KOLAR Document ID: 1773325

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 # 35906
Name: BCE-Mach III LLC
Address 1: 14201 WIRELESS WAY SUITE 300
Address 2:
City: OKLAHOMA CITY State: OK Zip: 73134 + 2521
Contact Person: Tami Laird
Phone: (405) 8210568
CONTRACTOR: License # 35696
Name: Atlas Drilling, LLC
Wellsite Geologist: n/a
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: BCE-Mach III LLC
Well Name: Jahay 1-34-11 1H
Original Comp. Date: 03/21/2022 Original Total Depth: 80
☐ 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 #:

2/27/2024	3/4/2024	3/25/2024
Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date

API No.: 15-007-24412-01-01
Spot Description:
SE - SW - SW - SE Sec. 36 Twp. 33 S. R. 11 ☐ East ☑ West
173 Feet from ☐ North / ☑ South Line of Section
2021 Feet from ☑ East / ☐ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☐ NW ☑ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Barber
Lease Name: JAHAY 1-34-11 Well #: 1H
Field Name: Kochia
Producing Formation: Mississippi
Elevation: Ground: 1445 Kelly Bushing: 1460
Total Vertical Depth: 4596 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 334 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: 04/16/2024
☐ **Confidential Release Date:** 04/16/2026
☐ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☐ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Kelsey Cox **Date:** 04/17/2024

Operator Name: BCE-Mach III LLC Lease Name: JAHAY 1-34-11 Well #: 1H

Sec. 36 Twp. 33 S. R. 11 ☐ East ☑ West County: Barber

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 *(Attach Additional Sheets)*	☐ Yes	☑ No	☐ Log	Formation (Top), Depth and Datum ☐ Sample
Samples Sent to Geological Survey	☑ Yes	☐ No	Name: Mississippi	Top: 4845 Datum: TVD
Cores Taken	☐ Yes	☑ No		
Electric Log Run	☐ Yes	☑ No		
Geologist Report / Mud Logs	☐ Yes	☑ No		
List All E. Logs Run:				

CASING RECORD ☑ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	9.625	36	334	Class A	160	0
Intermediate	8.75	7	26	4980	Class A/POZ	215	65/35
Liner	6.125	4.5	13.5	9512	n/a	0	0

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ Plug Off Zone	-			
	-			

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: 1/26/2024

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

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
	11	114	340	10363	21

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

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

PRODUCTION INTERVAL: Top 4980 Bottom 9515

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*
	5242	12322			256 bbls 15% HCL; 29,992 BBLS SLICKWATER / NO SAND

TUBING RECORD: Size: 2.875 Set At: 4737 Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

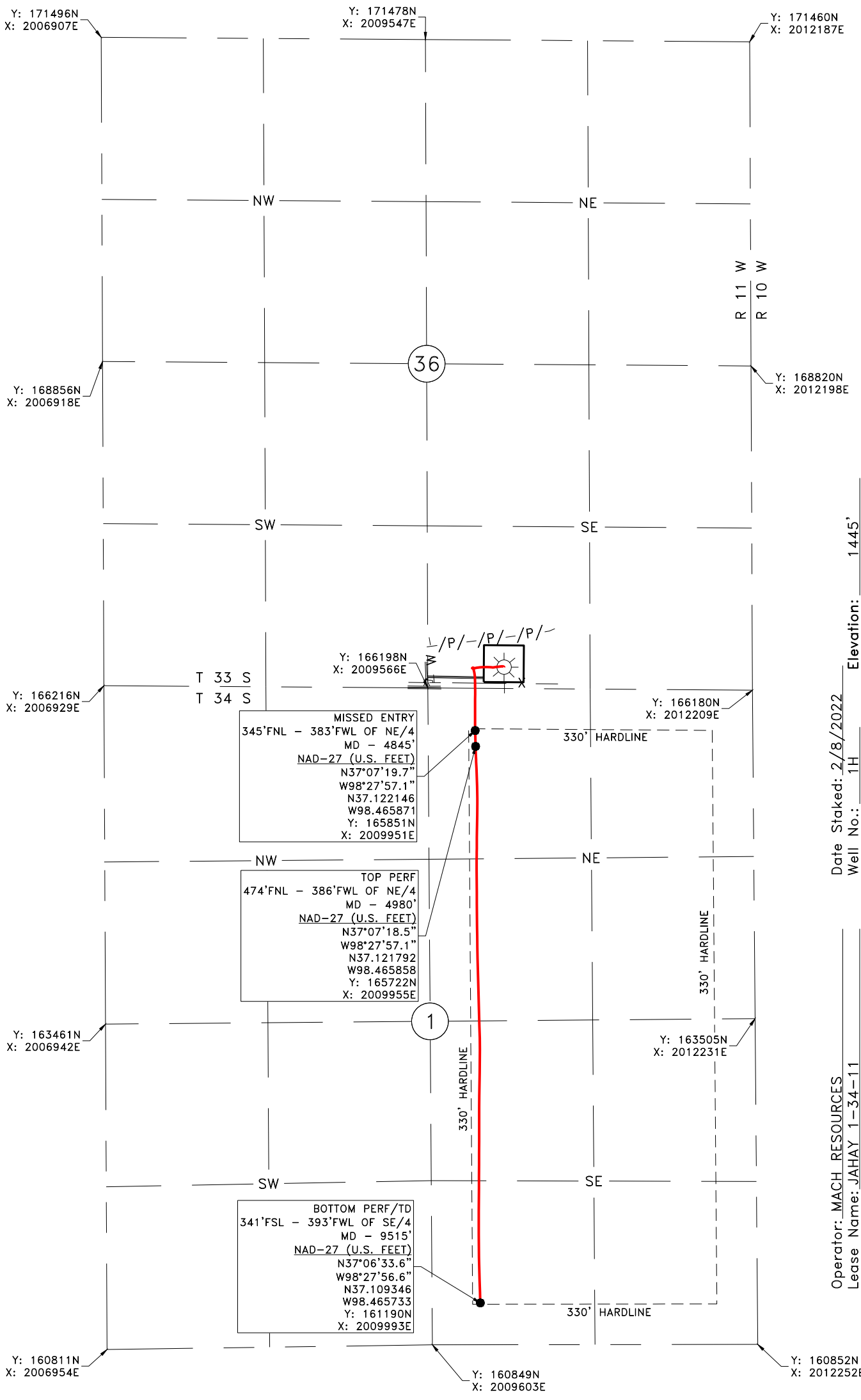
Form	ACO1 - Well Completion
Operator	BCE-Mach III LLC
Well Name	JAHAY 1-34-11 1H
Doc ID	1773325

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	9.625	36	334	Class A	160	0
Intermediate	8.75	7	26	4980	Class A/POZ	215	65/35
Liner	6.125	4.5	13.5	9512	n/a	0	0

BARBER County, Kansas

173'FSL – 2021'FEL Section 36 Township 33S Range 11W 6th P.M.



BEARINGS/COORDINATES ARE GRID
SPC, NAD 27, KANSAS SOUTH

Operator: MACH RESOURCES
Lease Name: JAHAY 1–34–11
Topography and Vegetation: PASTURE
Good Drill Site? YES
Best Accessibility to Location: FROM COUNTY ROAD

Date Staked: 2/8/2022
Well No.: 1H
Elevation: 1445'

Reference or Alt. Location Stakes Set: NONE

Distance and Direction from Hwy. Jct. or town: FROM HAZELTON, HEAD NORTH 2.25 MILES ON 1ST ST./TRI–CITY RD., THEN HEAD WEST 3.5 MILES ON GERLANE RD., THEN TURN NORTH INTO LOCATION.

GPS OBSERVATION: LATITUDE: N37°07'24.8"
LONGITUDE: W98°27'54.2"
LATITUDE: N37.123564
LONGITUDE: W98.465063

STATE PLANE NAD 27 KANSAS SOUTH ZONE Y: 166367N X: 2010187E

FINAL AS-DRILLED PLAT

All as–drilled information that is shown is based upon information and instructions furnished by Mach Resources

MACH RESOURCES

Gateway Services Group, LLC
80 E. 5TH ST., STE 400
EDMOND, OK 73034
OFF. (405) 285–5884
FAX (405) 285–5886
C.A. NO. 4091 (LS)
EXP. DATE 6–30–2024

EXHIBIT "A" AS–DRILLED
JAHAY 1–34–11 1H
173' FSL – 2021' FEL
SECTION 36, T 33 S – R 11 W 6TH P.M.,
BARBER COUNTY, KANSAS

DRAWN BY: ALE	DATE: 3/29/24	CHK'D: KRB
GATEWAY NO.: 22–0046–101AD		SCALE: 1"=1000'
LINE NO.:		AFE:

REV.	DWN.	DESCRIPTION	DATE

Mach Natural Resources

Barber County, KS (NAD 27)
Jahay
Jahay 1-34-11 1H

OH

Svy

Standard Survey Report

14 March, 2024

Total Report Version 1.60

COMPASS 5000.16 Build 97

Survey Report

Company:	Mach Natural Resources	**Local Co-ordinate Reference:**	Well Jahay 1-34-11 1H
Project:	Barber County, KS (NAD 27)	**TVD Reference:**	1445' GL + 16' KB @ 1461.00usft (Atlas 3)
Site:	Jahay	**MD Reference:**	1445' GL + 16' KB @ 1461.00usft (Atlas 3)
Well:	Jahay 1-34-11 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Svy	**Database:**	.Total Directional Production DB

Project Barber County, KS (NAD 27)

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Kansas South 1502		

Site Jahay

Site Position:		**Northing:**	166,367.00 usft	**Latitude:**	37.1235640
From:	Map	**Easting:**	2,010,187.00 usft	**Longitude:**	-98.4650623
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well Jahay 1-34-11 1H

Well Position	**+N/-S**	0.00 usft	**Northing:**	166,367.00 usft	**Latitude:**	37.1235640
	+E/-W	0.00 usft	**Easting:**	2,010,187.00 usft	**Longitude:**	-98.4650623
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	1,445.00 usft
Grid Convergence:		0.02 °				

Wellbore OH

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	HDGM2024	3/5/2024	4.13	64.87	50,741.80000000

Design Svy

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.00

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.00	0.00	0.00	180.00

Survey Program **Date** 3/14/2024

From (usft)	**To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
228.00	9,515.00	Survey #1 (OH)	MWD+HDGM	OWSG MWD + HDGM

Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Geo Coordinates Latitude (°)	Geo Coordinates Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	166,367.00	2,010,187.00	37.1235640	-98.4650623	0.00	0.00	0.00	0.00
228.00	0.26	8.50	228.00	0.51	0.08	166,367.51	2,010,187.08	37.1235654	-98.4650620	-0.51	0.11	0.11	0.00
404.00	0.62	17.38	403.99	1.82	0.42	166,368.82	2,010,187.42	37.1235690	-98.4650608	-1.82	0.21	0.20	5.05
495.00	3.12	301.00	494.94	3.56	-1.56	166,370.56	2,010,185.44	37.1235738	-98.4650676	-3.56	3.33	2.75	-83.93
584.00	4.97	285.54	583.72	5.84	-7.35	166,372.84	2,010,179.65	37.1235800	-98.4650875	-5.84	2.39	2.08	-17.37
672.00	6.42	273.14	671.29	7.13	-15.93	166,374.13	2,010,171.07	37.1235836	-98.4651169	-7.13	2.15	1.65	-14.09

Survey Report

Company:	Mach Natural Resources	**Local Co-ordinate Reference:**	Well Jahay 1-34-11 1H
Project:	Barber County, KS (NAD 27)	**TVD Reference:**	1445' GL + 16' KB @ 1461.00usft (Atlas 3)
Site:	Jahay	**MD Reference:**	1445' GL + 16' KB @ 1461.00usft (Atlas 3)
Well:	Jahay 1-34-11 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Svy	**Database:**	.Total Directional Production DB

Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Geo Coordinates Latitude (°)	Geo Coordinates Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
762.00	7.60	259.78	760.62	6.35	-26.82	166,373.35	2,010,160.18	37.1235814	-98.4651542	-6.35	2.23	1.31	-14.84
853.00	9.27	264.18	850.63	4.54	-40.03	166,371.54	2,010,146.97	37.1235765	-98.4651995	-4.54	1.97	1.84	4.84
941.00	8.18	259.52	937.61	2.68	-53.24	166,369.68	2,010,133.76	37.1235714	-98.4652448	-2.68	1.48	-1.24	-5.30
1,031.00	8.84	269.45	1,026.63	1.45	-66.45	166,368.45	2,010,120.55	37.1235680	-98.4652902	-1.45	1.79	0.73	11.03
1,120.00	7.47	247.83	1,114.75	-0.80	-78.65	166,366.20	2,010,108.35	37.1235619	-98.4653320	0.80	3.74	-1.54	-24.29
1,209.00	8.57	276.57	1,202.91	-2.22	-90.60	166,364.78	2,010,096.40	37.1235580	-98.4653730	2.22	4.62	1.24	32.29
1,302.00	8.13	274.90	1,294.92	-0.87	-104.04	166,366.13	2,010,082.96	37.1235617	-98.4654191	0.87	0.54	-0.47	-1.80
1,392.00	7.69	272.00	1,384.07	-0.11	-116.39	166,366.89	2,010,070.61	37.1235638	-98.4654615	0.11	0.66	-0.49	-3.22
1,581.00	7.82	270.95	1,571.34	0.54	-141.89	166,367.54	2,010,045.11	37.1235656	-98.4655489	-0.54	0.10	0.07	-0.56
1,674.00	7.60	268.92	1,663.50	0.53	-154.36	166,367.53	2,010,032.64	37.1235656	-98.4655917	-0.53	0.38	-0.24	-2.18
1,769.00	6.73	269.01	1,757.76	0.32	-166.21	166,367.32	2,010,020.79	37.1235650	-98.4656323	-0.32	0.92	-0.92	0.09
1,864.00	5.98	265.50	1,852.17	-0.17	-176.71	166,366.83	2,010,010.29	37.1235637	-98.4656683	0.17	0.89	-0.79	-3.69
1,958.00	7.34	267.25	1,945.54	-0.84	-187.59	166,366.16	2,009,999.41	37.1235618	-98.4657056	0.84	1.46	1.45	1.86
2,052.00	6.86	265.06	2,038.81	-1.61	-199.18	166,365.39	2,009,987.82	37.1235597	-98.4657454	1.61	0.59	-0.51	-2.33
2,146.00	6.33	261.45	2,132.19	-2.87	-209.90	166,364.13	2,009,977.10	37.1235563	-98.4657821	2.87	0.72	-0.56	-3.84
2,240.00	5.49	260.84	2,225.69	-4.35	-219.46	166,362.65	2,009,967.54	37.1235522	-98.4658149	4.35	0.90	-0.89	-0.65
2,334.00	4.57	258.46	2,319.33	-5.82	-227.57	166,361.18	2,009,959.43	37.1235482	-98.4658428	5.82	1.00	-0.98	-2.53
2,429.00	4.22	259.26	2,414.05	-7.23	-234.71	166,359.77	2,009,952.29	37.1235444	-98.4658673	7.23	0.37	-0.37	0.84
2,523.00	4.00	271.82	2,507.81	-7.77	-241.39	166,359.23	2,009,945.61	37.1235429	-98.4658901	7.77	0.98	-0.23	13.36
2,617.00	3.34	298.02	2,601.62	-6.38	-247.08	166,360.62	2,009,939.92	37.1235467	-98.4659097	6.38	1.90	-0.70	27.87
2,712.00	1.36	266.29	2,696.54	-5.15	-250.65	166,361.85	2,009,936.35	37.1235501	-98.4659219	5.15	2.42	-2.08	-33.40
2,806.00	1.27	257.50	2,790.52	-5.45	-252.78	166,361.55	2,009,934.22	37.1235493	-98.4659292	5.45	0.23	-0.10	-9.35
2,900.00	0.84	266.55	2,884.50	-5.71	-254.49	166,361.29	2,009,932.51	37.1235485	-98.4659351	5.71	0.49	-0.46	9.63
2,996.00	0.88	266.73	2,980.49	-5.80	-255.92	166,361.20	2,009,931.08	37.1235483	-98.4659400	5.80	0.04	0.04	0.19
3,091.00	0.88	251.08	3,075.48	-6.08	-257.34	166,360.92	2,009,929.66	37.1235475	-98.4659449	6.08	0.25	0.00	-16.47
3,185.00	0.66	255.39	3,169.47	-6.45	-258.55	166,360.55	2,009,928.45	37.1235465	-98.4659490	6.45	0.24	-0.23	4.59
3,279.00	0.40	258.46	3,263.47	-6.65	-259.39	166,360.35	2,009,927.61	37.1235460	-98.4659519	6.65	0.28	-0.28	3.27
3,373.00	1.63	195.62	3,357.45	-8.00	-260.08	166,359.00	2,009,926.92	37.1235423	-98.4659542	8.00	1.59	1.31	-66.85
3,468.00	1.05	94.02	3,452.44	-9.36	-259.57	166,357.64	2,009,927.43	37.1235385	-98.4659525	9.36	2.22	-0.61	-106.95
3,563.00	0.88	80.57	3,547.42	-9.31	-257.98	166,357.69	2,009,929.02	37.1235387	-98.4659471	9.31	0.30	-0.18	-14.16
3,658.00	0.66	74.07	3,642.41	-9.04	-256.74	166,357.96	2,009,930.26	37.1235394	-98.4659428	9.04	0.25	-0.23	-6.84
3,752.00	0.88	60.27	3,736.41	-8.53	-255.59	166,358.47	2,009,931.41	37.1235408	-98.4659389	8.53	0.30	0.23	-14.68
3,843.00	0.97	52.54	3,827.39	-7.72	-254.37	166,359.28	2,009,932.63	37.1235430	-98.4659347	7.72	0.17	0.10	-8.49
3,937.00	0.88	38.91	3,921.38	-6.67	-253.29	166,360.33	2,009,933.71	37.1235459	-98.4659310	6.67	0.25	-0.10	-14.50
3,984.00	1.05	93.41	3,968.38	-6.41	-252.63	166,360.59	2,009,934.37	37.1235466	-98.4659287	6.41	1.91	0.36	115.96
4,018.00	4.84	153.96	4,002.33	-7.72	-251.69	166,359.28	2,009,935.31	37.1235430	-98.4659255	7.72	13.00	11.15	178.09
4,031.00	6.68	155.99	4,015.26	-8.91	-251.14	166,358.09	2,009,935.86	37.1235398	-98.4659236	8.91	14.24	14.15	15.62
4,078.00	11.74	167.32	4,061.65	-16.07	-248.98	166,350.93	2,009,938.02	37.1235201	-98.4659162	16.07	11.39	10.77	24.11

Survey Report

Company:	Mach Natural Resources	**Local Co-ordinate Reference:**	Well Jahay 1-34-11 1H
Project:	Barber County, KS (NAD 27)	**TVD Reference:**	1445' GL + 16' KB @ 1461.00usft (Atlas 3)
Site:	Jahay	**MD Reference:**	1445' GL + 16' KB @ 1461.00usft (Atlas 3)
Well:	Jahay 1-34-11 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Svy	**Database:**	.Total Directional Production DB

Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Geo Coordinates Latitude (°)	Geo Coordinates Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,126.00	16.57	165.74	4,108.17	-27.48	-246.22	166,339.52	2,009,940.78	37.1234888	-98.4659067	27.48	10.09	10.06	-3.29
4,173.00	18.24	167.24	4,153.02	-41.15	-242.94	166,325.85	2,009,944.06	37.1234512	-98.4658955	41.15	3.68	3.55	3.19
4,218.00	23.25	169.78	4,195.09	-56.77	-239.81	166,310.23	2,009,947.19	37.1234083	-98.4658848	56.77	11.31	11.13	5.64
4,265.00	28.09	176.29	4,237.45	-76.95	-237.44	166,290.05	2,009,949.56	37.1233529	-98.4658767	76.95	11.90	10.30	13.85
4,313.00	32.31	179.01	4,278.93	-101.07	-236.49	166,265.93	2,009,950.51	37.1232866	-98.4658735	101.07	9.24	8.79	5.67
4,360.00	38.55	179.80	4,317.20	-128.30	-236.22	166,238.70	2,009,950.78	37.1232118	-98.4658726	128.30	13.31	13.28	1.68
4,408.00	39.74	178.84	4,354.43	-158.60	-235.86	166,208.40	2,009,951.14	37.1231286	-98.4658714	158.60	2.78	2.48	-2.00
4,428.10	41.28	178.60	4,369.71	-171.65	-235.57	166,195.35	2,009,951.43	37.1230928	-98.4658704	171.65	7.70	7.66	-1.17
Unit Entry: 4428.10' MD (385 FWL/2)													
4,455.00	43.34	178.31	4,389.60	-189.75	-235.08	166,177.25	2,009,951.92	37.1230431	-98.4658687	189.75	7.70	7.66	-1.09
4,502.00	48.84	181.56	4,422.19	-223.59	-235.09	166,143.41	2,009,951.91	37.1229501	-98.4658688	223.59	12.72	11.70	6.91
4,549.00	52.79	180.24	4,451.88	-260.01	-235.65	166,106.99	2,009,951.35	37.1228501	-98.4658708	260.01	8.68	8.40	-2.81
4,597.00	56.40	180.15	4,479.69	-299.12	-235.78	166,067.88	2,009,951.22	37.1227427	-98.4658713	299.12	7.52	7.52	-0.19
4,643.00	59.43	179.63	4,504.12	-338.09	-235.70	166,028.91	2,009,951.30	37.1226357	-98.4658711	338.09	6.66	6.59	-1.13
4,692.00	61.58	180.59	4,528.24	-380.74	-235.79	165,986.26	2,009,951.21	37.1225185	-98.4658714	380.74	4.71	4.39	1.96
4,739.00	62.81	180.24	4,550.17	-422.31	-236.09	165,944.69	2,009,950.91	37.1224044	-98.4658725	422.31	2.70	2.62	-0.74
4,787.00	63.52	179.63	4,571.83	-465.14	-236.04	165,901.86	2,009,950.96	37.1222867	-98.4658724	465.14	1.86	1.48	-1.27
4,827.70	64.13	179.09	4,589.79	-501.66	-235.63	165,865.34	2,009,951.37	37.1221864	-98.4658710	501.66	1.90	1.49	-1.32
HL Cross: 4827.70' MD (383 FWL/2, 330' FNL)													
4,834.00	64.22	179.01	4,592.53	-507.33	-235.54	165,859.67	2,009,951.46	37.1221709	-98.4658707	507.33	1.90	1.49	-1.31
4,882.00	68.09	178.40	4,611.93	-551.22	-234.54	165,815.78	2,009,952.46	37.1220503	-98.4658673	551.22	8.15	8.06	-1.27
4,926.00	73.80	178.05	4,626.29	-592.77	-233.25	165,774.23	2,009,953.75	37.1219362	-98.4658630	592.77	13.00	12.98	-0.80
4,948.00	76.00	178.05	4,632.02	-614.00	-232.53	165,753.00	2,009,954.47	37.1218779	-98.4658605	614.00	10.00	10.00	0.00
5,011.00	80.48	178.57	4,644.86	-675.63	-230.71	165,691.37	2,009,956.29	37.1217086	-98.4658544	675.63	7.16	7.11	0.83
5,042.00	80.84	178.22	4,649.89	-706.21	-229.86	165,660.79	2,009,957.14	37.1216247	-98.4658515	706.21	1.61	1.16	-1.13
5,074.00	82.24	177.25	4,654.60	-737.83	-228.60	165,629.17	2,009,958.40	37.1215378	-98.4658472	737.83	5.30	4.38	-3.03
5,089.00	84.40	177.52	4,656.34	-752.72	-227.92	165,614.28	2,009,959.08	37.1214969	-98.4658449	752.72	14.51	14.40	1.80
5,105.00	86.68	177.87	4,657.59	-768.65	-227.28	165,598.35	2,009,959.72	37.1214532	-98.4658427	768.65	14.42	14.25	2.19
5,120.00	87.82	177.34	4,658.31	-783.62	-226.66	165,583.38	2,009,960.34	37.1214120	-98.4658406	783.62	8.38	7.60	-3.53
5,137.00	88.79	177.17	4,658.81	-800.59	-225.84	165,566.41	2,009,961.16	37.1213654	-98.4658378	800.59	5.79	5.71	-1.00
5,152.00	90.07	176.99	4,658.96	-815.57	-225.08	165,551.43	2,009,961.92	37.1213243	-98.4658352	815.57	8.62	8.53	-1.20
5,168.00	91.12	177.08	4,658.79	-831.55	-224.25	165,535.45	2,009,962.75	37.1212804	-98.4658324	831.55	6.59	6.56	0.56
5,215.00	93.10	178.13	4,657.06	-878.48	-222.29	165,488.52	2,009,964.71	37.1211515	-98.4658257	878.48	4.77	4.21	2.23
5,263.00	93.41	178.05	4,654.34	-926.37	-220.69	165,440.63	2,009,966.31	37.1210200	-98.4658203	926.37	0.67	0.65	-0.17
5,310.00	92.88	178.49	4,651.76	-973.28	-219.27	165,393.72	2,009,967.73	37.1208912	-98.4658155	973.28	1.46	-1.13	0.94
5,357.00	92.62	179.28	4,649.50	-1,020.22	-218.36	165,346.78	2,009,968.64	37.1207622	-98.4658124	1,020.22	1.77	-0.55	1.68
5,404.00	90.11	179.89	4,648.39	-1,067.20	-218.02	165,299.80	2,009,968.98	37.1206332	-98.4658113	1,067.20	5.50	-5.34	1.30
5,452.00	89.27	179.45	4,648.64	-1,115.20	-217.74	165,251.80	2,009,969.26	37.1205014	-98.4658105	1,115.20	1.98	-1.75	-0.92

Survey Report

Company:	Mach Natural Resources	**Local Co-ordinate Reference:**	Well Jahay 1-34-11 1H
Project:	Barber County, KS (NAD 27)	**TVD Reference:**	1445' GL + 16' KB @ 1461.00usft (Atlas 3)
Site:	Jahay	**MD Reference:**	1445' GL + 16' KB @ 1461.00usft (Atlas 3)
Well:	Jahay 1-34-11 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Svy	**Database:**	.Total Directional Production DB

Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Geo Coordinates Latitude (°)	Geo Coordinates Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,545.00	91.69	181.12	4,647.87	-1,208.18	-218.21	165,158.82	2,009,968.79	37.1202460	-98.4658122	1,208.18	3.16	2.60	1.80
5,635.00	92.26	181.12	4,644.76	-1,298.11	-219.96	165,068.89	2,009,967.04	37.1199990	-98.4658183	1,298.11	0.63	0.63	0.00
5,674.00	92.44	180.95	4,643.16	-1,337.07	-220.67	165,029.93	2,009,966.33	37.1198920	-98.4658208	1,337.07	0.63	0.46	-0.44
5,725.00	91.03	181.03	4,641.62	-1,388.04	-221.55	164,978.96	2,009,965.45	37.1197521	-98.4658238	1,388.04	2.77	-2.76	0.16
5,758.00	89.54	179.98	4,641.46	-1,421.04	-221.84	164,945.96	2,009,965.16	37.1196614	-98.4658249	1,421.04	5.52	-4.52	-3.18
5,789.00	89.67	180.15	4,641.67	-1,452.03	-221.88	164,914.97	2,009,965.12	37.1195763	-98.4658250	1,452.03	0.69	0.42	0.55
5,813.00	89.14	180.42	4,641.92	-1,476.03	-221.99	164,890.97	2,009,965.01	37.1195104	-98.4658255	1,476.03	2.48	-2.21	1.13
5,843.00	87.82	180.95	4,642.72	-1,506.02	-222.35	164,860.98	2,009,964.65	37.1194280	-98.4658267	1,506.02	4.74	-4.40	1.77
5,872.00	86.95	181.03	4,644.04	-1,534.98	-222.85	164,832.02	2,009,964.15	37.1193485	-98.4658285	1,534.98	3.01	-3.00	0.28
5,903.00	86.90	180.86	4,645.70	-1,565.94	-223.36	164,801.06	2,009,963.64	37.1192635	-98.4658303	1,565.94	0.57	-0.16	-0.55
5,950.00	88.57	179.45	4,647.56	-1,612.90	-223.49	164,754.10	2,009,963.51	37.1191345	-98.4658308	1,612.90	4.65	3.55	-3.00
5,993.00	88.40	179.63	4,648.70	-1,655.88	-223.15	164,711.12	2,009,963.85	37.1190164	-98.4658297	1,655.88	0.58	-0.40	0.42
6,082.00	88.66	179.72	4,650.98	-1,744.85	-222.64	164,622.15	2,009,964.36	37.1187721	-98.4658280	1,744.85	0.31	0.29	0.10
6,171.00	89.10	179.54	4,652.72	-1,833.83	-222.07	164,533.17	2,009,964.93	37.1185277	-98.4658262	1,833.83	0.53	0.49	-0.20
6,260.00	89.45	179.80	4,653.84	-1,922.82	-221.55	164,444.18	2,009,965.45	37.1182833	-98.4658245	1,922.82	0.49	0.39	0.29
6,351.00	89.32	179.45	4,654.82	-2,013.81	-220.96	164,353.19	2,009,966.04	37.1180334	-98.4658226	2,013.81	0.41	-0.14	-0.38
6,441.00	88.79	179.19	4,656.31	-2,103.79	-219.89	164,263.21	2,009,967.11	37.1177863	-98.4658191	2,103.79	0.66	-0.59	-0.29
6,529.00	90.37	179.36	4,656.95	-2,191.78	-218.78	164,175.22	2,009,968.22	37.1175446	-98.4658153	2,191.78	1.81	1.80	0.19
6,618.00	90.73	179.10	4,656.10	-2,280.77	-217.58	164,086.23	2,009,969.42	37.1173002	-98.4658114	2,280.77	0.50	0.40	-0.29
6,708.00	89.05	178.40	4,656.27	-2,370.74	-215.62	163,996.26	2,009,971.38	37.1170531	-98.4658047	2,370.74	2.02	-1.87	-0.78
6,796.00	88.88	178.57	4,657.86	-2,458.70	-213.29	163,908.30	2,009,973.71	37.1168116	-98.4657969	2,458.70	0.27	-0.19	0.19
6,886.00	89.27	178.57	4,659.31	-2,548.66	-211.05	163,818.34	2,009,975.95	37.1165645	-98.4657893	2,548.66	0.43	0.43	0.00
6,980.00	89.49	178.49	4,660.33	-2,642.62	-208.63	163,724.38	2,009,978.37	37.1163064	-98.4657811	2,642.62	0.25	0.23	-0.09
7,075.00	89.49	178.22	4,661.17	-2,737.58	-205.91	163,629.42	2,009,981.09	37.1160456	-98.4657719	2,737.58	0.28	0.00	-0.28
7,168.00	90.59	178.40	4,661.11	-2,830.54	-203.16	163,536.46	2,009,983.84	37.1157903	-98.4657626	2,830.54	1.20	1.18	0.19
7,262.00	89.41	178.57	4,661.11	-2,924.50	-200.68	163,442.50	2,009,986.32	37.1155322	-98.4657542	2,924.50	1.27	-1.26	0.18
7,357.00	90.24	178.05	4,661.40	-3,019.46	-197.88	163,347.54	2,009,989.12	37.1152715	-98.4657447	3,019.46	1.03	0.87	-0.55
7,451.00	89.93	180.24	4,661.26	-3,113.44	-196.48	163,253.56	2,009,990.52	37.1150133	-98.4657400	3,113.44	2.35	-0.33	2.33
7,545.00	90.11	180.86	4,661.23	-3,207.44	-197.38	163,159.56	2,009,989.62	37.1147552	-98.4657432	3,207.44	0.69	0.19	0.66
7,639.00	89.93	180.59	4,661.19	-3,301.43	-198.57	163,065.57	2,009,988.43	37.1144970	-98.4657474	3,301.43	0.35	-0.19	-0.29
7,733.00	89.76	181.65	4,661.45	-3,395.41	-200.40	162,971.59	2,009,986.60	37.1142389	-98.4657539	3,395.41	1.14	-0.18	1.13
7,828.00	88.57	180.42	4,662.83	-3,490.38	-202.12	162,876.62	2,009,984.88	37.1139781	-98.4657599	3,490.38	1.80	-1.25	-1.29
7,922.00	88.22	179.98	4,665.47	-3,584.34	-202.45	162,782.66	2,009,984.55	37.1137200	-98.4657611	3,584.34	0.60	-0.37	-0.47
8,017.00	89.01	180.33	4,667.76	-3,679.32	-202.71	162,687.68	2,009,984.29	37.1134592	-98.4657621	3,679.32	0.91	0.83	0.37
8,111.00	89.58	179.72	4,668.92	-3,773.31	-202.75	162,593.69	2,009,984.25	37.1132011	-98.4657624	3,773.31	0.89	0.61	-0.65
8,204.00	90.99	180.07	4,668.46	-3,866.30	-202.58	162,500.70	2,009,984.42	37.1129457	-98.4657619	3,866.30	1.56	1.52	0.38
8,298.00	90.73	180.51	4,667.05	-3,960.29	-203.05	162,406.71	2,009,983.95	37.1126875	-98.4657636	3,960.29	0.54	-0.28	0.47

Survey Report

Company:	Mach Natural Resources	**Local Co-ordinate Reference:**	Well Jahay 1-34-11 1H
Project:	Barber County, KS (NAD 27)	**TVD Reference:**	1445' GL + 16' KB @ 1461.00usft (Atlas 3)
Site:	Jahay	**MD Reference:**	1445' GL + 16' KB @ 1461.00usft (Atlas 3)
Well:	Jahay 1-34-11 1H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Svy	**Database:**	.Total Directional Production DB

Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Map Coordinates Northing (usft)	Map Coordinates Easting (usft)	Geo Coordinates Latitude (°)	Geo Coordinates Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,392.00	89.10	180.24	4,667.18	-4,054.29	-203.67	162,312.71	2,009,983.33	37.1124294	-98.4657659	4,054.29	1.76	-1.73	-0.29
8,486.00	89.54	180.24	4,668.30	-4,148.28	-204.06	162,218.72	2,009,982.94	37.1121712	-98.4657673	4,148.28	0.47	0.47	0.00
8,580.00	89.23	180.24	4,669.31	-4,242.27	-204.45	162,124.73	2,009,982.55	37.1119131	-98.4657688	4,242.27	0.33	-0.33	0.00
8,674.00	89.71	180.42	4,670.18	-4,336.27	-205.00	162,030.73	2,009,982.00	37.1116550	-98.4657708	4,336.27	0.55	0.51	0.19
8,769.00	87.91	180.33	4,672.15	-4,431.24	-205.62	161,935.76	2,009,981.38	37.1113941	-98.4657730	4,431.24	1.90	-1.89	-0.09
8,863.00	88.35	180.24	4,675.22	-4,525.19	-206.08	161,841.81	2,009,980.92	37.1111361	-98.4657748	4,525.19	0.48	0.47	-0.10
8,957.00	89.10	179.54	4,677.31	-4,619.16	-205.90	161,747.84	2,009,981.10	37.1108780	-98.4657743	4,619.16	1.09	0.80	-0.74
9,051.00	89.67	179.54	4,678.32	-4,713.16	-205.15	161,653.84	2,009,981.85	37.1106199	-98.4657718	4,713.16	0.61	0.61	0.00
9,145.00	90.02	179.01	4,678.57	-4,807.15	-203.96	161,559.85	2,009,983.04	37.1103617	-98.4657678	4,807.15	0.68	0.37	-0.56
9,239.00	90.55	178.40	4,678.11	-4,901.12	-201.84	161,465.88	2,009,985.16	37.1101036	-98.4657607	4,901.12	0.86	0.56	-0.65
9,333.00	91.25	178.31	4,676.63	-4,995.07	-199.14	161,371.93	2,009,987.86	37.1098456	-98.4657515	4,995.07	0.75	0.74	-0.10
9,427.00	91.38	178.13	4,674.47	-5,089.00	-196.22	161,278.00	2,009,990.78	37.1095876	-98.4657416	5,089.00	0.24	0.14	-0.19
9,463.00	91.56	178.22	4,673.55	-5,124.97	-195.07	161,242.03	2,009,991.93	37.1094888	-98.4657378	5,124.97	0.56	0.50	0.25
Last Svy: 9463.00' MD, 4673.55' TVD													
9,515.00	91.56	178.22	4,672.13	-5,176.93	-193.46	161,190.07	2,009,993.54	37.1093461	-98.4657323	5,176.93	0.00	0.00	0.00
PTB: 9515.00' MD (393 FWL/2, 341' FSL)													

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TD BHL (Jahay 1-34-11 - actual wellpath hits target center - Point	0.00	0.00	4,672.13	-5,176.93	-193.46	161,190.08	2,009,993.55	37.1093461	-98.4657323

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
4,428.10	4,369.71	-171.65	-235.57	Unit Entry: 4428.10' MD (385 FWL/2)
4,827.70	4,589.79	-501.66	-235.63	HL Cross: 4827.70' MD (383 FWL/2, 330' FNL)
9,463.00	4,673.55	-5,124.97	-195.07	Last Svy: 9463.00' MD, 4673.55' TVD
9,515.00	4,672.13	-5,176.93	-193.46	PTB: 9515.00' MD (393 FWL/2, 341' FSL)

Checked By: _____ Approved By: _____ Date: _____

Prepared By: Tyler Howle

Jahay 1-34-11 1H

Final 3/18/2024

Completion Procedure

Mississippi Formation

AFE#DC24020

Surface Location: 173' FSL and 2021' FEL in Section 36-33S-11W

Bottom Hole Location: 356' FSL and 2256' FEL in Section 1-34S-11W

Latitude 37.123564 Longitude -98.465063

Barber County, KS

API #15-007-24412-01-00

KB: 16' AGL
GLE: 1445'
TD: 9515' MD (4672' TVD)
PBTD: 9337' 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	STC	8.921	8.765	3,520	2,020	453,000	0.0773
7"	4,980'	26	P-110	BPN	6.276	6.151	9,950	6,230	693,000	0.0383
4-1/2"	4850' - 9512'	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 STC
Intermediate: 7" 26# P-110 BPN

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 Hazelton, KS. North 2.25 mi on 1st St/Tri-City Rd, west 3.5 mi on Gerlane Rd, north into.

Directional:

Horizontal well. KOP at 3984'. Build Section from 3984' - 5152' MD. TD at 9515' MD ; 4672' TVD. Average TVD in lateral is ~4659'.
Bottom Hole Location: 356' FSL and 2256' FEL in Section 1-34S-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 10 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.

Contact	Cell Number
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**

*S*top 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!

*A*ccountability

- 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.

*F*amily 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?

*E*valuate

- Every job can be performed safely.
- Unnecessary risks are not to be taken to complete any job.
- Complete a job safely 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 (ensureing 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 @	9,337'					
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 accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 2) as follows:

STAGE 2

	Top Perf @	8,867'					
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 accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 3) as follows:

STAGE 3

	Top Perf @	8,440'					
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 accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 4) as follows:

STAGE 4

	Top Perf @	8,013'					
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 accroding to packer sheet. Drop rate to 10 bpm 50 bbls before seating ball.

Frac the MISSISSIPPI (Stage 5) as follows:

STAGE 5

	Top Perf @	7,543'					
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

	Top Perf @	7,116'					
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 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

	Top Perf @	6,647'					
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 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

	Top Perf @	6,220'					
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 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

	Top Perf @	5,732'					
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 10) as follows:

STAGE 10

	Top Perf @	5,254'					
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: **30,405 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 +/- 4,830' of 2-7/8" 6.5# L-80 EUE tbg.
8) TIH with **BAKER** ESP as per designed. (Bottom of ESP at +/-4,830')
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.

Notes

1) Hold safety meeting/JSA before commencing operations each morning, before each shift change, and before commencing any new phase of an operation

2) Report any injuries, spills or releases to Justin Flanagan, Tyler Howle, Dustin Elmore, Andrew Whiteneck or Rick Hughes as soon as reasonably possible.

3) Sign all field tickets. Inform all vendors that a signed field ticket **must** accompany invoice before payment will be authorized.

