Change of operator; From M.T.S. to Wexpro Inc.
Effective date: ?

FILE NOTATIONS

Entered in NID File ..... ✓
Location Map Pinned ..... ✓
Card Indexed ..... ✓

Checked by Chief CWB 4-30-74
Approval Letter .....
Disapproval Letter .....

COMPLETION DATA:

Date Well Completed .....
W..✓.. WW..... TA.....
OW..... OS..... PA.....

Location Inspected .....
Bond released
State or Fee Land .....

LOGS FILED

Driller's Log.....✓.....
Electric Logs (No.) .....✓.....
E..... I..... Dual I Lat..... GR-N..... Micro.....
BHC Sonic GR..... Lat..... L..... Sonic.....
CBLog..... CCLog..... Others.....

****
* SCHLUMBERGER *
****

HIGH RESOLUTION

DIPMETER

****

ARROW PROGRAM
****

(05-60-02)

00502 HDT-C DDR DEC 10

MOUNTAIN FUEL SUPPLY COMPANY

PATTERSON CANYON NO. 1

43-037-30170

WILDCAT

SAN JUAN COUNTY, UTAH

RUN NO. ONE

MAY 29, 1974

ALL QUALITY ARROW LIST

CORRELATION LENGTH 8 FT.
STEP LENGTH 4 FT.
SEARCH ANGLE 30 DEGREES X2

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
4330	2.2	87	0.5	29	8.7	8.1		D	21	100	67	
4334	2.1	100	0.5	27	9.0	8.1	**	D	10	100	82	
4338	1.2	195	0.5	26	8.9	8.2		*	0	12	83	
4342	4.3	166	0.5	25	8.7	8.2		*	10	32	60	
4346	3.8	297	0.5	27	8.6	8.2		B	11	100	66	
4350	2.9	252	0.5	27	8.5	8.2		C	0	100	70	
4354	3.4	189	0.5	23	8.5	8.2		C	0	100	65	
4358	7.6	253	0.5	17	8.3	8.3		*	0	11	30	
4362	5.8	74	0.5	15	8.3	8.3		C	0	100	57	
4366	2.6	60	0.5	17	8.2	8.3	**	C	24	100	77	
4370	3.4	42	0.5	16	8.2	8.3	**	C	100	55	78	
4374	3.8	40	0.5	16	8.2	8.3	**	C	100	100	81	
4378	1.6	276	0.5	17	8.2	8.7	**	D	10	100	89	
4382	6.6	247	0.5	17	8.2	8.9		*	0	17	88	
4386	5.3	298	0.5	17	8.2	8.9		*	0	11	91	
4390	0.5	71	0.5	18	8.2	8.8	**	B	100	100	70	
4394	1.3	55	0.5	18	8.1	8.8	**	C	100	100	82	
4398	3.4	80	0.5	23	8.0	9.0	**	C	14	100	94	
4402	1.9	90	0.5	31	8.1	8.7	**	C	10	100	93	
4406	0.6	17	0.5	29	8.2	8.3	**	C	100	100	94	
4410	14.0	2	0.5	24	8.1	8.0		*	0	0	98	
4414	1.5	227	0.5	26	8.0	7.9	**	A	100	100	78	
4418	1.0	240	0.5	38	8.0	7.9	**	A	100	100	77	
4422	1.7	342	0.5	53	8.1	7.9	**	D	100	100	80	
4426	9.3	342	0.5	61	8.2	8.0	**	D	100	100	78	
4430	9.6	309	0.5	59	8.0	8.0	**	D	38	100	84	
4434	0.5	119	0.5	54	8.0	8.0	**	B	100	100	97	
4438	0.2	299	0.5	49	8.1	8.1	**	B	100	100	97	
4442	1.3	260	0.5	44	8.1	8.1	**	C	100	100	95	
4446	0.8	217	0.5	39	8.1	8.0	**	C	100	100	94	
4450	2.2	66	0.5	35	8.2	8.0		*	0	36	92	
4454	3.9	33	0.5	31	8.2	8.0	**	C	10	100	92	
4458	2.1	66	0.5	29	8.2	8.0	**	A	100	100	97	
4462	1.2	59	0.5	28	8.3	8.1	**	B	100	100	85	
4466	14.2	282	0.5	26	8.4	8.2		D	95	100	74	
4470	2.1	197	0.5	23	8.3	8.2		C	0	100	92	
4474	1.8	165	0.5	17	8.0	8.1	**	D	100	100	94	
4478	1.8	36	0.5	15	7.8	7.9		A	0	100	81	
4482	0.9	115	0.5	15	7.8	7.9	**	C	100	100	95	
4486	1.3	98	0.5	15	7.8	8.2	**	C	100	100	95	

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
4490	3.0	121	0.5	15	7.8	8.5		D	0	100	76	
4494	2.1	49	0.5	19	7.9	8.8		C	12	100	85	
4498	0.7	269	0.5	27	7.9	8.7	**	A	100	100	78	
4502	2.6	82	0.5	35	7.9	8.2	**	C	12	100	98	
4506	3.1	67	0.5	39	7.9	7.9	**	C	15	100	98	
4510	0.5	224	0.5	39	8.0	7.9	**	D	10	100	84	
4514	8.1	202	0.5	45	8.1	7.9		B	0	100	81	
4518	7.6	188	0.5	60	8.2	7.9	**	A	100	54	67	
4522	5.3	183	0.5	81	8.3	7.9	**	B	100	100	72	
4526	0.8	210	0.5	92	8.4	8.0	**	A	100	100	84	
4530	1.9	305	0.5	92	8.3	8.0	**	A	100	100	87	
4534	3.4	284	0.5	88	7.9	8.0	**	C	100	100	91	
4538	2.8	195	0.5	80	7.9	8.0	**	C	100	100	94	
4542	1.1	155	0.5	72	7.9	7.9	**	A	100	100	87	
4546	1.8	109	0.5	65	7.9	7.9	**	B	100	100	96	
4550	1.2	113	0.5	58	7.9	8.0	**	A	100	100	96	
4554	1.0	102	0.5	49	7.9	8.0	**	A	100	100	91	
4558	0.4	353	0.5	44	7.9	8.0	**	D	100	100	91	
4562	3.4	118	0.5	42	7.9	8.1		D	0	100	94	
4566	2.8	109	0.5	40	7.9	8.2		B	0	100	92	
4570	1.8	195	0.5	36	8.2	8.5	**	C	10	100	85	
4574	4.4	197	0.5	32	8.4	8.7		B	0	100	80	
4578	21.6	120	0.5	36	8.4	8.8	**	D	10	88	74	
4582	7.8	96	0.5	42	8.4	8.6	**	C	10	76	77	
4586	2.0	233	0.5	44	8.2	8.4	**	C	100	100	91	
4590	1.8	240	0.5	43	8.1	8.3	**	C	100	100	90	
4594	1.4	260	0.5	44	8.0	8.3	**	B	100	100	83	
4598	1.0	259	0.5	47	8.0	8.3	**	B	100	100	87	
4602	1.2	224	0.5	46	8.0	8.3	**	C	10	100	96	
4606	1.3	207	0.5	43	8.0	8.3	**	C	10	100	97	
4610	3.2	187	0.5	46	8.0	8.2	**	C	100	100	96	
4614	1.4	222	0.5	45	8.0	8.1	**	C	100	100	95	
4618	1.8	262	0.5	38	8.0	8.0	**	A	100	100	98	
4622	1.0	172	0.5	33	7.9	7.9	**	A	100	100	89	
4626	1.2	178	0.5	28	7.9	7.9	**	A	10	100	81	
4630	1.8	176	0.5	22	8.0	7.9	**	B	100	100	97	
4634	1.7	173	0.5	21	8.2	7.9	**	B	100	100	98	
4638	3.1	5	0.5	21	8.1	7.9	**	D	10	100	96	
4642	0.7	223	0.5	21	8.0	7.9	**	D	10	100	97	
4646	1.1	228	0.5	18	8.3	8.0	**	D	100	100	97	

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
4650	2.3	282	0.5	17	8.8	8.0	**	D	19	100	86	
4654	1.0	246	0.5	16	9.1	8.1	**	D	100	100	82	
4658	3.3	111	0.5	13	9.0	8.2	**	D	22	100	78	
4662	22.5	106	0.5	12	9.7	8.3		D	0	100	54	
4666	6.7	89	0.5	11	10.5	8.6		*	0	44	63	
4670	11.9	358	0.5	14	10.9	8.5		*	0	10	56	
4674	3.0	82	0.5	15	10.1	8.2	**	D	10	100	70	
4678	1.6	56	0.5	14	8.9	8.2	**	D	10	84	90	
4682	3.1	318	0.5	14	8.7	8.1	**	C	100	100	95	
4686	2.0	281	0.5	16	9.3	8.0	**	D	10	50	95	
4690	2.4	98	0.5	14	9.4	8.0	**	D	10	100	84	
4694	1.2	317	0.5	10	8.8	8.0		C	0	100	87	
4698	3.2	284	0.5	7	8.7	8.0	**	C	12	54	96	
4702	1.3	83	0.5	8	8.8	8.0	**	D	100	100	82	
4706	3.3	319	0.5	8	9.0	8.0		*	0	20	65	
4710	17.1	249	0.5	9	9.2	8.0	**	D	16	66	72	
4714	1.3	311	0.5	11	9.4	8.0		*	0	10	66	
4718	1.2	171	0.5	9	9.1	8.1	**	C	100	100	43	
4722	1.8	244	0.5	7	9.0	8.1		C	0	100	91	
4726	6.3	180	0.5	13	9.6	8.4		*	0	49	96	
4730	1.8	109	0.5	19	9.3	8.3	**	D	10	100	96	
4734	1.4	115	0.5	22	8.7	8.0	**	B	100	100	87	
4738	2.4	158	0.5	22	8.6	8.0	**	A	100	100	64	
4742	0.7	23	0.5	17	8.4	8.1	**	C	100	100	91	
4746	0.7	97	0.5	11	8.2	8.2	**	C	100	100	90	
4750	2.0	137	0.5	7	8.2	8.4	**	C	100	100	79	
4754	4.7	123	0.5	8	8.2	8.5		*	0	45	92	
4758	4.4	204	0.5	8	8.2	8.7		*	0	31	89	
4762	1.7	276	0.5	6	8.3	8.9	**	C	100	100	87	
4766	3.6	208	0.5	5	8.3	9.2		D	0	100	90	
4770	1.3	259	0.5	6	8.3	9.2	**	C	10	100	67	
4774	4.6	222	0.5	11	8.3	9.0		*	0	14	83	
4778	0.4	251	0.5	17	8.3	8.8		*	0	100	74	
4782	4.4	305	0.5	20	8.4	8.6	**	D	100	100	81	
4786	3.9	320	0.5	23	8.4	8.3	**	D	100	52	94	
4790	1.0	232	0.5	25	8.3	8.1	**	A	100	100	68	
4794	2.3	191	0.5	27	8.3	8.0	**	C	10	100	95	
4798	0.9	172	0.5	33	8.2	8.0	**	A	100	100	96	
4802	0.5	149	0.5	38	8.1	7.9	**	A	100	100	92	
4806	0.5	150	0.5	41	8.0	7.9	**	A	100	100	88	

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
4810	1.3	147	0.5	42	8.0	8.0	**	A	100	100	89	
4814	0.4	124	0.5	41	8.1	8.1	**	C	100	100	93	
4818	0.3	234	0.5	38	8.1	8.1	**	A	100	100	94	
4822	0.5	210	0.5	41	8.2	8.2	**	A	100	100	97	
4826	0.4	221	0.5	43	8.2	8.2	**	D	100	100	98	
4830	0.4	220	0.5	40	8.2	8.2	**	*	100	100	95	
4834	1.3	135	0.5	35	8.1	8.3	**	D	100	100	78	
4838	0.8	172	0.5	30	8.1	8.6	**	C	10	100	86	
4842	0.7	283	0.5	29	8.0	8.6	**	C	100	100	92	
4846	1.3	38	0.5	32	8.0	8.3	**	*	100	100	89	
4850	2.7	15	0.5	32	8.1	8.4	**	C	100	100	86	
4854	3.8	354	0.5	32	8.2	8.7	**	C	13	100	84	
4858	10.5	341	0.5	33	8.4	9.0		*	0	22	92	
4862	16.1	301	0.5	33	8.6	9.1	**	*	10	55	82	
4866	2.5	123	0.5	33	8.5	8.9	**	C	10	100	83	
4870	1.5	145	0.5	32	8.3	8.6	**	C	10	100	93	
4874	4.2	276	0.5	31	8.3	8.5	**	C	10	100	92	
4878	2.8	358	0.5	31	8.3	8.5	**	D	10	64	87	
4882	2.1	350	0.5	32	8.2	8.4	**	C	10	100	84	
4886	2.1	309	0.5	33	8.2	8.4	**	C	10	100	76	
4890	10.9	264	0.5	34	8.2	8.6		*	0	38	89	
4894	3.3	281	0.5	33	8.2	8.6	**	D	10	100	90	
4898	1.1	308	0.5	34	8.2	8.3	**	C	100	100	81	
4902	0.2	218	0.5	39	8.2	8.1	**	B	100	100	92	
4906	5.2	191	0.5	39	8.2	8.0	**	C	100	100	94	
4910	5.7	207	0.5	34	8.2	8.0		*	0	18	94	
4914	0.9	31	0.5	33	8.2	8.0	**	C	12	100	80	
4918	0.3	187	0.5	31	8.2	8.0	**	D	100	100	92	
4922	0.5	156	0.5	29	8.1	8.0	**	D	100	100	95	
4926	0.4	123	0.5	29	8.0	8.0	**	A	100	100	81	
4930	0.7	203	0.5	25	8.0	8.0	**	A	100	100	80	
4934	0.9	189	0.5	22	8.1	8.0	**	A	100	100	87	
4938	0.6	277	0.5	18	8.1	8.0	**	*	100	100	90	
4942	0.7	226	0.5	17	8.0	8.0	**	*	100	100	90	
4946	1.4	142	0.5	17	8.0	8.0	**	B	100	100	90	
4950	3.7	237	0.5	16	8.1	8.1	**	C	15	100	94	
4954	5.7	239	0.5	14	8.0	8.1	**	C	100	74	93	
4958	0.9	91	0.5	10	8.0	8.0	**	C	100	100	91	
4962	2.6	328	0.5	6	7.9	8.0		*	0	14	92	
4966	1.9	268	0.5	7	7.9	7.9	**	C	100	100	89	

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
4970	4.6	211	0.5	5	7.9	8.0	**	B	43	100	89	
4974	6.1	195	0.5	4	7.9	8.1	**	A	26	100	88	
4978	1.2	301	0.5	6	7.9	8.0	**	C	100	100	96	
4982	1.1	272	0.5	9	7.9	7.9	**	C	100	100	90	
4986	0.5	109	0.5	11	7.9	7.9		A	100	100	69	
4990	0.5	204	0.5	13	7.9	7.9	**	A	100	100	81	
4994	0.4	264	0.5	14	7.9	7.9	**	A	100	100	90	
4998	0.3	176	0.5	13	8.0	7.9	**	*	100	100	99	*
5002	0.7	239	0.5	14	8.0	7.9	**	B	100	100	79	
5006	0.2	249	0.5	12	8.2	7.9	**	C	100	100	79	
5010	0.8	132	0.5	9	8.5	7.9	**	C	100	100	81	
5014	0.6	90	0.5	6	8.4	7.9	**	A	100	100	75	
5018	0.7	70	0.5	8	8.3	7.9	**	A	100	100	78	
5022	0.7	344	0.5	12	8.2	7.9	**	A	100	100	86	
5026	0.5	29	0.5	12	8.2	7.9	**	A	100	100	82	
5030	0.4	108	0.5	12	8.3	8.0	**	D	100	100	91	
5034	1.5	255	0.5	11	8.3	8.0	**	D	100	100	88	
5038	0.6	272	0.5	8	8.3	8.0	**	A	100	100	89	
5042	0.6	68	0.5	7	8.4	8.0		C	0	100	93	
5046	34.7	49	0.5	10	8.7	8.0		*	0	14	82	
5050	5.0	295	0.5	13	9.1	8.1	**	D	100	100	58	
5054	2.7	325	0.5	10	9.0	8.2		*	0	28	87	
5058	8.4	114	0.5	10	8.8	8.2	**	C	13	57	80	
5062	20.5	56	0.5	12	8.9	8.2		D	0	92	85	
5066	6.1	349	0.5	12	8.9	8.1	**	D	16	51	68	
5070	5.1	187	0.5	14	8.4	8.0		*	0	10	87	
5074	2.3	152	0.5	16	8.1	8.0		*	10	10	60	
5078	8.1	128	0.5	17	8.2	7.9		*	0	10	72	
5082	0.9	49	0.5	20	8.1	7.9	**	D	100	100	94	
5086	1.4	15	0.5	25	7.9	7.9	**	D	100	100	98	
5090	1.7	354	0.5	30	7.9	7.9	**	D	100	100	94	
5094	1.2	168	0.5	39	7.9	7.9		B	0	100	69	
5098	0.2	75	0.5	43	7.9	7.9	**	*	100	100	92	
5102	0.7	173	0.5	45	7.9	7.9	**	B	100	100	97	
5106	0.6	244	0.5	48	7.9	7.9	**	A	100	100	98	
5110	0.9	249	0.5	48	7.9	7.9	**	B	100	100	96	
5114	5.6	281	0.5	46	7.9	7.9	**	C	19	100	94	
5118	0.7	44	0.5	46	8.0	8.0	**	C	100	100	90	
5122	2.2	277	0.5	48	7.9	8.0		B	0	100	90	
5126	7.7	267	0.5	50	7.9	8.0	**	B	100	100	89	

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
5130	4.7	248	0.5	50	8.0	8.0	**	C	100	100	86	
5134	2.8	203	0.5	46	8.0	8.0	**	C	100	100	71	
5138	2.6	244	0.5	42	7.9	8.3		B	20	100	73	
5142	8.0	215	0.5	40	7.8	8.8	**	B	21	100	79	
5146	1.4	133	0.5	42	7.8	8.8	**	A	100	100	64	
5150	1.4	193	0.5	44	7.8	8.3	**	C	100	100	90	
5154	1.8	188	0.5	43	7.9	7.9	**	C	100	100	89	
5158	2.1	189	0.5	39	7.9	7.9	**	B	100	100	94	
5162	1.3	176	0.5	37	7.9	7.9	**	A	100	100	98	
5166	1.6	201	0.5	38	7.9	7.9	**	B	11	100	80	
5170	0.5	215	0.5	35	7.9	7.9	**	B	100	100	78	
5174	1.1	177	0.5	30	7.9	7.9	**	B	100	100	85	
5178	1.1	96	0.5	27	7.9	7.9	**	A	100	100	89	
5182	0.3	69	0.5	24	7.9	7.9	**	A	100	100	95	
5186	0.7	191	0.5	21	7.9	7.9	**	*	100	100	99	
5190	0.5	208	0.5	20	7.9	8.0	**	*	100	100	94	
5194	0.4	232	0.5	14	8.0	8.0	**	A	100	100	87	
5198	1.6	119	0.5	7	8.0	7.9	**	A	100	100	88	
5202	3.0	119	0.5	15	7.6	7.9	**	D	100	100	92	
5206	1.6	112	0.5	27	7.5	7.9		D	0	100	98	
5210	1.3	125	0.5	23	7.9	7.9	**	B	100	100	93	
5214	2.1	116	0.5	18	7.9	7.9	**	B	100	100	98	
5218	2.7	96	0.5	15	7.9	7.9	**	A	100	100	98	
5222	1.6	107	0.5	9	7.9	8.0	**	A	100	100	96	
5226	1.5	101	0.5	2	8.0	8.1	**	B	100	100	95	
5230	2.8	50	0.5	358	8.0	8.1	**	B	100	100	95	
5234	2.9	41	0.5	357	7.9	8.1	**	B	100	100	94	
5238	5.5	85	0.5	2	7.8	8.2		B	0	100	88	
5242	7.8	93	0.5	7	7.9	8.0	**	C	10	50	83	
5246	1.1	313	0.5	7	7.9	7.9		C	0	100	76	
5250	12.0	355	0.5	8	7.9	7.9		*	0	99	66	
5254	2.8	173	0.5	8	7.9	7.9		C	0	100	48	
5258	4.0	202	0.5	12	7.9	7.9		B	0	100	58	
5262	6.3	219	0.5	16	7.9	8.0	**	B	29	62	55	
5266	5.7	234	0.5	16	8.2	8.0		*	0	49	57	
5270	1.8	20	0.5	16	8.4	8.1	**	C	16	100	80	
5274	2.6	25	0.5	17	8.7	8.2	**	C	12	100	79	
5278	14.0	306	0.5	20	8.8	8.3		*	0	14	67	
5282	3.7	235	0.5	25	8.8	8.3	**	D	10	100	65	
5286	20.5	314	0.5	29	8.4	8.1		D	0	94	86	

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
5290	4.9	324	0.5	30	8.0	7.9		*	0	46	90	
5294	1.6	357	0.5	35	7.9	7.9	**	C	100	100	82	
5298	2.0	354	0.5	44	7.9	7.9	**	A	10	100	59	
5302	1.1	264	0.5	52	7.9	7.9	**	B	100	100	59	
5306	0.8	276	0.5	54	7.9	7.9	**	A	100	100	85	
5310	1.2	264	0.5	57	7.9	7.9	**	A	100	100	88	
5314	1.0	284	0.5	60	7.9	7.9	**	C	100	100	91	
5318	1.5	313	0.5	58	7.9	7.9	**	D	100	100	90	
5322	1.3	265	0.5	53	7.9	7.9	**	C	100	100	89	
5326	0.4	287	0.5	49	7.9	7.9	**	C	100	100	96	
5330	0.3	14	0.5	42	7.9	7.9	**	C	100	100	98	
5334	0.9	18	0.5	39	7.9	7.9	**	*	100	100	96	
5338	0.9	38	0.5	41	7.9	7.9	**	A	100	100	97	
5342	2.3	48	0.5	41	7.9	8.0	**	C	100	100	90	
5346	5.2	40	0.5	37	7.9	8.0	**	C	31	100	83	
5350	1.5	69	0.5	34	7.9	7.9	**	*	100	100	90	
5354	1.2	337	0.5	36	7.9	7.9	**	C	100	100	86	
5358	3.5	309	0.5	39	7.9	7.9	**	B	100	100	90	
5362	2.7	13	0.5	38	7.9	7.9		A	0	100	69	
5366	0.1	282	0.5	34	7.9	7.9	**	A	100	100	65	
5370	0.0	108	0.5	30	7.9	7.9	**	A	100	100	83	
5374	0.9	298	0.5	27	7.9	7.9	**	C	100	100	91	
5378	2.0	316	0.5	24	8.1	8.0	**	D	10	100	97	
5382	0.8	48	0.5	23	8.1	8.0	**	C	10	100	99	
5386	1.1	18	0.5	20	7.9	7.9		*	0	26	88	
5390	4.7	232	0.5	20	7.9	7.9		B	0	100	44	
5394	29.7	357	0.5	19	7.9	7.9		*	0	0	33	
5398	7.1	47	0.5	18	7.9	7.9		*	0	0	64	
5402	0.6	350	0.5	17	7.9	7.9		*	0	0	40	
5406	0.4	124	0.5	13	7.9	7.9	**	B	100	100	68	
5410	0.4	61	0.5	10	7.9	7.9	**	A	100	100	90	
5414	0.7	41	0.5	11	7.9	7.9	**	A	100	100	96	
5418	0.8	249	0.5	13	7.9	7.9	**	A	100	100	93	
5422	1.6	253	0.5	11	7.9	8.0	**	B	100	100	88	
5426	2.4	282	0.5	9	7.9	8.0	**	B	100	100	89	
5430	2.7	30	0.5	9	7.9	8.1	**	B	100	100	84	
5434	0.8	65	0.5	11	7.9	8.2	**	*	100	100	81	
5438	2.3	213	0.5	14	7.9	8.1	**	B	100	100	92	
5442	1.8	165	0.5	16	7.8	7.9	**	C	100	100	97	
5446	4.7	81	0.5	18	7.8	7.9	**	A	10	100	74	

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
5450	7.4	59	0.5	20	7.8	7.9	**	D	10	100	78	
5454	6.5	77	0.5	20	7.8	7.9		C	0	100	47	
5458	28.2	176	0.5	21	7.8	7.8		*	0	10	66	
5462	14.2	153	0.5	23	7.7	7.8		B	10	100	47	
5466	16.1	146	0.5	23	7.6	7.7		*	0	0	53	
5470	8.9	63	0.5	20	7.6	7.6		*	0	34	65	
5474	0.5	153	0.5	22	7.6	7.6		C	0	100	88	
5478	0.8	109	0.5	23	7.6	7.7		D	0	100	93	
5482	5.7	49	0.5	18	7.6	7.7		*	0	49	73	
5486	2.8	25	0.5	18	7.5	7.7	**	*	10	100	88	
5490	5.6	72	0.5	22	7.6	7.8		D	0	100	89	
5494	0.2	312	0.5	22	7.7	7.8	**	D	100	100	95	
5498	1.3	317	0.5	21	7.6	7.8	**	D	15	100	79	
5502	7.6	214	0.5	21	7.5	7.8	**	C	22	100	83	
5506	8.7	223	0.5	16	7.5	7.8	**	D	11	100	93	
5510	15.5	238	0.5	19	7.6	7.8	**	D	10	62	81	
5514	21.8	233	0.5	25	7.7	7.8	**	D	14	58	87	
5518	4.3	249	0.5	22	7.7	7.8		D	0	100	89	
5522	8.9	141	0.5	16	7.8	7.8		D	0	100	92	
5526	20.8	206	0.5	12	7.8	7.8		*	0	19	98	
5530	44.6	350	0.5	11	7.8	7.8		*	0	39	86	
5534	3.7	233	0.5	8	7.9	7.8	**	C	10	100	73	
5538	4.1	168	0.5	5	8.0	7.9	**	D	17	100	89	
5542	4.3	132	0.5	5	7.8	7.9		*	0	0	90	
5546	5.8	221	0.5	8	7.8	7.9		*	0	45	91	
5550	3.2	223	0.5	14	7.8	7.9		*	0	17	84	
5554	6.1	247	0.5	22	7.8	7.9	**	C	100	100	83	
5558	5.7	200	0.5	32	7.8	7.9		*	0	36	86	
5562	5.3	212	0.5	43	7.8	7.9	**	C	100	100	86	
5566	5.6	254	0.5	51	7.8	7.9	**	C	40	100	90	
5570	5.5	253	0.5	54	7.8	7.9	**	C	100	100	87	
5574	2.4	245	0.5	54	7.7	7.9		*	0	100	95	
5578	30.7	326	0.5	53	7.7	8.0		D	0	78	87	
5582	11.0	277	0.5	51	7.8	8.0		*	0	0	76	
5586	12.8	290	0.5	50	7.8	8.1		*	0	21	76	
5590	6.6	357	0.5	46	7.8	8.1		*	0	13	68	
5594	3.1	209	0.5	39	7.8	8.0		*	0	24	32	
5598	6.6	274	0.5	34	7.9	7.9	**	C	100	100	83	
5602	5.9	270	0.5	35	7.8	7.9	**	B	100	100	91	
5606	3.8	276	0.5	35	8.1	7.9	**	B	100	100	94	

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
5610	5.1	250	0.5	32	8.1	7.9		C	0	100	81	
5614	6.5	256	0.5	30	7.9	7.9	**	C	100	100	94	
5618	7.5	258	0.5	32	7.9	7.9	**	B	10	74	99	
5622	36.8	233	0.5	32	7.9	7.9		D	0	62	7	
5626	43.8	262	0.5	31	7.8	7.9		*	0	0	0	
5630	53.4	65	0.5	30	7.8	7.9		*	0	0	13	*
5634	0.9	193	0.4	28	7.9	7.9		C	0	100	98	
5638	4.1	202	0.4	26	7.9	7.9	**	D	10	100	96	
5642	1.9	250	0.4	25	7.8	7.9	**	C	100	100	98	
5646	1.9	256	0.5	25	8.2	8.0	**	C	100	100	97	
5650	3.9	298	0.5	24	8.7	8.0		*	0	13	94	
5654	0.7	225	0.6	26	8.5	7.9		*	0	11	86	
5658	11.7	240	0.8	34	8.1	7.9		*	0	25	86	
5662	3.8	96	0.8	40	7.9	7.8		*	0	0	88	
5666	6.3	245	0.8	40	7.9	7.8	**	B	100	100	96	
5670	6.5	234	0.9	35	7.9	7.8	**	C	100	100	96	
5674	10.6	253	1.0	33	7.7	7.8		*	0	23	81	
5678	9.0	247	1.0	33	7.7	7.7	**	D	15	100	84	
5682	7.7	226	1.0	32	7.8	7.8	**	D	10	74	97	
5686	15.9	36	0.9	31	7.8	7.8		*	0	89	34	*
5690	3.7	181	0.9	28	7.8	7.8	**	C	10	100	93	
5694	4.9	248	0.9	27	7.8	7.8		D	0	100	90	
5698	4.7	256	0.9	29	7.8	7.8		C	0	100	88	
5702	4.4	258	0.9	30	7.8	7.9	**	A	100	100	99	
5706	3.2	266	0.9	30	7.7	7.9	**	A	100	100	93	
5710	2.4	277	0.9	31	7.7	7.9	**	A	100	100	93	
5714	2.8	271	1.0	33	7.7	7.9	**	A	100	100	95	
5718	3.1	241	1.0	31	7.7	7.9	**	C	100	100	97	
5722	3.0	239	1.0	30	7.7	7.9	**	C	100	100	98	
5726	3.5	250	0.9	34	7.7	7.9	**	D	100	100	94	
5730	4.9	262	0.9	33	7.7	7.8	**	C	100	100	87	
5734	6.8	253	0.8	31	7.7	7.8	**	C	100	100	91	
5738	7.5	226	0.8	32	7.7	7.8	**	C	100	59	81	
5742	5.7	211	0.9	33	7.8	7.9	**	D	100	100	95	
5746	6.4	229	0.8	36	7.8	7.9	**	D	100	100	79	
5750	3.5	257	0.7	37	7.7	7.8		D	100	100	57	
5754	50.7	337	0.7	34	7.7	7.8		*	0	0	86	
5758	28.7	170	0.7	34	7.7	7.8		*	0	0	69	
5762	3.7	352	0.6	35	7.7	7.8		*	0	19	85	
5766	5.2	295	0.7	35	7.7	7.8		*	0	23	93	

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
5770	4.5	164	0.7	38	7.7	7.8	**	D	100	100	93	
5774	1.7	251	0.8	44	7.7	7.8		C	0	100	90	
5778	5.8	275	0.8	49	7.7	7.8	**	C	26	66	85	
5782	5.1	254	0.8	50	7.7	7.8	**	C	21	100	90	
5786	3.4	236	0.8	52	7.7	7.8	**	D	10	100	93	
5790	4.3	271	0.8	55	7.7	7.8		A	0	100	96	
5794	4.8	264	0.9	56	8.0	8.0	**	A	31	100	98	

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
5616	4.6	265	0.0	0	7.8	7.8		*	0	40	93	
5620	8.5	266	0.0	0	7.8	7.8	**	C	100	100	95	
5624	53.4	51	0.1	45	7.8	7.8		*	0	0	9	
5628	NO CORR		0.2	42	7.8	7.8						
5632	2.2	86	0.2	42	7.8	7.8		*	0	12	34	*
5636	7.8	210	0.3	41	7.8	7.8	**	D	34	100	76	
5640	4.9	223	0.4	36	7.8	7.8	**	D	15	100	96	
5644	3.4	246	0.5	33	7.8	7.8	**	A	100	100	98	
5648	3.0	246	0.5	31	8.1	7.9	**	A	100	100	98	
5652	6.3	246	0.5	31	8.6	8.0		*	0	46	96	
5656	4.8	248	0.7	33	8.4	8.0		*	0	30	87	
5660	15.3	256	0.7	35	8.1	7.9		*	0	22	83	
5664	6.3	235	0.8	37	8.1	7.8		*	0	19	67	
5668	6.6	238	0.8	39	8.1	7.8	**	D	100	100	92	
5672	6.7	232	0.9	35	8.0	7.9	**	D	100	100	94	
5676	11.4	284	0.9	34	7.8	7.8	**	*	30	61	70	
5680	8.3	242	1.0	35	7.8	7.8	**	D	13	100	84	
5684	8.7	224	1.0	33	7.9	7.8	**	C	10	100	96	
5688	21.4	93	1.0	34	7.9	7.8		D	0	100	8	
5692	10.7	120	1.0	32	7.8	7.8		C	0	67	95	
5696	2.2	213	1.0	28	7.8	7.8		D	0	100	87	
5700	4.1	260	0.9	28	7.8	7.8		*	0	100	90	
5704	3.4	259	0.9	32	7.8	7.9	**	A	100	100	98	
5708	2.1	266	1.0	34	7.7	7.8	**	A	100	100	94	
5712	2.4	277	1.0	33	7.6	7.8	**	B	100	100	93	
5716	2.7	272	1.1	30	7.6	7.8	**	B	100	100	94	
5720	3.2	252	1.1	30	7.6	7.8	**	C	100	100	97	
5724	3.1	258	1.1	30	7.7	7.8	**	D	100	100	96	
5728	3.2	261	1.1	32	7.8	7.8	**	C	100	100	95	
5732	4.6	252	1.1	35	7.8	7.8	**	C	100	100	93	
5736	5.1	242	1.1	35	7.8	7.8	**	C	100	100	94	
5740	5.3	225	1.1	32	7.8	7.8	**	C	100	100	90	
5744	5.2	222	1.1	30	7.8	7.8	**	D	100	100	91	
5748	4.3	255	1.1	30	7.8	7.8		D	100	100	80	
5752	12.1	269	1.1	30	7.8	7.8		*	0	29	69	*
5756	14.0	258	1.0	31	7.8	7.8		*	0	23	86	*
5760	13.9	306	1.0	35	7.8	7.8		*	0	0	70	
5764	4.2	259	0.9	35	7.8	7.8		*	0	19	86	
5768	5.0	240	0.9	31	7.8	7.8	**	D	100	100	93	
5772	3.7	247	1.0	31	7.8	7.8	**	D	100	100	96	

DEPTH	DIP	DIP AZM	DEV	DEV AZM	DIAM 1-3	DIAM 2-4	LO GI	Q	PLA	CLO	MAX	SPD COR
5776	2.4	295	1.0	33	7.8	7.8		D	0	100	96	
5780	5.9	242	1.0	34	7.8	7.8	**	B	100	100	81	
5784	5.8	236	1.0	34	7.8	7.8	**	C	100	100	94	
5788	4.5	263	1.0	33	7.7	7.8	**	D	12	100	98	

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* SCHLUMBERGER *
****

HIGH RESOLUTION

DIPMETER

****

ARROW PROGRAM
****

(05-60-02)

00502 HDT-C DDR DEC 10

MOUNTAIN FUEL SUPPLY COMPANY

PATTERSON CANYON NO. 1

WILDCAT

SAN JUAN COUNTY, UTAH

RUN NO. ONE

MAY 29, 1974

ALL QUALITY ARROW LIST

CORRELATION LENGTH 8 FT.
STEP LENGTH 4 FT.
SEARCH ANGLE 30 DEGREES X2

DIP FREQUENCY BY AZIMUTH
0-10 DEGREE DIPS

PRESENTATION	210	240	W	300	330	N	30	60	E	120	150	S	210
4330- 4400	1	3	1	2			2	4	3				2
4400- 4500	2	2	2	2	2		3	4	2	3			1
4500- 4600	6	2	3	1		1		1	3	4	1		2
4600- 4700	4	2	4		2	1		1	3	1			5
4700- 4800	3	3	2	2	2		1		2	3	2		4
4800- 4900	3	1	3	2		3	2			2	5		1
4900- 5000	6	3	4	1	1		1		1	2	2		4
5000- 5100		2	2	1	2	2	2	3	2	4	1		2
5100- 5200	5	5	3				1	1	1	2			7
5200- 5300	2	2		1	1	2	3	1	4	5			1
5300- 5400		1	6	4	2	2	4	4		1			
5400- 5500	1	2	1	1	1	1	3	6	2	2	1		1
5500- 5600	7	6	1			1				1	1		1
5600- 5700	1	8	6	1					1				2
5700- 5794	1	9	9	1		1					1		

DIP FREQUENCY BY AZIMUTH
10-90 DEGREE DIPS

PRESENTATION	210	240	W	300	330	N	30	60	E	120	150	S	210
4330- 4400													
4400- 4500				1			1						
4500- 4600											1		
4600- 4700							1				1		
4700- 4800			1										
4800- 4900				1	1	1							
4900- 5000													
5000- 5100									2				
5100- 5200													
5200- 5300					2		1						
5300- 5400							1						
5400- 5500												2	1
5500- 5600		1	2	1	1	1	1						
5600- 5700			3	1				1	1				
5700- 5794						1							1

DIP FREQUENCY BY AZIMUTH
0-10 DEGREE DIPS

PRESENTATION	30	60	E	120	150	S	210	240	W	300	330	N	30
4330- 4400	2	4	3			2	1	3	1	2			
4400- 4500	3	4	2	3		1	2	2	2	2	2		
4500- 4600		1	3	4	1	2	6	2	3	1		1	
4600- 4700		1	3	1		5	4	2	4		2	1	
4700- 4800	1		2	3	2	4	3	3	2	2	2		
4800- 4900	2			2	5	1	3	1	3	2		3	
4900- 5000	1		1	2	2	4	6	3	4	1	1		
5000- 5100	2	3	2	4	1	2		2	2	1	2	2	
5100- 5200	1	1	1	2		7	5	5	3				
5200- 5300	3	1	4	5		1	2	2		1	1	2	
5300- 5400	4	4		1				1	6	4	2	2	
5400- 5500	3	6	2	2	1	1	1	2	1	1	1	1	
5500- 5600				1	1	1	7	6	1			1	
5600- 5700			1			2	1	8	6	1			
5700- 5794					1		1	9	9	1		1	

DIP FREQUENCY BY AZIMUTH
0-90 DEGREE DIPS

PRESENTATION	30	60	E	120	150	S	210	240	W	300	330	N	30
4330- 4400	2	4	3			2	1	3	1	2			
4400- 4500	3	4	2	3		1	2	2	3	2	2	1	
4500- 4600		1	3	5	1	2	6	2	3	1		1	
4600- 4700		1	3	2		5	4	2	4		2	2	
4700- 4800	1		2	3	2	4	3	4	2	2	2		
4800- 4900	2			2	5	1	3	1	4	3	1	3	
4900- 5000	1		1	2	2	4	6	3	4	1	1		
5000- 5100	2	5	2	4	1	2		2	2	1	2	2	
5100- 5200	1	1	1	2		7	5	5	3				
5200- 5300	3	1	4	5		1	2	2		3	1	3	
5300- 5400	4	4		1				1	6	4	2	3	
5400- 5500	3	6	2	2	3	2	1	2	1	1	1	1	
5500- 5600				1	1	1	8	8	2	1	1	2	
5600- 5700	1	1	1			2	1	11	7	1			
5700- 5794					1	1	1	9	9	1	1	1	

DIP FREQUENCY BY AZIMUTH
0-10 DEGREE DIPS

PRESENTATION	210	240	W	300	330	N	30	60	E	120	150	S	210
5616- 5700		4	8	2					1				
5700- 5788		1	8	10	1								

DIP FREQUENCY BY AZIMUTH
10-90 DEGREE DIPS

PRESENTATION	210	240	W	300	330	N	30	60	E	120	150	S	210
5616- 5700				2					1	1	1		
5700- 5788				2	1								

DIP FREQUENCY BY AZIMUTH
0-10 DEGREE DIPS

PRESENTATION	30	60	E	120	150	S	210	240	W	300	330	N	30
5616- 5700				1				4	8	2			
5700- 5788								1	8	10	1		

```
* * * * * * * * * * * * * * * *
*                             *
*  DIP FREQUENCY BY AZIMUTH   *
*       0-90 DEGREE DIPS      *
*                             *
* * * * * * * * * * * * * * * *
```

PRESENTATION	30	60	E	120	150	S	210	240	W	300	330	N	30
5616- 5700			1	2	1			4	8	4			
5700- 5788								1	8	12	2		

E N D O F F R E Q U E N C Y L I S T I N G

MOUNTAIN FUEL SUPPLY CO.
Patterson Canyon #1
North Aneth Area
San Juan County, Utah
(Option Farmout Agreement)

WELL INDEX

Form 9-331 C
(May 1963)

SUBMIT IN [illegible]PLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [ ] OTHER Wildcat SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR: Mountain Fuel Supply Company

3. ADDRESS OF OPERATOR: P. O. Box 1129, Rock Springs, Wyoming 82901

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 560' FNL, 1674' FWL NE NW
At proposed prod. zone:

5. LEASE DESIGNATION AND SERIAL NO.: U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -

7. UNIT AGREEMENT NAME: -

8. FARM OR LEASE NAME: Patterson Canyon

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: NE NW 9-38S-25E., SLBS

12. COUNTY OR PARISH: San Juan 13. STATE: Utah

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 27 miles southeast of Monticello, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 354' / -

16. NO. OF ACRES IN LEASE: 960

17. NO. OF ACRES ASSIGNED TO THIS WELL: -

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: - / -

19. PROPOSED DEPTH: 6000'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 5225'

22. APPROX. DATE WORK WILL START*: May 3, 1974

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13-3/4	10-3/4	32.75	500	350
7-7/8	4-1/2	11.6	to be determined	

We would like to drill the subject well to an estimated depth of 6000', anticipated formation tops are as follows: Morrison at the surface, Summerville at 480', Entrada at 515', Carmel at 695', Navajo at 755', Kayenta at 1045', Wingate at 1220', Chinle at 1465', Shinarump at 2295', Moenkopi at 2375', Cutler at 2605', Honaker Trail at 4455', Paradox at 4925', Upper Ismay at 5330', Lower Ismay at 5635', "B" Marker at 5730', Desert Creek at 5755' and salt at 5880'.

Mud will be adequate to contain formation fluids and blow out preventers will be checked daily.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED BW Croft TITLE Vice President, Gas Supply Operations DATE April 24, 197[illegible]

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED
MAY 1 1974
JERRY W. LONG
DISTRICT ENGINEER

Oper.

RECEIVED
APR 26 1974
U. S. GEOLOGICAL SURVEY
DURANGO, COLO.

*See Instructions On Reverse Side

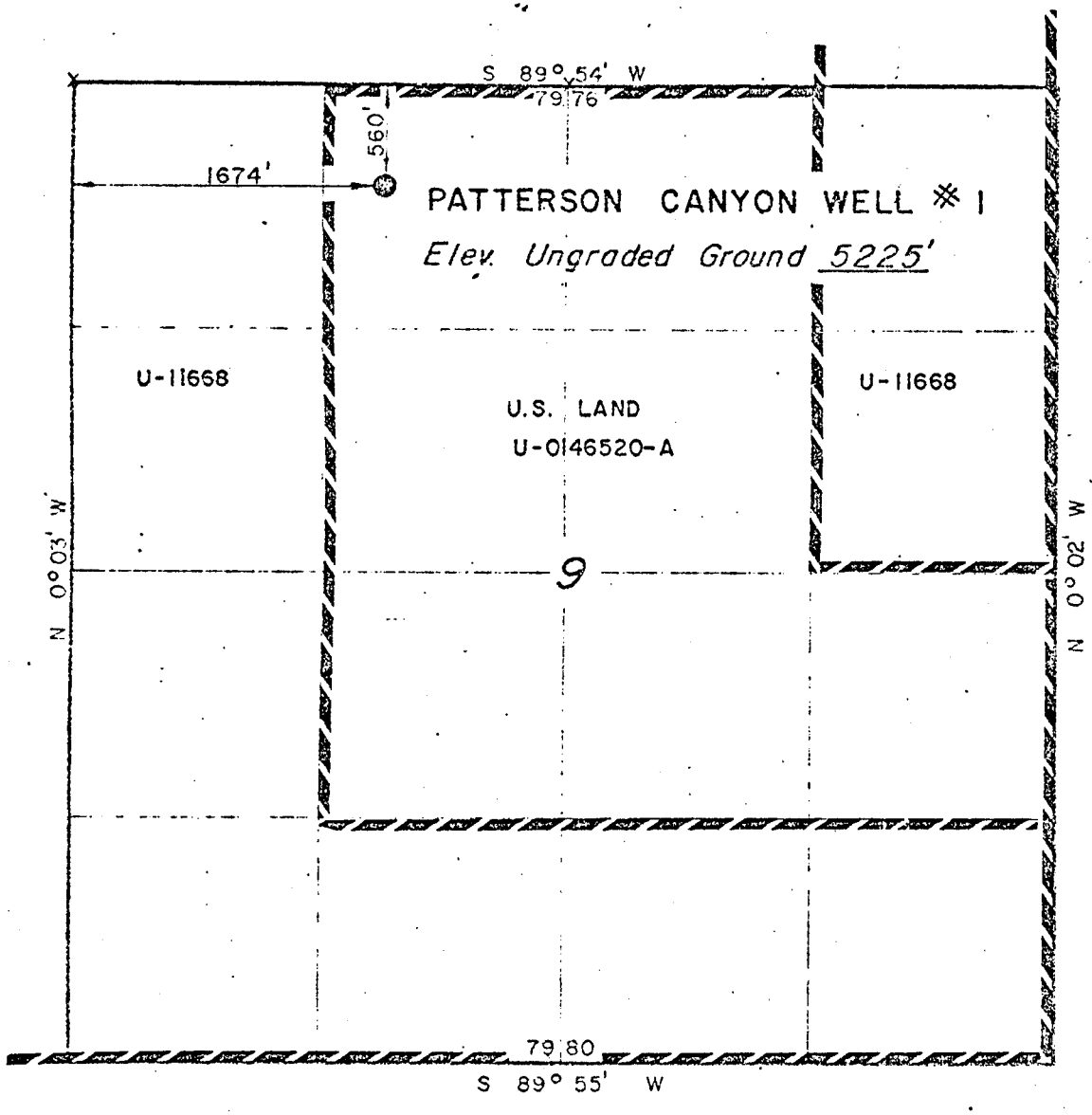
Appl. app. to drill ltr 4/29/74

PROJECT

MOUNTAIN FUEL

Well location, located as shown in the NE 1/4 NW 1/4 Section 9 T38S, R25E, SLB. & M. San Juan County, Utah.

T38S, R25E, S.L.B. & M.



X = Section corners located.

