

**McVAY DRILLING COMPANY**

P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX: 39-DRILL

HOBBS OCD

NOV 06 2017

RECEIVED

Well Name and Num: Windward Federal #6H
Location: Sec 30, T24S, R32E
Operator: COG
Drilling Contractor: McVay Drilling Company

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
0.75	484	1.88	6878	89.30	14485		
0.60	753	2.10	7349	89.70	14862		
1.10	861	1.97	7821	91.20	15333		
1.53	1320	2.08	8104	92.70	15711		
1.82	1507	2.20	8382	89.60	16088		
1.10	1979	24.75	8886	91.40	16465		
1.38	2451	68.06	9312	89.30	16844		
2.58	2829	89.37	9771	90.20	17316		
2.20	3112	91.95	10243	89.20	17693		
1.67	3489	89.45	10621	88.50	18165		
2.34	3961	91.47	13833	90.30	18542		
2.04	4433	93.77	14116	92.30	19013		
1.70	4551	91.19	14582	95.10	19204		
1.91	4991	90.01	15054				
1.94	5463	90.18	15526				
2.39	5935	94.53	15998				
2.39	6406	89.68	16334				

By: Matt A. Bann

Subscribed and sworn to before me this 27th day of March, 2017

Tina Flemens
Notary Public, Lea County, New Mexico



WINDWARD FEDERAL #6H

<u>Perfs</u>	<u>7 1/2% Acid (Gal)</u>	<u>15% Acid (Gal)</u>	<u>Sand (#)</u>	<u>Fluid (Gal)</u>
1	0	1512	244851	361914
2	1512	3024	299680	439866
3	1512	1512	240540	354732
4	1500	1512	300070	475428
5	1500	1512	300240	459552
6	1500	1512	152130	357366
7	1500	1512	300160	501930
8	1512	1512	300280	379470
9	1512	1512	299060	463806
10	1500	1512	300120	441660
11	1512	1512	298580	477204
12	1512	1512	171440	449274
13	1500	1512	303350	538554
14	1512	1512	299530	482790
15	1512	1512	300680	426804
16	1500	1512	300270	458712
17	1512	1512	300130	421302
18	1512	1512	320770	506436
19	1500	1512	302220	416124
20	1512	1512	302140	420420
21	1512	1512	300620	426216
22	1512	1512	206980	323232
23	1512	1512	301360	411768
24	1512	1512	283280	435666
25	1500	1512	297770	458796
26	1512	1512	299740	445914
27	1512	1554	300020	416640
28	1512	1512	300490	382116
29	1512	1512	301950	362796
30	1512	1512	302015	352926
31	1500	1974	300250	369336
32	1512	1512	302380	365442
33	1512	1512	298910	384720
34	1512	1512	300080	371028
35	1512	1512	186000	412734
36	1512	1512	301660	359394
37	1512	1512	277870	474704
38	1512	1512	293950	361452
39	1512	1512	303670	357336
40	1512	1512	301150	358218
41	1512	1554	291440	354228
42	1512	1554	298470	353682
43	1512	1512	301130	358386
44	1512	1512	300340	369138
45	1512	1512	297520	373254
46	1512	1512	301110	385854
47	1512	1554	288760	348642
48	1512	1512	300870	421806
49	1512	1512	300600	493038
50	1512	1512	300020	418656
51	1512	1554	300000	417774
52	1512	1512	301460	392952
53	1512	1512	300100	390096
54	1512	1512	305590	368340
55	1512	1512	300820	354480
56	1512	1512	264060	435582
57	1512	1512	300440	361410
58	1512	1512	303618	381192
59	1512	1512	276840	386190
60	1512	1512	301150	428484
61	1512	1512	300520	356244
62	1512	1512	300250	358176
63	1634	1512	296520	350192
Totals	93,744	97,440	18,228,014	25,521,572