4) Fill out the morning report in Wellview and sync prior to 6 am each day

MACH RESOURCES OPERATIONS CONTACT LIST

Mach Resources
14201 Wireless Way, Suite 300
Oklahoma City, OK 73134

Rick Hughes: VP|Operations
405-252-8151|Office
405-249-0484|Mobile
rhughes@machresources.com

Dustin Elmore: Sr Production Engineer
405-252-8152|Office
580-747-6691|Mobile
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Tyler Howle: Completions Engineer
405-252-8150|Office
405-234-0004|Mobile
thowle@machresources.com

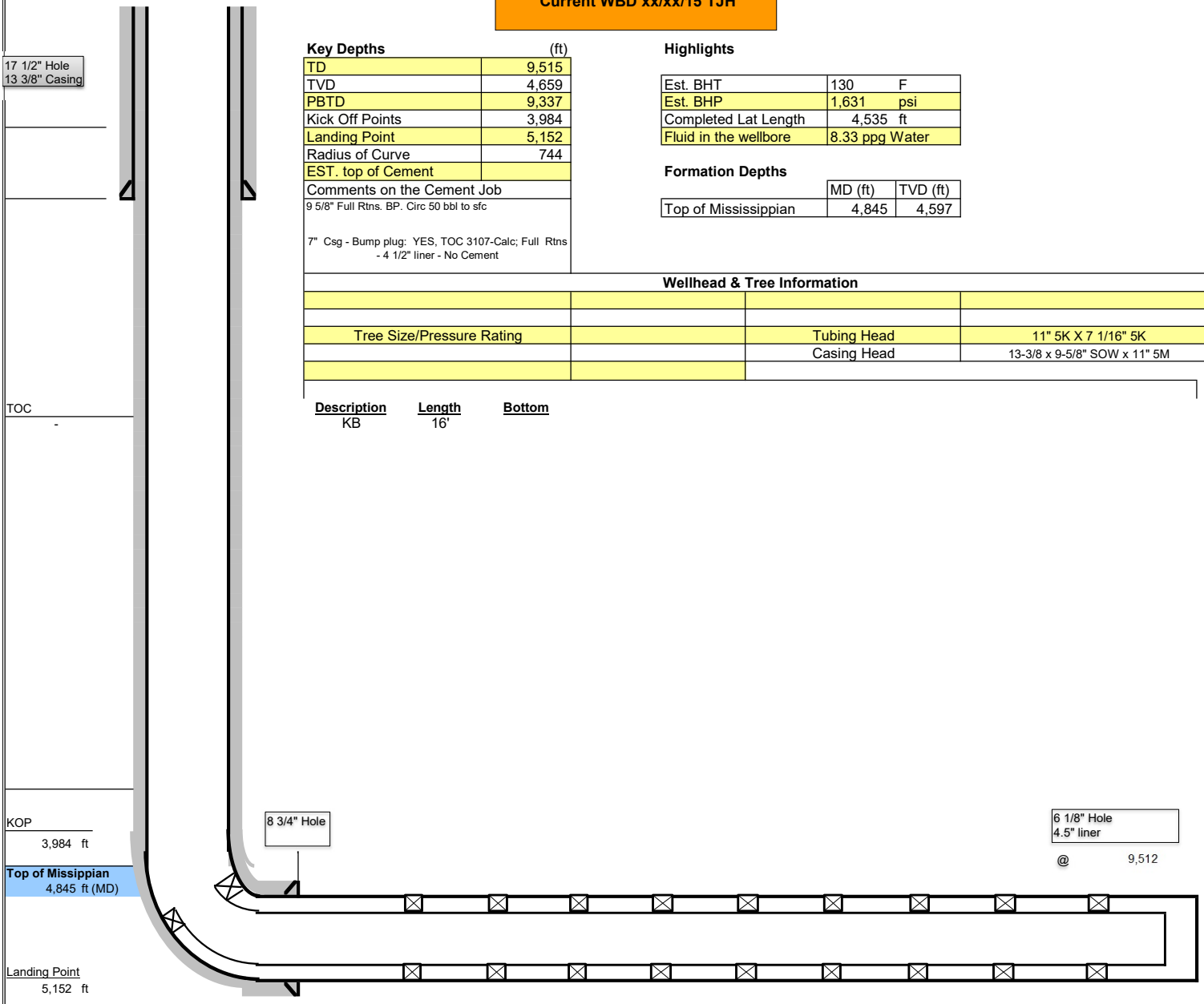
Clarence Watts
405-546-9694|Mobile
cwatts@machresources.com

Mach Resources

14201 Wireless Way
Oklahoma City, OK 73134

		Casing									
Lease :	**Jahay 1-34-11 1H**										
API No:	**15-007-24412-01-00**	**Size**	**Weight**	**Grade**	**Thread**	**Depth (ft)**	**ID (in)**	**Drift**	**Collapse**	**Burst**	**BBL/Ft**
		9 5/8"	36.0	J-55	STC	334	8.921	8.765	2020	3520	0.0773
KB :	16'	7"	26.0	P-110	BPN	4980	6.276	6.151	6230	9950	0.0383
GL:	1,445'	4-1/2"	13.5	P-110	BTC	4850' - 9512'	3.920	3.795	10670	12410	0.0149
Legals :											
County:	Barber										
State:	KS	**Tubing**									
Spud:		**Size**	**Weight**	**Grade**	**Thread**	**Depth**	**ID**	**Drift**	**Collapse**	**Burst**	**BBL/Ft**
RR:		2-7/8"	6.5	J-55	EUE	TBD	2.441	2.347	7680	7260	0.00579
Latitude:	37.123564000										
Longitude:	-98.465063000										

Current WBD xx/xx/15 TJH



Key Depths	(ft)
TD	9,515
TVD	4,659
PBTD	9,337
Kick Off Points	3,984
Landing Point	5,152
Radius of Curve	744
EST. top of Cement	
Comments on the Cement Job	
9 5/8" Full Rtns. BP. Circ 50 bbl to sfc	
7" Csg - Bump plug: YES, TOC 3107-Calc; Full Rtns - 4 1/2" liner - No Cement	

Highlights

Est. BHT	130	F
Est. BHP	1,631	psi
Completed Lat Length	4,535	ft
Fluid in the wellbore	8.33 ppg Water	

Formation Depths

	MD (ft)	TVD (ft)
Top of Mississippian	4,845	4,597

Wellhead & Tree Information

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

Description	**Length**	**Bottom**
KB	16'	

	Designed					
	Bottom	Length	Top	Actual	Ball	Stage
TD	9,515'					
P-Sleeve #1	9,279'	3'	9,276'	9,337'		1
Packer #1	9,056'	4'	9,052'	9,123'		
Sleeve #2	8,836'	4'	8,832'	8,867'	3.125''	2
Packer #2	8,612'	4'	8,608'	8,653'		
Sleeve #3	8,392'	4'	8,388'	8,440'	3.188''	3
Packer #3	8,168'	4'	8,164'	8,226'		
Sleeve #4	7,948'	4'	7,944'	8,013'	3.250''	4
Packer #4	7,724'	4'	7,720'	7,757'		
Sleeve #5	7,504'	4'	7,500'	7,543'	3.312''	5
Packer #5	7,280'	4'	7,276'	7,330'		
Sleeve #6	7,060'	4'	7,056'	7,116'	3.375''	6
Packer #6	6,836'	4'	6,831'	6,902'		
Sleeve #7	6,616'	4'	6,612'	6,647'	3.437''	7
Packer #7	6,391'	4'	6,387'	6,433'		
Sleeve #8	6,171'	4'	6,167'	6,220'	3.500''	8
Packer #8	5,947'	4'	5,943'	5,960'		
Sleeve #9	5,727'	4'	5,723'	5,732'	3.562''	9
Packer #9	5,503'	4'	5,499'	5,467'		
Sleeve #10	5,283'	4'	5,279'	5,254'	3.625''	10
7'' Shoe	4,980'					

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	-173	5531	3259	2020
BHL	9515	91.56	178.22	4672.13	-5176.93	-193.46	5176.93	0.00	5005	356	3041	2256
Mississippian Entry	4845	65.11	178.87	4596.98	-517.39	-235.31	517.39	3.33	346	5015	3021	2260
Top OH	4980	78.28	178.31	4638.54	-645.30	-231.61	645.30	8.56	474	4887	3024	2257
Bottom OH	9515	91.56	178.22	4672.13	-5176.93	-193.46	5176.93	0.00	5005	356	3041	2256

Survey Points		X	Y					m
	NW Corner XY Coord	2006929	166216				North Line slope	-0.006818182
	SW Corner XY Coord	2006954	160811	Surface XY	2010187	166367	East Line slope	-0.008070571
	NE Corner XY Coord	2012209	166180				South Line slope	0.007738769
	SE Corner XY Coord	2012252	160852				West Line slope	-0.004625347

	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
									-173	5531	3259	2020
	228.00	0.26	8.50	228.00	0.51	0.08	-0.51	0.11	-174	5531	3259	2020
	404.00	0.62	17.38	403.99	1.82	0.42	-1.82	0.21	-175	5533	3259	2020
	495.00	3.12	301.00	494.94	3.56	-1.56	-3.56	3.33	-177	5535	3257	2022
	584.00	4.97	285.54	583.72	5.84	-7.35	-5.84	2.39	-179	5537	3251	2028
	672.00	6.42	273.14	671.29	7.13	-15.93	-7.13	2.15	-180	5538	3243	2036
	762.00	7.60	259.78	760.62	6.35	-26.82	-6.35	2.23	-179	5538	3232	2047
	853.00	9.27	264.18	850.63	4.54	-40.03	-4.54	1.97	-177	5536	3219	2060
	941.00	8.18	259.52	937.61	2.68	-53.24	-2.68	1.48	-176	5534	3205	2074
	1,031.00	8.84	269.45	1,026.63	1.45	-66.45	-1.45	1.79	-174	5533	3192	2087
	1,120.00	7.47	247.83	1,114.75	-0.80	-78.65	0.80	3.74	-172	5531	3180	2099
	1,209.00	8.57	276.57	1,202.91	-2.22	-90.60	2.22	4.62	-170	5529	3168	2111
	1,302.00	8.13	274.90	1,294.92	-0.87	-104.04	0.87	0.54	-172	5531	3155	2125
	1,392.00	7.69	272.00	1,384.07	-0.11	-116.39	0.11	0.66	-172	5532	3142	2137
	1,581.00	7.82	270.95	1,571.34	0.54	-141.89	-0.54	0.10	-173	5533	3117	2162
	1,674.00	7.60	268.92	1,663.50	0.53	-154.36	-0.53	0.38	-173	5533	3104	2175
	1,769.00	6.73	269.01	1,757.76	0.32	-166.21	-0.32	0.92	-172	5533	3092	2187
	1,864.00	5.98	265.50	1,852.17	-0.17	-176.71	0.17	0.89	-172	5532	3082	2197
	1,958.00	7.34	267.25	1,945.54	-0.84	-187.59	0.84	1.46	-171	5532	3071	2208
	2,052.00	6.86	265.06	2,038.81	-1.61	-199.18	1.61	0.59	-170	5531	3060	2220
	2,146.00	6.33	261.45	2,132.19	-2.87	-209.90	2.87	0.72	-169	5530	3049	2230
	2,240.00	5.49	260.84	2,225.69	-4.35	-219.46	4.35	0.90	-167	5528	3039	2240
	2,334.00	4.57	258.46	2,319.33	-5.82	-227.57	5.82	1.00	-166	5527	3031	2248
	2,429.00	4.22	259.26	2,414.05	-7.23	-234.71	7.23	0.37	-164	5526	3024	2255
	2,523.00	4.00	271.82	2,507.81	-7.77	-241.39	7.77	0.98	-164	5525	3017	2262
	2,617.00	3.34	298.02	2,601.62	-6.38	-247.08	6.38	1.90	-165	5527	3012	2268
	2,712.00	1.36	266.29	2,696.54	-5.15	-250.65	5.15	2.42	-166	5528	3008	2271
	2,806.00	1.27	257.50	2,790.52	-5.45	-252.78	5.45	0.23	-166	5527	3006	2273
	2,900.00	0.84	266.55	2,884.50	-5.71	-254.49	5.71	0.49	-166	5527	3004	2275
	2,996.00	0.88	266.73	2,980.49	-5.80	-255.92	5.80	0.04	-166	5527	3003	2276
	3,091.00	0.88	251.08	3,075.48	-6.08	-257.34	6.08	0.25	-165	5527	3001	2278
	3,185.00	0.66	255.39	3,169.47	-6.45	-258.55	6.45	0.24	-165	5527	3000	2279
	3,279.00	0.40	258.46	3,263.47	-6.65	-259.39	6.65	0.28	-165	5526	2999	2280
Top of Tangent	3,373.00	1.63	195.62	3,357.45	-8.00	-260.08	8.00	1.59	-163	5525	2999	2281
@ 0'	3,468.00	1.05	94.02	3,452.44	-9.36	-259.57	9.36	2.22	-162	5524	2999	2280
	3,563.00	0.88	80.57	3,547.42	-9.31	-257.98	9.31	0.30	-162	5524	3001	2279
	3,658.00	0.66	74.07	3,642.41	-9.04	-256.74	9.04	0.25	-162	5524	3002	2277
	3,752.00	0.88	60.27	3,736.41	-8.53	-255.59	8.53	0.30	-163	5524	3003	2276
Btm of Tangent	3,843.00	0.97	52.54	3,827.39	-7.72	-254.37	7.72	0.17	-164	5525	3004	2275
@ 0'	3,937.00	0.88	38.91	3,921.38	-6.67	-253.29	6.67	0.25	-165	5526	3005	2274
	3,984.00	1.05	93.41	3,968.38	-6.41	-252.63	6.41	1.91	-165	5527	3006	2273
	4,018.00	4.84	153.96	4,002.33	-7.72	-251.69	7.72	13.00	-164	5525	3007	2272
	4,031.00	6.68	155.99	4,015.26	-8.91	-251.14	8.91	14.24	-163	5524	3008	2272
	4,078.00	11.74	167.32	4,061.65	-16.07	-248.98	16.07	11.39	-155	5517	3010	2270
	4,126.00	16.57	165.74	4,108.17	-27.48	-246.22	27.48	10.09	-144	5505	3012	2267
	4,173.00	18.24	167.24	4,153.02	-41.15	-242.94	41.15	3.68	-130	5492	3016	2264
	4,218.00	23.25	169.78	4,195.09	-56.77	-239.81	56.77	11.31	-115	5476	3019	2261
	4,265.00	28.09	176.29	4,237.45	-76.95	-237.44	76.95	11.90	-95	5456	3021	2259
	4,313.00	32.31	179.01	4,278.93	-101.07	-236.49	101.07	9.24	-71	5432	3022	2258
	4,360.00	38.55	179.80	4,317.20	-128.30	-236.22	128.30	13.31	-43	5405	3022	2258
	4,408.00	39.74	178.84	4,354.43	-158.60	-235.86	158.60	2.78	-13	5374	3022	2258
	4,455.00	43.34	178.31	4,389.60	-189.75	-235.08	189.75	7.70	18	5343	3023	2257
	4,502.00	48.84	181.56	4,422.19	-223.59	-235.09	223.59	12.72	52	5309	3023	2257
	4,549.00	52.79	180.24	4,451.88	-260.01	-235.65	260.01	8.68	88	5273	3022	2258
	4,597.00	56.40	180.15	4,479.69	-299.12	-235.78	299.12	7.52	128	5234	3022	2259
	4,643.00	59.43	179.63	4,504.12	-338.09	-235.70	338.09	6.66	166	5195	3021	2259
	4,692.00	61.58	180.59	4,528.24	-380.74	-235.79	380.74	4.71	209	5152	3021	2259
	4,739.00	62.81	180.24	4,550.17	-422.31	-236.09	422.31	2.70	251	5110	3021	2260
	4,787.00	63.52	179.63	4,571.83	-465.14	-236.04	465.14	1.86	294	5068	3021	2260
	4,834.00	64.22	179.01	4,592.53	-507.33	-235.54	507.33	1.90	336	5025	3021	2260
	4,882.00	68.09	178.40	4,611.93	-551.22	-234.54	551.22	8.15	380	4982	3022	2259
	4,926.00	73.80	178.05	4,626.29	-592.77	-233.25	592.77	13.00	421	4940	3023	2259
	4,948.00	76.00	178.05	4,632.02	-614.00	-232.53	614.00	10.00	442	4919	3023	2258