WORK ORDER 21859

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 3154
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P O BOX Q — 110 EAST - FIRST SOUTH
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 4/18/74
PARTY DA RR	REFERENCES GLO PLAT
WEATHER CLEAR, WARM	FILE MOUTAIN FUEL M-11549

MOUNTAIN FUEL SUPPLY CO.
Patterson Canyon #1
North Aneth Area
San Juan County, Utah
(Option Farmout Agreement)

(1) Daily Progress Report

LOCATION:		560' FNL and 1674' FWL, NE¼ NW¼ of Section 9, T38S, R25E, San Juan County, Utah.
5-1-74	(2)	TD 524' (524') Totco @ 120'-½°; 343'-¼°. Mud 9.9, Vis 35. Preparing to run surface. Logging unit will rig up 5-2-74.
5-2-74	(3)	No Report.
5-3-74	(4)	TD 547' (23') Totco @ 547'-¼°. Mud 9.0, Vis 34. Reamed hole to 13¾" hole. Preparing to run surface casing.
5-4-74	(5)	TD 604' (58') Sand. Drilling with water.
5-5-74	(6)	TD 1972' (402') Siltstone. Totco @ 1661'-2-3/4°. Wingate 1303', Shinlee 1538'.
5-6-74	(7)	TD 2445' (473') Sand, siltstone and shale. Shinnarump 2369'.
5-7-74	(8)	No Report.
5-8-74	(9)	TD 2840' (395') Siltstone and sandstone.
5-9-74	(10)	TD 3168' (328') Sandstone, shale, siltstone. 4 mpf. Cuttler @ 2590'.
5-10-74	(11)	TD 3440' (272') Silstone. Red to brown with red shale to pink. Mud 8.8, Vis 30. Sand stone. No show. Mudded up @ 3260'.
5-11-74	(12)	TD 3648' (208') Sand, shale, siltstone, and limestone. Mud 8.7, Vis 34.

#3

MOUNTAIN FUEL SUPPLY CO.
Patterson Canyon #1
North Aneth Area
San Juan County, Utah
(Option Farmout Agreement)

(2) Daily Progress Report

5-12-74	(13)	TD 3838' (190') Sand, siltstone, shale, limestone. Drilling 6½ MTF. Mud 8.9, Vis 30.
5-13-74	(14)	TD 4036' (198') Breaks @ 3854'-70', 2 MTF, 3908'-16', 3 MTF, Mud 8.9, Vis 33.
5-14-74	(15)	TD 4250' (214') Drilling breaks @ 4124'-40', 1-½ MTF, 4202'-24', 2½ mft, Mud 8.8, Vis 36.
5-15-74	(16)	TD 4425' (175') Sandstone, siltstone, shale and limestone. 8MTF, drilling break @ 4282-96', 2 MTF, BGG 1-2 units, Mud 8.8, Vis 32. Honokee Trail @ 4404'. Gas show 4408-09' maximum 5½ units on hot wire.
5-16-74	(17)	TD 4598' (173') Limestone, siltstone, sandstone, red shale. Drilling 7½ MFT. No show. Mud8.8, Vis 35. Totco @ 4462'-½°.
5-17-74	(18)	TD 4710' (112') Limestone, siltstone, shale. Drilling 10 M/FT BGG 2 units. Trip for new bit @ 4643'. Mud 8.8, Vis 32.
5-18-74	(19)	TD 4885' (175') POH to run DST #1 from 4855'-4885'. Sandstone, siltstone, shale and limestone. 10 MTF. Drilling break @ 4859'-76', 6 MTF, BGG 2 units Mud 8.9, Vis 32. Cromatic graph before break, C-1 EQ 1, C-2 EQ 0, C-3 EQ 0, C-4 EQ 0. During break: C-1 EQ 28, C-2 #Q 20, C-3 & 4, EQ 1. After break: C-1 EQ 3, C-2 EQ 2, C-3 EQ ½, C-4 EQ 0. 60% limestone, Microxyle foss 10% sandstone, and 30% siltstone, light stain, 10% no cut on flow.

#4

MOUNTAIN FUEL SUPPLY CO.
Patterson Canyon #1
North Aneth Area
San Juan County, Utah
(Option Farmout Agreement)

(3) Daily Progress Report

5-19-74	(20)	TD 4907' (22') Limestone. Light gray to tan, sandstone, drilling 10 MFT. Mud 8.9, Vis 40. DST #1, 4860'-74', Honaker trail, had 17' break, 6.5 units of gas increase. First flow opened with weal blow, died at end. Final flow, opened dead and remained dead. Opened 30 mins no gas, FF 45 min, no gas. Bottom hole temp., 118°. Recovered 3' mud, 2100# CC mud in sampler IH 2328#. IF 4040#, ISIP 53#, FF 4040#, FSIP 66#.
5-20-74	(21)	TD 5079' (172') Limestone. Light to dark gray, tan, hard silty fos, 8-9 MTF, Mud 8.9, Vis 41. Top Paradox 4932'.
5-21-74	(22)	TD 5200' (121') Limestone, light gray to tan, hard siliceous, Fos, limestone, dark gray, silty siliceaou 12-15 MTF, 4' break 5128'-32', slight show 14 units gas, C-1 9-32-8, C-2 2-7-71, C-3 1-4-1, C-4 0-2-1. Slight flow, slight cut very tight. Mud 9.0, Vis 44.
5-22-74	(23)	TD 5361' (161') Limestone. Gray to light gray to white. Firm density, silty siliceous with OI shows. Faint flow and slow cut. 8 MTF. Now breaks Top Upper ISMAY @ 5285', Mud 8.9, Vis 43.

#5

MOUNTAIN FUEL SUPPLY CO.
Patterson Canyon #1
North Aneth Area
San Juan County, Utah
(Option Farmout Agreement)

(4) Daily Progress Report

5-23-74	(24)	TD 5507' (146') Limestone, white, firm density, silty foss, frac, good odor, good flow. Slow cut, 9 MFT, Break 5464'-70', 5476'-5503'. Mud 9.1, Vis 78. Before show one unit gas, during break 111 units, after 22 units.
5-24-74	(25)	CORRECTED TD: 5504' Mud 9.1, Vis 57. POH with test tool. DST #2, 5430'-5504' on upper Ismay, if open 30 mins strong blow remained strong, increased slightly at end, gas to surface in 30 min, FF 240 min, open with strong blow, remained strong, gas nil, recovered 2391' of salt water, 93' gas cut mud and 120' oil.
5-25-74	(26)	TD 5529' (25') Mud 9.1, Vis 67. Drilling in limestone, dolomite. 6 MTF, had drilling break @ 5509'-21', 3 MTF, background gas 50 units. DST #3 5509'-29', misrun, DST #4 5513'-29',opened with weak blow. Increased to good after 27 min. Closed in 90 min. Opened with weak blow and still open.
5-26-74	(27)	TD 5665' (81') Testing. Shale, limestone, anhydrite. 1215 MTF. Lower Ismay 5570 B marker 5656', 8-12 units background gas, DST #5, lower Ismay 5556'-5665', opend with weak blow, reamed weak. IF 30 min, no gas to surface. FF 120 min, no gas, BHT 126, recovered 9' slightly gas cut mud, 2150' CC mud. 0#.
5-27-74	(28)	TD 5700' (35') Shale, limestone, dolomite, sandstone, 15-20 MTF, drilling break @ 5687'-89', Dessert Creek, 5686',

MOUNTAIN FUEL SUPPLY CO.
Patterson Canyon #1
North Aneth Area
San Juan County, Utah
(Option Farmout Agreement)

(5) Daily Progress Report

5-27-74(con't)		background gas 8 units, 125 trip gas to 5665'.
5-28-74	(29)	TD 5744' (44') Pulled out of hole with test tool, 15-20 MTF, break @ 5716'-18, 7 MFT. 5736'-42' 5 MTF, background gas, 8-40 units. DST #6, upper Dessert Creek 5687'-5744', opened with strong blow. Decreased to weak, FF open with strong blow, decreased to weak in 75 min, IF 30 min, no gas to surface FF 120 min, no gas, ISIP 90#, FSI 225# min, recovered 95' of gas cut mud.
5-29-74	(30)	No Report.
5-30-74	(31)	TD 5820' (76') Waiting on logging truck. Shale, siltstone, anhydrite, salt. Mud 9.0, Vis 58. Drilling 15 MTF. Break 5757'-71', 6 MTF. Top Salt 5804'.
5-31-74	(32)	TD 5820' Preparing to test 5462'-80'. Ran DIL, BHC, Sonci Sidewall Neutron Gamma-Ray and Dipmeter.
6-1-74	(33)	TD 5820' (0') Laying down pipe to run 4½" casing. DST #7 staddle 5460'-80' IF weak increase to good in 8 min no gas, FF good to strong gas to surface in 42 mins. Gas gauge on 3/8" orifice, 57 min has 27 MCF, 72 min has 32 MCF 87 min, had 22 MCF, 102-220 min, had 19 MCF, 217-232 min nil. Recovered total 747' in fluid, 597' fluid of oil and 100' SL, and 60' highly saturated gas and oil, cut mud. Top gas chart IH 2560#, IF 27-82#, ISIP 2457#, FF 55-246 #, FSIP 2457#, FHH 2612#, Recovered 1050 CC fluid in sampler. 75% oil, 25% SL, 1 cubic ft gas, resisitivity pit mud .603, water .067, mud 1.54, Oil 41, Gravity @ 78°

#7

MOUNTAIN FUEL SUPPLY CO.
Patterson Canyon #1
North Aneth Area
San Juan County, Utah
(Option Farmout Agreement)

(6) Daily Progress Report

6-2-74	(34)	TD 5820' (O') Ran 4½" casing, landed @ 5726.62' with 359 sx 50-50 pos. Plug down 4:00 PM, 6-1-74.
6-3-74	(35)	PBTD 5726' and waiting on cement.
6-4-74	(36)	No Report.
6-5-74	(37)	TD 5818' PBTD 5762' Picked up casing scraper and tubing. Started in hole and pin pulled out of tubing and dropped same. Now POH.
6-6-74	(38)	PBTD 5726' POH with fish. Replaced 69 jts tubing, perforatec 5464'-76' with 2 spf. Landed tubing @ 5434'. Now hooking up tree.
6-7-74	(39)	PBTD 5762' Installed well head. Spotted acid pad, could not break formation with 300#, set tubing bridge plug and remoæd well head. Installed BOP's. Lowered tubing to 5493'. Removed BOPs. Installed well head. Pulled bridge plug. Displaced tubing and casing with drip oil Tested to 3000#. Bled to 800# in 8 minutes. Displaced tubing with acid. 5% HCL.
6-8-74	(40)	PBTD 5762' Applied acid with 5000 gals 5% HCL and 5000 gals 28%. Displaced with 6000 gals drip oil, total acid 238 bbls, total oil 210 bbls, open to separator @ 3:00 PM, 6:00 AM, tubing 0#. casing 250#, Gas nil. Recovered 355 bbls load. Now preparing to unload with nitrogen.

#8

MOUNTAIN FUEL SUPPLY CO.
Patterson Canyon #1
North Aneth Area
San Juan County, Utah
(Option Farmout Agreement) (7) Daily Progress Report

6-9-74	(41)	Shut in, waiting on swabbing units.
6-10-74	(42)	Shut in.
6-11-74	(43)	No Report.
6-12-74	(44)	Shut in, waiting on swabbing unit.
6-13-74	(45)	Waiting on swabbing unit.
6-14-74	(46)	Waiting on swabbinb unit.
6-15-74	(47)	Shut in waiting on swabbing unit.
6-16-74	(48)	No Report.
6-17-74	(49)	No Report.
6-18-74	(50)	Waiting on swabbing unit.
6-19-74	(51)	Waiting on swabbing unit.
6-20-74	(52)	Moved in and rigging up. Preparing to swab.
6-21-74	(53)	Waiting on Backhoe to install dead man anchor.
6-22-74	(54)	Installed dead man, tubing casing 1800#, Flowed 15 mins and died. Made 4 trips with swab from 3000' and well began flowing. Flowed 6 runs, making 92 bf and died. Swabbed from 3000' and well started flowing making 26 bf in 3 hrs and died.

#9

MOUNTAIN FUEL SUPPLY CO.
Patterson Canyon #1
North Aneth Area
San Juan County, Utah
(Option Farmout Agreement) (8) Daily Progress Report

6-23-74	(55)	Flowed and swabbed 13½ hrs. Recovered 152 bbls of oil emulsion, 334 bbls water, tubing pressure 485#, casing, 1476#. Flowed additional 114 bbls fluid.
6-24-74	(56)	Flowed and swabbed for 13 hrs, recovered 277 bbls fluid, tubing pressure 380# casing, 1620#. Recovered 152 bbls oil in last 2 days, 475 bbls water and 904 bbls total fluid.
6-25-74	(57)	Waiting on crew.
6-26-74	(58)	Drained water from production. Had 83 bbls oil and 205 water, flowed and swabbed 210 bbls fluid in last 24 hrs.
6-27-74	(59)	Flowed and swabbed 55 bbls oil and 150 bbls water. Flowed 2½ hrs made 85 bbls fluid.
6-28-74	(60)	No Report.
6-29-74	(61)	3:00 PM to 8:00 AM, 6-26-74. Made 35 bbls oil, total oil 375 bbls. Total 1170 bbls water, tubing pressure 320# casing pressure 1475#, Rig released 11:00 AM, 6-27-74.
7-2-74		Shut in.
7-3-74		Shut in.
7-4-74		Shut in.
7-5-74		Shut in.

#10

MOUNTAIN FUEL SUPPLY CO.
Patterson Canyon #1'
North Aneth Area
San Juan County, Utah
(Option Farmout Agreement) (9) Daily Progress Report

7-6-74

Rig released 6-27-74.
Shut in. Initial production
125 bbls oil per day.
39.6 @ 60°. 390 bbls water
per day gas nil.
FINAL REPORT.

#11

CHEMICAL & GEOLOGICAL LABORATORIES
P. O. Box 2794
Casper, Wyoming 82601

CRUDE OIL ANALYSIS REPORT

Company Mountain Fuel Supply Company
Well No. Unit #1
Field Patterson Canyon
County San Juan
State Utah

Date August 9, 1974 Lab. No. 13401
Location NW NW 9-38S-25E
Formation Upper Ismay -
Depth 5430-5504
Analyzed by Staff

DST No. 2

GENERAL CHARACTERISTICS

Specific gravity @ 60/60 °F.	0.8158
A.P.I. gravity @ 60 °F.	41.9
Saybolt Universal Viscosity @ 70°F., seconds	38.5
Saybolt Universal Viscosity @ 100°F., seconds	35.0
B. s. and water, % by volume	0.10
Pour point, °F.	below zero
Total sulphur, % by weight	0.11

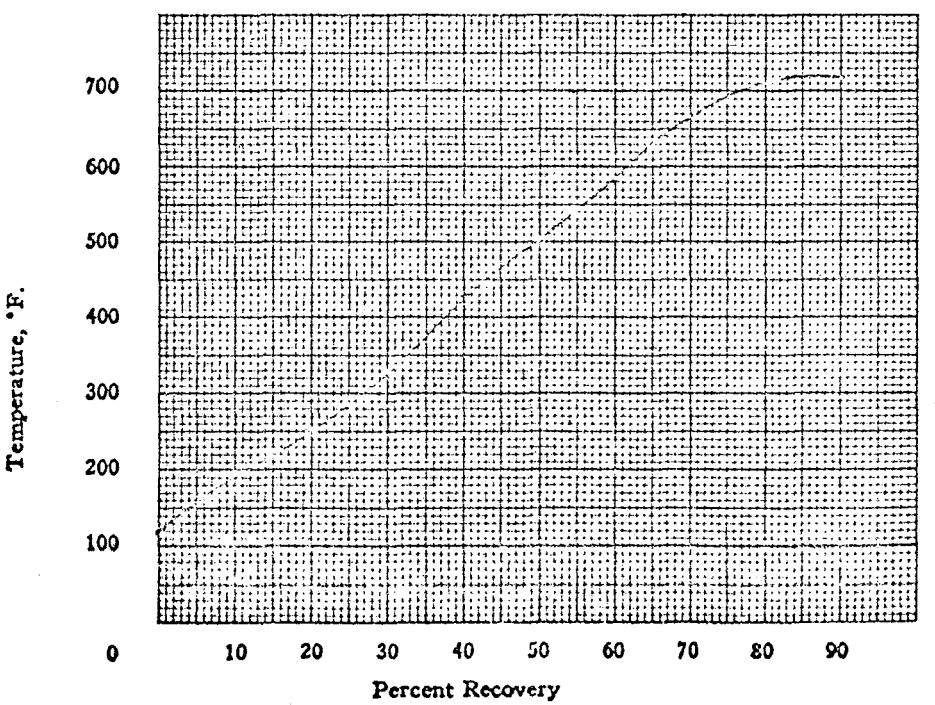
REMARKS:

ENGLER DISTILLATION

Recovery, %	Temperature, °F.
IBP	122
5	162
10	195
15	223
20	252
25	285
30	326
35	373
40	428
45	465
50	503
55	540
60	582
65	625
70	666
75	694
80	703
85	713
90	716
95	
E.P.	

Recovery, %	95
Residue, %	4
Loss, %	1

DISTILLATION GRAPH



Approximate Recovery

300 EP gasoline, %	27.0
392 EP gasoline, %	36.5
500 EP distillate, %	13.0

#12

MPANY Mountain Fuel Supply

L Patterson Canyon #1

D Wildcat

JNTY San Juan

TE Utah

Quantitative Log Interpretation

This interpretation represents our best judgement. However, because all log analysis is based on best assumptions and empirical relationships, we cannot guarantee the accuracy of these figures. For this reason, we must disclaim any responsibility for any loss or expense which results from the use of this interpretation.

Dresser Atlas

Cont

Depth	ΔT	ϕ_{AL}	D_B	ϕ_D	SwN	R_w	R_t	R_{wa}	S_w	Remarks
5725-32	65			14	15	.035	3	.06	71	DOL LS
5692-5700	64			12	12	1	5	.07	62	LS
5672-80	70			11.5	8	1	19	.25	38	SS
5635-42	62			8.5	7	1	25	.18	43	ANHYD
5494-5512	63			15	18	1	1	.022	100	DOL
5484-89	64			13.5	14	1	2	.035	100	DOL LS
5462-78	68			17	19	1	1.5	.04	94	DOL LS
4870-76	58			4.5	3	1	800	1.5	15	LS OR ANHYD Tight
4855-64	72			13.5	10	1	80	1.4	17	SS Tight - Poss Show
4814-30	64			8	5.5	1	60	.38	30	LMY SS

References

T_m =

T_f =

D_g =

D_f =

EQUATIONS

CHART MANUAL PAGE REFERENCE

OTHER

D R Smith

DRESSER ATLAS ENGINEER

5-2[illegible]

DATE

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.
U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
-

7. UNIT AGREEMENT NAME
-

8. FARM OR LEASE NAME
Patterson Canyon

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
NE NW 9-38S-25E., SLB&M

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER Wildcat

2. NAME OF OPERATOR
Mountain Fuel Supply Company

3. ADDRESS OF OPERATOR
P. O. Box 1129, Rock Springs, Wyoming 82901

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
560' FNL, 1674' FWL NE NW

14. PERMIT NO.
API # 43-037-30170

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
GR 5225'

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Supplementary history			X
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Depth 3164', drilling.

Spudded April 30, 1974, set 10-3/4" H-40 casing at 540.15' with 350 sacks of cement.

18. I hereby certify that the foregoing is true and correct
SIGNED BW Croft TITLE Vice President, Gas Supply Operations DATE May 8, 1974

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

#14

well file

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER Wildcat

2. NAME OF OPERATOR: Mountain Fuel Supply Company

3. ADDRESS OF OPERATOR: P. O. Box 1129, Rock Springs, Wyoming 82901

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 560' FNL, 1674' FWL - NE NW

5. LEASE DESIGNATION AND SERIAL NO.: U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -

7. UNIT AGREEMENT NAME: -

8. FARM OR LEASE NAME: Patterson Canyon

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: NE NW 9-38S-25E., SLB&M

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): KB 5237.50' GR 5225'

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Supplementary history			X
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

TD 5818', PBD 5726', testing.
CORRECTION: 10-3/4"OD, 32.75#, H-40 casing landed at 538.53' and set with 350 sacks of cement.
DST #1: 4855-4885', Lower Honaher Trail, IO ½ hr, ISI 1½ hrs, FO 145 minutes, FSI 3-3/4, opened very weak, dead in ½ hr, reopened dead, no gas, recovered 3' mud. IHP 2328, IOFP's 40-40, ISIP 53, FOFP's 40-40, FSIP 53, FHP 2328.

DST #2: 5430-5504', Upper Ismay, IO ½ hr, ISI 2 hrs, FO 4 hrs, FSI 6 hrs, opened strong, reopened strong gas not enough to gauge, recovered 93' gas cut mud, 2391' salt water and 120' yellow green oil (recovered from reversing out fluid), IHP 2638, IOFP's 301-410, ISIP 2425, FOFP's 437-1221, FSIP 2425, FHP 2585.
DST #3: 5509-5529', Upper Ismay, mis-run, no packer seat.
DST #4: 5513-5529', Upper Ismay, IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened very weak increase to good, reopened weak increase to good, no gas, recovered 961' water, IHP 2614, IOFP's 27-189, ISIP 2375, FOFP's 189-486, FSIP 2296, FHP 2534.
DST #5: 5556-5665', Lower Ismay, IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened very weak continued, no gas, reopened dead, recovered 9' mud, IHP 2641, IOFP's 14-14, ISIP 54, FOFP's 14-14, FSIP 27, FHP 2640.

CONTINUED ON REVERSE -

18. I hereby certify that the foregoing is true and correct
SIGNED BW Croft TITLE Vice President, Gas Supply Operations DATE June 26, 1974

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

#15

DST #6: 5687-5743', Desert Creek, IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened with good blow decreasing to weak blow on both openings, no gas, recovered 95' gas cut mud, IHP 2770, IOFP's 106-106, ISIP 212, FOFP's 106-106, FSIP 292, FHP 2770.

DST #7: Straddle test Upper Ismay 5460-5480', IO ½ hr, ISI 2 hrs, FO 4 hrs, FSI 6 hrs, opened weak increase to strong, no gas, reopened strong, gas in 42 minutes, ½ hr 22 Mcf, 1 hr 19 Mcf, 2-3/4 hrs 19 Mcf, 3 hrs not enough to gauge, recovered 60' mud, 100' water and 597' oil, IHP 2561, IOFP's 27-81, ISIP 2455, FOFP's 81-243, FSIP 2455, FHP 2561.

Ran and cemented 4½" casing, perforated from 5464' to 5476' with 2 holes per foot, applied 5,000 gallons 28% HCL to perforations, flowed to clean up, then used nitrogen to unload wellbore, well dead, rig released June 7, 1974.

Moved in and rigged up work over unit on 6-18-74, installed dead men anchors, swabbed and flowed well, made 55 bbls drip oil and 150 barrels water in last 24 hours, testing.

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed between plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well conditioned for final inspection looking to approval of the abandonment.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1972-782-247/33 REGION NO. 8

#16

MOUNTAIN FUEL SUPPLY CO.
Patterson Canyon #1
North Aneth Area
San Juan County, Utah
(Option Farmout Agreement)

WELL SUMMARY

LOCATION:	560' FNL and 1674' FWL, NE¼ NW¼ of Section 9, T38S, R25E, San Juan County, Utah.
Elevation:	K.B. 5233' D.F. 5232' G.L. 5221'
TD Driller:	5820'
TD Logger:	5810'
Spudded:	4-30-74
Rig Released:	6-27-74
Completed As:	OIL WELL
Contractor:	Mountain Fuel Supply Co.
Casing Record:	10-3/4" @ 538.53 4½" @ 5726.62
Tubing Record:	None
Packer Record:	None

#17

Form 9-330
(Rev. 5-68)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -

7. UNIT AGREEMENT NAME: -

8. FARM OR LEASE NAME: Patterson Canyon

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: NE NW 9-38S-25E., SLB&M

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

2. NAME OF OPERATOR: Mountain Fuel Supply Company

3. ADDRESS OF OPERATOR: P. O. Box 1129, Rock Springs, Wyoming 82901

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: 560' FNL, 1674' FWL NE NW
At top prod. interval reported below
At total depth

14. PERMIT NO.: API NO: 43-037-30170
DATE ISSUED:

15. DATE SPUDDED: 4-30-74
16. DATE T.D. REACHED: 5-29-74
17. DATE COMPL. (Ready to prod.): 6-27-74
18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*: KB 5237.50' GR 5225'
19. ELEV. CASINGHEAD: -

20. TOTAL DEPTH, MD & TVD: 5818
21. PLUG, BACK T.D., MD & TVD: 5726
22. IF MULTIPLE COMPL., HOW MANY*:
23. INTERVALS DRILLED BY: →
ROTARY TOOLS: 0-5818'
CABLE TOOLS: -

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 5464 - 5476' Ismay

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: Dual Induction Focused, BHC Acoustilog, Sidewall Neutron GR

27. WAS WELL CORED: No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
10-3/4	32.75	538.53	13-3/4	350	0
4-1/2	11.6 & 10.5	5726.62	7-7/8	359	0

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (Interval, size and number)
5464-5476', jet, 2 holes per foot

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5464-5476'	5,000 gals. 28% HCL

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
Shut in	Pumping (swabbed & flowed intermittently)	Shut in

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
6/20-26/74	48						

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
			62.5	NETG	195	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.): Vented while testing
TEST WITNESSED BY:

35. LIST OF ATTACHMENTS: Logs as above, Well Lithology and Well Completion to be sent at a later date.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED BW Crafft TITLE Vice President, Gas Supply Operations DATE July 17, 1974

*(See Instructions and Spaces for Additional Data on Reverse Side)

#18

1 - Dallas
1 - Well File

CHEMICAL & GEOLOGICAL LABORATORIES

P. O. Box 2794
Casper, Wyoming 82601

CRUDE OIL ANALYSIS REPORT

Company	Mountain Fuel Supply Company	Date	August 9, 1974
Well No.	Unit #1	Lab. No.	13401
Field	Patterson Canyon	Location	NW NW 9-38S-25E
County	San Juan	Formation	Upper Ismay
State	Utah	Depth	5430-5504
		Analyzed by	Staff

DST No. 2

GENERAL CHARACTERISTICS

Specific gravity @ 60/60 °F.	0.8158
A.P.I. gravity @ 60 °F.	41.9
Saybolt Universal Viscosity @ 70°F., seconds	38.5
Saybolt Universal Viscosity @ 100°F., seconds	35.0
B. s. and water, % by volume	0.10
Pour point, °F.	below zero
Total sulphur, % by weight	0.11

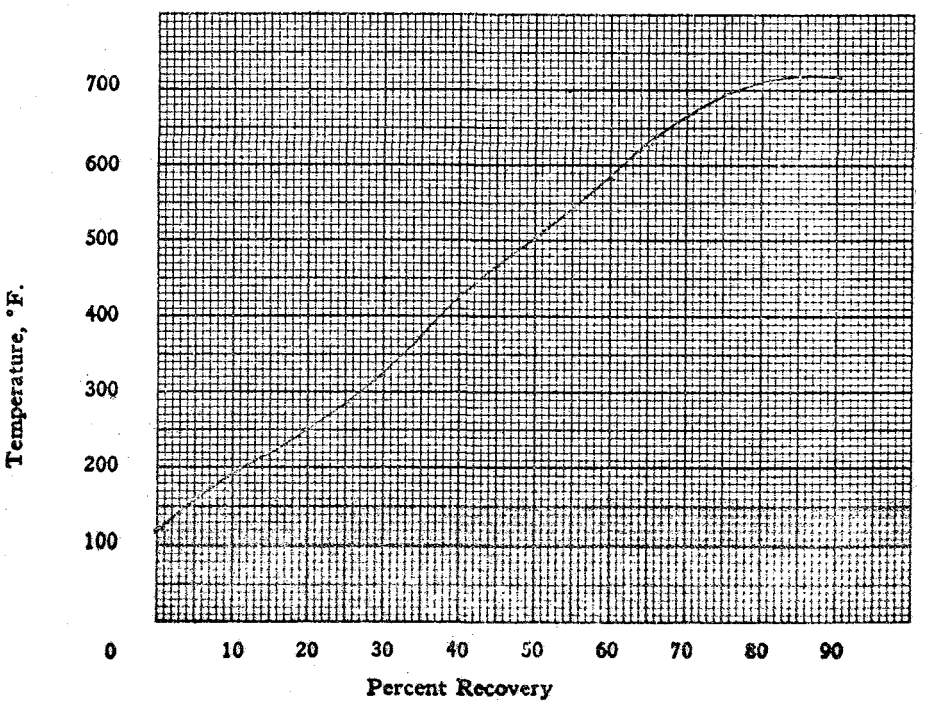
REMARKS:

ENGLER DISTILLATION

Recovery, %	Temperature, °F.
IBP	122
5	162
10	195
15	223
20	252
25	285
30	326
35	373
40	428
45	465
50	503
55	540
60	582
65	625
70	666
75	694
80	703
85	713
90	716
95	
E.P.	

Recovery, %	95
Residue, %	4
Loss, %	1

DISTILLATION GRAPH



Approximate Recovery	
300 EP gasoline, %	27.0
392 EP gasoline, %	36.5
500 EP distillate, %	13.0

Form 9-330
(Rev. 5-63)

File

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE* (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

2. NAME OF OPERATOR: Mountain Fuel Supply Company

3. ADDRESS OF OPERATOR: P. O. Box 1129, Rock Springs, Wyoming 82901

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 560' FNL, 1674' FWL NE NW
At top prod. interval reported below
At total depth

5. LEASE DESIGNATION AND SERIAL NO.: U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -

7. UNIT AGREEMENT NAME: -

8. FARM OR LEASE NAME: Patterson Canyon

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: NE NW 9-38S-25E., SLB&M

API NO: 43-037-30170

14. PERMIT NO. | DATE ISSUED

12. COUNTY OR PARISH: San Juan | 13. STATE: Utah

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
4-30-74	5-29-74	6-27-74	KB 5237.50' GR 5225'	-

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5818	5726		→	0-5818'	-

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 5464 - 5476' Ismay

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: Dual Induction Focused, BHC Acoustilog, Sidewall Neutron GR

27. WAS WELL CORED: No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
10-3/4	32.75	538.53	13-3/4	350	0
4-1/2	11.6 & 10.5	5726.62	7-7/8	359	0

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (*Interval, size and number*): 5464-5476', jet, 2 holes per foot

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5464-5476'	5,000 gals. 28% HCL

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
Shut in	Pumping (swabbed & flowed intermittently)	Shut in

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
6/20-26/74	48						

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
			62.5	NETG	195	

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): Vented while testing

TEST WITNESSED BY

35. LIST OF ATTACHMENTS: Logs as above, Well Lithology and Well Completion to be sent at a later date.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED B W Croft TITLE Vice President, Gas Supply Operations DATE July 17, 1974

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.
If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.
Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.
Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.
Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.
Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.
Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Log tops:		
Morrison	behind casing	
Summerville	behind casing	
Entrada	620'	
Carmel	780	
Navajo	810	
Kayenta	1172	
Wingate	1300	
Chinle	1532	
Shinarump	2356	
Moenkopi	2496	
Cutler	2526	
Honaker Trail	4382	
Paradox	4900	
Upper Ismay	5274	
Lower Ismay	5540	
B Zone	5646	
Desert Creek	5666	
Salt	5798	

U.S. GOVERNMENT PRINTING OFFICE: 1963—O-683636
837-497

6-18-74: Moved in an rigged up contract work over rig.

6-19-74: Wait on back hoe to install deadmen.

6-20-74: Installed deadmen anchors. 8 am 6-20-74, CP 1800, TP 185, flowed well ¼ hour, well dead, rigged up and made 4 swab runs from 3000', well started to flow, flowed well for 6 hours, well dead, produced 92 barrels fluid, made 4 swab runs from 3000' well started to flow, flowed 3 hours and well died, made 26 barrels fluid, shut down for night, produced 118 barrels fluid, will drain water off today.

6-21-74: Had 400 psig on tubing and 1625 psig on the casing, opened and blew tubing down. Made 3 swab runs and well started to flow, flowed 3 hours and died, recovered 82 barrels of fluid. Made 4 more swab runs to get well flowing, flowed 4 hours and died, recovering 74 barrels of fluid; shut in to drain water from tank. Of 486 barrels of fluid in tank, there were 152 barrels of oil and emulsion and 334 barrels of water recovered including prior day's recovery. Tubing pressure built to 485 psig and casing to 1475 psig while draining water. Reopened well and flowed 63 barrels of fluid and well died. Swabbed steadily rest of afternoon recovering 78 barrels of fluid. Overall total fluid recovery 627 barrels, breakdown not available. This includes corrected prior day's recovery of 330 barrels of fluid.

6-22-74: After overnight shut in, tubing pressure was 380 psig and casing was 1620 psig. Drained water off test tank and had 152 barrels of oil from 627 barrels total 2-day fluid recovery. Made 3 swab runs and well flowed 36 barrels fluid in 2½ hours and died. Made 4 swab runs and well flowed 37 barrels fluid in 2 hours and died. Swabbed 18 barrels fluid then well flowed 90 barrels fluid in 2½ hours and died. Swabbed additional 8 barrels fluid and shut down for night. Total fluid for day 288 barrels. Three days total 904 bbls.

6-23-74: Wait on crews.

Date & Time	Tbg psi	Csg psi	Drip Oil	Total Drip	Water bbls	Total Water	Remarks
6-22-74							Drained water off tank, flowed & swabbed
8 am	380	1620	83	235	205	680	288 bbls fluid during day
6-23-74	shut down						
6-24-74	450	1625					210 bbls fluid, drained water off tank, swabbed and flowed well.
6-25-74	300	1570	55	320	150	1010	drained 160 barrels water, flowed well for ¼ hour, well dead, made 4 swab runs, well flowed 3½ hours, well dead, made 4 swab runs well flowed 2½ hours, well dead, made 4 swab runs, well flowed 2-3/4 hours, shut well in to drain water, well produced 205 barrels fluid since 8 am, drained 150 barrels water.
3 pm	380	1340					flowed well for 2½ hrs produced 85 bbls fluid, shut down for night.
6-26-74							
8 am	320	1475					Drained 65 barrels water, flowed well ¼ hr well dead; made 4 swab runs flowed well 2 hours, well dead; made 4 swab runs well flowed 4½ hours, well dead. Produced 130 barrels fluid, shut down for night, will haul out oil today.

27% oil, made 35 bbls oil, total oil 375 bbls, water 95 bbls, total water 1170 bbls.

6-27-74: Drained 95 barrels water, well shut in

RIG RELEASED JUNE 27, 1974 at 11:00 a.m.

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.: U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER Wildcat

7. UNIT AGREEMENT NAME: -

2. NAME OF OPERATOR: Mountain Fuel Supply Company

8. FARM OR LEASE NAME: Patterson Canyon

3. ADDRESS OF OPERATOR: P. O. Box 1129, Rock Springs, Wyoming 82901

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 560' FNL, 1674' FWL - NE NW

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: NE NW 9-38S-25E., SLB&M

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): KB 5237.50' GR 5225'

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Supplementary history			X
(Other)			☐	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

TD 5818', PBD 5726', testing.
CORRECTION: 10-3/4"OD, 32.75#, H-40 casing landed at 538.53' and set with 350 sacks of cement.
DST #1: 4855-4885', Lower Honaher Trail, IO ½ hr, ISI 1½ hrs, FO 145 minutes, FSI 3-3/4, opened very weak, dead in ½ hr, reopened dead, no gas, recovered 3' mud.
IHP 2328, IOFP's 40-40, ISIP 53, FOFP's 40-40, FSIP 53, FHP 2328.

DST #2: 5430-5504', Upper Ismay, IO ½ hr, ISI 2 hrs, FO 4 hrs, FSI 6 hrs, opened strong, reopened strong gas not enough to gauge, recovered 93' gas cut mud, 2391' salt water and 120' yellow green oil (recovered from reversing out fluid), IHP 2638, IOFP's 301-410, ISIP 2425, FOFP's 437-1221, FSIP 2425, FHP 2585.
DST #3: 5509-5529', Upper Ismay, mis-run, no packer seat.
DST #4: 5513-5529', Upper Ismay, IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened very weak increase to good, reopened weak increase to good, no gas, recovered 961' water, IHP 2614, IOFP's 27-189, ISIP 2375, FOFP's 189-486, FSIP 2296, FHP 2534.
DST #5: 5556-5665', Lower Ismay, IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened very weak continued, no gas, reopened dead, recovered 9' mud, IHP 2641, IOFP's 14-14, ISIP 54, FOFP's 14-14, FSIP 27, FHP 2640.

CONTINUED ON REVERSE -

18. I hereby certify that the foregoing is true and correct

SIGNED BW Croft TITLE Vice President, Gas Supply Operations DATE June 26, 1974

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

DST #6: 5687-5743', Desert Creek, IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened with good blow decreasing to weak blow on both openings, no gas, recovered 95' gas cut mud, IHP 2770, IOFP's 106-106, ISIP 212, FOFP's 106-106, FSIP 292, FHP 2770.

DST #7: Straddle test Upper Ismay 5460-5480', IO ½ hr, ISI 2 hrs, FO 4 hrs, FSI 6 hrs, opened weak increase to strong, no gas, reopened strong, gas in 42 minutes, ½ hr 22 Mcf, 1 hr 19 Mcf, 2-3/4 hrs 19 Mcf, 3 hrs not enough to gauge, recovered 60' mud, 100' water and 597' oil, IHP 2561, IOFP's 27-81, ISIP 2455, FOFP's 81-243, FSIP 2455, FHP 2561.

Ran and cemented 4½" casing, perforated from 5464' to 5476' with 2 holes per foot, applied 5,000 gallons 28% HCL to perforations, flowed to clean up, then used nitrogen to unload wellbore, well dead, rig released June 7, 1974.

Moved in and rigged up work over unit on 6-18-74, installed dead men anchors, swabbed and flowed well, made 55 bbls drip oil and 150 barrels water in last 24 hours, testing.

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed between above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well conditioned for final inspection looking to approval of the abandonment.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1972 782-247/207 REGION NO. 8

Patterson Canyon Well No. 1

6-18-74: Moved in an rigged up contract work over rig.

6-19-74: Wait on back hoe to install deadmen.

6-20-74: Installed deadmen anchors. 8 am 6-20-74, CP 1800, TP 185, flowed well ¼ hour, well dead, rigged up and made 4 swab runs from 3000', well started to flow, flowed well for 6 hours, well dead, produced 92 barrels fluid, made 4 swab runs from 3000' well started to flow, flowed 3 hours and well died, made 26 barrels fluid, shut down for night, produced 118 barrels fluid, will drain water off today.

6-21-74: Had 400 psig on tubing and 1625 psig on the casing, opened and blew tubing down. Made 3 swab runs and well started to flow, flowed 3 hours and died, recovered 82 barrels of fluid. Made 4 more swab runs to get well flowing, flowed 4 hours and died, recovering 74 barrels of fluid; shut in to drain water from tank. Of 486 barrels of fluid in tank, there were 152 barrels of oil and emulsion and 334 barrels of water recovered including prior day's recovery. Tubing pressure built to 485 psig and casing to 1475 psig while draining water. Reopened well and flowed 63 barrels of fluid and well died. Swabbed steadily rest of afternoon recovering 78 barrels of fluid. Overall total fluid recovery 627 barrels, breakdown not available. This includes corrected prior day's recovery of 330 barrels of fluid.

6-22-74: After overnight shut in, tubing pressure was 380 psig and casing was 1620 psig. Drained water off test tank and had 152 barrels of oil from 627 barrels total 2-day fluid recovery. Made 3 swab runs and well flowed 36 barrels fluid in 2½ hours and died. Made 4 swab runs and well flowed 37 barrels fluid in 2 hours and died. Swabbed 18 barrels fluid then well flowed 90 barrels fluid in 2½ hours and died. Swabbed additional 8 barrels fluid and shut down for night. Total fluid for day 288 barrels. Three days total 904 bbls.

6-23-74: Wait on crews.

Date & Time	Tbg psi	Csg psi	Drip Oil	Total Drip	Water bbls	Total Water	Remarks
6-22-74							Drained water off tank, flowed & swabbed
8 am	380	1620	83	235	205	680	288 bbls fluid during day
6-23-74	shut down						
6-24-74	450	1625					210 bbls fluid, drained water off tank, swabbed and flowed well.
6-25-74	300	1570	55	320	150	1010	drained 160 barrels water, flowed well for ¼ hour, well dead, made 4 swab runs, well flowed 3½ hours, well dead, made 4 swab runs well flowed 2½ hours, well dead, made 4 swab runs, well flowed 2-3/4 hours, shut well in to drain water, well produced 205 barrels fluid since 8 am, drained 150 barrels water.
3 pm	380	1340	flowed well for 2½ hrs produced 85 bbls fluid, shut down for night.				

Patterson Canyon Well No. 1

KB 5237.50'

CASING REPORT

	Net	Gross
1 - 10" 3000 psi National type B casing flange	1.62'	1.62'
1 jt. 10-3/4"OD, 32.75#, H-40, 8rd thd, ST&C casing (Range #2)	29.12	29.36
11 jts. 10-3/4"OD, 32.75#, H-40, 8rd thd, ST&C casing (Range #3)	494.47	497.11
1 Baker guide shoe	0.82	0.82
	526.03'	528.91

Above casing landed at 538.53' KBM or 12.50' below KB, circulated casing 55 minutes with rig pump. Cemented with 350 sacks class A cement treated with 1645 pounds D43A, cement was mixed with rig water, displaced with rig water, left 20' plug in casing, one top wooden plug 11:00 a.m. 5-2-74. Left on rack:

1 jt. 10-3/4"OD, 32.75#, H-40, 8rd thd, ST&C casing (Range #2) used as landing joint 29.75' 29.99'

6-6-74: Applied acid treatment to Ismay perforations (5464-5476'), pump 5000 gallons 5% HCL acid pad 1½ BPM 2800-3000 psi; pump 5000 gallons 28% HCL acid 1½ BPM 2800-3000 psi; displace acid with 6000 gallons drip oil 1½ BPM 3000 psi, rig up to flow.
Used total of 210 barrels drip oil and 238 barrels acid water.

Date & Time	Tbg psi	Csg psi	Gas Mcf	Choke	Drip Oil hr.	Drip Oil Total	Water Hr.	Water Total	Remarks
6-6-74									
3 pm	2100	2100	-	3/4					opened tubing to separator
4	100	550	0	"	68	68	0	0	
5	"	525	"	"	27	95	"	"	
6	"	375	"	"	39	134			
7	"	300	"	"	24	158			
8	"	250	"	"	32	190			
9	"	"	"	"	30	220	0	0	trace acid water
10	80	150	0	"	14	234	13	13	acid water
11	80	125	NETG	"	"	248	13	26	"
12 pm	60	100	"	"	11	259	11	37	"
6-7-74									
1 am	60	100	NETG	3/4	11	270	11	48	acid water
2	40	"	"	"	9	279	9	57	"
3	20	"	"	"	4	283	4	61	"
4	"	"	"	"	3	286	4	65	10% crude in drip oil
5	0	200	"	"	2	288	2	67	"
6 am	"	250	"	"	0	"	0	"	acid water not salty to taste,
	rigging Nowsco to unload well with nitrogen.								
9 am	125	1800	-	"		using Nowsco to unload wellbore with nitrogen			
11	25	1400	-	"	5	293	16	83	turn well on through sep making oil and salt water
11:05	0	1400	-	"	0	293	0	83	well died rig up Nowsco, unload well with 1575 psi nitrogen
11:30	-	-	-	-	-	-	-	-	
12:30 pm	100	1525	-	"	4	297	12	95	crude oil & salt water
1:30 pm	0	1450	-	"	2	299	7	102	well died at 1:30 pm out ofnitrogen
3:30 pm	0	1475	-	-	0	299	0	102	Well dead.

June 8, 1974:
TD 5818', PBD 5726', 0', days 40, lost time 24 hours--17 test well, clean pits, tear out equipment.

RIG RELEASED JUNE 7, 1974 at 11:00 p.m.

Patterson Canyon Well No. 1

KB 5237.50'

CASING REPORT

	Net	Gross
1 - 10" 3000 psi National type B casing flange	1.62'	1.62'
1 jt. 10-3/4"OD, 32.75#, H-40, 8rd thd, ST&C casing (Range #2)	29.12	29.36
11 jts. 10-3/4"OD, 32.75#, H-40, 8rd thd, ST&C casing (Range #3)	494.47	497.11
1 Baker guide shoe	0.82	0.82
	526.03'	528.91

Above casing landed at 538.53' KBM or 12.50' below KB, circulated casing 55 minutes with rig pump. Cemented with 350 sacks class A cement treated with 1645 pounds D43A, cement was mixed with rig water, displaced with rig water, left 20' plug in casing, one top wooden plug 11:00 a.m. 5-2-74. Left on rack:

1 jt. 10-3/4"OD, 32.75#, H-40, 8rd thd, ST&C casing (Range #2) used as landing joint 29.75' 29.99'

6-6-74: Applied acid treatment to Ismay perforations (5464-5476'), pump 5000 gallons 5% HCL acid pad 1½ BPM 2800-3000 psi; pump 5000 gallons 28% HCL acid 1½ BPM 2800-3000 psi; displace acid with 6000 gallons drip oil 1½ BPM 3000 psi, rig up to flow.
Used total of 210 barrels drip oil and 238 barrels acid water.

Date & Time	Tbg psi	Csg psi	Gas Mcf	Choke	Drip Oil hr.	Drip Oil Total	Water Hr.	Water Total	Remarks
6-6-74									
3 pm	2100	2100	-	3/4					opened tubing to separator
4	100	550	0	"	68	68	0	0	
5	"	525	"	"	27	95	"	"	
6	"	375	"	"	39	134			
7	"	300	"	"	24	158			
8	"	250	"	"	32	190			
9	"	"	"	"	30	220	0	0	trace acid water
10	80	150	0	"	14	234	13	13	acid water
11	80	125	NETG	"	"	248	13	26	"
12 pm	60	100	"	"	11	259	11	37	"
6-7-74									
1 am	60	100	NETG	3/4	11	270	11	48	acid water
2	40	"	"	"	9	279	9	57	"
3	20	"	"	"	4	283	4	61	"
4	"	"	"	"	3	286	4	65	10% crude in drip oil
5	0	200	"	"	2	288	2	67	"
6 am	"	250	"	"	0	"	0	"	acid water not salty to taste, rigging Nowsco to unload well with nitrogen.

