Sanjel

Pumping Service Report

9203635

Client Name	Well Name	Rig	Job Date	Call Sheet
NGL Water Solutions DJ, LLC	NGL C5	Ensign Drilling Inc. 138	March 09,2015	1056451
Client Representative	**Surface Well Location**	**Down Hole Well Location**	**Job Type**	**Lead Supervisior**
Mr. Chris Montoya	SW SW Sec 29:T2N:R64W		Intermediate Casing	Hansen, Kevin (27592)

Well Profile

Well Type:	Oil		
Maximum Treating Pressure (psi):		---	
Predicted Bottom Hole Static Temperature (°F):		---	@ --
Bottom Hole Circulating Temperature (°F):		---	@ --
Bottom Hole Logged Temperature (°F):		---	@ --

Open Hole

Size (in)	Excess (%)	TMD From (ft)	TMD To (ft)	TVD From (ft)	TVD To (ft)
8.750	--	1,030.000	8,790.000	--	--

Casing

Size (in)	Weight (lb/ft)	Grade	Collapse Pressure (psi)	Internal Yield Pressure (psi)	Capacity (bbl)	I.D. (in)	O.D. (in)	Depth From (ft)	Depth To (ft)
9.625	36.000	---	--	--	--	--	--	0.0	1,030.0
7.000	26.000	---	--	--	--	--	--	0.0	8,783.0

Products

Stage 1

From Depth (ft): 7330

To Depth (ft): 8783

Acids/Blends/Fluids :

Tail: 156 Sacks of 1-1-0 G, Density = 13.5 lb/gal, Volume Pumped = 49 (bbl)
Water Temperature(°F) = 60 , Bulk Temperature(°F) = 60 , Slurry Temperature(°F) = 65
+ 20 % of Silica Flour (Preblend),
+ 8 % of SilFume (Preblend),
+ 0.3 % of CFR (Preblend),
+ 0.8 % of CFL-4 (Preblend),
+ 1.5 % of Gel (Preblend),
+ 0.25 lb/sack of Polyflake (Preblend),
+ 0.1 % of LTR (Preblend)

Stage 2

From Depth (ft): 0

To Depth (ft): 6400

Acids/Blends/Fluids :

Lead 1: 605 Sacks of 1:1:0 Poz:Type III, Density = 12 lb/gal, Volume Pumped = 210 (bbl)
Water Temperature(°F) = 60 , Bulk Temperature(°F) = 60 , Slurry Temperature(°F) = 65
+ 0.5 % of CFL-4 (Preblend),
+ 0.2 % of ASM-3 (Preblend),
+ 2 % of FWC-2 (Preblend)

Stage 3

From Depth (ft): 6400

To Depth (ft): 7330

Acids/Blends/Fluids :

Tail: 96 Sacks of 1-1-0 G, Density = 13.5 lb/gal, Volume Pumped = 30 (bbl)
Water Temperature(°F) = 60 , Bulk Temperature(°F) = 60 , Slurry Temperature(°F) = 65
+ 20 % of Silica Flour (Preblend),
+ 8 % of SilFume (Preblend),
+ 0.3 % of CFR (Preblend),
+ 0.8 % of CFL-4 (Preblend),
+ 1.5 % of Gel (Preblend),
+ 0.25 lb/sack of Polyflake (Preblend),
+ 0.1 % of LTR (Preblend)

Fluid & Cement Data

Expected Cement Top: Surface

Wellbore Fluid

Fluid Type	Viscosity (cP)	Density (lbs/gal)	Yield Point (psi)	Temperature (°F)	Recorded@
Water	--	8.600	--	--	Jan 31, 2015 13:10
Water Based Mud	--	--	--	--	Feb 10, 2015 16:45

Attachment & Tools

Down Hole Tools

Tool Type	Depth (ft)	Supplier
Stage Tool Hydraulic (MSCC)	7,330.000	Client
Float Collar	8,735.000	Client
Guide/Float Shoe	8,781.000	Client

Tubular Plugs

Tubular Plug Type	Size (in)	Supplier
Stage Tool first Plug	7.000	Third Party
Rubber Bottom	7.000	Third Party

Units & Personnel

Units

Truck Unit No.	Main Type	Sub Type	Tractor Unit No.	Main Type	Sub Type	Time On Location	Time Off Location
449095	TRAILER	Utility Trailer	201025	PICKUP	1 Ton	03/09/2015 20:00	03/10/2015 12:00
445024	TRAILER	SCM Twin	745024	TRACTOR	Tandem - Tractor	03/09/2015 20:00	03/10/2015 12:00
446194	TRAILER	Bulker	746194	TRACTOR	Tandem - Tractor	03/09/2015 20:00	03/10/2015 12:00
446196	TRAILER	Bulker	746196	TRACTOR	Tandem - Tractor	03/09/2015 20:00	03/10/2015 12:00
200910	PICKUP	1/2 Ton				03/09/2015 20:00	03/10/2015 12:00
449121	TRAILER	1600 Porta Bulker				03/09/2015 20:00	03/10/2015 12:00

Crew and Bonuses

Employee	Start Shift	End Shift	Second Start Shift	Second End Shift
Hansen, Kevin (27592)	03/09/2015 20:00	03/10/2015 12:00		
Hansen, Ted (29055)	03/09/2015 20:00	03/10/2015 12:00		
Leon, Justin (30152)	03/09/2015 20:00	03/10/2015 12:00		
Martinez, Fernando (28421)	03/09/2015 20:00	03/10/2015 12:00		
Spirek, Matthew (26921)	03/09/2015 20:00	03/10/2015 12:00		
Martinez, Fernando (28421)	03/09/2015 20:00	03/10/2015 12:00		

