AT S-12-931

SWD-1343

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Form 3160-3
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☑ REENTER	5. Lease Serial No. NM 19836
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☑ Other SWD ☑ Single Zone ☐ Multiple Zone	6. If Indian, Allotee or Tribe Name
2. Name of Operator MURCHISON OIL & GAS, INC.	7. If Unit or CA Agreement, Name and No.
3a. Address 1100 MIRA VISTA BLVD. PLANO, TX 75093-4698	8. Lease Name and Well No. RINGER FEDERAL #6 SWD 39403?
3b. Phone No. (include area code) 972-931-0700	9. API Well No. ~~30-015-33187~~
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface 1,250' FSL & 1,250' FEL At proposed prod. zone	10. Field and Pool, or Exploratory SWD; DEVONIAN 96101?
	11. Sec., T. R. M. or Blk. and Survey or Area SEC. 3, T25S, R26E
14. Distance in miles and direction from nearest town or post office* 17 MILES SW OF CARLSBAD, NEW MEXICO	12. County or Parish EDDY / 13. State NM
15. Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg. unit line, if any) 70'	16. No. of acres in lease 359.86 AC / 17. Spacing Unit dedicated to this well N/A
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 3,485'	19. Proposed Depth 13,700' / 20. BLM/BIA Bond No. on file NM2163
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3,340' GL	22. Approximate date work will start* 10/01/2012 / 23. Estimated duration 24 DAYS

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature	Name (Printed/Typed) JACK RANKIN	Date 09/06/2012
Title VICE PRESIDENT OPERATIONS		
Approved by /s/ Don Peterson	Name (Printed/Typed)	Date NOV 6 2012
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval 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.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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.

(Continued on page 2)

*(Instructions on page 2)

Witness CIT

CARLSBAD CONTROLLED WATER BASIN

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-33187	96101	SWD; Devonian

4 Property Code	5 Property Name	6 Well Number
39403	RINGER FEDERAL	6
7 OGRID No.	**8 Operator Name**	**9 Elevation**
15363	MURCHISON OIL & GAS, INC.	3340.2

10 Surface Location

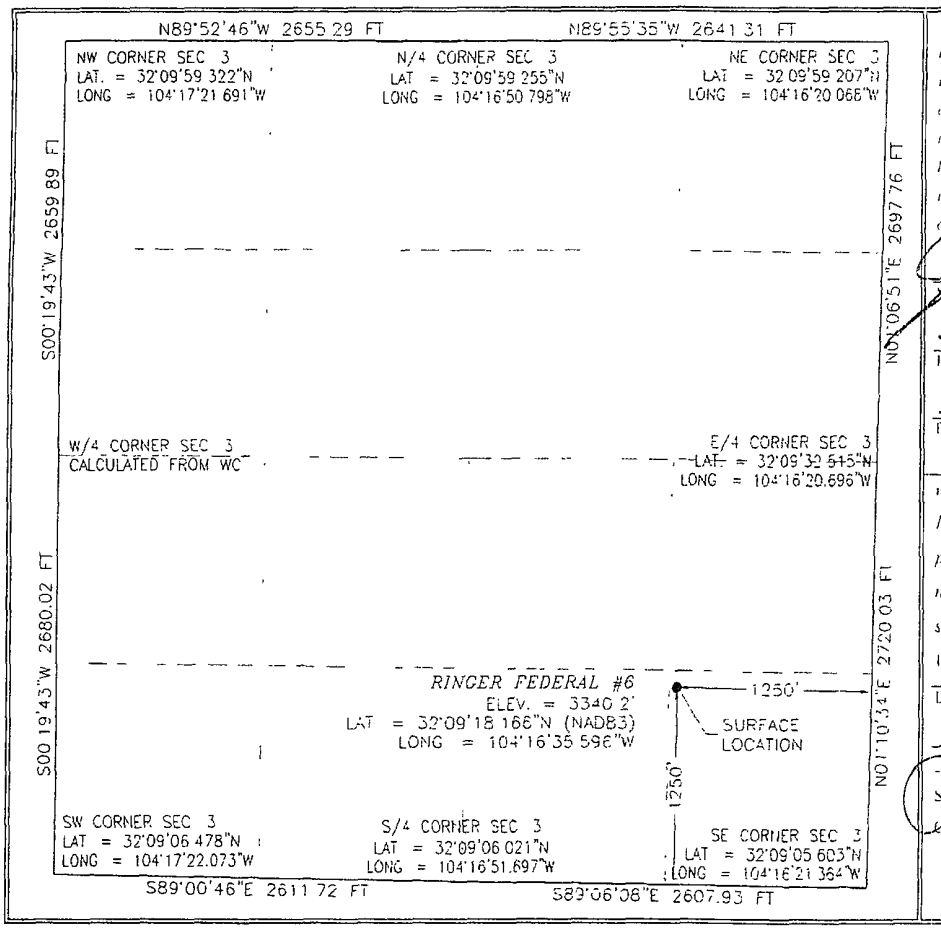
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	3	25 S	26 E		1250	SOUTH	1250	EAST	EDDY