June 1, 1974:
Depth 5818', 0', days 33, pump 1200, table 34, mud wt 9.1, vis 65, sand content 1/8%, wl 7.6, fc 2/32, ph 11, solids 5%, lost time 24 hours--7 DST #7; 3 trip in hole open ended to 5818'; 1½ set 50 sack cement plug at 5818' 50-50 pozmix A cement with 3# salt per sack; 8 pull up to 5650', circulate and wait on casing; 4½ lay down drill pipe. Laying down drill pipe.

Drill Stem Test No. 7
STRADDLE TEST
Depth 5818', packers 5454' & 5460' - 5480'
Upper Ismay 104 units increase

IO ½ hr, ISI 2 hrs, FO 4 hrs, FSI 6 hrs, opened with weak blow increased to strong, no gas to surface, reopened strong, gas in 42 minutes, ¼ hr 27 Mcf, ½ hr 22 Mcf, 3/4 hr 22 Mcf, 1 hr 19 Mcf, 19 Mcf to 2-3/4 hrs, 3 hrs not enough to gauge, 3¼ hrs NETG, 3½ hrs NETG, recovered 60' mud (8.3 ppg, Rw.154), 100' water (9.4 ppg Rw .067) and 597' oil 41 gravity @ 78°; pit mud 9.1 ppg, Rw .603. MFE 175 psig, 2050 cc 75% oil 25% water.
IHP 2561, IOFP's 27-81, ISIP 2455, FOFP's 81-243, FSIP 2455, FHP 2561. BHT 132°F.

June 2, 1974:
Depth 5818', PBD 5726', 0', days 34, lost time 24 hours--3 lay down drill pipe and drill collars; 1 rig up to run casing; 4 run 51 jts 4½" 11.6#, K-55, 8rd thd, ST&C, range 2 casing, and 127 jts 4½", 10.5#, K-55, 8rd thd ST&C range 2 casing, total of 178 jts, 4½" casing set at 5726.62' KBM, float collar set at approximately 5688'; 1 rig up and circulate casing; 1 cement casing with 359 sacks 50-50 Pozmix treated with 3# salt per sack, rotated casing while mixing and displacing cement, bumped plug and held 2500 psi for ¼ hr for casing pressure test, held OK, cement in place at 4 pm 6-1-74; 4 raise preventers, set casing slips with full weight of string (52,000#) on slips, cut casing, removed preventers installed tubing head, tested seals to 2000 psi, held OK; 9 WOC. Wait on cement.

June 3, 1974:
TD 5818', PBD 5726', lost time 24 hours--24 wait on cement. 35 days.

June 4, 1974:
TD 5818', PBD 5726', lost time 24 hours, days 36--14 wait on cement and nipple up; 2½ measure tubing, clean boxes and pins; 3-3/4 pick XX up casing scraper and 112 joints tubing, pin pulled out of box dropped tubing; 3-3/4 pick up 73 joints tubing screw into box now pulling out. Trip out with tubing.

June 5, 1974:
TD 5818', PBD 5726', 0', days 37, lost time 24 hours--4 trip out with fish; 5½ rig up Dresser Atlas and log; 6½ lay down 69 joints crooked tubing, picked up 69 jts new tubing, run in to 5688' displace water with 9.1# mud; 3 tripout to perforate; 3 rig up and perforate 5464-5476' 2 holes per foot; 2 trip in with tubing to 5432', 32' above perforations, land tubing, remove BOP, will acidize perforations. Hook up Xmas tree.

June 6, 1974:
TD 5818', PBD 5726', lost time 24 hours, 38 day--install upper portionof wellhead, rig up Dowell, displace mud with drip oil, displace drip oil out of tubing with 5% HCL acid pad. Could not break down formation with 3000 psi pump pressure, released pressure and attempt to flow back well, well dead, could not breakdown formation with 3000 psi, set wire line tubing bridge plug, removed upper fportion of wellhead, installed preventers, lowered d2-3/8" OD 2 joints 61.60' (5493' KBM or 17' below bottom perfs), landed tubing, removed preventers, installed upper portion of wellhead, retrieved tubing bridge plug, displaced casing and tubing with drip oil, closed wing XXXXX valve pressured up to 3000 psi, pressure bled off to 800 psi in 8 minutes, displaced tubing with new 5% HCL acid pad.

Patterson Canyon Well No. 1

KB 5237.50'

CASING REPORT

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11 jts. 10-3/4"OD, 32.75#, H-40, 8rd thd, ST&C casing (Range #3)	494.47	497.11
1 Baker guide shoe	0.82	0.82
	526.03'	528.91

Above casing landed at 538.53' KBM or 12.50' below KB, circulated casing 55 minutes with rig pump. Cemented with 350 sacks class A cement treated with 1645 pounds D43A, cement was mixed with rig water, displaced with rig water, left 20' plug in casing, one top wooden plug 11:00 a.m. 5-2-74. Left on rack:

1 jt. 10-3/4"OD, 32.75#, H-40, 8rd thd, ST&C casing (Range #2) used as landing joint	29.75'	29.99'

June 1, 1974:
Depth 5818', 0', days 33, pump 1200, table 34, mud wt 9.1, vis 65, sand content 1/8%, wl 7.6, fc 2/32, ph 11, solids 5%, lost time 24 hours--7 DST #7; 3 trip in hole open ended to 5818'; 1½ set 50 sack cement plug at 5818' 50-50 pozmix A cement with 3# salt per sack; 8 pull up to 5650', circulate and wait on casing; 4½ lay down drill pipe. Laying down drill pipe.

STRADDLE TEST

Drill Stem Test No. 7
Depth 5818', packers 5454' & 5460' - 5480'
Upper Ismay 104 units increase

IO ½ hr, ISI 2 hrs, FO 4 hrs, FSI 6 hrs, opened with weak blow increased to strong, no gas to surface, reopened strong, gas in 42 minutes, ¼ hr 27 Mcf, ½ hr 22 Mcf, 3/4 hr 22 Mcf, 1 hr 19 Mcf, 19 Mcf to 2-3/4 hrs, 3 hrs not enough to gauge, 3¼ hrs NETG, 3½ hrs NETG, recovered 60' mud (8.3 ppg, Rw.154), 100' water (9.4 ppg Rw .067) and 597' oil 41 gravity @ 78°; pit mud 9.1 ppg, Rw .603. MFE 175 psig, 2050 cc 75% oil 25% water.
IHP 2561, IOFP's 27-81, ISIP 2455, FOFP's 81-243, FSIP 2455, FHP 2561. BHT 132°F.

June 2, 1974:
Depth 5818', PBD 5726', 0', days 34, lost time 24 hours--3 lay down drill pipe and drill collars; 1 rig up to run casing; 4 run 51 jts 4½" 11.6#, K-55, 8rd thd, ST&C, range 2 casing, and 127 jts 4½", 10.5#, K-55, 8rd thd ST&C range 2 casing, total of 178 jts, 4½" casing set at 5726.62' KBM, float collar set at approximately 5688'; 1 rig up and circulate casing; 1 cement casing with 359 sacks 50-50 Pozmix treated with 3# salt per sack, rotated casing while mixing and displacing cement, bumped plug and held 2500 psi for ¼ hr for casing pressure test, held OK, cement in place at 4 pm 6-1-74; 4 raise preventers, set casing slips with full weight of string (52,000#) on slips, cut casing, removed preventers installed tubing head, tested seals to 2000 psi, held OK; 9 WOC. Wait on cement.

June 3, 1974:
TD 5818', PBD 5726', lost time 24 hours--24 wait on cement. 35 days.

June 4, 1974:
TD 5818', PBD 5726', lost time 24 hours, days 36--14 wait on cement and nipple up; 2½ measure tubing, clean boxes and pins; 3-3/4 pick up casing scraper and 112 joints tubing, pin pulled out of box dropped tubing; 3-3/4 pick up 73 joints tubing screw into box now pulling out. Trip out with tubing.

WELL _____

_____

_____

The following information and reports pertaining to the above captioned well have been incorporated into our file and copies of each have been forwarded to the Dallas office and other interested parties on the date indicated.

	Well File	Dallas				
A. Location Plat						
B. Application for Permit to Drill						
1. State						
(Unapproved)**	4/26/74					
(Approved)						
2. Federal (Form 9-331-C)*						
(Unapproved)**	illegible	illegible				
(Approved)						
C. Geological Prognosis						
D. Electrical Logs						
1. Field Prints	5/31/74	5/31/74				
2. Final Prints	illegible	6/10/74				
E. Core Analysis Reports						
F. Drill Stem Test Reports	6/14/74 6/10/74 5/31/74	6/14/74 6/10/74 5/31/74				
G. Geological Well Completion Report						
H. Other Geological Data (specify)						
1. Water Anal. to be Rep	6/5/74					
2.	illegible	illegible				
I. Abandonment Reports						
1. State Abandonment Reports (plugging and log of well)						
(Unapproved)**						
(Approved)						
2. Federal*						
a. Sundry Notices (Form 9-331)						
1. Unapproved**	5/10/74					
2. Approved						
b. Well Completion Report and Log (Form 9-330)						

*Applicable on wells drilled on U.S.A. leases.

**Applicable only on Placid Operated Wells.

CL1-51 (REV. 1966)

Well file

CHEM LAB

WATER ANALYSIS EXCHANGE REPORT

MEMBER	Mountain Fuel Supply Company	LAB NO.	12753 REPORT NO.
OPERATOR	Mountain Fuel Supply Company	LOCATION	NE NW 9-38S-25E
WELL NO.	Patterson Canyon #1	FORMATION	Upper Ismay
FIELD	Paradox Basin	INTERVAL	5430-5504
COUNTY	San Juan	SAMPLE FROM	Production 5-23-74
STATE	Utah	DATE	May 28, 1974

REMARKS & CONCLUSIONS: Very cloudy water with clear filtrate

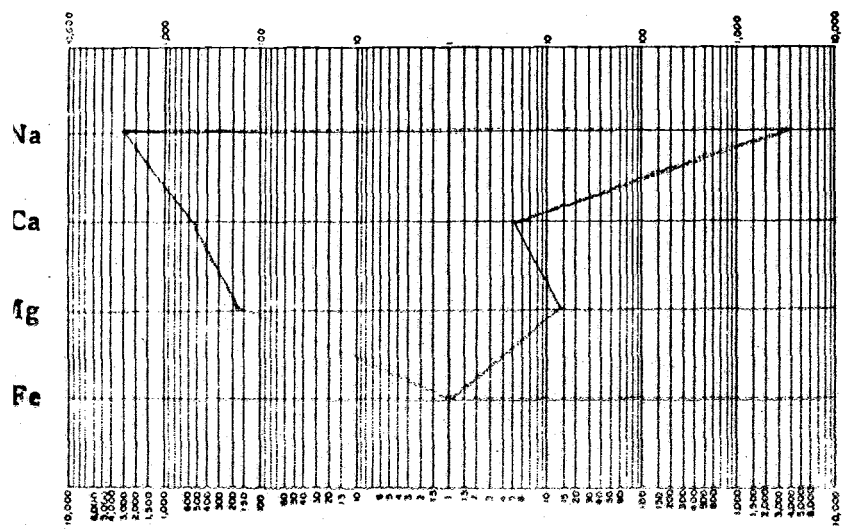
Cations	mg/1	meq/1	Anions	mg/1	meq/1
Sodium	68701	2988.51	Sulfate	620	12.90
Potassium	2586	66.20	Chloride	135000	3807.00
Lithium	–	–	Carbonate	0	–
Calcium	11753	586.47	Bicarbonate	305	5.00
Magnesium	2235	183.72	Hydroxide	–	–
Iron	–	–	Hydrogen sulfide	–	–
Total Cations		3824.90	Total Anions		3824.90

Total dissolved solids, mg/1	221045	Specific resistance @ 68° F.:	
NaCl equivalent, mg/1	222315	Observed	0.057 ohm-meters
Observed pH	7.3	Calculated	0.053 ohm-meters

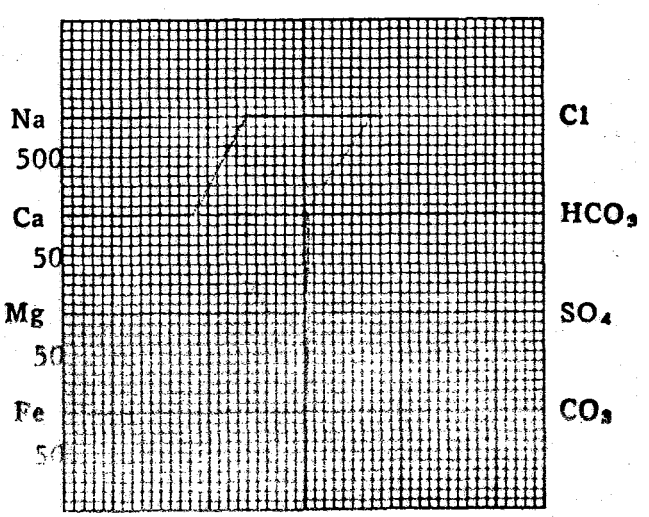
WATER ANALYSIS PATTERNS

MEQ per unit

LOGARITHMIC



STANDARD



(Na value in above graphs includes Na, K, and Li)

NOTE: Mg/1 = Milligrams per liter. Meq/1 = Milligram equivalents per liter

Sodium chloride equivalent = by Dunlap & Hawthorne calculation from components

CL1-51 (REV. 1966)

CHEM LAB

WATER ANALYSIS EXCHANGE REPORT

MEMBER	Mountain Fuel Supply Company	LAB NO.	12753 REPORT NO.
OPERATOR	Mountain Fuel Supply Company	LOCATION	NE NW 9-38S-25E
WELL NO.	Patterson Canyon #1	FORMATION	Upper Ismay
FIELD	Paradox Basin	INTERVAL	5430-5504
COUNTY	San Juan	SAMPLE FROM	Production 5-23-74
STATE	Utah	DATE	May 28, 1974

REMARKS & CONCLUSIONS: Very cloudy water with clear filtrate

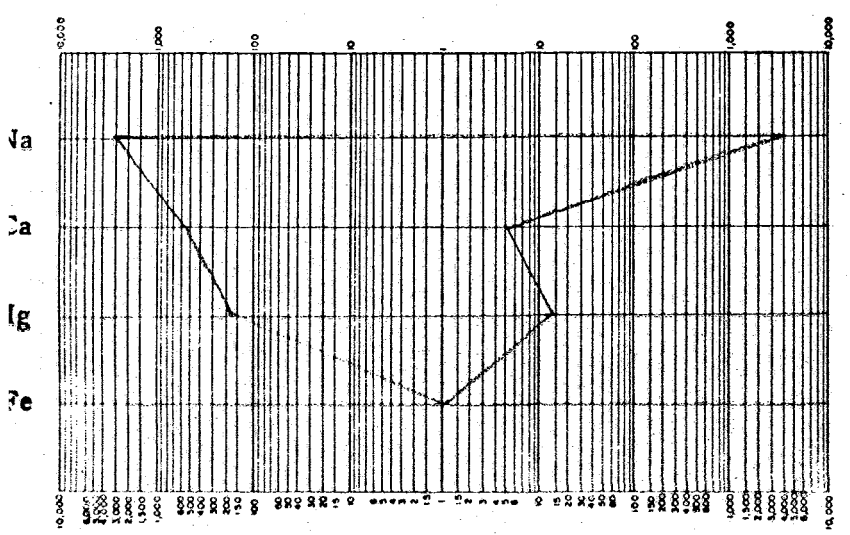
Cations	mg/l	meq/l	Anions	mg/l	meq/l
Sodium	68701	2988.51	Sulfate	620	12.90
Potassium	2586	66.20	Chloride	135000	3807.00
Lithium	-	-	Carbonate	0	-
Calcium	11753	586.47	Bicarbonate	305	5.00
Magnesium	2235	183.72	Hydroxide	-	-
Iron	-	-	Hydrogen sulfide	-	-
Total Cations		3824.90	Total Anions		3824.90

Total dissolved solids, mg/l	221045	Specific resistance @ 68° F.:	
NaCl equivalent, mg/l	222315	Observed	0.057 ohm-meters
Observed pH	7.3	Calculated	0.053 ohm-meters

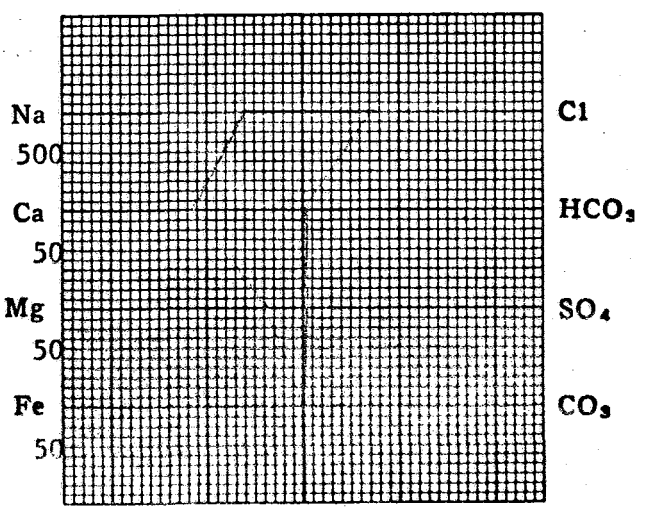
WATER ANALYSIS PATTERNS

MEQ per unit

LOGARITHMIC



STANDARD



(Na value in above graphs includes Na, K, and Li)

NOTE: Mg/l=Milligrams per liter. Meq/l=Milligram equivalents per liter

Sodium chloride equivalent=by Dunlap & Hawthorne calculation from components

June 1, 1974:
Depth 5818', 0', days 33, pump 1200, table 34, mud wt 9.1, vis 65, sand content 1/8%, wl 7.6, fc 2/32, ph 11, solids 5%, lost time 24 hours--7 DST #7; 3 trip in hole open ended to 5818'; 1½ set 50 sack cement plug at 5818' 50-50 pozmix A cement with 3# salt per sack; 8 pull up to 5650', circulate and wait on casing; 4½ lay down drill pipe. Laying down drill pipe.

STRADDLE TEST

Drill Stem Test No. 7
Depth 5818', packers 5454' & 5460' - 5480'
Upper Ismay 104 units increase

IO ½ hr, ISI 2 hrs, FO 4 hrs, FSI 6 hrs, opened with weak blow increased to strong, no gas to surface, reopened strong, gas in 42 minutes, ¼ hr 27 Mcf, ½ hr 22 Mcf, 3/4 hr 22 Mcf, 1 hr 19 Mcf, 19 Mcf to 2-3/4 hrs, 3 hrs not enough to gauge, 3¼ hrs NETG, 3½ hrs NETG, recovered 60' mud (8.3 ppg, Rw.154), 100' water (9.4 ppg Rw .067) and 597' oil 41 gravity @ 78°; pit mud 9.1 ppg, Rw .603. MFE 175 psig, 2050 cc 75% oil 25% water.
IHP 2561, IOFP's 27-81, ISIP 2455, FOFP's 81-243, FSIP 2455, FHP 2561. BHT 132°F.

June 2, 1974:
Depth 5818', PBD 5726', 0', days 34, lost time 24 hours--3 lay down drill pipe and drill collars; 1 rig up to run casing; 4 run 51 jts 4½" 11.6#, K-55, 8rd thd, ST&C, range 2 casing, and 127 jts 4½", 10.5#, K-55, 8rd thd ST&C range 2 casing, total of 178 jts, 4½" casing set at 5726.62' KBM, float collar set at approximately 5688'; 1 rig up and circulate casing; 1 cement casing with 359 sacks 50-50 Pozmix treated with 3# salt per sack, rotated casing while mixing and displacing cement, bumped plug and held 2500 psi for ¼ hr for casing pressure test, held OK, cement in place at 4 pm 6-1-74; 4 raise preventers, set casing slips with full weight of string (52,000#) on slips, cut casing, removed preventers installed tubing head, tested seals to 2000 psi, held OK; 9 WOC. Wait on cement.

June 3, 1974:
TD 5818', PBD 5726', lost time 24 hours--24 wait on cement. 35 days.

May 26, 1974:
Depth 5665', 84', days 27, pump 1200, table 34, wt on bit 16 tons, mud wt 9.1, vis 65, sand content 1/8%, wl 6.4, fc 3/32, ph 11.5, solids 8%, LCM 5½%, bit #5, 7-7/8" fp53 cut 84' from 5581' to 5665' in 17¼ hours, lost time 6-3/4 hours--6-3/4 DST #5. DST #5.

Drill Stem Test No. 5
Depth 5665', packers 5550' and 5556'
Lower Ismay 5556-5665' 12 unit gas increase
IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened very weak continued, no gas, reopened dead continued, no gas, recovered 9' mud (8.2 ppg, Rw 0.7); pit mud 9.1 ppg Rw .72.
IHP 2641, IOFP's 14-14, ISIP 54, FOFP's 14-14, FSIP 27, FHP 2640. BHT 126°F.
MFE: 0 psig, 2150 cc mud Rw 0.70.

May 27, 1974:
Depth 5693', 28', days 28, pump 1200, table 34, wt on bit 16 tons, mud wt 9.1, vis 65, sand content 1/8%, wl 6.4, fc 2/32, ph 11.5, solids 5%, bit #5, 7-7/8" fp53 cut 28' from 5665' to 5693' in 7 hours, lost time 17 hours--17 DST #5. Drilling.

May 28, 1974:
Depth 5743', 50', days 29, pump 1200, table 34, wt on bit 16 tons, mud wt 9.1, vis 65, sand content ¼%, wl 5.4, fc 2/32, ph 11.5, solids 6%, bit #5, 7-7/8" fp53 cut 50' from 5693' to 5743' in 8-3/4 hours, lost time 15¼ hours--15¼ DST #6. Now pulling test tool. DST #6.

Drill Stem Test No. 6
Depth 5743', packers 5681' and 5687' 5736-42 90 units
Desert Creek drlg breaks 5687-89-51 unit; 5716-18 10 units
IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened with good blow decrease to weak blow, no gas, reopened with good blow decrease to weak blow in 1¼ hrs, no gas, recovered 95' gas cut mud (9 ppg, Rw 0.854); pit mud 9.1 ppg, Rw 0.0824.
IHP 2770, IOFP's 106-106, ISIP 212, FOFP's 106-106, FSIP 292, FHP 2770. BHT 120°F.
MFE: 40 psig, 2150 cc mud, 0.70 cu. ft. gas.

May 29, 1974:
Depth 5818', 75', days 30, pump 1200, table 34, wt on bit 16 tons, mud wt 9.1, vis 62, sand content 1/8%, wl 7.2, fc 2/32, ph 11, solids 3%, bit #5, 7-7/8" fp53 cut 75' from 5743' to 5818' in 12 hours, lost time 12 hours--7½ DST #6; ½ circulate for logs. Cir. f/logs.

May 30, 1974:
Depth 5818', 0', days 31, pump 1200, table 34, mud wt 8.9, vis 62, sand content 1/8%, wl 7.2 fc 2/32, ph 11, solids 5%, bit #5, 7-7/8" fp53, lost time 24 hours--16 log well; 8 trip in the hole, circulate and wait on orders, have orders now to run straddle test over interval 5462' to 5480', Ismay.

May 31, 1974:
Depth 5818', 0', days 32, pump 1200, table 34, wt on bit 0, mud wt 9.1, vis 64, sand content 1/8%, wl 7.2, fc 2/32, ph 11.5, solids 5%, bit #5, 7-7/8" fp53 circulate, lost time 24 hours--1 circulate wait on orders; 23 DST #7. DST #7.

May 19, 1974:
Depth 5076', 166', days 20, pump 1200, table 34, wt on bit 16 tons, mud wt 8.9, vis 40, sand content 1/8%, wl 5.6, fc 2/32, ph 11, solids 4%, bit #5, 7-7/8" fp53 cut 166' from 4910' to 5076' in 24 hours. Drilling.

May 20, 1974:
Depth 5197', 121', days 21, pump 1200, table 34, wt on bit 16 tons, mud wt 9, vis 44, sand content 1/8%, wl 6.4, fc 2/32, ph 12, solids 4.5%, bit #5, 7-7/8" fp53 cut 121' from 5076' to 5197' in 24 hours. Drilling.

May 21, 1974:
Depth 5346', 149', days 22, pump 1200, table 34, wt on bit 16 tons, mud wt 9, vis 43, sand content 1/8%, wl 5.6, fc 2/32, ph 11.5, solids 4%, bit #5, 7-7/8" fp53 cut 149' from 5197' to 5346' in 24 hours. Drilling.

May 22, 1974:
Depth 5504', 158', days 23, pump 1200, table 34, wt on bit 16 tons, mud wt 9.1, vis 75, sand content 1/8%, wl 6, fc 2/32, ph 12, solids 5%, bit #5, 7-7/8" fp53 cut 158' from 5346' to 5504' in 20 hours, lost time 4 hours--4 DST #2. DST #2.

May 23, 1974:
Depth 5504', 0', days 24, mud wt 9.1, vis 75, sand content 1/8%, wl 6, fc 2/32, ph 12, solids 5%, lost time 24 hours--24 DST #2, shut down 3 hours wait on daylight. DST #2.

Drill Stem Test No. 2
Depth 5504', packers 5424' and 5430'
Upper Ismay drlg brks 5435-41' 37 units, 5464-5470' 32 units, 5476-5503' 102 units

IO ½ hr, ISI 2 hrs, FO 4 hrs, FSI 6 hrs, opened strong, continued, gas to surface while closing tool for first shut in; reopened strong continued not enough to guage, recovered 93' gas cut mud (.8.5 ppg Rw 0.46), 2391' salt water and 120' yellow-green oil (this recovery was from reversing out fluid. Pit mud 9.1 ppg, Rw 1.12.
IHP 2638, IOFP's 301-410, ISIP 2425, FOFP's 437-1221, FSIP 2425, FHP 2585. BHT 128°F.
MFE: 1500 psig, 1800 cc water, 350 cc oil, 0.023 cu. ft. gas.

May 24, 1974:
Depth 5529', 25', days 25, pump 1200, table 34, wt on bit 16 tons, mud wt 8.9, vis 68, sand content 1/8%, wl 7.6, fc 2/32, ph 11, solids 5%, bit #5, 7-7/8" fp53 cut 25' from 5504' to 5529' in 1¼ hours, lost time 22-3/4 hours--9 DST #2; 10½ DST #3; 3¼ DST #4. DST #4.

Drill Stem Test No. 3
Depth 5529', packers 5503' and 5509'
Upper Ismay drlg break 5506-5518' 80 unit gas increase

Mis-run, no packer seat.

May 25, 1974:
Depth 5581', 52', days 26, pump 1200, table 34, wt on bit 16 tons, mud wt 9.0, vis 64, sand content 1/8%, wl 6, fc 2/32, ph 11.5, solids 5%, bit #5, 7-7/8" fp53 cut 52' from 5529' to 5581' in 9-3/4 hours, survey 5464' 3/4°, lost time 14¼ hours--14¼ DST #4. Drilling.

Drill Stem Test No. 4
Depth 5529', packers 5507' and 5513'
Upper Ismay 5506-5518 drlg break 80 unit gas increase

IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened very weak increased to good blow after 27 minutes, no gas to surface, reopened weak increased to good blow after 26 minutes, remained good, no gas to surface, recovered 961' water (8.5 ppg, Rw 0.6).
IHP 2614, IOFP's 27-189, ISIP 2375, FOFP's 189-486, FSIP 2296, FHP 2534. BHT 126°F.
MFE: 25 psig, 1650 cc water, 0.58 ohms. Pit mud 8.9 ppg, Rw 0.60.

May 9, 1974:
Depth 3445', 281', days 10, pump 1100, table 34, wt on bit 16 tons, water, bit #4 7-7/8" f4 cut 281' from 3164' to 3445' in 24 hours. Drilling.

May 10, 1974:
Depth 3645', 200', days 11, pump 1100, table 34, wt on bit 16 tons, water, bit #4, 7-7/8" s4 cut 200' from 3445' to 3645' in 24 hours. Drilling.

May 11, 1974:
Depth 3847', 202', days 12, pump 1100, table 34, wt on bit 16 tons, mud wt 8.9, vis 30, bit #4 7-7/8" f4 cut 202' from 3645' to 3847' in 22 hours, lost time 2 hours--2 change out drill pipe to hard band. Drilling.

May 12, 1974:
Depth 4038', 191', days 13, pump 1100, table 34, wt on bit 16 tons, mud wt 8.9, vis 33, wl 8.4, fc 2/32, ph 11, solids 2%, bit #4, 7-7/8" s4 cut 191' from 3847' to 4038' in 24 hours. Drilling.

May 13, 1974:
Depth 4250', 212', days 14, pump 1100, table 34, wt on bit 16 tons, mud wt 8.8, vis 36, sand content 1/8%, wl 7.6, fc 2/32, ph 12, solids 2%, bit #4, 7-7/8" s4 cut 212' from 4038' to 4250' in 23$\frac{1}{4}$ hours, lost time 3/4 hour--3/4 repair leak in mud tank. Drilling.

May 14, 1974:
Depth 4422', 172', days 15, pump 1100, table 34, wt on bit 6 tons, mud wt 8.8, vis 34, sand content 1/8%, wl 7.6, fc 2/32, ph 11.5, solids 3%, bit #4, 7-7/8" f4 cut 172' from 4250' to 4422' in 24 hours. Drilling.

May 15, 1974:
Depth 4594', 172', days 16, pump 1100, table 34, wt on bit 16 tons, mud wt 8.9, vis 32, sand content $\frac{1}{4}$%, wl 6.8, fc 2/32, ph 11.5, solids 3%, bit #4, 7-7/8" f4 cut 172' from 4422' to 4594' in 23 hours, survey 4462' $\frac{1}{2}$°, drilling time 23 hours, lost time 1 hour--1 survey. Drilling.

May 16, 1974:
Depth 4709', 115, days 17, pump 1200, table 34, wt on bit 16 tons, mud wt 8.9, vis 34, sand content 1/8%, wl 5.6, fc 2/32, ph 12, solids 4%, bit #4, 7-7/8" f4 cut 49' from 4594' to 4643' in 7$\frac{1}{2}$ hours, bit #5, 7-7/8" fp53 cut 66' from 4643' to 4709' in 9 hours, drilling time 16$\frac{1}{2}$ hours, lost time 7$\frac{1}{2}$ hours--6 trip; 1$\frac{1}{2}$ ream 70' to bottom. bit #4 cut a total of 4096' in 290 hours. Drilling.

May 17, 1974:
Depth 4884', 175', days 18, pump 1200, table 34, wt on bit 16 tons, mud wt 8.9, vis 36, sand content 1/8%, wl 7.2, fc 2/32, ph 11.5, solids 3%, bit #5, 7-7/8" fp53 cut 175' from 4709' to 4884' in 24 hours. Drilling.

May 18,1974:
Depth 4910', days 19, 26', pump 1200, table 34, wt on bit 16 tons, mud wt 8.9, vis 40, sand content 1/8%, wl 7.6, fc 2/32, ph 11.5, solids 3%, bit #5, 7-7/8" fp53 cut 26' from 4884' to 4910' in 2 hours, lost time 22 hours--22 DST #1. Drilling.

Drill Stem Test No. 1
Depth 4885', packers 4849' and 4855'
Lower Honaker Trail drlg break 4859-76, 6 unit gas increase IO $\frac{1}{2}$ hr, ISI 1$\frac{1}{2}$ hrs, FO 145 minutes, FSI 3-3/4 hrs, opened very weak, dead in $\frac{1}{2}$ hr, no gas, reopened dead continued, no gas, recovered 3' mud (8.9 ppg Rw .92); pit mud 8.9 ppg Rw 1.17. IHP 2328, IOFP's 40-40, ISIP 53, FOFP's 40-40, FSIP 53, FHP 2328. BHT 118°F.
MFE: 0 psig, 2100 cc mud, Rw 1.17.

Patterson Canyon Well No. 1
MFSCO, Operator
Lease No.: U-0146520-A
560' FNL, 1674' FWL
NE NW 9-38S-25E., SLB&M
San Juan County, Utah
Ground elevation 5225'

Projected depth:
6000' Desert Creek (WC)

Drilling contractor: Loffland Brothers Company

SPUDDED APRIL 30, 1974 at 12:01 a.m.

April 30, 1974:
Depth 125', 125', day 1, pump 600, table 120, wt on bit ½ ton, mud wt 8.8, vis 31, bit #1 9-7/8" sfbh cut 125' from 0' to 125' in 6 hours, lost time 18 hours--12 rig up; 6 drill rat hole and mouse hole. Drilling.

May 1, 1974:
Depth 524', 399', days 2, pump 900, table 34, wt on bit 10 tons, mud wt 9, vis 35, bit #1, 9-7/8" sfbh cut 235' from 125' to 360' in 13 hours, bit #2 RR 9-7/8" s82 cut 154' from 360' to 524' in 8¼ hours, surveys 120' ½°, 229' ¼°, 343' ½°, drilling time 21¼ hours, lost time 2-3/4 hours--1 surveys; 1-3/4 trip.

May 2, 1974:
Depth 547', 23', days 3, pump 700, table 120, wt on bit 10 tons, mud wt 9, vis 34, bit #2 9-7/8" fp52 cut 23' from 524' to 547' in 1½ hours, bit #3, 13-3/4" hole opener cut 547' from 0' to 547' in 18 hours, survey 547' ¼°, drilling time 1½ hours, lost time 22½ hours--18 ream; 2½ trip for hole opener; 1½ repair pump motor; ½ trip. Trip out.

May 3, 1974:
Depth 600', 53', days 4, pump 1100, table 44, wt on bit 12 tons, water, bit #4 7-7/8" s4 cut 53' from 547' to 600' in 1¼ hours, lost time 22-3/4 hours--5 rig and run 12 jts. 10-3/4", H-40, 8rd ST&C casing Range 3 landed at 540.15' KB cemented with 350 sacks class A with 1645# D43A plug down 11 pm 5-2-74, returned 20 sacks of cement; 6 wait on cement; 7 nipple up; 4-3/4 pressure test all BOP's to 1500 psi OK and pick up drill collars. Drilling.

May 4, 1974:
Depth 1547', 947', days 5, pump 1100, table 34, wt on bit 16 tons, water, bit #4, 7-7/8" s4 cut 947' from 600' to 1547' in 22½ hours, lost time 1½ hours--1½ trip pick up drill collars. Drilling.

May 5, 1974:
Depth 1996', 450', days 6, pump 1100, table 34, wt on bit 16 tons, water, bit #4, 7-7/8" f4 cut 450' from 1547' to 1996' in 23½ hours, survey 1661' 2-3/4°, lost time ½ hour--½ survey. Drilling.

May 6, 1974:
Depth 2438', 442', days 7, pump 1100, table 34, wt on bit 16 tons, water, bit #4, 7-7/8" s4 cut 442' from 1996' to 2438' in 23 hours, survey 2085' 1¼°, drilling time 23 hours, lost time 1 hour--1 survey. Drilling.

May 7, 1974:
Depth 2841', 403', days 8, pump 1100, table 34, wt on bit 16 tons, water, bit #4 7-7/8" f4 cut 403' from 2438' to 2841' in 24 hours. S/T MOENKOPI 2456'. Drilling.

May 8, 1974:
Depth 3164', 323', days 9, pump 1100, table 34, wt on bit 16 tons, water, bit #4, 7-7/8" f4 cut 323' from 2841' to 3164' in 24 hours. Drilling.
Cutler top at 2590'.

Well File

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.: U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -

1. OIL WELL ☐ GAS WELL ☐ OTHER: Wildcat

7. UNIT AGREEMENT NAME: -

2. NAME OF OPERATOR: Mountain Fuel Supply Company

8. FARM OR LEASE NAME: Patterson Canyon

3. ADDRESS OF OPERATOR: P. O. Box 1129, Rock Springs, Wyoming 82901

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 560' FNL, 1674' FWL NE NW

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: NE NW 9-38S-25E., SLB&M

14. PERMIT NO.: API # 43-037-30170

15. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 5225'

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Supplementary history			X
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Depth 3164', drilling.

Spudded April 30, 1974, set 10-3/4" H-40 casing at 540.15' with 350 sacks of cement.

18. I hereby certify that the foregoing is true and correct

SIGNED BW Croft TITLE Vice President, Gas Supply Operations DATE May 8, 1974

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -

7. UNIT AGREEMENT NAME: -

8. FARM OR LEASE NAME: Patterson Canyon

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: NE NW 9-38S-25E., SLB&M

1a. TYPE OF WORK: DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER Wildcat SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR: Mountain Fuel Supply Company

3. ADDRESS OF OPERATOR: P. O. Box 1129, Rock Springs, Wyoming 82901

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 560' FNL, 1674' FWL NE NW
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 27 miles southeast of Monticello, Utah

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): 354' / -

16. NO. OF ACRES IN LEASE: 960

17. NO. OF ACRES ASSIGNED TO THIS WELL: -

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: - / -

19. PROPOSED DEPTH: 6000'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 5225'

22. APPROX. DATE WORK WILL START*: May 3, 1974

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13-3/4	10-3/4	32.75	500	350
7-7/8	4-1/2	11.6	to be determined	

We would like to drill the subject well to an estimated depth of 6000', anticipated formation tops are as follows: Morrison at the surface, Summerville at 480', Entrada at 515', Carmel at 695', Navajo at 755', Kayenta at 1045', Wingate at 1220', Chinle at 1465', Shinarump at 2295', Moenkopi at 2375', Cutler at 2605', Honaker Trail at 4455', Paradox at 4925', Upper Ismay at 5330', Lower Ismay at 5635', "B" Marker at 5730', Desert Creek at 5755' and salt at 5880'.

Mud will be adequate to contain formation fluids and blow out preventers will be checked daily.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED BW Croft TITLE Vice President, Gas Supply Operations DATE April 24, 1974

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

Patterson Canyon Well No. 1
MFSCO, Operator
Lease No.: U-0146520-A
560' FNL, 1674' FWL
NE NW 9-38S-25E., SLB&M
San Juan County, Utah
Ground elevation 5225'

Projected depth:
6000' Desert Creek (WC)

Drilling contractor: Loffland Brothers Company

SPUDDED APRIL 30, 1974 at 12:01 a.m.

April 30, 1974:
Depth 125', 125', day 1, pump 600, table 120, wt on bit $\frac{1}{2}$ ton, mud wt 8.8, vis 31, bit #1 9-7/8" sfbh cut 125' from 0' to 125' in 6 hours, lost time 18 hours--12 rig up; 6 drill rat hole and mouse hole. Drilling.

MUD AND CUTTINGS ANALYSIS

MOUNTAIN FUEL SUPPLY COMPANY

PATTERSON CANYON WELL NO. 1

WILDCAT

SAN JUAN COUNTY, UTAH

well file

CORE LAB

PETROLEUM RESERVOIR ENGINEERING

SUMMARY OF WELL DATA

Operator:	Mountain Fuel Supply Company
Lease:	Patterson Canyon Well No. 1
Location:	San Juan County, Utah
Elevation:	5233' KB
Contractor:	Loffland Brothers Company - Rig 223
Spud Date:	April 29, 1974
Completion Date:	May 29, 1974
Casing:	10 3/4" Set at 527' with 350 sacks Class "A" Cement
Hole Size:	9 7/8" to 547' Reamed to 13 3/4"; 7 7/8" from 547' to Total Depth - 5818'
Mud:	Fresh Water to 3260'; Weighted Chemical Gel 3260' to 5818'
Logging:	Drilling Time: From Surface Casing to Total Depth (TOTCO) - 5818'
	Dresser-Atlas: Dual Induction Laterlog - 541' - 5810' Borehole Compensated Integrated Sonic - 541' - 58'' Sidewall Neutron Porosity - Gamma-Ray 4300' - 5808'
	Schlumberger: Dipmeter - 4300' - 5808'
Samples:	30' Samples 550' to 2000' 10' Samples 2000' to 5818'
Geology:	Wellsite Geology by Ric Duncan
Lost Circulation:	780' to 1100' - Approximately 700 bbls.
Total Depth:	5818' - Driller 5810' - Logger
Status:	4½" Casing Set at 5726' for Further Testing and Evaluation.
Plugs:	5726' to 5818'

SUMMARY OF WELL DATA CONTINUED

Drill Stem Tests: DST NO. 1

4855' - 4885 - 10-30 min; open with very weak blow, died at end of initial open; ISI - 90 min; FO-145 min; open dead, remained dead; FSI - 225 min - IHP - 2328; IF - 40-40; ISI - 53; FF - 40-40; FSI - 53; FHP - 2328.

DST NO. 2

5430 - 5504 - IO - 30 min-open strong, remained strong, GTS in 30 min, TSTM. ISI - 120 min; FO - 240 min; open strong, remained strong, GTS immed TSTM; FSI - 360 min; IHP - 2638; IF - 301-409; ISI - 2425; FF - 437 - 1221; FSI - 2425; FHP - 2585.

DST. NO. 3

5509 - 5529 - Misrun, packers failed.

DST NO. 4

5513 - 5529 - IO - 30 min, opened weak, increased to good after 27 min, remained good. ISI - 90 min; FO - 120 min, opened weak, increased to good after 28 min, remained good. FSI - 225 min. IHP - 2614; IF - 27-189; ISI - 2375; FF - 189-486; FSI - 2296; FHP - 2534.

DST NO. 5

5556 - 5665 - IO-30 min, opened very weak, remained very weak; ISI - 90 min; FO - 120 min, opened dead, remained dead; FSI - 225 min; IHP - 2610; IF 14-14; ISI - 54; FF - 14-14; FSI - 57; FHP - 2640.

DST NO. 6

5687 - 5744 - IO - 30 min, opened strong, decreased to weak by end of IO; ISI - 90 min; FO - 120, opened strong, decreased to weak after 75 min, remained weak. FSI - 225 min; IHP - 2770; IFP - 106-106; ISI - 212; FFP - 106-106; FSI - 292; FHP - 2770.

DST NO. 7

5460 - 5480 - I030 min, opened with weak blow, increased to good after 8 min. ISI-120 min; FO - 240 min, open with good blow, increased to strong after 8 min; GTS-42 min; FSI - 360 min; IHP - 2561; IFP - 27-81; ISI - 2455; FFP - 81-245; FSI - 2455; FHP - 2561.

CORES: None.

SAMPLE AND ELECTRIC LOG FORMATION TOPS

SAMPLE TOPS FORMATION:	Depth	Datum
Entrada	632'	+4601'
Carmel	784'	+4449'
Navajo	820'	+4413'
Kayenta	1160'	+4073'
Wingate	1303'	+3930'
Chinle	1538'	+3695'
Shinarump	2369'	+2864'
Moenkopi	2451'	+2782'
Butler	2590'	+2643'
Honaker Trail	4404'	+829'
Paradox	4932'	+301'
Upper Ismay	5285'	-52'
Lower Ismay	5570'	-337'
"B" Marker	5656'	-423'
Desert Creek	5686'	-453'
Salt	5804'	-571'

ELECTRIC LOG TOPS		
Entrada	N/A	
Carmel	N/A	
Navajo	N/A	
Kayenta	1118'	+4115'
Wingate	1242'	+3991'
Chinle	1531'	+3702'
Shinarump	2357'	+2876'
Moenkopi	2497'	+2736'
Cutler	2572'	+2671'
Honaker Trail	4433'	+800'
Paradox	4920'	+313'
Upper Ismay	5269'	-36'
Lower Ismay	5533'	-300'
"B" Marker	5648'	-415'
Desert Creek	5667'	-434
Salt	5798'	-565'

GEOLOGICAL SUMMARY

The subject well was drilled to a total depth of 5818 feet and to a point 15' into the Paradox Salt immediately below the Desert Creek member of Paradox formation of the Pennsylvanian Stratigraphic section in the Paradox Basin in San Juan County, Utah.

The Entrade sandstone was penetrated at a sample depth of 632 feet. No shows of oil or gas were encountered in the cuttings or on the Hot-Wire gas detector. The formation thickness at this location was approximately 152'.

No shows of oil or gas were noted in the Carmel formation. Thickness was approximately 36', with a sample top of 784'. This formation is not productive in the area of the subject well.

The Navajo formation, with a sample top of 820', showed no indication of oil or gas being present in drill cuttings or on electronic recording equipment. Formation thickness is approximately 340'.

The Kayenta sandstone was drilled between the depths of 1160' and 1303'. No show of oil or gas was noted in this interval and none was anticipated. Formation thickness was indicated to be 143' from samples.

Samples of the Wingate contained no shows of oil or gas, and no increase in readings was noted on gas monitoring equipment. Sample top of the formation was indicated to be 1303' with an approximate thickness of 235'.

The Chinle Formation was penetrated at a depth of 1538'. No shows of oil or gas were found to be present in the thin sandstone beds of this formation. Formation thickness at this location is 831 feet.

No show of oil or gas was noted in the Shinarump conglomerate between the depths of 2369 to 2451 feet.

The Moenkopi shale was drilled between the sample depths of 2451 to 2590 feet. No oil or gas was detected in this formation.

The Cutler Formation was penetrated at a sample depth of 2590 feet, with an approximate thickness of 1814 feet. Although numerous thin sandstone beds were encountered in this formation, no shows of oil or gas were noted in drill cuttings or on hot wire gas detection equipment.

The sample top of the Honaker Trail Formation was picked at 4404 feet. Two small shows of gas were noted in the formation on gas detection equipment. A DST was run over the interval 4855 to 4885 feet. Results indicated that the zone was very tight, with no oil or gas production potential. The formation thickness, from samples, is about 528 feet.

Several shows of gas were noted on the hot wire recorder in the Paradox Formation. Wellsite evaluation of these shows indicated that the zones were hard and tite. No tests were run on these shows. The formation showed an apparent thickness of 353 feet, with a sample top of 4932 feet.

The Upper Ismay Zone of the Paradox Formation was penetrated at a sample depth of 5285 feet. Shows of oil and gas were noted in several zones of this formation member. Good staining, flouresence and cut were noted in the samples, as well as an increase in gas reading on gas detection equipment. Drill stem tests were run on the following intervals: 5430 to 5504 and 5513 to 5529 feet. Some oil was recovered in the upper zone along with large amounts of salt water. Salt water was recovered in the lower zone. After electric logs were run, and evaluated it was decided to straddle test from 5460 to 5480 feet. Oil to water recovery ration was favorable on this zone so a decision was made to run pipe for further testing and evaluation. Thickness of the Upper Ismay was approximately 285 feet.

The Lower Ismay interval was drilled from 5570 to 5656 feet. One show was noted over this interval and a Drill Stem Test was run. Results indicated the formation to be tight, was no possibility of commercial production.

No shows of oil or gas were noted in the "B" Zone. Formation sample top was picked at 5656 feet with an apparent thickness of 30 feet.

