27.44	1.86	7970	195	3936	1382
	1,129.00	14.07	252.89	1,119.59	-33.45	-98.85	-33.45	0.78	7976	189	3915	1403
	1,217.00	14.20	251.57	1,204.92	-40.01	-119.31	-40.01	0.39	7982	183	3895	1424
	1,308.00	15.30	251.22	1,292.92	-47.40	-141.27	-47.40	1.21	7990	175	3873	1445
	1,399.00	17.63	252.98	1,380.18	-55.30	-165.82	-55.30	2.62	7998	168	3848	1470
	1,495.00	20.31	254.47	1,470.96	-64.02	-195.78	-64.02	2.84	8007	159	3818	1500
	1,590.00	22.29	255.53	1,559.47	-72.94	-229.11	-72.94	2.12	8016	150	3785	1533
	1,686.00	23.03	255.17	1,648.06	-82.29	-264.89	-82.29	0.78	8025	141	3750	1569
	1,781.00	17.45	250.95	1,737.16	-91.70	-296.35	-91.70	6.07	8035	131	3718	1600
	1,877.00	13.85	247.00	1,829.59	-100.90	-320.54	-100.90	3.91	8044	122	3694	1624
	1,971.00	9.80	246.47	1,921.58	-108.49	-338.24	-108.49	4.31	8052	114	3676	1642
	2,066.00	8.66	247.61	2,015.34	-114.44	-352.26	-114.44	1.22	8058	108	3663	1656
	2,160.00	10.07	251.83	2,108.09	-119.70	-366.62	-119.70	1.67	8063	103	3648	1670
	2,254.00	12.04	251.83	2,200.34	-125.32	-383.74	-125.32	2.10	8069	98	3631	1687
	2,348.00	12.48	249.55	2,292.20	-131.93	-402.57	-131.93	0.70	8076	91	3612	1706
	2,442.00	11.12	246.21	2,384.21	-139.13	-420.38	-139.13	1.62	8083	84	3595	1724
	2,537.00	11.43	244.71	2,477.38	-146.85	-437.28	-146.85	0.45	8091	76	3578	1741
	2,631.00	11.47	250.52	2,569.51	-153.94	-454.51	-153.94	1.23	8098	69	3561	1758
	2,725.00	9.76	258.16	2,661.90	-158.70	-471.12	-158.70	2.35	8103	64	3544	1775
	2,819.00	7.03	255.00	2,754.89	-161.82	-484.48	-161.82	2.94	8106	61	3531	1788
	2,913.00	5.67	252.71	2,848.31	-164.69	-494.47	-164.69	1.47	8109	58	3521	1798
Top of Tangent @ 0'	3,007.00	4.75	253.50	2,941.92	-167.17	-502.64	-167.17	0.98	8112	56	3513	1806
	3,102.00	4.57	257.37	3,036.60	-169.12	-510.10	-169.12	0.38	8114	54	3505	1813
	3,195.00	4.79	264.67	3,129.30	-170.29	-517.58	-170.29	0.68	8115	53	3498	1821
	3,290.00	2.81	268.71	3,224.08	-170.71	-523.86	-170.71	2.10	8115	52	3492	1827
	3,384.00	2.73	309.93	3,317.98	-169.33	-527.88	-169.33	2.08	8114	54	3488	1831
Btm of Tangent @ 0'	3,479.00	0.92	305.45	3,412.93	-167.43	-530.24	-167.43	1.91	8112	56	3485	1834
	3,573.00	0.35	320.74	3,506.92	-166.77	-531.03	-166.77	0.63	8111	56	3484	1834
	3,669.00	0.62	319.25	3,602.92	-166.15	-531.56	-166.15	0.28	8111	57	3484	1835
	3,764.00	0.84	309.58	3,697.91	-165.32	-532.43	-165.32	0.26	8110	58	3483	1836
	3,860.00	1.89	317.31	3,793.88	-163.71	-534.05	-163.71	1.11	8108	59	3481	1837
	3,955.00	1.19	261.94	3,888.85	-162.69	-536.08	-162.69	1.64	8107	60	3479	1839
	4,051.00	1.63	210.00	3,984.83	-164.01	-537.75	-164.01	1.35	8109	59	3478	1841
	4,144.00	0.84	201.12	4,077.81	-165.80	-538.66	-165.80	0.87	8111	57	3477	1842
	4,208.00	0.48	183.45	4,141.80	-166.50	-538.85	-166.50	0.64	8111	57	3477	1842
	4,233.00	0.70	186.09	4,166.80	-166.76	-538.87	-166.76	0.89	8112	56	3476	1842
	4,260.00	0.22	349.13	4,193.80	-166.87	-538.90	-166.87	3.38	8112	56	3476	1842
	4,288.00	3.78	357.83	4,221.78	-165.90	-538.94	-165.90	12.72	8111	57	3476	1842
	4,329.00	9.36	356.95	4,262.49	-161.21	-539.17	-161.21	13.61	8106	62	3476	1843
	4,376.00	16.40	359.68	4,308.28	-150.75	-539.41	-150.75	15.03	8096	72	3476	1843

4,424.00	21.27	0.55	4,353.70	-135.26	-539.37	-135.26	10.16	8080	88	3476	1843
4,472.00	25.41	2.93	4,397.76	-116.26	-538.75	-116.26	8.84	8061	107	3476	1842
4,520.00	28.18	3.45	4,440.60	-94.65	-537.55	-94.65	5.79	8039	128	3477	1841
4,567.00	31.30	2.40	4,481.41	-71.37	-536.37	-71.37	6.73	8016	152	3478	1840
4,615.00	34.51	1.35	4,521.70	-45.31	-535.52	-45.31	6.79	7990	178	3479	1840
4,663.00	38.15	0.20	4,560.37	-16.89	-535.15	-16.89	7.71	7962	206	3479	1840
4,711.00	40.09	359.50	4,597.60	13.40	-535.24	13.40	4.15	7931	236	3478	1840
4,758.00	44.22	359.06	4,632.44	44.93	-535.64	44.93	8.81	7900	268	3477	1840
4,806.00	46.59	359.15	4,666.14	79.11	-536.17	79.11	4.94	7866	302	3477	1841
4,853.00	50.77	358.97	4,697.16	114.39	-536.75	114.39	8.90	7830	337	3476	1842
4,902.00	54.02	358.88	4,727.06	153.20	-537.48	153.20	6.63	7792	376	3474	1843
4,949.00	59.78	359.24	4,752.71	192.55	-538.12	192.55	12.27	7752	416	3473	1844
4,997.00	61.01	359.32	4,776.43	234.28	-538.64	234.28	2.57	7710	457	3472	1845
5,044.00	61.54	358.80	4,799.02	275.49	-539.32	275.49	1.49	7669	499	3471	1846
5,092.00	61.89	358.80	4,821.76	317.75	-540.21	317.75	0.73	7627	541	3470	1847
5,122.00	65.27	359.24	4,835.11	344.61	-540.66	344.61	11.34	7600	568	3469	1847
5,139.00	67.96	359.76	4,841.85	360.21	-540.80	360.21	16.07	7585	583	3469	1848
5,188.00	72.66	0.99	4,858.36	406.33	-540.49	406.33	9.88	7538	629	3469	1848
5,219.00	75.34	0.47	4,866.90	436.12	-540.11	436.12	8.79	7509	659	3469	1847
5,272.00	79.56	0.60	4,878.42	487.84	-539.63	487.84	7.97	7457	711	3469	1847
5,288.00	80.92	0.73	4,881.13	503.61	-539.45	503.61	8.54	7441	727	3469	1847
5,304.00	81.98	0.91	4,883.51	519.43	-539.22	519.43	6.72	7425	742	3469	1847
5,319.00	82.86	1.39	4,885.49	534.30	-538.92	534.30	6.67	7410	757	3469	1847
5,336.00	84.97	0.91	4,887.29	551.20	-538.58	551.20	12.73	7394	774	3469	1847
5,351.00	86.68	1.48	4,888.38	566.15	-538.27	566.15	12.01	7379	789	3469	1846
5,366.00	87.91	1.21	4,889.09	581.13	-537.92	581.13	8.39	7364	804	3469	1846
5,384.00	89.49	1.21	4,889.50	599.12	-537.54	599.12	8.78	7346	822	3470	1846
5,400.00	90.42	1.21	4,889.51	615.12	-537.20	615.12	5.81	7330	838	3470	1846
5,431.00	92.53	1.35	4,888.71	646.10	-536.51	646.10	6.82	7299	869	3470	1845
5,463.00	92.88	1.21	4,887.20	678.05	-535.79	678.05	1.18	7267	901	3470	1845
5,494.00	91.38	0.16	4,886.05	709.03	-535.42	709.03	5.91	7236	932	3470	1845
5,541.00	90.68	359.41	4,885.21	756.02	-535.60	756.02	2.18	7189	979	3470	1845
5,588.00	91.03	359.50	4,884.50	803.01	-536.05	803.01	0.77	7142	1026	3469	1846
5,635.00	91.60	359.19	4,883.43	850.00	-536.58	850.00	1.38	7095	1073	3468	1847
5,682.00	89.54	359.46	4,882.96	896.99	-537.14	896.99	4.42	7048	1120	3467	1848
5,729.00	89.63	358.80	4,883.30	943.98	-537.85	943.98	1.42	7001	1167	3465	1849
5,776.00	89.89	359.06	4,883.49	990.97	-538.73	990.97	0.78	6954	1214	3464	1850
5,870.00	90.90	358.36	4,882.85	1,084.95	-540.85	1,084.95	1.31	6860	1308	3461	1852
5,965.00	89.85	359.63	4,882.23	1,179.93	-542.51	1,179.93	1.73	6765	1403	3458	1855
6,058.00	89.76	359.76	4,882.54	1,272.92	-543.01	1,272.92	0.17	6672	1496	3457	1856
6,152.00	90.59	359.63	4,882.25	1,366.92	-543.51	1,366.92	0.89	6578	1590	3455	1857
6,246.00	90.33	359.06	4,881.50	1,460.91	-544.58	1,460.91	0.67	6484	1684	3453	1859
6,340.00	90.33	358.75	4,880.96	1,554.89	-546.38	1,554.89	0.33	6390	1778	3450	1861
6,433.00	90.24	2.00	4,880.50	1,647.88	-545.77	1,647.88	3.50	6297	1871	3450	1861
6,527.00	90.02	2.36	4,880.28	1,741.81	-542.19	1,741.81	0.45	6203	1965	3452	1858
6,621.00	90.77	2.22	4,879.63	1,835.73	-538.44	1,835.73	0.81	6109	2059	3455	1855
6,716.00	91.25	1.83	4,877.96	1,930.66	-535.08	1,930.66	0.65	6014	2154	3457	1852
6,809.00	91.30	1.65	4,875.89	2,023.59	-532.26	2,023.59	0.20	5921	2247	3459	1850
6,903.00	91.16	1.13	4,873.87	2,117.54	-529.98	2,117.54	0.57	5827	2341	3461	1848
6,997.00	92.09	1.26	4,871.21	2,211.48	-528.02	2,211.48	1.00	5733	2435	3462	1847
7,090.00	91.74	0.38	4,868.10	2,304.42	-526.69	2,304.42	1.02	5640	2527	3462	1846
7,184.00	90.11	359.46	4,866.58	2,398.40	-526.82	2,398.40	1.99	5546	2621	3461	1847
7,278.00	90.29	358.58	4,866.25	2,492.39	-528.43	2,492.39	0.96	5452	2715	3458	1849
7,373.00	90.20	358.36	4,865.85	2,587.35	-530.96	2,587.35	0.25	5357	2810	3454	1853
7,466.00	89.58	357.48	4,866.03	2,680.29	-534.34	2,680.29	1.16	5264	2903	3450	1857
7,561.00	90.29	359.10	4,866.13	2,775.24	-537.17	2,775.24	1.86	5170	2998	3446	1860
7,654.00	90.55	0.16	4,865.45	2,868.24	-537.77	2,868.24	1.17	5077	3091	3445	1861
7,749.00	89.49	359.37	4,865.42	2,963.23	-538.16	2,963.23	1.39	4982	3186	3443	1862
7,844.00	89.23	0.91	4,866.48	3,058.23	-537.93	3,058.23	1.64	4887	3281	3442	1863
7,937.00	88.92	359.68	4,867.98	3,151.21	-537.45	3,151.21	1.36	4794	3374	3442	1863
8,031.00	90.15	1.04	4,868.74	3,245.20	-536.86	3,245.20	1.95	4700	3468	3441	1863
8,125.00	89.76	359.28	4,868.82	3,339.20	-536.60	3,339.20	1.92	4606	3562	3441	1863
8,218.00	91.38	359.41	4,867.89	3,432.18	-537.66	3,432.18	1.75	4513	3655	3439	1865
8,312.00	92.48	358.40	4,864.73	3,526.11	-539.46	3,526.11	1.59	4419	3749	3436	1867
8,402.00	89.80	359.37	4,862.94	3,616.07	-541.21	3,616.07	3.17	4329	3839	3433	1870
8,493.00	89.10	358.62	4,863.81	3,707.05	-542.80	3,707.05	1.13	4238	3930	3430	1872
8,582.00	88.70	0.51	4,865.52	3,796.02	-543.48	3,796.02	2.17	4149	4019	3429	1873
8,627.00	88.04	1.17	4,866.80	3,841.00	-542.82	3,841.00	2.07	4104	4064	3429	1873
8,673.00	89.85	1.74	4,867.65	3,886.97	-541.65	3,886.97	4.13	4058	4110	3430	1872