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
			SWD- 1343

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



16 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — 7/5/12 Date

Jack Rankin, VP Operations
Printed Name

jrankin@jdmii.com
E-mail Address

17 SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

JUNE 20, 2012
Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number: FRANK T. GARAMILLO, PLS 12797

SURVEY NO. 1160

May 14, 2012

New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505

RE: Ringer Federal Com #6 (30-015-33187)
Sec. 3, T25S, R26E, Eddy County, NM
SWD Administrative Application

To Whom It May Concern:

Enclosed is an original Form C-108 (Application for Authorization to Inject) for the well mentioned above.

This well never produced, it was plugged and abandoned after wire line logs (HALS/TLD/MCFL/CNL/GR/CAL) were run.

Murchison proposes to re-enter the well, drill out the 5 cement plugs, and ream to bottom and drill ahead to a new TD of 13700'MD +/-. The well is planned to be cased with 5.5"casing from surface to 12850'MD, 40' into the top of the Devonian formation with 5.5" slotted casing from 12850' – 13700'. An ECP/DV tool will be set at 12850' with a 7-5/8" hydraulic set packer set at 12830'.

The Affidavit of Publication on May 9, 2012 from the Carlsbad Current Argus is enclosed. Proof of notice to operators in the area of review is attached.

If you have any questions or need further information, please call me at (972) 931-0700.

Sincerely,

Michael S. Daugherty
COO

Enclosures

Murchison Oil & Gas, Inc.
Ringer Federal Com #6 SWD
30-015-33187
1,250' FSL & 1,250' FEL, Lot P, Sec. 3, T25S, R26E
Eddy County, New Mexico