5,011.00	80.48	178.57	4,644.86	-675.63	-230.71	675.63	7.16	504	4857	3025	2257
5,042.00	80.84	178.22	4,649.89	-706.21	-229.86	706.21	1.61	535	4827	3026	2256
5,074.00	82.24	177.25	4,654.60	-737.83	-228.60	737.83	5.30	566	4795	3027	2255
5,089.00	84.40	177.52	4,656.34	-752.72	-227.92	752.72	14.51	581	4780	3027	2254
5,105.00	86.68	177.87	4,657.59	-768.65	-227.28	768.65	14.42	597	4764	3028	2254
5,120.00	87.82	177.34	4,658.31	-783.62	-226.66	783.62	8.38	612	4749	3028	2253
5,137.00	88.79	177.17	4,658.81	-800.59	-225.84	800.59	5.79	629	4732	3029	2253
5,152.00	90.07	176.99	4,658.96	-815.57	-225.08	815.57	8.62	644	4717	3030	2252
5,168.00	91.12	177.08	4,658.79	-831.55	-224.25	831.55	6.59	660	4701	3031	2251
5,215.00	93.10	178.13	4,657.06	-878.48	-222.29	878.48	4.77	707	4654	3032	2250
5,263.00	93.41	178.05	4,654.34	-926.37	-220.69	926.37	0.67	755	4606	3034	2249
5,310.00	92.88	178.49	4,651.76	-973.28	-219.27	973.28	1.46	802	4559	3035	2248
5,357.00	92.62	179.28	4,649.50	-1,020.22	-218.36	1,020.22	1.77	848	4512	3036	2247
5,404.00	90.11	179.89	4,648.38	-1,067.20	-218.02	1,067.20	5.50	895	4465	3036	2247
5,452.00	89.27	179.45	4,648.64	-1,115.20	-217.74	1,115.20	1.98	943	4417	3036	2247
5,545.00	91.69	181.12	4,647.87	-1,208.18	-218.21	1,208.18	3.16	1036	4324	3035	2248
5,635.00	92.26	181.12	4,644.76	-1,298.11	-219.96	1,298.11	0.63	1126	4235	3033	2251
5,674.00	92.44	180.95	4,643.16	-1,337.07	-220.67	1,337.07	0.63	1165	4196	3032	2252
5,725.00	91.03	181.03	4,641.62	-1,388.04	-221.55	1,388.04	2.77	1216	4145	3031	2253
5,758.00	89.54	179.98	4,641.46	-1,421.04	-221.84	1,421.04	5.52	1249	4112	3030	2254
5,789.00	89.67	180.15	4,641.67	-1,452.03	-221.88	1,452.03	0.69	1280	4081	3030	2254
5,813.00	89.14	180.42	4,641.92	-1,476.03	-221.99	1,476.03	2.48	1304	4057	3030	2254
5,843.00	87.82	180.95	4,642.72	-1,506.02	-222.35	1,506.02	4.74	1334	4027	3029	2255
5,872.00	86.95	181.03	4,644.04	-1,534.98	-222.85	1,534.98	3.01	1363	3998	3029	2256
5,903.00	86.90	180.86	4,645.70	-1,565.94	-223.36	1,565.94	0.57	1394	3967	3028	2256
5,950.00	88.57	179.45	4,647.56	-1,612.90	-223.49	1,612.90	4.65	1441	3920	3028	2257
5,993.00	88.40	179.63	4,648.70	-1,655.88	-223.15	1,655.88	0.58	1484	3877	3028	2257
6,082.00	88.66	179.72	4,650.98	-1,744.85	-222.64	1,744.85	0.31	1573	3788	3028	2257
6,171.00	89.10	179.54	4,652.72	-1,833.83	-222.07	1,833.83	0.53	1662	3699	3028	2257
6,260.00	89.45	179.80	4,653.84	-1,922.82	-221.55	1,922.82	0.49	1751	3610	3028	2258
6,351.00	89.32	179.45	4,654.82	-2,013.81	-220.96	2,013.81	0.41	1842	3519	3028	2258
6,441.00	88.79	179.19	4,656.31	-2,103.79	-219.89	2,103.79	0.66	1932	3429	3029	2257
6,529.00	90.37	179.36	4,656.95	-2,191.78	-218.78	2,191.78	1.81	2020	3341	3030	2257
6,618.00	90.73	179.10	4,656.10	-2,280.77	-217.58	2,280.77	0.50	2109	3252	3031	2256
6,708.00	89.05	178.40	4,656.27	-2,370.74	-215.62	2,370.74	2.02	2199	3162	3032	2255
6,796.00	88.88	178.57	4,657.86	-2,458.70	-213.29	2,458.70	0.27	2287	3074	3034	2254
6,886.00	89.27	178.57	4,659.31	-2,548.66	-211.05	2,548.66	0.43	2377	2984	3036	2252
6,980.00	89.49	178.49	4,660.33	-2,642.62	-208.63	2,642.62	0.25	2471	2890	3038	2250
7,075.00	89.49	178.22	4,661.17	-2,737.58	-205.91	2,737.58	0.28	2566	2795	3040	2248
7,168.00	90.59	178.40	4,661.11	-2,830.54	-203.16	2,830.54	1.20	2659	2702	3042	2246
7,262.00	89.41	178.57	4,661.11	-2,924.50	-200.68	2,924.50	1.27	2753	2608	3044	2245
7,357.00	90.24	178.05	4,661.40	-3,019.46	-197.88	3,019.46	1.03	2848	2513	3047	2243
7,451.00	89.93	180.24	4,661.26	-3,113.44	-196.48	3,113.44	2.35	2942	2419	3048	2242
7,545.00	90.11	180.86	4,661.23	-3,207.44	-197.38	3,207.44	0.69	3036	2325	3046	2244
7,639.00	89.93	180.59	4,661.19	-3,301.43	-198.57	3,301.43	0.35	3130	2231	3045	2246
7,733.00	89.76	181.65	4,661.45	-3,395.41	-200.40	3,395.41	1.14	3224	2137	3043	2248
7,828.00	88.57	180.42	4,662.83	-3,490.38	-202.12	3,490.38	1.80	3319	2042	3040	2251
7,922.00	88.22	179.98	4,665.47	-3,584.34	-202.45	3,584.34	0.60	3413	1948	3040	2252
8,017.00	89.01	180.33	4,667.76	-3,679.32	-202.71	3,679.32	0.91	3507	1853	3039	2253
8,111.00	89.58	179.72	4,668.92	-3,773.31	-202.75	3,773.31	0.89	3601	1759	3038	2254
8,204.00	90.99	180.07	4,668.46	-3,866.30	-202.58	3,866.30	1.56	3694	1666	3038	2254
8,298.00	90.73	180.51	4,667.05	-3,960.29	-203.05	3,960.29	0.54	3788	1572	3037	2256
8,392.00	89.10	180.24	4,667.18	-4,054.29	-203.67	4,054.29	1.76	3882	1478	3036	2257
8,486.00	89.54	180.24	4,668.30	-4,148.28	-204.06	4,148.28	0.47	3976	1384	3035	2258
8,580.00	89.23	180.24	4,669.31	-4,242.27	-204.45	4,242.27	0.33	4070	1290	3035	2259
8,674.00	89.71	180.42	4,670.18	-4,336.27	-205.00	4,336.27	0.55	4164	1196	3034	2260
8,769.00	87.91	180.33	4,672.15	-4,431.24	-205.62	4,431.24	1.90	4259	1101	3033	2262
8,863.00	88.35	180.24	4,675.22	-4,525.19	-206.08	4,525.19	0.48	4353	1007	3032	2263
8,957.00	89.10	179.54	4,677.31	-4,619.16	-205.90	4,619.16	1.09	4447	913	3031	2264
9,051.00	89.67	179.54	4,678.32	-4,713.16	-205.15	4,713.16	0.61	4541	819	3032	2264
9,145.00	90.02	179.01	4,678.57	-4,807.15	-203.96	4,807.15	0.68	4635	725	3033	2263
9,239.00	90.55	178.40	4,678.11	-4,901.12	-201.84	4,901.12	0.86	4729	631	3034	2262
9,333.00	91.25	178.31	4,676.63	-4,995.07	-199.14	4,995.07	0.75	4823	537	3036	2260
9,427.00	91.38	178.13	4,674.47	-5,089.00	-196.22	5,089.00	0.24	4917	443	3039	2258
9,463.00	91.56	178.22	4,673.55	-5,124.97	-195.07	5,124.97	0.56	4953	408	3040	2257
9,515.00	91.56	178.22	4,672.13	-5,176.93	-193.46	5,176.93	0.00	5005	356	3041	2256

BCE-Mach LLC
Jahay 1-34-11 1H
Barber
2/27/2024
Surface

Ticket # P-6580

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

COMPANY	PROJECT NUMBER	AFE/WORK ORDER	DATE
BCE-Mach LLC	P-6580		2/27/2024

CONTRACTOR	Owner	LEGAL DESCRIPTION	API
Spinnaker Oil	Same	Sec 36, T33S, R11W	15-007-24412

LEASE & WELL #	COUNTY	STATE	MILEAGE
Jahay 1-34-11 1H	Barber	KS	300

DIRECTIONS

From Hazelton, KS - Head North 2.25 miles on Tri-City Rd. Then head West on Gerlane Rd for 3.5 miles. North into. Atlas 3

Pumping Services

☑ Surface ☐ Intermediate ☐ Long String ☐ Plug Back
☐ Squeeze ☐ Acid ☐ PTA ☐ Other

Casing Size	Casing Weig	Thread	Csng Grade	Thread	Plug. Cont.	Swage	Top Plug	Bottom Plug	% Excess
9 5/8	36.00	LTC	J-55		Yes	Yes	Yes	N/A	225%

Number and Type Units	BHST - F	Casing Depth	Depth - TVD - FT	Hole Size - Inches
Pump Truck, 1 ea. 660 Bulk Truck	83	300	300	12 1/4

Remarks	BHCT - F	Previous Csg	Depth - MD - FT	Mud Weight/Type - PPG
9-5/8" Top Plug, Head , 200 lbs Sugar, 1" pipe	80	Conductor	300	

Materials

Spacer	Qty - BBLS	Type	SPACER:
	40	H2O	H2O

BBL OF LEAD	# of Sacks	Type		LEAD CEMENT
49.9	95	Class A		95 Sacks Class A, 3% Gypsum, 1% SMS, 2.5% Calcium Chloride, 0.25 lb/sk Poly
H2O REQUIRED	Weight PPG	Yield Ft3/Sk	Water Gal/S	
41.1	11.40	2.95	18.16	

BBL OF TAIL	# of Sacks	Type		TAIL CEMENT
21.5	65	Class A		65 Sacks Class A, 3% Gypsum, 1% SMS, 2.5% Calcium Chloride, 0.25 lb/sk Poly
H2O REQUIRED	Weight PPG	Yield Ft3/Sk	Water Gal/S	
15.4	13.20	1.86	9.98	

Displace-ment	Qty - BBLS	Type	DISPLACEMENT
	22.7	H2O	H2O

BBL OF TAIL	# of Sacks	Type		TOP OUT IF NEEDED
56.4	240	Class A		480sk of Class A
H2O REQUIRED	Weight PPG	Yield Ft3/Sk	Water Gal/S	
36.0	14.80	1.32	6.30	

Notes:

Bulk Truck: *Front Pot Top Out | Back Pot Job Cement*
Lead - 6 hrs; Tail - 2.5 hrs
Variable blend cement - Use bbl counter for lead
Make sure your H2S monitor is charged and bump tested*

Sales Items

Casing Size	Casing Weight	Thread	
9 5/8	36.00	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 LLC
Jahay 1-34-11 1H
Barber
2/27/2024
Surface

Ticket # P-6580

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

Customer: BCE-Mach LLC
Customer Rep:
Mobile:
Well Name: Jahay 1-34-11 1H
Job Type: Surface
County: Barber
Casing: 9 5/8
State: Kansas
Field Supervisor: TYLER MELTON
API #: 15-007-24412
Date: 2/27/2024
Legals: Sec. 36-T33S-R11W
Proposal #: 48270001