8,763.00	91.21	1.17	4,866.81	3,976.94	-539.37	3,976.94	1.64	3968	4200	3431	1870
8,851.00	92.13	0.03	4,864.25	4,064.90	-538.45	4,064.90	1.66	3880	4288	3431	1870
8,941.00	91.08	0.20	4,861.73	4,154.86	-538.27	4,154.86	1.18	3790	4378	3430	1870
9,032.00	91.74	0.29	4,859.49	4,245.83	-537.88	4,245.83	0.73	3699	4469	3430	1870
9,041.00	91.60	359.46	4,859.23	4,254.83	-537.90	4,254.83	9.35	3690	4478	3429	1871
9,051.00	91.74	359.90	4,858.94	4,264.82	-537.95	4,264.82	4.62	3680	4488	3429	1871
9,122.00	89.80	0.69	4,857.98	4,335.81	-537.59	4,335.81	2.95	3609	4559	3429	1871
9,173.00	86.64	0.03	4,859.57	4,386.78	-537.27	4,386.78	6.33	3558	4610	3429	1871
9,211.00	87.12	0.64	4,861.63	4,424.72	-537.04	4,424.72	2.04	3520	4648	3428	1871
9,241.00	89.10	2.22	4,862.62	4,454.69	-536.30	4,454.69	8.44	3490	4678	3429	1870
9,272.00	90.29	2.84	4,862.79	4,485.66	-534.93	4,485.66	4.33	3459	4709	3430	1869
9,278.00	90.33	2.97	4,862.76	4,491.65	-534.62	4,491.65	2.27	3453	4715	3430	1869
9,302.00	90.15	2.62	4,862.65	4,515.62	-533.45	4,515.62	1.64	3429	4739	3431	1868
9,348.00	91.08	2.49	4,862.16	4,561.58	-531.40	4,561.58	2.04	3383	4785	3433	1866
9,394.00	91.60	2.53	4,861.09	4,607.52	-529.39	4,607.52	1.13	3337	4831	3434	1864
9,482.00	91.69	1.57	4,858.56	4,695.42	-526.24	4,695.42	1.10	3249	4918	3436	1862
9,573.00	90.42	1.83	4,856.88	4,786.37	-523.54	4,786.37	1.42	3158	5009	3438	1860
9,664.00	89.63	0.16	4,856.84	4,877.35	-521.96	4,877.35	2.03	3067	5100	3439	1859
9,754.00	89.63	359.50	4,857.43	4,967.35	-522.23	4,967.35	0.73	2977	5190	3437	1860
9,844.00	89.76	359.10	4,857.90	5,057.34	-523.33	5,057.34	0.47	2887	5280	3435	1861
9,934.00	91.34	0.38	4,857.04	5,147.33	-523.74	5,147.33	2.26	2797	5370	3434	1862
10,023.00	91.74	359.50	4,854.65	5,236.30	-523.83	5,236.30	1.09	2708	5459	3433	1863
10,083.00	92.00	358.80	4,852.69	5,296.26	-524.72	5,296.26	1.24	2648	5519	3431	1864
10,114.00	92.57	358.66	4,851.45	5,327.22	-525.41	5,327.22	1.89	2617	5550	3430	1865
10,158.00	91.60	358.66	4,849.85	5,371.18	-526.44	5,371.18	2.20	2574	5594	3429	1866
10,208.00	91.82	359.46	4,848.36	5,421.15	-527.26	5,421.15	1.66	2524	5644	3427	1868
10,233.00	90.90	0.25	4,847.77	5,446.15	-527.32	5,446.15	4.85	2499	5669	3427	1868
10,302.00	90.99	0.47	4,846.63	5,515.13	-526.89	5,515.13	0.34	2430	5738	3427	1868
10,397.00	91.12	359.76	4,844.88	5,610.12	-526.69	5,610.12	0.76	2335	5833	3426	1868
10,490.00	90.59	0.11	4,843.49	5,703.11	-526.80	5,703.11	0.68	2242	5926	3425	1869
10,584.00	91.52	0.20	4,841.76	5,797.09	-526.55	5,797.09	0.99	2148	6020	3424	1869
10,679.00	90.95	359.98	4,839.72	5,892.07	-526.40	5,892.07	0.64	2053	6115	3423	1870
10,773.00	89.89	1.52	4,839.03	5,986.05	-525.17	5,986.05	1.99	1959	6209	3423	1869
10,820.00	90.11	1.39	4,839.03	6,033.04	-523.97	6,033.04	0.54	1912	6256	3424	1868
10,868.00	90.42	1.70	4,838.80	6,081.02	-522.68	6,081.02	0.91	1864	6304	3425	1867
10,915.00	89.45	2.00	4,838.86	6,127.99	-521.16	6,127.99	2.16	1817	6351	3426	1866
10,962.00	88.97	1.61	4,839.51	6,174.97	-519.68	6,174.97	1.32	1770	6398	3427	1865
11,009.00	89.76	1.35	4,840.03	6,221.95	-518.47	6,221.95	1.77	1723	6445	3427	1864
11,056.00	90.11	1.83	4,840.08	6,268.93	-517.16	6,268.93	1.26	1676	6492	3428	1863
11,103.00	88.26	2.18	4,840.75	6,315.89	-515.52	6,315.89	4.01	1629	6539	3429	1862
11,149.00	88.70	2.22	4,841.97	6,361.84	-513.75	6,361.84	0.96	1583	6585	3431	1860
11,196.00	88.57	1.87	4,843.09	6,408.80	-512.08	6,408.80	0.79	1536	6632	3432	1859
11,242.00	87.56	2.00	4,844.64	6,454.75	-510.53	6,454.75	2.21	1490	6678	3433	1858
11,289.00	87.78	1.92	4,846.55	6,501.68	-508.92	6,501.68	0.50	1443	6725	3434	1856
11,336.00	88.26	1.92	4,848.18	6,548.63	-507.35	6,548.63	1.02	1396	6772	3435	1855
11,383.00	88.88	2.00	4,849.35	6,595.58	-505.74	6,595.58	1.33	1349	6819	3436	1854
11,430.00	89.14	1.26	4,850.16	6,642.56	-504.40	6,642.56	1.67	1302	6866	3437	1853
11,477.00	89.76	1.65	4,850.61	6,689.54	-503.21	6,689.54	1.56	1255	6913	3438	1852
11,524.00	88.00	0.69	4,851.53	6,736.52	-502.25	6,736.52	4.27	1208	6960	3438	1851
11,571.00	88.48	0.69	4,852.97	6,783.49	-501.68	6,783.49	1.02	1161	7007	3438	1851
11,617.00	88.31	0.42	4,854.26	6,829.47	-501.24	6,829.47	0.69	1115	7052	3438	1851
11,664.00	88.88	0.33	4,855.41	6,876.46	-500.93	6,876.46	1.23	1068	7099	3438	1851
11,711.00	89.10	0.42	4,856.24	6,923.45	-500.62	6,923.45	0.51	1021	7146	3438	1851
11,758.00	89.49	359.72	4,856.82	6,970.44	-500.56	6,970.44	1.70	974	7193	3437	1851
11,805.00	90.02	0.33	4,857.02	7,017.44	-500.54	7,017.44	1.72	927	7240	3437	1851
11,852.00	90.55	0.91	4,856.79	7,064.44	-500.04	7,064.44	1.67	880	7287	3437	1851
11,899.00	89.58	359.90	4,856.74	7,111.44	-499.70	7,111.44	2.98	833	7334	3437	1851
11,946.00	90.07	0.07	4,856.88	7,158.44	-499.72	7,158.44	1.10	786	7381	3436	1852
11,993.00	90.20	359.32	4,856.77	7,205.44	-499.97	7,205.44	1.62	739	7428	3435	1852



Survey Report

Service Company: SB Directional Services

Location: SEC 17-T35S-R11W

Well: JMC 17-8-35-11 1H

Rig: Atlas 3

API or UWI: 15007244870000

Job Number: 12231357

State: KS

Operating Company: Mach Resources

County: Barber

Magnetic Declination: 4.07

Country: United States

Proposed Azimuth: 0.00

Comment:

North Reference: GRID

Latitude: 36.99939585

Longitude: -98.53537967

Tie-In Data

MD	Inclination	Azimuth	TVD	NS	EW
0.00	0.00	0.00	0.00	0.00	0.00

Survey Data

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
137.00	0.79	200.90	137.00	-0.88	-0.34	200.90	0.94	-0.88	0.58
228.00	0.40	179.19	227.99	-1.79	-0.56	197.30	1.87	-1.79	0.49
283.00	0.75	194.18	282.99	-2.33	-0.64	195.42	2.41	-2.33	0.69
350.00	0.40	185.34	349.98	-2.98	-0.77	194.48	3.08	-2.98	0.54
407.00	1.27	211.14	406.98	-3.72	-1.12	196.68	3.89	-3.72	1.63
494.00	2.68	240.67	493.93	-5.55	-3.39	211.42	6.50	-5.55	1.95
582.00	3.43	244.45	581.80	-7.69	-7.56	224.50	10.78	-7.69	0.88
672.00	6.07	251.57	671.48	-10.35	-14.50	234.47	17.82	-10.35	3.00
762.00	8.26	254.82	760.78	-13.55	-25.26	241.78	28.66	-13.55	2.47
853.00	10.64	254.47	850.53	-17.51	-39.66	246.17	43.36	-17.51	2.62
947.00	12.26	255.35	942.66	-22.36	-57.68	248.81	61.86	-22.36	1.73
1037.00	13.93	255.79	1030.32	-27.44	-77.43	250.49	82.15	-27.44	1.86
1129.00	14.07	252.89	1119.59	-33.45	-98.85	251.31	104.36	-33.45	0.78
1217.00	14.20	251.57	1204.92	-40.01	-119.31	251.46	125.84	-40.01	0.39
1308.00	15.30	251.22	1292.92	-47.40	-141.27	251.45	149.01	-47.40	1.21
1399.00	17.63	252.98	1380.18	-55.30	-165.82	251.56	174.80	-55.30	2.62
1495.00	20.31	254.47	1470.96	-64.02	-195.78	251.89	205.98	-64.02	2.84
1590.00	22.29	255.53	1559.47	-72.94	-229.11	252.34	240.44	-72.94	2.12
1686.00	23.03	255.17	1648.06	-82.29	-264.89	252.74	277.38	-82.29	0.78
1781.00	17.45	250.95	1737.16	-91.70	-296.35	252.81	310.21	-91.70	6.07
1877.00	13.85	247.00	1829.59	-100.90	-320.54	252.53	336.04	-100.90	3.91
1971.00	9.80	246.47	1921.58	-108.49	-338.24	252.22	355.21	-108.49	4.31
2066.00	8.66	247.61	2015.34	-114.44	-352.26	252.00	370.39	-114.44	1.22
2160.00	10.07	251.83	2108.09	-119.70	-366.62	251.92	385.66	-119.70	1.67
2254.00	12.04	251.83	2200.34	-125.32	-383.74	251.91	403.69	-125.32	2.10