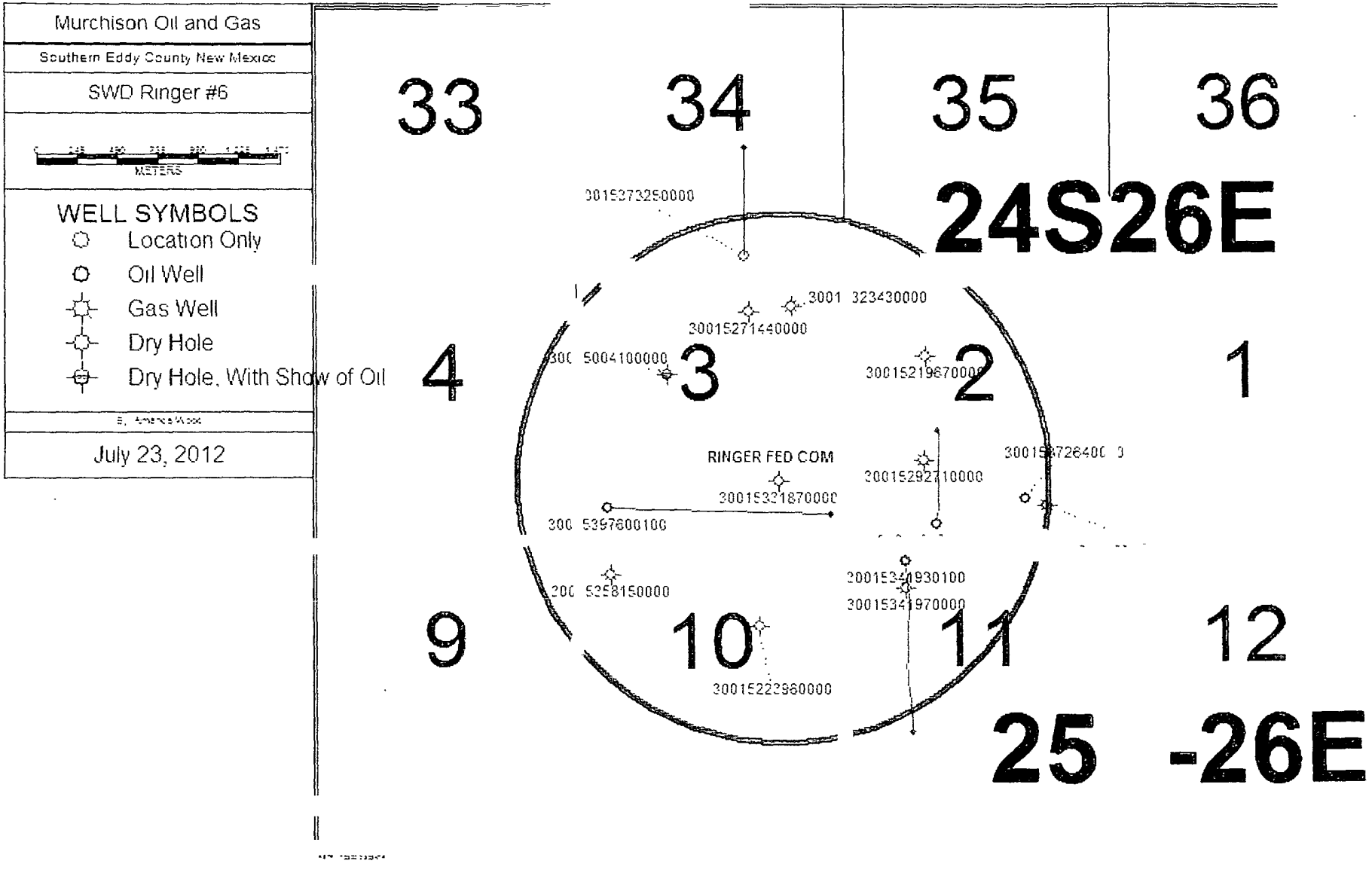
CERTIFICATION

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Murchison Oil & Gas, Inc. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

5 July 2012
Date

Jack Rankin
VP, Operations
Murchison Oil & Gas, Inc.