Ref. #	Description	Quantity	Unit Price	Sub Total	Disc Unit Price	Total
	********** **Cementing Services** **********					
MLPU1	Pickup Mileage 1 unit (roundtrip miles)	300	$3.94	$1,182.00	$1.89	$567.00
MLHE2	Heavy Vehicle Mileage 2 units (roundtrip miles)	300	$13.56	$4,068.00	$6.51	$1,953.00
MLTN	Bulk Cement Delivery/Return (per Ton-Mile)	1,205	$2.73	$3,289.65	$1.31	$1,578.55
MXBK	Bulk Material Mixing Service Charge (Per cu.ft.)	160	$3.03	$484.80	$1.45	$232.00
CMTHD	Cement Head with manifold (per Job)	1	$1,895.00	$1,895.00	$909.60	$909.60
PC1K	Pump Charge 0-1000' (Per 4 hrs)	1	$1,887.60	$1,887.60	$906.05	$906.05
DAQ	Data Acquisition System	1	$1,331.00	$1,331.00	$638.88	$638.88
FLSCG	Fuel Surcharge (per unit/per job)	2	$605.00	$1,210.00	$290.40	$580.80
ENVFEE	Environmental Fee	1	$211.75	$211.75	$101.64	$101.64
DAMSS	Data Monitoring System/Supervisor	1	$800.00	$800.00	$384.00	$384.00
CIRON	Circulation Equipment (40' of equipment per job)	2	$1,512.50	$3,025.00	$726.00	$1,452.00
	********** **Cementing Materials** **********					
CSTD	Class A Type Standard Cement (per sack)	160	$31.81	$5,089.60	$15.27	$2,443.20
CEXTGYP	Gypsum (per lb)	452	$0.54	$244.08	$0.26	$117.52
CACCSMS	SMS (per lb)	151	$3.86	$582.86	$1.85	$279.35
CACCCC	Calcium Chloride (per lb)	376	$1.45	$545.20	$0.70	$263.20
CLCMPF	Poly Flake (per lb)	40	$3.23	$129.20	$1.55	$62.00
	********** **TOP OUT if needed** **********					
CSTD	Class A Type Standard Cement (per sack)	0	$31.81	$0.00	$15.27	$0.00
TOCMT	Top Out Cement Job charge (Per 2 hrs)	0	$1,975.00	$0.00	$1,975.00	$0.00
TOPIPE	1" Pipe for Top-Out (per ft)	0	$4.95	$0.00	$4.95	$0.00
HNDL	Handling Tools (per job)	0	$135.00	$0.00	$135.00	$0.00
	Additional Items (As Required)					
PCADD	Primary Pump Unit Addl Hours	0.0	$594.50	$0.00	$594.50	$0.00
BKADD	Bulk Unit Additional Hours (per unit/per hour)	0.0	$121.00	$0.00	$121.00	$0.00
VALV12	1" to 2" valves	1	$393.25	$393.25	$188.76	$188.76
SG36	Swage, 4 1/2" - 13 3/8" (per day)	1	$423.50	$423.50	$203.28	$203.28
H2SMON	H2S/Gas Monitors (per job)	1	$135.00	$135.00	$64.80	$64.80
FTRP958	9 5/8" Top Rubber Plug	0	$220.00	$0.00	$220.00	$0.00
CSUGAR	Sugar (per lb)	0	$1.47	$0.00	$1.47	$0.00
CDFDIAL	ATF Cement Defoamer (per gal)	15	$29.50	$442.50	$29.50	$442.50
RESTK	Product Restocking Fee (per truck)	1	$1,250.00	$1,250.00	$1,250.00	$1,250.00
WTCMT	Waiting on Cement Head after job (per hours)	0	$95.00	$0.00	$95.00	$0.00
CACCCC	Calcium Chloride (per lb)	0	$1.45	$0.00	$0.70	$0.00
	Book Price			$28,619.99		
	Estimated Job Cost (Exclusive of Sales Tax)					**$14,618.13**

Signature: Tyler Melton
Field Supervisor: AFE # DC24020
WELL NAME Jahay 1-34-11 1H
Signature:
Customer Rep: COST CODE 2230-2800
AMOUNT 14618.13
DATE 2/27

Jason S

2/27/2024

Thank You For Your Business!!!

BCE-Mach LLC
Jahay 1-34-11 1H
Barber
2/27/2024
Surface

Ticket # P-6580

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

COMPANY: BCE-Mach LLC	PROJECT NUMBER: P-6580	CUSTOMER REP:	DATE: 2/27/2024
CONTRACTOR: Spinnaker Oil	Owner: Same	LEGAL DESCRIPTION: Sec 36, T33S, R11W	
LEASE & WELL #: Jahay 1-34-11 1H	COUNTY: Barber	STATE: KS	MILEAGE: 300

Customer Job Satisfaction Sheet

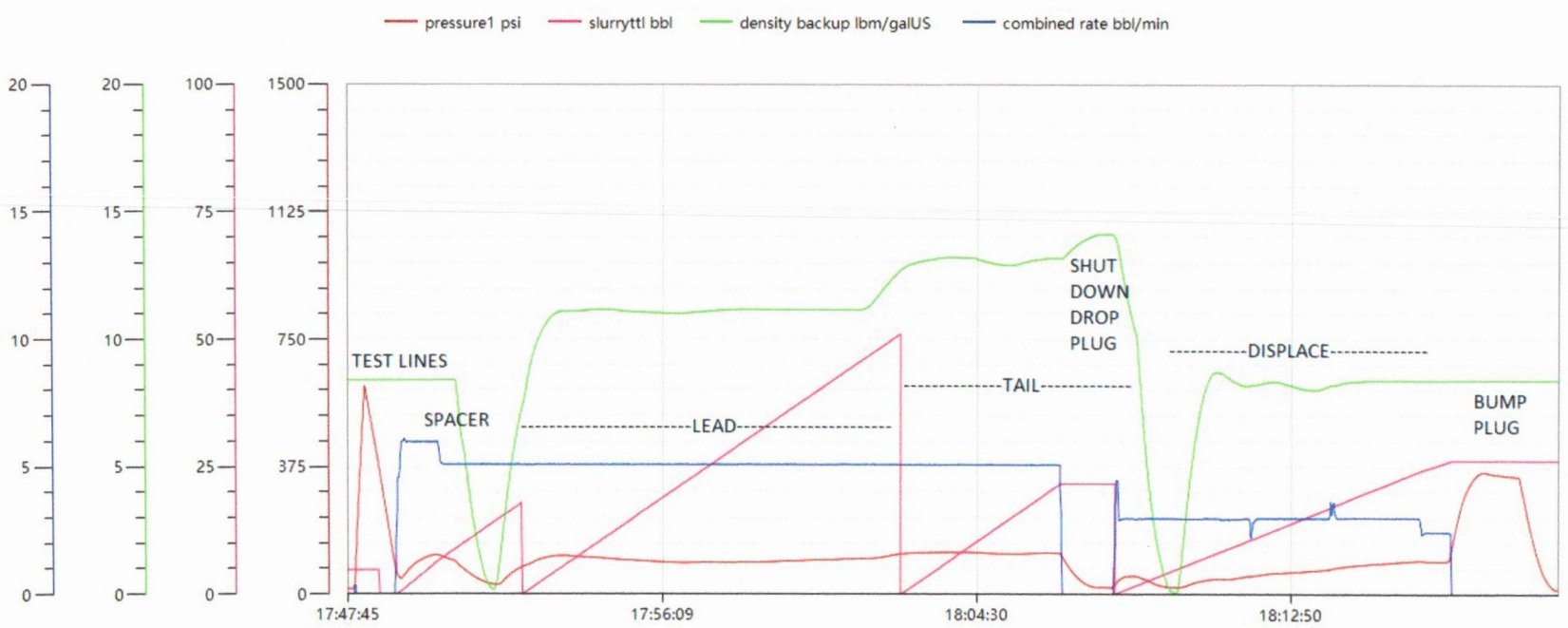
We will greatly appreciate if you can fill out a short survey regarding our performance today. Safety and service quality are our top priorities and we want to ensure that we are continually providing the best service possible in the safest manner as possible. These surveys are regularly reviewed and 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: _____ Date: 2/27

Chart Report



Date:2/27/2024 Well Name:JAHAY 1H Location:BARBER COUNTY Country:KANSAS Operators:MACH Supervisor:TYLER MELTON Jobtype:SURFACE Address: Comment:

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

JOB LOG

PROJECT NUMBER	TICKET DATE
P-6580	02/27/24

COMPANY	COUNTRY	STATE	COUNTY
BCE-Mach LLC	USA	KS	Barber

LEASE NAME / Well No.	EMPLOYEE NAME	CUSTOMER REP
Jahay 1-34-11 1H	TYLER MELTON	

FIELD	SEC / TWP / RNG	TICKET AMOUNT
	Sec 36, T33S, R11W	

API/UWI #	JOB PURPOSE	WELL TYPE
15-007-24412	Surface	

PUMP #1	316
PUMP #2	
PUMP #3	

Date	Time	Rate (BPM)	Volume (BBL)(GAL)	Press.(PSI) CSG.	Press.(PSI) Tbg	Job Description / Remarks
2/27/24	1620					ON LOCATION
	1620					SPOT TRUCKS AND RIG UP
	1640					SAFETY MEETING WITH ALL PARITES
	1658					TEST LINES TO 1500PSI
	1700	5BPM	40BBL	100		PUMP 40BBL WATER SPACER
	1704	5BPM	50BBL	120		PUMP 50BBL LEAD AT 11.4PPG
	1714	5BPM	21BBL	100		PUMP 21BBL TAIL AT 13.2PPG (CEMENT BACK 30BBL)
	1719					SHUT DOWN DROP PLUG
	1720	3BPM		100		DISPLACE
	1729	3BPM	22BBL	350		22GONE BUMP PLUG (100PSI TO 350PSI)
	1734					BLED OFF 1/2BBL FLOATS HELD
						FINAL LIFT -100PSI
						TOP OF TAIL - 40'

Supervisor Signature: Tyler Melton

Print Name:

Thank You For Using
Spinnaker Oilfield Services

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

SERVICE ORDER CONTRACT

Customer Name **BCE-Mach LLC** Ticket Number P-6580

Lease & Well Number Jahay 1-34-11 1H Date 2/27/2024

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:

BCE-Mach LLC
Jahay 1-34-11 1H
Barber
2/27/2024
Surface

Ticket # P-6580

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

LOCATION WATER TEST

General Information

Customer: **BCE-Mach LLC**

Date: 2/27/2024

Ticket # : P-6580

Time: 2/27/2024

Lease Name & # : Jahay 1-34-11 1H

Water Source: FRAC TANKS

Cementer: TYLER MELTON

Test Results Sample #1

			Standard Range
Temp	59	° F	50° to 100° F
pH	7.0		6.0 - 8.0
Sulfates	NONE	mg/L	Less Than 1500 mg/L
Chlorides	300	mg/L	Less Than 3000 mg/L
Lignins & Tannins	NONE	Yes/No	No

Test Results Sample #2

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

Remarks:

EQUIPMENT CHECKLIST

UNIT # 316

1. BEFORE THE JOB – PREPARE

- [x] Power up the unit, ensuring all electronics are functioning, and recalibrate all console pressure gauges to atmospheric pressure
- [x] Check the cement head (visually inspect), vacuum breakers, and dry cement line.
- [x] 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.
- [x] 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.
- [x] Check the bulk equipment; compressors, valves, pop-offs, to make sure it airs up and hold pressure.
- [x] Check the casing cement head, O-rings, adapters (sizes and thread types).
- [x] Check the bulk paperwork, ensuring all correct cement and volumes are on location.
- [x] Check to make sure all chemicals and plugs are on location. Check the auxiliary boost pump, if any.
- [x] Perform a Water Analysis.

2. DURING THE JOB

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

3. AFTER THE JOB

- [x] 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)

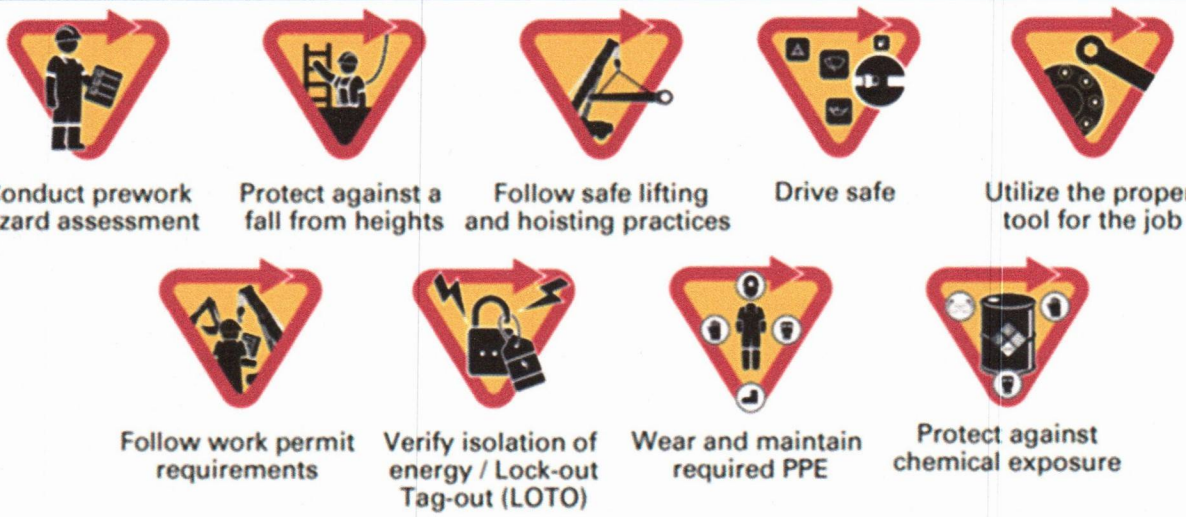
Isaiah Hargis
(Operator Name and Signature)

JOB SAFETY ANALYSIS (JSA)

WORK LOCATION (Check):	☐ DISTRICT SHOP/YARD	☒ REMOTE WORK SITE	**DATE:**	
CUSTOMER:	MACH			
CUSTOMER REPRESENTATIVE:				
LEASE NAME	JAHAY			
WELL NAME	1-34-11 1H			
SUPERVISOR NAME (PRINT):	TYLER MELTON		**EMPLOYEE ID:**	34429
SUPERVISOR SIGNATURE:				

CUDD LIFE SAVING RULES

Discuss CUDD Life Saving Rules, as applicable



GENERAL HAZARDS

Check the boxes for the general hazards for this job site and discuss during JSA meeting

	Comments
☐ Extreme Weather	Verify all the PPE needed for the job is available.
☐ Fauna/Wildlife/Insects	Stay hydrated.
☒ Hazardous Areas	Watch footing for Slips, Trips & Falls.
☒ Low Lighting	
☒ Vehicular Traffic	
☒ Poor Walking/Working Conditions	

WORK TASK ANALYSIS

Describe all work task steps, potential accidents and hazards, and all safeguards and mitigations below, multiple copies of this page may be printed as necessary.

