Stimulation Service Report

Dowell

Customer	Job Number
MOBIL DRILLING V3905007578	20124657

Well	Location (legal)	Dowell Location	Job Start
FF Rapp 4	Sec. 16-31S-36W	Ulysses, KS	9/22/99

Field	Formation Name/Type	Deviation	Station	Well MD	Well TVD
Hugoton	Chase	0 °	0 in	2,883 ft	2,883 ft

County	State/Province	BHP	BHST	BHCT	Pore Frac Gradient
Stevens	Kansas	0 psi	95 °F	85 °F	0 psi/ft

Rig Name	Drilled For	Service Via
	Gas	Land

Offshore Zone	Well Class	Well Type
	Old	Development

Primary Treating Fluid	Polymer Loading	Fluid Density
80 Q Foam	20 lb/1000gal	lb/gal

Service Line	Job Type
Fracturing	Frac,N2Foam/Energized

Max. Allowed Tubing Pressure	Max. Allowed Ann. Pressure	Wellhead Connection
2500 psi	0 psi	5 1/2 Frac Valve

Service Instructions

Safely deliver & perform Foam Frac with materials & equipment listed on the Service Receipt. Per clients instructions.

Casing				
Depth, ft	Size, in	Weight, lb/ft	Grade	Thread
2883	5.5	14		
0	0	0		

Tubing				
Depth,	Size, in	Weight, lb/ft	Grade	Thread
0	0	0		
0				

Perforated Intervals				
Top, ft	Bottom, ft	spf	No. of Shots	Total Interval
2576	2586	4	40	40 ft
2614	2634	4	80	Diameter
2654	2664	4	40	0 in

Treat Down	Displacement	Packer Type	Packer Depth
Casing	64 bbl	None	0 ft

Job Scheduled For:	Arrived on Location:	Leave Location:	Tubing Vol.	Casing Vol.	Annular Vol.	Open Hole Vol
	9/22/99 16:00	9/22/99 18:30	0 bbl	64 bbl	0 bbl	0 bbl

Time 24 hr clock	S-U PSI psi	SH-FOAM-Q %	SH-SU-RATE bbl/min	FOAMER RATE gal/min	Total Flowrate bpm	TOTAL N2 RATE scf/min	Total Volume bbl		Message
16:54	0	0	0	0	0	0	0	0	START ACQUISITION
16:54	-3617	0.	0.	-6.25	0.	0.	0.	0	
16:55	2953	0.	0.	0.008	0.	0.	0.13	0	
16:55	2953	0.	0.	0.008	0.	0.	0.13	0	Pressure Test Lines
16:55	1305	0.	0.	0.	0.	0.	0.13	0	
16:56	1099	0.	0.	0.008	0.	0.	0.13	0	
16:57	2647	0.	0.	0.008	0.	0.	0.13	0	
16:58	3191	0.	0.	0.	0.	0.	0.13	0	
16:58	3114	0.	0.	0.008	0.	0.	0.13	0	
16:59	1795	0.	0.	0.	0.	0.	0.13	0	
17:00	1795	0.	0.	0.	0.	0.	0.13	0	PAUSE ACQUISITION
17:03	1795	0.	0.	0.	0.	0.	0.13	0	RESTART AFTER PAUSE
17:03	1186	0.	0.	0.	0.	0.	0.13	0	
17:04	1158	0.	0.	0.	0.	0.	0.13	0	
17:05	458	0.	3.33	0.374	3.33	0.	0.435	0	
17:05	458	0.	3.33	0.374	3.33	0.	0.435	0	Start Using N2 Flowmeter
17:05	456	0.	3.33	0.374	3.33	0.	0.435	0	[TOTAL N2 RATE]=F[TOTAL N2 RATE 2]
17:05	228.9	74.94	32.68	6.35	8.19	10365	6.04	0	
17:06	485.3	75.42	32.59	1.92	8.01	10421	12.07	0	
17:07	737.2	73.86	30.3	1.98	7.92	9467	18.03	0	
17:08	934.1	74.85	31.85	1.98	8.01	10110	24.	0	
17:08	1122	74.12	31.65	2.01	8.19	9945	30.17	0	
17:09	1282	74.12	31.65	1.98	8.19	9945	36.42	0	
17:10	1282	74.12	31.65	1.98	8.19	9945	36.42	0	[TOTAL N2 RATE]=F[TOTAL N2 RATE 1]
17:10	1282	74.12	31.65	1.98	8.19	9945	36.42	0	Start Using Tach_s
17:10	1529	80.83	83.56	3.21	16.02	26936	47.18	0	
17:11	1665	80.29	80.81	3.21	15.93	27608	59.25	0	

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Well	Field	Service Date	Customer	Job Number
FF Rapp #4	Hugoton		AOBIL DRILLING V3905007	20124857

