ENSECO Directional Drilling

JOB NO.:	11055-159	**FIELD:**	Powder Wash
Company:	Wexpro Company	**Township:**	11 N
LOCATION:		**Range**	97 W
RIG NAME:	SST-88		
STATE:	Colorado		
COUNTY:	Country		
WELL NAME:	Musser # 72		

MOTOR INFORMATION

Desc: 6 1/2 adj motor

Bent Hsg/Sub: 1.5 / 1.5 Bit to Bend: 5.97

Pad OD: 9.562 NB Stab:

Slide Report for BHA # 2

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
2	27-Feb	Drilling	19:00	20:00	1.00	1558	1621	63	15	63.0	50	0	369	1200		0.00	0.00	0.00	
2	27-Feb	Drilling	20:15	21:20	1.08	1621	1717	96	15	88.6	50	0	369	1200		0.00	0.00	0.00	
2	27-Feb	Sliding	21:35	21:55	0.33	1717	1732	15	10	45.0	0	0	369	1200	290	0.00	0.00	0.00	
2	27-Feb	Drilling	21:55	22:40	0.75	1732	1780	48	15	64.0	50	0	369	1200		0.00	0.00	0.00	
2	27-Feb	Drilling	22:50	23:05	0.25	1780	1812	32	15	128.0	50	0	369	1200		0.00	0.00	0.00	
2	27-Feb	Sliding	23:20	23:25	0.08	1812	1820	8	10	96.0	0	0	369	1200	-30	0.00	0.00	0.00	
2	27-Feb	Drilling	23:25	24:00	0.58	1820	1865	45	15	77.1	50	0	369	1200		0.00	0.00	0.00	
2	28-Feb	Drilling	00:00	00:10	0.17	1865	1876	11	15	66.0	50	0	369	1200		0.00	0.00	0.00	
2	28-Feb	Sliding	00:25	00:35	0.17	1876	1882	6	10	36.0	0	0	369	1200	-90	0.00	0.00	0.00	
2	28-Feb	Drilling	00:35	01:00	0.42	1882	1907	25	15	60.0	50	0	369	1200		0.00	0.00	0.00	
2	28-Feb	Sliding	01:15	01:25	0.17	1907	1920	13	10	78.0	0	0	369	1200	-5	0.00	0.00	0.00	
2	28-Feb	Drilling	01:25	02:40	1.25	1920	2003	83	15	66.4	50	0	369	1200		0.00	0.00	0.00	
2	28-Feb	Sliding	02:55	03:05	0.17	2003	2013	10	10	60.0	0	0	369	1200	-30	0.00	0.00	0.00	
2	28-Feb	Drilling	03:05	04:20	1.25	2013	2098	85	15	68.0	50	0	369	1200		0.00	0.00	0.00	
2	28-Feb	Sliding	04:30	04:40	0.17	2098	2111	13	10	78.0	0	0	369	1200	-10	0.00	0.00	0.00	
2	28-Feb	Drilling	04:40	05:40	1.00	2111	2194	83	15	83.0	50	0	369	1200		0.00	0.00	0.00	
2	28-Feb	Sliding	05:50	06:05	0.25	2194	2207	13	15	52.0	0	0	369	1200	10	0.00	0.00	0.00	
2	28-Feb	Drilling	06:05	07:00	0.92	2207	2288	81	15	88.4	50	0	369	1200		0.00	0.00	0.00	
2	28-Feb	Sliding	07:15	07:30	0.25	2288	2303	15	15	60.0	0	0	369	1200	360	0.00	0.00	0.00	
2	28-Feb	Drilling	07:30	08:30	1.00	2303	2384	81	15	81.0	50	0	369	1350		0.00	0.00	0.00	
2	28-Feb	Sliding	08:45	09:05	0.33	2384	2399	15	15	45.0	0	0	369	1350	-20	0.00	0.00	0.00	
2	28-Feb	Drilling	09:05	10:05	1.00	2399	2480	81	15	81.0	50	0	369	1350		0.00	0.00	0.00	
2	28-Feb	Sliding	10:20	10:30	0.17	2480	2489	9	15	54.0	0	0	369	1350	-30	0.00	0.00	0.00	
2	28-Feb	Drilling	10:30	11:40	1.17	2489	2575	86	15	73.7	50	0	369	1350		0.00	0.00	0.00	
2	28-Feb	Drilling	11:50	12:40	0.83	2575	2638	63	15	75.6	50	0	369	1350		0.00	0.00	0.00	
2	28-Feb	Drilling	12:55	13:20	0.42	2638	2671	33	15	79.2	50	0	369	1350		0.00	0.00	0.00	
2	28-Feb	Sliding	13:35	13:40	0.08	2671	2678	7	15	84.0	0	0	369	1350	-80	0.00	0.00	0.00	