REVIEW AND DISCUSS STOP WORK AUTHORITY (SWA) WITH ALL PERSONNEL

WORK TASKS	DESCRIBE POTENTIAL ACCIDENTS AND HAZARDS INVOLVED	SAFEGUARDS/MITIGATIONS
ASSESS LOCATION FOR POTENTIAL HAZARDS	SLIPS-TRIPS-FALLS, H2S, STRUCK BY	PAY ATTENTION TO SURROUNDINGS REMOVE HAZARDS IF POSSIBLE PROPER PPE
SPOT EQUIPMENT	BACKING INTO OR OVER SOMETHING OR SOMEONE, STRIKING STATIONARY OBJECT	USE SPOTTERS AND MIRRORS BACK SLOW, WATCH SPOTTER, IF YOU LOSE SIGHT OF SPOTTER STOP, WALK PATH OF TRAVEL AND OBSERVE SURROUNDINGS
RIG UP IRON AND HOSES	SLIPS-TRIPS-FALLS-PINCH POINTS, STRUCK BY, DROPPED OBJECTS, STRAINS	PAY ATTENTION, DON'T RUSH, TWO MAN CARRY, FOLLOW DIRECTIONS, USE PROPER LIFTTING TECHNICS,
PRIME PUMPS	MOVING PARTS, TRAPPED PRESSURE	CLEAR PUMP OF PERSONNEL – SET PRESSURE TRIPS- CHECK VALVES ARE IN PROPER POSITION
SAFETY MEETING	MISCOMMUNICATION	REVIEW ALL JOB PROCEDURES/ HAZARDS WITH ALL PERSONEL INVOLVED, REVIEW MUSTER AREAS AND EMERGENCY PLAN Make sure you are familiar with all instructions given during the safety meeting, ask questions if you aren't sure about something, utilize Stop Work Authority.
TEST LINES	LINES LEAKING OR IRON PARTING, PRESSURE	STAY CLEAR OF LINES WHILE UNDER PRESSURE- NEVER HAMMER ON IRON W/ PRESSURE ON IT!!! IRON INSPECTION
PUMP JOB	LEAKS-PUMPING WRONG FLUIDS-VALVES CLOSED- PINCH POINTS	START PUMPING SLOWLY- WATCH FOR LEAKS OR RAPID PRESSURE – CHECK PUMPING CORRECT FLUID. PAY ATTENTION TO JOB DUTIES
RIG DOWN IRON, HOSES AND LOAD	SLIPS-TRIPS-FALLS- DROPED OBJECTS- PINCH POINTS	WATCH HAND AND FOOT PLACEMENT. DON'T WALK UNDER LOADS BEING LOWERED OR RAISED. DON'T THROW HAMMERS OR HANDLES. DON'T RUSH OR TAKE SHORT CUTS. WORK TOGETHER ASK FOR HELP, OFFER HELP

LEAVE LOCATION	STRIKING OBJECT OR SOMEONE. OBJECTS FALLING FROM TRUCKS. FALLING ASLEEP WHILE DRIVING	USE SPOTTER IF NEEDED. MAKE SURE ALL EQUIPMENT IS SECURE BEFORE MOVING TRUCK. WALK AROUND BEFORE GETTING IN CAB. IF YOU ARE TOO TIRED TO DRIVE, TAKE A NAP BEFORE LEAVING LOCATION. STOP IF YOU BECOME SLEEPY

REQUIRED PPE

Check the boxes for all required PPE while conducting work tasks, for additional required PPE, describe in the box next to the "OTHER" field.

☒ HARD HAT	☐ HALF-FACE AIR PURIFYING RESPIRATOR	☐ OTHER:	
☒ SAFETY GLASSES	☐ PERSONAL MONITOR	☐ OTHER:	
☒ FR CLOTHING	☐ H2S ☐ O2 ☐ LEL ☐ CO	☐ OTHER:	
☒ SAFETY TOE BOOTS	☐ FALL PROTECTION	☐ OTHER:	
☒ HAND PROTECTION	☒ HEARING PROTECTION		

Permit to Work Check the boxes for all required tasks which involve a permit to work, follow the required actions for each task. For tasks conducted simultaneously, all required actions for all tasks should be followed.	
Task	**Required Actions**

☐ Confined Space Entry	• Confined Space Entry shall NOT be conducted on a customer location
	• Refer to SAF-PR-6005-1 Confined Space Entry
	• Follow service line specific confined space entry program
	• Complete the following forms prior to confined space entry in a CES facility as applicable:
	  ○ SAF-FO-6005-1 Confined Space Pre-entry Checklist
	  ○ SAF-FO-6005-2 Confined Space Entry Permit

☐ Critical Lifts	• Refer to SAF-PR-6102-1 Crane Operations • Complete form SAF-FO-6102-1 Critical Lift Determination and Plan prior to conducting lift as applicable
☐ Lock Out / Tag Out	• Follow service line specific LOTO Program • Complete all applicable LOTO permits and checklists as applicable
☐ Hot Work	• Refer to SAF-PR-6026-1 Hot Work • Complete form SAF-FO-6026-1 CES Hot Work Permit prior to beginning hot work as applicable

☐ Hydrogen Sulfide (H2S)	• Refer to SAF-PR-6017-1 Hydrogen Sulfide
	• Complete the following forms as applicable prior to performing work:
	  ○ SAF-FO-6017-1 Hydrogen Sulfide Pre-Entry Checklist
	  ○ SAF-FO-6017-2 Hydrogen Sulfide Entry Permit

☐ Working at Heights	• This applies to working at heights above 4ft without engineered/administrative controls to prevent falling • Refer to SAF-PR-6076-1 Fall Protection • Complete for SAF-FO-6076-1 Fall Protection Work Plan as applicable

EMPLOYEE SIGN IN SHEET AND SSE IDENTIFICATION

Multiple copies of this page may be printed as necessary

Short Service Employees (Green Hats) must be identified below with a check mark in the YES box, an empty box will signify a Full Service Employee.

EMPLOYEE NAME	EMPLOYEE SIGNATURE	EMPLOYEE ID	TIME	COMPANY	SSE?	If "YES" list the mentor assigned
TYLER MELTON	Tyler Melton	34429		SPINNAKER	☐ YES	
CHANCE NAPOLEON	[illegible]	34440		SPINNAKER	☐ YES	
ISAIAH HARJO	[illegible]	34386		SPINNAKER	☐ YES	
BRENNAN SEAMAN	Big Daddy	34478		SPINNAKER	☐ YES	
[illegible]	[illegible]				☐ YES	
Marlon Hurtado	[illegible]	aronov		d/las	☐ YES	
Agustin Posadas	[illegible]				☐ YES	
					☐ YES	
					☐ YES	
					☐ YES	
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					☐ YES	
					☐ YES	
					☐ YES	

BCE-Mach LLC
Jahay 1-34-11 1H
Barber
3/1/2024
Intermediate

Ticket # P-6597

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

COMPANY	PROJECT NUMBER	AFE/WORK ORDER	DATE
BCE-Mach LLC	P-6597		3/1/2024

CONTRACTOR	Owner	LEGAL DESCRIPTION	API
Spinnaker Oil	Same	Sec 36, T33S, R11W	15-007-24412

LEASE & WELL #	COUNTY	STATE	MILEAGE
Jahay 1-34-11 1H	Barber	OK	300

DIRECTIONS

From Hazelton, KS - Head North 2.25 miles on Tri-City Rd. Then head West on Gerlane Rd for 3.5 miles. North into. Atlas 3

Pumping Services

☐ Surface ☑ Intermediate ☐ Long String ☐ Plug Back
☐ Squeeze ☐ Acid ☐ PTA ☐ Other ( ) H2S

Casing Size	Casing Weig	Thread	CSG Grade	Plug. Cont.	Swage	Top Plug	Bottom Plug	% Excess
7	26.00	TCBC-HT	P-110	Yes	Yes	Yes	Yes	30%

Number and Type Units	BHST - F	Casing Depth	Depth - TVD - FT	Hole Size - Inches
Pump Truck, 1 ea. 660 Bulk	131	4936	4645	8 3/4

Remarks	BHCT - F	Pvs Csg	Depth - MD - FT	Mud Weight/Type - PPG
7" Top & Bottom Plugs, Head, manifold, circulating iron & both adapters	104	9-5/8" at 300'	4936	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	Water Gal/S	
55.5	10.20	5.50	35.87	

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	Water Gal/S	
23.6	13.80	1.39	6.61	

	Qty - BBLS	Type	Procedure
Displacement	189	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	Casing Weight	Thread	
7	26.00		
Guide Shoe	Float Shoe	Float Collar	Insert Float Valve

Remarks: *Defoamer, Plugs*

BCE-Mach LLC
Jahay 1-34-11 1H
Barber
3/1/2024
Intermediate

Ticket # P-6597

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

Customer: BCE-Mach LLC
Customer Rep:
Mobile:
Well Name: Jahay 1-34-11 1H
Job Type: Intermediate
County: Barber
Casing: 7
State: Kansas
Field Supervisor: Ben Wagner
API #: 15-007-24412
Date: 3/1/2024
Legals: Sec 36, T33S, R11W
Proposal #: 48270001

Ref. #	Description	Quantity	Unit Price	Sub Total	Total
	******** Cementing Service and Materials ********				
MLPU1	Pickup Mileage 1 unit (roundtrip miles)	300	$3.94	$1,182.00	$495.00
MLHE2	Heavy Vehicle Mileage 2 units (roundtrip miles)	300	$13.56	$4,068.00	$1,710.00
MLTN	Bulk Cement Delivery/Return (per Ton-Mile)	1,586	$2.73	$4,329.78	$1,823.90
MXBK	Bulk Material Mixing Service Charge (Per cu.ft.)	215	$3.03	$651.45	$273.05
CMTHD	Cement Head with manifold (per Job)	1	$1,895.00	$1,895.00	$795.90
PC5K	Pump Charge 4001-5000' (Per 5 hrs)	1	$3,811.50	$3,811.50	$1,600.83
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	$1,576.48
CPOZF	POZ (per sack)	98	$17.35	$1,700.30	$714.42
CEXTGEL	GEL (per lb)	1,100	$0.63	$693.00	$286.00
CEXTGYP	Gypsum (per lb)	931	$0.54	$502.74	$214.13
CEXTSFA	SFA (per lb)	679	$1.21	$821.59	$346.29
CFL5	SFL-5 (per lb)	45	$18.56	$835.20	$351.00
CFWCSA1	SA-2 (per lb)	85	$19.52	$1,659.20	$697.00
CLCMPF	Poly Flake (per lb)	64	$3.23	$206.72	$87.04
CLCMFBR	Fine Super Fiber (per lb)	24	$19.28	$462.72	$194.40
	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)	10	$29.50	$295.00	$295.00
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			$34,262.28	
NPT	**Mach Jahay 1-34-11 1H Surface - P-6580 - 1 hour**				**-$600.00**
	Estimated Job Cost (Exclusive of Sales Tax)	Jason's			**$13,966.14**

Signature:
Field Supervisor:

Signature:
Customer Rep:

AFE # DC24020
WELL NAME Jayhay 01-34-11 1H
COST CODE 2050-3000
AMOUNT 13966.14
DATE 3/1

3/1/2024

Thank You For Your Business!!!

BCE-Mach LLC
Jahay 1-34-11 1H
Barber
3/1/2024
Intermediate

Ticket # P-6597

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

COMPANY		PROJECT NUMBER	CUSTOMER REP:		DATE
BCE-Mach LLC		P-6597	0		3/1/2024
CONTRACTOR	Owner		LEGAL DESCRIPTION		
Spinnaker Oil	Same		Sec 36, T33S, R11W		
LEASE & WELL #	COUNTY		STATE	MILEAGE	
Jahay 1-34-11 1H	Barber		OK	300	

Customer Job Satisfaction Sheet

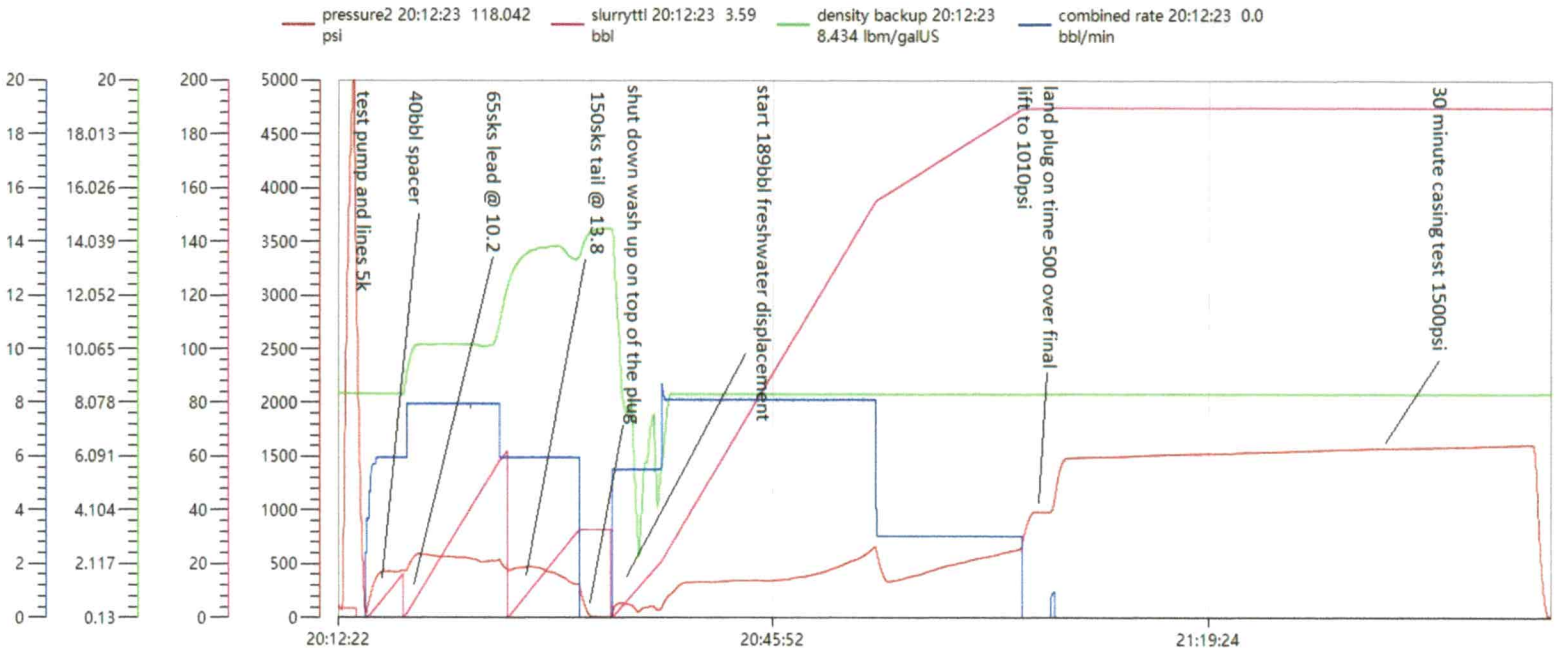
We will greatly appreciate if you can fill out a short survey regarding our performance today. Safety and service quality are our top priorities and we want to ensure that we are continually providing the best service possible in the safest manner as possible. These surveys are regularly reviewed and 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) 0