Time 24 hr clock	B-U PSI psi	BH-FORM-G %	BH-BU-RATE bbl/min	FOAMER RATE gal/min	Total Foamer bgal	TOTAL SS RATE Sbbl/min	Total Volume bbl		Messages
17:12	1639	80.22	80.99	3.23	16.02	27548	71.36	0	
17:12	1639	80.31	81.34	3.24	16.02	27696	83.44	0	
17:13	1621	80.27	81.2	3.25	16.02	27636	95.53	0	
17:14	1635	80.04	80.72	3.26	16.11	27396	107.6	0	
17:15	1603	80.08	80.42	3.26	16.02	27304	119.8	0	
17:15	1525	80.05	80.73	3.26	16.11	27400	131.9	0	
17:16	1520	80.13	81.08	3.25	16.11	27548	144.	0	
17:17	1543	80.08	80.86	3.24	16.11	27464	156.2	0	
17:18	1552	80.03	80.69	3.25	16.11	27380	168.3	0	
17:18	1557	80.03	80.69	3.26	16.11	27380	180.4	0	
17:19	1557	80.15	80.72	3.24	16.02	27432	192.6	0	
17:20	1543	80.09	80.93	3.25	16.11	27484	204.7	0	
17:21	1536	80.13	81.09	3.24	16.11	27552	216.9	0	
17:21	1543	80.17	81.22	3.21	16.11	27608	229.	0	
17:22	1552	80.17	81.22	3.27	16.11	27608	241.1	0	
17:23	1552	80.17	81.22	3.24	16.11	27608	253.3	0	
17:24	1548	80.01	80.14	3.24	16.02	27186	265.4	0	
17:24	1552	79.99	80.25	3.25	16.11	27196	277.5	0	
17:25	1548	79.94	80.29	3.26	16.11	27212	289.7	0	
17:26	1548	79.94	80.33	3.14	16.11	27228	301.8	0	
17:27	1525	79.95	80.34	3.15	16.11	27232	313.9	0	
17:27	1484	79.99	80.5	3.17	16.11	27300	326.1	0	
17:28	1465	80.04	80.69	3.21	16.11	27384	338.3	0	
17:29	1442	79.53	78.71	3.2	16.11	26544	350.4	0	
17:30	1433	79.53	78.71	3.24	16.11	26544	362.6	0	
17:30	1406	79.45	78.39	3.21	16.11	26408	374.7	0	
17:31	1374	79.46	78.45	3.24	16.11	26432	386.9	0	
17:32	1273	79.4	78.62	3.21	16.2	26466	399.1	0	
17:33	1218	79.38	78.58	3.26	16.2	26446	411.3	0	
17:33	1213	79.24	78.05	3.24	16.2	26224	423.5	0	
17:34	1209	79.18	77.81	3.27	16.2	26124	435.7	0	
17:35	1204	79.18	77.81	3.18	16.2	26124	448.	0	
17:36	1204	79.27	77.72	3.24	16.11	26124	460.2	0	
17:36	1126	79.24	77.61	3.25	16.11	26076	472.3	0	
17:37	989.	79.41	78.66	3.24	16.2	26464	484.5	0	
17:38	723.4	0.	0.	3.06	0.	0.	494.5	0	
17:38	723.4	0.	0.	3.06	0.	0.	494.5	0	Shutdown
17:39	586.1	0.	0.	3.02	0.	0.	494.5	0	
17:39	554.	0.	0.	-6.24	0.	0.	494.5	0	
17:40	535.7	0.	0.	-6.24	0.	0.	494.5	0	
17:41	517.4	0.	0.	-6.24	0.	0.	494.5	0	
17:42	508.2	0.	0.	-6.24	0.	0.	494.5	0	
17:42	499.1	0.	0.	-6.24	0.	0.	494.5	0	
17:43	485.3	0.	0.	-6.24	0.	0.	494.5	0	
17:44	480.8	0.	0.	-6.24	0.	0.	494.5	0	
17:45	471.6	0.	0.	-6.25	0.	0.	494.5	0	
17:45	462.5	0.	0.	-6.24	0.	0.	494.5	0	
17:46	453.3	0.	0.	-6.24	0.	0.	494.5	0	
17:47	444.1	0.	0.	-6.25	0.	0.	494.5	0	
17:48	435.	0.	0.	-6.25	0.	0.	494.5	0	
17:48	430.4	0.	0.	-6.24	0.	0.	494.5	0	
17:49	421.2	0.	0.	-6.25	0.	0.	494.5	0	
17:50	407.5	0.	0.	-6.24	0.	0.	494.5	0	
17:51	402.9	0.	0.	-6.24	0.	0.	494.5	0	

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Well	Field	Service Date	Customer	Job Number
FF Rapp #4	Hugoton		MOBIL DRILLING V3905007	2012-0557

Time 24 hr clock	S-U PSI psi	SN-FOAM-Q %	SN-SIU-RATE bbl/min	FOAMER RATE gal/min	Total Fluid bbls	TOTAL N2 RATE scf/min	Total Volume bbl		Message
17:52	393.8	0.	0.	-6.24	0.	0.	494.5	0	
17:52	384.6	0.	0.	-6.24	0.	0.	494.5	0	
17:53	384.6	0.	0.	-6.24	0.	0.	494.5	0	End Job

Post Job Summary

Average Injection Rates, bpm

Fluid	N2	CO2	Maximum Rate
16	27100	0	16

Volume of Fluid Injected, bbl

Clean Fluid	Acid	Oil	CO2	N2 (scf)
493	0	0	0	635576

Treating Pressure Summary, psi

Breakdown	Maximum	Final	Average	ISIP	15 Min. ISIP
1700	1700	950	1500	583	494

Quantity of & placed, lb

Total Injected	Total Ordered/Designed
0	0

N2 Percent	CO2 Percent	Designed Fluid Volume	Displacement	Slurry Volume	Pad Volume	Percent Pad
80 %	0 %	100000 gal	0 bbl	0 bbl	0 gal	0 %

Customer or Authorized Representative	Dowell Supervisor	Number of Stages	Fracture Gradient	
John Rice	Jeffrey Dutton	0	0 psi/ft	☑ Job Completed ☐ Service Out