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
2348.00	12.48	249.55	2292.20	-131.93	-402.57	251.86	423.64	-131.93	0.70
2442.00	11.12	246.21	2384.21	-139.13	-420.38	251.69	442.81	-139.13	1.62
2537.00	11.43	244.71	2477.38	-146.85	-437.28	251.44	461.28	-146.85	0.45
2631.00	11.47	250.52	2569.51	-153.94	-454.51	251.29	479.87	-153.94	1.23
2725.00	9.76	258.16	2661.90	-158.70	-471.12	251.38	497.13	-158.70	2.35
2819.00	7.03	255.00	2754.89	-161.82	-484.48	251.53	510.79	-161.82	2.94
2913.00	5.67	252.71	2848.31	-164.69	-494.47	251.58	521.17	-164.69	1.47
3007.00	4.75	253.50	2941.92	-167.17	-502.64	251.60	529.71	-167.17	0.98
3102.00	4.57	257.37	3036.60	-169.12	-510.10	251.66	537.40	-169.12	0.38
3195.00	4.79	264.67	3129.30	-170.29	-517.58	251.79	544.88	-170.29	0.68
3290.00	2.81	268.71	3224.08	-170.71	-523.86	251.95	550.97	-170.71	2.10
3384.00	2.73	309.93	3317.98	-169.33	-527.88	252.22	554.37	-169.33	2.08
3479.00	0.92	305.45	3412.93	-167.43	-530.24	252.48	556.04	-167.43	1.91
3573.00	0.35	320.74	3506.92	-166.77	-531.03	252.57	556.60	-166.77	0.63
3669.00	0.62	319.25	3602.92	-166.15	-531.56	252.64	556.92	-166.15	0.28
3764.00	0.84	309.58	3697.91	-165.32	-532.43	252.75	557.50	-165.32	0.26
3860.00	1.89	317.31	3793.88	-163.71	-534.05	252.96	558.57	-163.71	1.11
3955.00	1.19	261.94	3888.85	-162.69	-536.08	253.12	560.23	-162.69	1.64
4051.00	1.63	210.00	3984.83	-164.01	-537.75	253.04	562.21	-164.01	1.35
4144.00	0.84	201.12	4077.81	-165.80	-538.66	252.89	563.60	-165.80	0.87
4208.00	0.48	183.45	4141.80	-166.50	-538.85	252.83	563.98	-166.50	0.64
4233.00	0.70	186.09	4166.80	-166.76	-538.87	252.80	564.08	-166.76	0.89
4260.00	0.22	349.13	4193.80	-166.87	-538.90	252.79	564.14	-166.87	3.38
4288.00	3.78	357.83	4221.78	-165.90	-538.94	252.89	563.90	-165.90	12.72
4329.00	9.36	356.95	4262.49	-161.21	-539.17	253.35	562.76	-161.21	13.61
4376.00	16.40	359.68	4308.28	-150.75	-539.41	254.39	560.08	-150.75	15.03
4424.00	21.27	0.55	4353.70	-135.26	-539.37	255.92	556.07	-135.26	10.16
4472.00	25.41	2.93	4397.76	-116.26	-538.75	257.82	551.16	-116.26	8.84
4520.00	28.18	3.45	4440.60	-94.65	-537.55	260.01	545.82	-94.65	5.79
4567.00	31.30	2.40	4481.41	-71.37	-536.37	262.42	541.09	-71.37	6.73
4615.00	34.51	1.35	4521.70	-45.31	-535.52	265.16	537.44	-45.31	6.79
4663.00	38.15	0.20	4560.37	-16.89	-535.15	268.19	535.42	-16.89	7.71
4711.00	40.09	359.50	4597.60	13.40	-535.24	271.43	535.40	13.40	4.15
4758.00	44.22	359.06	4632.44	44.93	-535.64	274.79	537.52	44.93	8.81
4806.00	46.59	359.15	4666.14	79.11	-536.17	278.39	541.97	79.11	4.94
4853.00	50.77	358.97	4697.16	114.39	-536.75	282.03	548.80	114.39	8.90
4902.00	54.02	358.88	4727.06	153.20	-537.48	285.91	558.89	153.20	6.63
4949.00	59.78	359.24	4752.71	192.55	-538.12	289.69	571.53	192.55	12.27
4997.00	61.01	359.32	4776.43	234.28	-538.64	293.51	587.39	234.28	2.57
5044.00	61.54	358.80	4799.02	275.49	-539.32	297.06	605.61	275.49	1.49
5092.00	61.89	358.80	4821.76	317.75	-540.21	300.46	626.73	317.75	0.73
5122.00	65.27	359.24	4835.11	344.61	-540.66	302.51	641.15	344.61	11.34
5139.00	67.96	359.76	4841.85	360.21	-540.80	303.67	649.78	360.21	16.07
5188.00	72.66	0.99	4858.36	406.33	-540.49	306.94	676.19	406.33	9.88
5219.00	75.34	0.47	4866.90	436.12	-540.11	308.92	694.21	436.12	8.79
5272.00	79.56	0.60	4878.42	487.84	-539.63	312.11	727.45	487.84	7.97
5288.00	80.92	0.73	4881.13	503.61	-539.45	313.03	737.99	503.61	8.54
5304.00	81.98	0.91	4883.51	519.43	-539.22	313.93	748.71	519.43	6.72
5319.00	82.86	1.39	4885.49	534.30	-538.92	314.75	758.89	534.30	6.67
5336.00	84.97	0.91	4887.29	551.20	-538.58	315.66	770.64	551.20	12.73
5351.00	86.68	1.48	4888.38	566.15	-538.27	316.45	781.19	566.15	12.01
5366.00	87.91	1.21	4889.09	581.13	-537.92	317.21	791.88	581.13	8.39
5384.00	89.49	1.21	4889.50	599.12	-537.54	318.10	804.92	599.12	8.78

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
5400.00	90.42	1.21	4889.51	615.12	-537.20	318.87	816.67	615.12	5.81
5431.00	92.53	1.35	4888.71	646.10	-536.51	320.29	839.81	646.10	6.82
5463.00	92.88	1.21	4887.20	678.05	-535.79	321.68	864.19	678.05	1.18
5494.00	91.38	0.16	4886.05	709.03	-535.42	322.94	888.48	709.03	5.91
5541.00	90.68	359.41	4885.21	756.02	-535.60	324.68	926.52	756.02	2.18
5588.00	91.03	359.50	4884.50	803.01	-536.05	326.28	965.49	803.01	0.77
5635.00	91.60	359.19	4883.43	850.00	-536.58	327.74	1005.20	850.00	1.38
5682.00	89.54	359.46	4882.96	896.99	-537.14	329.09	1045.52	896.99	4.42
5729.00	89.63	358.80	4883.30	943.98	-537.85	330.33	1086.46	943.98	1.42
5776.00	89.89	359.06	4883.49	990.97	-538.73	331.47	1127.94	990.97	0.78
5870.00	90.90	358.36	4882.85	1084.95	-540.85	333.50	1212.28	1084.95	1.31
5965.00	89.85	359.63	4882.23	1179.93	-542.51	335.31	1298.67	1179.93	1.73
6058.00	89.76	359.76	4882.54	1272.92	-543.01	336.90	1383.90	1272.92	0.17
6152.00	90.59	359.63	4882.25	1366.92	-543.51	338.32	1471.01	1366.92	0.89
6246.00	90.33	359.06	4881.50	1460.91	-544.58	339.56	1559.11	1460.91	0.67
6340.00	90.33	358.75	4880.96	1554.89	-546.38	340.64	1648.10	1554.89	0.33
6433.00	90.24	2.00	4880.50	1647.88	-545.77	341.68	1735.90	1647.88	3.50
6527.00	90.02	2.36	4880.28	1741.81	-542.19	342.71	1824.25	1741.81	0.45
6621.00	90.77	2.22	4879.63	1835.73	-538.44	343.65	1913.07	1835.73	0.81
6716.00	91.25	1.83	4877.96	1930.66	-535.08	344.51	2003.43	1930.66	0.65
6809.00	91.30	1.65	4875.89	2023.59	-532.26	345.26	2092.42	2023.59	0.20
6903.00	91.16	1.13	4873.87	2117.54	-529.98	345.95	2182.85	2117.54	0.57
6997.00	92.09	1.26	4871.21	2211.48	-528.02	346.57	2273.64	2211.48	1.00
7090.00	91.74	0.38	4868.10	2304.42	-526.69	347.13	2363.84	2304.42	1.02
7184.00	90.11	359.46	4866.58	2398.40	-526.82	347.61	2455.58	2398.40	1.99
7278.00	90.29	358.58	4866.25	2492.39	-528.43	348.03	2547.79	2492.39	0.96
7373.00	90.20	358.36	4865.85	2587.35	-530.96	348.40	2641.27	2587.35	0.25
7466.00	89.58	357.48	4866.03	2680.29	-534.34	348.73	2733.03	2680.29	1.16
7561.00	90.29	359.10	4866.13	2775.24	-537.17	349.05	2826.75	2775.24	1.86
7654.00	90.55	0.16	4865.45	2868.24	-537.77	349.38	2918.22	2868.24	1.17
7749.00	89.49	359.37	4865.42	2963.23	-538.16	349.71	3011.71	2963.23	1.39
7844.00	89.23	0.91	4866.48	3058.23	-537.93	350.02	3105.18	3058.23	1.64
7937.00	88.92	359.68	4867.98	3151.21	-537.45	350.32	3196.71	3151.21	1.36
8031.00	90.15	1.04	4868.74	3245.20	-536.86	350.61	3289.31	3245.20	1.95
8125.00	89.76	359.28	4868.82	3339.20	-536.60	350.87	3382.04	3339.20	1.92
8218.00	91.38	359.41	4867.89	3432.18	-537.66	351.10	3474.04	3432.18	1.75
8312.00	92.48	358.40	4864.73	3526.11	-539.46	351.30	3567.14	3526.11	1.59
8402.00	89.80	359.37	4862.94	3616.07	-541.21	351.49	3656.34	3616.07	3.17
8493.00	89.10	358.62	4863.81	3707.05	-542.80	351.67	3746.58	3707.05	1.13
8582.00	88.70	0.51	4865.52	3796.02	-543.48	351.85	3834.73	3796.02	2.17
8627.00	88.04	1.17	4866.80	3841.00	-542.82	351.96	3879.17	3841.00	2.07
8673.00	89.85	1.74	4867.65	3886.97	-541.65	352.07	3924.53	3886.97	4.13
8763.00	91.21	1.17	4866.81	3976.94	-539.37	352.28	4013.35	3976.94	1.64
8851.00	92.13	0.03	4864.25	4064.90	-538.45	352.45	4100.40	4064.90	1.66
8941.00	91.08	0.20	4861.73	4154.86	-538.27	352.62	4189.58	4154.86	1.18
9032.00	91.74	0.29	4859.49	4245.83	-537.88	352.78	4279.76	4245.83	0.73
9041.00	91.60	359.46	4859.23	4254.83	-537.90	352.79	4288.69	4254.83	9.35
9051.00	91.74	359.90	4858.94	4264.82	-537.95	352.81	4298.62	4264.82	4.62
9122.00	89.80	0.69	4857.98	4335.81	-537.59	352.93	4369.01	4335.81	2.95
9173.00	86.64	0.03	4859.57	4386.78	-537.27	353.02	4419.56	4386.78	6.33
9211.00	87.12	0.64	4861.63	4424.72	-537.04	353.08	4457.19	4424.72	2.04
9241.00	89.10	2.22	4862.62	4454.69	-536.30	353.14	4486.86	4454.69	8.44
9272.00	90.29	2.84	4862.79	4485.66	-534.93	353.20	4517.44	4485.66	4.33