The Desert Creek Zone of the Paradox Formation was encountered at a sample depth of 5686 feet. Several shows of gas were noted in this zone and DST was run from 5687 to 5744 feet. Results indicated the interval to be tite. The formation thickness is approximately 118 feet.

The top of the Paradox Salt was drilled at 5804 feet and the well was at T.D. at 5818.

After evaluation of electric logs, it was decided to run 4½' casing for further testing and evaluation of Patterson Canyon No. 1.

No. 1 Patterson Canyon
Wildcat
San Juan, Utah

SAMPLE LOG:

550 - 580 - Sandstone - red brn, clr, f-mg, hd sil cmt, clr, wht, fg, hd

580 - 590 - Siltstone - red, red brn, frm, dns, s/calc

590 - 605 - Shale - red, red brn, frm, dns, slty, s/calc

605 - 615 - Siltstone - red, red brn, a/a

615 - 785 - Siltstone - red, red brn, clr, f-mg, hd, sil cem, f-mg uncons qtz grs, smf-mg clstrs, hd vs/calc ip

785 - 795 - Siltstone - red, red brn, sft, sndy, s/calc

795 - 1265 - Siltstone - red, red brn, f-vfg, hd, slty, calc, clr, wht, fg, frm, hd, calc, tr calc, cly tr sltst, wht, tan, vfg, uncons qtz grs, sm clstrs, wht, clr, 1 pnk, fg, uncons qtz grs, fg clusters

1265 - 1280 - Siltstone - red, red brn, sft, sndy, s/calc

1280 - 1625 - Sandstone - lorng, fg, hd, slty, micac ip, s/calc

1625 - 1780 - Siltstone - red, red brn, sft, frm, sndy ip, s/calc, v/calc

1780 - 1790 - Shale - red brn, brn, sft-frm, slty, dns, calc

1790 - 1800 - Sandstone - red brn, lorng, vfg, frm, sfty, calc

1800 - 1810 - Shale - red brn, brn, sft-frm, slty, dns, calc

1810 - 2065 - Siltstone - buff, red brn, 1 brn, sft-frm, occ sndy, calc, 1 orng, frm, a/a, occ gdng to sh, tr bent, tr clay

2065 - 2070 - Shale - pnk, red, sft-frm, slty, calc

2070 - 2075 - Siltstone - red, red brn, 1 orng, sft-frm, occ sndy, calc

2075 - 2085 - Shale - pnk, red,sft-frm, slty, calc

2085 - 2100 - Siltstone - red, red brn, 1 orng, hd, dns, calc

2100 - 2110 - Shale - brn, 1 brn, sft, dns, calc

2110 - 2120 - Siltstone - red, red brn, 1 orng, hd dns, calc

2120 - 2145 - Shale - red, hd, dns, slty, v/calc

2145 - 2155 - Siltstone - buff, hd, dns, v/calc, sm w/lge calc incl

2155 - 2180 - Shale - redbrn, buff, sft-frm, dns, slty, s/calc

2180 - 2190 - Siltstone - buff, hd, dns, v/calc, w/lge calc incl

2190 - 2205 - Shale - red brn, buff, sft-frm, dns, slty, s/calc

2205 - 2215 - Limestone - pnk, hd, dns, sil, sndy ip, micro xtln ip

2215 - 2230 - Siltstone - red brn, l brn, sft-frm, sndy ip, calc

2230 - 2240 - Shale - d red, buff, frm-hd, dns, calc

2240 - 2250 - Siltstone - red brn, l brn, sft-frm, dns, calc

2250 - 2260 - Shale - d red, buff, frm-hd, dns, calc

2260 - 2290 - Siltstone - buff, l pnk, red, frm-hd, dns, calc, sm w/sil & calc incl

2290 - 2335 - Shale - red, red brn, pnk, frm, dns, slty, calc, sm wth/wht ls incl, tr bent clay

2335 - 2360 - Siltstone - red, red brn, frm, shly, sm calc incl, occ grdg to slty sh

2360 - 2370 - Shale - red, red brn, pnk, frm, dns, a/a

2370 - 2375 - Siltstone - red, red brn, frm, a/a

2375 - 2380 - Shale - red red brn, pnk, frm, dns, a/a

2380 - 2430 - Sandstone - wht, clr, f-mg, frm, fri, micac, calc abund lse mg uncons qtz grs

2430 - 2440 - Siltstone - red, red brn, frm, dns, shly, calc

2440 - 2455 - Sandstone - wht, clr, f-mg, frm, fri, a/a

2455 - 2470 - Siltstone - red brn, red frm, dns, shly, occ sndy, calc, wht, frm, sndy, calc

2470 - 2480 - Shale - lgy, gy, frm, dns, slty ip, red red brn, frm, slty, calc

2480 - 2490 - Siltstone - red, red brn, wht, frm, a/a

2490 - 2505 - Shale - lgy, gy, red red brn, a/a

2505 - 2515 - Siltstone - red, red brn, frm, dns, s/calc

2515 - 2530 - Shale - gy, l gy, frm, dns, slty, s/calc

2530 - 2540 - Sandstone - wht, clr, vfg-fg, hd, s/calc

2540 - 2555 - Siltstone - red brn, buff, sft-frm, sndy, s/calc

2555 - 2560 - Shale - 1 gy, frm, slty, sndy ip, s/calc

2560 - 2570 - Sandstone - wht, clr, vfg, hd, s/calc, sm lse lg qtz grs

2570 - 2575 - Siltstone - red brn, buff, sft-frm, a/a

2575 - 2580 - Shale - 1 gy, frm, a/a

2580 - 2590 - Sandstone - wht, clr, vfg, hd, a/a pyric ip

2590 - 2600 - Shale - 1 gy, frm, slty, calc, d gy, hd, slty, calc, sm w/occ qtz incl

2600 - 2625 - Sandstone - wht, clr, 1 orng, f-vfg, hd, slty ip, s/calc, 1 orng, wht, fg, frm, vs/calc

2625 - 2640 - Siltstone - red,red brn, sft-frm, calc, occ sndy, wht, frm, sndy, calc, occ grdg to vfg ss

2640 - 2650 - Shale - brn, red brn, 1 gy, sft, calc, subwxy ip

2650 - 2655 - Siltstone - brn, red brn, sft-frm, a/a

2655 - 2660 - Shale - brn, red brn, 1 gy, sft, a/a

2660 - 2670 - Sandstone - wht, clr, buff, 1 brn, vf-mg, hd, s/calc, abund lse lg uncons qtz grs

2670 - 2675 - Shale - 1 gy, 1 gn, frm, dns, subwxy

2675 - 2700 - Sandstone - wht, clr, buff, 1 brn, vf-mg, a/a, abund lg uncons qtz grs

2700 - 2710 - Shale - 1 gy, frm, slty ip, subwxy, s/calc ip, 1 brn, hd, dns, s/calc

2710 - 2715 - Siltstone - brn, 1 gy, frm-hd, dns, s/calc

2715 - 2735 - Sandstone - wht, clr, 1 orng, fg, uncons qtz grs, buff, fg, hd, slty ip, s/calc

2735 - 2750 - Siltstone - brn, 1 gy, frm-hd, dns, s/calc

2750 - 2770 - Sandstone - wht, clr, f-mg, frm-hd, s/calc, abund uncons f-mg qtz grs

2770 - 2780 - Siltstone - red, red brn, frm, dns, sndy ip, s/calc, 1 gn, frm s/calc

2780 - 2785 - Shale - 1 gn, 1 gy, sft-frm, slty, sndy ip, s/calc

2785 - 2810 - Siltstone - red, red brn, 1 gn, frm, a/a

2810 - 2815 - Shale - 1 gn, 1 gy, sft-frm, a/a

2815 - 2820 - Siltstone - red red brn, lgn, a/a

2820 - 2830 - Shale - 1 gy, 1 gn, sft-frm, dns, slty, sndy ip, s/calc, occ grdg to sltst

2830 - 2840 - Siltstone - red, red brn, frm, dns, sndy, s/calc, abund cg qtz incl

2840 - 2850 - Shale - 1 gy, lgn, sft-frm, a/a

2850 - 2865 - Siltstone - red, red brn, frm, sndy, a/a

2865 - 2870 - Shale - 1 gy, 1 gn, frm, dns, slty ip, s/calc

2870 - 2890 - Siltstone - red, red brn, frm, dns, sndy ip, calc

2890 - 2900 - Shale - 1 gn, 1 gy, frm, slty, a/a

2900 - 2910 - Siltstone - red, red brn, frm, a/a

2910 - 2920 - Shale - 1 gy, frm, slty ip, occ subwxy, s/calc

2920 - 2935 - Siltstone - red, red brn, buff, sft-frm, occ sndy, calc

2935 - 2950 - Shale - 1 gy, frm, slty, a/a

2950 - 2960 - Siltstone - red, red brn, sft-frm, a/a

2960 - 2970 - Sandstone - wht, clr, buff, f-mg, uncons qtz, sm hd s/calc clstrs

2970 - 2980 - Shale - 1 gy, frm, slty, subwxy, brn, frm, slty, calc

2980 - 2985 - Siltstone - red, red brn, sft-frm, a/a

2985 - 2995 - Sandstone - wht, clr, buff, f-mg, a/a

2995 - 3000 - Shale - 1 gy, brn, frm, a/a

3000 - 3005 - Siltstone - 1 brn, buff, sft-frm, dns, micac, calc

3005 - 3015 - Sandstone - wht, clr, buff, f-mg, uncons qtz grs

3015 - 3025 - Siltstone - 1 brn, buff, sft-frm, dns, micac, calc

3025 - 3045 - Shale - 1 gy, brn, sft-frm, slty, subwxy ip, calc

3045 - 3055 - Sandstone - wht, clr, buff, f-mg, a/a

3055 - 3070 - Siltstone - red, red brn, frm, occ sndy, s/calc

3070 - 3085 - Shale - 1 gy, 1 gn, sft-frm, dns, slty ip, sm w/lge qtz incl

3085 - 3095 - Sandstone - wht, clr, f-mg, uncons qtz grs

3095 - 3115 - Siltstone - red, red brn, frm, dns, sndy ip, s/calc

3115 - 3130 - Shale - 1 gy, 1 gn, sft-frm, a/a

3130 - 3150 - Siltstone - red, red brn, frm, a/a

3150 - 3160 - Shale - 1 gy, lgn, frm, dns, slty, sndy ip

3160 - 3170 - Sandstone - wht, clr, f-mg, uncons qtz grs

3170 - 3175 - Shale - 1 gy,1 gn, frm, a/a

3175 - 3180 - Siltstone - red, red brn, frm, a/a

3180 - 3190 - Shale - 1 gy, 1 gn, frm, slty & sndy ip, s/calc

3190 - 3215 - Siltstone - wht, brn, buff, frm, sndy ip s/calc

3215 - 3230 - Shale - 1 gy, gy, frm, slty & sndy ip, s/calc

3230 - 3240 - Sandstone - wht, clr, f-mg, uncons qtz grs

3240 - 3260 - Siltstone - wht, brn, buff, frm, a/a

3260 - 3275 - Shale - 1 gy, 1 gn, sft-frm, subwxy-wxy, micac ip, s/calc ip

3275 - 3285 - Siltstone - red brn, brn, sft-frm, sndy ip, micac, s/calc

3285 - 3295 - Sandstone - wht, clr, f-mg, uncons qtz grs

3295 - 3320 - Siltstone - brn, red brn, buff, sft-frm, a/a

3320 - 3335 - Shale - 1 gy, 1 gn, sft-frm, s/calc, a/a

3335 - 3350 - Siltstone - red, red brn, buff, frm, sndy ip, micac, calc, 1 gy, frm, sndy, calc

3350 - 3370 - Sandstone - wht, clr, f-mg, uncons qtz grs sm clstrs, f-mg, hd, calc

3370 - 3380 - Siltstone - red, red brn, frm, sndy, micac, s/calc

3380 - 3395 - Shale - red, red brn, 1 orng, sft-frm, dns, slty, sndy ip, s/calc

3395 - 3425 - Siltstone - red, red brn, buff, frm, dns, sndy ip, micac, s/calc

3425 - 3430 - Shale - 1 gy, 1 gn, sft, dns, occ sndy, s/calc

3430 - 3435 - Sandstone - wht, clr, f-mg, uncons qtz grs, sm clstrs, f-mg, hd, calc

3435 - 3465 - Siltstone - red, red brn, buff, frm, sndy, a/a

3465 - 3480 - Shale - 1 gy, 1 gn, sft-frm, subwxy, sndy ip, s/calc

3480 - 3495 - Siltstone - red, red brn, buff, frm, sndy ip, micac, s/calc

3495 - 3500 - Limestone - wht, tan, crm, hd, dns, sil

3500 - 3515 - Sandstone - wht, clr, pnk, fg, hd, slty, micac & arkos ip, s/calc

3515 - 3525 - Shale - 1 gy, 1 gn, sft-frm, a/a

3525 - 3530 - Siltstone - red, red brn, buff, frm, a/a

3530 - 3545 - Shale - 1 gy, 1 gn, sft, subwxy ip, sm qtz incl, s/calc

3545 - 3560 - Siltstone - red, red brn, buff, frm, sndy ip, micac, calc

3560 - 3570 - Shale - 1 gy, 1 gn, sft-frm, a/a

3570 - 3580 - Limestone - 1 pnk, hd, dns, sil, n/xtln

3580 - 3595 - Siltstone - red, red brn, buff, sft-frm, a/a

3595 - 3610 - Shale - 1 gy, brn, frm, slty, subwxy, n/calc

3610 - 3620 - Limestone - 1 orng, pnk, frm-hd, dns, sil

3620 - 3625 - Shale - red brn, 1 orng, frm, slty, calc

3625 - 3645 - Siltstone - red, red brn, 1 orng, frm, shly ip, s/calc

3645 - 3665 - Shale - red brn, 1 orng, frm, a/a

3665 - 3680 - Siltstone - red brn, red, 1 orng, frm, shly, s/calc

3680 - 3690 - Limestone - 1 orng, pnk, hd, dns, sil

3690 - 3700 - Siltstone - red, red brn, 1 orng, a/a

3700 - 3715 - Shale - brn, red brn, 1 gn, frm, dns, slty, micac ip

3715 - 3735 - Siltstone - brn, red brn, buff, wht, frm, sndy ip, micac, s/calc

3735 - 3740 - Limestone - pnk, crm, tan, hd, dns, sil

3740 - 3750 - Sandstone - wht, clr, f-mg, uncons qtz grs

3750 - 3760 - Siltstone - brn, red brn, buff, wht, frm, a/a

3760 - 3775 - Shale - brn, red brn, 1 gn, frm, slty, a/a

3775 - 3785 - Limestone - pnk, crm, lt tan, hd, dns, sil

3785 - 3805 - Siltstone - brn, red brn, buff, frm, sndy ip, occ shly, micac ip, s/calc

3805 - 3815 - Sandstone - wht, clr, m-cg, uncons qtz grs, sm clstrs, frm, s/calc

3815 - 3830 - Shale - brn, red brn, 1 gn, frm, dns, slty, s/calc

3830 - 3840 - Siltstone - brn, red brn, buff, frm, a/a

3840 - 3855 - Sandstone - wht, clr, f-mg, hd, wlcons, micac ip

3855 - 3860 - Shale - brn, red brn, 1 gn, frm, a/a

3860 - 3880 - Sandstone - wht, clr, f-mg, a/a

3880 - 3890 - Limestone - wht, 1 gy, 1 pnk, hd, dns, sil, n/xtln

3890 - 3905 - Siltstone - red, red brn, frm, dns, s/calc

3905 - 3925 - Sandstone - wht, clr, f-vfg, hd, micac, ark ip, s/calc

3925 - 3945 - Siltstone - red, red brn, 1 gn, frm, micac ip, occ sndy, s/calc

3945 - 3950 - Shale - red, red brn, 1 gn, 1 gy, frm a/a

3950 - 3960 - Limestone - wht, 1 gy, 1 pnk, hd, dns, sil, n/xtln

3960 - 3985 - Shale - red, red brn, 1 gy, frm, micac, s/calc

3985 - 4000 - Siltstone - red, red brn, 1 gn, frm, micac ip

4000 - 4010 - Limestone - wht, 1 gy, 1 pnk, hd, dns, a/a

4010 - 4020 - Siltstone - red, red brn, 1 gn, frm, micac ip

4020 - 4025 - Limestone - wht, 1 gy, hd, dns, n/xtln, silic

4025 - 4030 - Shale - red, red brn, frm, dns, micac

4030 - 4040 - Siltstone - red, red brn, 1 gy, frm, micac, sndy

4040 - 4050 - Limestone - wht, 1 gy, hd, dns, n/xtln

4050 - 4060 - Siltstone - red, red brn, 1 gy, a/a

4060 - 4085 - Shale - red, red brn, 1 gy, 1 gn, frm, dns, micac

4085 - 4110 - Siltstone - red, red brn, 1 gy, frm, sndy ip, s/calc

4110 - 4120 - Shale - red, red brn, 1 gy, 1 gn, a/a

4120 - 4145 - Sandstone - wht, clr, 1 gn, vfg, hd, micac, ark

4145 - 4160 - Shale - red brn, brn, 1 gn, frm, dns, sub/wxy

4160 - 4175 - Siltstone - red brn, brn, frm, s/calc, micac

4175 - 4185 - Shale - red, red brn, brn, 1 gn, frm, a/a

4185 - 4200 - Sandstone - wht, clr, fg, hd, micac, ark

4200 - 4210 - Siltstone - red, red brn, 1 gy, frm, a/a

4210 - 4235 - Sandstone - wht, clr, vfg, hd, wl cons, micac

4235 - 4245 - Siltstone - red, red brn, 1 gy, frm, dns, s/calc

4245 - 4260 - Shale - red brn, 1 gn, frm, dns, slty ip, s/calc

4260 - 4270 - Siltstone - red, red brn, 1 gy, frm, a/a

4270 - 4295 - Sandstone - wht, clr, mg, hd, wlcons, s/calc, ark

4295 - 4305 - Siltstone - brn, red brn, l gy, frm, dns, calc

4305 - 4325 - Shale - red, red brn, brn, l gy, l gn, frm, dns, s/calc

4325 - 4340 - Siltstone - brn, red brn, frm, a/a

4340 - 4350 - Shale - red, red brn, frm, dns, calc

4350 - 4365 - Siltstone - brn, red brn, lgy, frm, dns, calc

4365 - 4370 - Limestone - wht, gry, hd, dns, slty ip, silic

4370 - 4380 - Siltstone - brn, l gy, l gn, frm, calc

4380 - 4385 - Limestone - wht, hd, dns, slty ip

4385 - 4395 - Shale - red brn, l gy, l gn, a/a

4395 - 4400 - Limestone - wht, gy, l gy, hd, dns, sil, slty ip, n/xtln

4400 - 4405 - Siltstone - red, red brn, l orng, frm, calc ip

4405 - 4415 - Limestone - tan, wht, hd, dns, slty ip, sil

4415 - 4425 - Siltstone - red, red brn, frm, a/a

4425 - 4435 - Shale - red red brn, gy, sft-frm, subwxy ip, calc

4435 - 4445 - Limestone - wht, tan, hd, dns, a/a

4445 - 4460 - Siltstone - l gy, gy, sft-frm, sndy ip, calc

4460 - 4470 - Shale - brn, d gy, frm, dns, slty ip, calc

4470 - 4480 - Sandstone - wht, clr, fg, hd, wl cons, calc

4480 - 4485 - Siltstone - l gy, gy, frm, a/a

4485 - 4500 - Limestone - wht, gy, crm, hd, dns, n/xtln

4500 - 4505 - Siltstone - l gy, gy, wht, frm, calc

4505 - 4510 - Limestone - wht, gy, crm, hd, a/a

4510 - 4520 - Shale - brn, gy, l gy, frm, dns, slty ip

4520 - 4530 - Siltstone - l gy, gy, frm, sndy ip, micac, calc

4530 - 4540 - Sandstone - wht, clr, vfg, hd, micac, sil cmt

4540 - 4555 - Limestone - wht, pnk, crm, hd, dns, sil, n/xtln

4555 - 4570 - Siltstone - l gy, gy, frm, sndy ip, calc

4570 - 4595 - Sandstone - wht, clr, vfg, wlcons, micac, calc

4595 - 4600 - Siltstone - brn, gy, d gy, frm, micac, calc

4600 - 4615 - Limestone - gy, d gy, tan, hd, dns, sil, fos ip, n/xtln

4615 - 4620 - Siltstone - l gy, gy, wht, frm, a/a

4620 - 4630 - Shale - l gn, wht, gy, frm, dns, slty ip, calc

4630 - 4640 - Sandstone - wht, clr, vfg, hd, slty, calc

4640 - 4645 - Siltstone - l gy, gy, frm, sndy ip, calc

4645 - 4665 - Shale - l gn, wht, gy, frm, dns, a/a

4665 - 4670 - Limestone - wht, clr, hd, dns, sil, n/xtln

4670 - 4685 - Siltstone - l gy, gy, frm, dns, sndy ip, calc

4685 - 4690 - Limestone - wht, clr, hd, dns, a/a

4690 - 4710 - Limestone - wht, l gy, frm-hd, dns, sil, slty ip

4710 - 4730 - Siltstone - tan, l gy, brn, frm-hd, dns, shly, calc

4730 - 4740 - Sandstone - wht, clr, vfg, hd, micac, calc

4740 - 4750 - Shale - l gy, orng, brn, frm, dns, subwxy ip

4750 - 4760 - Shale - l gy, orng, brn, frm, dns, subwxy ip

4760 - 4770 - Limestone - wht, gy, crm, hd, sil n/xtln

4770 - 4785 - Slbt - brn, gy, tan, frm, sndy ip, calc

4785 - 4795 - Shale - l gy, orng, brn, frm, a/a

4795 - 4805 - Sandstone - wht, clr, vfg, hd, wlcons, calc

4805 - 4815 - Shale - l gy, gy, frm, dns, slty, calc

4815 - 4835 - Siltstone - brn, gy, tan, frm, dns, calc

4835 - 4850 - Limestone - wht, gy, l gy, hd, dns, sil, n/xtln

4850 - 4865 - Siltstone - wht, l gy, gy, frm, sndy ip, calc, sm w/ls incl

4865 - 4870 - Limestone - wht, tan, hd, sil, fos ip, mcroxtln ip

4870 - 4885 - Sandstone - wht, clr, mg, micac, glau ip, v/calc

4885 - 4905 - Limestone - wht, l tan, crm, frm-hd, dns, slty & sil ip, occ mcroxtln ip abund fos

4905 - 4915 - Shale - red, red brn, frm, dns, slty, calc

4915 - 4920 - Siltstone - red, red brn, l gy, frm, sndy ip, calc

4920 - 4940 - Limestone - wht, gy, tan, hd, dns, slty ip, mcroxtln ip

4940 - 4960 - Siltstone - l gy, gy, buff, brn, hd, dns, micac, v/calc

4960 - 5015 - Limestone - gy, d gy, brn, tan, hd, dns, sil, mcroxtln ip, fos ip

5015 - 5035 - Slbt - wht, gy, brn, frm, dns, v/calc

5035 - 5045 - Limestone - brn, tan, gy,, d gy, hd, a/a

5045 - 5050 - Siltstone - wht, gy, brn, frm, a/a

5050 - 5065 - Limestone - gy, d gy, tan, hd, dns, sil, fos ip, gy, d gy, frm, v/slty, sil ip

5065 - 5075 - Siltstone - wht, gy, l gy, frm, sndy ip, micac ip, calc

5075 - 5080 - Limestone - d gy, gy, tan, sft-hd, a/a

5080 - 5090 - Shale - l gy, gy, sft-frm, slty, calc

5090 - 5115 - Limestone - blk, d gy, hd, dns, v/slty, sil, grdg to sltst

5115 - 5130 - Siltstone - d gy, gy, hd, dns, v/calc

5130 - 5140 - Sandstone - wht, l gy, frm, vfg, slty, calc

5140 - 5150 - Limestone - l gy, gy, hd, dns, fos ip, d gy, gy, hd, dns, v/slty, sil ip

5150 - 5160 - Siltstone - l gy, gy, d gy, hd, v/calc

5160 - 5180 - Limestone, l gy, tan, hd, dns, sil, v/fos, mcroxtln ip, d gy, hd, dns, v/slty

5180 - 5190 - Siltstone - d gy, hd, dns, v/calc

5190 - 5205 - Limestone - d gy, dns, hd, sil ip, v/slty

5205 - 5215 - Siltstone - wht, sft-frm, sndy ip, l gy, gy, d gy, hd, dns, v/calc

5115 - 5230 - Limestone - wht, gy, l tan, hd, dns, sil, mcroxtln ip, d gy, gy, hd, dns, slty, sil ip

5230 - 5240 - Siltstone - wht, l gy, gy, frm-hd, a/a

5240 - 5255 - Sandstone - wht, l gy, vfg, slty, calc

5255 - 5265 - Limestone - wht, gy, l tan, hd, dns, a/a

5265 - 5275 - Limestone - wht, l gy, tan, hd, dns, slty, sil & dol ip, mcroxtln ip, d gy, frm, dns, slty

5275 - 5285 - Siltstone - l gy, gy, brn, frm-hd, micac ip, calc

5285 - 5305 - Limestone - wht, l gy, gy, tan, frm-hd, a/a

5305 - 5310 - Siltstone - wht, l gy, brn, frm, a/a

5310 - 5330 - Limestone - l gy, gy, d gy, frm-hd, dns, sil, slty ip, wht, l gy, hd, dns, sil

5330 - 5335 - Siltstone - wht, l gy, frm, dns, calc

5335 - 5355 - Limestone - wht, l gy, gy, d gy, frm-hd, a/a

5335 - 5365 - Siltstone - gy, hd, v/calc, wht, sft, sndy, calc

5365 - 5390 - Limestone - l gy, tan, hd, dns, slty, sil, d gy, gy, slty, sil ip

5390 - 5400 - Siltstone - wht, gy, sft-hd, a/a

5400 - 5425 - Limestone - l gy, gy, tan, frm-hd, dns, sil, fos ip, d gy, hd, dns, slty, sil

5425 - 5435 - Siltstone - wht, sft & sndy, v/calc, gy, d gy, hd, dns, calc

5435 - 5440 - Limestone - wht, l gy, gy, d gy, a/a

5440 - 5455 - Siltstone - wht, l gy, d gy, sft-hd, a/a

5455 - 5470 - Limestone - wht, sft-hd, slty, sil, v/cxtln ip, gy, d gy, hd, slty, sil

5470 - 5475 - Dolomite - wht, hd, dns, xtln

5475 - 5485 - Limestone - wht, gy, d gy, sft-hd, a/a

5485 - 5490 - Dolomite - wht, hd, a/a

5490 - 5500 - Limestone - wht, d gy, sft-hd, a/a

5500 - 5505 - Shale - d gy, frm, slty, calc

5505 - 5515 - Dolomite - wht, tan, frm-hd, slty & sil ip, mcroxtln

5515 - 5520 - Limestone - wht, l gy, hd, slty, sil

5520 - 5535 - Dolomite - wht, l tan, frm-hd, a/a

5535 - 5555 - Limestone - lvat, l gy, hd, dns, sil, slty ip, mcroxtln ip

5555 - 5560 - Dolomite - wht, hd, dns, lmy, sil & slty ip

5560 - 5570 - Limestone - wht, l gy, hd, dns, a/a

5570 - 5600 - Shale - blk, frm, dns, slty, v/calc, occ grdg to sltst

5600 - 5610 - Limestone - l gy, hd, dns, slty, mcroxtln ip

5610 - 5630 - Shale - blk, frm, dns, a/a

5630 - 5645 - Anhyd - wht, sft - frm, msiv, mcroxtln ip

5645 - 5650 - Limestone - 1 gy, frm, dns, slty

5650 - 5660 - Shale - blk, hd, dns, slty, v/calc

5660 - 5665 - Siltstone - 1 gy, tan, frm, lmy, dolo ip

5665 - 5685 - Shale - blk, hd, dns, a/a, occ grdg to sltst

5685 - 5690 - Limestone - 1 gy, frm-hd, slty, mcroxtln ip

5690 - 5695 - Dolomite - 1 tan, frm, lmy, sucr

5695 - 5705 - Anhyd - wht, sft-frm, mcroxtln ip

5705 - 5710 - Limestone - 1 gy, frm-hd, a/a

5710 - 5720 - Siltstone & shale, a/a

5720 - 5725 - Anhyd - wht, sft-frm, a/a

5725 - 5730 - Shale - blk, frm-hd, slty, calc

5730 - 5740 - Limestone - wht, crm, 1 gy, hd, slty, sil ip, dol-l brn, frm, slty, mcroxtln

5740 - 5745 - Limestone - wht, crm, 1 gy, hd, slty, sil ip

5745 - 5750 - Dolomite - 1 tan, brn, frm, slty, mcroxtln

5750 - 5755 - Anhyd - wht, frm, mcroxtln ip

5755 - 5770 - Siltstone - d gy, brn, frm, lmy, occ dolo ip, v/calc

5770 - 5804 - Shale - blk, frm, slty, v/calc, occ grdg to sltst

5804 - 5820 - Salt

DRILL RATE 10' INTERVALS

550 - 600	10	10	10	20	37
600 - 650	16	15	16	17	10
650 - 700	10	6	6	6	6
700 - 750	6	6	7	7	7
750 - 800	6	6	6	22	20
800 - 850	21	16	8	8	8
850 - 900	8	8	8	10	10
900 - 950	10	7	7	7	6
950 - 1000	6	6	8	8	8
1000 - 1050	8	8	8	8	8
1050 - 1100	8	8	8	8	8
1100 - 1150	9	9	9	10	10
1150 - 1200	17	16	16	19	20
1200 - 1250	15	15	16	15	20
1250 - 1300	21	25	15	15	15
1300 - 1350	15	15	12	10	10
1350 - 1400	8	8	8	8	8
1400 - 1450	8	10	10	10	10
1450 - 1500	5	5	5	7	11
1500 - 1550	16	14	22	29	29
1550 - 1600	30	30	20	25	30
1600 - 1650	16	18	18	30	30
1650 - 1700	30	24	29	29	33
1700 - 1750	30	23	23	27	32
1750 - 1800	25	27	23	57	26
1800 - 1850	57	41	44	39	42
1850 - 1900	46	36	31	35	29
1900 - 1950	29	19	42	34	36
1950 - 2000	25	23	29	37	34
2000 - 2050	Rig Geol	INOP	31	33	25
2050 - 2100	30	31	31	31	21
2100 - 2150	22	20	26	24	21
2150 - 2200	21	30	35	29	31
2200 - 2250	31	32	33	33	35
2250 - 2300	29	Rig Geol	INOP	36	32
2300 - 2350	35	35	40	27	27
2350 - 2400	24	27	25	20	24
2400 - 2450	29	28	29	36	24
2450 - 2500	38	27	25	18	17
2500 - 2550	11	20	22	20	24
2550 - 2600	26	27	32	37	37
2600 - 2650	34	19	24	25	32
2650 - 2700	47	34	31	23	43
2700 - 2750	54	34	22	37	40
2750 - 2800	30	24	58	53	51
2800 - 2850	49	51	52	49	49
2850 - 2900	49	50	41	Rig Geol	INOP
2900 - 2950	37	38	44	37	56
2950 - 3000	31	36	43	41	46
3000 - 3050	47	44	50	52	44
3050 - 3100	40	41	42	29	39
3100 - 3150	39	40	38	38	38
3150 - 3200	41	38	42	43	36
3200 - 3250	35	33	35	36	34

3250 - 3300	30	34	37	44	44
3300 - 3350	56	51	80	68	71
3350 - 3400	26	34	65	78	69
3400 - 3450	50	43	52	63	64
3450 - 3500	51	62	54	Rig INOP Geol	54
3500 - 3550	39	64	71	84	71
3550 - 3600	70	76	82	84	87
3600 - 3650	86	86	81	83	79
3650 - 3700	71	57	68	64	56
3700 - 3750	56	Rig INOP Geol	61	53	53
3750 - 3800	66	78	84	73	32
3850 - 3900	46	29	50	64	Rig INOP Geol
3900 - 3950	67	46	75	73	87
3950 - 4000	Rig Geol	INOP	116	92	88
4000 - 4050	93	74	79	72	78
4050 - 4100	68	63	63	66	62
4100 - 4150	69	86	20	23	68
4150 - 4200	90	Rig INOP Geol	75	67	60
4200 - 4250	78	35	23	66	91
4250 - 4300	82	75	59	25	37
4300 - 4350	77	87	90	88	90
4350 - 4400	93	93	90	106	86
4400 - 4450	81	88	104	77	70
4450 - 4500	67	72	66	79	82
4500 - 4550	88	101	84	85	97
4550 - 4600	84	78	55	56	74
4600 - 4650	82	75	95	82	100
4650 - 4700	118	90	96	92	103
4700 - 4750	98	82	53	64	88
4750 - 4800	86	84	77	89	80
4800 - 4850	85	87	87	81	81
4850 - 4900	91	67	64	84	78
4900 - 4950	80	75	88	81	69
4950 - 5000	78	80	82	88	93
5000 - 5050	103	76	65	71	64
5050 - 5100	91	68	86	91	93
5100 - 5150	128	98	78	74	142
5150 - 5200	110	124	145	132	118
5200 - 5250	78	98	85	73	78
5250 - 5300	75	70	69	83	90
5300 - 5350	98	109	114	110	Rig INOP Geol
5350 - 5400	Rig INOP Geol	Rig INOP Geol	86	86	90
5400 - 5450	78	92	94	95	81
5450 - 5500	106	88	57	19	26
5500 - 5550	62	20	59	140	127
5550 - 5600	98	113	111	79	69
5600 - 5650	87	128	105	146	159
5650 - 5700	129	79	218	113	132
5700 - 5750	93	92	117	75	105
5750 - 5800	76	64	130	151	130
5800 - 5850	26	26			

FORM 925204

COMPANY Mountain Fuel Supply
WELL Patterson Canyon #1
FIELD Wildcat
COUNTY San Juan
STATE Utah

Quantitative Log Interpretation

This interpretation represents our best judgement. However, because all log analysis is based on best assumptions and empirical relationships, we cannot guarantee the accuracy of these figures. For this reason, we must disclaim any responsibility for any loss or expense which results from the use of this interpretation.

Dresser Atlas

Point No.	Depth	ΔT	ϕ_{AL}	D_B	Corr ϕ_D	SwN	R_w	R_t	R_{wa}	S_w	Remarks
1	5725-32	65			14	15	.035	3	.06	71	DOL LS
2	5692-5700	64			12	12	1	5	.07	62	LS
3	5672-80	70			11.5	8	1	19	.25	38	SS
4	5635-42	62			8.5	7	1	25	.18	43	ANHYD
5	5494-5512	63			15	18	1	1	.022	100	DOL
6	5484-89	64			13.5	14	1	2	.035	100	DOL LS
7	5462-78	68			17	19	1	1.5	.04	94	DOL LS
8	4870-76	58			4.5	3	1	800	1.5	15	LS OR ANHYD Tight
9	4855-64	72			13.5	10	1	80	1.4	17	SS Tight - Poss Show
10	4814-30	64			8	5.5	1	60	.38	30	LMY SS

References

T_m =

T_f =

D_g =

D_f =

EQUATIONS

CHART MANUAL PAGE REFERENCE

OTHER

D R [illegible] 5-2[illegible]-74
DRESSER ATLAS ENGINEER DATE

FORM 925204

COMPANY Mountain Fuel Supply
WELL Patterson Canyon #1
FIELD Wildcat
COUNTY San Juan
STATE Utah

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Dresser Atlas

Point No.	Depth	ΔT	ϕ_{AL}	D_B	ϕ_D (Corr)	SW N	R_w	R_t	R_{wa}	S_w	Remarks
1	5725-32	65			14	15	.035	3	.06	71	DOL LS
2	5692-5700	64			12	12	1	5	.07	62	LS
3	5672-80	70			11.5	8	1	19	.25	38	SS
4	5635-42	62			8.5	7	1	25	.18	43	ANHYD
5	5494-5512	63			15	18	1	1	.022	100	DOL
6	5484-89	64			13.5	14	1	2	.035	100	DOL LS
7	5462-78	68			17	19	1	1.5	.04	94	DOL LS
8	4870-76	58			4.5	3	1	800	1.5	15	LS OR ANHYD Tight
9	4855-64	72			13.5	10	1	80	1.4	17	SS Tight - Less shale
10	4814-30	64			8	5.5	1	60	.38	30	LMY SS

References

T_m =

T_f =

D_g =

D_f =

EQUATIONS

CHART MANUAL PAGE REFERENCE

OTHER

D R Smith
DRESSER ATLAS ENGINEER

5-24-74
DATE

GEOLOGICAL FIELD SHEET

STATE & COUNTY San Juan, Utah ELEV. GR 5225'

OPERATOR Mountain Fuel Dr.-Loffland Brothers CO.

FEE OWNER #1 Patterson Canyon

LOCATION NE NW 560' FNL, 1674' FWL SURVEY SEC.-TWP.-RNG. 9-38S-25E

Geologist-Clair Adams (801)328-8315 (SLC)

Rick Duncan, Core Lab will begin daily reports @ 5000'

Proj. Depth: 6000' Desert Creek (WC) (Charles Add)

Courtesy Mountain Fuel Operator 565-9601

BEG.: COMP.:

CASING RECORD	COMPLETION RECORD

TOPS

SAMPLE	SCHLUMBERGER

FORM 511-SCOUT REPORT

THE M. L. BATH COMPANIES SHREVEPORT—LONGVIEW—LAKE CHARLES BATH-O-GRAM REG. NO. 513,321 U. S. PAT. OFF.

MISCELLANEOUS INFORMATION

4/30/74 Spudded @ 12:01 a.m. - will set 10 3/4" to 500' - TD 125'.

5/1/74 TD 524' - made 399' in 24 hrs.
Md. wt. 9.0, visc. 35
½° @ 120', ¼° @ 343
Preparing to run surface casing - logging unit will rig up tommorow.

5/2/74 547' drilled 23 feet - tripping out of hole
Survey: 547' at ¼°
Md. wt. 9.0, visc. 34
Reamed hole to 13 3/4" - prep. to run 10 3/4" surface casing.

5/3/74 604' drilling - sand - mud - fresh water
Made 58' last 24 hrs.

WELL LOG

BOTTOM	FORMATION	BOTTOM	FORMATION	BOTTOM	FORMATION
5/4/74	1570' - 966' in 24 hrs.- Sandstone - av. drilling rate 1½ min. per foot - lost circ. 780-1100' Lost about 700 bbls. Sample tops: Entrada 632' Carmell 784' Navajo 820' Kayenta 1160'				
5/5/74	1972' - 402' in 24 hrs.- Siltstone - drilling about 3-4 min. per foot Sample tops: Windgate 1303' Shin Lee 1538' Dev. survey 2 3/4° at 1661'.				
5/6/74	2445' - 473' in 24 hrs. Sandstone, siltstone and shale - 3 min. a foot Tops: Shinarump 2369' - 1¼° at 2130'				
5/7/74	2840' drilling - made 395' - sandstone, shale, siltstone - Moenkopi 2456' - drilling w/water.				
5/8/74	Present depth 3168', 328' in 24 hrs. drilling at present time. - sandstone, shale and siltstone - av. drilling 4 min. to the foot Tops: Cutler 2590' - still drilling with water.				
5/9/74	3440' drilling; 272' last 24 hrs. Siltstone, red-brn, firm, w/rd sh to pink ss, f-m, silty, calc., N/S - mudded up @ 3260' Md. wt. 8.8, vis. 30				
5/10/74	3648' made 208' in 24 hrs. - sandstone, shale, siltstone, limestone - 7 min. per ft. Md. wt. 8.7, visc. 34				
5/11/74	3838'--made 190' in 24 hrs. - drilling Sandstone, siltstone, shale, limestone Av. drilling rate 6½ min. to the foot No samples, no dev. sur., no background gas Md. wt. 8.9 - visc. 30				
5/12/74	4036'--made 198' in 24 hrs. - drilling Sandstone, siltstone, shale, limestone Av. drilling rate 7 min. to the foot Couple drilling breaks: 3854-3870 - 2 min. to the foot 3908-3916 - 3 min. to the foot				

#1 Patterson, NE NW Sec. 9-38S-25E, San Juan Co., Utah

(Contd.)

No background gas
Md. wt. 8.9, visc. 33

5/13/74 4250'--made 214' in 24 hrs. - drilling
Sandstone, siltstone, shale, limestone
Av. Drilling rate 7 min. to the foot
Drilling breaks:
4124-4140 - 1½" to the foot
4202-4224 - 2½" to the foot
No background gas
Md. wt. 8.8, visc. 36

5/14/74 4425' - made 175' in 24 hrs.
Sandstone, siltstone, shale, limestone - 8'/ft.
Drilling brk - 4282-4296 2'/ft.
Background gas 1-2 units - Md. wt. 8.8, visc. 32
Honaker Trail 4404'
Gas show @ 4408-9 - max. 5½ units on hot wire..

5/15/74 Drilling 4598' - 173' in 24 hrs.
Limestone, sandstone, siltstone, red shale
NS - 7½ min./ft. - Md. wt. 8.8, visc. 33
½° at 4462'.

5/16/74 4710' - 112' in 24 hrs. - drilling
Limestone, siltstone, sandstone, shale
Av. drilling rate 10'/ft.
Background gas 2 units - tripped for new bit
at 4643' but no trip gas - Md. wt. 8.8, visc. 32

5/17/74 Pulling out of hole to run DST #1 - Depth 4885'
Made 175' in 24 hrs. - Sandstone, siltstone,
limestone shale - Av. drlg. rate 10'/ft.
Drlg. break 4859-4876' 6'/ft.
Background gas = 2 units - Md. wt. 8.9, visc. 32
Preparing to test 4855'-4885'
Chromatograph readings before break:
C1 = 28, C2 = 0, C3 = 0, C4 = 0

Chromatograph readings during break:
C1 = 28, C2 = 20, C3 = 1, C4 = 1

Chromatograph readings after break:
C1 = 3, C2 = 2, C3 = ½, C4 = 0

In break the samples were 60% limestone, microxyln,
foss, 10% sandstone, 30% siltstone, lt. tan stain
10% - no cut or fluor.

5/18/74 TD 4907' drilling - 22' in 24 hrs.
Limestone, lt gray-tan, siltstone, foss
Av. drilling rate 10'/ft.
Mud wt. 8.9, visc. 40

DST #1: 4860-4874 Honaker Trail
17' drilling brk. 6.5 units gas increase
1st flo open w/weak blow - died at end.
Final open dead, remained dead
IOP 30 min. - no gas to surf.
FF 45 min. - no gas to surf.
BHT 118° - Rec. 3' mud, 2100 cc mud in sampler

Top Chart	Bottom Chart
IH 2328	IH 2349
IF 40-40	IF 53-53
ISI 53	ISI 66
FF 40-40	FF 53-53
FSI 53	FSI 66

5/19/74 TD 5079' drilling - 172' in 24 hrs.
Limestone, lt-dk gray-tan, hd, silty, foss.
Av. drilling rate 8-9'/ft.
Mud wt. 8.9, visc. 41 - Top Paradox 4932'

5/20/74 5200' drilling - made 121' in 24 hrs.
Limestone, lt gry, tan, hd, ~~s~~ siliceous, foss
Limestone, dk gry, silty, ~~siltstone~~ siliceous
Av. drilling rate 12-15'/ft.
4' break 5128-32 slight show (14 units gas)
Chrom. C-1 9-32-8
C-2 2-7-1
C-3 1-4-1
C-4 0-2-1
Slight flow, slight cut, v. tite, Md. wt. 9.0, visc. 44

5/21/74 Drlg. @ 5361' - 161' in 24 hrs.
ls, gry-lt gry - wht, firm, dse, slty, sil w/os
Faint flo & slow cut - 8'/ft. - no brks.
Top Upper Ismay 5285' - Md. wt. 8.9, visc. 43

5/22/74 Pulling out of hole to run DST #2
Depth 5507' - made 146' in 24 hrs. - ls, wht, firm, dse, slty, foss, frac., good odor, good flour, slow cut - drilling rate 9'/ft.
Brks. 5464-70 and 5476-5503.
Mud. wt. 9.1, visc. 78
Before show 8 units of gas
During brks 111 units of gas
After brks 22 units of gas.

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5/23/74 Cor. depth 5504' - coming out with test tool. - Md. Wt. 9.1, visc. 75
DST #2 5430-5504 (Upper Ismay)
IF Op 30 min. w/strong blow; remained strong increased slightly at end. Gas to surf in 30 min.
FF 240 min. Op w/strg blow; remained strong. Gas too small to measure.
Rec. 2391' SW; 93' GCM; 120' oil.

5/24/74 5529' - running DST #4 - 25' in 24 hrs.
ls and dolo. - 6'/ft. - drilling brk 5509-21
3'/ft. - backgrd gas = 50 units - Md. 9.1, v. 67
DST #3 5509-29 misrun
DST #4 5513-29 - OP IF wk blow, incr. to good after 27 min. - closed for 90 min. - Op w/ weak blow, tool still open.

DST #4 - Rec. 931' sli muddy WS
30' sli GCM
1650 cc SW w/gas odor

5/25/74 5584' made 55' in 24 hrs. drlg., dolo, ls, sh 10-12"/ft. - 165 units - trip gas 5529'
Md. 9.1, visc. 67

5/26/74 5665' tstg - made 81' in 24 hrs. - sh, ls, anhy 12-15"/ft. - Lwr Ismay 5570 - "B" Marker 5656'
8-12 units backgrd gas - Md. 9.1, visc. 65

DST #5 - Lwr Ismay 5556-5665
Op w/wk blow, remained wk
FF Op dead, remained dead
IF 30 min. - no gas to surf.
FF 120 min. - no gas to surf.
BHT 126° - Rec. 9' sli GCM
2150 cc mud in sampler 0#

5/27/74 5700 drlg - 35 ft. in 24 hrs.
sh, ls, dolo, sltst - 15-20"/ft.
drlg brk 5687-89 - Desert Creek 5686'
Backgrd gas = 8 units; 125 units trip gas @ 5665
Md. 9.1, visc. 65

5/28/74 5744' - coming out w/test tool - made 44' in 24 hrs.
sh, slt, dolo, ls, anhy - 15-20"/ft.
drlig brks 5716-18 (7"/ft.)
5736-42 (5"/ft.)
Backgrd. gas 8-40 units - Md. 9.1, visc. 65
DST #6 (contd.)

