

HALLIBURTON

iCem[®] Service

CATAMOUNT EXPLORATION LLC

For: Reed Fischer

Date: Sunday, November 26, 2017

Catamount, IGS #148 , Surface

IGS #148

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Job Date: Sunday, November 26, 2017

Sincerely,

Farmington Cement Engineering

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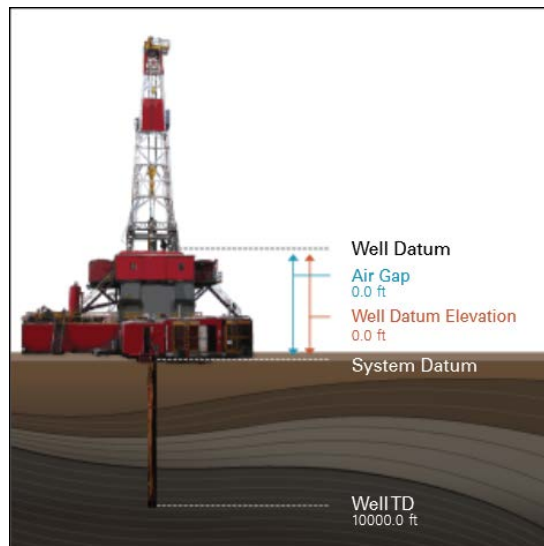
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1.0 Job Design

1.1 Overview

Job Type	Primary Cement Job
Injection Path	Casing/Conventional
Foam Job	No

Well Snapshot



Simulations Performed

1.2 Pump Schedule

Description	Stage No.	Density (ppg)	Rate (bbl/min)	Yield (ft ³ /sack)	Water Req. (gal/sack)	Volume (bbl)	Bulk Cement (sacks)	Duration (min)
fresh water	1	8.33	4.00			0.00		0.00
Fresh Water Spacer	2	8.33	4.00			10.00		2.50
Shallow Surface Primary - 2227671/1	3	15.80	4.00	1.1818	5.244	86.30	410.00	21.57
Top Plug/Start Displacement								
fresh water	4-1	8.33	4.00			30.00		7.50
fresh water	4-2	8.33	2.00			6.32		3.16
Total:						132.62		34.74

*Pump schedule may include additional rows for displacement if "Automatic Rate Adjustment" was enabled and ECDs approached the fracture gradient.

2.0 Real-Time Job Summary

2.1 Job Event Log

Type	Seq. No.	Graph Label	Date	Time	Source	PS Pump Press (psi)	DH Density (ppg)	PS Pump Rate (bbl/min)	Pump Stg Tot (bbl)	Recirc Density (ppg)	Comments
Event	1	Call Out	11/25/2017	19:30:00	USER						Job called out @ 1930
Event	2	Depart Yard Safety Meeting	11/25/2017	22:25:00	USER						Depart yard meeting held with crew
Event	3	Depart from Service Center or Other Site	11/25/2017	22:30:00	USER						Departed from yard @ 22300
Event	4	Other	11/26/2017	01:00:00	USER						Got stopped on the way out to location due to rig problems pulled over and slept called in @ 0730 that new on location time was 1030
Event	5	Arrive At Loc	11/26/2017	10:30:00	USER						Arrived on location @ 1030 rig pulling drill pipe
Event	6	Pre-Job Safety Meeting	11/26/2017	11:00:00	USER						Pre job safety meeting with all affected personnel on location
Event	7	Rig-Up Equipment	11/26/2017	11:10:00	USER						Rigged up Halliburton a 2" iron and water hoses
Event	8	Pre-Rig Up Safety Meeting	11/26/2017	11:20:00	USER						Pre rig up meeting with crew
Event	9	Start Job	11/26/2017	13:43:13	COM5	-12.70	8.32	0.00	12.3	8.35	
Event	10	Prime Pumps and lines	11/26/2017	13:58:04	COM5	5.30	8.27	2.10	0.6	0.00	Prime lines with 2 bbl fresh
Event	11	Pressure Test	11/26/2017	13:59:41	USER	1659.30	8.29	0.00	2.1	0.00	Test pumps and lines to 2500psi
Event	12	Pump Spacer 1	11/26/2017	14:09:15	COM5	6.30	8.25	2.00	0.7	15.88	Pump 10 bbl fresh water spacer
Event	13	Pump Cement	11/26/2017	14:11:33	COM5	85.30	8.28	5.00	0.0	15.93	410sks@15.8# 1.18yield 5.24 wrq = 86.2bbl cmt 51.15bbl mix water
Event	14	Check weight	11/26/2017	14:12:54	COM5	157.30	15.59	5.00	6.8	15.52	
Event	15	Check weight	11/26/2017	14:23:06	COM5						
Event	16	Drop Plug	11/26/2017	14:40:00	USER	79.30	15.54	0.00	138.8	8.27	Drop third party top pug

Event	17	Pump Displacement	11/26/2017	14:43:28	COM5	101.30	11.92	5.00	0.0	0.29	Calculated 35.8bbl to land plug
Event	18	Cement Returns to Surface	11/26/2017	14:45:00	USER	118.30	8.34	5.00	7.7	0.29	Calculated 38 bbl of cmt back. 30 bbl of good cmt actually returned to surface
Event	19	Bump Plug	11/26/2017	14:51:52	USER	755.30	8.33	0.00	34.4	0.29	Calculated 220psi to land plug. Plug landed @ 230psi took it up to 930psi. lift psi @ 190
Event	20	Check Floats	11/26/2017	14:54:37	USER	204.30	8.37	0.00	34.4	0.29	Check floats, floats held 0.5 bbl back
Event	21	End Job	11/26/2017	15:11:48	COM5						

3.0 Attachments

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