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
9278.00	90.33	2.97	4862.76	4491.65	-534.62	353.21	4523.36	4491.65	2.27
9302.00	90.15	2.62	4862.65	4515.62	-533.45	353.26	4547.02	4515.62	1.64
9348.00	91.08	2.49	4862.16	4561.58	-531.40	353.36	4592.42	4561.58	2.04
9394.00	91.60	2.53	4861.09	4607.52	-529.39	353.45	4637.83	4607.52	1.13
9482.00	91.69	1.57	4858.56	4695.42	-526.24	353.61	4724.82	4695.42	1.10
9573.00	90.42	1.83	4856.88	4786.37	-523.54	353.76	4814.92	4786.37	1.42
9664.00	89.63	0.16	4856.84	4877.35	-521.96	353.89	4905.20	4877.35	2.03
9754.00	89.63	359.50	4857.43	4967.35	-522.23	354.00	4994.72	4967.35	0.73
9844.00	89.76	359.10	4857.90	5057.34	-523.33	354.09	5084.34	5057.34	0.47
9934.00	91.34	0.38	4857.04	5147.33	-523.74	354.19	5173.91	5147.33	2.26
10023.00	91.74	359.50	4854.65	5236.30	-523.83	354.29	5262.43	5236.30	1.09
10083.00	92.00	358.80	4852.69	5296.26	-524.72	354.34	5322.19	5296.26	1.24
10114.00	92.57	358.66	4851.45	5327.22	-525.41	354.37	5353.07	5327.22	1.89
10158.00	91.60	358.66	4849.85	5371.18	-526.44	354.40	5396.92	5371.18	2.20
10208.00	91.82	359.46	4848.36	5421.15	-527.26	354.44	5446.73	5421.15	1.66
10233.00	90.90	0.25	4847.77	5446.15	-527.32	354.47	5471.61	5446.15	4.85
10302.00	90.99	0.47	4846.63	5515.13	-526.89	354.54	5540.25	5515.13	0.34
10397.00	91.12	359.76	4844.88	5610.12	-526.69	354.64	5634.79	5610.12	0.76
10490.00	90.59	0.11	4843.49	5703.11	-526.80	354.72	5727.39	5703.11	0.68
10584.00	91.52	0.20	4841.76	5797.09	-526.55	354.81	5820.95	5797.09	0.99
10679.00	90.95	359.98	4839.72	5892.07	-526.40	354.89	5915.53	5892.07	0.64
10773.00	89.89	1.52	4839.03	5986.05	-525.17	354.99	6009.04	5986.05	1.99
10820.00	90.11	1.39	4839.03	6033.04	-523.97	355.04	6055.75	6033.04	0.54
10868.00	90.42	1.70	4838.80	6081.02	-522.68	355.09	6103.44	6081.02	0.91
10915.00	89.45	2.00	4838.86	6127.99	-521.16	355.14	6150.12	6127.99	2.16
10962.00	88.97	1.61	4839.51	6174.97	-519.68	355.19	6196.80	6174.97	1.32
11009.00	89.76	1.35	4840.03	6221.95	-518.47	355.24	6243.51	6221.95	1.77
11056.00	90.11	1.83	4840.08	6268.93	-517.16	355.28	6290.22	6268.93	1.26
11103.00	88.26	2.18	4840.75	6315.89	-515.52	355.33	6336.90	6315.89	4.01
11149.00	88.70	2.22	4841.97	6361.84	-513.75	355.38	6382.55	6361.84	0.96
11196.00	88.57	1.87	4843.09	6408.80	-512.08	355.43	6429.22	6408.80	0.79
11242.00	87.56	2.00	4844.64	6454.75	-510.53	355.48	6474.90	6454.75	2.21
11289.00	87.78	1.92	4846.55	6501.68	-508.92	355.52	6521.57	6501.68	0.50
11336.00	88.26	1.92	4848.18	6548.63	-507.35	355.57	6568.25	6548.63	1.02
11383.00	88.88	2.00	4849.35	6595.58	-505.74	355.62	6614.94	6595.58	1.33
11430.00	89.14	1.26	4850.16	6642.56	-504.40	355.66	6661.68	6642.56	1.67
11477.00	89.76	1.65	4850.61	6689.54	-503.21	355.70	6708.44	6689.54	1.56
11524.00	88.00	0.69	4851.53	6736.52	-502.25	355.74	6755.21	6736.52	4.27
11571.00	88.48	0.69	4852.97	6783.49	-501.68	355.77	6802.02	6783.49	1.02
11617.00	88.31	0.42	4854.26	6829.47	-501.24	355.80	6847.84	6829.47	0.69
11664.00	88.88	0.33	4855.41	6876.46	-500.93	355.83	6894.68	6876.46	1.23
11711.00	89.10	0.42	4856.24	6923.45	-500.62	355.86	6941.52	6923.45	0.51
11758.00	89.49	359.72	4856.82	6970.44	-500.56	355.89	6988.39	6970.44	1.70
11805.00	90.02	0.33	4857.02	7017.44	-500.54	355.92	7035.27	7017.44	1.72
11852.00	90.55	0.91	4856.79	7064.44	-500.04	355.95	7082.11	7064.44	1.67
11899.00	89.58	359.90	4856.74	7111.44	-499.70	355.98	7128.97	7111.44	2.98
11946.00	90.07	0.07	4856.88	7158.44	-499.72	356.01	7175.86	7158.44	1.10
11993.00	90.20	359.32	4856.77	7205.44	-499.97	356.03	7222.76	7205.44	1.62
12040.00	90.86	359.37	4856.33	7252.43	-500.50	356.05	7269.68	7252.43	1.41
12086.00	91.52	359.90	4855.38	7298.42	-500.80	356.07	7315.58	7298.42	1.84
12118.00	91.87	359.85	4854.43	7330.40	-500.87	356.09	7347.50	7330.40	1.10
12180.00	91.34	0.07	4852.70	7392.38	-500.91	356.12	7409.33	7392.38	0.93
12227.00	91.78	0.47	4851.42	7439.36	-500.69	356.15	7456.19	7439.36	1.26

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
12334.00	90.59	0.77	4849.20	7546.33	-499.53	356.21	7562.85	7546.33	1.15

Projected Survey

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
12391.00	90.59	0.77	4848.62	7603.32	-498.76	356.25	7619.66	7603.32	0.00

BCE-Mach III LLC
 JMC 17/8-35-11 1H
 Barber
 12/23/2023
 Surface

Ticket # P-6408



COMPANY BCE-Mach III LLC	PROJECT NUMBER P-6408	AFE/WORK ORDER	DATE 12/23/2023
CONTRACTOR Spinnaker Oil	Owner Same	LEGAL DESCRIPTION Sec 17, T35S, R11W	API 15-007-24487
LEASE & WELL # JMC 17/8-35-11 1H	COUNTY Barber	STATE KS	MILEAGE 280
DIRECTIONS			

From Kiowa, KS - Go South 1 mile to E0010 Rd. Turn West and go 2.5 miles. North into. Atlas 3

Pumping Services	<input checked="" type="checkbox"/> Surface	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Long String	<input type="checkbox"/> Plug Back			
	<input type="checkbox"/> Squeeze	<input type="checkbox"/> Acid	<input type="checkbox"/> PTA	<input type="checkbox"/> Other			
	Casing Size 9 5/8	Casing Weight 36.00	Thread LTC	Csng Grade J-55			
	Thread LTC	Plug. Cont. Yes	Swage Yes	Top Plug Yes			
Number and Type Units Pump Truck, 1 ea. 660 Bulk Truck				BHST - F 83	Casing Depth 300	Depth - TVD - FT 300	Hole Size - Inches 12 1/4
Remarks 9 5/8" Top Plug, Head , 200 lbs Sugar				BHCT - F 80	Previous Csq Conductor	Depth - MD - FT 300	Mud Weight/Type - PPG

Materials	Spacer	Qty - BBLS 40	Type H2O	SPACER:	H2O
	BBL OF LEAD	# of Sacks 95	Type Class A	LEAD CEMENT	95 Sacks Class A, 3% Gypsum, 1% SMS, 2.5% Calcium Chloride, 0.25 lb/sk Poly
	H2O REQUIRED	Weight PPG 11.40	Yield Ft3/Sk 2.95	Water Gal/S 18.16	
	BBL OF TAIL	# of Sacks 65	Type Class A	TAIL CEMENT	
	H2O REQUIRED	Weight PPG 13.20	Yield Ft3/Sk 1.86	Water Gal/S 9.98	65 Sacks Class A, 3% Gypsum, 1% SMS, 2.5% Calcium Chloride, 0.25 lb/sk Poly
	Displacement	Qty - BBLS 22.8	Type H2O	DISPLACEMENT	H2O

Notes:

SINGLE Variable Density Slurry. Please go by bbl counter for the lead. All Cement in front pot
Lead - 6 hrs; Tail - 2.5 hrs
****Make sure your H2S monitor is charged and bump tested****

Sales Items	Casing Size 9 5/8	Casing Weight 36.00	Thread LTC
	Guide Shoe	Float Shoe	Float Collar Insert Float Valve
	Centralizers - Number	Size	Type
	Wall Cleaners - Number	Type	MSC (DV Tool) MSC Plug Set
	Limit Clamps	Thread lock	Other
	Remarks 300 lbs Sugar, CC for prime up if needed		

BCE-Mach III LLC
 JMC 17/8-35-11 1H
 Barber
 12/23/2023
 Surface

Ticket # P-6408



Customer: BCE-Mach III LLC
 Well Name: JMC 17/8-35-11 1H
 County: Barber
 State: Kansas
 API #: 15-007-24487
 Legals: Sec. 17-T35S-R11W

Customer Rep:
 Mobile:
 Job Type: Surface
 Casing: 9 5/8
 Field Supervisor: TYLER MELTON
 Date: 12/23/2023
 Proposal #: 46430002

Ref. #	Description	Quantity	Unit Price	Sub Total	Total
***** Cementing Services *****					
MLPU1	Pickup Mileage 1 unit (roundtrip miles)	280	\$3.94	\$1,103.20	\$529.54
MLHE2	Heavy Vehicle Mileage 2 units (roundtrip miles)	280	\$13.56	\$3,796.80	\$1,822.46
MLTN	Bulk Cement Delivery/Return (per Ton-Mile)	1,125	\$2.73	\$3,071.25	\$1,474.20
MXBK	Bulk Material Mixing Service Charge (Per cu.ft.)	160	\$3.03	\$484.80	\$232.70
CMTHD	Cement Head with manifold (per Job)	1	\$1,895.00	\$1,895.00	\$909.60
PC1K	Pump Charge 0-1000' (Per 4 hrs)	1	\$1,887.60	\$1,887.60	\$906.05
DAQ	Data Acquisition System	1	\$1,331.00	\$1,331.00	\$638.88
FLSCG	Fuel Surcharge (per unit/per job)	2	\$605.00	\$1,210.00	\$580.80
ENVFEE	Environmental Fee	1	\$211.75	\$211.75	\$101.64
DAMSS	Data Monitoring System/Supervisor	1	\$800.00	\$800.00	\$384.00
CIRON	Circulation Equipment (40' of equipment per job)	2	\$1,512.50	\$3,025.00	\$1,452.00
***** Cementing Materials *****					
CSTD	Class A Type Standard Cement (per sack)	160	\$31.81	\$5,089.60	\$2,443.01
CEXTGYP	Gypsum (per lb)	452	\$0.54	\$244.08	\$117.16
CACCSMS	SMS (per lb)	151	\$3.86	\$582.86	\$279.77
CACCCC	Calcium Chloride (per lb)	376	\$1.45	\$545.20	\$261.70
CLCMPF	Poly Flake (per lb)	40	\$3.23	\$129.20	\$62.02
Additional Items (As Required)					
PCADD	Primary Pump Unit Addl Hours	0.0	\$594.50	\$0.00	\$0.00
BKADD	Bulk Unit Additional Hours (per unit/per hour)	0.0	\$121.00	\$0.00	\$0.00
VALV12	1" to 2" valves	1	\$393.25	\$393.25	\$188.76
SG36	Swage, 4 1/2" - 13 3/8" (per day)	1	\$423.50	\$423.50	\$203.28
H2SMON	H2S/Gas Monitors (per job)	1	\$135.00	\$135.00	\$64.80
FTRP958	9 5/8" Top Rubber Plug	0	\$220.00	\$0.00	\$0.00
CSUGAR	Sugar (per lb)	100	\$1.47	\$147.00	\$147.00
CDFDIAL	ATF Cement Defoamer (per gal)	15	\$29.50	\$442.50	\$442.50
DERKC	Derrick Charge (Cement Head Stabbing Above 8 ft)	0	\$726.00	\$0.00	\$0.00
WTCMT	Waiting on Cement Head after job (per hours)	0	\$95.00	\$0.00	\$0.00
CACCCC	Calcium Chloride (per lb)	0	\$1.45	\$0.00	\$0.00
	Book Price			\$26,948.59	
	Estimated Job Cost (Exclusive of Sales Tax)				\$13,241.86

Signature: Tyler Melton
 Field Supervisor:

Signature: Jim Melton
 Customer Rep:

AFE # DC 22112
 WELL NAME JMC 17/8-35-11 1H
 COST CODE 2050 2800
 AMOUNT \$13,241.86
 DATE 12-23-23
Jim Melton

BCE-Mach III LLC
JMC 17/8-35-11 1H
Barber
12/23/2023
Surface

Ticket # P-6408



COMPANY BCE-Mach III LLC	PROJECT NUMBER P-6408	CUSTOMER REP:	DATE 12/23/2023
CONTRACTOR Spinnaker Oil	Owner Same	LEGAL DESCRIPTION Sec 17, T35S, R11W	
LEASE & WELL # JMC 17/8-35-11 1H	COUNTY Barber	STATE OK	MILEAGE 280

Customer Job Satisfaction Sheet

We will greatly appreciate if you can fill out a short survey regarding our performance today. Safety and service quality are our top priorities and we want to ensure that we are continually providing the best service possible in the safest manner as possible. These surveys are regularly reviewed and we highly value your opinion. Thank you for your business.