5/28/74 (contd.) DST #6
Up Desert Crk 5687-5744
IOP w/strong blow, dec. to wk
FF Op w/strong blow, dec. to wk in 75 min.
IF 30 min. - no gas to surf.
FF 120 min. - no gas to surf.
ISI 90 min.
FSI 225 min.
Rec. 95' GCM

5/29/74 Depth drlg 5820' - made 76' in 24 hrs.
W.O. logging truck - sh, slt, anhy, salt
Drlg rate 15"/ft. - drlg brk 5757-71 - 6"/ft.
Tops: Salt 5804' - Md. 9.0, visc. 58

5/30/74 TD 5818' - prep. to test 5462-80
Ran Dual Ind. lateralog
Bore Hole Compensated Sonic
Sidewall Neutron - Gammaray
Dipmeter - Md. 9.1, visc. 58

5/31/74 Tripping ~~out~~ laying down w/DST #7, straddle 5460-80
IF weak, incr. to good in 8 min. - no gas to surf.
FF good to strong - gas to surf in 42 min.
Gas guage on 3/8" orifice
57 min. - 27 mcf
72 min. - 32 mcf
87 min. - 22 mcf
102-202" - 19 mcf
217-232" - not enough to guage NIL
Recovery = 757' fluid
597 oil - 100 SW - 60 HG & OCM

TOP CHART	BOTTOM CHART
IH 2560	IH 2611
IF 27-81	IF 27-82
ISI 2455	ISI 2457
FF 81-243	FF 55-246
FSI 2455	FSI 2457
FH 2561	FH 2612

BHT 132°
Rec. 1050 cc fluid in sampler
75% oil - 25% SW - 1 cf gas
Resistivity pit mud .603 - water .067
mud .154 in pipe
Oil 41 grav. @ 78°
Prep. to run 4½" casing

#1 Patterson, NE NW Sec. 9-38S-25E, San Juan Co., Utah

6/1/74 Prep. to run 4½" casing.

6/2/74 Ran 4½" csg - landed at 5726.62'
Cemented w/ 359 sx 50-50 pos.-mix
Plugged down @ 4:00 p.m. on 6/1

6/3/74 Plugged back TD 5726' - WOC

6/4/74 TD 5818' - PBTD 5726' - picked up csg scraper and tubing. While running in hole, pin pulled out of box and dropped tubing. Now tripping out with tubing.

6/5/74 TD 5818' - PBTD 5726' - tripped out w/fish, replaced 69 joints of tubing
Perf: 5464-5476 w/2 holes/ft.
Landed tubing @ 5432' - now hooking up tree.

6/6/74 TD 5818 - PBTD 5726 - Ismay perfs: 5464-76
Installed well head; spotted acid pad and could not brk formation w/300 lbs. per sq. in.
Set tubing bridge plug; removed well head; installed blowout preventer; lowered tubing to 5493'; removed BOP & installed well head; removed tubing BP; displaced tubing & csg w/drip oil and pressured to 3000 PSI.
Bled to 800 PSI in 8 min.; displaced tubing w/acid - 5% hydrocloric acid.

6/7/74 TD 5818 - PBTD 5726' - Ismay perfs: 5464-76
Applied acid treatment w/5000 gal 5% HCL & 5000 gals 28% HCL; displaced w/6000 gal drip oil. Total acid 238 bbls, total drip 210 bbls. Op to seperator at 3 p.m.; at 6 a.m. TP 0#, csg pres. 250, gas not enough to guage; rec. 355 bbls load
Now prep to unload w/nitrogen.

6/8/74 TD 5818' - PBTD 5726' - Ismay perfs: 5464-76
Rig rel. 11 p.m. 6/7
Well making 25% oil; 75% SW

6/9/74 Well S.I. - WO swabbing unit

6/10/74 Well SI

6/11/74 Well SI - WO swabbing unit

6/12/74 Well SI - WO swabbing unit

6/13/74 Well SI - WO swabbing unit

6/14/74 Well SI - WO swabbing unit

6/17/74 Well SI - WO swabbing unit

6/18/74 Well SI

6/19/74 TD 5818' - PBTD 5726' - Ismay perfs: 5464-5476
Have rigged up completion unit - preparing to swab.

6/20/74 TD 5818' - PBTD 5726' - Ismay pers: 5464-5476
WO back hoe to install dead men anchors.

6/21/74 TD 5818' - PBTD 5726' - Ismay perfs: 5464-5476
Installed deadmen 6-20-74.
TP 185 PSI, CP 1800 PSI - flowed 1/4 hr. and well died. Swabbed 4 runs from 3000' and began flowing. Flowed 6 hrs. making 92 bbls. fluid and died. Swabbed 4 runs from 3000' and flowed 26 bbls. fluid in 3 hrs. and died.
Shut down for nite.

6/22/74 TD 5818' - PBTD 5726' - Ismay perfs: 5464-5476
Flowed and swabbed well 13½ hrs., rec. 152 bbls. oil and emulsion - 334 bbls. water
TP 485 - CP 1476 - flowed an additional 141 bbls. fluid with no breakdown.

6/23/74 Flowed and swabbed well approx. 13 hrs.
Rec. 277 bbls. fluid - TP 380 - CP 1620
Rec. in last 2 days 152 bbls. oil, 475 bbls. water
3 days total fluid 904 bbls.

6/24/74 Waiting on crews.

6/25/74 TD 5818' - PBTD 5726' - Ismay perfs: 5464-5476
Drained water from 6/22 production (83 BO, 205 BW)
Flowed and swabbed 210 bbls. fluid on 6/24.

6/26/74 TD 5818' - PBTD 5726' - Ismay perfs: 5464-5476
Flowed and swabbed 55 BO and 150 BW - flowed well for 2½ hrs. making 85 bbls fluid -
Shut down for nite.

6/27/74 Flowed well 15 min.--dead. Made 4 swab runs-
Flowed well 2 hrs. & died - Made 4 swab runs-
Flowed 4½ hrs. and died.
Produced 130 bbls fluid, shut down for nite.

#1 Patterson, NE NW Sec. 9-38S-25E, San Juan Co., Utah

6/28/74 From 3 p.m., June 25, to 8 a.m., June 26 made 35 BO - Total of 375 BO and 95 BW - Total of 1170 BW - TP 320 - CP 1475
Rig was released at 11 a.m. on the 27th.

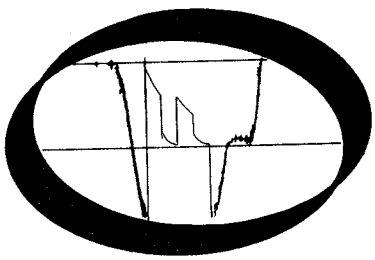
7/1/74 Well SI.

7/2/74 Well SI.

7/5/74 TD 5818' - PBTD 5726' - Ismay perfs: 5464-5476
Rig rel. 6-27-74
Comp. 6-26-74
SI Oil Well
IP 125 BOPD (39.6 @ 60°)
390 BWPD - Gas NETG
FINAL REPORT.

DST

Formation Testing Service Report

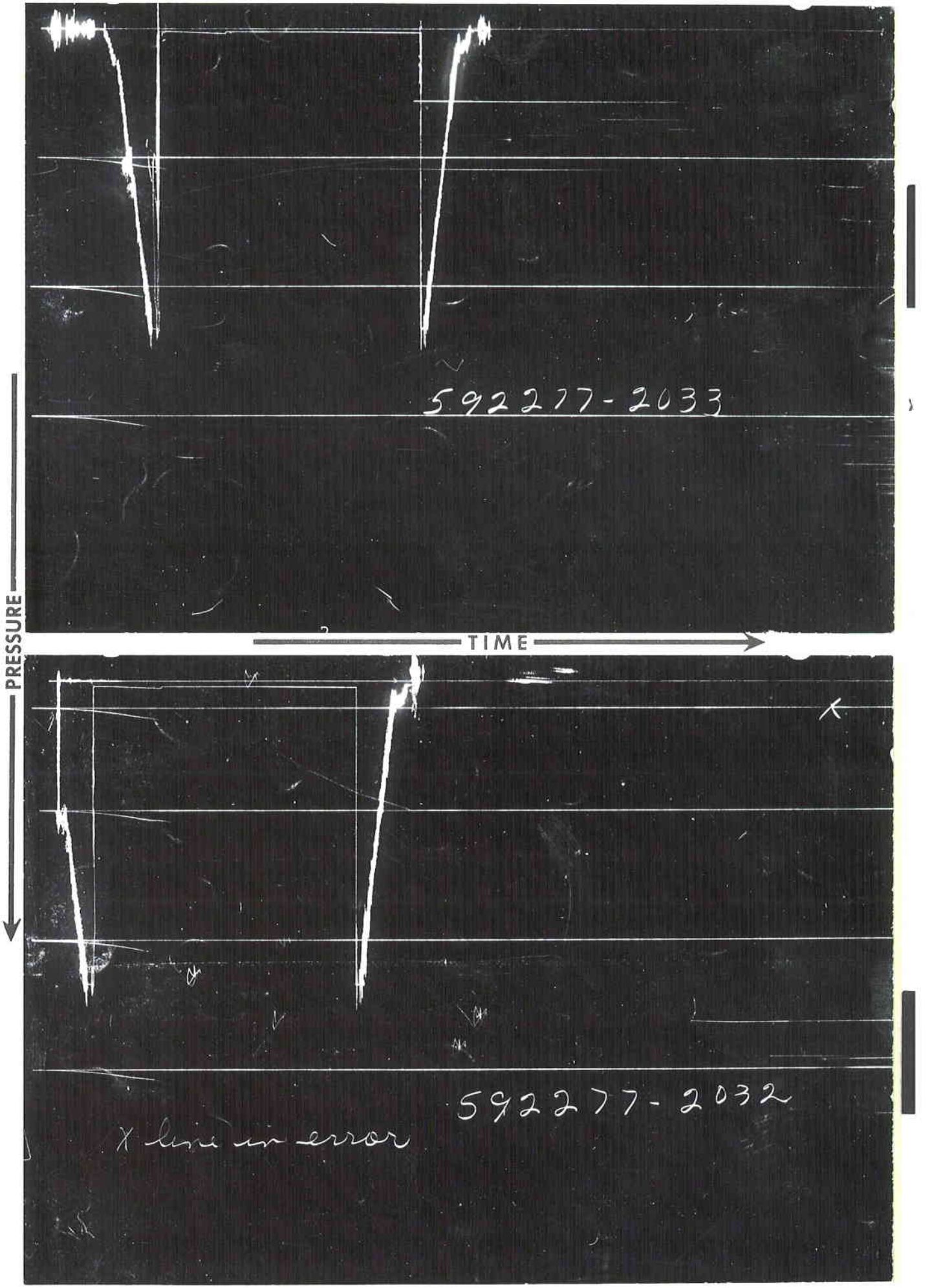


HALLIBURTON SERVICES

DUNCAN, OKLAHOMA

PATTERSON CANYON	1	1	4855'-4885'	MOUNTAIN FUEL SUPPLY COMPANY
Lease Name	Well No.	Test No.	Tested Interval	Lease Owner/Company Name

10



Each Horizontal Line Equal to 1000 p.s.i.

FLUID SAMPLE DATA

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud 2100
Tot. Liquid cc. _____
Gravity _____ ° API @ _____ °F.
Gas/Oil Ratio _____ cu. ft./bbl.

	RESISTIVITY		CHLORIDE CONTENT
Recovery Water	____ @ ____ °F.		____ ppm
Recovery Mud	.856 @ 68 °F.		____ ppm
Recovery Mud Filtrate	____ @ ____ °F.		____ ppm
Mud Pit Sample	1.170 @ 68 °F.		____ ppm
Mud Pit Sample Filtrate	____ @ ____ °F.		____ ppm

Mud Weight 8.9 vis 64 cp

Date 5-17-74 Ticket Number 592277
Kind of Job OPEN HOLE Halliburton District FARMINGTON
Tester MR. DAVIS Witness MR. JENKINS
Drilling Contractor LOFFLAND BROTHERS 223 DR

EQUIPMENT & HOLE DATA

Formation Tested Honaker Trail
Elevation - Ft.
Net Productive Interval 30' Ft.
All Depths Measured From Rotary Kelly Bushing
Total Depth 4885' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 561' I.D. 2½"
Drill Pipe Length 4287' I.D. 3.826"
Packer Depth(s) 4850-4855' Ft.
Depth Tester Valve 4841' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve
Surface Choke 3/4" Bottom Choke 3/4"

Recovered 3 Feet of drilling mud
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Mea. From Tester Valve

Remarks Opened tool for 30 minute first flow with a very weak blow, died in 30 minutes. Closed tool for 90 minute first closed in pressure. Reopened tool for 120 minute second flow with no blow. Closed tool for 225 minute second closed in pressure.

TEMPERATURE	Gauge No. 2033		Gauge No. 2032		Gauge No.		TIME	
	Depth: 4845 Ft.		Depth: 4881 Ft.		Depth: Ft.			
	24 Hour Clock		24 Hour Clock		Hour Clock		Tool Opened	A.M. 16:00 P.M.
Est. °F.	Blanked Off No		Blanked Off Yes		Blanked Off			
Actual 118 °F.	Pressures		Pressures		Pressures		Opened Bypass	A.M. 23:45 P.M.
	Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic	2328	2335	2349	2359				
First Period Flow Initial	40	24	53	48			—	—
First Period Flow Final	40	24	53	48			30	
First Period Closed in	53	39	66	56			90	
Second Period Flow Initial	40	28	53	49			—	—
Second Period Flow Final	40	28	53	49			120	
Second Period Closed in	53	31	66	49			225	
Third Period Flow Initial							—	—
Third Period Flow Final								
Third Period Closed in								
Final Hydrostatic	2328	2319	2349	2350			—	—

Legal Location Sec. - Twp. - Rng.
Lease Name PATTERSON CANYON
Well No. 1
Test No. 1
Field Area WILDCAT
Tested Interval 4855'-4885'
County SAN JUAN
State UTAH
Lease Owner/Company Name MOUNTAIN FUEL SUPPLY COMPANY

FORM 181—PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S 93974 5M 8/73

10

TICKET NO. 592277

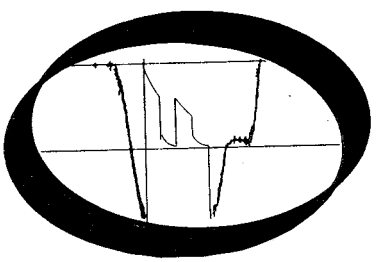
	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub				
Water Cushion Valve				
Drill Pipe	4½"	3.826"	4287'	
Drill Collars	6½"	2½"	561'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler	5"		7'	
Hydro-Spring Tester	5"	.75"	4'	4841'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"		4'	4845'
Hydraulic Jar	5"	1"	5'	
VR Safety Joint	5"	1"	2'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1.3"	5'	4850'
Distributor				
Packer Assembly	6 3/4"	1.3"	5'	4855'
Flush Joint Anchor	5 3/4"	2½"	26'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor				
Blanked-Off B.T. Running Case	3 3/4"		4'	4881'
Total Depth				

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
D.R.	= Damage Ratio	——
El	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot (Psi^2/cycle Gas)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_F	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	——
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.

Formation Testing Service Report



HALLIBURTON SERVICES
DUNCAN, OKLAHOMA

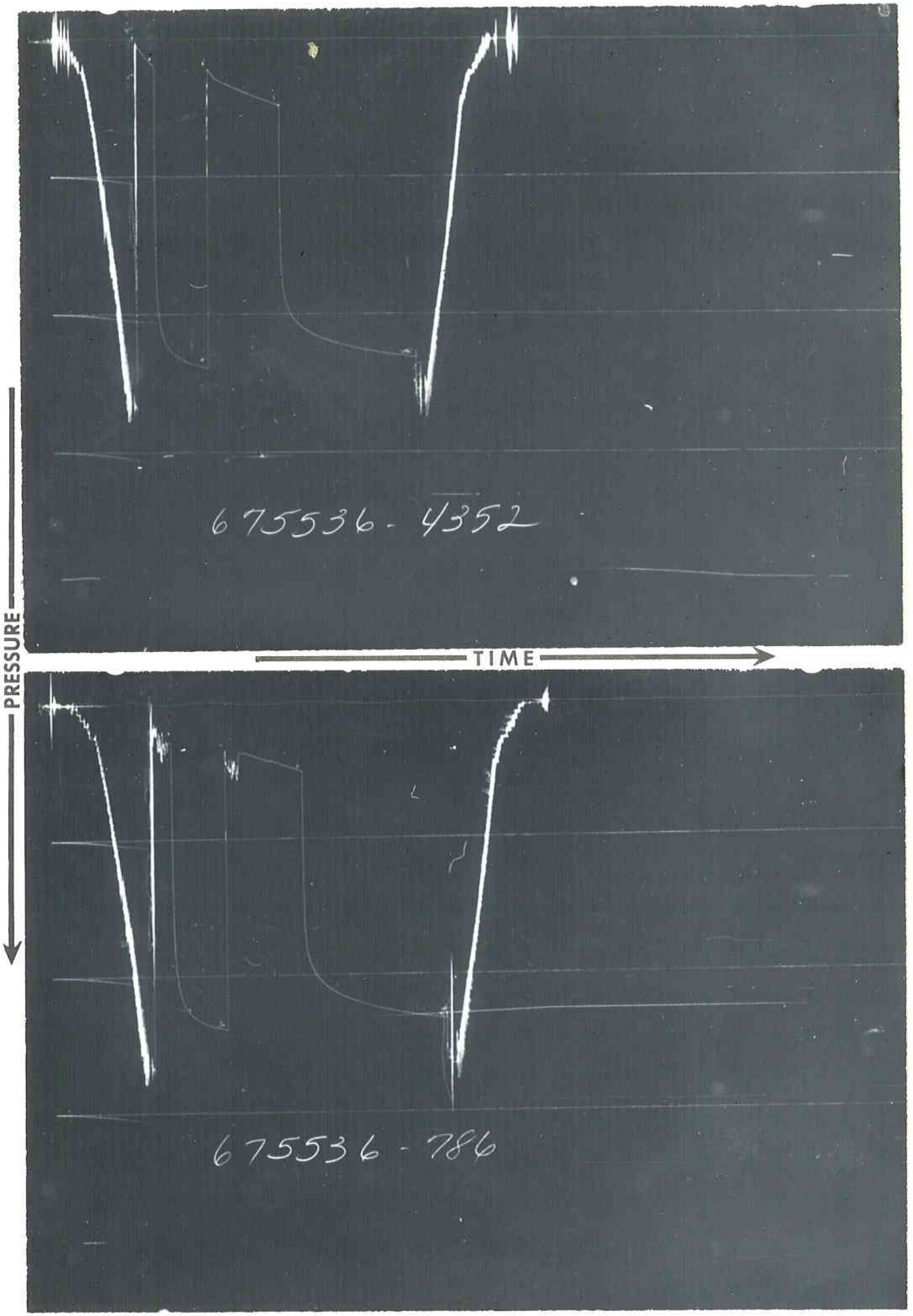
PATTERSON CANYON
Lease Name

1
Well No.

4
Test No.

5513 - 5529'
Tested Interval

MOUNTAIN FUEL SUPPLY COMPANY
Lease Owner/Company Name



Each Horizontal Line Equal to 1000 p.s.i.

FLUID SAMPLE DATA

Sampler Pressure 25 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas
cc. Oil
cc. Water 1650
cc. Mud
Tot. Liquid cc. 1650
Gravity ° API @ °F.
Gas/Oil Ratio cu. ft./bbl.

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	.058	@ 68	°F.	ppm
Recovery Mud		@	°F.	ppm
Recovery Mud Filtrate		@	°F.	ppm
Mud Pit Sample	.60	@ 68	°F.	ppm
Mud Pit Sample Filtrate		@	°F.	ppm

Mud Weight 9.1 vis 66 cp

Date 5-24-74 Ticket Number 675536
Kind of Job OPEN HOLE Halliburton District FARMINGTON
Tester G.K. SMITH Witness R. JENKINS
Drilling Contractor LOFFLAND BROTHERS DRILLING COMPANY SM 5

EQUIPMENT & HOLE DATA

Formation Tested Upper Ismay
Elevation 5233' Ft.
Net Productive Interval 8' Ft.
All Depths Measured From Rotary Kelly bushing
Total Depth 5529' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 561' I.D. 2 1/2"
Drill Pipe Length 4911' I.D. 3.826"
Packer Depth(s) 5507-5513' Ft.
Depth Tester Valve 5491' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve
Surface Choke 2" valve Bottom Choke 3/4"

Recovered 931' Feet of muddy salt water
Recovered 30 Feet of very slight gas cut mud
Recovered Feet of
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks Tool opened for 31 minute first flow period with a weak blow which increased to good. Closed tool for 87 minute first closed in pressure period. Tool re-opened for 120 minute second flow period with no blow - very weak blow in 2 minutes and then increased to a good blow in 30 minutes. Closed tool for 227 minute second closed in pressure period.

TEMPERATURE	Gauge No. 4352 Depth: 5495 Ft.		Gauge No. 786 Depth: 5525 Ft.		Gauge No. Depth: Ft.		TIME
	24 Hour Clock		24 Hour Clock		Hour Clock		Tool Opened A.M. 0600 P.M.
Est. °F.	Blanked Off no		Blanked Off		Blanked Off		Opened A.M.
Actual 126 °F.	Pressures		Pressures		Pressures		Bypass P.M. 1345
	Field	Office	Field	Office	Field	Office	Reported Minutes / Computed Minutes
Initial Hydrostatic	2614	2651	2638	2657			
First Period Flow Initial	27	41	137	193			— / —
First Period Flow Final	189	211	273	292			32 / 31
First Period Closed in	2375	2395	2399	2401			88 / 87
Second Period Flow Initial	189	223	328	352			— / —
Second Period Flow Final	487	491	519	510			120 / 120
Second Period Closed in	2296	2320	2319	2331			225 / 227
Third Period Flow Initial							— / —
Third Period Flow Final							
Third Period Closed in							
Final Hydrostatic	2534	2609	2638	2615			— / —

Legal Location Sec. - Twp. - Rng.: 9 38 S 25 E
Lease Name: PATTERSON CANYON
Well No.: 1
Test No.: 4
Tested Interval: 5513 - 5529'
Field Area: WILDCAT
County: SAN JUAN
State: UTAH
Lease Owner/Company Name: MOUNTAIN FUEL SUPPLY COMPANY

Gauge No.	4352	Depth	5495'	Clock No.	12118	24 hour	Ticket No.	675536

	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0	.0000	41	.0000		211	.0000	223	.0000		491					
1	.0201*	76	.0233**		2084	.0668	309	.0565***		2001					
2	.0369	107	.0499		2207	.1336	351	.1063		2085					
3	.0537	139	.0765		2265	.2004	391	.1561		2131					
4	.0705	162	.1031		2300	.2672	426	.2059		2164					
5	.0873	189	.1297		2325	.3340	458	.2557		2191					
6	.1040	211	.1563		2344	.4010	491	.3055		2212					
7			.1829		2357			.3553		2231					
8			.2095		2370			.4051		2247					
9			.2361		2379			.4549		2260					
10			.2627		2387			.5047		2273					
11			.2890		2395			.5545		2285					
12								.6043		2294					
13								.6541		2304					
14								.7039		2313					
15								.7540		2320					

Gauge No.	786	Depth	5525'	Clock No.	1768	24 hour						
0	.0000	193	.0000		292	.0000	352	.0000		510					
1	.1060	292	.0235**		2073	.0717	P	.0588***		1993					
2			.0504		2209	.1434	385	.1107		2076					
3	Plugging		.0773		2268	.2151	422	.1626		2128					
4			.1042		2304	.2868	446	.2145		2163					
5			.1311		2328	.3585	478	.2664		2192					
6			.1580		2349	.4300	510	.3183		2215					
7			.1849		2365			.3702		2236					
8			.2118		2376			.4221		2252					
9			.2387		2385			.4740		2269					
10			.2656		2395			.5259		2281					
11			.2920		2401			.5778		2295					
12								.6297		2304					
13								.6816		2315					
14								.7335		2323					
15								.7850		2331					
Reading Interval	5		8			20		15							Minutes

REMARKS: *First interv d is equal to 6 minutes. ** = 7 minutes. *** = 17 minutes. P = plugging

TICKET NO. 675536

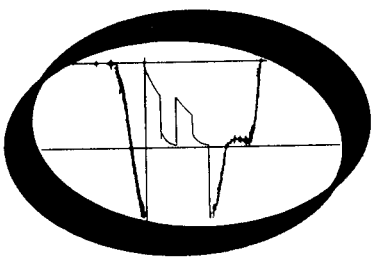
	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	6"	3"	1'	
Water Cushion Valve				
Drill Pipe	4½"	3.826"	4911'	
Drill Collars	6"	2 1/2"	561'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler	5"	3/4"	7'	
Hydro-Spring Tester	5"	3/4"	5'	5491'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"		4'	5495'
Hydraulic Jar	5"	1"	6'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1½"	6'	5507'
Distributor				
Packer Assembly	6 3/4"	1½"	6'	5513'
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor	5 3/4"	2½"	10'	
Blanked-Off B.T. Running Case	5 3/4"	2½"	5'	5525'
Total Depth				

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
D.R.	= Damage Ratio	——
El	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot (Psi^2/cycle Gas)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_F	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water *)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	——
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.

Formation Testing Service Report



HALLIBURTON SERVICES

DUNCAN, OKLAHOMA

PATTERSON CANYON	1	5	5555-5665'	MOUNTAIN FUEL SUPPLY COMPANY
Lease Name	Well No.	Test No.	Tested Interval	Lease Owner/Company Name

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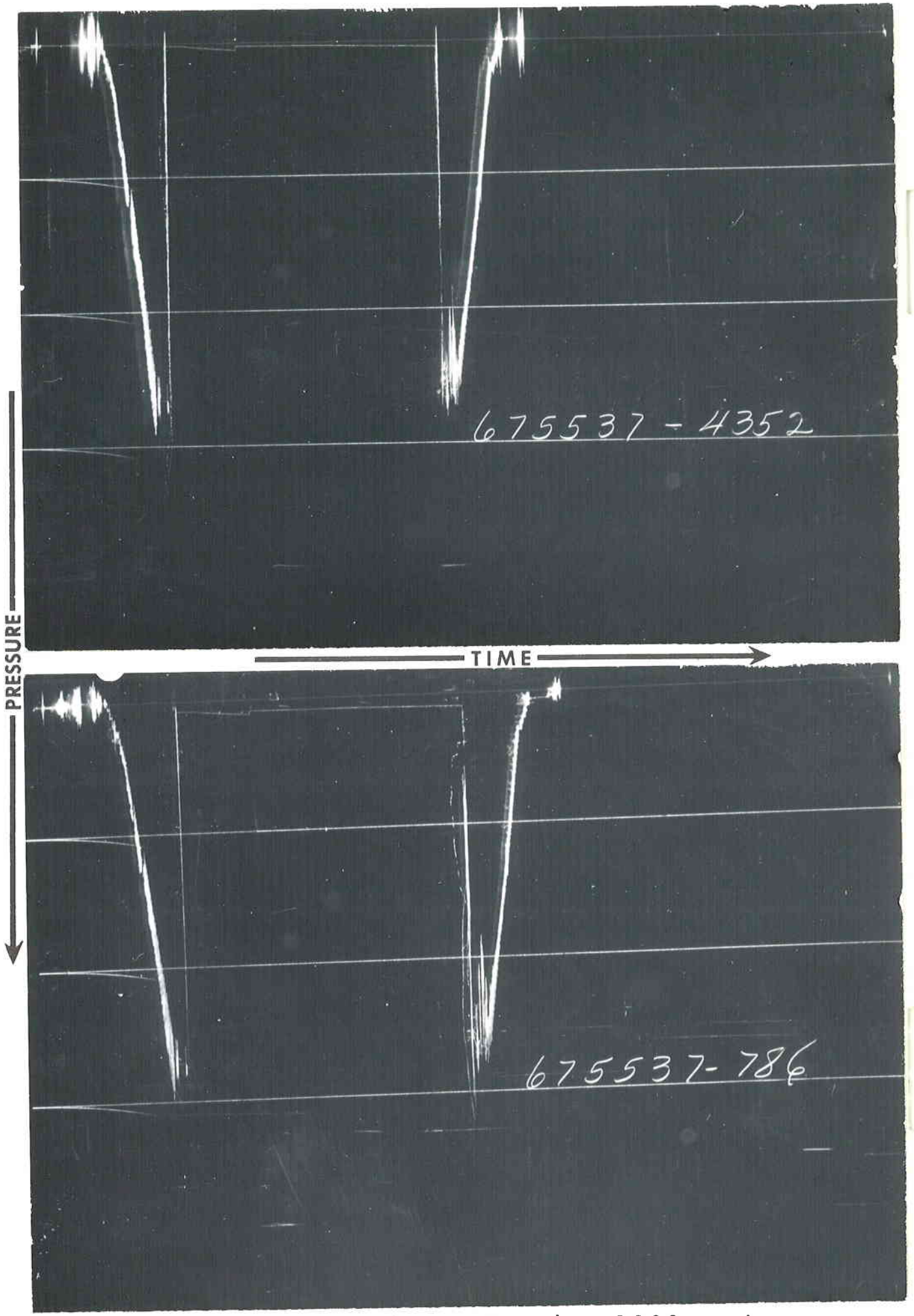


Each Horizontal Line Equal to 1000 p.s.i.

FLUID SAMPLE DATA

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud 2150
Tot. Liquid cc. 2150
Gravity _____ ° API @ _____ °F.
Gas/Oil Ratio _____ cu. ft./bbl.

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	____	@ ____	°F.	____ ppm
Recovery Mud	.70	@ 68	°F.	____ ppm
Recovery Mud Filtrate	____	@ ____	°F.	____ ppm
Mud Pit Sample	.72	@ 88	°F.	____ ppm
Mud Pit Sample Filtrate	____	@ ____	°F.	____ ppm

Mud Weight 9.1 vis 61 cp

Date 5-26-74 Ticket Number 675537
Kind of Job OPEN HOLE Halliburton District FARMINGTON
Tester MR. SMITH Witness MR. JENKINS
Drilling Contractor LOFFLAND BROTHERS DRILLING COMPANY DR

EQUIPMENT & HOLE DATA

Formation Tested Lower Ismay
Elevation 5233' Ft.
Net Productive Interval 6' Ft.
All Depths Measured From Rotary Kelly Bushing
Total Depth 5665' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 496' I.D. 2½"
Drill Pipe Length 5043' I.D. 3.826"
Packer Depth(s) 5549'-5555' Ft.
Depth Tester Valve 5533' Ft.

Cushion TYPE AMOUNT ____ Ft. Depth Back Pres. Valve ____ Surface Choke 2" Valve Bottom Choke 3/4"

Recovered 9 Feet of very slight gas cut mud
Recovered ____ Feet of ____
Recovered ____ Feet of ____
Recovered ____ Feet of ____
Recovered ____ Feet of ____

MAILED
JUN 6 1974
Halliburton Company
Duncan, Oklahoma

Remarks Opened tool for 30 minute first flow with a very weak blow. Closed tool for 90 minute first closed in pressure. Reopened tool for 138 minute second flow with no blow. Closed tool for 207 minute second closed in pressure.

TEMPERATURE	Gauge No. 4352 Depth: 5537 Ft.	Gauge No. 786 Depth: 5661 Ft.	Gauge No. Depth: Ft.	TIME
Est. °F.	24 Hour Clock	24 Hour Clock	Hour Clock	Tool Opened A.M. 09:00 P.M.
Actual 126 °F.	Blanked Off No	Blanked Off Yes	Blanked Off	Opened Bypass A.M. 16:45 P.M.

		Pressures Field	Pressures Office	Pressures Field	Pressures Office	Pressures Field	Pressures Office	Reported Minutes	Computed Minutes
Initial Hydrostatic		2640.5	2666	2691.4	2731				
First Period	Flow Initial	13.6	19	54.7	91			____	____
	Flow Final	13.6	19	54.7	91			30	
	Closed in	54.1	55	109.3	131			90	
Second Period	Flow Initial	13.6	30	82.0	105			____	____
	Flow Final	13.6	30	82.0	105			138	
	Closed in	27.1	45	82.0	116			207	
Third Period	Flow Initial							____	____
	Flow Final								
	Closed in								
Final Hydrostatic		2640.5	2666	2638.2	2731			____	____

PATTERSON CANYON Lease Name | Legal Location Sec. - Twp. - Rng. 9-38S-25E | 1 Well No. | 5 Test No. | 5555-5665' Tested Interval | MOUNTAIN FUEL SUPPLY COMPANY Lease Owner/Company Name

Field Area WILDCAT | Meas. From Tester Valve | County SAN JUAN | State UTAH

FORM 181—PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S 93074 5M 8/73

10

TICKET NO. 675537

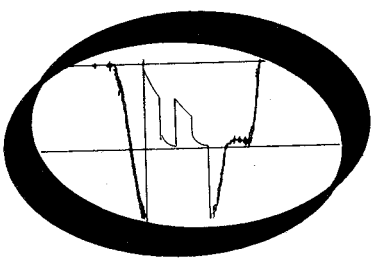
	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	6"	3"	1'	
Water Cushion Valve				
Drill Pipe	4½"	3.826"	5843'	
Drill Collars	6"	2½"	496'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler	5"	3/4"	7'	
Hydro-Spring Tester	5"	3/4"	5'	5533'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"		4'	5537'
Hydraulic Jar	5"	1"	6'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	5 3/4"	1½"	6'	5549'
Distributor				
Packer Assembly	6 3/4"	1½"	6'	5555'
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars	6"	2½"	65'	
Flush Joint Anchor	5 3/4"	2½"	35'	
Blanked-Off B.T. Running Case	5 3/4"		5'	5661'
Total Depth				

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
D.R.	= Damage Ratio	——
El	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot (Psi^2/cycle Gas)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_F	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	——
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

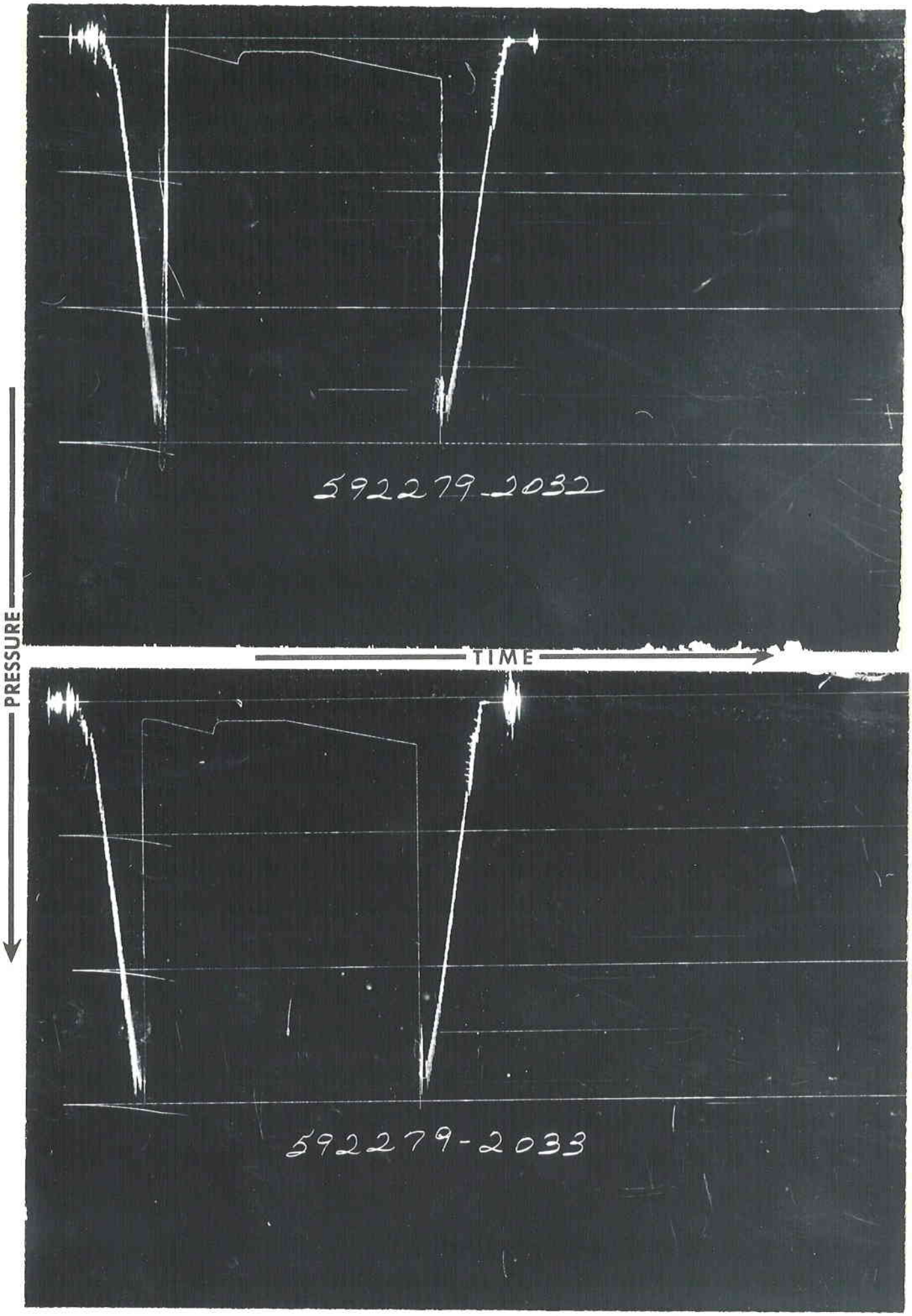
* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.

Formation Testing Service Report



HALLIBURTON SERVICES
DUNCAN, OKLAHOMA

PATTERSON CANYON	1	6	5687' - 5743'	MOUNTAIN FUEL SUPPLY COMPANY
Lease Name	Well No.	Test No.	Tested Interval	Lease Owner/Company Name



Each Horizontal Line Equal to 1000 p.s.i.

FLUID SAMPLE DATA

Sampler Pressure 40 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas .07
cc. Oil
cc. Water
cc. Mud 2150
Tot. Liquid cc. 2150
Gravity ° API @ °F.
Gas/Oil Ratio cu. ft./bbl.

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water		@	°F.	ppm
Recovery Mud	.854	@ 88	°F.	ppm
Recovery Mud Filtrate		@	°F.	ppm
Mud Pit Sample	.824	@ 86	°F.	ppm
Mud Pit Sample Filtrate		@	°F.	ppm

Mud Weight 9.0 vis 50 cp

Date 5-27-74 Ticket Number 592279
Kind of Job OPEN HOLE Halliburton District FARMINGTON
Tester MR. DAVIS Witness MR. JENKINS
Drilling Contractor LOFFLAND BROTHERS DRILLING COMPANY

EQUIPMENT & HOLE DATA IC

Formation Tested Desert Creek
Elevation 5233' Ft.
Net Productive Interval 56' Ft.
All Depths Measured From Rotary Kelly Bushing
Total Depth 5743' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 528' I.D. 2.50"
Drill Pipe Length 5222' I.D. 3.826"
Packer Depth(s) 5687' - 5682' Ft.
Depth Tester Valve 5657' Ft.

Cushion TYPE - AMOUNT - Ft. Depth Back Pres. Valve - Surface Choke 1/4" Bottom Choke 3/4"

Recovered 95 Feet of Slightly gas cut mud
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks Opened tool for 30 minute first flow with a good blow decreasing to weak blow in 30 minutes. Closed tool for 90 minute initial closed in pressure. Reopened tool for 120 minute second flow with a good blow decreasing to weak in 75 minutes. Closed tool for 225 minute second closed in pressure.

TEMPERATURE	Gauge No. 2032 Depth: 5661' Ft.		Gauge No. 2033 Depth: 5739' Ft.		Gauge No. Depth: Ft.		TIME	
	24 Hour Clock		24 Hour Clock		Hour Clock		Tool Opened	A.M. 22:45 P.M.
Est. °F.	Blanked Off NO		Blanked Off YES		Blanked Off		Opened Bypass	A.M. 06:30 P.M.
Actual 120 °F.	Pressures		Pressures		Pressures		Reported Minutes	Computed Minutes
	Field	Office	Field	Office	Field	Office		
Initial Hydrostatic	2770	2764	2803	2825				
First Period Flow Initial	106	76	160	133			—	—
First Period Flow Final	106	88	160	149			30	
First Period Closed in	212	191	240	251			90	
Second Period Flow Initial	106	145	160	168			—	—
Second Period Flow Final	106	99	160	156			120	
Second Period Closed in	292	296	346	351			225	
Third Period Flow Initial							—	—
Third Period Flow Final								
Third Period Closed in								
Final Hydrostatic	2770	2764	2803	2825			—	—

Legal Location Sec. - Twp. - Rng. ---
Lease Name PATTERSON CANYON
Well No. 1
Test No. 6
Tested Interval 5687' - 5743'
Field Area WILDCAT
County SAN JUAN
State UTAH
Lease Owner/Company Name MOUNTAIN FUEL SUPPLY COMPANY

FORM 181—PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S 93974 8M 8/73

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TICKET NO. 592279

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub				
Water Cushion Valve				
Drill Pipe	4 1/2"	3.826"	5222'	
Drill Collars	6 1/2"	2.50"	528'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler	5"		7'	
Hydro-Spring Tester	5"	.75"	4'	5657'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"		4'	5661'
Hydraulic Jar	5"	1"	5'	
VR Safety Joint	5"	1"	2'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1.3"	5'	5682'
Distributor				
Packer Assembly	6 3/4"	1.3"	5'	5687'
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars	6 1/2"	2.50"	36'	
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor	5 3/4"	2 1/2"	16'	
Blanked-Off B.T. Running Case			4'	5739'
Total Depth				5743'

FORM 107—PRINTED IN U.S.A.

EQUIPMENT DATA

LITTLE'S

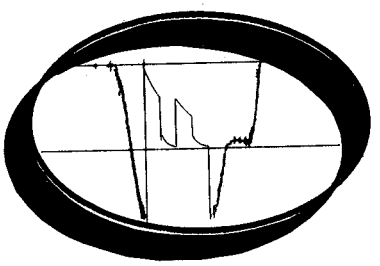
NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
D.R.	= Damage Ratio	——
El	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot (Psi^2/cycle Gas)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_F	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	——
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

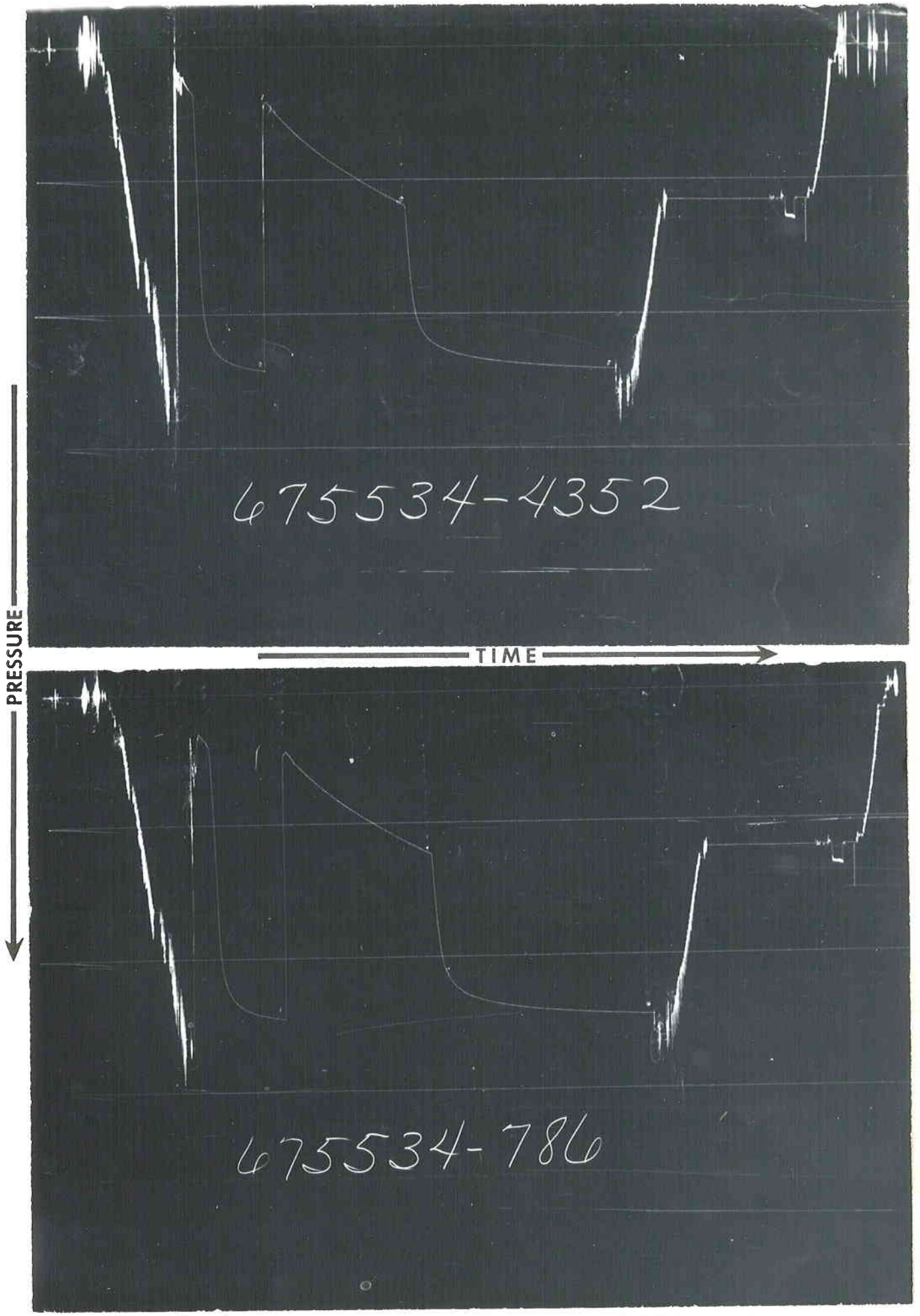
* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.

Formation Testing Service Report

PATTERSON CANYON	1	2	5430' - 5504'	MOUNTAIN FUEL SUPPLY COMPANY
Lease Name	Well No.	Test No.	Tested Interval	Lease Owner/Company Name



HALLIBURTON SERVICES
DUNCAN, OKLAHOMA



Each Horizontal Line Equal to 1000 p.s.i.

FLUID SAMPLE DATA

Sampler Pressure 1500 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas .023
cc. Oil 350 Oil
cc. Water 1800 Salt water
cc. Mud -
Tot. Liquid cc. 2150
Gravity ____ ° API @ ____ °F.
Gas/Oil Ratio ____ cu. ft./bbl.