EXHIBIT D
Ringer Federal #6 SWD
1 Mile Radius Map



FL-4S CASING CONNECTION SPECIFICATIONS

Size O.D.	Nom. Weight	Plain End Weight	Wall Thickness	Nom. Inside Dia.	Drift Dia.	Pin I.D. Bored	Make-Up Loss	Critical Area of Conn.	Tensile Efficiency	K-55 Min. Parting Load	K-55 String Length DF=1.8	L-80 Min. Parting Load	L-80 String Length DF=1.6	N-80 Min. Parting Load	N-80 String Length DF=1.6	P-110 Min. Parting Load	P-110 String Length DF=1.6	Q-125 Min. Parting Load	Q-125 String Length DF=1.6
In.	Lbs./Ft.	Lbs./Ft.	In.	In.	In.	In.	In.	Sq. In.	%	1000 Lbs.	Ft.	1000 Lbs.	Ft.	1000 Lbs.	Ft.	1000 Lbs.	Ft.	1000 Lbs.	Ft.
2-3/8	4.70	4.43	0.190	1.995	1.901	1.926	1.523	0.531	40.7	50	6330	50	7120	53	7490	66	9370	72	10110
	5.95	5.75	0.254	1.867	1.773	1.823	2.050	0.877	51.8	83	8050	83	9060	88	9530	110	11920	118	12870
	6.65	6.26	0.280	1.815	1.721	1.771	2.099	0.960	52.1	91	8090	91	9110	96	9580	120	11980	130	12940
2-7/8	6.50	6.16	0.217	2.441	2.347	2.372	1.473	0.751	41.4	71	6430	71	7240	75	7620	94	9530	101	10290
	7.90	7.66	0.276	2.323	2.229	2.279	2.099	1.175	52.1	112	8100	112	9110	118	9590	147	11980	159	12940
	8.70	8.44	0.308	2.259	2.165	2.215	2.161	1.307	52.6	124	8170	124	9200	131	9680	163	12100	176	13070
	10.40	9.72	0.362	2.151	2.057	2.107	3.841	1.805	63.2	171	9800	171	11030	181	11610	226	14510	244	15670
3-1/2	7.70	7.58	0.216	3.068	2.943	2.968	1.635	0.927	41.6	88	6450	88	7260	93	7640	116	9550	125	10320
	9.30	8.81	0.254	2.992	2.867	2.917	2.048	1.343	51.8	128	8050	128	9050	134	9530	168	11910	181	12860
	10.30	9.91	0.289	2.922	2.797	2.847	2.132	1.458	50.0	139	7760	139	8740	146	9200	182	11490	197	12410
	12.80	12.31	0.368	2.764	2.639	2.689	3.910	2.240	61.9	213	9600	213	10800	224	11370	280	14220	302	15350
	12.95	12.52	0.375	2.750	2.625	2.675	3.847	2.312	62.8	220	9750	220	10960	231	11540	289	14430	312	15580
	15.50	14.63	0.449	2.602	2.477	2.527	4.348	2.714	63.1	258	9790	258	11010	271	11590	339	14490	366	15650
	15.80	15.37	0.476	2.548	2.423	2.473	4.348	2.800	61.9	266	9610	266	10820	280	11390	350	14230	378	15370
4	9.50	9.11	0.226	3.548	3.423	3.448	1.680	1.111	41.5	106	6440	106	7240	111	7620	139	9530	150	10290
	11.00	10.46	0.262	3.476	3.351	3.401	2.068	1.615	52.5	153	8150	153	9170	162	9650	202	12060	218	13030
	11.60	11.34	0.286	3.428	3.303	3.353	2.118	1.746	52.3	166	8130	166	9140	175	9620	218	12030	236	12990
