



Petroshare Corporation

PRODUCTION POST JOB REPORT

Shook 3-10-1NBH 05-001-09970
S:3 T:1S R:67W Adams CO

CallSheet #: 871
Proposal #: 13340



PRODUCTION Post Job Report

Attention: Mr. Bill Lloyd | (303) 500-1160 | blloyd@petroshare.com
Petroshare Corporation
9635 Maroon Circle, Ste 400 | Englewood, CO 80112

Dear Mr. Lloyd,

Thank you for the opportunity to provide cementing services on this well. BJ Services strives to achieve complete customer satisfaction. If you have any questions regarding the services or data provided, please contact BJ Services at any time.

Sincerely,

Zen Keith

Technical Specialist-II | (307) 757-7178 | Zen.Keith@bjservices.com

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1 Job Details & Summary

1.1 Geometry

Type	Function	OD (in)	ID (in)	Weight (lb/ft)	Thread	Top (ft)	Bottom (ft)	Excess (%)
Casing	Outer	9.625	8.921	36	n/a	0	1823	0
Open Hole	Outer	n/a	8.5	n/a	n/a	1823	12950	15
Casing	Inner	5.5	4.892	20	n/a	0	12887	0

1.2 Equipment / People

Unit Type	Unit	Employee #1	Mileage
Bulk Trailer	508	Henderson, Ethan	200
Silo	654		200
Silo	664		200
Cement Pump	102	Montoya, Hector	200
Light Duty Pickups	7	Acuna, Roger	200
Light Duty Pickups	3	Hamilton, Daniel	200

1.3 Timing

Event	Date/Time
Call Out	6/3/2017 17:00
Depart Facility	6/3/2017 18:30
On Location	6/3/2017 20:30
Rig Up Iron	6/3/2017 21:00
Job Started	6/4/2017 04:58
Job Completed	6/4/2017 08:15
Rig Down Iron	6/4/2017 08:45
Depart Location	6/4/2017 10:30

1.4 General Job Information

Metrics	Value
Well Fluid Density	10.6 lb/gal
Well Fluid Type	OBM
Rig Circulation Vol	1848 bbls
Rig Circulation Time	4 hours
Calculated Displacement	297 bbls
Actual Displacement	298 bbls
Total Spacer to Surface	40 bbls
Total CMT to Surface	65 bbls

1.5 Well Fluid Details

Metrics	Value
Plastic Viscosity	29
Yield Point	9
10 sec. SGS	6
10 min. SGS	20
30 min. SGS	34
Filtrate	20
Flow Line Temp.	114

1.6 Job Details

Metrics	Value
Flare Prior to Job	Yes
Flare Prior to Job	2484 units
Flare During Job	No
Flare at End of Job	No
Well Full Prior to Job	Yes
Well Fluid Density Into Well	10.6 lb/gal
Well Fluid Density Out of Well	10.6 lb/gal

1.7 Job Details (cont.)

Metrics	Value
BHCT	228 °F
BHST	228 °F

1.8 Circulation

Lost Circulation Experienced
No



1.9 Job Execution Information

Job	Fluid	Product	Function	Density (lb/gal)	Yield (ft ³ /sk)	Water Rq. (gal/sk)	Water Rq. (gal/bbl)	Volume (sks)	Volume (bbl)	Top (ft)
1	1	CD Spacer	Spacer	11.00			32.73		40.00	0
1	2	ALTCem P100-X2	Lead	12.50	2.07	11.81		990.00	365.07	0
1	3	ALTCem P50-X1	Tail	13.50	1.47	7.43		921.00	241.89	7041
1	4	Water	DisplacementFinal	8.33			42.00		297.00	0

1.10 Job Fluid Details

Job	Fluid	Type	Fluid	Product	Function	Conc.	Uom
1	1	Spacer	CD Spacer	ASR-20	StrengthRetrogression	179.68	lb/bbl
1	1	Spacer	CD Spacer	AR-31	Retarder	0.79	lb/bbl
1	1	Spacer	CD Spacer	ASF-20	Surfactant	0.50	gal/bbl
1	1	Spacer	CD Spacer	ASF-80	Surfactant	0.50	gal/bbl
1	1	Spacer	CD Spacer	AVS-10	Viscosifier	0.80	lb/bbl
1	2	Lead	ALTCem P100-X2	AC3-10	Cement	100.00	%
1	2	Lead	ALTCem P100-X2	ABX-30	BondEnhancer	0.40	%BWOB
1	2	Lead	ALTCem P100-X2	ADF-11	Defoamer	0.30	%BWOB
1	2	Lead	ALTCem P100-X2	AFL-10	FluidLoss	0.30	%BWOB
1	2	Lead	ALTCem P100-X2	AR-31	Retarder	0.20	%BWOB
1	2	Lead	ALTCem P100-X2	AVS-10	Viscosifier	0.10	%BWOB
1	3	Tail	ALTCem P50-X1	ACG-10	Cement	50.00	%
1	3	Tail	ALTCem P50-X1	AFA-10	Extender	50.00	%
1	3	Tail	ALTCem P50-X1	ADF-11	Defoamer	0.30	%BWOB
1	3	Tail	ALTCem P50-X1	AFL-50	FluidLoss	0.20	%BWOB
1	3	Tail	ALTCem P50-X1	AR-20	Retarder	0.10	%BWOB
1	3	Tail	ALTCem P50-X1	AVS-10	Viscosifier	0.10	%BWOB
1	3	Tail	ALTCem P50-X1	AVS-50	Viscosifier	2.00	%BWOB

