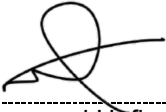





DULANG D05 ADDENDUM#8

Revision: 0
Prepared for: Zhafran Rahman / Pravin
Date Prepared: 22th August 2023
Well: D-05
Field: DULANG
Operation Region: PMA
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Date

Remark: Do not execute the procedures in this document if it is not fully approved and signed by all parties.

DIMENSION BID	DIMENSION BID COILED TUBING SERVICES		
	DULANG D-05	ACIDIZING	

OBJECTIVES

The objective of this addendum is to;

1. To proceed with acid wash through bullheading

OVERVIEW

During CT Run#3, unable to proceed with Acid wash due to encounter BHA Stuck in hole situation, after drop ball to disconnect the MHA, CT able to retrieve to surface. After discussion, decided to continue with acid wash through bullheading method.

Prepared By: Muhammad hafiz	Reviewed By: Kung Yee Han	Date: 22/8/2023	Rev. Rev0	Controlled Document DB-CT-MHS-23022	Pg. 3
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OPERATIONAL PROCEDURE

CT RUN# ADDENDUM #8 – BULLHEADING ACTIVITY

Conduct pre job safety meeting with all personnel on location detailing the program, pressure limitations, personnel responsibilities, emergency well control drill, and safety precautions.

BULLHEADING ACTIVITY

1. Rig up pumping treating line to slickline pumping tee.
2. Perform low pressure test and high-pressure test.
3. Once complete, proceed with Injectivity test (if required) else skip this step and proceed to step 7.
4. Open well, bleed off tubing head pressure and casing head pressure to 0 psi or minimum value.
5. Pump and fill up tubing with TSW until full (140 bbls). MASTP 1,100 psi.
6. Do not stop pumping after filling up completion. Proceed immediately with injectivity test. Log injectivity rate after the pumping pressure has stabilized over a 5min period. Pump rate max to MSTP or Maximum pumping operating limit (Whichever comes first). **(Monitor all annulus pressure ICP, PCP and SCP)**

Rate (bpm)	Pump Pressure (psi)	Time (min)	Volume (bbl)	THP (psi)	PCP (psi)	SCP (psi)	ICP (psi) if available
... (as minimum as possible)							
0.5							
0.7							
1.0							
1.5							
2.0							
2.5							
3.0							
3.5							
.... (as maximum as possible)							

7. After get approval from EIC and WSS, proceed to prepare pre-flush, Main Treatment, post flush and TSW as per below Table while pumping TSW at idle rate while preparing all required fluid.

Pre-Flush Solvent			1,176	gals	28	bbis	Description
Products	Concentration	Volume					
Fresh Water	849 gptg	999	gals	23.79	bbis		Base Fluid
NE-Surf 200	4 gptg	5	gals	0.12	bbis		Non-Emulsifier
Ammonium Chloride	595 pptg	700	lbs				Clay Stabilizer
MESB MS 300	100 gptg	118	gals	2.81	bbis		Mutual Solvent

Acid Descaler (15% HCl)			1,764	gals	42	bbis	Description
Products	Concentration	Volume					
Fresh Water	419 gptg	739	gals	17.60	bbis		Base Fluid
ACM Corr 400	4 gptg	7	gals	0.17	bbis		Acid Corrosion Inhibitor
NE 500	4 gptg	7	gals	0.17	bbis		Non-Emulsifier
ACM Surf 210	3 gptg	5	gals	0.12	bbis		Surfactant
Ammonium Chloride	417 pptg	736	lbs				Clay Stabilizer
ACM Iron 300	25 pptg	44	lbs				Iron Sequestering
ACM Iron 200	15 gptg	26	gals	0.62	bbis		Iron Control
33% HCl	419 gptg	739	gals	17.60	bbis		Raw Acid
MS 300	100 gptg	176	gals	4.19	bbis		Mutual Solvent

Post-Flush with Fines Control Agent			1,176	gals	28	bbis	Description
Products	Concentration	Volume					
Fresh Water	891 gptg	1,048	gals	24.95	bbis		Base Fluid
NE-Surf 200	2 gptg	2	gals	0.05	bbis		Non-Emulsifier
Ammonium Chloride	595 pptg	700	lbs				Clay Stabilizer
Fine Control Agent	10 gptg	12	gals	0.29	bbis		Fines Control
MS 300	50 gptg	59	gals	1.40	bbis		Mutual Solvent

8. After complete prepare all treatment fluid, proceed with pumping operation as per table below.

Pumping schedule for Injectivity Test						
Stage	Description	Fluid	Vol (bbl)	Pump Rate (bpm)	Remarks	MASTP (psi)
1	Pre-Flush	Solvent	23	1	To remove hydrocarbon/organic deposited and pre-condition formation.	1,100
2	Main Treatment	15% HCl	37	1	To remove calcite in wellbore and formation.	1,100
3	Post Flush	Solvent with Fine Control Agent	23	1	To displace 15% HCL below EOT (1 tubing volume = 72 bbis).	1,000
4	Displacement	TSW	47	1		
Stop pump and soak for 2 Hours						
After 2 hours, start pumping displacement fluid.						
5	Displacement	TSW	1,082 (CT Volume + wellbore volume+ 5 ft penetration)	1	Spot post flush at penetration design.	1,100

9. Once complete pumping, proceed with Injectivity test (if required) else the job is complete.
10. Do not stop pumping after filling up completion. Proceed immediately with injectivity test. Log injectivity rate after the pumping pressure has stabilized over a 5min period. Pump rate max to MSTP or Maximum pumping operating limit (Whichever comes first). **(Monitor all annulus pressure ICP, PCP and SCP)**

Rate (bpm)	Pump Pressure (psi)	Time (min)	Volume (bbl)	THP (psi)	PCP (psi)	SCP (psi)	ICP (psi) if available
... (as minimum as possible)							
0.5							
0.7							
1.0							
1.5							
2.0							
2.5							
3.0							
3.5							
.... (as maximum as possible)							

11. After complete injectivity test, share the result to town.