Windward Federal 6H

From Bottom to Top	Stage 1	Distance Between Pairs	Shots	Stage 2	Distance Between Pairs	Shots	Stage 3	Distance Between Pairs	Shots	Stage 4	Distance Between Pairs	Shots	Stage 5	Distance Between Pairs	Shots
	18.815	38	14	18.824	77	6	18.815	10	6	18.852	33	6	18.201	33	6
	18.277	38	12	18.810	14	6	18.877	18	6	18.841	13	6	18.190	13	6
	18.728	38	10	18.808	14	6	18.872	20	6	18.828	18	6	18.178	18	6
	18.051		8	18.803	14	6	18.848	18	6	18.808	22	6	18.157	18	6
From Bottom to Top	Plug to Plug			18.805	0	5	18.825	22	5	18.825	14	5	18.151	14	5
	18.805	21	5	18.825	0	5	18.805	18	5	18.825	18	5	18.151	18	5
	18.805	21	5	18.825	0	5	18.805	18	5	18.825	18	5	18.151	18	5
	18.805	21	5	18.825	0	5	18.805	18	5	18.825	18	5	18.151	18	5
	18.805	21	5	18.825	0	5	18.805	18	5	18.825	18	5	18.151	18	5
From Bottom to Top	Plug to Plug	18.805	44	Plug to Plug	18.825	44	Plug to Plug	18.805	44	Plug to Plug	18.825	44	Plug to Plug	18.805	44
	18.805	44	44	18.825	44	44	18.805	44	44	18.825	44	44	18.805	44	44
	18.805	44	44	18.825	44	44	18.805	44	44	18.825	44	44	18.805	44	44
	18.805	44	44	18.825	44	44	18.805	44	44	18.825	44	44	18.805	44	44
	18.805	44	44	18.825	44	44	18.805	44	44	18.825	44	44	18.805	44	44
From Bottom to Top	Stage 6	Distance Between Pairs	Shots	Stage 7	Distance Between Pairs	Shots	Stage 8	Distance Between Pairs	Shots	Stage 9	Distance Between Pairs	Shots	Stage 10	Distance Between Pairs	Shots
	18.005	30	6	17.812	23	6	17.812	33	6	17.808	27	6	17.808	34	6
	18.040	14	6	17.807	18	6	17.807	13	6	17.808	17	6	17.807	14	6
	18.008	18	6	17.807	22	6	17.807	17	6	17.808	23	6	17.807	12	6
	18.010	21	6	17.807	16	6	17.810	16	6	17.808	18	6	17.811	16	6
From Bottom to Top	17.809	17	5	17.811	16	5	17.804	22	5	17.842	19	5	17.808	22	5
	17.809	17	5	17.811	16	5	17.804	22	5	17.842	19	5	17.808	22	5
	17.809	17	5	17.811	16	5	17.804	22	5	17.842	19	5	17.808	22	5
	17.809	17	5	17.811	16	5	17.804	22	5	17.842	19	5	17.808	22	5
	17.809	17	5	17.811	16	5	17.804	22	5	17.842	19	5	17.808	22	5
From Bottom to Top	17.809	21	5	17.804	10	5	17.804	10	5	17.804	18	5	17.804	18	5
	17.809	21	5	17.804	10	5	17.804	10	5	17.804	18	5	17.804	18	5
	17.809	21	5	17.804	10	5	17.804	10	5	17.804	18	5	17.804	18	5
	17.809	21	5	17.804	10	5	17.804	10	5	17.804	18	5	17.804	18	5
	17.809	21	5	17.804	10	5	17.804	10	5	17.804	18	5	17.804	18	5
From Bottom to Top	Plug to Plug	145	44	Plug to Plug	145	44	Plug to Plug	145	44	Plug to Plug	145	44	Plug to Plug	145	44
	145	44	44	145	44	44	145	44	44	145	44	44	145	44	44
	145	44	44	145	44	44	145	44	44	145	44	44	145	44	44
	145	44	44	145	44	44	145	44	44	145	44	44	145	44	44
	145	44	44	145	44	44	145	44	44	145	44	44	145	44	44
From Bottom to Top	Stage 11	Distance Between Pairs	Shots	Stage 12	Distance Between Pairs	Shots	Stage 13	Distance Between Pairs	Shots	Stage 14	Distance Between Pairs	Shots	Stage 15	Distance Between Pairs	Shots
	17.217	18	6	17.457	29	6	17.457	20	6	18.680	36	6	18.704	34	6
	17.205	18	6	17.457	12	6	18.682	14	6	18.680	10	6	18.680	10	6