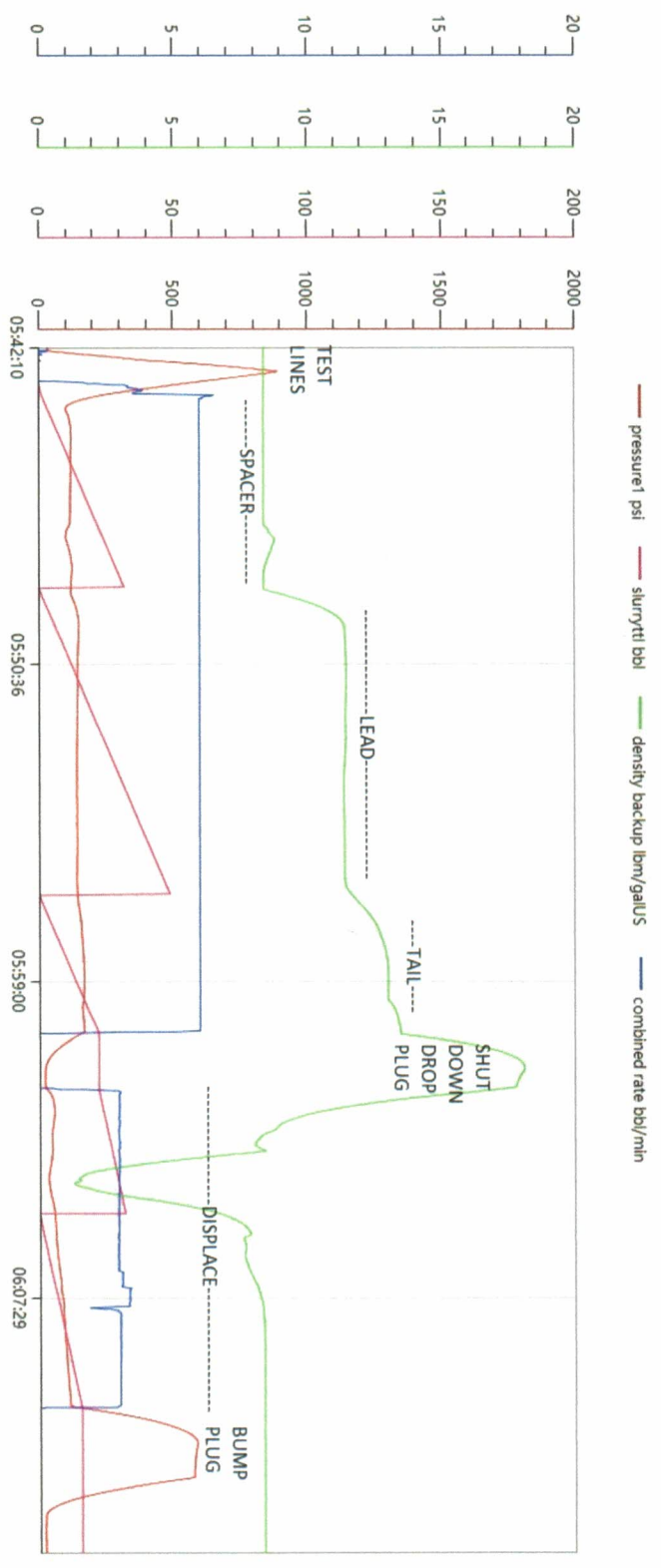
	Poor	Fair	Satisfactory	Great	Outstanding
HSE					
Performance of Crew					
Performance of Equipment					
Service Quality					
Job Completed as Agreed					

Customer Name (Printed)

Customer Signature: *Jim Miller*

Date: *12-23-23*

Chart Report



Date: 1/23/2023 Well Name: JMC 17/8-35-11 1H Location: BARBER COUNTY County: KANSAS Operator: MACH Supervisor: TYLER MELTON Jobtype: SURFACE Address: Comment:



JOB LOG

PROJECT NUMBER	TICKET DATE
P-6408	12/23/23

COMPANY BCE-Mach III LLC	COUNTRY USA	STATE OK	COUNTY Barber
LEASE NAME JMC 17/8-35-11 1H	Well No.	EMPLOYEE NAME TYLER MELTON	CUSTOMER REP
FIELD	SEC / TWP / RNG Sec 17, T35S, R11W	TICKET AMOUNT	
API/UWI # 15-007-24487	JOB PURPOSE Surface	WELL TYPE	
PUMP #1	316		
PUMP #2			
PUMP #3			

Date	Time	Rate (BPM)	Volume (BBL)(GAL)	Press.(PSI)		Job Description / Remarks
				CSG.	Tbg	
12/23/23	0330					ON LOCATION
	0430					SPOT TRUCKS AND RIG UP
	0530					SAFETY MEETING WITH ALL PARTIES
	0540					TEST LINES TO 1500PSI
	0542	6BPM	40BBL			PUMP 40BBL WATER SPACER
	0547	6BPM	50BBL			PUMP 50BBL LEAD CEMENT AT 11.4PPG
	0555	6BPM	21BBL			PUMP 21BBL TAIL CEMENT (CEMENT TO SURFACE 30BBL BACK)
	0559					SHUT DOWN DROP PLUG
	0600	3BPM			100	DISPLACE
	0609	3BPM	22BBL		650	BUMP PLUG 150PSI TO 650PSI
	0612					bled off 1/2BBL
						FINAL LIFT - 150PSI
						TOP OF TAIL - 25'

Supervisor Signature: 

Print Name:

Thank You For Using
Spinnaker Oilfield Services



SERVICE ORDER CONTRACT

Customer Name BCE-Mach III LLC

Ticket Number P-6408

Lease & Well Number JMC 17/8-35-11 1H

Date 12/23/2023

As consideration, The Above Named customer Agrees:

Spinnaker Oilfield Services Company LLC ("Spinnaker") shall not be responsible for and customer shall secure Spinnaker against any liability for damage to property of customer and of the well owner (if different from customer),

unless caused by the willful misconduct or gross negligence of Spinnaker, this provision applying to

but not limited to subsurface damage and surface damage arising from subsurface damage, unless an MSA between Spinnaker and above named customer specifies otherwise.

Spinnaker makes no guarantee to the effectiveness of the products, supplies, or materials, nor of the results of any treatment or services. Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others,

Spinnaker personnel will use their best efforts in gathering such information and their best judgment in interpreting it, but because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others except where due to Spinnaker gross negligence or willful misconduct in the preparation or furnishing it.

Invoices payable NET 10 days following the date on the invoice.

Upon customers default in payment of the customers account 15 days past due.

Customer agrees to pay interest thereon after at the highest lawful contract rate applicable but never to exceed 18% per annum in the event it becomes necessary to employ an attorney to enforce collection of said account.

Customer agrees to pay all collection costs and attorney fees in the amount of 25% of the unpaid account.

Service order: I authorize work to begin per service instructions in accordance with terms and conditions printed on this form and represent that I have authority to accept and sign this order.

I HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMERS AGENT.

Customer Authorized Agent: Jim MDA

EQUIPMENT CHECKLIST

UNIT # 316

1. BEFORE THE JOB – PREPARE

- Power up the unit, ensuring all electronics are functioning, and recalibrate all console pressure gauges to atmospheric pressure
- Check the cement head (visually inspect), vacuum breakers, and dry cement line.
- Prime the truck up and pressure test. Test for Global kick-out, and check martin decker gauges. Note any difference between console and martin decker pressures.
- Function test and pump through the entire plumbing, checking all lines as well as centrifugal and triplex pumps. Check for any packing leaks on the pumping unit. Chart the test.
- Check the bulk equipment; compressors, valves, pop-offs, to make sure it airs up and hold pressure.
- Check the casing cement head, O-rings, adapters (sizes and thread types).
- Check the bulk paperwork, ensuring all correct cement and volumes are on location.
- Check to make sure all chemicals and plugs are on location. Check the auxiliary boost pump, if any.
- Perform a Water Analysis.

2. DURING THE JOB

- Note any pumping issues or any discrepancies on outputs
- Check for any leaks and contain accordingly if any

3. AFTER THE JOB

- Turn in the check list to customer, if requested, and include a copy with packet, and make detailed note of any issues

Supervisor Comments:

Tyler Melton
(Supervisor Name and Signature)

Isaiah Hajo
(Operator Name and Signature)

BCE-Mach III LLC
JMC 17/8-35-11 1H
Barber
12/23/2023
Surface

Ticket # P-6408



LOCATION WATER TEST

General Information

Customer: BCE-Mach III LLC Date: 12/23/2023
Ticket #: P-6408 Time: 4AM
Lease Name & #: JMC 17/8-35-11 1H Water Source: FRAC TANK
Cementer: TYLER MELTON

Test Results Sample #1

			Standard Range
Temp	<u>66</u>	° F	50° to 100° F
pH	<u>7.0</u>		6.0 - 8.0
Sulfates	<u>NONE</u>	mg/L	Less Than 1500 mg/L
Chlorides	<u>400</u>	mg/L	Less Than 3000 mg/L
Lignins & Tannins	<u>NONE</u>	Yes/No	No

Test Results Sample #2

			Standard Range
Temp	<u> </u>	° F	50° to 100° F
pH	<u> </u>		6.0 - 8.0
Sulfates	<u> </u>	mg/L	Less Than 1500 mg/L
Chlorides	<u> </u>	mg/L	Less Than 3000 mg/L
Lignins & Tannins	<u> </u>	Yes/No	No

Remarks:

JOB SAFETY ANALYSIS (JSA)

DATE 12/23/2023	TICKET NUMBER P-6408	CUSTOMER BCE-Mach III LLC	LEASE AND WELL NO. JMC 17/8-35-11 1H
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List of Employees on site (In case of evacuation, check boxes as employees are accounted for - use additional paper if needed)

TYLER MELTON	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ISAIAH HARJO	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ANGEL REY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Discussion of Hazards Found at the Job Site

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><input checked="" type="checkbox"/> Electrical Discuss location of electrical lines and power sources in relation to equipment and lines. PSW, QA, Light Plant.</p> <p><input checked="" type="checkbox"/> Chemicals Discuss possible exposures to substances such as dusts, Chemicals, vapors, radioactive materials, explosives, and Fla./combustible materials. Provide MSDS sheets, H2S, Gas Flammable gasses. SEE MSDS</p> <p><input checked="" type="checkbox"/> Overhead Discuss overhead hazards (e.g. guy wires, DME, chains, pulleys hazards while on the rig floor or under the rig floor).Rig guy wires.</p> <p><input checked="" type="checkbox"/> Cranes, Masts, Booms Discuss hazards associated with overhead lifting devices. CRANE TRUCK.</p> <p><input checked="" type="checkbox"/> Weather Discuss weather conditions (e.g. heat, cold, ice, snow, rain, wind, dust, visibility, etc.)</p> <p><input checked="" type="checkbox"/> Chemical spills & releases Tote tanks, frac tanks, drums, hose connections and pumps. USE DIAPERS.</p> <p><input checked="" type="checkbox"/> Ignition Sources Discuss possible ignition sources (e.g. engines, electrical equipment, open flames, smoking, etc.) SMOKING, EQUIP, DIESEL.</p> <p><input checked="" type="checkbox"/> Well bore fluids or gasses Discuss shale shaker, frac tanks, return lines and vent lines.</p> <p><input type="checkbox"/> Explosives Handling Discuss hazards of working with and around explosive materials. Restrict the work area to those that have propper training. Follow approved procedures.</p> | <p><input checked="" type="checkbox"/> Confined Spaces Discuss any required entry into confined spaces (e.g. cellars, tanks, pits.). TANKS, Mt. Mover.LGC Bldr.</p> <p><input checked="" type="checkbox"/> Noise Discuss areas with high noise levels and avoid these areas or provide hearing protection. EQUIP.</p> <p><input checked="" type="checkbox"/> Walking / working surfaces Discuss the terrain where the rig up and job will occur (e.g. boards, limestone, mud, stairways, walkways, the derrick, and the rig floor). HOSES, IRON, EQUIP.</p> <p><input checked="" type="checkbox"/> Lifting Discuss proper lifting techniques and ways to eliminate or reduce heavy lifting such as forklifts, cranes, and sharing the load. CRANE, BUDDY SYS.</p> <p><input checked="" type="checkbox"/> Falling Discuss job procedures requiring work at heights greater than 10 ft. (3.3 m). FALL PROTECTION.Fall protection for tanks.</p> <p><input checked="" type="checkbox"/> Pressure Discuss pressure hazards such as DME and bulk tanks. 10.000 dsi</p> <p><input checked="" type="checkbox"/> LO / TO Discuss equipment that has been locked or tagged out.</p> <p><input type="checkbox"/> RA Handling Discuss hazards working around different types of radiation. Restrict the work area to those with the proper training. Follow approved Procedures</p> |
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3. Hazard Controls