Customer Signature: _____ Date: 3/1

Chart Report



Date:3/1/2024 Well Name:jahay 1-34-11-1H Location:Barber County, Ks Country:USA Operators:Preston Reynolds Supervisor:Ben Wagner Jobtype:Intermediate Address:Mach Comment:

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

JOB LOG

PROJECT NUMBER	TICKET DATE
P-6597	03/01/24

COMPANY	COUNTRY	STATE	COUNTY
BCE-Mach LLC	USA	OK	Barber

LEASE NAME / Well No.	EMPLOYEE NAME	CUSTOMER REP
Jahay 1-34-11 1H		

FIELD	SEC / TWP / RNG	TICKET AMOUNT
	Sec 36, T33S, R11W	

API/UWI #	JOB PURPOSE	WELL TYPE
15-007-24412	Intermediate	

PUMP #1	313
PUMP #2	
PUMP #3	

Date	Time	Rate (BPM)	Volume (BBL)(GAL)		Press.(PSI) CSG.	Press.(PSI) Tbg	Job Description / Remarks
3/1/2024	1100						Customer called and requested a crew on location @1800
3/1/2024	1415						conduct a pre journey safety meeting with crew
3/1/2024	1800						Arrive on location on time
3/1/2024	1815						conduct a pre rig up meeting with crew
3/1/2024	1830						Rig up all of spinnakers equipment
3/1/2024	1900						make up head and iron loops
3/1/2024	1930						conduct a pre job meeting with all personel
3/1/2024	2013				5000		test pump and lines to 5k
3/1/2024	2014	6.0	40.0		430		40 bbl freshwater spacer
3/1/2024	2017	6.0	63.7		600		mix 65 sks of lead cement @ 10.20ppg
3/1/2024	2025	6.0	37.1		479		mix 150 sks of tail cement @ 13.8ppg
3/1/2024	2031						shutdown send plug washup on top of plug
3/1/2024	2032	8.0	189.0		334		start 189bbl freshwater displacment

Supervisor Signature:

Print Name: Ben Wagner

Thank You For Using
Spinnaker Oilfield Services

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

JOB LOG

PROJECT NUMBER	TICKET DATE
P-6597	03/01/24

COMPANY	COUNTRY	STATE	COUNTY
BCE-Mach LLC	USA	OK	Barber

LEASE NAME / Well No.	EMPLOYEE NAME	CUSTOMER REP
Jahay 1-34-11 1H		

FIELD	SEC / TWP / RNG	TICKET AMOUNT
	Sec 36, T33S, R11W	

API/UWI #	JOB PURPOSE	WELL TYPE
15-007-24412	Intermediate	

Date	Time	Rate (BPM)	Volume (BBL)(GAL)		Press.(PSI) CSG.	Press.(PSI) Tbg	Job Description / Remarks
3/1/2024	2054	3.0	160.0				slow rate to land the plug @ 160bbl gone
3/1/2024	2105	3.0	189.0		1010		land plug on time 500 over final lift 1010psi
3/1/2024	2107				1500		30 minute casing test @ 1500psi
3/1/2024	2139						check floats (held)
3/1/2024	2145						conduct a pre rig down meeting with crew
3/1/2024	2200						rig down all of spinnakers equipment
3/1/2024	2215						conduct a pre departure meeting with crew
3/1/2024	2230						depart location
3/1/2024							HOT-1315, TOT-3670, HOL-2376, HOC-3692, HOM/TOC-1294

Supervisor Signature:

Print Name: Ben Wagner

Thank You For Using
Spinnaker Oilfield Services

SERVICE ORDER CONTRACT

Customer Name **BCE-Mach LLC** Ticket Number P-6597

Lease & Well Number Jahay 1-34-11 1H Date 3/1/2024

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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:

BCE-Mach LLC
Jahay 1-34-11 1H
Barber
3/1/2024
Intermediate

Ticket # P-6597

SPINNAKER CEMENTING SOLUTIONS
A Division of Cudd Energy Services

LOCATION WATER TEST

General Information

Customer: **BCE-Mach LLC** Date: 3/1/2024

Sales Order # : P-6597 Time: 18:30

Lease Name & # : Jahay 1-34-11 1H Water Source: frac tank

Tested By : Ben Wagner

Test Results **Sample #1**

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

Test Results **Sample #2**

			Standard Range
Temp		° F	50° to 100° F
pH			6.0 - 8.0
Sulfates		mg/L	Less Than 1500 mg/L
Chlorides		mg/L	Less Than 3000 mg/L
Lignins & Tannins		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)

EMPLOYEE SIGN IN SHEET AND SSE IDENTIFICATION

Multiple copies of this page may be printed as necessary

Short Service Employees (Green Hats) must be identified below with a check mark in the YES box, an empty box will signify a Full Service Employee.

EMPLOYEE NAME	EMPLOYEE SIGNATURE	EMPLOYEE ID	TIME	COMPANY	SSE?	If "YES" list the mentor assigned
Ben Wagner	[signature]	34508	19:38		☐ YES	
Dwight Stewart	[signature]	34492	1938		☐ YES	
Preston Reynolds	[signature]	34162	1938		☐ YES	
D					☐ YES	
Tarow [illegible]	[signature]				☐ YES	
David Weber	[signature]			Atlas	☐ YES	
Fily Moren	[signature]			Atlas	☐ YES	
					☐ YES	
Gustavo Rivera.					☐ YES	
Felix Olson	[signature]			Atlas	☐ YES	
					☐ YES	
					☐ YES	
					☐ YES	
					☐ YES	
					☐ YES	
					☐ YES	
					☐ YES	
					☐ YES	
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					☐ YES	
					☐ YES	
					☐ YES	
					☐ YES	
					☐ YES	

JOB SAFETY ANALYSIS (JSA)

WORK LOCATION (Check):	☐ DISTRICT SHOP/YARD	☒ REMOTE WORK SITE	**DATE:**	3/1/2024
CUSTOMER:	Mach			
CUSTOMER REPRESENTATIVE:				
LEASE NAME	Jahay 1-34-11-1H			
WELL NAME				
SUPERVISOR NAME (PRINT):	Ben Wagner		**EMPLOYEE ID:**	34508
SUPERVISOR SIGNATURE:				

CUDD LIFE SAVING RULES

Discuss CUDD Life Saving Rules, as applicable

GENERAL HAZARDS

Check the boxes for the general hazards for this job site and discuss during JSA meeting

	Comments
☐ Extreme Weather	Verify all the PPE needed for the job is available.
☐ Fauna/Wildlife/Insects	Stay hydrated.
☒ Hazardous Areas	Watch footing for Slips, Trips & Falls.
☒ Low Lighting	
☒ Vehicular Traffic	
☒ Poor Walking/Working Conditions	

WORK TASK ANALYSIS

Describe all work task steps, potential accidents and hazards, and all safeguards and mitigations below, multiple copies of this page may be printed as necessary.

REVIEW AND DISCUSS STOP WORK AUTHORITY (SWA) WITH ALL PERSONNEL

WORK TASKS	DESCRIBE POTENTIAL ACCIDENTS AND HAZARDS INVOLVED	SAFEGUARDS/MITIGATIONS
ASSESS LOCATION FOR POTENTIAL HAZARDS	SLIPS-TRIPS-FALLS, H2S, STRUCK BY	PAY ATTENTION TO SURROUNDINGS REMOVE HAZARDS IF POSSIBLE PROPER PPE
SPOT EQUIPMENT	BACKING INTO OR OVER SOMETHING OR SOMEONE, STRIKING STATIONARY OBJECT	USE SPOTTERS AND MIRRORS BACK SLOW, WATCH SPOTTER, IF YOU LOSE SIGHT OF SPOTTER STOP, WALK PATH OF TRAVEL AND OBSERVE SURROUNDINGS
RIG UP IRON AND HOSES	SLIPS-TRIPS-FALLS-PINCH POINTS, STRUCK BY, DROPPED OBJECTS, STRAINS	PAY ATTENTION, DON'T RUSH, TWO MAN CARRY, FOLLOW DIRECTIONS, USE PROPER LIFTTING TECHNICS,
PRIME PUMPS	MOVING PARTS, TRAPPED PRESSURE	CLEAR PUMP OF PERSONNEL – SET PRESSURE TRIPS- CHECK VALVES ARE IN PROPER POSITION
SAFETY MEETING	MISCOMMUNICATION	REVIEW ALL JOB PROCEDURES/ HAZARDS WITH ALL PERSONEL INVOLVED, REVIEW MUSTER AREAS AND EMERGENCY PLAN Make sure you are familiar with all instructions given during the safety meeting, ask questions if you aren't sure about something, utilize Stop Work Authority.
TEST LINES	LINES LEAKING OR IRON PARTING, PRESSURE	STAY CLEAR OF LINES WHILE UNDER PRESSURE- NEVER HAMMER ON IRON W/ PRESSURE ON IT!!! IRON INSPECTION
PUMP JOB	LEAKS-PUMPING WRONG FLUIDS-VALVES CLOSED- PINCH POINTS	START PUMPING SLOWLY- WATCH FOR LEAKS OR RAPID PRESSURE – CHECK PUMPING CORRECT FLUID. PAY ATTENTION TO JOB DUTIES
RIG DOWN IRON, HOSES AND LOAD	SLIPS-TRIPS-FALLS- DROPED OBJECTS- PINCH POINTS	WATCH HAND AND FOOT PLACEMENT. DON'T WALK UNDER LOADS BEING LOWERED OR RAISED. DON'T THROW HAMMERS OR HANDLES. DON'T RUSH OR TAKE SHORT CUTS. WORK TOGETHER ASK FOR HELP, OFFER HELP

LEAVE LOCATION	STRIKING OBJECT OR SOMEONE. OBJECTS FALLING FROM TRUCKS. FALLING ASLEEP WHILE DRIVING	USE SPOTTER IF NEEDED. MAKE SURE ALL EQUIPMENT IS SECURE BEFORE MOVING TRUCK. WALK AROUND BEFORE GETTING IN CAB. IF YOU ARE TOO TIRED TO DRIVE, TAKE A NAP BEFORE LEAVING LOCATION. STOP IF YOU BECOME SLEEPY

REQUIRED PPE

Check the boxes for all required PPE while conducting work tasks, for additional required PPE, describe in the box next to the "OTHER" field.

☒ HARD HAT	☐ HALF-FACE AIR PURIFYING RESPIRATOR	☐ OTHER:	
☒ SAFETY GLASSES	☐ PERSONAL MONITOR	☐ OTHER:	
☒ FR CLOTHING	☐ H2S ☐ O2 ☐ LEL ☐ CO	☐ OTHER:	
☒ SAFETY TOE BOOTS	☐ FALL PROTECTION	☐ OTHER:	
☒ HAND PROTECTION	☒ HEARING PROTECTION		

Permit to Work Check the boxes for all required tasks which involve a permit to work, follow the required actions for each task. For tasks conducted simultaneously, all required actions for all tasks should be followed.	
Task	**Required Actions**

☐ Confined Space Entry	• Confined Space Entry shall NOT be conducted on a customer location
	• Refer to SAF-PR-6005-1 Confined Space Entry
	• Follow service line specific confined space entry program
	• Complete the following forms prior to confined space entry in a CES facility as applicable:
	  o SAF-FO-6005-1 Confined Space Pre-entry Checklist
	  o SAF-FO-6005-2 Confined Space Entry Permit

☐ Critical Lifts	• Refer to SAF-PR-6102-1 Crane Operations • Complete form SAF-FO-6102-1 Critical Lift Determination and Plan prior to conducting lift as applicable
☐ Lock Out / Tag Out	• Follow service line specific LOTO Program • Complete all applicable LOTO permits and checklists as applicable
☐ Hot Work	• Refer to SAF-PR-6026-1 Hot Work • Complete form SAF-FO-6026-1 CES Hot Work Permit prior to beginning hot work as applicable

☐ Hydrogen Sulfide (H2S)	• Refer to SAF-PR-6017-1 Hydrogen Sulfide
	• Complete the following forms as applicable prior to performing work:
	  o SAF-FO-6017-1 Hydrogen Sulfide Pre-Entry Checklist
	  o SAF-FO-6017-2 Hydrogen Sulfide Entry Permit

☐ Working at Heights	• This applies to working at heights above 4ft without engineered/administrative controls to prevent falling • Refer to SAF-PR-6076-1 Fall Protection • Complete for SAF-FO-6076-1 Fall Protection Work Plan as applicable