	13.40	12.93	0.330	3.340	3.215	3.265	2.211	2.004	52.7	190	8180	190	9200	200	9690	251	12110	271	13080
4-1/2	9.50	9.40	0.205	4.090	3.965	3.990	1.588	1.136	41.1	108	6380	108	7180	114	7550	142	9440	153	10200
	10.50	10.23	0.224	4.052	3.927	3.952	1.672	1.253	41.6	119	6460	119	7270	125	7660	157	9570	169	10330
	11.00	10.79	0.237	4.026	3.901	3.926	1.727	1.327	41.8	126	6490	126	7300	133	7690	166	9610	179	10380
	11.60	11.35	0.250	4.000	3.875	3.925	2.111	1.728	51.8	164	8040	164	9040	173	9520	216	11890	233	12850
	12.75	12.24	0.271	3.958	3.833	3.883	2.048	1.879	52.2	179	8100	179	9120	188	9590	235	11990	254	12950
	13.50	13.04	0.290	3.920	3.795	3.845	2.128	2.012	52.5	191	8140	191	9160	201	9640	252	12050	272	13020
	15.10	14.98	0.337	3.826	3.701	3.751	2.221	2.320	52.6	220	8170	220	9200	232	9680	290	12100	313	13070
	16.90	16.44	0.373	3.754	3.629	3.679	3.889	3.046	63.0	289	9780	289	11000	305	11580	381	14470	411	15630
	18.80	18.69	0.430	3.640	3.515	3.565	4.248	3.470	63.1	330	9800	330	11020	347	11600	434	14500	468	15670
	21.60	21.36	0.500	3.500	3.375	3.425	4.679	3.985	63.4	379	9850	379	11080	399	11660	498	14580	538	15740
5	11.50	11.23	0.220	4.560	4.435	4.460	1.652	1.369	41.4	130	6430	130	7240	137	7620	171	9520	185	10290
	13.00	12.83	0.253	4.494	4.369	4.419	2.059	1.958	51.9	186	8050	186	9060	196	9540	245	11920	264	12880
	15.00	14.87	0.296	4.408	4.283	4.333	2.139	2.298	52.5	218	8160	218	9180	230	9660	287	12070	310	13040
	18.00	17.93	0.362	4.276	4.151	4.201	3.815	3.310	62.8	314	9740	314	10960	331	11540	414	14420	447	15580
	20.30	20.01	0.408	4.184	4.059	4.109	4.073	3.651	62.0	347	9630	347	10830	365	11400	456	14250	493	15400
	20.80	20.63	0.422	4.156	4.031	4.081	4.073	3.834	63.2	364	9810	364	11030	383	11620	479	14520	518	15680
	23.60	23.08	0.478	4.044	3.919	3.969	4.552	4.300	4.300	409	9830	409	11060	430	11640	538	14560	581	15720
	24.20	24.03	0.500	4.000	3.875	3.925	4.678	4.475	63.3	425	9830	425	11060	448	11640	559	14550	604	15710
5-1/2	14.00	13.70	0.244	5.012	4.887	4.912	1.757	1.676	41.6	159	6460	159	7260	168	7650	210	9560	226	10320
	15.50	15.35	0.275	4.950	4.825	4.875	2.098	2.356	52.2	224	8100	224	9110	236	9590	295	11990	318	12950
	17.00	16.87	0.304	4.892	4.767	4.817	2.148	2.607	52.5	248	8160	248	9180	261	9660	326	12070	352	13040