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><input checked="" type="checkbox"/> Personal protective equipment Discuss required PPE such as respirators, head protection, hearing protection, protective footwear, hand and skin protection, and fall protection. PROPER PPE.</p> <p><input checked="" type="checkbox"/> Physical barriers Discuss items such as hose covers, line tiedowns, guards, railings, and inert gas blankets.</p> <p><input checked="" type="checkbox"/> Weather Discuss control measures for weather factors such as temperature, wind, ice, rain, snow, etc.</p> <p><input checked="" type="checkbox"/> Ignition source controls Discuss control measures for ignition sources such as the use of spark arrestors, emergency shutdown procedures, and NO SMOKING rules.Equip. & Smoking.</p> <p><input checked="" type="checkbox"/> Crane, Masts, Booms Safe working capacities have been calculated per charts on equipment and will not be overloaded.</p> <p><input checked="" type="checkbox"/> Safety equipment Discuss safety items such as pop-off valves, fire extinguishers, and communication devices. FIRE EXT. AIR PACKS.</p> | <p><input checked="" type="checkbox"/> Vents Discuss vent lines for frac tanks and bulk tanks.</p> <p><input checked="" type="checkbox"/> Equipment monitored for leaks during job and contained</p> <p><input checked="" type="checkbox"/> Equipment wash-up per customers instructions.</p> <p><input checked="" type="checkbox"/> Equipment drain pans drained in approved containers prior to leaving location.</p> <p><input checked="" type="checkbox"/> All empty containers must be returned to facility I.e. empty sacks, pails, and drums.</p> <p><input checked="" type="checkbox"/> Waste handling Discussion of chemical and waste handling procedures.</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

4. Contingency Plans for Emergencies

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><input checked="" type="checkbox"/> Location of eyewash/safety shower station Discuss the location of the eyewash/safety shower station and how to use it.PU, QA, PSW.</p> <p><input checked="" type="checkbox"/> Assembly points Discuss where to gather in the event of an emergency. LEASE ROAD.</p> <p><input checked="" type="checkbox"/> Fire fighting Discuss fire fighting responsibilities with the appropriate personnel (trained and equipped personnel only).</p> <p><input checked="" type="checkbox"/> Wind direction Discuss the wind direction and how it may change the contingency plan such as the assembly area location, and discuss how to detect wind direction on the job site (e.g. windsocks, streamers, etc.).</p> <p><input checked="" type="checkbox"/> First aid station Point out the location of the first aid kit and who is responsible for administering first aid. PU, QA, PSW.</p> <p><input checked="" type="checkbox"/> Reporting Spills Discuss measures used for spill reporting.</p> <p><input checked="" type="checkbox"/> Spill Response Kit Review location of Spill Response Kit.</p> | <p><input checked="" type="checkbox"/> Contaminated soil Discuss procedures for spill / leak cleanup.</p> <p><input checked="" type="checkbox"/> Injury and accident procedures Discuss personnel responsibilities and procedures in the event of an injury or accident.NOTIFY IMMEDIATELY.</p> <p><input checked="" type="checkbox"/> Rescue procedures Discuss rescue procedures with the appropriate personnel (trained and equipped).</p> <p><input checked="" type="checkbox"/> Emergency shut down procedures Discuss when, how, and what to shut down in the event of an emergency.</p> <p><input checked="" type="checkbox"/> Recovery procedures Discuss how to return to normal operating procedures after an emergency.</p> <p><input checked="" type="checkbox"/> Nearest hospital The best rout of travel along with everyone understanding which vehicle will be used as the ambulance.</p> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Head count	Employees	3
	Other	
	Total	

5. Roles and Responsibilities

Communicated Assigned

6. Emergency Escape Procedures (Communicate the following information with all employees on location).

Safe Refuge Area and / or Meeting Point:
Entrance to Location

Note: If wind direction changes do not proceed to gathering point, but rather proceed upwind after observing wind direction indicator.

Evacuation may occur on site because of: (Check appropriate boxes)	The following equipment is required on location: (Check appropriate boxes)
<input type="checkbox"/> Release of H2S above 10 ppm	<input type="checkbox"/> H2S monitors
<input checked="" type="checkbox"/> Blowout	<input type="checkbox"/> Combustible gas monitors
<input checked="" type="checkbox"/> Release of flammable gasses	<input checked="" type="checkbox"/> Wind direction indicator (windsocks, streamers, etc.)
<input checked="" type="checkbox"/> Release of other gasses	<input checked="" type="checkbox"/> Escape respirators (one for each employee)
<input checked="" type="checkbox"/> Fire	<input checked="" type="checkbox"/> Full facepiece positive pressure SCBA

7. Emergency Telephone Numbers and / or Method of Contact

Sheriff: _____ Hospital (Actual phone numbers other than 911): _____
 Supervisor: _____ Customer: **BCE-Mach III LLC**
 First Aid Responders on this site (Names): _____ Designated emergency vehicle & mobile phone # **Supervisor PU**

Rescue Procedures If emergency rescue is necessary, the following is required: (Check appropriate boxes)

<input checked="" type="checkbox"/> Full facepiece SCBA (30 Minute)	<input checked="" type="checkbox"/> Escape respirators
<input checked="" type="checkbox"/> Protective clothing:	<input type="checkbox"/> Monitoring Equipment:
List: Hard Hat, Steel Toe Boots, Safety Glasses, Ear Plugs, Coveralls, & Gloves	List:

Site Plan (Draw the location, indicate the wind direction, and mark the safe area / meeting point.)

10. Postjob Safety Meeting (Note: Enter information into IJR) Date: _____ Time: _____

Check Appropriate box for each incident event Vehicle Accident No Vehicle Accident
 Injury No Injury Spill Near Miss No Near Miss
 Location is as clean as when we arrived.
 Is follow up with customer needed? Yes No

COMMENTS

Customer Representative _____ Spinnaker Representative _____

BCE-Mach III LLC
 JMC 17/8-35-11 1H
 Barber
 12/28/2023
 Intermediate

Ticket # P-6419



COMPANY BCE-Mach III LLC	PROJECT NUMBER P-6419	AFE/WORK ORDER	DATE 12/28/2023
CONTRACTOR Spinnaker Oil	Owner Same	LEGAL DESCRIPTION Sec 17, T35S, R11W	API 15-007-24487
LEASE & WELL # JMC 17/8-35-11 1H	COUNTY Barber	STATE KS	MILEAGE 280
DIRECTIONS			

From Alva, OK - Go North 13.5 miles to E0010 Rd. Turn East and go 6 miles. North into. Atlas 3

Pumping Services	<input type="checkbox"/> Surface	<input checked="" type="checkbox"/> Intermediate	<input type="checkbox"/> Long String	<input type="checkbox"/> Plug Back					
	<input type="checkbox"/> Squeeze	<input type="checkbox"/> Acid	<input type="checkbox"/> PTA	<input type="checkbox"/> Other	() H2S				
	Casing Size 7	Casing Weight 26.00	Thread TCBC-HT	CSG Grade P-110	Plug. Cont. Yes	Swage Yes	Top Plug Yes	Bottom Plug Yes	% Excess 30%
	Number and Type Units Pump Truck, 1 ea. 660 Bulk					BHST - F 132	Casing Depth 5230	Depth - TVD - FT 4827	Hole Size - Inches 8 3/4
Remarks 7" Top & Bottom Plugs, Head, manifold, circulating iron & both adapters					BHCT - F 105	Pvs Csg 9-5/8" at 300'	Depth - MD - FT 5230	Mud Weight/Type - PPG WBM ~9.2	

BBL OF SPACER	Type	SPACER	
40	Fresh Water	Fresh Water	
BBL OF LEAD	# of Sacks	Type	LEAD CEMENT
63.7	65	Class A/POZ	65 Sacks 65/35 A/POZ, 12% Gel, 12% Gypsum, 12% SFA, 1.5% SA-2, 0.4 lb/sk Poly Flakes, 0.2% Fine Super Fibers
H2O REQUIRED	Weight PPG	Yield Ft3/Sk	
55.5	10.20	5.50	
BBL OF TAIL	# of Sacks	Type	TAIL CEMENT
37.1	150	Class A/POZ	150 Sacks 50/50 A/POZ, 3% Gel, 2% Gypsum, 0.35% SFL-5, 0.25 lb/sk Poly Flakes, 0.1% Fine Super Fibers
H2O REQUIRED	Weight PPG	Yield Ft3/Sk	
23.6	13.80	1.39	
Displacement	Qty - BBLs	Type	Procedure
	200	Water	Water

NOTES:

LEAD - BACK POT | TAIL - FRONT POT
 Pump time: LEAD - 6:00 hrs. TAIL - 4:00 hrs
 ** 5 bpm Max **

Sales Items	Casing Size 7	Casing Weight 26.00	Thread	
	Guide Shoe	Float Shoe	Float Collar	Insert Float Valve
	Remarks Defoamer, Plugs			

BCE-Mach III LLC
 JMC 17/8-35-11 1H
 Barber
 12/27/2023
 Intermediate

Ticket # P-6419



Customer: BCE-Mach III LLC

Customer Rep:

Well Name: JMC 17/8-35-11 1H

Mobile:

County: Barber

Job Type: Intermediate

State: Kansas

Casing: 7

API #: 15-007-24487

Field Supervisor: Ben Wagner

Legals: Sec 17, T35S, R11W

Date: 12/27/2023

Proposal #: 46430002

Ref. #	Description	Quantity	Unit Price	Sub Total	Total
***** Cementing Service and Materials *****					
MLPU1	Pickup Mileage 1 unit (roundtrip miles)	280	\$3.94	\$1,103.20	\$463.34
MLHE2	Heavy Vehicle Mileage 2 units (roundtrip miles)	280	\$13.56	\$3,796.80	\$1,594.66
MLTN	Bulk Cement Delivery/Return (per Ton-Mile)	1,480	\$2.73	\$4,040.40	\$1,696.97
MXBK	Bulk Material Mixing Service Charge (Per cu.ft.)	215	\$3.03	\$651.45	\$273.61
CMTHD	Cement Head with manifold (per Job)	1	\$1,895.00	\$1,895.00	\$795.90
PC6K	Pump Charge 5001-6000' (Per 5 hrs)	1	\$4,325.75	\$4,325.75	\$1,816.82
DAQ	Data Acquisition System	1	\$1,331.00	\$1,331.00	\$559.02
FLSCG	Fuel Surcharge (per unit/per job)	2	\$605.00	\$1,210.00	\$508.20
ENVFEE	Environmental Fee	1	\$211.75	\$211.75	\$88.94
DAMSS	Data Monitoring System/Supervisor	1	\$800.00	\$800.00	\$336.00
CIRON	Circulation Equipment (40' of equipment per job)	2	\$1,512.50	\$3,025.00	\$1,270.50
CSTD	Class A Type Standard Cement (per sack)	118	\$31.81	\$3,753.58	\$1,576.50
CPOZF	POZ (per sack)	98	\$17.35	\$1,700.30	\$714.13
CEXTGEL	GEL (per lb)	1,100	\$0.63	\$693.00	\$291.06
CEXTGYP	Gypsum (per lb)	931	\$0.54	\$502.74	\$211.15
CEXTSFA	SFA (per lb)	679	\$1.21	\$821.59	\$345.07
CFL5	SFL-5 (per lb)	45	\$18.56	\$835.20	\$350.78
CFWCSA1	SA-2 (per lb)	85	\$19.52	\$1,659.20	\$696.86
CLCMPF	Poly Flake (per lb)	64	\$3.23	\$206.72	\$86.82
CLCMFBR	Fine Super Fiber (per lb)	24	\$19.28	\$462.72	\$194.34
Additional Items if used					
PCADD	Primary Pump Unit Addl Hours	0.0	\$594.50	\$0.00	\$0.00
BKADD	Bulk Unit Additional Hours (per unit/per hour)	0.0	\$121.00	\$0.00	\$0.00
FTRP7	7" Top Rubber Plug	0	\$140.00	\$0.00	\$0.00
FBRP7	7" Bottom Rubber Plug	0	\$150.00	\$0.00	\$0.00
SG36	Swage, 4 1/2" - 13 3/8" (per day)	1	\$423.50	\$423.50	\$177.87
VALV12	1" to 2" valves	1	\$393.25	\$393.25	\$165.17
RADIO	Radios (per job)	0	\$135.00	\$0.00	\$0.00
CACCCC	Calcium Chloride (per lb)	0	\$1.45	\$0.00	\$0.00
CSUGAR	Sugar (per lb)	0	\$1.47	\$0.00	\$0.00
CDFDIAL	ATF Cement Defoamer (per gal)	5	\$29.50	\$147.50	\$147.50
DERKC	Derrick Charge (Cement Head Stabbing Above 8 ft)	0	\$726.00	\$0.00	\$0.00
WTCMT	Waiting on Cement Head after job (per hours)	0	\$95.00	\$0.00	\$0.00
	Book Price			\$33,989.65	
	Estimated Job Cost (Exclusive of Sales Tax)				\$14,361.20