2 Job Logs

Line	Event	Date (MM/DD/YY)	Time (HH:MM)	Density (lb/gal)	Pump Rate (bpm)	Pump Volume (bbls)	Pipe Pressure (psi)	Comment
1	Called Out	6/3/2017	17:00					Called out
2	Pre Convoy	6/3/2017	18:00					Pre journey management
3	Depart Camp	6/3/2017	18:30					Depart Cheyenne WY
4	Arrive to Location	6/3/2017	20:30					Arrive to location, check in with company man, 12887' of 5.5" 20ppf CSG in 8.5" OH PCSG 9.625" 36ppf @ 1823'
5	Safety Meeting	6/3/2017	20:45					Pre rig up safety meeting
6	Rig up Iron	6/3/2017	21:00					Rig up iron
7	Waiting on Rig	6/3/2017	21:30					Waiting on rig to finish running casing
8	Casing on Bottom	6/4/2017	00:30					Casing on bottom
9	Safety Meeting	6/4/2017	04:00					Pre job safety meeting
10	Start Job	6/4/2017	04:57					Start job
11	Fill Lines	6/4/2017	04:58	8.33	2	2	0	Fill lines 2bbls fresh water, drop bottom plug
12	Test Lines	6/4/2017	05:11				5000	Test lines 5000psi
13	Pump CD Spacer	6/4/2017	05:15	11	6	40	600	Pump 40bbls spacer w/surfactant @ 11ppg
14	Pump Lead Cement	6/4/2017	05:29	12.5	6	365	500	Pump 365bbls lead cement @ 12.5ppg (990sk 2.07yld 11.81gps) calculated to surface
15	Pump Tail Cement	6/4/2017	06:27	13.5	6	241	300	Pump 241bbls tail cement @ 13.5ppg (921sk 1.47yld 7.43gps) calculated top 7048'
16	Shutdown	6/4/2017	07:06					Shutdown, wash pumps and lines to the pit
17	Drop Top Plug	6/4/2017	07:10					Drop top plug
18	Displacement	6/4/2017	07:11	8.33	8	200	1600	Pump fresh water displacement
19	Spacer to Surface	6/4/2017	07:37					40bbls spacer to surface
20	Slow Rate	6/4/2017	07:38	8.33	5	50	2400	Slow rate
21	Shutdown	6/4/2017	07:44					Shutdown, had to switch out pits for returns
22	Online	6/4/2017	07:47	8.33	5	20	2500	Pump displacement
23	Cement to Surface	6/4/2017	07:49					65bbls cement to surface
24	Slow Rate	6/4/2017	07:57	8.3	3	28	2400	Slow rate to bump plug
25	Land Plug	6/4/2017	08:12					Did not land plug. held for 3min, total displacement pumped



								298bbbls, saw that we had over displaced by 18bbbls after checking the pit volume and re-calculating pipe volume, plug looked like it landed and burst @ 3150psi 275bbbls into displacement, we thought that we hit a bridge because the pressure dropped down past our circulating pressure that is why we came back online
26	Check Floats	6/4/2017	08:15					Check floats, floats held getting 2bbbls back to the pump
27	End Job	6/4/2017	08:16					End job
28	Safety Meeting	6/4/2017	08:30					Pre rig down safety meeting
29	Rig down Iron	6/4/2017	08:45					Rig down iron
30	Pre Convoy	6/4/2017	10:15					Pre journey management
31	Depart Location	6/4/2017	10:30					Depart location

3 Water Analysis

Metrics	Value	Recommended
Water Source	Upright Rig Tank	
Temperature	60 °F	50-80 °F
pH Level	7	5.5-8.5
Chlorides	0 mg/L	0-3000 mg/L
Total Alkalinity	250	0-1000
Total Hardness	0 mg/L	0-500 mg/L
Carbonates	0 mg/L	0-100 mg/L
Sulfates	Below 200 mg/L	0-1500 mg/L
Potassium	450 mg/L	0-3000 mg/L
Iron	0 mg/L	0-300 mg/L

4 Pump Diagrams