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	.66	@ 68	°F.	____ ppm
Recovery Mud	46	@ 68	°F.	____ ppm
Recovery Mud Filtrate	____	@ ____	°F.	____ ppm
Mud Pit Sample	1.12	@ 68	°F.	____ ppm
Mud Pit Sample Filtrate	____	@ ____	°F.	____ ppm

Mud Weight 9.1 vis 78 cp

Date 5-23-74 Ticket Number 675534
Kind of Job OPEN HOLE Halliburton District FARMINGTON
Tester MR. SMITH Witness MR. JENKINS
Drilling Contractor LOFFLAND BROTHERS DRILLING COMPANY

EQUIPMENT & HOLE DATA

Formation Tested Upper Ismay
Elevation 5233' Ft.
Net Productive Interval 27' Ft.
All Depths Measured From Rotary Kelly Bushing
Total Depth 5504' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 528' I.D. 2½"
Drill Pipe Length 4865' I.D. 3.826"
Packer Depth(s) 5424' - 5430' Ft.
Depth Tester Valve 5408' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 1" Valve Bottom Choke 3/4"

Recovered 93 Feet of Gas cut mud
Recovered 120 Feet of Free oil
Recovered 2391 Feet of Salt water
Recovered Feet of
Recovered Feet of

Mea. From Tester Valve

Remarks Tool opened for a 30 minute first flow with a fair blow, increasing to a good blow in one minute. Gas to surface in 30 minutes. Closed tool for 118 minute first closed in pressure. Reopened tool for 243 minute second flow with a good blow. Opened to flow line on ½" choke. See production test data sheet.....Closed tool for 359 minute second closed in pressure.

TEMPERATURE	Gauge No. 4352 Depth: 5412' Ft.		Gauge No. 786 Depth: 5500' Ft.		Gauge No. Depth: Ft.		TIME	
	24 Hour Clock		13 Hour Clock		Hour Clock		Tool Opened	~~A.M.~~ 1250 P.M.
Est. °F.	Blanked Off No		Blanked Off Yes		Blanked Off		Opened	A.M.
Actual 138 °F.	Pressures		Pressures		Pressures		Bypass 0120	~~P.M.~~
	Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic	2588	2607	2638	2645				
First Period Flow Initial	243	155	301	322			—	—
First Period Flow Final	351	364	410	408			30	30
First Period Closed in	1073	2423	2425	2459			120	118
Second Period Flow Initial	406	415	437	448			—	—
Second Period Flow Final	1180	1197	1221	1235			240	243
Second Period Closed in	2402	2415	2426	2453			360	359
Third Period Flow Initial							—	—
Third Period Flow Final								
Third Period Closed in								
Final Hydrostatic	2561	2573	2585	2614			—	—

Legal Location Sec. - Twp. - Rng. 9 - 38S - 25E
Lease Name PATTERSON CANYON
Well No. 1
Test No. 2
Tested Interval 5430' - 5504'
Field Area WILDCAT
County SAN JUAN
State UTAH
Lease Owner/Company Name MOUNTAIN FUEL SUPPLY COMPANY

Casing perfs.____ Bottom choke____ Surf. temp____ °F Ticket No. 675534

Gas gravity____ Oil gravity____ GOR____

Spec. gravity____ Chlorides____ ppm Res.____ @____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED____

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
1521	½"	No	Too small to measure	No	
1527	3/8"	"	"	"	
1533					Closed to bubble hose to get gas sample
1536	"	"	"	"	
1550	"	"	"	"	
1605	"	"	"	"	
1620	"	"	"	"	
1635	"	"	"	"	
1650	"	"	"	"	
1705	"	"	"	"	
1720	"	"	"	"	
1735	"	"	"	"	
1740					Opened to 2" flow line
1920					Closed tool
0120					Trip out with 30 stands and waited on daylight

Gauge No.	4352		Depth	5412'		Clock No.	12418		24 hour	Ticket No.	675534			
	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0	.0000	155	.0000		364	.0000	415	.0000		1197					
1	.0168	297 GS	.0335		1509*	.1426	600**	.0768		2076***					
2	.0337	227	.0737		2151	.2753	757	.1568		2219					
3	.0505	254	.1139		2268	.4080	888	.2368		2275					
4	.0674	301	.1541		2326	.5407	1001	.3168		2309					
5	.0842	332	.1943		2358	.6734	1104	.3968		2332					
6	.1010	364	.2345		2381	.8060	1197	.4768		2347					
7			.2747		2395			.5568		2361					
8			.3149		2407			.6368		2371					
9			.3551		2416			.7168		2381					
10			.3950		2423			.7968		2389					
11								.8768		2395					
12								.9568		2401					
13								1.0368		2406					
14								1.1168		2410					
15								1.1970		2415					

Gauge No.	786		Depth	5500'		Clock No.	1768		24 hour					
0	.0000	322	.0000		408	.0000	448	.0000		1235					
1	.0177	654 GS	.0348		1582*	.1501	640**	.0805		2125***					
2	.0353	374	.0766		2192	.2897	798	.1645		2259					
3	.0530	309	.1184		2308	.4293	928	.2485		2316					
4	.0707	340	.1602		2361	.5689	1043	.3325		2348					
5	.0884	376	.2020		2393	.7085	1146	.4165		2368					
6	.1060	408	.2438		2415	.8480	1235	.5005		2387					
7			.2856		2431			.5845		2400					
8			.3274		2441			.6685		2411					
9			.3692		2452			.7525		2420					
10			.4110		2459			.8365		2428					
11								.9205		2435					
12								1.0045		2440					
13								1.0885		2444					
14								1.1725		2449					
15								1.2570		2453					
Reading Interval	5		12			40		24							Minutes

REMARKS: *Interval = 10 minutes **Interval = 43 minutes ***Interval = 23 minutes
GS = Gas to surface

01

TICKET NO. 675534

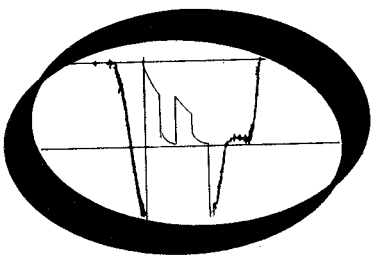
	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	6"	3"	1'	
Water Cushion Valve				
Drill Pipe	4½"	3.826"	4865'	
Drill Collars	6¼"	2½"	528'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler	5"	-	7'	
Hydro-Spring Tester	5"	-	5'	5408'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	-	4'	5412'
Hydraulic Jar	5"	1"	6'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1½"	6'	5424'
Distributor				
Packer Assembly	6 3/4"	1½"	6'	5430'
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars	6¼"	2½"	33'	
Flush Joint Anchor	5 3/4"	2½"	32'	
Blanked-Off B.T. Running Case	5 3/4"	-	5'	5500'
Total Depth				5504'

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
D.R.	= Damage Ratio	——
El	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot (Psi^2/cycle Gas)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_s	= Extrapolated Static Pressure	Psig.
P_F	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	——
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

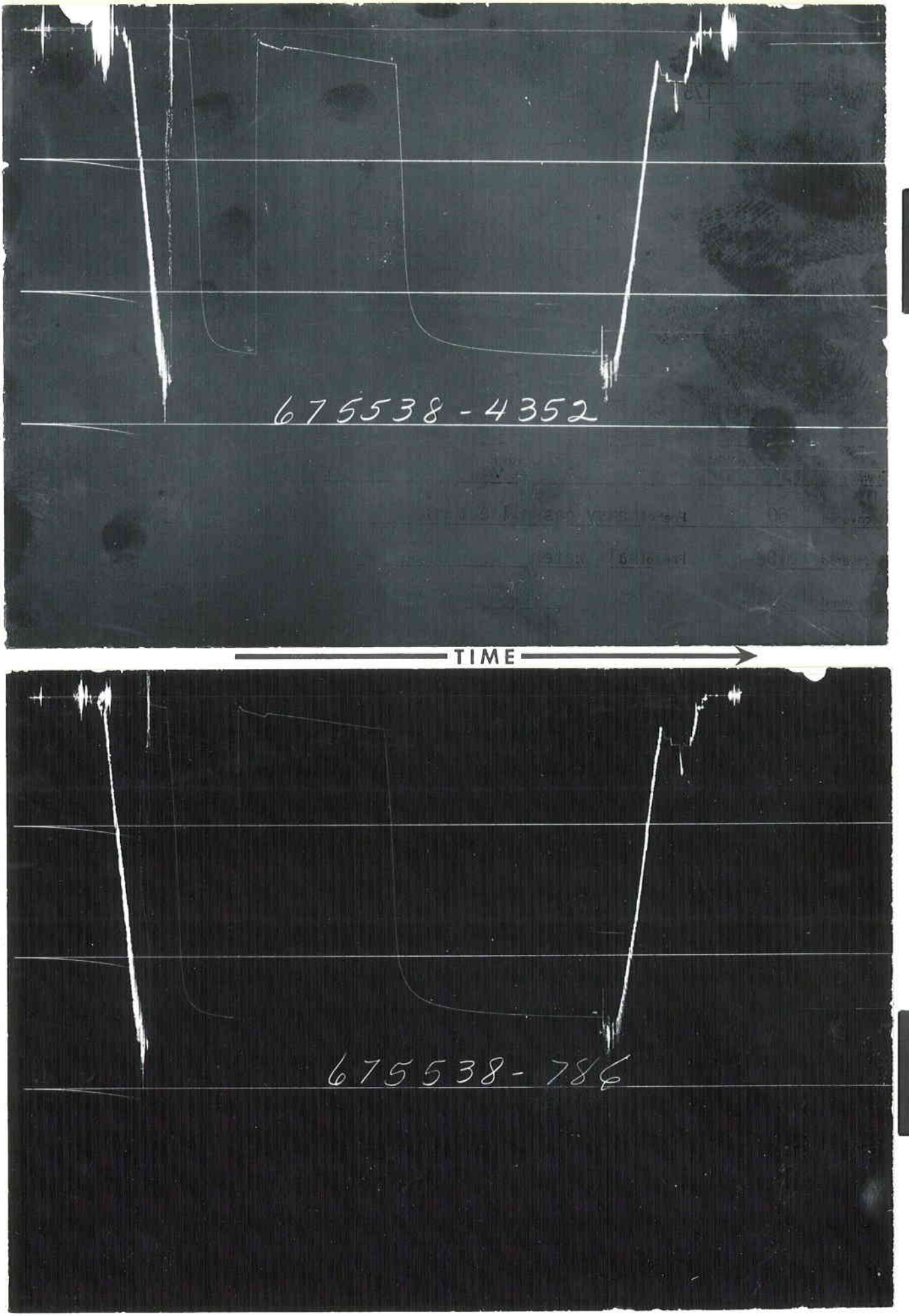
* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.

Formation Testing Service Report



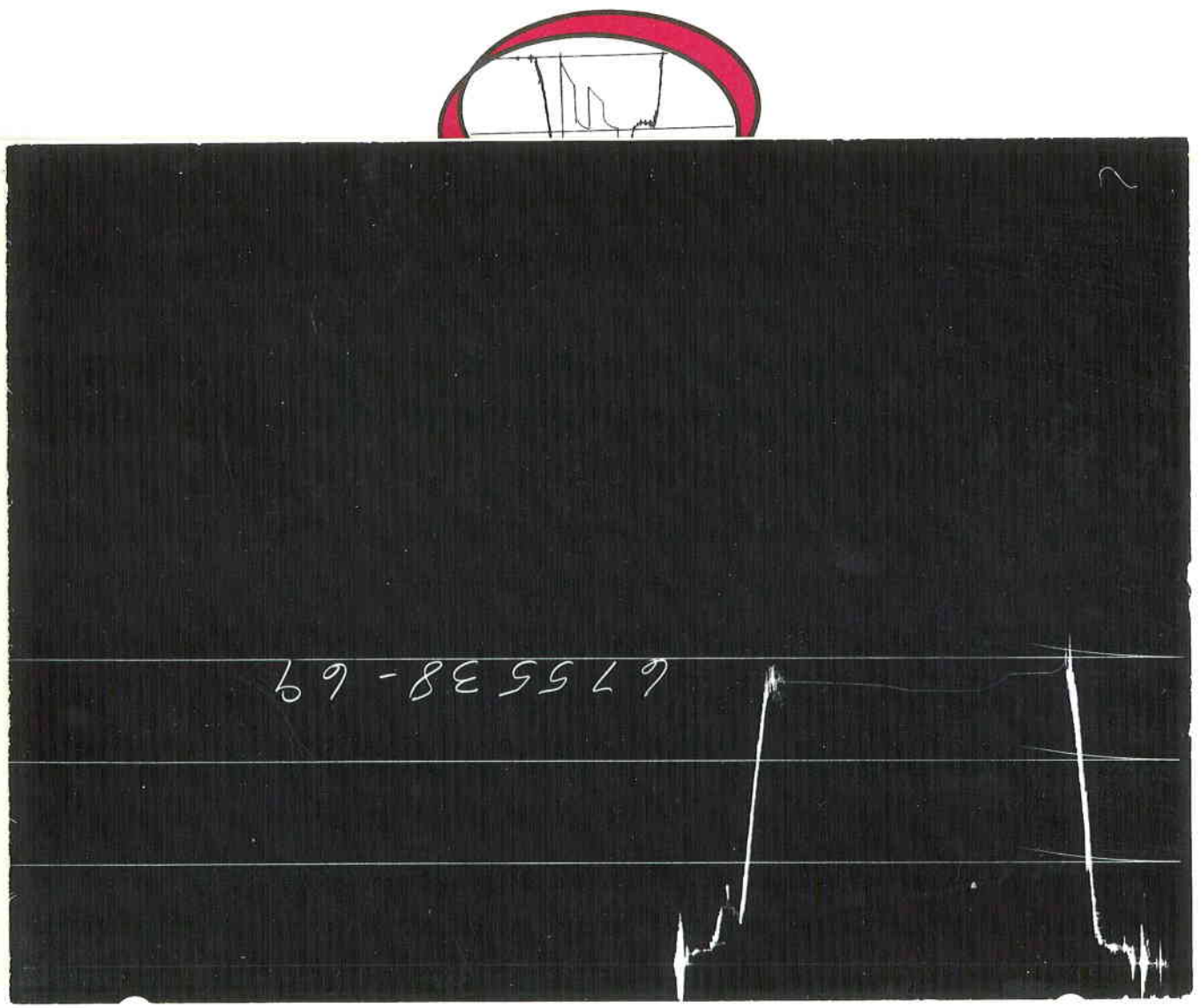
HALLIBURTON SERVICES
DUNCAN, OKLAHOMA

PATTERSON CANYON	1	7	5460'-5480'	MOUNTAIN FUEL SUPPLY COMPANY
Lease Name	Well No.	Test No.	Tested Interval	Lease Owner/Company Name



Each Horizontal Line Equal to 1000 p.s.i.

Formation Testing Service Report



FLUID SAMPLE DATA

Sampler Pressure 175 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas 1
cc. Oil 75% Oil
cc. Water 25% water
cc. Mud
Tot. Liquid cc. 1050
Gravity 41 ° API @ 78 °F.
Gas/Oil Ratio cu. ft./bbl.

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	.067	@ 68	°F.	ppm
Recovery Mud	.154	@ 68	°F.	ppm
Recovery Mud Filtrate		@	°F.	ppm
Mud Pit Sample	.603	@ 68	°F.	ppm
Mud Pit Sample Filtrate		@	°F.	ppm

Mud Weight 9.1 vis 64 cp

Date 5-31-74 Ticket Number 675538
Kind of Job STRADDLE OPEN HOLE Halliburton District FARMINGTON
Tester MR. SMITH Witness MR. JENKINS
Drilling Contractor LOFFLAND BROTHERS DR S

EQUIPMENT & HOLE DATA

Formation Tested Upper Ismay
Elevation 5233' Ft.
Net Productive Interval 16' Ft.
All Depths Measured From Rotary Kelly Bushing
Total Depth 5818' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 250' I.D. 2½"
Drill Pipe Length 5173' I.D. 3.826"
Packer Depth(s) 5454'-5460-5480' Ft.
Depth Tester Valve 5438' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve
Surface Choke 2" Valve Bottom Choke 3/4"

Recovered 60 Feet of heavy gas-oil cut mud
Recovered 100 Feet of salt water
Recovered 597 Feet of oil
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks Opened tool for 30 minute first flow with a weak blow increasing to a good blow. Closed tool for 118 minute first closed in pressure. Reopened tool for 243 minute second flow with a good blow, gas to surface. Opened to flow line on 3/8" choke. Closed tool for 259 minute second closed in pressure.

SEE PRODUCTION TEST DATA SHEET

TEMPERATURE	Gauge No. 4352 Depth: 5442 Ft.	Gauge No. 786 Depth: 5470 Ft.	Gauge No. 69 Depth: 5814 Ft.	TIME
	24 Hour Clock	24 Hour Clock	48 Hour Clock	Tool Opened 16:20 A.M. P.M.
Est. °F.	Blanked Off No	Blanked Off Yes	Blanked Off Yes	Opened A.M.
Actual 132 °F.	Pressures	Pressures	Pressures	Bypass 04:50 P.M.

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic		2561.6	2633	2611.6	2638		2855		
First Period	Flow Initial	27.1	20	27.4	29			——	——
	Flow Final	81.1	88	82.0	85			30	30
	Closed in	2454.9	2472	245.9	2472	HYDROSTATIC		120	118
Second Period	Flow Initial	81.1	82	2457.3	78	RELEASE:	2779	——	——
	Flow Final	243.3	264	-	262			240	243
	Closed in	2454.9	2473	-	2472			360	259
Third Period	Flow Initial							——	——
	Flow Final								
	Closed in								
Final Hydrostatic		2561.0	2633	2611.6	2638			——	——

Legal Location Sec. - Twp. - Rng. 9-38S-25E
Lease Name PATTERSON CANYON
Well No. 1
Test No. 7
Tested Interval 5460'-5480'
Field Area WILDCAT
County SAN JUAN
State UTAH
Lease Owner/Company Name MOUNTAIN FUEL SUPPLY COMPANY

FORM 181—PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S 98974 8M 8/73

(10)

Casing perfs. _____ Bottom choke _____ Surf. temp _____ °F Ticket No. 675538

Gas gravity _____ Oil gravity 41-78° GOR _____

Spec. gravity _____ Chlorides _____ ppm Res. _____ @ _____ °F

INDICATE TYPE AND SIZE OF GAS MEASURING DEVICE USED _____

Date Time a.m. p.m.	Choke Size	Surface Pressure psi	Gas Rate MCF	Liquid Rate BPD	Remarks
20:05	3/8"	2	27		
20:20	"	1.25	22		
20:35	"	1.25	22		
20:50	"	1	19		
21:05	"	1	19		
21:20	"	1	19		
21:35	"	1	19		
21:50	"	1	19		
22:05	"	1	19		
22:20	"	1	Too small	to measure	
22:35	"		"		
22:50	"		"		Closed tool

FORM 192—PRINTED IN U.S.A.

PRODUCTION TEST DATA

LITTLE'S 03075 5M 8/73

(10)

Gauge No.	4352	Depth	5442'	Clock No.	12118	24 hour	Ticket No.	675538

	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0	.000	20	.000	---	88	.000	82	.000	---	264					
1	.0172	50	.0199	.791	458*	.1430	158**	.0969	1.017	2133***					
2	.0344	68	.0464	.508	1056	.2760	157	.1753	.792	2302					
3	.0516	76	.0729	.383	1962	.4090	185	.2537	.662	2362					
4	.0688	81	.0994	.309	2269	.5420	214	.3321	.573	2394					
5	.0860	85	.1259	.260	2351	.6750	239	.4105	.508	2412					
6	.1030	88	.1524	.224	2390	.8080	264	.4889	.457	2426					
7			.1789	.197	2414			.5673	.416	2436					
8			.2054	.177	2429			.6457	.382	2444					
9			.2319	.160	2440			.7241	.354	2451					
10			.2584	.146	2448			.8025	.329	2456					
11			.2849	.134	2456			.8809	.308	2460					
12			.3114	.124	2462			.9593	.290	2464					
13			.3379	.116	2465			1.0377	.274	2467					
14			.3644	.108	2471			1.1161	.259	2470					
15			.3910	.102	2472			1.1950	.246	2473					

Gauge No.	786	Depth	5470'	Clock No.	1768	hour	24

0	.000	29	.000	---	85	.000	78	.000	---	262					
1	.0172	55	.0210	.771	422*	.1497	156**	.1022	1.012	2145***					
2	.0344	67	.0490	.492	944	.2890	154	.1849	.788	2301					
3	.0516	72	.0770	.369	1865	.4283	180	.2676	.658	2361					
4	.0688	78	.1050	.297	2251	.5676	210	.3503	.569	2392					
5	.0860	82	.1330	.249	2344	.7069	236	.4330	.504	2412					
6	.1030	85	.1610	.215	2389	.8460	262	.5157	.453	2427					
7			.1890	.189	2412			.5984	.413	2438					
8			.2170	.169	2428			.6811	.379	2445					
9			.2450	.152	2440			.7638	.351	2452					
10			.2730	.139	2448			.8465	.327	2457					
11			.3010	.128	2455			.9292	.306	2461					
12			.3290	.118	2461			1.0119	.287	2464					
13			.3570	.110	2465			1.0946	.271	2468					
14			.3850	.103	2469			1.1773	.257	2471					
15			.4130	.097	2472			1.260	.244	2472					
Reading Interval	5		8			40		17							Minutes

REMARKS: * First interval equal to 6 minutes **-43 minutes ***-21 minutes.

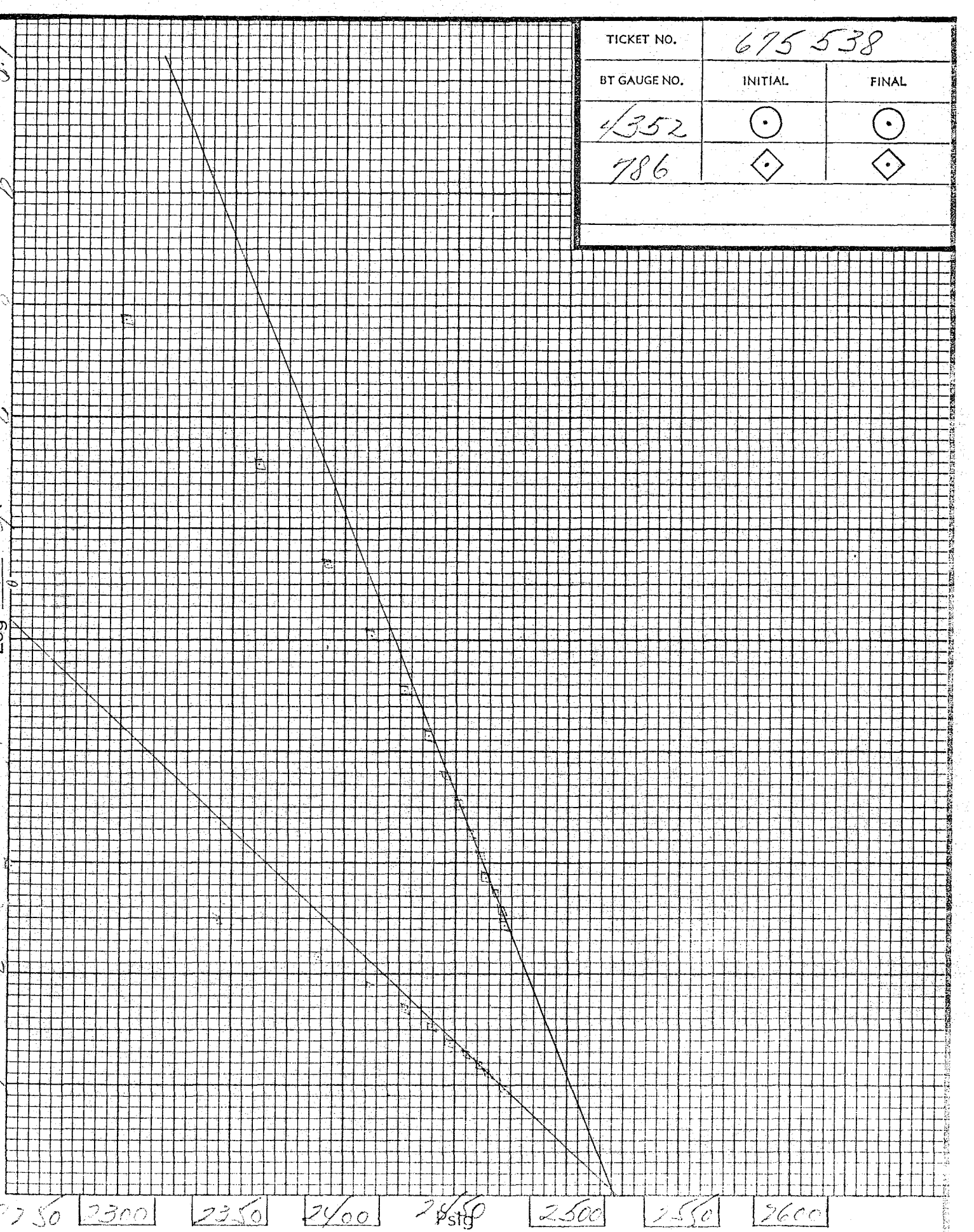
(8)

PRINTED IN U.S.A.

SPECIAL PRESSURE DATA

LITTLE'S

TICKET NO.	675538	
BT GAUGE NO.	INITIAL	FINAL
4352	⊙	⊙
786	◇	◇



EXTRAPOLATED PRESSURE GRAPH

Liquid Production

B.T. Gauge Numbers			4352	786	Ticket Number		675538
			PRESSURE	PRESSURE			
Initial Hydrostatic			2633	2638	Elevation		5233 ft.
Final Hydrostatic			2633	2638	Indicated Production	1st Flow	- bbls./day
1st Flow	Initial	Time	20	29		2nd Flow	36 bbls./day
	Final	30	88	85		3rd Flow	- bbls./day
	Closed In Pressure	118	2472	2472	Drill Collar Length		250 ft.
2nd Flow	Initial	Time	82	78	Drill Collar I.D.		2.5 in.
	Final	243	264	262	Drill Pipe Factor		0.01422 bbls./ft.
	Closed In Pressure	259	2473	2472	Hole Size		7.875 in.
3rd Flow	Initial	Time			Footage Tested		16 ft.
	Final				Mud Weight		9.1 lbs./gal.
	Closed In Pressure				Viscosity, Oil or ~~Water~~		2.1 cp
Extrapolated Static Pressure		1st	2572	2572	Oil API Gravity		39.2° @ 60°F —
		2nd	2571	2571	Water Specific Gravity		- —
		3rd	-	-	Temperature		132 °F
Slope P/10		1st	-	-			
		2nd	2322	2322			
		3rd	-	-			

Remarks: Both gauges extrapolate to approximately the same pressure valve. The gradient used for production calculations is based on the reported sampler oil-water ration of 75% oil and 25 % water.

SUMMARY

B.T. Gauge No. 4352 Depth 5442'

B.T. Gauge No. 786 Depth 5470'

PRODUCT	EQUATION	FIRST	SECOND	THIRD	FIRST	SECOND	THIRD	UNITS
Production	$Q = \frac{1440\ R}{t}$		35.			36.		bbls. day
Transmissability	$\frac{Kh}{\mu} = \frac{162.6\ Q}{m}$		23.130			23.567		$\frac{\text{md. ft.}}{\text{cp}}$
Indicated Flow Capacity	$Kh = \frac{Kh}{\mu}\ \mu$		48.573			49.489		md. ft.
Average Effective	$K = \frac{Kh}{h}$		-			-		md.
Permeability	$K_1 = \frac{Kh}{h_1}$		3.036			3.094		md.
Damage Ratio	$DR = .183\ \frac{Ps - Pf}{m}$		1.69			1.69		—
Theoretical Potential w/Damage Removed	$Q_1 = Q\ DR$		60.			61.		bbls. day
Approx. Radius of Investigation	$b \leq \sqrt{Kt}$ or $\sqrt{Kt_0}$		-			-		ft.
	$b_1 \leq \sqrt{K_1 t}$ or $\sqrt{K_1 t_0}$		28.8			29.0		ft.
Potentiometric Surface *	$Pot. = El - GD + 2.319\ Ps$		5753			5725		ft.

NOTICE: These calculations are based upon information furnished by you and taken from Drill Stem Test pressure charts, and are furnished you for your information. In furnishing such calculations and evaluations based thereon, Halliburton is merely expressing its opinion. You agree that Halliburton makes no warranty express or implied as to the accuracy of such calculations or opinions, and that Halliburton shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.

TICKET NO. — 675538

	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing				
Reversing Sub	6"	3"	1'	
Water Cushion Valve				
Drill Pipe	4½"	3 826"	5173'	
Drill Collars	6"	2½"	250'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler	5"	3/4"	7'	
Hydro-Spring Tester	5"	3/4"	5'	5438'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"		4'	5442'
Hydraulic Jar	5"	1"	6'	
VR Safety Joint	5"	1"	3'	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1½"	6'	5454'
Distributor				
Packer Assembly	6 3/4"	1½"	6'	5460'
Flush Joint Anchor	5 3/4"	2½"	6'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"		4'	5470'
Drill Collars				
Anchor Pipe Safety Joint	5"	1"	3'	
Packer Assembly	6 3/4"	1½"	6'	5480'
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars	6"	2½"	311'	
Flush Joint Anchor	5 3/4"	2½"	18'	
Blanked-Off B.T. Running Case	5 3/4"		5'	5814'
Total Depth				

NOMENCLATURE

b	= Approximate Radius of Investigation	Feet
b_1	= Approximate Radius of Investigation (Net Pay Zone h_1)	Feet
D.R.	= Damage Ratio	——
El	= Elevation	Feet
GD	= B.T. Gauge Depth (From Surface Reference)	Feet
h	= Interval Tested	Feet
h_1	= Net Pay Thickness	Feet
K	= Permeability	md
K_1	= Permeability (From Net Pay Zone h_1)	md
m	= Slope Extrapolated Pressure Plot (Psi^2/cycle Gas)	psi/cycle
OF_1	= Maximum Indicated Flow Rate	MCF/D
OF_2	= Minimum Indicated Flow Rate	MCF/D
OF_3	= Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF_4	= Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P_S	= Extrapolated Static Pressure	Psig.
P_F	= Final Flow Pressure	Psig.
P_{ot}	= Potentiometric Surface (Fresh Water*)	Feet
Q	= Average Adjusted Production Rate During Test	bbls/day
Q_1	= Theoretical Production w/Damage Removed	bbls/day
Q_g	= Measured Gas Production Rate	MCF/D
R	= Corrected Recovery	bbls
r_w	= Radius of Well Bore	Feet
t	= Flow Time	Minutes
t_o	= Total Flow Time	Minutes
T	= Temperature Rankine	°R
Z	= Compressibility Factor	——
μ	= Viscosity Gas or Liquid	CP
Log	= Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.

Form 9-331 C
(May 1963)

SUBMIT TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -

1a. TYPE OF WORK: DRILL ☒ DEEPEN ☐ PLUG BACK ☐

7. UNIT AGREEMENT NAME: -

b. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER Wildcat SINGLE ZONE ☐ MULTIPLE ZONE ☐

8. FARM OR LEASE NAME: Patterson Canyon

2. NAME OF OPERATOR: Mountain Fuel Supply Company

9. WELL NO.: 1

3. ADDRESS OF OPERATOR: P. O. Box 1129, Rock Springs, Wyoming 82901

10. FIELD AND POOL, OR WILDCAT: Wildcat

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 560' FNL, 1674' FWL NE NW

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: NE NW 9-38S-25E., SLB&M

At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 27 miles southeast of Monticello, Utah

12. COUNTY OR PARISH: San Juan | 13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	354' / -	16. NO. OF ACRES IN LEASE: 960	17. NO. OF ACRES ASSIGNED TO THIS WELL: -
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	- / -	19. PROPOSED DEPTH: 6000'	20. ROTARY OR CABLE TOOLS: Rotary
21. ELEVATIONS (Show whether DF, RT, GR, etc.) GR 5225' Desert Creek			22. APPROX. DATE WORK WILL START*: May 3, 1974

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
13-3/4	10-3/4	32.75	500	350
7-7/8	4-1/2	11.6	to be determined	

We would like to drill the subject well to an estimated depth of 6000', anticipated formation tops are as follows: Morrison at the surface, Summerville at 480', Entrada at 515', Carmel at 695', Navajo at 755', Kayenta at 1045', Wingate at 1220', Chinle at 1465', Shinarump at 2295', Moenkopi at 2375', Cutler at 2605', Honaker Trail at 4455', Paradox at 4925', Upper Ismay at 5330', Lower Ismay at 5635', "B" Marker at 5730', Desert Creek at 5755' and salt at 5880'.

Mud will be adequate to contain formation fluids and blow out preventers will be checked daily.

Approved in accordance with Rule C-3 Hearing, the Division requires a letter stating reasons for unorthodox location and that Mtn. Fuel Supply Co. controls acreage in a 660 radius from proposed well site.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED B W Croft TITLE Vice President, Gas Supply Operations DATE April 24, 1974

(This space for Federal or State office use)

PERMIT NO. 43-037-30170 APPROVAL DATE -

APPROVED BY - TITLE - DATE -

CONDITIONS OF APPROVAL, IF ANY:

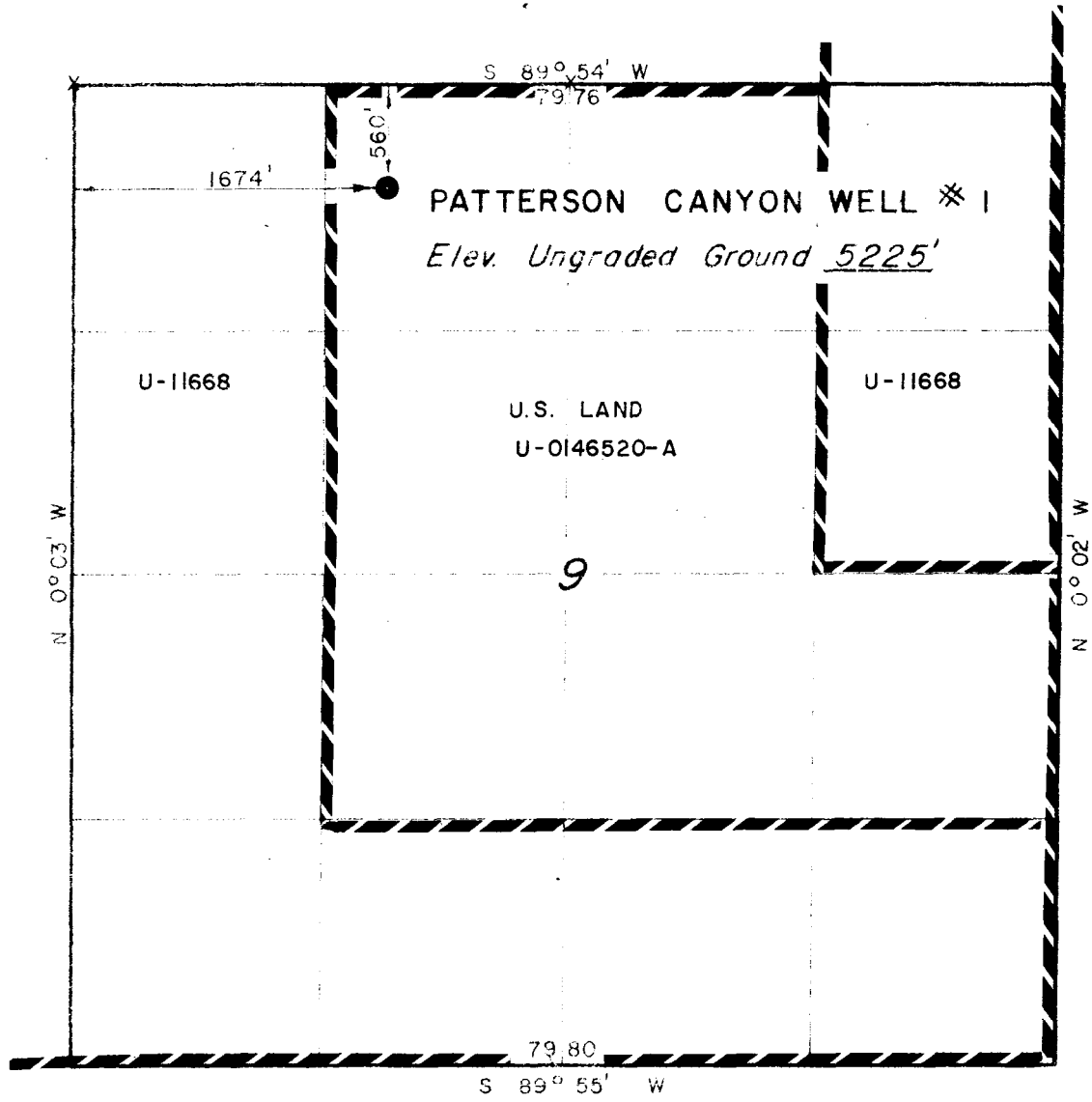
*See Instructions On Reverse Side

PROJECT

MOUNTAIN FUEL

Well location, located as shown in the NE 1/4 NW 1/4 Section 9 T38S, R25E, S.L.B. & M. San Juan County, Utah.

T38S, R25E, S.L.B. & M.



X = Section corners located

WORK ORDER 21859

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 3154
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
P O BOX Q - 110 EAST FIRST SOUTH
VERNAL, UTAH - 84078

SCALE 1" = 1000'	DATE 4/18/74
PARTY DA RR	REFERENCES GLO PLAT
WEATHER CLEAR, WARM	FILE MOUTAIN FUEL

M-11549

Form DOGC-4

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS CONSERVATION

1588 WEST NORTH TEMPLE
SALT LAKE CITY, UTAH 84116
328-5771

State Lease No. U
Federal Lease No. 0146520A
Indian Lease No.
Fee & Pat.

REPORT OF OPERATIONS AND WELL STATUS REPORT

STATE Utah COUNTY San Juan FIELD/LEASE Paradox Basin

The following is a correct report of operations and production (including drilling and producing wells) for the month of: APR 1974, 19

Agent's Address P.O. Box 11368
Salt Lake City, Utah 84139

Phone No. 328-8315

Company Mountain Fuel Supply Company
Signed J. Murphey
Title Chief Accountant

Sec. and ¼ of ¼	Twp.	Range	Well No.	Days Produced	Barrels of Oil	Gravity	Cu. Ft. of Gas (In thousands)	Gallons of Gasoline Recovered	Barrels of Water (if none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
				Marvin Wolf - Patterson Canyon Well						
NE NW 9	38S	25E	1	0	0	0	0	0	0	Spud April 30, 1974 525' Drilling

GAS: (MCF)
Sold 0
Flared/Vented 0
Used On/Off Lease 0

OIL or CONDENSATE: (To be reported in Barrels)
On hand at beginning of month 0
Produced during month 0
Sold during month 0
Unavoidably lost 0
Reason: 0
On hand at end of month 0

DRILLING/PRODUCING WELLS: This report must be filed on or before the sixteenth day of the succeeding month following

INTEROFFICE COMMUNICATION

R. G. MYERS

FROM R. G. Myers — Rock Springs, Wyoming (CITY / STATE)

TO B. W. Croft — DATE April 24, 1974

SUBJECT Tentative Plan to Drill
Patterson Canyon Well No. 1
San Juan County, Utah

Attached for your information and files is a tentative plan to drill the above-captioned well. This plan was written in accordance with the Geologic Prognosis dated April 19, 1974.

RGM/gm
Attachment
cc: J. T. Simon
L. A. Hale (6)
J. E. Adney
Geology (2)
D. E. Dallas (4)
C. F. Rosene
B. M. Steigleder
E. A. Farmer
U.S.G.S.
State
Paul Zubatch
P. E. Files (4)

From: Pat Brotherton

Rock Springs, Wyoming

To: T. M. Colson

April 24, 1974

Tentative Plan to Drill
Patterson Canyon Well No. 1
San Juan County, Utah

This well will be drilled to total depth by the _____ Drilling Company. One work order has been originated for the drilling and completion of the well, namely 21859, Drill Patterson Canyon Well No. 1. This well is located in the NE 1/4 NW 1/4 Sec. 9, T. 38 S., R. 25 E., San Juan County, Utah. The well will be drilled to a total depth of 6000 feet to test the Paradox formation. Surface elevation is at 5225 feet.

1. Drill a 13-3/4-inch hole to approximately 525 feet KBM.

2. Run and cement approximately 500 feet 10-3/4-inch O.D., 32.75-pound, H-40, 8 round thread, ST&C casing. The casing will be cemented with 350 sacks of regular Type G cement which represents theoretical requirements plus 100 percent excess cement for 10-3/4-inch O.D. casing in 13-3/4-inch hole with cement returned to the surface. Cement will be treated with 1645 pounds Dowell D43A. Plan on leaving a 20 foot cement plug in the bottom of the casing after displacement is completed. Floating equipment will consist of a Baker guide shoe. The top and bottom of ten casing collars and the guide shoe will be spot welded in the field. The bottom of the surface casing should be landed in such a manner that the top of the 10-inch 3000 psi casing flange will be at ground level. A cellar three feet deep will be required. Prior to cementing, circulate 75 barrels of mud. Capacity of the 10-3/4-inch O.D. casing is 50 barrels.

3. After a WOC time of 6 hours, remove landing joint. Install a NSCo. Type B 10-inch 3000 psi regular duty casing flange tapped for 10-3/4-inch O.D., 8 round thread casing. Install a 2-inch extra heavy nipple, 6 inches long, and a WKM Figure B138 (2000 psi WOG, 4000 psi test) valve on one side of the

casing flange and a 2-inch extra heavy bull plug in the opposite side. Install adequate preventers. After a WOC time of 12 hours, pressure test surface casing and all preventer rams to 1000 psi for 15 minutes using rig pump and mud. The burst pressure rating for the 10-3/4-inch O.D. casing is 1820 psi.

4. Drill a 7-7/8-inch hole to a tentative total depth of 6000 feet or to such other depth as the Geological Department may recommend. A mud desander and desilter will be used from under the surface casing to total depth to remove all undesirable solids from the mud system and to keep the mud weight to a minimum. A fully manned logging unit will be used from the bottom of the surface casing to total depth. The logging unit will be responsible for catching 10 foot samples to total depth. The mud system will consist of properties adequate to allow the running of drill stem tests. Six drill stem tests are anticipated starting at a depth of approximately 4400 feet. Anticipated tops are as follows:

	Approximate Depth (Feet KBM)
Morrison	Surface
Summerville	480
Entrada	515
Carmel	695
Navajo	755
Kayenta	1,045
Wingate	1,220
Chinle	1,465
Shinarump	2,295
Moenkopi	2,375
Cutler	2,605
Honaker Trail	4,455
Paradox	4,925
Upper Ismay	5,330
Lower Ismay	5,635
"B" Marker	5,730
Desert Creek	5,755
Salt	5,880
Total Depth	6,000

5. After reaching a total depth of approximately 6000 feet, run a dual induction laterolog (with 2-inch linear, 5-inch logarithmic) integrated sonic gamma ray-caliper log from bottom of surface casing to total depth, and a sidewall neutron log from 4400 feet to total depth. Note: Check salt content of the mud prior to logging to determine if the logging program should be changed.

6. Assuming commercial quantities of gas and/or oil are present, go into hole with 7-7/8-inch bit and condition hole prior to running 4-1/2-inch O.D. casing. Pull and lay down drill pipe and drill collars.

7. Run 4-1/2-inch O.D. casing as follows:

   (Top of String in Well)

   A. 5960 feet 4-1/2-inch O.D., 11.6-pound, K-55, 8 round thread, ST&C casing.

   B. One Larkin filrite float collar.

   C. One joint 4-1/2-inch O.D., 11.6-pound, K-55, 8 round thread, ST&C casing.

   D. One Larkin filrite float shoe.

   Run the casing to bottom and pick up one foot. The casing will be cemented with 50-50 Pozmix cement. Cement requirements will be the actual volume as calculated from the caliper log plus 20% excess. Circulate 150 barrels mud prior to beginning cementing operations. The capacity of the 4-1/2-inch O.D. casing is 93 barrels. Rotate casing while circulating, mixing, and displacing cement. Displace cement with water.

8. Immediately after cementing operations are completed, land the 4-1/2-inch O.D. casing with full weight on slips and record indicator weight. Cut off the 4-1/2-inch O.D. casing and install a 10-inch 3000 psi by 6-inch 3000 psi NSCo. Type B tubing spool. Pressure test seals to 2000 psi for 5 minutes. The collapse pressure for the 4-1/2-inch O.D., 11.6-pound, K-55 casing is 4540 psi. Install a steel plate over the tubing spool and release drilling rig.

9. Rig up a contract workover rig. Install a 6-inch 5000 psi double gate preventer with blind rams in bottom and 2-3/8-inch rams in top.

10. Pick up a 3-3/4-inch bit and run on 2-3/8-inch O.D., 4.6-pound, J-55 seal lock tubing to plugged back depth. Using Halliburton pump truck and water, pressure test pipe rams and casing to 3000 psi for 15 minutes. The minimum internal yield for 4-1/2-inch O.D., 11.6-pound, J-55 tubing is 5350 psi. Land the tubing on a H-1 tubing hanger and pressure test blind rams to 3000 psi for 15 minutes. Pull tubing, standing same in derrick.

11. After the above items have been evaluated, a tentative plan to complete the well will be finalized.

GENERAL INFORMATION

I. The following tubular goods have been assigned to the well.

Description	Approximate Gross Measurement (feet)	Availability
	Surface Casing	
10-3/4-inch O.D., 32.75-pound, H-40, 8 round thread, ST&C casing	550	Warehouse stock
	Production Casing	
4-1/2-inch O.D., 11.6-pound, K-55, 8 round thread, ST&C casing	6,200	Warehouse stock
	Production Tubing	
2-3/8-inch O.D., 4.6-pound, J-55, seal lock tubing	6,200	Warehouse stock

II. The salt content of the mud will be checked prior to cementing the 4-1/2-inch O.D. casing to determine if a salt saturated cement will be required.

III. All ram type preventers will have hand wheels installed and operative at the time the preventers are installed.

IV. Well responsibility: O. C. Adams

April 30, 1974

Mountain Fuel Supply Company
Box 1129
Rock Springs, Wyoming 82901

Re: Well No. Patterson Canyon #1
Sec. 9, T. 38 S, R. 25 E,
San Juan County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill this well is hereby granted in accordance with Rule C-3(c), General Rules and Regulations and Rules of Practice and Procedure. However, said approval is conditional upon the following:

(a) A written statement is forwarded this office indicating the reason for this unorthodox location, and stating that your company owns or controls all the acreage within a 660' radius of the proposed well site.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

PAUL W. BURCHELL - Chief Petroleum Engineer
HOME: 277-2890
OFFICE: 328-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation relative to the above will be greatly appreciated.