Signature: Ben Wagner
 Field Supervisor:

Signature: _____
 Customer Rep:

AFE # Dr 22112
 WELL NAME JMC 17/8-35-11 1H
 COST CODE 2050 3000
 AMOUNT 14361.20
 DATE 12-29-23
Jim Miller

BCE-Mach III LLC
 JMC 17/8-35-11 1H
 Barber
 12/28/2023
 Intermediate

Ticket # P-6419



COMPANY BCE-Mach III LLC	PROJECT NUMBER P-6419	CUSTOMER REP: 0	DATE 12/28/2023
CONTRACTOR Spinnaker Oil	Owner Same	LEGAL DESCRIPTION Sec 17, T35S, R11W	
LEASE & WELL # JMC 17/8-35-11 1H	COUNTY Barber	STATE KS	MILEAGE 280

Customer Job Satisfaction Sheet

We will greatly appreciate if you can fill out a short survey regarding our performance today. Safety and service quality are our top priorities and we want to ensure that we are continually providing the best service possible in the safest manner as possible. These surveys are regularly reviewed and we highly value your opinion. Thank you for your business

	Poor	Fair	Satisfactory	Great	Outstanding
HSE					
Performance of Crew					
Performance of Equipment					
Service Quality					
Job Completed as Agreed					

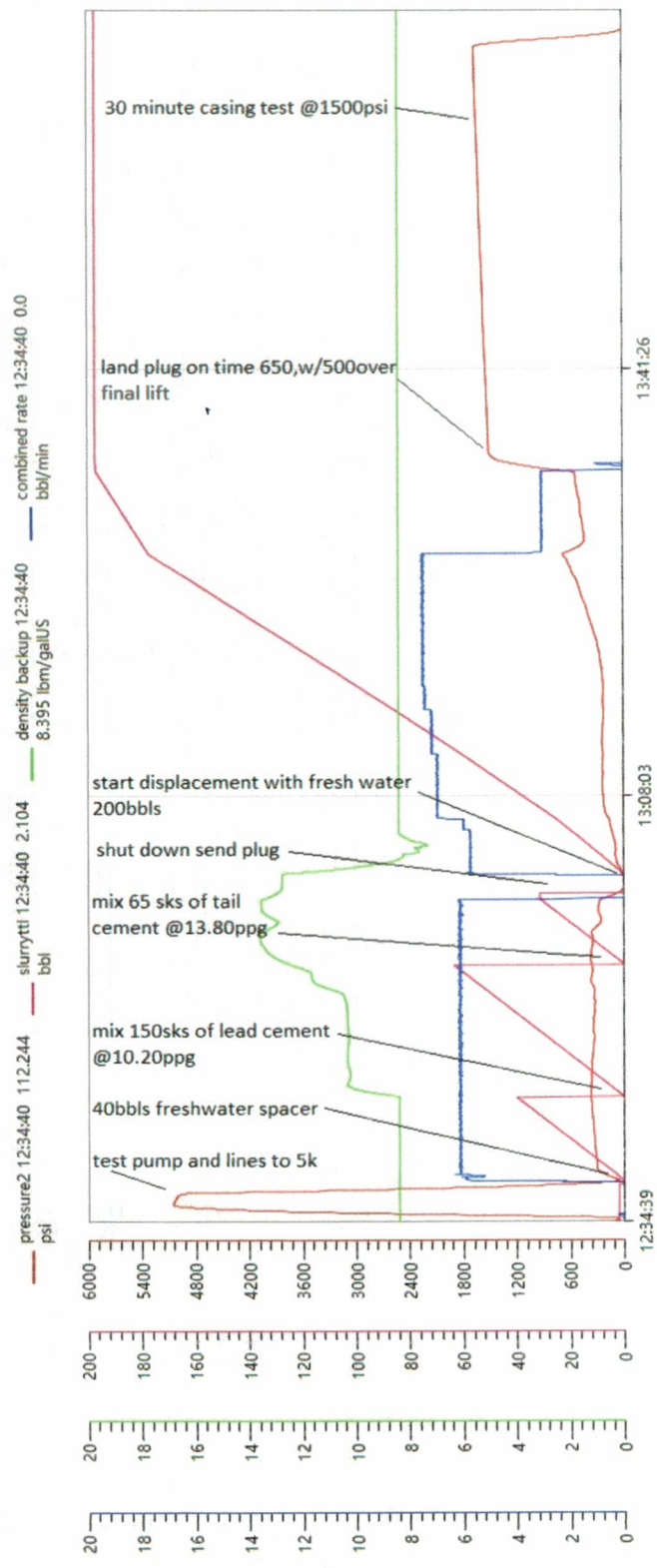
Customer Name (Printed)

Customer Signature: *Jim Miller*

Date: *12-29-23*



Chart Report





JOB LOG

PROJECT NUMBER	TICKET DATE
P-6419	12/28/23
COMPANY	COUNTRY
BCE-Mach III LLC	USA
STATE	COUNTY
KS	Barber
LEASE NAME	Well No.
JMC 17/8-35-11 1H	
EMPLOYEE NAME	CUSTOMER REP
FIELD	TICKET AMOUNT
API/UWI #	WELL TYPE
15-007-24487	

SEC / TWP / RNG	JOB PURPOSE
Sec 17, T35S, R11W	Intermediate
PUMP #1	313
PUMP #2	
PUMP #3	

Date	Time	Rate (BPM)	Volume (BBL)(GAL)	Press.(PSI)		Job Description / Remarks
				CSG.	Tbg	
12/27/2023	0300					customer called and requested a crew on location @1030
12/27/2023	0730					conduct a pre-journey meeting with crew
12/27/2023	1030					arrive on location
12/27/2023	1100					conduct a pre rig up meeting with crew
12/27/2023	1115					rig up all of spinnakers equipment
12/27/2023	1200					stab head and make up iron loops
12/27/2023	1215					conduct a pre-job meeting with all personel
12/27/2023	1250			5000		test pump and lines to 5000psi
12/27/2023	1251	6.0	40.0	300		40bbl freshwater spacer
12/27/2023	1258	6.0	63.7	376		mix 65sks of lead cement @ 10.20ppg
12/27/2023	1308	6.0	37.1	357		mix 150 sks of tail cement 13.80ppg
12/27/2023	1315					shutdown wash up on top of plug
12/27/2023	1318	7.0	200.0	158		start 200bbbls of displacement

Supervisor Signature:

Print Name:

Ben Wagner

Thank You For Using
Spinnaker Oilfield Services



JOB LOG

PROJECT NUMBER P-6419	TICKET DATE 12/28/23
STATE KS	COUNTY Barber
CUSTOMER REP	TICKET AMOUNT
WELL TYPE	

COMPANY BCE-Mach III LLC	Well No.
LEASE NAME JMC 17/8-35-11 1H	
FIELD	
API/UWI # 15-007-24487	

COUNTRY USA	EMPLOYEE NAME
SEC / TWP / RNG Sec 17, T35S, R11W	
JOB PURPOSE Intermediate	

Date	Time	Rate (BPM)	Volume (BBL)(GAL)	Press.(PSI)		Job Description / Remarks
				CSG.	Tbg	
12/27/2023	1323	7.0	50.0	201		50bbl gone
12/27/2023	1330	7.0	100.0	467		100bbl gone
12/27/2023	1336	7.5	150.0	521		150bbl gone
12/27/2023	1340	3.0	170.0	400		slow rate to land plug @170 gone
12/27/2023	1348	3.0	200.0	1200		land plug on time 650 final lift with 500 over to 1200
12/27/2023	1349			1500		30 minute casing test @1500psi
12/27/2023	1419		1.5			release pressure check floats (held) bled back 1.5bbl
12/27/2023	1445					conduct a pre rig down meeting with crew and rig down all of spinnakers equipment
12/27/2023	1500					conduct a pre departure meeting with crew
12/27/2023	1530					depart location
12/27/2023						HOT-1315.68, HOL/TOT-3945.78
12/27/2023						
12/27/2023						

Supervisor Signature:

Print Name:

Ben Wagner

**Thank You For Using
Spinnaker Oilfield Services**



SERVICE ORDER CONTRACT

Customer Name BCE-Mach III LLC

Ticket Number P-6419

Lease & Well Number JMC 17/8-35-11 1H

Date 12/28/2023

As consideration, The Above Named customer Agrees:

Spinnaker Oilfield Services Company LLC ("Spinnaker") shall not be responsible for and customer shall secure Spinnaker against any liability for damage to property of customer and of the well owner (if different from customer), unless caused by the willful misconduct or gross negligence of Spinnaker, this provision applying to but not limited to subsurface damage and surface damage arising from subsurface damage, unless an MSA between Spinnaker and above named customer specifies otherwise.

Spinnaker makes no guarantee to the effectiveness of the products, supplies, or materials, nor of the results of any treatment or services. Because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others, Spinnaker personnel will use their best efforts in gathering such information and their best judgment in interpreting it, but because of the uncertainty of variable well conditions and the necessity of relying on facts and supporting services furnished by others except where due to Spinnaker gross negligence or willful misconduct in the preparation or furnishing it.

invoiced payable NET 10 days following the date on the invoice.

Upon customers default in payment of the customers account 15 days past due.

Customer agrees to pay interest thereon after at the highest lawful contract rate applicable but never to exceed 18% per annum in the event it becomes necessary to employ an attorney to enforce collection of said account. Customer agrees to pay all collection costs and attorney fees in the amount of 25% of the unpaid account.

Service order: I authorize work to begin per service instructions in accordance with terms and conditions printed on this form and represent that I have authority to accept and sign this order.

I HAVE READ AND UNDERSTAND THIS CONTRACT AND REPRESENT THAT I AM AUTHORIZED TO SIGN THE SAME AS CUSTOMERS AGENT.

Customer Authorized Agent: Jim Math

BCE-Mach III LLC
JMC 17/8-35-11 1H
Barber
12/28/2023
Intermediate

Ticket # P-6419



LOCATION WATER TEST

General Information

Customer: BCE-Mach III LLC Date: 12/27/2023
Sales Order #: P-6419 Time: 0:00
Lease Name & #: JMC 17/8-35-11 1H Water Source: frac
Tested By: ben wagner

Test Results Sample #1

		Standard Range
Temp	<u>pass</u> ° F	50° to 100° F
pH	<u>pass</u>	6.0 - 8.0
Sulfates	<u>pass</u> mg/L	Less Than 1500 mg/L
Chlorides	<u>pass</u> mg/L	Less Than 3000 mg/L
Lignins & Tannins	<u>pass</u> Yes/No	No

Test Results Sample #2

		Standard Range
Temp	<u> </u> ° F	50° to 100° F
pH	<u> </u>	6.0 - 8.0
Sulfates	<u> </u> mg/L	Less Than 1500 mg/L
Chlorides	<u> </u> mg/L	Less Than 3000 mg/L
Lignins & Tannins	<u> </u> Yes/No	No

Remarks:

EQUIPMENT CHECKLIST

UNIT # 313

1. BEFORE THE JOB – PREPARE

- Power up the unit, ensuring all electronics are functioning, and recalibrate all console pressure gauges to atmospheric pressure
- Check the cement head (visually inspect), vacuum breakers, and dry cement line.
- Prime the truck up and pressure test. Test for Global kick-out, and check martin decker gauges. Note any difference between console and martin decker pressures.
- Function test and pump through the entire plumbing, checking all lines as well as centrifugal and triplex pumps. Check for any packing leaks on the pumping unit. Chart the test.
- Check the bulk equipment; compressors, valves, pop-offs, to make sure it airs up and hold pressure.
- Check the casing cement head, O-rings, adapters (sizes and thread types).
- Check the bulk paperwork, ensuring all correct cement and volumes are on location.
- Check to make sure all chemicals and plugs are on location. Check the auxiliary boost pump, if any.
- Perform a Water Analysis.