	17.205	18	6	17.457	12	6	18.682	14	6	18.680	10	6	18.680	10	6
	17.205	18	6	17.457	12	6	18.682	14	6	18.680	10	6	18.680	10	6
From Bottom to Top	17.205	22	6	17.457	19	6	18.681	18	6	18.681	18	6	18.681	18	6
	17.205	22	6	17.457	19	6	18.681	18	6	18.681	18	6	18.681	18	6
	17.205	22	6	17.457	19	6	18.681	18	6	18.681	18	6	18.681	18	6
	17.205	22	6	17.457	19	6	18.681	18	6	18.681	18	6	18.681	18	6
	17.205	22	6	17.457	19	6	18.681	18	6	18.681	18	6	18.681	18	6
From Bottom to Top	17.205	18	5	17.074	19	5	18.682	10	5	18.774	14	5	18.924	18	5
	17.205	18	5	17.074	19	5	18.682	10	5	18.774	14	5	18.924	18	5
	17.205	18	5	17.074	19	5	18.682	10	5	18.774	14	5	18.924	18	5
	17.205	18	5	17.074	19	5	18.682	10	5	18.774	14	5	18.924	18	5
	17.205	18	5	17.074	19	5	18.682	10	5	18.774	14	5	18.924	18	5
From Bottom to Top	17.205	10	5	17.068	10	5	18.685	10	5	18.808	18	5	18.808	18	5
	17.205	10	5	17.068	10	5	18.685	10	5	18.808	18	5	18.808	18	5
	17.205	10	5	17.068	10	5	18.685	10	5	18.808	18	5	18.808	18	5
	17.205	10	5	17.068	10	5	18.685	10	5	18.808	18	5	18.808	18	5
	17.205	10	5	17.068	10	5	18.685	10	5	18.808	18	5	18.808	18	5
From Bottom to Top	Plug to Plug	181	44	Plug to Plug	147	44	Plug to Plug	180	44	Plug to Plug	141	44	Plug to Plug	187	44
	181	44	44	147	44	44	180	44	44	141	44	44	187	44	44
	181	44	44	147	44	44	180	44	44	141	44	44	187	44	44
	181	44	44	147	44	44	180	44	44	141	44	44	187	44	44
	181	44	44	147	44	44	180	44	44	141	44	44	187	44	44
From Bottom to Top	Stage 16	Distance Between Pairs	Shots	Stage 17	Distance Between Pairs	Shots	Stage 18	Distance Between Pairs	Shots	Stage 19	Distance Between Pairs	Shots	Stage 20	Distance Between Pairs	Shots
	18.550	37	6	18.404	28	6	18.580	16	6	18.112	28	6	18.548	42	6
	18.534	18	6	18.388	14	6	18.500	10	6	18.538	18	6	18.538	10	6
	18.518	20	6	18.376	13	6	18.511	10	6	18.601	18	6	18.526	17	6
	18.486	20	6	18.372	18	6	18.512	18	6	18.603	19	6	18.504	19	6
From Bottom to Top	18.478	18	6	18.343	18	6	18.494	19	6	18.044	19	6	18.592	23	6
	18.478	18	6	18.343	18	6	18.494	19	6	18.044	19	6	18.592	23	6
	18.478	18	6	18.343	18	6	18.494	19	6	18.044	19	6	18.592	23	6
	18.478	18	6	18.343	18	6	18.494	19	6	18.044	19	6	18.592	23	6
	18.478	18	6	18.343	18	6	18.494	19	6	18.044	19	6	18.592	23	6
From Bottom to Top	18.437	11	5	18.300	13	5	18.158	18	5	18.002	14	5	18.099	17	5
	18.437	11	5	18.300	13	5	18.158	18	5	18.002	14	5	18.099	17	5
	18.437	11	5	18.300	13	5	18.158	18	5	18.002	14	5	18.099	17	5
	18.437	11	5	18.300	13	5	18.158	18	5	18.002	14	5	18.099	17	5
	18.437	11	5	18.300	13	5	18.158	18	5	18.002	14	5	18.099	17	5
From Bottom to Top	Plug to Plug	148	44	Plug to Plug	134	44	Plug to Plug	168	44	Plug to Plug	148	44	Plug to Plug	134	44
	148	44	44	134	44	44	168	44	44	148	44	44	134	44	44
	148	44	44	134	44	44	168	44	44	148	44	44	134	44	44
	148	44	44	134	44	44	168	44	44	148	44	44	134	44	44
	148	44	44	134	44	44	168	44	44	148	44	44	134	44	44
From Bottom to Top	Stage 21	Distance Between Pairs	Shots	Stage 22	Distance Between Pairs										