The API number assigned to this well is 43-037-30170.

Very truly yours,

DIVISION OF OIL AND GAS CONSERVATION

CLEON B. FEIGHT
DIRECTOR

Form DOGC-4

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF OIL & GAS CONSERVATION

1588 WEST NORTH TEMPLE
SALT LAKE CITY, UTAH 84116
328-5771

State Lease No. U
Federal Lease No. 0146520A
Indian Lease No.
Fee & Pat.

REPORT OF OPERATIONS AND WELL STATUS REPORT

STATE Utah COUNTY San Juan FIELD/LEASE Paradox Basin

The following is a correct report of operations and production (including drilling and producing wells) for the month of: MAY 1974, 19.

Agent's Address P.O. Box 11368
Salt Lake City, Utah 84139

Phone No. 328-8315

Company Mountain Fuel Supply Company
Signed D. Murphey
Title Chief Accountant

c. and of ¼	Twp.	Range	Well No.	Days Produced	Barrels of Oil	Gravity	Cu. Ft. of Gas (In thousands)	Gallons of Gasoline Recovered	Barrels of Water (if none, so state)	REMARKS (If drilling, depth; if shut down, cause; date and result of test for gasoline content of gas)
				Marvin Wolf - Patterson Canyon Well						
E NW 9	38S	25E	1	0	0	0	0	0	0	Spud April 30, 1974 TD 5,818' Shut in

GAS: (MCF)
Sold 0
Flared/Vented 0
Used On/Off Lease 0

OIL or CONDENSATE: (To be reported in Barrels)
On hand at beginning of month 0
Produced during month 0
Sold during month 0
Unavoidably lost 0
Reason: 0
On hand at end of month 0

DRILLING/PRODUCING WELLS: This report must be filed on or before the sixteenth day of the succeeding month following production for each well. Where a well is temporarily shut-in, a negative report must be filed. *THIS REPORT MUST BE FILED IN DUPLICATE*

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER Wildcat

2. NAME OF OPERATOR
Mountain Fuel Supply Company

3. ADDRESS OF OPERATOR
P. O. Box 1129, Rock Springs, Wyoming 82901

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
560' FNL, 1674' FWL NE NW

5. LEASE DESIGNATION AND SERIAL NO.
U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
-

7. UNIT AGREEMENT NAME
-

8. FARM OR LEASE NAME
Patterson Canyon

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
NE NW 9-38S-25E., SLB&M

14. PERMIT NO.
API # 43-037-30170

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
GR 5225'

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Supplementary history			X
(Other)			☐	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Depth 3164', drilling.

Spudded April 30, 1974, set 10-3/4" H-40 casing at 540.15' with 350 sacks of cement.

18. I hereby certify that the foregoing is true and correct

SIGNED BW Croft TITLE Vice President, Gas Supply Operations DATE May 8, 1974

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

P.1

Ed Wayes - Exxon

S. C. — 3000'

surface Ridge

P.T. — 25 — ag

5

~~Jerry~~

#1 Patterson

San Juan Co.

Tom Coulson - Mtn ~~[illegible]~~

300 BWPD — 30 days.

+ flare (~300-400 Mcf)

Have OK

[illegible]

Form DOGC-4

STATE OF UTAH

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL & GAS CONSERVATION

1588 WEST NORTH TEMPLE
SALT LAKE CITY, UTAH 84116
328-5771

State Lease No. U
Federal Lease No. 0146520-A
Indian Lease No.
Fee & Pat.

REPORT OF OPERATIONS AND WELL STATUS REPORT

STATE Utah COUNTY San Juan FIELD/LEASE Paradox Basin

The following is a correct report of operations and production (including drilling and producing wells) for the month of: JUN 1974, 19.

Agent's Address P.O. Box 11368
Salt Lake City, Utah 84139

Phone No. 328-8315

Company Mountain Fuel Supply Company
Signed J. Murphy
Title Chief Accountant

Sec. and ¼ of ¼	Twp.	Range	Well No.	Days Produced	Barrels of Oil	Gravity	Cu. Ft. of Gas (In thousands)	Gallons of Gasoline Recovered	Barrels of Water (if none, so state)	REMARKS (If drilling, depth; if shut down, cause date and result of test for gasoline content of gas)
			Marvin Wolf - Patterson Canyon Well							
NE NW 9	38S	25E	1	0	0	0	0	0	0	Spud April 30, 1974 TD 5,818' Shut In ✓

GAS: (MCF)
Sold 0
Flared/Vented 0
Used On/Off Lease 0

OIL or CONDENSATE: (To be reported in Barrels)
On hand at beginning of month 0
Produced during month 0
Sold during month 0
Unavoidably lost 0
Reason: 0
On hand at end of month 0

DRILLING/PRODUCING WELLS: This report must be filed on or before the sixteenth day of the succeeding month following production for each well. Where a well is temporarily shut-in, a negative report must be filed. *THIS REPORT MUST BE FILED IN DUPLICATE*

FLUID SAMPLE DATA

Sampler Pressure: 1500 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas: .023
cc. Oil: 350 Oil
cc. Water: 1800 Salt water
cc. Mud: -
Tot. Liquid cc.: 2150
Gravity: ° API @ °F.
Gas/Oil Ratio: cu. ft./bbl.

	RESISTIVITY		CHLORIDE CONTENT
Recovery Water	.66 @ 68 °F.		ppm
Recovery Mud	46 @ 68 °F.		ppm
Recovery Mud Filtrate	@ °F.		ppm
Mud Pit Sample	1.12 @ 68 °F.		ppm
Mud Pit Sample Filtrate	@ °F.		ppm

Mud Weight: 9.1 vis 78 cp

Date: 5-23-74 Ticket Number: 675534
Kind of Job: OPEN HOLE Halliburton District: FARMINGTON
Tester: MR. SMITH Witness: MR. JENKINS
Drilling Contractor: LOFFLAND BROTHERS DRILLING COMPANY

EQUIPMENT & HOLE DATA

Formation Tested: Upper Ismay
Elevation: 5233' Ft.
Net Productive Interval: 27' Ft.
All Depths Measured From: Rotary Kelly Bushing
Total Depth: 5504' Ft.
Main Hole/Casing Size: 7 7/8"
Drill Collar Length: 528' I.D. 2½"
Drill Pipe Length: 4865' I.D. 3.826"
Packer Depth(s): 5424' - 5430' Ft.
Depth Tester Valve: 5408' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve: Surface Choke 1" Valve Bottom Choke 3/4"

Recovered 93 Feet of Gas cut mud
Recovered 120 Feet of Free oil
Recovered 2391 Feet of Salt water
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks: Tool opened for a 30 minute first flow with a fair blow, increasing to a good blow in one minute. Gas to surface in 30 minutes. Closed tool for 118 minute first closed in pressure. Reopened tool for 243 minute second flow with a good blow. Opened to flow line on ½" choke. See production test data sheet.....Closed tool for 359 minute second closed in pressure.

TEMPERATURE	Gauge No. 4352 Depth: 5412' Ft.		Gauge No. 786 Depth: 5500' Ft.		Gauge No. Depth: Ft.		TIME
Est. °F.	24 Hour Clock		13 Hour Clock		Hour Clock		Tool Opened 1250 P.M.
Actual 138 °F.	Blanked Off No		Blanked Off Yes		Blanked Off		Opened A.M.
	Pressures		Pressures		Pressures		Bypass 0120 P.M.
	Field	Office	Field	Office	Field	Office	Reported Minutes / Computed Minutes
Initial Hydrostatic	2588	2607	2638	2645			
First Period Flow Initial	243	155	301	322			— / —
First Period Flow Final	351	364	410	408			30 / 30
First Period Closed in	1073	2423	2425	2459			120 / 118
Second Period Flow Initial	406	415	437	448			— / —
Second Period Flow Final	1180	1197	1221	1235			240 / 243
Second Period Closed in	2402	2415	2426	2453			360 / 359
Third Period Flow Initial							— / —
Third Period Flow Final							
Third Period Closed in							
Final Hydrostatic	2561	2573	2585	2614			— / —

Legal Location Sec. - Twp. - Rng.: 9 - 38S - 25E
Lease Name: PATTERSON CANYON
Well No.: 1
Test No.: 2
Tested Interval: 5430' - 5504'
Field Area: WILDCAT
County: SAN JUAN
State: UTAH
Lease Owner/Company Name: MOUNTAIN FUEL SUPPLY COMPANY

FLUID SAMPLE DATA

Sampler Pressure 25 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas
cc. Oil
cc. Water 1650
cc. Mud
Tot. Liquid cc. 1650
Gravity ° API @ °F.
Gas/Oil Ratio cu. ft./bbl.

	RESISTIVITY		CHLORIDE CONTENT
Recovery Water	.058 @ 68 °F.		ppm
Recovery Mud	@ °F.		ppm
Recovery Mud Filtrate	@ °F.		ppm
Mud Pit Sample	.60 @ 68 °F.		ppm
Mud Pit Sample Filtrate	@ °F.		ppm

Mud Weight 9.1 vis 66 cp

Date 5-24-74 Ticket Number 675536
Kind of Job OPEN HOLE Halliburton District FARMINGTON
Tester G.K. SMITH Witness R. JENKINS
Drilling Contractor LOFFLAND BROTHERS DRILLING COMPANY SM

EQUIPMENT & HOLE DATA

Formation Tested Upper Ismay
Elevation 5233' Ft.
Net Productive Interval 8' Ft.
All Depths Measured From Rotary Kelly bushing
Total Depth 5529' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 561' I.D. 2 1/2"
Drill Pipe Length 4911' I.D. 3.826"
Packer Depth(s) 5507-5513' Ft.
Depth Tester Valve 5491' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 2" valve Bottom Choke 3/4"

Recovered 931' Feet of muddy salt water
Recovered 30 Feet of very slight gas cut mud
Recovered Feet of
Recovered Feet of
Recovered Feet of

Mea. From Tester Valve

Remarks Tool opened for 31 minute first flow period with a weak blow which increased to good. Closed tool for 87 minute first closed in pressure period. Tool re-opened for 120 minute second flow period with no blow - very weak blow in 2 minutes and then increased to a good blow in 30 minutes. Closed tool for 227 minute second closed in pressure period.

TEMPERATURE	Gauge No. 4352 Depth: 5495 Ft.		Gauge No. 786 Depth: 5525 Ft.		Gauge No. Depth: Ft.		TIME
	24 Hour Clock		24 Hour Clock		Hour Clock		Tool Opened 0600 A.M. P.M.
Est. °F.	Blanked Off no		Blanked Off		Blanked Off		Opened A.M.
Actual 126 °F.	Pressures		Pressures		Pressures		Bypass 1345 P.M.
	Field	Office	Field	Office	Field	Office	Reported Minutes / Computed Minutes
Initial Hydrostatic	2614	2651	2638	2657			
First Period Flow Initial	27	41	137	193			— / —
First Period Flow Final	189	211	273	292			32 / 31
First Period Closed in	2375	2395	2399	2401			88 / 87
Second Period Flow Initial	189	223	328	352			— / —
Second Period Flow Final	487	491	519	510			120 / 120
Second Period Closed in	2296	2320	2319	2331			225 / 227
Third Period Flow Initial							— / —
Third Period Flow Final							
Third Period Closed in							
Final Hydrostatic	2534	2609	2638	2615			— / —

Legal Location Sec. - Twp. - Rng. 9 38 S 25 E
Lease Name PATTERSON CANYON
Well No. 1
Test No. 4
Tested Interval 5513 - 5529'
Field Area WILDCAT
County SAN JUAN
State UTAH
Lease Owner/Company Name MOUNTAIN FUEL SUPPLY COMPANY

FORM 181—PRINTED IN U.S.A.

FORMATION TEST DATA

LITTLE'S 93074 9M 6/72

10

FLUID SAMPLE DATA

Sampler Pressure 175 P.S.I.G. at Surface
Recovery: Cu. Ft. Gas 1
cc. Oil 75% Oil
cc. Water 25% water
cc. Mud
Tot. Liquid cc. 1050
Gravity 41 ° API @ 78 °F.
Gas/Oil Ratio cu. ft./bbl.

	RESISTIVITY			CHLORIDE CONTENT
Recovery Water	.067	@ 68	°F.	ppm
Recovery Mud	.154	@ 68	°F.	ppm
Recovery Mud Filtrate		@	°F.	ppm
Mud Pit Sample	.603	@ 68	°F.	ppm
Mud Pit Sample Filtrate		@	°F.	ppm

Mud Weight 9.1 vis 64 cp

Date 5-31-74 Ticket Number 675538
Kind of Job STRADDLE OPEN HOLE Halliburton District FARMINGTON
Tester MR. SMITH Witness MR. JENKINS
Drilling Contractor LOFFLAND BROTHERS DR S

EQUIPMENT & HOLE DATA

Formation Tested Upper Ismay
Elevation 5233' Ft.
Net Productive Interval 16' Ft.
All Depths Measured From Rotary Kelly Bushing
Total Depth 5818' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length 250' I.D. 2½"
Drill Pipe Length 5173' I.D. 3.826"
Packer Depth(s) 5454'-5460-5480' Ft.
Depth Tester Valve 5438' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 2" Valve Bottom Choke 3/4"

Recovered 60 Feet of heavy gas-oil cut mud
Recovered 100 Feet of salt water
Recovered 597 Feet of oil
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks Opened tool for 30 minute first flow with a weak blow increasing to a good blow. Closed tool for 118 minute first closed in pressure. Reopened tool for 243 minute second flow with a good blow, gas to surface. Opened to flow line on 3/8" choke. Closed tool for 259 minute second closed in pressure.

SEE PRODUCTION TEST DATA SHEET

TEMPERATURE	Gauge No. 4352 Depth: 5442 Ft.	Gauge No. 786 Depth: 5470 Ft.	Gauge No. 69 Depth: 5814 Ft.	TIME
	24 Hour Clock	24 Hour Clock	48 Hour Clock	Tool Opened 16:20 A.M. P.M.
Est. °F.	Blanked Off No	Blanked Off Yes	Blanked Off Yes	Opened A.M.
Actual 132 °F.	Pressures	Pressures	Pressures	Bypass 04:50 P.M.

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic		2561.6	2633	2611.6	2638		2855		
First Period	Flow Initial	27.1	20	27.4	29			—	—
	Flow Final	81.1	88	82.0	85			30	30
	Closed in	2454.9	2472	245.9	2472	HYDROSTATIC		120	118
Second Period	Flow Initial	81.1	82	2457.3	78	RELEASE:	2779	—	—
	Flow Final	243.3	264	-	262			240	243
	Closed in	2454.9	2473	-	2472			360	259
Third Period	Flow Initial							—	—
	Flow Final								
	Closed in								
Final Hydrostatic		2561.0	2633	2611.6	2638			—	—

Legal Location Sec. - Twp. - Rng. 9-38S-25E
Lease Name PATTERSON CANYON
Well No. 1
Test No. 7
Tested Interval 5460'-5480'
Lease Owner/Company Name MOUNTAIN FUEL SUPPLY COMPANY
Field Area WILDCAT
County SAN JUAN
State UTAH

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.: U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER Wildcat

7. UNIT AGREEMENT NAME: -

2. NAME OF OPERATOR: Mountain Fuel Supply Company

8. FARM OR LEASE NAME: Patterson Canyon

3. ADDRESS OF OPERATOR: P. O. Box 1129, Rock Springs, Wyoming 82901

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 560' FNL, 1674' FWL - NE NW

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: NE NW 9-38S-25E., SLB&M

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.): KB 5237.50' GR 5225'

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Supplementary history			X
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

TD 5818', PBD 5726', testing.
CORRECTION: 10-3/4"OD, 32.75#, H-40 casing landed at 538.53' and set with 350 sacks of cement.
DST #1: 4855-4885', Lower Honaher Trail, IO ½ hr, ISI 1½ hrs, FO 145 minutes, FSI 3-3/4, opened very weak, dead in ½ hr, reopened dead, no gas, recovered 3' mud. IHP 2328, IOFP's 40-40, ISIP 53, FOFP's 40-40, FSIP 53, FHP 2328.

DST #2: 5430-5504', Upper Ismay, IO ½ hr, ISI 2 hrs, FO 4 hrs, FSI 6 hrs, opened strong, reopened strong gas not enough to gauge, recovered 93' gas cut mud, 2391' salt water and 120' yellow green oil (recovered from reversing out fluid), IHP 2638, IOFP's 301-410, ISIP 2425, FOFP's 437-1221, FSIP 2425, FHP 2585.
DST #3: 5509-5529', Upper Ismay, mis-run, no packer seat.
DST #4: 5513-5529', Upper Ismay, IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened very weak increase to good, reopened weak increase to good, no gas, recovered 961' water, IHP 2614, IOFP's 27-189, ISIP 2375, FOFP's 189-486, FSIP 2296, FHP 2534.
DST #5: 5556-5665', Lower Ismay, IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened very weak continued, no gas, reopened dead, recovered 9' mud, IHP 2641, IOFP's 14-14, ISIP 54, FOFP's 14-14, FSIP 27, FHP 2640.

CONTINUED ON REVERSE -

18. I hereby certify that the foregoing is true and correct

SIGNED BW Croft TITLE Vice President, Gas Supply Operations DATE June 26, 1974

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

DST #6: 5687-5743', Desert Creek, IO ½ hr, ISI 1½ hrs, FO 2 hrs, FSI 3-3/4 hrs, opened with good blow decreasing to weak blow on both openings, no gas, recovered 95' gas cut mud, IHP 2770, IOFP's 106-106, ISIP 212, FOFP's 106-106, FSIP 292, FHP 2770.

DST #7: Straddle test Upper Ismay 5460-5480', IO ½ hr, ISI 2 hrs, FO 4 hrs, FSI 6 hrs, opened weak increase to strong, no gas, reopened strong, gas in 42 minutes, ½ hr 22 Mcf, 1 hr 19 Mcf, 2-3/4 hrs 19 Mcf, 3 hrs not enough to gauge, recovered 60' mud, 100' water and 597' oil, IHP 2561, IOFP's 27-81, ISIP 2455, FOFP's 81-243, FSIP 2455, FHP 2561.

Ran and cemented 4½" casing, perforated from 5464' to 5476' with 2 holes per foot, applied 5,000 gallons 28% HCL to perforations, flowed to clean up, then used nitrogen to unload wellbore, well dead, rig released June 7, 1974.

Moved in and rigged up work over unit on 6-18-74, installed dead men anchors, swabbed and flowed well, made 55 bbls drip oil and 150 barrels water in last 24 hours, testing.

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on eral and Indian lands pursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to appli State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regar local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State of In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present signifi fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date wel conditioned for final inspection looking to approval of the abandonment.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1972-782-241/207 REGION NO. 8

Form 9-330
(Rev. 5-63)

3

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE (See other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: U - 0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: -

7. UNIT AGREEMENT NAME: -

8. FARM OR LEASE NAME: Patterson Canyon

9. WELL NO.: 1

10. FIELD AND POOL, OR WILDCAT: Wildcat

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: NE NW 9-38S-25E., SLB&M

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP-EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

2. NAME OF OPERATOR: Mountain Fuel Supply Company

3. ADDRESS OF OPERATOR: P. O. Box 1129, Rock Springs, Wyoming 82901

4. LOCATION OF WELL (*Report location clearly and in accordance with any State requirements*)*
At surface: 560' FNL, 1674' FWL NE NW
At top prod. interval reported below
At total depth

14. PERMIT NO.: API NO: 43-037-30170
DATE ISSUED:

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (*Ready to prod.*)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
4-30-74	5-29-74	6-27-74	KB 5237.50' GR 5225'	-

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5818	5726		→	0-5818'	-

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: 5464 - 5476' Ismay

25. WAS DIRECTIONAL SURVEY MADE: No

26. TYPE ELECTRIC AND OTHER LOGS RUN: Dual Induction Focused, BHC Acoustilog, Sidewall Neutron GR

27. WAS WELL CORED: No

28. CASING RECORD (*Report all strings set in well*)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
10-3/4	32.75	538.53	13-3/4	350	0
4-1/2	11.6 & 10.5	5726.62	7-7/8	359	0

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)

31. PERFORATION RECORD (*Interval, size and number*): 5464-5476', jet, 2 holes per foot

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5464-5476'	5,000 gals. 28% HCL

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (*Flowing, gas lift, pumping—size and type of pump*)	WELL STATUS (*Producing or shut-in*)
Shut in	Pumping (swabbed & flowed intermittently)	Shut in

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
6/20-26/74	48						

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
			62.5	NETG	195	

34. DISPOSITION OF GAS (*Sold, used for fuel, vented, etc.*): Vented while testing

TEST WITNESSED BY:

35. LIST OF ATTACHMENTS: Logs as above, Well Lithology and Well Completion to be sent at a later date.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED BW Croft TITLE Vice President, Gas Supply Operations DATE July 17, 1974

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: *"Sacks Cement":* Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES:
SHOW ALL IMPORTANT ZONES OF POROSITY AND CONTENTS THEREOF; CORED INTERVALS; AND ALL DRILL-STEM TESTS, INCLUDING DEPTH INTERVAL TESTED, CUSHION USED, TIME TOOL OPEN, FLOWING AND SHUT-IN PRESSURES, AND RECOVERIES

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Log tops:		
Morrison	behind casing	
Summerville	behind casing	
Entrada	620'	
Carmel	780	
Navajo	810	
Kayenta	1172	
Wingate	1300	
Chinle	1532	
Shinarump	2356	
Moenkopi	2496	
Cutler	2526	
Honaker Trail	4382	
Paradox	4900	
Upper Ismay	5274	
Lower Ismay	5540	
B Zone	5646	
Desert Creek	5666	
Salt	5798	

P-M

U.S. GOVERNMENT PRINTING OFFICE: 1963—O-683636
837-497

Well: Patterson Canyon Well No. 1 Date: June 26, 1975

Area: Patterson Canyon Lease No: U-0146520-A

[X] New Field Wildcat [ ] Development Well [ ] Shallower Pool Test

[ ] New Pool Wildcat [ ] Extension [ ] Deeper Pool Test

Location: 560 feet from north line, 1674 feet from west line

NE ¼ NW ¼

Section 9, Township 38 south, Range 25 east

County: San Juan State: Utah

Operator: Mountain Fuel Supply Company

Elevation: KB 5237.5' Gr 5225' Total Depth: Driller 5818' Log 5810'

Drilling Commenced: April 30, 1974 Drilling Completed: May 29, 1974

Rig Released: June 27, 1974 Well Completed: June 27, 1974

Sample Tops: (unadjusted)

Entrada	632'	Shinarump	2369'	B Zone	5656'
Carmel	784'	Moenkopi	2451'	Desert	
Navajo	820'	Cutler	2590'	Creek	5686'
Kayenta	1160'	Honaker Trail	4404'	Salt	5804'
Wingate	1303'	Paradox	4932'		
Chinle	1538'	Upper Ismay	5285'		
		Lower Ismay	5570'		

Log Tops:

Morrison)	Behind Casing
Summerville)	
Entrada	620'
Carmel	780'
Navajo	810'
Kayenta	1172'
Wingate	1300'
Chinle	1532'
Shinarump	2356'
Moenkopi	2496'
Cutler	2526'
Honaker Trail	4382'
Paradox	4900'
Upper Ismay	5274'
Lower Ismay	5540'
B Zone	5646'
Desert Creek	5666'
Salt	5798'

Sample Cuttings:

30' samples 550-2000'
10' samples 2000-5818'

Status:

Oil Well

Producing Formation:

Ismay

Perforations:

5464-5476' - 2 holes per foot

Stimulation:

Acid treatment

Production:

62.5 BO, 195 BW, NETG

Plug Back Depth:

5726'

Plugs:

None

Hole Size:

13-3/4" to 547'; 7-7/8" from 547' to 5818'

Casing/Tubing:

10-3/4" @ 538.53; 4½" @ 5726.62'.

Logging - Mud:

Core Lab

Mechanical:

Dresser Atlas

Contractor:

Loffland Brothers

Completion Report Prepared by:

E. G. Mickel

Remarks:

This well was put on a 25-day pumping (12-30-74 to 1-23-75) Test
At end of test well was making 64 BO, 215 BW and 175 MCFGD.

COMPLETION REPORT (cont.)

Well: Patterson Canyon Well No. 1

Area: Patterson Canyon

Cored Intervals (recovery): None

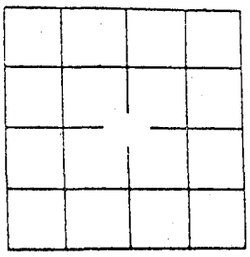
Tabulation of Drill Stem Tests:

No.	Interval	IHP	IFP (min.)	ISIP (min.)	FFP (min.)	FSIP (min.)	FHP	Samples Caught	Remarks
1	4855-4885	2335	24-24(30)	39 (90)	28-28(120)	31 (225)	2319	None	Rec 3' mud (Honaker Trail) BHT 118
2	5430-5504	2607	155-364(30)	2423(118)	415-1197(243)	2415(359)	2573	Oil & water	Rec 93' GCM; 120' oil & 2391' SW (Ismay) BHT 138
3	5509-5529	MISRUN -- NO PACKER SEAT							
4	5513-5529	2651	41-211 (31)	2395 (87)	223-491(120)	2320(227)	2609	Salt water	Rec 931' MSW; 30' VS GCM. BHT 126
5	5555-5665	2666	19-19(30)	55(90)	30-30(138)	45(207)	2666	None	Rec 9' VSGCM.
6	5687-5743	2764	76-88(30)	191(90)	145-99(120)	296(225)	2764	None	Rec 95' VSGCM (Desert Creek) BHT 120
7	Straddle Test (Upper Ismay) 5460-5480	2633	20-88(30)	2472(118)	82-264(243)	2473(259)	2633	Oil & water	Rec 60' HGOCM; 100' SW; 597' Oil BHT 132

FIELD Patterson Canyon STATE Utah COUNTY San Juan SEC. 9 T. 38S R. 25E

COMPANY Mountain Fuel Supply Company FARM WELL NO. 1

LOCATION 1674' FWL; 560' FNL ELEV. 5225; KB 5238'



DRILLING COMMENCED April 30, 1974 COMPLETED June 27, 1974

RIG RELEASED June 27, 1974 TOTAL DEPTH 5818'

CASING RECORD 10-3/4" @ 538.53'

4½" @ 5726.62'

TUBING RECORD

PERFORATIONS 5464-5476' 2 holes per foot

I. P. GAS NETG OIL 62.5 BO, 195 BW

SANDS

SHUT-IN SURFACE PRESSURES

REMARKS

	FROM	TO
Sandstone - red brown, clear, fine to medium grain, hard siliceous cement, clear, white, fine grain, hard	550	580
Siltstone - red, red brown, firm, dense, slightly calcareous	580	590
Shale, red, red brown, firm, dense, silty, slightly calcareous	590	605
Siltstone - red, red brown, as above	605	615
Siltstone - red, red brown, clear, fine to medium grain, hard, siliceous cement, fine to medium grain, unconsolidated quartz grains, some fine to medium grain clusters, hard, very slightly calcareous in part	615	785
Siltstone - red, red brown, soft, sandy, slightly calcareous	785	795
Siltstone - red, red brown, fine to very fine grain, hard, silty, calcareous, clear, white, fine grain, firm, hard, calcareous, trace calcareous claystone, trace siltstone, white, tan, very fine grain, unconsolidated quartz grains, some clusters, white, clear, light pink, fine grain, unconsolidated quartz grains, fine grain clusters.	795	1265
Siltstone - red, red brown, soft, sandy, slightly calcareous	1265	1280
Sandstone - light orange, fine grain, hard, silty, micaceous in part, slightly calcareous	1280	1625
Siltstone - red, red brown, soft, firm, sandy in part, slightly calcareous, very calcareous	1625	1780
Shale - red brown, brown, soft to form, silty, dense, calcareous	1780	1790
Sandstone - red brown, light orange, very fine grain, firm, silty, calcareous	1790	1800

FARM Patterson Canyon WELL NO. 1

COMPANY Mountain Fuel Supply Company

	FROM	TO
Shale - red brown, brown, soft to firm, silty, dense, calcareous	1800	1810
Siltstone - buff, red brown, light brown, soft to firm, occasional sandy, calcareous, light orange, firm, as above, occasional grading to shale, trace bentonite, trace clay	1810	2065
Shale - pink, red, soft to firm, silty, calcareous	2065	2070
Siltstone - red, red brown, light orange, soft to firm, occasional sandy, calcareous	2070	2075
Shale - pink, red, soft to firm, silty, calcareous	2075-	2085
Siltstone - red, red brown, light orange, hard, dense, calcareous	2085	2100
Shale - brown, light brown, soft, dense, calcareous	2100	2110
Siltstone - red, red brown, light orange, hard, dense, calcareous	2110	2120
Shale - red, hard, dense, silty, very calcareous	2120	2145
Siltstone - buff, hard, dense, very calcareous, some large calcareous inclusion	2145	2155
Shale - red brown, buff, soft to firm, dense, silty, slightly calcareous	2155	2180
Siltstone - buff, hard, dense, very calcareous with large calcareous inclusion	2180	2190
Shale - red brown, buff, soft to firm, dense, silty, slight calcareous	2190	2205
Limestone - pink, hard, dense, siliceous, sandy in part, micro-crystalline in part	2205	2215
Siltstone - red brown, light brown, soft to firm, sandy in part, calcareous	2215	2230
Shale - dark red, buff, firm to hard, dense, calcareous	2230	2240
Siltstone - red brown, light brown, soft to firm, dense, calcareous	2240	2250
Shale - dark red, buff, firm to hard, dense, calcareous	2250	2260
Siltstone - buff, light pink, red, firm to hard, dense, calcareous, some with siliceous and calcareous inclusion	2260	2290
Shale - red, red brown, pink, firm, dense, silty, calcareous, some with white limestone inclusion, trace bentonitic clay	2290	2335
Siltstone - red, red brown, firm, shaly, some calcareous includion, occasional grading to silty shale	2335	2360
Shale - red, red brown, pink, firm, dense, as above	2360	2370
Siltstone - red, red brown, firm, as above	2370	2375
Shale - red, red brown, pink, firm, dense, as above	2375	2380
Sandstone - white, clear, fine to medium grain, friable, micaceous, calcareous abundant loose medium grain unconsolidated quartz grains	2380	2430

FARM Patterson Canyon WELL NO. 1

COMPANY Mountain Fuel Supply Co.

	FROM	TO
Siltstone - red, red brown, firm, dense, shaly, calcareous	2430	2440
Sandstone - white, clear, fine to medium grain, firm friable, as above	2440	2455
Siltstone - red brown, red, firm, dense, shaly, occasional sandy, calcareous, white, firm, sandy, calcareous	2455	2470
Shale - light gray, gray, firm, dense, silty in part, red red brown, firm, silty, calcareous	2470	2480
Siltstone - red, red brown, white, firm, as above	2480	2490
hale - light gray,gray, red,red brown, as above	2490	2505
Siltstone - red, red brown, firm, dense, slightly calcareous	2505	2515
Shale - gray, light gray, firm, dense, silty, slightly calcareous	2515	2530
Sandstone - white, clear, very fine grain to fine grain hard, slightly calcareous	2530	2540
Siltstone - red brown, buff, soft to firm, sandy, slightly calcareous	2540	2555
Shale - light gray, firm, silty, sandy in part, slightly calcareous	2555	2560
Sandstone - white, clear, very fine grain, hard, slightly calcareous, some loose large quartz grains	2560	2570
Siltstone - red brown, buff, soft to firm, as above	2570	2575
Shale - light gray, firm, as above	2575	2580
Sandstone - white, clear, very fine grain, hard, as above pyritic in part	2580	2590
Shale - light gray, firm, silty, calcareous, dark gray, hard, silty, calcareous, some with occasional quartz inclusions	2590	2600
Sandstone - white, clear, light orange, fine to very fine grain, hard, silty in part, slightly calcareous, light orange, white, fine grain, firm, very slightly calcareous	2600	2625
Siltstone - red, red brown, soft to firm, calcareous occasional sandy, white, firm, sandy, calcareous, occasional grading to very fine grain sandstone	2625	2640
Shale - brown, red brown, light gray, soft, calcareous, subwaxy in part	2640	2650
Siltstone - brown, red brown, soft to firm, as above	2650	2655
Shale - brown, red brown, light gray, soft, as above	2655	2660
Sandstone - white, clear, buff, light brown, very fine to medium grain, hard, slightly calcareous, abundant loose large unconsolidated quartz grains	2660	2670
Shale - light gray, light green, firm, dense, subwaxy	2670	2675
Sandstone - white, clear, buff, light brown, very fine to medium grain, as above, abundant large unconsolidated quartz grains	2675	2700

	FROM	TO
Shale - light gray, firm, silty in part, subwaxy, slightly calcereous in part,light brown, hard, dense slightly calcereous	2700	2710
Siltstone - brown, light gray, firm to hard, dense, slightly calcerous	2710	2715
Sandstone - white, clear, light orange, fine grain, unconsolidated quartz grains,buff, fine grain, hard, silty in part, slight calcereous	2715	2735
Siltstone - brown, light gray, firm to hard, dense, slightly calcereous	2735	2750
Santstone - white, clear, fine to medium grain, firm to hard, slightly calcereous, abundant unconsolidated fine to medium grain quartz grains	2750	2770
Siltstone - red, red brown, firm, dense, sandy in part, slightly calcereous, light green, firm, slightly calcereous	2770	2780
Shale - light green, light gray, soft to firm, silty, sandy in part, slightly calcereous	2780	2785
Siltstone - red, red brown, light green, firm, as above	2785	2810
Shale - light green, light gray, soft to firm, as above	2810	2815
Siltstone - red, red brown, light green, as above	2815	2820
Shale - light gray, light green, soft to firm, dense, silty, sandy in part, slightly calcereous, occasional grading to siltstone	2820	2830
Siltstone - red, red brown, firm, dense, sandy, slightly calcereous, abundant coarge grain quartz inclusion	2830	2840
Shale - light gray, light green, soft to firm, as above	2840	2850
Siltstone - red, red brown, firm, sandy, as above	2850	2865
Shale - light gray, light green, firm, dense, silty in part, slightly calcereous	2865	2870
Siltstone - red, red brown, firm, dense, sandy in part, calcereous	2870	2890
Shale - light green, light gray, firm, silty, as above	2890	2900
Siltstone - red, red brown, firm, as above	2900	2910
Shale - light gray, firm, silty in part, occasional subwaxy, slightly calcereous	2910	2920
Siltstone - red, red brown, buff, soft to firm, occasional sandy, calcereous	2920	2935
Shale - light gray, firm, silty, as above	2935	2950
Siltstone - red, red brown, soft to firm, as above	2950	2960
Sandstone - white, clear, buff, fine to medium grain, unconsolidated quartz, some hard slightly calcereous clusters	2960	2970
Shale - light gray,firm, silty, subwaxy, brown, firm, silty, calcereous	2970	2980

FARM Patterson Canyon WELL NO. 1

COMPANY Mountain Fuel Supply Company

	FROM	TO
Siltstone - red, red brown, soft to firm, as above	2980	2985
Sandstone - white, clear, buff, fine to medium grain, as above	2985	2995
Shale - light gray, brown, firm, as above	2995	3000
Siltstone - light brown, buff, soft to firm, dense, micaceous, calcereous	3000	3005
Sandstone - white, clear, buff, fine to medium grain unconsolidated quartz grains	3005	3015
Siltstone - light brown, buff, soft to firm, dense, micaceous, calcereous	3015	3025
Shale - light gray, brown, soft to firm, silty, subwaxy in part, calcereous	3025	3045
Sandstone - white, clear, buff, fine to medium grain, as above	3045	3055
Siltstone - red, red brown, firm, occasional sandy, slightly calcereous	3055	3070
Shale - light gray, light green, soft to firm, dense, silty in part, some with large quartz inclusions	3070	3085
Sandstone - white, clear, fine to medium grain, unconsolidated quartz grains	3085	3095
Siltstone - red, red brown, firm, dense, sandy in part, slightly calcereous	3095	3115
Shale - light gray, light green, soft to firm, as above	3115	3130
Siltstone - red, red brown, firm, as above	3130	3150
Shale - light gray, light green, firm, dense, silty, sandy in part	3150	3160
Sandstone - white, clear, fine to medium grain, unconsolidated quartz grains	3160	3170
Shale - light gray, light green, firm, as above	3170	3175
Siltstone - red, red brown, firm, as above	3175	3180
Shale - light gray, light green, firm, silty and sandy in part, slightly calcereous	3180	3190
Siltstone - white, brown, buff, firm, sandy in part, slightly calcereous	3190	3215
Shale - light gray, gray, firm, silty & sandy in part, slightly calcereous	3215	3230
Sandstone - white, clear, fine to medium grain, unconsolidated quartz grains	3230	3240
Siltstone - white, brown, buff, firm, as above	3240	3260
Shale - light gray, light green, soft to firm, subwaxy to waxy, micaceous in part, slightly calcereous in part	3260	3275
Siltstone - red brown, brown, soft to firm, sandy in part, micaceous, slightly calcereous	3275	3285

	FROM	TO
Sandstone - white, clear, fine to medium grain, unconsolidated quartz grains	3285	3295
Siltstone - brown, red brown, buff, soft to firm, as above	3295	3320
Shale - light gray, light green, soft to firm, slightly calcereous, as above	3320	3335
Siltstone - red, red brown, buff, firm, sandy in part, micaceous, calcereous, light gray, firm, sandy calcereous	3335	3350
Sandstone - white, clear, fine to medium grain, unconsolidated quartz grains, some clusters, fine to medium grain, hard, calcereous	3350	3370
Siltstone - red, red brown, firm, sandy, micaceous, slightly calcereous	3370	3380
Shale - red, red brown, light orange, soft to firm, dense, silty, sandy in part, slightly calcereous	3380-3395	
Siltstone - red, red brown, buff, firm, dense, sandy in part, micaceous, slightly calcereous	3395	3425
Shale - light gray, light green, soft, dense, occasional sandy, slightly calcereous	3425	3430
Sandstone - white, clear, fine to medium grain, unconsolidated quartz grains, some clusters, fine to medium grain hard, calcereous	3430	3435
Siltstone - red, red brown, buff, firm, sandy, as above	3435	3465
Shale - light gray, light green, soft to firm, subwaxy, sandy in part, slightly calcereous	3465	3480
Siltstone - red, red brown, buff, firm, sandy in part, micaceous, slightly calcereous	3480	3495
Limestone - white, tan, cream, hard, dense, siliceous	3495	3500
Sandstone - white, clear, pink, fine grain, hard, silty, micaceous and arkosic in part, slightly calcereous	3500	3515
Shale - light gray, light green, soft to firm, as above	3515	3525
Siltstone - red, red brown, buff, firm, as above	3525	3530
Shale - light gray, light green, soft, subwaxy in part some quartz inclusions, slightly calcereous	3530	3545
Siltstone - red, red brown, buff, firm, sandy in part, micaceous, calcereous	3545	3560
Shale - light gray, light green, soft to firm, as above	3560	3570
Limestone - light pink, hard, dense, siliceous, non-crystalline	3570	3580
Siltstone - red, red brown, buff, soft to firm, as above	3580	3595
Shale - light gray, brown, firm, silty, subwaxy, non calcereous	3595	3610
Limestone - light orange, pink, firm to hard, dense, siliceous	3610	3620
Shale - red brown, light orange, firm, silty, calcereous	3620	3625

FARM Patterson Canyon WELL NO. 1

COMPANY Mountain Fuel Supply Co.

	FROM	TO
Siltstone - red, red brown, light orange, firm, shaly in part, slightly calcereous	3625	3645
Shale - red brown, light orange, firm, as above	3645	3665
Siltstone - red brown, red, light orange, firm, shaly, slightly calcereous	3665	3680
Limestone - light orange, pink, hard, dense, siliceous	3680	3690
Siltstone - red, red brown, light orange, as above	3690	3700
Shale - brown, red brown, light green, firm, dense, silty, micaceous in part	3700	3715
Siltstone - brown, red brown, buff, white, firm, sandy in part, micaceous, slightly calcereous	3715	3735
Limestone - pink, cream, tan, hard, dense, siliceous	3735	3740
Sandstone - white, clear, fine to medium grain, unconsolicated quartz grains	3740	3750
Siltstone - brown, red brown, buff, white, firm, as above	3750	3760
Shale - brown, red brown, light green, firm, silty, as above	3760	3775
Limestone - pink, cream, light tan, hard, dense, siliceous	3775	3785
Siltstone - brown, red brown, buff, firm, sandy in part, occasional shaly, micaceous in part, slightly calcereous	3785	3805
Sandstone - white, clear medium to coarse grain, unconsolidated quartz grains, some clusters, firm, slightly calcereous	3805	3815
Shale - brown, red brown, light green, firm, dense, silty, slightly calcereous	3815	3830
Siltstone- brown, red brown, buff, firm, as above	3830	3840
Sandstone - white, clear, fine to medium grain, hard, well consolidated, micaceous in part	3840	3855
Shale - brown, red brown, light green, firm, as above	3855	3860
Sandstone - white, clear, fine to medium grain, as above	3860	3880
Limestone - white, light gray, light pink, hard, dense siliceous, non cryst lline	3880	3890
Siltstone - red, red brown, firm, dense, slightly	3890	3905
Sandstone - white, clear, fine to very fine grain, hard, micaceous, arkose in part, slightly calcereous	3905	3925
Siltstone - red, red brown, light green, firm, micaceous in part, occasional sandy, slightly calcereous	3925	3945
Shale - red, red brown, light green, light gray, firm, as above	3945	3950
Limestone - white, light gray, light pink, hard, dense, siliceous, non-crystelline	3950	3960
Shale - red, red brown, light gray, firm, micaceous, slightly calcereous	3960	3985
Siltstone - red, red brown, light green, firm, micaceous in part	3985	4000
Limestone - white, light gray, light pink, hard, dense,	4000	4010

FARM Patterson Canyon WELL NO. 1

COMPANY Mountain Fuel Supply Co.

	FROM	TO
Siltstone - Red, red brown, light green, firm, micaceous in part.	4010	4020
Limestone - white, light gray, hard, dense, non-crystalline, siliceous	4020	4025
Shale - red, red brown, firm, dense, micaceous	4025	4030
Siltstone - red, red brown, light gray, firm, micaceous sandy	4030	4040
Limestone - white, light gray, hard, dense, non-crystalline	4040	4050
Siltstone - red, red brown, light gray, as above	4050	4060
Shale - red, red brown, light gray, light green, firm, dense, micaceous	4060	4085
Siltstone - red, red brown, light gray, firm, sandy in part, slightly calcereous	4085	4110
Shale - red, red brown, light gray, light green, as above	4110	4120
Sandstone - white, clear, light green, very fine grain, hard, micaceous, arkose	4120	4145
Shale - red brown, brown, light green, firm, dense, subwaxy	4145	4160
Siltstone - red brown, brown, firm, slightly calcereous	4160	4175
Shale - red, red brown, brown, light green, firm, as above	4175	4185
Sandstone - white, clear, fine grain, hard, micaceous, arkose	4185	4200
Siltstone - red, red brown, light gray, firm, as above	4200	4210
Sandstone - white, clear, very fine grain, hard, well consolidated, micaceous	4210	4235
Siltstone - red, red brown, light gray, firm, dense, slightly calcereous	4235	4245
Shale - red brown, light green, firm, dense, silty in part,	4245	4260
Siltstone - red, red brown, light gray, firm, as above	4260	4270
Sandstone - white, clear, medium grain, hard, well consolidated, slightly calcereous, arkosic	4270	4295
Siltstone - brown, red brown, light gray, firm, dense, calcereous	4295	4305
Shale - red, red brown, brown, light gray, light green, firm,	4305	4325
Siltstone - brown, red brown, firm, as above	4325	4340
Shale - red, red brown, firm, dense, calcereous	4340	4350
Siltstone - brown, red brown, light gray, firm, dense, calcereous	4350	4365
Limestone - white, gray, hard, dense, silty in part, siliceous	4365	4370
Siltstone - brown, light gray, light green, firm, calcereous	4370	4380
Limestone - white, hard, dense, silty in part	4380	

FARM Patterson Canyon WELL NO. 1

COMPANY Mountain Fuel Supply Co.

	FROM	TO
Shale - red brown, light gray, light green, as above	4385	4395
Limestone - white, gray, light gray, hard, dense, siliceous, silty in part, non-crystalline	4395	4400
Siltstone - red, red brown, light orange, firm, calcereous in part	4400	4405
Limestone - tan, white, hard, dense, silty in part, siliceous	4405	4415
Siltstone - red, red brown, firm, as above	4415	4425
Shale - red, red brown, gray, soft to firm, subwaxy in part, calcereous	4425	4435
Limestone - white, tan, hard, dense, as above	4435	4445
Siltstone - light gray, gray, soft to firm, sandy in part, calcereous	4445	4460
Shale - brown, dark gray, firm, dense, silty in part, calcereous	4460	4470
Sandstone - white, clear, fine grain, hard, well consolidated, calcereous	4470	4480
Siltstone - light gray, gray, firm, as above	4480	4485
Limestone - white, gray, cream, hard, dense, non-crystalline	4485	4500
Siltstone - light gray, gray, white, firm, calcereous	4500	4505
Limestone - white, gray, cream, hard, as above	4505	4510
Shale - brown, gray, light gray, firm, dense, silty in part	4510	4520
Siltstone - light gray, gray, firm, sandy in part, micaceous, calcereous	4520	4530
Sandstone - white, clear, very fine grain, hard, micaceous, siliceous cement	4530	4540
Limestone - white, pink, cream, hard, dense, siliceous, non-crystalline	4540	4555
Siltstone - light gray, gray, firm, sandy in part, calcereous	4555	4570
Sandstone - white, clear, very fine grain, well consolidated, micaceous, calcereous	4570	4595
Siltstone - brown, gray, dark gray, firm, micaceous, calcereous	4595	4600
Limestone - gray, dark gray, tan, hard, dense, siliceous, fossils in part, non-crystalline	4600	4615
Siltstone - light gray, gray, white, firm, as above	4615	4620
Shale - light green, white, gray, firm, dense, silty in	4620	4630
Santstone - white, clear, very fine grain, hard, silty calcereous	4630	4640
Siltstone - light gray, gray, firm, sandy in part, calcercereous	4640	4665
Limestone - white, clear, hard, dense, siliceous non-	4665	4670

FARM Patterson Canyon WELL NO. 1

COMPANY Mountain Fuel Supply Co.