Treatment Reports & Remarks

Treatment Report

Event #	Event Time	Event Description	Fluid Type	Rate (bbl/min)	Tubular Pressure (psi)	Annular Pressure (psi)	Stage Volume (bbl)	Total Volume (bbl)
1	Mar 09,2015 20:00	Arrive On Location		--	--	--	--	0.00
2	Mar 09,2015 20:10	Crew Briefing (Rig in)		--	--	--	--	0.00
	Remarks: Discussed spotting of trucks and filled out JSA							
3	Mar 09,2015 23:00	Rig in Complete		--	--	--	--	0.00
4	Mar 09,2015 23:15	Crew Briefing (Pre Job)		--	--	--	--	0.00
	Remarks: Discussed job and safety concerns with rig crew							
5	Mar 09,2015 23:35	Pressure Test Start	Water	3.00	350.0	--	3.00	3.00
	Remarks: Filled lines for pressure test							

Treatment Report

Event #	Event Time	Event Description	Fluid Type	Rate (bbl/min)	Tubular Pressure (psi)	Annular Pressure (psi)	Stage Volume (bbl)	Total Volume (bbl)
6	Mar 09,2015 23:39	Pressure Test Complete		--	4,500.0	--	--	3.00
	Remarks: Pressure test good							
7	Mar 09,2015 23:40	Pump Preflush	Water	3.00	350.0	--	20.00	23.00
	Remarks: Pumped Mudflush SAPP & WS-30							
8	Mar 09,2015 23:45	Pump Spacer	Water	5.00	500.0	--	20.00	43.00
	Remarks: Fresh water spacer							
9	Mar 10,2015 00:05	Mix Cement	1-1-0 G	5.00	700.0	--	48.00	91.00
	Remarks: Pumped @ D-13.5							
10	Mar 10,2015 00:52	Drop Plug		--	--	--	--	91.00
11	Mar 10,2015 00:55	Displace Fluid	Water	5.00	700.0	--	80.00	171.00
	Remarks: 1st 80 bbl were Fresh Water							
12	Mar 10,2015 01:11	Displace Fluid	Water Based Mud	6.00	800.0	--	250.00	421.00
	Remarks: Remaining Displacement was with Mud							
13	Mar 10,2015 02:00	Bump Plug		--	1,400.0	--	--	421.00
14	Mar 10,2015 02:03	Check Float		--	--	--	--	421.00
	Remarks: Floats held 2 bbl back							
15	Mar 10,2015 02:14	Pressure Test		--	3,400.0	--	--	421.00
	Remarks: Pressured up to set DV tool							
16	Mar 10,2015 02:15	Establish Circulation	Water Based Mud	6.00	750.0	--	20.00	441.00
	Remarks: Made sure circulation was good then turned circulation over to rig							
17	Mar 10,2015 02:30	Job Complete		--	--	--	--	441.00
18	Mar 10,2015 07:45	Pressure Test	Water	--	4,500.0	--	2.00	2.00
	Remarks: Pressure test good							
19	Mar 10,2015 07:49	Pump Preflush	Water	4.00	350.0	--	40.00	42.00
	Remarks: Pumped Mud flush SAPP & WS-30							
20	Mar 10,2015 08:00	Pump	Water	4.00	450.0	--	20.00	62.00
	Remarks: Pumped Visweep							
21	Mar 10,2015 11:29	Mix Cement	1:1:0 Poz:Type III	5.50	600.0	--	210.00	272.00
	Remarks: Pumped @ D-12.0 Y- 1.95							
22	Mar 10,2015 08:39	Job Complete		--	--	--	--	272.00
23	Mar 10,2015 08:40	Mix Cement	1-1-0 G	5.00	400.0	--	30.00	30.00
	Remarks: Pumped @ D-13.5 Y- 1.76							
24	Mar 10,2015 09:00	Drop Plug		--	--	--	--	30.00
25	Mar 10,2015 09:01	Displace Fluid	Water Based Mud	6.00	900.0	--	280.00	310.00
	Remarks: Slowed to 4bbl @220 away, Slowed to 2 bbl@ 250 away							
26	Mar 10,2015 10:07	Bump Plug		--	1,500.0	--	--	310.00
27	Mar 10,2015 10:08	Pressure Test		--	--	--	--	310.00
	Remarks: Pressured up to Close DV tool and held pressure to test casing for 15 min.							
28	Mar 10,2015 10:23	Check Float		--	--	--	--	310.00
	Remarks: Floats held. 2 bbl back							
29	Mar 10,2015 11:00	Wash		--	--	--	--	310.00

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Event #	Event Time	Event Description	Fluid Type	Rate (bbl/min)	Tubular Pressure (psi)	Annular Pressure (psi)	Stage Volume (bbl)	Total Volume (bbl)
30	Mar 10,2015 11:30	Rig Out		--	--	--	--	310.00
31	Mar 10,2015 11:55	Pre-Departure Meeting		--	--	--	--	310.00
	Remarks: Discussed journey management							
32	Mar 10,2015 12:00	Leave Location		--	--	--	--	441.00

Did Float Hold: Yes

Fluid Returns : Yes

Type : Cement

Volume (bbl) : 2

Temperature (°F) : 68

FDAS Functioning Correctly : Yes

Was the Program Followed As Per Design? : Yes

Material Transfer Sheet Number

Material Transfer Sheet Number
57588
57589
57587