	15.50	15.35	0.275	4.950	4.825	4.875	2.098	2.356	52.2	224	8100	224	9110	236	9590	295	11990	318	12950
	17.00	16.87	0.304	4 892	4.767	4.817	2 148	2.607	52 5	248	8160	248	9180	261	9660	326	12070	352	13040
	20.00	19 81	0.361	4.778	4.653	4.703	3.825	3.669	63.0	349	9780	349	11000	367	11580	459	14470	495	15630
	23.00	22 54	0.415	4.670	4.545	4.595	4.184	4.193	63.2	398	9820	3998	11050	419	11630	524	14530	566	15700
	26.00	25.54	0.476	4.548	4.423	4.473	4.562	4.757	63.3	452	9830	452	11060	476	11640	595	14550	642	15720
	28.40	28.13	0.530	4.440	4.315	4.365	4.868	5 261	63.6	500	9870	500	11100	526	11690	675	14230	729	15370
	32.30	31.95	0.612	4.276	4.151	4.201	5 311	5.986	63.7	569	9890	569	11120	599	11710	748	14640	808	15810
6-5/8	20.00	19.49	0.288	6.049	5.924	5.974	2.119	2.994	52.2	284	8110	284	9120	299	9600	374	12000	404	12960
	23 20	22.19	0.330	5.965	5.840	5.895	2.210	3.439	52.7	327	8180	327	9200	344	9690	430	12110	464	13080
	24.00	23.58	0.352	5.921	5.796	5.846	3.017	4.121	59.4	392	9220	392	10380	412	10920	515	13650	556	14750
	28 00	27.65	0.417	5.791	5.666	5.716	4.173	5.134	63 1	488	9800	488	11020	513	11600	642	14510	693	15670
	32.00	31 20	0.475	5.675	5.550	5.600	4.530	5.810	63.3	552	9830	552	11060	581	11640	726	14550	784	15710
	40.80	40 05	0.625	5.375	5.250	5.300	5.467	7.507	63.7	713	9890	713	11130	751	11720	938	14640	1013	15820
7	17.00	16.70	0 231	6.538	6.413	6.438	1 700	2.054	41.8	195	6490	195	7300	205	7690	257	9610	277	10380
	20.00	19 54	0.272	6.456	6.331	6381	2 098	2 999	52 2	285	8100	285	9110	300	9590	375	11990	405	12950
	23.00	22 63	0.317	6.366	6 241	6.291	2.178	3.493	52.5	332	8150	332	9160	349	9650	437	12060	472	13020
	26.00	25 66	0.362	6.276	6.151	6.201	3 814	4.745	62 9	451	9760	451	10980	475	11560	593	14450	641	15600
	29.00	28.72	0.408	6.184	6.059	6.109	4.057	5.341	63 2	507	9820	507	11040	534	11620	669	14530	721	15690
	32 00	31 67	0.453	6.094	5.969	6 019	4.395	5.893	63.2	560	9820	560	11050	589	11630	737	14540	796	15700
	35 00	34 58	0.498	6.004	5.879	5.929	4 679	6.445	63.4	612	9840	612	11070	645	11650	806	14560	870	15730
	38.00	37.26	0.540	5 920	5.795	5.845	4.940	6.958	63.5	661	9860	661	11090	696	11670	870	14590	939	15760
	41.00	40 39	0.590	5.820	5.695	5.745	5 251	7.563	63.7	718	9880	718	11120	756	11700	945	14630	1021	15800
	46 00	45.30	0.670	5.660	5.535	5.585	6 251	8 711	65 4	828	10150	828	11420	871	12020	1089	15020	1176	16230
	49.50	48.88	0.730	5 540	5 415	5 465	6.183	9.242	64 3	878	9980	878	11230	924	11820	1155	14770	1248	15950
7-5/8	24.00	23 47	0.300	7.025	6 900	6.950	2 148	3.626	52.5	344	8150	344	9170	363	9660	453	12070	490	13040
	26.40	25.56	0.328	6.969	6.844	6.894	2.199	3.954	52.6	376	8160	376	9190	395	9670	494	12090	534	13050
	29.70	29.04	0.375	6.875	6 750	6 800	3.899	5 379	63 0	511	9780	511	11000	538	11580	672	14470	726	15630
	33.70	33.04	0.430	6.765	6.640	6 690	4 258	6.143	63.2	584	9810	584	11040	614	11620	768	14530	829	15690
	39.00	38.05	0.500	6.625	6.500	6.550	4.700	7.111	63.5	676	9860	676	11100	711	11680	889	14600	960	15770
	45.30	44.67	0.595	6.435	6.310	6 360	5 274	8.361	63.6	794	9880	794	11110	836	11700	1045	14620	1129	15790
	47 10	46.73	0.625	6.375	6.250	6.300	5 274	8.617	62.7	819	9730	819	10950	862	11520	1077	14410	1163	15560
	51.20	50.91	0.687	6.251	6.126	6.176	5.274	8.617	57.5	819	8930	819	10050	862	10580	1077	13220	1163	14280
	53.06	52.57	0.712	6.201	6.076	6.141	6 789	10.048	65.0	955	10090	955	11350	1005	11950	1256	14930	1356	16130
7-3/4	46 10	45.47	0.595	6.560	6.500	6.560	5.289	7.871	58 9	748	9140	748	10280	787	10820	984	13520	1063	14610
8-5/8	24.00	23 57	0.264	8.097	7.972	8.022	2.076	3 610	52 1	343	8080	343	9090	361	9570	451	11970	487	12920
	28 00	27 02	0.304	8.017	7 892	7.942	2.158	4.166	52.4	396	8140	396	9150	417	9640	521	12050	562	13010
	29.35	28.55	0.322	7.981	7.856	7.906	2 188	4.409	52.5	419	8150	419	9170	441	9650	551	12070	595	13030
	32.00	31 10	0.352	7.921	7.796	7.846	2.259	4.830	52.8	459	8200	459	9220	483	9710	604	12130	652	13100
	36.00	35.14	0.400	7.825	7 700	7.750	4.067	6.515	63 0	619	9790	619	11010	652	11590	814	14480	880	15640
	40.00	39.29	0.450	7.725	7.600	7.650	4 373	7.307	63.2	694	9820	694	11040	731	11620	913	14530	986	15690
	44.00	43.39	0.500	7.625	7.500	7.550	4.698	8.106	63.5	770	9860	770	11090	811	11680	1013	14600	1094	15760
	49.00	48.00	0.557	7.511	7.386	7.436	5.045	8.968	63.5	852	9860	852	11090	897	11680	1121	14600	1211	15760
9-5/8	43.50	42.69	0.435	8 755	8.599	8.675	4.585	8.249	65.7	784	10200	784	11470	825	12080	1031	15100	1114	16300
	47.00	46.14	0.472	8.681	8.525	8.610	4.723	8.377	61 7	796	9580	796	10780	838	11350	1047	14180	1131	15320
	53.50	52.85	0.545	8.535	8.379	8.460	5.908	10.114	65 1	961	10100	961	11360	1011	11960	1264	14950	1365	16150