Windward Federal SH

Stage 41	Distance Between Pairs	Shots	Stage 42	Distance Between Pairs	Shots	Stage 43	Distance Between Pairs	Shots	Stage 44	Distance Between Pairs	Shots	Stage 45	Distance Between Pairs	Shots
From Bottom to Top	12,002	40	12,665	26	6	12,601	42	6	12,505	26	6	12,215	28	6
12,784	13	6	12,657	13	6	12,496	14	6	12,207	16	6	12,200	13	6
12,728	10	6	12,657	19	6	12,482	17	6	12,534	18	6	12,187	25	6
12,745	13	6	12,613	24	6	12,465	16	6	12,318	18	6	12,162	16	6
12,727	10	6	12,540	22	6	12,433	21	6	12,302	21	6	12,146	13	6
12,711	18	6	12,588	22	6	12,412	10	6	12,281	19	6	12,133	21	6
12,683	6	6	12,583	6	6	12,393	6	6	12,262	19	6	12,112	18	6
Plug to Plug	137	44	Plug to Plug	148	44	Plug to Plug	161	44	Plug to Plug	180	44	Plug to Plug	148	44
Free Plug	12,618	Total Shots	Free Plug	12,672	Total Shots	Free Plug	12,624	Total Shots	Free Plug	12,572	Total Shots	Free Plug	12,523	Total Shots

Stage 46	Distance Between Pairs	Shots	Stage 47	Distance Between Pairs	Shots	Stage 48	Distance Between Pairs	Shots	Stage 49	Distance Between Pairs	Shots	Stage 50	Distance Between Pairs	Shots
From Bottom to Top	12,968	26	11,811	33	6	11,785	27	6	11,605	38	6	11,422	28	6
12,958	15	6	11,881	17	6	11,748	13	6	11,504	20	6	11,467	19	6
12,037	18	6	11,881	16	6	11,725	16	6	11,574	17	6	11,438	18	6
12,019	10	6	11,865	15	6	11,716	19	6	11,562	17	6	11,405	22	6
12,000	18	6	11,860	19	6	11,700	16	6	11,546	15	6	11,388	16	6
11,981	10	6	11,831	16	6	11,682	22	6	11,530	17	6	11,382	18	6
11,963	18	6	11,813	21	6	11,660	16	6	11,513	13	6	11,364	19	6
11,944	6	6	11,792	6	6	11,644	6	6	11,500	6	6	11,346	6	6
Plug to Plug	155	44	Plug to Plug	146	44	Plug to Plug	160	44	Plug to Plug	171	44	Plug to Plug	165	44
Free Plug	12,024	Total Shots	Free Plug	11,818	Total Shots	Free Plug	11,770	Total Shots	Free Plug	11,613	Total Shots	Free Plug	11,468	Total Shots