	FROM	TO
Siltstone - light gray, gray, firm, dense, sandy in part calcereous	4670	4685
Limestone - white, clear, hard, dense, as above	4685	4690
Limestone - white, light gray, firm to hard, dense, siliceous, silty in part	4690	4710
Siltstone - tan, light gray, brown, firm to hard, dense,	4710	4730
Sandstone - white, clear, very fine grain,hard, micaceous, calcereous	4730	4740
Shale - light gray, orange, brown, firm, dense, subwaxy in part	4740	4750
Shale - light gray, orange, brown, firm, dense, subwaxy in part	4750	4760
Limestone - white, gray, cream, hard, siliceous, non-cryst lline	4760	4770
Siltstone - brown, gray, tan, firm, sandy in part, calcereous	4770	4785
Shale - light gray, orange, brown, firm, as above	4785	4795
Sandstone - white, clear, very fine grain,hard, well consolidated, calcereous	4795	4805
Shale - light gray, gray, firm, dense, silty, calcereous	4805	4815
Siltstone - brown, gray, tan, firm, dense, calcereous	4815	4835
Limestone - white, gray, light gray, hard, dense, silice-ous, non-cryst lline	4835	4850
Siltstone - white, light gray, gray, firm, sandy in part, calcereous, some with limestone inclusions	4850	4865
Limestone - white, tan, hard, siliceous, fossils in part, micro-crystalline in part	4865	4870
Sandstone - white, clear, medium grain, micaceous, glau-conite in part, very calcereous	4870	4885
Limestone - white, light tan, cream, firm to hard, dense, silty and siliceous in part, occasional mycro-crystalline in part, abundant fossils	4885	4905
Shale - red, red brown, firm, dense, silty, calcereous	4905	4915
Siltstone - red, red brown, light gray, firm, sandy in part, calcereous	4915	4920
Limestone - white, gray, tan, hard, dense, silty in part, micro-crystalline in part	4920	4940
Siltstone - light gray, gray, buff, brown, hard, dense, micaceous, very calcereous	4940	4960
Limestone - gray, dark gray, brown, tan, hard, dense, siliceous, micro-crystalline in part, fossils in part	4960	5015
Siltstone - white, gray, brown, firm, dense, very calcereous	5015	5035

FARM Patterson Canyon WELL NO. 1

COMPANY Mountain Fuel Supply Co.

	FROM	TO
Limestone - brown, tan, gray, dark gray, hard, as above	5035	5045
Siltstone - white, gray, brown, firm, as above	5045	5050
Limestone - gray, dark gray, tan, hard, dense, siliceous, fossils in part, gray, dark gray, firm, very silty, siliceous in part	5050	5065
Siltstone - white, gray, light gray, firm, sandy in part, micaceous in part, calcereous	5065	5075
Limestone - dark gray, gray, tan, soft to hard, as above	5075	5080
Shale - light gray, gray, soft to firm, silty, calcereous	5080	5090
Limestone - black, dark gray, hard, dense, very silty, siliceous, grading to siltstone	5090	5115
Siltstone - dark gray, gray, hard, dense, very calcereous	5115	5130
Sandstone - white, light gray, firm, very fine grain, silty	5130	5140
Limestone - light gray, gray, hard, dense, fossils in part, dark gray, gray, hard, dense, very silty, siliceous in part	5140	5150
Siltstone - light gray, gray, dark gray, hard, very calcereous	5150	5160
Limestone - light gray, tan, hard, dense, siliceous, very fossiliferous, microcrystalline in part, dark gray, hard, dense, very silty	5160	5180
Siltstone - dark gray, hard, dense, very calcereous	5180	5190
Limestone - dark gray, dense, hard, siliceous in part, very silty	5190	5205
Siltstone - white, soft to firm, sandy in part, light gray, gray, dark gray, hard, dense, very calcereous	5205	5215
Limestone - white, gray, light tan, hard, dense, siliceous, microcrystalline in part, dark gray, gray, hard, dense, silty, siliceous in part	5215	5230
Siltstone - white, light gray, gray, firm to hard, as above	5230	5240
Sandstone - white, light gray, very fine grain, silty, calcereous	5240	5255
Limestone - white, gray, light tan. hard, dense, as above	5255	5265
Limestone white, light gray, tan, hard, dense, silty siliceous and dolomitic in part, micro-crystalline in part, dark gray, firm, dense, silty	5265	5275
Siltstone - light gray, gray, brown, firm to hard, micaceous in part, calcereous	5275	5285
Limestone - white, light gray, gray, tan, firm to hard, as above	5285	5305
Siltstone - white, light gray, brown, firm, as above	5305	5310
Limestone - light gray, gray, dark gray, firm to hard, dense, siliceous, silty in part, white, light gray, hard, dense, siliceous	5310	5330

FARM Patterson Cany WELL NO. 1

COMPANY Mountain Fuel Supply Co.

	FROM	TO
Siltstone - white, light gray, firm, dense, calcereous	5330	5335
Limestone - white, light gray, gray, dark gray, firm to hard as above	5335	5355
Siltstone - gray, hard, very calcereous, white, soft, sandy, calcereous	5355	5365
Limestone - light gray, tan, hard, dense, silty, siliceous, dark gray, gray, silty, siliceous in part	5365	5390
Siltstone - white, gray, soft to hard, as above	5390	5400
Limestone - light gray, gray, tan, firm to hard, dense, siliceous, fossiliferous in part, dark gray, hard, dense, silty, siliceous	5400	5425
Siltstone - white, soft and sandy, very calcereous, gray, dark gray, hard, dense, calcereous	5425	5435
Limestone - white, light gray, gray, dark gray, as above	5435	5440
Siltstone - white, light gray, dark gray, soft to hard, as above	5440	5455
Limestone - white, soft to hard, silty, siliceous, very crystalline in part, gray, dark gray, hard, silty, siliceous	5455	5470
Dolomite - white, hard, dense, crystalline	5470	5475
Limestone - white, gray, dark gray, soft to hard, as above	5475	5485
Dolomite - white, hard, as above	5485	5490
Limestone - white, dark gray, soft to hard, as above	5490	5500
Shale - dark gray, firm, silty, calcereous	5500	5505
Dolomite - white, tan, firm to hard, silty and siliceous in part, micro-crystalline	5505	5515
Limestone - white, light gray, hard, silty, siliceous	5515	5520
Dolomite - white, light tan, firm to hard, as above	5520	5535
Limestone - lavendar, light gray, hard, dense, siliceous, silty in part, micro-crystalline in part	5535	5555
Dolomite - white, hard, dense, limey, siliceous and silty in part	5555	5560
Limestone - white, light gray, hard, dense, as above	5560	5570
Shale - black, firm, dense, silty, very calcereous, occasional grading to siltstone	5570	5600
Limestone - light gray, hard, dense, silty, micro-crystalline in part	5600	5610
Shale - black, firm, dense, as above	5610	5630
Anhydrite - white, soft to firm, massive, micro-crystalline in part	5630	5645
Limestone - light gray, firm, dense, silty	5645	5650
Shale - black, hard, dense, silty, very calcereous	5650	5660
Siltstone - light gray, tan, firm, limey, domomitic in part	5660	5665

post. 5464-76

FARM Patterson Canyon WELL NO. 1

COMPANY Mountain Fuel Supply Co.

	FROM	TO
Shale - black, hard, dense, as above, occasional grading to siltstone	5665	5685
Limestone - light gray, firm to hard, silty, micro-crystalline in part	5685	5690
Dolomite - light tan, firm, limey, sucrosic	5690	5695
Anhydrite - white, soft to firm, micro-crystalline in part	5695	5705
Limestone - light gray, firm to hard, as above	5705	5710
Siltstone & shale, as above	5710	5720
Anhydrite - white, soft to firm, as above	5720	5725
Shale - black, firm to hard, silty, calcereous	5725	5730
Limestone - white, cream, light gray, hard, silty, siliceous in part, dolomite-light brown, firm, silty, micro-crystalline	5730	5740
Limestone - white, cream, light gray, hard, silty, siliceous in part	5740	5745
Dolomite - light tan, brown, firm, silty, micro-crystalline	5745	5750
Anhydrite - white, firm, micro-crystalline in part	5750	5755
Siltstone - dark gray, brown, firm, limey, occasional dolomite in part, very calcereous	5755	5770
Shale - black, firm, silty, very calcereous, occasional grading to siltstone	5770	5804
Salt -	5804	5820

CL 1 51 (REV. 1966)

RECEIVED
AUG 18 1976
DIVISION OF OIL, GAS & MINING

CHEM LAB

WATER ANALYSIS EXCHANGE REPORT

MEMBER Mountain Fuel Supply Company
OPERATOR Mountain Fuel Supply Company
WELL NO. Patterson Canyon #1
FIELD Paradox Basin
COUNTY San Juan
STATE Utah

LAB NO. 12753 REPORT NO.
LOCATION NE NW 9-38S-25E
FORMATION Upper Ismay
INTERVAL 5430-5504
SAMPLE FROM Production 5-23-74
DATE May 28, 1974

REMARKS & CONCLUSIONS: Very cloudy water with clear filtrate

Cations	mg/l	meq/l	Anions	mg/l	meq/l
Sodium	68701	2988.51	Sulfate	620	12.90
Potassium	2586	66.20	Chloride	135000	3807.00
Lithium	–	–	Carbonate	0	–
Calcium	11753	586.47	Bicarbonate	305	5.00
Magnesium	2235	183.72	Hydroxide	–	–
Iron	–	–	Hydrogen sulfide	–	–
Total Cations		3824.90	Total Anions		3824.90

Total dissolved solids, mg/l 221045
NaCl equivalent, mg/l 222315
Observed pH 7.3

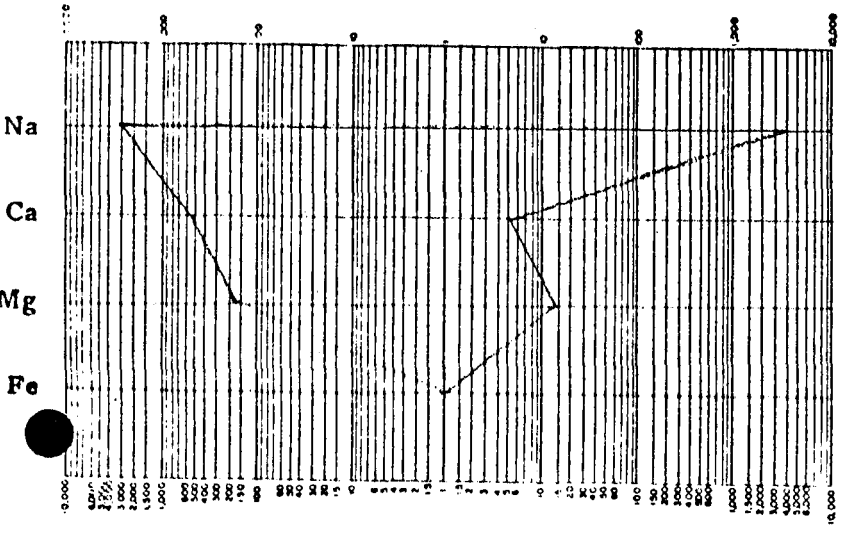
Specific resistance @ 68° F.:
Observed 0.057 ohm-meters
Calculated 0.053 ohm-meters

DIV. OF OIL, GAS, AND MINING
DATE:
BY:

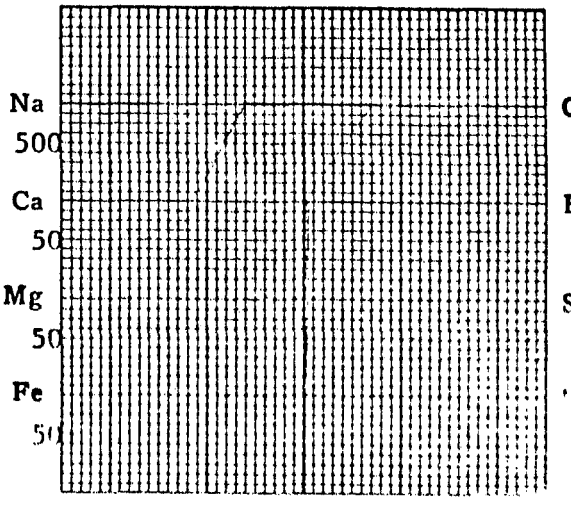
WATER ANALYSIS PATTERNS

MEQ per unit

LOGARITHMIC



STANDARD



(Na value in above graphs includes Na, K, and Li)
NOTE: Mg/l = Milligrams per liter. Meq/l = Milligram equivalents per liter
Sodium chloride equivalent = by Dunlap & Hawthorne calculation from components

9-331
1973

Form Approved.
Budget Bureau No. 42-R1424

2

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9-331-C for such proposals.)

1. oil well ☒ gas well ☐ other

2. NAME OF OPERATOR
Wexpro Company

3. ADDRESS OF OPERATOR
P. O. Box 458, Rock Springs, WY 82902

4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.)
AT SURFACE: NE NW, 1674' FWL, 560' FNL
AT TOP PROD. INTERVAL:
AT TOTAL DEPTH:

5. LEASE
U-0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
--

7. UNIT AGREEMENT NAME
Patterson

8. FARM OR LEASE NAME
Patterson Canyon

9. WELL NO.
1

10. FIELD OR WILDCAT NAME
Patterson

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
9-38S-25E, SLB&M

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

14. API NO.
43-037-30170

15. ELEVATIONS (SHOW DF, KDB, AND WD)
GR 5225'

16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

REQUEST FOR APPROVAL TO:		SUBSEQUENT REPORT OF:	
TEST WATER SHUT-OFF	☐		☐
FRACTURE TREAT	☐		☐
SHOOT OR ACIDIZE	☐		☐
REPAIR WELL	☐		☐
PULL OR ALTER CASING	☐		☐
MULTIPLE COMPLETE	☐		☐
CHANGE ZONES	☐		☐
ABANDON*	☐		☐
(other) see below			

RECEIVED
MAR 30 1984
DIVISION OF
OIL, GAS & MINING

(NOTE: Report results of multiple completion or zone change on Form 9-330.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Testing complete. Install three additional 400 barrel tanks on location. Tie in well to gas line (on location). Facilities utilized for testing will remain on location permanently.

Site facility diagram will be submitted within 30 days of initial production.

Subsurface Safety Valve: Manu. and Type _____ Set @ _____ Ft.

18. I hereby certify that the foregoing is true and correct

SIGNED C. T. Timm TITLE District Foreman DATE March 22, 1984

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0135
Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.: U-0146520-A

POW

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: --

051128

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

7. UNIT AGREEMENT NAME: Patterson

2. NAME OF OPERATOR: Wexpro Company

8. FARM OR LEASE NAME: Canyon

3. ADDRESS OF OPERATOR: P. O. Box 458, Rock Springs, Wyoming 82902

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: NE NW, 560' FNL, 1674' FWL

10. FIELD AND POOL, OR WILDCAT: Patterson

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: 9-38S-25E, SLB&M

14. PERMIT NO.: 43-037-30170

15. ELEVATIONS (Show whether DF, RT, GR, etc.): GR 5225'

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other) See Below			X	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS: (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Wexpro Company requests permission for off-lease measurement of the above-captioned well. Due to the contraction of the Patterson Unit, the measurement of this well at the Patterson Battery is no longer within the unit boundary, and is, therefore, without authorization. A facility diagram and unit map are attached for further reference. This well produces approximately 41 BOPD, 74 BWPD, and 37 MCFPD.

RECEIVED
MAY 07 1987
DIVISION OF
OIL, GAS & MINING

18. I hereby certify that the foregoing is true and correct

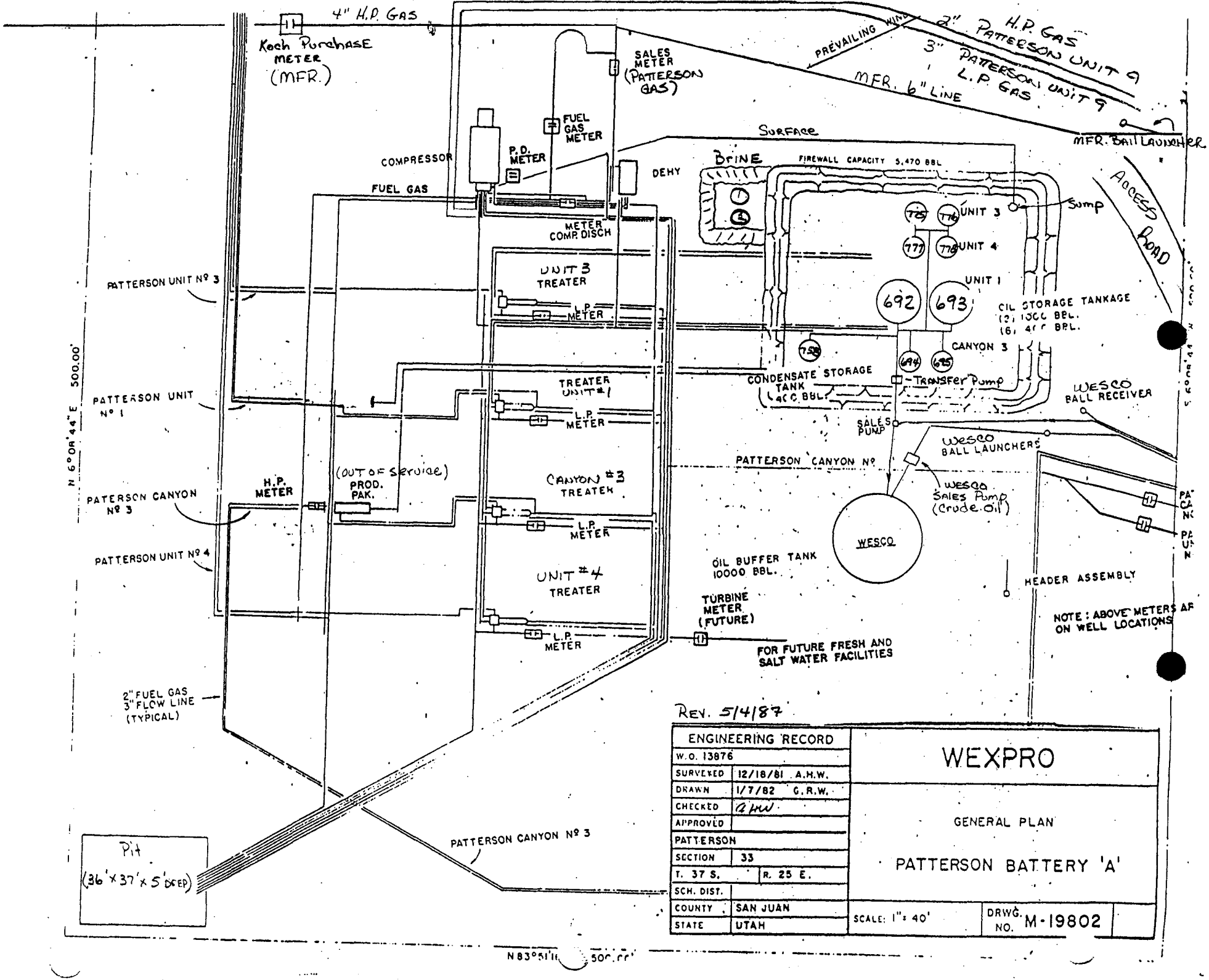
SIGNED R. K. Hagen TITLE District Manager DATE May 4, 1987

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side



REV. 5/4/87

ENGINEERING RECORD		
W.O. 13876		
SURVEYED	12/18/81	A.H.W.
DRAWN	1/7/82	G.R.W.
CHECKED	GHW	
APPROVED		
PATTERSON		
SECTION	33	
T. 37 S.	R. 25 E.	
SCH. DIST.		
COUNTY	SAN JUAN	
STATE	UTAH	

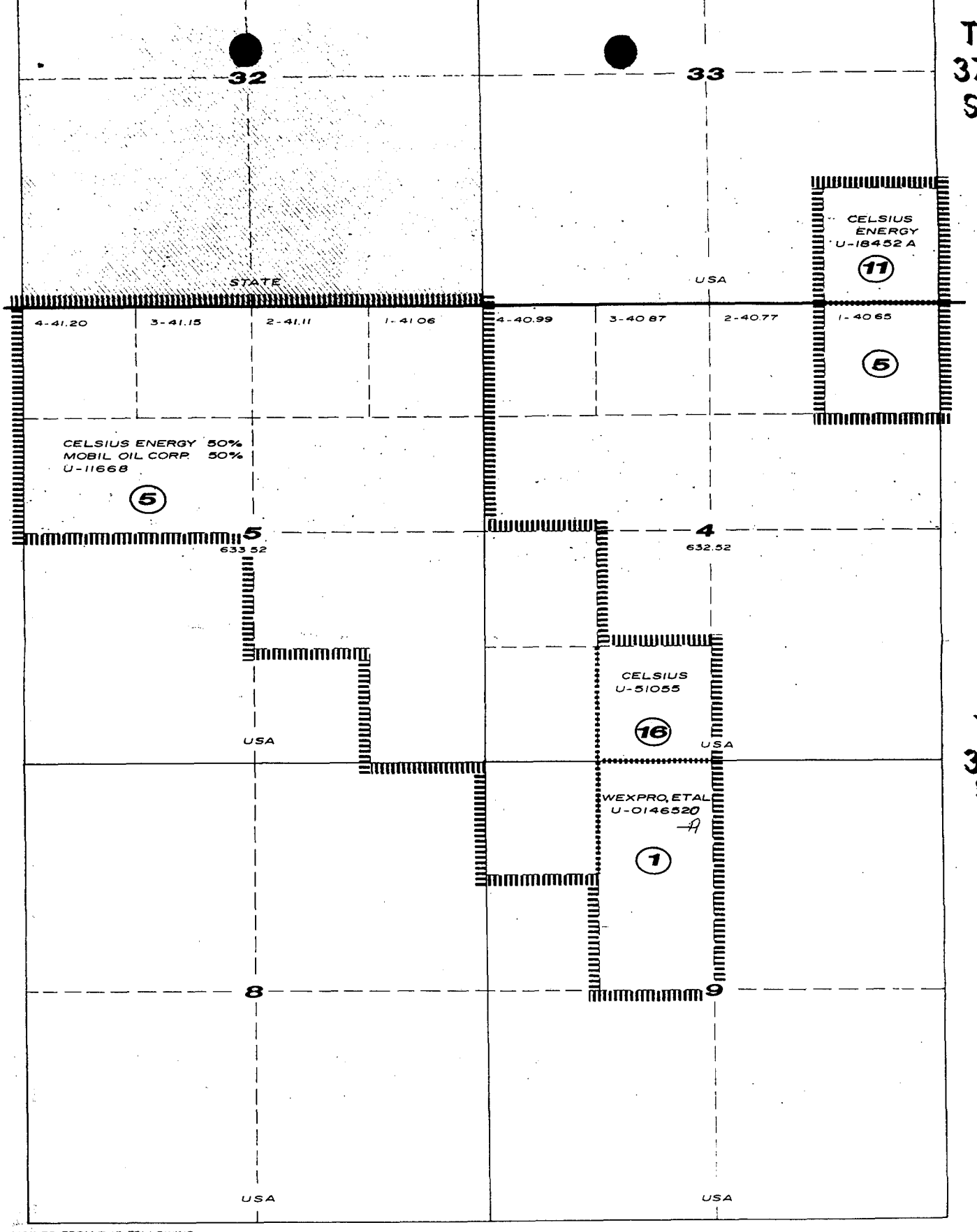
WEXPRO

GENERAL PLAN

PATTERSON BATTERY 'A'

SCALE: 1" = 40'

DRWG. NO. M-19802



MAILED FROM THE FOLLOWING
T. LAND OFFICE SURVEY PLATS
E: JULY 28, 1923 (ALL ARE IN THE SL B & M, UTAH)
E: MARCH 31, 1920

	ACRES	PERCENT
UNIT BOUNDARY	765.17	100.00000
TRACT BOUNDARY AND NUMBER		
FEDERAL LANDS	765.17	100.00000
STATE LANDS		

— ABBREVIATIONS —

EXHIBIT 'A'

CONTRACTED PATTERSON UNIT

SAN JUAN COUNTY, UTAH

WEXPRO COMPANY

SALT LAKE CITY, UTAH

Form 3160-5
December 1989

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires September 30, 1990

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

OCT 03 1990

DIVISION OF
OIL, GAS & MINING

5. Lease Designation and Serial No.
U-0146520-A

6. If Indian, Allottee or Tribe Name
--

7. If Unit or CA, Agreement Designation
Patterson Unit

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.
Patterson Canyon 1

2. Name of Operator
Wexpro Company

9. API Well No.
43-037-30170 POW

3. Address and Telephone No.
P. O. Box 458, Rock Springs, WY 82902 307-382-9791

10. Field and Pool, or Exploratory Area
Patterson

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
560' FNL, 1674' FWL, NE NW, 9-38S-25E

11. County or Parish, State
San Juan, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other Flare Gas	

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On October 11, 1990, Patterson Battery Compressor is scheduled to be shut-in for routine maintenance. It is anticipated that the overhaul will be completed in four days. While the compressor is down, approximately 27 MCFPD will be vented to the atmosphere from the above well. Other wells which will be venting gas are Patterson Unit Wells No. 1, 3 and 9, and Patterson Canyon Wells No. 1 and 3. The volume of flared gas will be reported on the Monthly Report of Operations.

ACCEPTED BY THE STATE
OF UTAH DIVISION OF
OIL, GAS, AND MINING
DATE: 10/4/90
BY:

OIL AND GAS	
DPN	RJF
JRB	GLH
DTS	2 SLS
2 SLH	
4-Time	
45 MICROFILM	
FILE	

Federal approval of this action is required before commencing operations.

14. I hereby certify that the foregoing is true and correct

Signed _____ Title District Manager Date 10/02/90

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

2. Name of Operator
Wexpro Company

3. Address and Telephone No.
P. O. Box 458, Rock Springs, WY 82902 (307) 382-9791

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
NE NW, 9-38S-25E

5. Lease Designation and Serial No.
U-0146520-A

6. If Indian, Allottee or Tribe Name
---

7. If Unit or CA, Agreement Designation
Patterson

8. Well Name and No.
Canyon No. 1

9. API Well No.
43-037-30170

10. Field and Pool, or Exploratory Area
Patterson

11. County or Parish, State
San Juan, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other Undesirable Event	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On November 25, 1991 at approximately 8:00 a.m., the field operator of the above well discovered the sight glass on the treater was broken resulting in approximately 10 barrels of oil and 5 barrels of water spilling onto the location. Clean up was conducted using matasorb and removal of stained soil. Clean up was finished by 4:00 p.m. The sight glass was replaced. There was no obvious reason for the glass to break, however, vandalism has been ruled out. BLM, Utah Division of Oil, Gas, Mining, and Utah Division of Social Services were notified.

RECEIVED
NOV 29 1991
DIVISION OF
OIL GAS & MINING

14. I hereby certify that the foregoing is true and correct

Signed _____ Title District Manager Date 11/26/91

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: U-0146520-A
6. If Indian, Allottee or Tribe Name: ---
7. If Unit or CA, Agreement Designation: Patterson
8. Well Name and No.: Canyon No. 1
9. API Well No.: 43-037-30170
10. Field and Pool, or Exploratory Area: Patterson
11. County or Parish, State: San Juan, Utah

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator: Wexpro Company
3. Address and Telephone No.: P.O. Box 458, Rock Springs, WY 82902 (307) 382-9791
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): NE NW, 9-38S-25E

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other Undesirable Event	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On December 2, 1991 at approximately 8:00 a.m., the field operator of the above well discovered the sight glass on the treater was broken resulting in approximately 5 barrels of oil and 3 barrels of water spilling onto the location. Clean up was conducted using matasorb and removal of stained soil. Clean up was finished by 6:00 p.m. The sight glass was replaced. An ice plug formed in the flow line causing pressure to build in the treater. The sight glass broke at approximately 60 pounds before the rupture disk. Utah Division of Oil, Gas, Mining, and Utah Division of Social Services were notified.

RECEIVED
DEC 0 5 1991
DIVISION OF
OIL GAS & MINING

14. I hereby certify that the foregoing is true and correct

Signed _____ Title District Manager Date 12-2-91

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

2. Name of Operator
WEXPRO COMPANY

3. Address and Telephone No.
P.O. Box 458 Rock Springs, WY 82902 (307) 382-9791

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
NE NW 9-38S-25E
560' FNL, 1674' FWL

5. Lease Designation and Serial No.
U-0146520-A

6. If Indian, Allottee or Tribe Name
---

7. If Unit or CA, Agreement Designation
Patterson

8. Well Name and No.
Canyon No. 1

9. API Well No.
43-037-30170

10. Field and Pool, or Exploratory Area
Patterson

11. County or Parish, State
San Juan, Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other Flare Gas	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On September 24, 1992, Patterson Battery Compressor is scheduled to be shut-in for overhaul. It is anticipated that the overhaul will be completed in three days. While the compressor is down, approximatly 171 MCFPD (combined total) will be vented to the atmosphere from Patterson Canyon No. 1, Patterson Canyon No. 3, Patterson Unit No. 1 and Patterson Unit No. 3. The volume of gas flared will be reported on the Monthly Report of Operations. Verbal approval was granted by Dale Manchester, Moab District Office.

ACCEPTED BY THE STATE OF UTAH DIVISION OF OIL, GAS AND MINING
DATE: 9/30/92
BY: [signature]

RECEIVED
SEP 28 1992
DIVISION OF OIL GAS & MINING

14. I hereby certify that the foregoing is true and correct

Signed [signature] Title District Superintendent Date 9/24/92

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

5. LEASE DESIGNATION AND SERIAL NO.
U-0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
---

7. IF UNIT OR CA, AGREEMENT DESIGNATION
PATTERSON

1. TYPE OF WELL
OIL [X] WELL GAS [ ] WELL [ ] OTHER

8. WELL NAME AND NO.
CANYON NO. 1

2. NAME OF OPERATOR
WEXPRO COMPANY

9. API WELL NO.
43-037-30170

3. ADDRESS AND TELEPHONE NO.
P. O. BOX 458, ROCK SPRINGS, WY 82902 (307) 382-9791

10. FIELD AND POOL, OR EXPLORATORY AREA
PATTERSON

4. LOCATION OF WELL (FOOTAGE, SEC., T., R., M., OR SURVEY DESCRIPTION)
560' FNL, 1674' FWL
NE NW, 9-38S-25E

11. COUNTY OR PARISH, STATE
SAN JUAN, UTAH

RECEIVED
OCT 12 1993
DIVISION OF
OIL, GAS & MINING

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change in Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other FLARE GAS	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On October 7-13, 1993, the Patterson Battery Compressor was shut-in for overhaul. While the compressor is down, approximately 85 MCFPD will be vented to the atmosphere from the above well. Other wells which will be venting gas are Patterson Unit Well Nos. 1, 3 and 9, and Patterson Canyon Well Nos. 1 and 3. The volume of flared gas will be reported on the Monthly Report of Operations. Verbal approval was granted by Eric Jones, Moab District Office.

14. I hereby certify that the foregoing is true and correct

Signed _____ Title District Superintendent Date 10/8/93

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S. C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT -" for such proposals

SUBMIT IN TRIPLICATE

5. LEASE DESIGNATION AND SERIAL NO.: U-0146520-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA

7. IF UNIT OR CA, AGREEMENT DESIGNATION: PATTERSON

1. TYPE OF WELL: [X] OIL WELL [ ] GAS WELL [ ] OTHER

8. WELL NAME AND NO.: PATTERSON CANYON NO. 1

2. NAME OF OPERATOR: WEXPR

9. API WELL NO.: 43-037-30170

3. ADDRESS AND TELEPHONE NO.: P. O. BOX 458, ROCK SPRINGS, WY 82902 (307) 382-9791

10. FIELD AND POOL, OR EXPLORATORY AREA: PATTERSON

4. LOCATION OF WELL (FOOTAGE, SEC., T., R., M., OR SURVEY DESCRIPTION): NE NW 9-38S-25E, SLB&M

11. COUNTY OR PARISH, STATE: SAN JUAN COUNTY, UTAH

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change in Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other UNDESIRABLE EVENT	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

On August 4, 2000 at 2:15 p.m., the contract operator discovered a leak in the water dump line at Patterson Canyon Well No. 1. Approximately 30 barrels of salt water were discharged on the location. The well, line and equipment were shut-in. No containment was possible. The spill will be noted on the Monthly Report of Operations. Other State and National organizations will be notified as necessary.

RECEIVED
AUG 10 2000
DIVISION OF OIL, GAS AND MINING

14. I hereby certify that the foregoing is true and correct

Signed _____ Title G. T. Nimmo, Operations Manager Date August 8, 2000

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

Title 18 U.S. C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

***See Instruction on Reverse Side**

Form 3160-5
(Aug. 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0135
Expires. Nov. 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals

SUBMIT IN TRIPLICATE - Other instructions on reverse side

5. Lease Serial No.
SEE BELOW

6. If Indian, Allottee or Tribe Name
NA

7. If Unit or CA,/Agreement, Name and/or No
PATTERSON UNIT

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.
SEE BELOW

2. Name of Operator
WEXPRO COMPANY

9. API Well No.
SEE BELOW

3a. Address
P. O. BOX 458, ROCK SPRINGS, WYOMING 82902-0458

3b. Phone No. *(include area code)*
307-382-9791

10. Field and Pool, or Exploratory Area
PATTERSON

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
SEE BELOW

11. County or Parish, State
SAN JUAN COUNTY, UTAH

43-037-30170

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
[X] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/Resume)	[ ] Water Shut-Off
[ ] Subsequent Report	[ ] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Final Abandonment Notice	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[X] Other VARIANCE
	[ ] Change Plans	[ ] Plug and Abandon	[ ] Temporarily Abandon	
	[ ] Convert to Injection	[ ] Plug Back	[ ] Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion is a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wexpro Company is requesting a variance from Onshore Order No. 5, III.B.17 which requires meter calibrations on a quarterly basis. Wexpro Company is requesting that meter calibrations be performed on the following wells on a semi-annual basis:

Patterson Unit Well No. 1
NE NW 5-38S-25E
San Juan County, Utah
Lease No. U-11668
Meter Location 1087
API No. 43-037-30510
Currently does not produce

Patterson Unit Well No. 3
SW NE 5-38S-25E
San Juan County, Utah
Lease No. U-11668
Meter Location 1627
API No. 43-037-30848
Produces 10 MCFPD

Patterson Unit Well No. 5
SW SW 4-38S-25E
San Juan County, Utah
Lease No. U-11668
Meter Location 2294
API No. 43-037-31019
Water Injection Well
Fuel Gas Meter - No sales

Patterson Canyon Well No. 1
NE NW 9-38S-25E
San Juan County, Utah
Lease No. U-0146520-A
Meter Location 1878
API No. 43-037-30170
Produces 45 MCFPD

RECEIVED
JUL 18 2001
DIVISION OF
OIL, GAS AND MINING

CONTINUED ON PAGE TWO

14. I hereby certify that the foregoing is true and correct

Name *(Printed/Typed)* G. T. Nimmo — Title Operations Manager

Signature — Date July 12, 2001

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by — Title — Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. — Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 3160-5
(Aug. 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

PAGE TWO

FORM APPROVED
OMB No. 1004-0135
Expires: Nov. 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals

SUBMIT IN TRIPLICATE - Other instructions on reverse side

5. Lease Serial No.
SEE BELOW

6. If Indian, Allottee or Tribe Name
NA

7. If Unit or CA./Agreement, Name and/or No.
PATTERSON UNIT

8. Well Name and No.
SEE BELOW

9. API Well No.
SEE BELOW

10. Field and Pool, or Exploratory Area
PATTERSON

11. County or Parish, State
SAN JUAN COUNTY, UTAH

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

2. Name of Operator
WEXPRO COMPANY

3a. Address
P. O. BOX 458, ROCK SPRINGS, WYOMING 82902-0458

3b. Phone No. *(include area code)*
307-382-9791

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
SEE BELOW

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
[X] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/Resume)	[ ] Water Shut-Off
[ ] Subsequent Report	[ ] Alter Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Final Abandonment Notice	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[X] Other VARIANCE
	[ ] Change Plans	[ ] Plug and Abandon	[ ] Temporarily Abandon	
	[ ] Convert to Injection	[ ] Plug Back	[ ] Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion is a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

The request for variance is based on the following reasons:

(1) Questar Gas Management takes delivery of the gas produced from the Patterson A Battery located in the SW SW 33-37S-25E, through Meter Location 377 (Master Meter) which is the delivery and royalty point for the gas produced from the above wells.

(2) The well meters listed are for allocation purposes only.

(3) A change from quarterly to semi-annual meter calibrations would be more cost effective for Wexpro due to the low gas production.

(4) Conducting meter calibrations on a semi-annual basis would not have a negative impact on royalties or royalty payments.

Accepted by the Utah Division of Oil, Gas and Mining

Date: 7/23/01

By: [signature]

Federal Approval Of This Action Is Necessary

COPY SENT TO OPERATOR
Date: 7-23-01
Initials: CHD

RECEIVED
JUL 18 2001
DIVISION OF
OIL, GAS AND MINING

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

ROUTING
1. DJJ
2. CDW

X Change of Operator (Well Sold) Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective: **1/2/2006**

FROM: (Old Operator):	**TO:** (New Operator):
N1070-Wexpro Company	N2355-Seeley Oil Company, LLC
PO Box 458	PO Box 9105
Rock Springs, WY 82902	Salt Lake City, UT 84109
Phone: 1 (307) 382-9791	Phone: 1 (801) 467-6419

CA No. **Unit:** **PATTERSON**

WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
PATTERSON UNIT 5	04	380S	250E	4303731019	1071	Federal	WD	A
PATTERSON CYN 3	05	380S	250E	4303730391	1070	Federal	OW	S
PATTERSON UNIT 1	05	380S	250E	4303730510	1065	Federal	OW	S
PATTERSON UNIT 3	05	380S	250E	4303730848	1065	Federal	OW	S
PATTERSON CYN 1	09	380S	250E	4303730170	1070	Federal	OW	S

OPERATOR CHANGES DOCUMENTATION

Enter date after each listed item is completed

1. (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 3/6/2006
2. (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 3/15/2006

3. The new company was checked on the **Department of Commerce, Division of Corporations Database on:** 6/13/2006
4. Is the new operator registered in the State of Utah: YES Business Number: 5260313-0160
5. If **NO**, the operator was contacted contacted on:

6a. (R649-9-2)Waste Management Plan has been received on: Requested 6/13/06
6b. Inspections of LA PA state/fee well sites complete on: n/a
6c. Reports current for Production/Disposition & Sundries on: ok

7. **Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM 5/5/2006 BIA n/a

8. **Federal and Indian Units:**
The BLM or BIA has approved the successor of unit operator for wells listed on: 5/5/2006

9. **Federal and Indian Communization Agreements ("CA"):**
The BLM or BIA has approved the operator for all wells listed within a CA on: n/a

10. **Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject,** for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: 6/12/2006

DATA ENTRY:

1. Changes entered in the **Oil and Gas Database on:** 6/13/2006
2. Changes have been entered on the **Monthly Operator Change Spread Sheet on:** 6/13/2006
3. Bond information entered in RBDMS on: n/a
4. Fee/State wells attached to bond in RBDMS on: n/a
5. Injection Projects to new operator in RBDMS on: 6/13/2006
6. Receipt of Acceptance of Drilling Procedures for APD/New on: n/a

BOND VERIFICATION:

1. Federal well(s) covered by Bond Number: UT0692
2. Indian well(s) covered by Bond Number: n/a
3. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number n/a

a. The **FORMER** operator has requested a release of liability from their bond on: n/a
The Division sent response by letter on: n/a

LEASE INTEREST OWNER NOTIFICATION:

4. (R649-2-10) The **FORMER** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: n/a

COMMENTS:

FORM 9

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number: UTU-11668

6. If Indian, Allottee or Tribe Name:

7. Unit Agreement Name: Patterson Canyon

8. Well Name and Number: Patterson Canyon 1

9. API Well Number: 43-037-30170

10. Field and Pool, or Wildcat: Patterson Canyon

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

1. Type of Well: OIL [X] GAS [ ] OTHER:

2. Name of Operator: SEELEY OIL COMPANY, LLC N2880

3. Address and Telephone Number: P.O. Box 9105, Salt Lake City, UT 84109 (801) 467-6419

4. Location of Well
Footages:
QQ, Sec., T., R., M.: NENW - Sec. 9, T38S, R25E
County: San Juan
State: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
[ ] Abandon	[ ] New Construction	[ ] Abandon *	[ ] New Construction
[ ] Repair Casing	[ ] Pull or Alter Casing	[ ] Repair Casing	[ ] Pull or Alter Casing
[ ] Change of Plans	[X] Recomplete	[ ] Change of Plans	[ ] Reperforate
[ ] Convert to Injection	[ ] Reperforate	[ ] Convert to Injection	[ ] Vent or Flare
[ ] Fracture Treat or Acidize	[ ] Vent or Flare	[ ] Fracture Treat or Acidize	[ ] Water Shut-Off
[ ] Multiple Completion	[ ] Water Shut-Off	[ ] Other Change of Operator	
[ ] Other			
Approximate date work will start		Date of work completion	

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form.

* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Seeley Oil Company, LLC is considered to be the operator of the above referenced well, Lease UTU-11668, San Juan County, Utah, and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by Utah Federal Bond UT0692.

13.
Name & Signature: B. K. Seeley Jr. Title: President Date: 2/28/06

(This space for State use only)

APPROVED 6/13/06
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

RECEIVED
MAR 0 6 2006
DIV. OF OIL, GAS & MINING

(4/94)

Form 3160- 5
(September 2001)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004- 0135
Expires: January 31,2004

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side

5. Lease Serial No.: U-0146520-A
6. If Indian, Allottee, or Tribe Name: N/A
7. If Unit or CA. Agreement Designation: Patterson
8. Well Name and No.: Patterson Canyon 1
9. API Well No.: 43-037-30170
10. Field and Pool, or Exploratory Area: Patterson
11. County or Parish, State: San Juan, Utah

1. Type of Well: [X] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator: **WEXPRO COMPANY** N1070
3a. Address: P. O. BOX 458, ROCK SPRINGS, WY 82902
3b. Phone No. *(include area code)*: (307) 382-9791
4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*: 560' FLN, 1674' FWL NENW: 9-T38S-25E

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
[X] Notice of Intent	[ ] Acidize	[ ] Deepen	[ ] Production (Start/ Resume)	[ ] Water Shut-off
	[ ] Altering Casing	[ ] Fracture Treat	[ ] Reclamation	[ ] Well Integrity
[ ] Subsequent Report	[ ] Casing Repair	[ ] New Construction	[ ] Recomplete	[X] Other Change of Operator
	[ ] Change Plans	[ ] Plug and abandon	[ ] Temporarily Abandon	
[ ] Final Abandonment Notice	[ ] Convert to Injection	[ ] Plug back	[ ] Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths or pertinent markers and sands. Attach the Bond under which the work will performed or provide the Bond No. on file with the BLM/ BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notice shall be filed only after all requirements, including reclamantion, have been completed, and the operator has determined that the site is ready for final inspection.)

Please be advised that Seeley Oil Company, LLC is considered to be the operataor of the above referenced well pursuant to that certain Assignment and Bill of Sale dated November 18, 2005. Seeley Oil Company, LLC is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. The effective date of change is January 2, 2006.

Bond #58023144

Seeley Oil Company, LLC
P.O. Box 9015
Salt Lake City, Utah 84109-0015

B. K. Seeley

B.K. Seeley Jr. President

Date March 10, 2006

APPROVED 6/13/06
Earlene Russell
Division of Oil, Gas and Mining
Earlene Russell, Engineering Technician

14. I hereby certify that the foregoing is true and correct.
Name *(Printed/ Typed)*: J.R. Livsey
Title: Vice President
Signature: J R Livsey
Date: March 10, 2006

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001 AND Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make any department or agency of the United States any false, fictitiousor fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

RECEIVED
MAR 15 2006
DIV. OF OIL, GAS & MINING

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
P.O. Box 45155
Salt Lake City, UT 84145-0155

IN REPLY REFER TO
3180
UT-922

May 5, 2006

Seeley Oil Company, LLC
P.O. Box 9015
Salt Lake City, Utah 84109

Re: Patterson Unit
San Juan County, Utah

Gentlemen:

On April 14, 2006, we received an indenture dated January 2, 2006, whereby Wexpro Company resigned as Unit Operator and Seeley Oil Company, LLC was designated as Successor Unit Operator for the Patterson Unit, San Juan County, Utah.

This indenture was executed by all required parties and the signatory parties have complied with Sections 5 and 6 of the unit agreement. The instrument is hereby approved effective May 5, 2006. In approving this designation, the Authorized Officer neither warrants nor certifies that the designated party has obtained all required approval that would entitle it to conduct operations under the Patterson Unit Agreement.

Your Utah statewide oil and gas bond No. UT0692 will be used to cover all federal operations within the Patterson Unit.

It is requested that you notify all interested parties of the change in unit operator. Copies of the approved instruments are being distributed to the appropriate federal offices, with one copy returned herewith.

Sincerely,

/s/ James Fouts

for Douglas Cook
Chief, Branch of Fluid Minerals

Enclosure

bcc: Field Manager - Moab (w/enclosure)
SITLA
Division of Oil, Gas & Mining
File - Patterson Unit (w/enclosure)
Agr. Sec. Chron
Reading File
Central Files

UT922:TAThompson:tt:5/5/06

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

5. LEASE DESIGNATION AND SERIAL NUMBER: U-0146520-A
6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
7. UNIT or CA AGREEMENT NAME: Patterson
1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER
8. WELL NAME and NUMBER: Canyon #1
2. NAME OF OPERATOR: Seeley Oil Company
9. API NUMBER: 4303730170
3. ADDRESS OF OPERATOR: P.O. Box 9015 CITY Salt Lake City STATE ut ZIP 84109
PHONE NUMBER: (801) 467-6419
10. FIELD AND POOL, OR WILDCAT: Patterson
4. LOCATION OF WELL
FOOTAGES AT SURFACE:
COUNTY: San Juan
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 9 38S 25E
STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: _____	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☐ SUBSEQUENT REPORT (Submit Original Form Only)	☑ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion: _____	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☐ OTHER: _____
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

We desire to change the well name from Patterson Canyon #1 to the Patterson Unit #8.

All future submissions must be submitted on the proper Federal form.

RECEIVED
MOAB FIELD OFFICE
2007 SEP 19 AM 9:57

NAME (PLEASE PRINT) B.K. Seeley Jr. TITLE President

SIGNATURE B.K. Seeley Jr. DATE 9/17/2007

(This space for State use only)

NOTED

Division of Resources
Moab Field Office RECEIVED 9/19/07

SEP 30 2008

DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)