Slide Report for BHA # 2

Note: Surveys listed are interpolated from the actual surveys

#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
2	28-Feb	Drilling	13:40	15:05	1.42	2678	2767	89	15	62.8	50	0	369	1400		0.00	0.00	0.00	
2	28-Feb	Drilling	15:20	16:55	1.58	2767	2862	95	15	60.0	50	0	369	1400		0.00	0.00	0.00	
2	28-Feb	Sliding	17:10	17:15	0.08	2862	2868	6	15	72.0	0	0	369	1400	-90	0.00	0.00	0.00	
2	28-Feb	Drilling	17:15	18:50	1.58	2868	2958	90	15	56.8	50	0	369	1400		0.00	0.00	0.00	
2	28-Feb	Drilling	19:00	20:20	1.33	2958	3053	95	15	71.3	50	0	369	1400		0.00	0.00	0.00	
2	28-Feb	Drilling	20:30	22:10	1.67	3053	3149	96	15	57.6	50	0	369	1400		0.00	0.00	0.00	
2	28-Feb	Sliding	22:20	22:30	0.17	3149	3158	9	15	54.0	0	0	369	1400	360	0.00	0.00	0.00	
2	28-Feb	Drilling	22:30	23:35	1.08	3158	3245	87	15	80.3	50	0	369	1400		0.00	0.00	0.00	
2	28-Feb	Drilling	23:45	24:00	0.25	3245	3276	31	15	124.0	50	0	369	1400		0.00	0.00	0.00	
2	1-Mar	Drilling	00:00	01:15	1.25	3276	3340	64	15	51.2	50	0	369	1400		0.00	0.00	0.00	
2	1-Mar	Drilling	01:25	02:55	1.50	3340	3435	95	15	63.3	50	0	369	1400		0.00	0.00	0.00	
2	1-Mar	Sliding	03:05	03:20	0.25	3435	3442	7	15	28.0	0	0	369	1400	360	0.00	0.00	0.00	
2	1-Mar	Drilling	03:20	04:50	1.50	3442	3530	88	15	58.7	50	0	369	1400		0.00	0.00	0.00	
2	1-Mar	Drilling	05:00	06:25	1.42	3530	3626	96	15	67.8	50	0	369	1500		0.00	0.00	0.00	
2	1-Mar	Sliding	06:40	06:50	0.17	3626	3632	6	15	36.0	0	0	369	1500	360	0.00	0.00	0.00	
2	1-Mar	Drilling	06:50	08:10	1.33	3632	3721	89	15	66.8	50	0	369	1500		0.00	0.00	0.00	
2	1-Mar	Drilling	08:20	09:40	1.33	3721	3817	96	15	72.0	50	0	369	1500		0.00	0.00	0.00	
2	1-Mar	Drilling	09:50	11:25	1.58	3817	3912	95	15	60.0	50	0	369	1500		0.00	0.00	0.00	
2	1-Mar	Sliding	11:40	11:50	0.17	3912	3919	7	15	42.0	0	0	369	1500	80	0.00	0.00	0.00	
2	1-Mar	Drilling	11:50	13:20	1.50	3919	4008	89	15	59.3	50	0	369	1500		0.00	0.00	0.00	
2	1-Mar	Drilling	13:30	15:00	1.50	4008	4103	95	15	63.3	50	0	369	1500		0.00	0.00	0.00	
2	1-Mar	Drilling	15:35	17:00	1.42	4103	4199	96	15	67.8	50	0	369	1500		0.00	0.00	0.00	
2	1-Mar	Drilling	17:10	18:40	1.50	4199	4294	95	15	63.3	50	0	369	1500		0.00	0.00	0.00	
2	1-Mar	Drilling	18:50	20:25	1.58	4294	4390	96	15	60.6	50	0	369	1500		0.00	0.00	0.00	
2	1-Mar	Sliding	20:40	21:00	0.33	4390	4398	8	15	24.0	0	0	369	1500	-20	0.00	0.00	0.00	
2	1-Mar	Drilling	21:00	22:10	1.17	4398	4485	87	15	74.6	50	0	369	1500		0.00	0.00	0.00	
2	1-Mar	Drilling	22:20	23:50	1.50	4485	4581	96	15	64.0	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Sliding	00:00	00:20	0.33	4581	4589	8	15	24.0	0	0	369	1500	-10	0.00	0.00	0.00	
2	2-Mar	Drilling	00:20	01:50	1.50	4589	4676	87	15	58.0	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Drilling	02:00	04:25	2.42	4676	4772	96	15	39.7	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Drilling	04:35	06:00	1.42	4772	4867	95	15	67.1	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Sliding	06:15	06:20	0.08	4867	4875	8	15	96.0	0	0	369	1500	-150	0.00	0.00	0.00	
2	2-Mar	Drilling	06:20	07:55	1.58	4875	4962	87	15	54.9	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Sliding	08:10	08:15	0.08	4962	4975	13	15	156.0	0	0	369	1500	-150	0.00	0.00	0.00	
2	2-Mar	Drilling	08:15	09:20	1.08	4975	5058	83	15	76.6	50	0	369	1500		0.00	0.00	0.00	