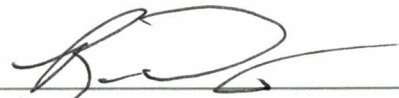
2. DURING THE JOB

- Note any pumping issues or any discrepancies on outputs
- Check for any leaks and contain accordingly if any

3. AFTER THE JOB

- Turn in the check list to customer, if requested, and include a copy with packet, and make detailed note of any issues

Supervisor Comments:



 (Supervisor Name and Signature)

 (Operator Name and Signature)

JOB SAFETY ANALYSIS (JSA)

DATE 12/28/2023	TICKET NUMBER 46430002	CUSTOMER BCE-Mach III LLC	LEASE AND WELL NO. JMC 17/8-35-11 1H
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List of Employees on site (In case of evacuation, check boxes as employees are accounted for - use additional paper if needed)

Ben Wagner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Josh Hardin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Henry Alexander	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. Discussion of Hazards Found at the Job Site

- | | |
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| <p><input checked="" type="checkbox"/> Electrical Discuss location of electrical lines and power sources in relation to equipment and lines. PSW, QA. Light Plant.</p> <p><input checked="" type="checkbox"/> Chemicals Discuss possible exposures to substances such as dusts, Chemicals, vapors, radioactive materials, explosives, and Fla./combustible materials. Provide MSDS sheets, H2S, Gas Flammable gasses. SEE MSDS</p> <p><input checked="" type="checkbox"/> Overhead Discuss overhead hazards (e.g. guy wires, DME, chains, pulleys hazards while on the rig floor or under the rig floor).Rig guy wires.</p> <p><input checked="" type="checkbox"/> Cranes, Masts, Booms Discuss hazards associated with overhead lifting devices. CRANE TRUCK.</p> <p><input checked="" type="checkbox"/> Weather Discuss weather conditions (e.g. heat, cold, ice, snow, rain, wind, dust, visibility, etc.)</p> <p><input checked="" type="checkbox"/> Chemical spills & releases Tote tanks, frac tanks, drums, hose connections and pumps. USE DIAPERS.</p> <p><input checked="" type="checkbox"/> Ignition Sources Discuss possible ignition sources (e.g. engines, electrical equipment, open flames, smoking, etc.) SMOKING, EQUIP, DIESEL.</p> <p><input checked="" type="checkbox"/> Well bore fluids or gasses Discuss shale shaker, frac tanks, return lines and vent lines.</p> <p><input type="checkbox"/> Explosives Handling Discuss hazards of working with and around explosive materials. Restrict the work area to those that have proper training. Follow approved procedures.</p> | <p><input checked="" type="checkbox"/> Confined Spaces Discuss any required entry into confined spaces (e.g. cellars, tanks, pits.). TANKS, Mt. Mover.LGC Bldr.</p> <p><input checked="" type="checkbox"/> Noise Discuss areas with high noise levels and avoid these areas or provide hearing protection. EQUIP.</p> <p><input checked="" type="checkbox"/> Walking / working surfaces Discuss the terrain where the rig up and job will occur (e.g. boards, limestone, mud, stairways, walkways, the derrick, and the rig floor). HOSES, IRON, EQUIP.</p> <p><input checked="" type="checkbox"/> Lifting Discuss proper lifting techniques and ways to eliminate or reduce heavy lifting such as forklifts, cranes, and sharing the load. CRANE, BUDDY SYS.</p> <p><input checked="" type="checkbox"/> Falling Discuss job procedures requiring work at heights greater than 10 ft. (3.3 m). FALL PROTECTION.Fall protection for tanks.</p> <p><input checked="" type="checkbox"/> Pressure Discuss pressure hazards such as DME and bulk tanks.</p> <p><input checked="" type="checkbox"/> LO / TO Discuss equipment that has been locked or tagged out.</p> <p><input type="checkbox"/> RA Handling Discuss hazards working around different types of radiation. Restrict the work area to those with the proper training. Follow approved Procedures</p> |
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3. Hazard Controls

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| <p><input checked="" type="checkbox"/> Personal protective equipment Discuss required PPE such as respirators, head protection, hearing protection, protective footwear, hand and skin protection, and fall protection. PROPER PPE.</p> <p><input checked="" type="checkbox"/> Physical barriers Discuss items such as hose covers, line tiedowns, guards, railings, and inert gas blankets.</p> <p><input checked="" type="checkbox"/> Weather Discuss control measures for weather factors such as temperature, wind, ice, rain, snow, etc.</p> <p><input checked="" type="checkbox"/> Ignition source controls Discuss control measures for ignition sources such as the use of spark arrestors, emergency shutdown procedures, and NO SMOKING rules.Equip. & Smoking.</p> <p><input checked="" type="checkbox"/> Crane, Masts, Booms Safe working capacities have been calculated per charts on equipment and will not be overloaded.</p> <p><input checked="" type="checkbox"/> Safety equipment Discuss safety items such as pop-off valves, fire extinguishers, and communication devices. FIRE EXT. AIR PACKS.</p> | <p><input checked="" type="checkbox"/> Vents Discuss vent lines for frac tanks and bulk tanks.</p> <p><input checked="" type="checkbox"/> Equipment monitored for leaks during job and contained</p> <p><input checked="" type="checkbox"/> Equipment wash-up per customers instructions.</p> <p><input checked="" type="checkbox"/> Equipment drain pans drained in approved containers prior to leaving location.</p> <p><input checked="" type="checkbox"/> All empty containers must be returned to facility i.e. empty sacks, pails, and drums.</p> <p><input checked="" type="checkbox"/> Waste handling Discussion of chemical and waste handling procedures.</p> |
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4. Contingency Plans for Emergencies

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| <p><input checked="" type="checkbox"/> Location of eyewash/safety shower station Discuss the location of the eyewash/safety shower station and how to use it.PU, QA, PSW.</p> <p><input checked="" type="checkbox"/> Assembly points Discuss where to gather in the event of an emergency. LEASE ROAD.</p> <p><input checked="" type="checkbox"/> Fire fighting Discuss fire fighting responsibilities with the appropriate personnel (trained and equipped personnel only).</p> <p><input checked="" type="checkbox"/> Wind direction Discuss the wind direction and how it may change the contingency plan such as the assembly area location, and discuss how to detect wind direction on the job site (e.g. windsocks, streamers, etc.).</p> <p><input checked="" type="checkbox"/> First aid station Point out the location of the first aid kit and who is responsible for administering first aid. PU, QA, PSW.</p> <p><input checked="" type="checkbox"/> Reporting Spills Discuss measures used for spill reporting.</p> <p><input checked="" type="checkbox"/> Spill Response Kit Review location of Spill Response Kit.</p> | <p><input checked="" type="checkbox"/> Contaminated soil Discuss procedures for spill / leak cleanup.</p> <p><input checked="" type="checkbox"/> Injury and accident procedures Discuss personnel responsibilities and procedures in the event of an injury or accident.NOTIFY IMMEDIATELY.</p> <p><input checked="" type="checkbox"/> Rescue procedures Discuss rescue procedures with the appropriate personnel (trained and equipped).</p> <p><input checked="" type="checkbox"/> Emergency shut down procedures Discuss when, how, and what to shut down in the event of an emergency.</p> <p><input checked="" type="checkbox"/> Recovery procedures Discuss how to return to normal operating procedures after an emergency.</p> <p><input checked="" type="checkbox"/> Nearest hospital The best rout of travel along with everyone understanding which vehicle will be used as the ambulance.</p> |
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Head count	Employees	3
	Other	6
	Total	9

5. Roles and Responsibilities

Communicated Assigned

6. Emergency Escape Procedures (Communicate the following information with all employees on location).

Safe Refuge Area and / or Meeting Point:

Entrance to Location

Note: If wind direction changes do not proceed to gathering point, but rather proceed upwind after observing wind direction indicator.

Evacuation may occur on site because of: <small>(Check appropriate boxes)</small>	The following equipment is required on location: <small>(Check appropriate boxes)</small>
<input type="checkbox"/> Release of H2S above 10 ppm	<input type="checkbox"/> H2S monitors
<input checked="" type="checkbox"/> Blowout	<input type="checkbox"/> Combustible gas monitors
<input checked="" type="checkbox"/> Release of flammable gasses	<input checked="" type="checkbox"/> Wind direction indicator (windsocks, streamers, etc.)
<input checked="" type="checkbox"/> Release of other gasses	<input checked="" type="checkbox"/> Escape respirators (one for each employee)
<input checked="" type="checkbox"/> Fire	<input checked="" type="checkbox"/> Full facepiece positive pressure SCBA

7. Emergency Telephone Numbers and / or Method of Contact

Sheriff:	Hospital (Actual phone numbers other than 911):
Supervisor:	Customer: BCE-Mach III LLC
First Aid Responders on this site (Names):	Designated emergency vehicle & mobile phone # Supervisor PU

Rescue Procedures *If emergency rescue is necessary, the following is required:* (Check appropriate boxes)

<input checked="" type="checkbox"/> Full facepiece SCBA (30 Minute)	<input checked="" type="checkbox"/> Escape respirators
<input checked="" type="checkbox"/> Protective clothing:	<input type="checkbox"/> Monitoring Equipment:

List:
Hard Hat, Steel Toe Boots, Safety Glasses, Ear Plugs, Coveralls, & Gloves

Site Plan (Draw the location, indicate the wind direction, and mark the safe area / meeting point.)

The site plan consists of a large grid. In the lower-left quadrant, there is a compass rose with four arrows pointing North, South, East, and West, each labeled with its respective direction in blue, bold, stylized text. In the upper-right quadrant, the words "Safety Meeting" are written in blue, bold, stylized text with a red outline.

10. Postjob Safety Meeting (Note: Enter information into IJR) Date: Time:

Check Appropriate box for each incident event Vehicle Accident No Vehicle Accident

Injury No Injury Spill Near Miss No Near Miss

Location is as clean as when we arrived.

Is follow up with customer needed? Yes No

COMMENTS

Customer Representative	Spinnaker Representative
	Ben Wagner

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	01/09/2023
Job End Date:	01/10/2023
State:	Kansas
County:	Barber
API Number:	15-007-24487-01-00
Operator Name:	Mach Resources
Well Name and Number:	JMC 17-18-35-11 1H
Latitude:	36.999397
Longitude:	-98.53538
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	4848
Total Base Water Volume (gal)*:	1903482
Total Base Non Water Volume:	0



Water Source	Percent
Surface Water, < 1000TDS	100.00%

Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
15% HCl Acid	Reagent	Acidizing					
AC-213 FinoTAP Frac-LTG	Finoric	Acidizing Additive Package					
BioSuite GQ2505	Flotek Chemistry	Control microbial growth					
HiRate 602	Innospec Oilfield Services	Friction Reducer					
PS-100	Flotek Chemistry	Scale Inhibitor					
Soda Ash	Finoric	Acid Neutralizer					
Water	BCE-Mach III	Carrier/Base Fluid					
Items above are Trade Names. Items below are the individual ingredients.							
			Water	7732-18-5	100.00000	98.99102	None

			Water	7732-18-5	84.00000	0.74788	None
			Hydrochloric Acid	7647-01-0	16.00000	0.14245	None
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.02696	None
			Mixture	Proprietary	95.00000	0.01272	None
			Ammonium chloride	12125-02-9	5.00000	0.00448	None
			N,N-bis(2-hydroxyethyl)oleamide	93-83-4	5.00000	0.00448	None
			Glutaraldehyde	111-30-8	30.00000	0.00319	None
			Acetic Acid	64-19-7	75.00000	0.00262	None
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl. Chlorides	68424-85-1	15.00000	0.00159	None
			Sodium Carbonate	497-19-8	99.80000	0.00124	None
			Methanol	67-56-1	5.00000	0.00067	None
			Methanol	67-56-1	5.00000	0.00053	None
			Glycol ether	111-76-2	10.00000	0.00035	None
			Alkyl Pyridine Quat	68909-18-2	10.00000	0.00035	None

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)