Stage 51	Distance Between Pairs	Shots	Stage 52	Distance Between Pairs	Shots	Stage 53	Distance Between Pairs	Shots	Stage 54	Distance Between Pairs	Shots	Stage 55	Distance Between Pairs	Shots
From Bottom to Top	11,508	37	11,160	25	6	11,012	28	6	10,666	20	6	10,720	26	6
11,504	14	6	11,153	20	6	10,998	12	6	10,630	15	6	10,700	11	6
11,280	10	6	11,130	20	6	10,966	16	6	10,636	15	6	10,689	18	6
11,264	14	6	11,110	20	6	10,970	18	6	10,620	18	6	10,671	10	6
11,250	18	6	11,092	20	6	10,982	19	6	10,602	18	6	10,652	10	6
11,232	18	6	11,070	20	6	10,973	19	6	10,783	18	6	10,633	18	6
11,214	10	6	11,050	20	6	10,914	19	6	10,784	18	6	10,615	19	6
11,198	6	6	11,040	6	6	10,885	6	6	10,746	6	6	10,586	6	6
Plug to Plug	158	44	Plug to Plug	150	44	Plug to Plug	146	44	Plug to Plug	148	44	Plug to Plug	155	44
Free Plug	11,335	Total Shots	Free Plug	11,178	Total Shots	Free Plug	11,029	Total Shots	Free Plug	10,872	Total Shots	Free Plug	10,728	Total Shots

Stage 56	Distance Between Pairs	Shots	Stage 57	Distance Between Pairs	Shots	Stage 58	Distance Between Pairs	Shots	Stage 59	Distance Between Pairs	Shots	Stage 60	Distance Between Pairs	Shots
From Bottom to Top	10,552	34	10,418	30	6	10,270	26	6	10,120	24	6	9,959	38	6
10,552	11	6	10,404	14	6	10,289	18	6	10,100	10	6	9,944	18	6
10,541	20	6	10,380	19	6	10,340	18	6	10,090	19	6	9,928	11	6
10,521	10	6	10,371	19	6	10,321	18	6	10,072	18	6	9,915	14	6
10,502	18	6	10,362	18	6	10,303	19	6	10,054	19	6	9,901	17	6
10,483	18	6	10,354	19	6	10,284	19	6	10,034	19	6	9,886	18	6
10,465	10	6	10,315	10	6	10,185	21	6	10,015	18	6	9,866	15	6
10,448	6	6	10,298	6	6	10,144	6	6	9,997	6	6	9,851	6	6
Plug to Plug	148	44	Plug to Plug	137	44	Plug to Plug	167	44	Plug to Plug	163	44	Plug to Plug	133	44
Free Plug	10,479	Total Shots	Free Plug	10,424	Total Shots	Free Plug	10,287	Total Shots	Free Plug	10,130	Total Shots	Free Plug	9,987	Total Shots

Stage 61	Distance Between Pairs	Shots	Stage 62	Distance Between Pairs	Shots	Stage 63	Distance Between Pairs	Shots	Stage 64	Distance Between Pairs	Shots	Stage 65	Distance Between Pairs	Shots
From Bottom to Top	8,720	25	8,664	26	6	8,511	29	6		3268			0	
8,709	18	6	8,652	18	6	8,507	19	6						
8,711	10	6	8,638	16	6	8,486	18	6						
8,772	18	6	8,620	16	6	8,472	15	6						
8,753	15	6	8,564	14	6	8,457	22	6						
8,738	5	6	8,560	24	6	8,436	19	6						
8,720	20	6	8,547	19	6	8,410	18	6						
8,700	5	6	8,547	6	6	8,388	6	6						
Plug to Plug	154	44	Plug to Plug	154	44	Plug to Plug	54	44	Plug to Plug	0	0	Plug to Plug	0	0
Free Plug	8,634	Total Shots	Free Plug	8,588	Total Shots	Free Plug	8,538	Total Shots	Free Plug		Total Shots	Free Plug		Total Shots