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#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
2	2-Mar	Sliding	09:35	10:00	0.42	5058	5073	15	15	36.0	0	0	369	1500	180	0.00	0.00	0.00	
2	2-Mar	Drilling	10:00	11:50	1.83	5073	5153	80	15	43.6	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Drilling	12:00	14:00	2.00	5153	5249	96	15	48.0	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Sliding	14:15	14:25	0.17	5249	5256	7	15	42.0	0	0	369	1500	-135	0.00	0.00	0.00	
2	2-Mar	Drilling	14:25	14:50	0.42	5256	5280	24	15	57.6	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Drilling	15:05	16:05	1.00	5280	5344	64	15	64.0	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Sliding	16:20	16:30	0.17	5344	5351	7	15	42.0	0	0	369	1500	-150	0.00	0.00	0.00	
2	2-Mar	Drilling	16:30	18:50	2.33	5351	5439	88	15	37.7	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Sliding	19:00	19:15	0.25	5439	5450	11	15	44.0	0	0	369	1500	-160	0.00	0.00	0.00	
2	2-Mar	Drilling	19:15	21:20	2.08	5450	5535	85	15	40.8	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Sliding	21:30	21:40	0.17	5535	5543	8	15	48.0	0	0	369	1500	-90	0.00	0.00	0.00	
2	2-Mar	Drilling	21:40	23:40	2.00	5543	5630	87	15	43.5	50	0	369	1500		0.00	0.00	0.00	
2	2-Mar	Sliding	23:50	24:00	0.17	5630	5633	3	15	18.0	0	0	369	1500	-90	0.00	0.00	0.00	
2	3-Mar	Sliding	00:00	00:05	0.08	5633	5638	5	15	60.0	0	0	369	1500	-90	0.00	0.00	0.00	
2	3-Mar	Drilling	00:05	01:50	1.75	5638	5725	87	15	49.7	50	0	369	1500		0.00	0.00	0.00	
2	3-Mar	Drilling	02:05	03:45	1.67	5725	5821	96	15	57.6	50	0	369	1500		0.00	0.00	0.00	
2	3-Mar	Sliding	03:55	04:05	0.17	5821	5829	8	15	48.0	0	0	369	1500	-90	0.00	0.00	0.00	
2	3-Mar	Drilling	04:05	05:40	1.58	5829	5916	87	15	54.9	50	0	369	1500		0.00	0.00	0.00	
2	3-Mar	Drilling	05:50	07:30	1.67	5916	6012	96	15	57.6	50	0	369	1500		0.00	0.00	0.00	
2	3-Mar	Sliding	07:45	07:50	0.08	6012	6020	8	15	96.0	0	0	369	1500	120M	0.00	0.00	0.00	
2	3-Mar	Drilling	07:50	09:30	1.67	6020	6107	87	15	52.2	50	0	369	1500		0.00	0.00	0.00	
2	3-Mar	Sliding	09:45	10:00	0.25	6107	6120	13	15	52.0	0	0	369	1500	180M	0.00	0.00	0.00	
2	3-Mar	Drilling	10:00	11:40	1.67	6120	6202	82	15	49.2	50	0	369	1500		0.00	0.00	0.00	
2	3-Mar	Drilling	11:50	14:15	2.42	6202	6298	96	15	39.7	50	0	369	1500		0.00	0.00	0.00	
2	3-Mar	Sliding	14:35	14:55	0.33	6298	6308	10	15	30.0	0	0	369	1500	200M	0.00	0.00	0.00	
2	3-Mar	Drilling	14:55	17:50	2.92	6308	6393	85	15	29.1	50	0	369	1600		0.00	0.00	0.00	
2	3-Mar	Drilling	18:00	20:00	2.00	6393	6488	95	15	47.5	50	0	369	1600		0.00	0.00	0.00	
2	3-Mar	Sliding	20:10	20:35	0.42	6488	6498	10	15	24.0	0	0	369	1600	220M	0.00	0.00	0.00	
2	3-Mar	Drilling	20:35	22:30	1.92	6498	6584	86	15	44.9	50	0	369	1600		0.00	0.00	0.00	
2	3-Mar	Drilling	22:40	24:00	1.33	6584	6647	63	15	47.3	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Drilling	00:00	00:35	0.58	6647	6679	32	15	54.9	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Sliding	00:45	01:05	0.33	6679	6692	13	15	39.0	0	0	369	1600	220M	0.00	0.00	0.00	
2	4-Mar	Drilling	01:05	03:05	2.00	6692	6775	83	15	41.5	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Drilling	03:15	05:20	2.08	6775	6870	95	15	45.6	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Sliding	05:30	05:50	0.33	6870	6880	10	15	30.0	0	0	369	1600	220M	0.00	0.00	0.00	

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#	Date	Drill Mode	Start Time	End Time	Hours	Start MD	End MD	Depth Drilled	WOB	ROP	RPM	Surf. Torque	Flow Rate	SPP	TFO	INC	AZM	DLS	Note
2	4-Mar	Drilling	05:50	07:30	1.67	6880	6966	86	15	51.6	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Drilling	07:45	09:50	2.08	6966	7061	95	15	45.6	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Drilling	10:05	12:00	1.92	7061	7156	95	15	49.6	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Drilling	12:25	15:30	3.08	7156	7252	96	15	31.1	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Drilling	15:40	16:25	0.75	7252	7283	31	15	41.3	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Drilling	16:40	18:15	1.58	7283	7347	64	15	40.4	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Drilling	18:25	20:40	2.25	7347	7442	95	15	42.2	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Drilling	20:50	23:10	2.33	7442	7538	96	15	41.1	50	0	369	1600		0.00	0.00	0.00	
2	4-Mar	Drilling	23:20	24:00	0.67	7538	7569	31	15	46.5	50	0	369	1600		0.00	0.00	0.00	
2	5-Mar	Drilling	00:00	01:45	1.75	7569	7633	64	15	36.6	50	0	369	1600		0.00	0.00	0.00	
2	5-Mar	Drilling	01:55	04:45	2.83	7633	7728	95	15	33.5	50	0	369	1600		0.00	0.00	0.00	
2	5-Mar	Drilling	04:55	07:20	2.42	7728	7824	96	15	39.7	50	0	369	1800		0.00	0.00	0.00	
2	5-Mar	Drilling	07:30	10:45	3.25	7824	8015	191	20	58.8	55	0	369	1900		0.00	0.00	0.00	
2	5-Mar	Drilling	11:00	13:15	2.25	8015	8110	95	20	42.2	55	0	369	1900		0.00	0.00	0.00	
2	5-Mar	Drilling	13:30	13:50	0.33	8110	8120	10	20	30.0	55	0	369	1900		0.00	0.00	0.00	

Total Drilled:	6562	**Avg. Total ROP:**	53.21		**DEPTH% - TIME %**
Total Rotary Drilled:	6238	**Avg. Rotary ROP:**	53.70	**Percent Rotary:**	95.06 - 94.19
Total Drilled Sliding:	324	**Avg. Slide ROP:**	45.21	**Percent Slide:**	4.94 - 5.81