NOTES:
1. Each size and wall designed individually for maximum performance - not interchangeable. Also available in other sizes. Specifications on request.
2. Minimum parting load data is calculated using listed critical area of the connection times the ultimate tensile strength of the grades listed: K-55/L-80 = 95,000 PSI; N-80 = 100,000 PSI; P-110 = 125,000 PSI; Q-125 = 135,000 PSI.

BOX 905
HOBBS, NM 88241-0905
505-393-3085

HOBBS RENTAL CORP

7621

PIPE INSPECTION DIVISION

DATE 4-21-04

INSPECTION REPORT OF TUBULAR GOODS

Invoice To [illegible] Oil & Gas	Code	Work Done For [illegible]		
		Rig # [illegible]	Location [illegible]	
		County Eddy	State [illegible]	
		Area		
Authorized By	Order No	Inspector [illegible]		

INSPECTION SPECIFICATIONS

API Standard # ________ , 12½ % of nominal wall thickness .054", API Drift Diameter 6.500

TYPE OF INSPECTION [illegible]

MATERIAL INSPECTED

65 Total Lengths NEW ~~USED~~ 7⅝ "O.D. casing , 33.70 # , GRADE N-80

RANGE III , .430 "WALL THICKNESS, WITH STC CONNECTIONS.

MANUFACTURER [illegible]

SUMMARY OF RESULTS

A. 0 Lengths were found to be free of internal & external defects exceeding ________ % of nominal wall thickness. Identified by ________ paint band near box end.
________ Defective couplings were found on above lengths. ID by red paint band.
/ Defective pins were found on above lengths. ID by red paint band.
/ Defective pin & box on same jt. of above pipe. ID by red paint band.

B. 0 Lengths were found with internal or external defects exceeding ________ % but less than ______ % of nominal wall thickness. Identified by ________ paint band.
________ Defective couplings were found on above lengths. ID by red paint band.
/ Defective pins were found on above lengths. ID by red paint band.
/ Defective pin & box on same jt. of above pipe. ID by red paint band.

C. 0 Lengths were found with internal or external defects exceeding ________ % but less than ______ % of nominal wall thickness. Identified by ________ paint band.
0 Defective couplings were found on above lengths. ID by red paint band.
0 Defective pins were found on above lengths. ID by red paint band.
0 Defective pins & box on same jt. of above pipe. ID by red paint band.

D. 0 Lengths contained defects exceeding ______ % of nominal wall thickness. These lengths identified by ________ paint band.

E. 65 Lengths drifted to API specs. 0 lengths wouldn't drift (ID by red band)

REMARKS No Rejects

Thank you!!
[illegible]

B-1547

ATTACHMENT TO FORM 3160-3
Murchison Oil & Gas, Inc.
Ringer Federal #6 SWD
SL: 1,250' FSL & 1,250' FEL, Unit P
Sec 3, T25S, R26E
Eddy County, New Mexico

1. ESTIMATED FORMATION TOPS

Rustler – not present	
Top of Salt	350'
Base of Salt	1687'
Lamar Lime	1900'
Bell Canyon	1906'
Cherry Canyon	2804'
Bone Spring	5376'
3rd Bone Spring	8156'
Wolfcamp	8608'
Strawn	10292'
Atoka	10347'
Morrow Limestone	10937'
Morrow Clastics	11288'
Devonian	12810'
Montoya	13810'

PROPOSED DEPTH: 13,700' MD

2. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL, OR GAS

Anticipated Formation Tops: RKB +/- 3360' Ground Elevation: 3340'

Fresh Water	50' – 300'	Surface Fresh Water Sands
Oil/Gas	1906'	Delaware
Oil/Gas	5376'	Bone Spring
Oil/Gas	8608'	Woflcamp
Oil/Gas	10,292'	Strawn
Oil/Gas	11,288'	Morrow

3. CASING PROGRAM

Casing Size	Hole Size	From To	Weight	Grade	Joint	Condition	Purpose
13.375"	17 5"	0' – 362'	68#	J-55	BTC	New	Surface
9.625"	12.25"	0' – 1926'	47 #	L-80	LTC	New	Intermediate
7.625"	8.75"	0' – 8553'	33.7 #	N-80	SJ-2	New	Intermediate
5.5"	6.5"	8403' – 12850'	17#	P-110	FJ	New	Liner

Casing Size	Casing ID	Burst Rating, psi	Safety Factor	Collapse Rating, psi	Safety Factor	Tension Rating, 1000 lbs.	Safety Factor
13.375"	12.415"	3450	2.5	1950	2.28	1140	9.01
9.625"	8.681"	6870	2.5	4760	3.71	893	9.8
7.625"	6.756"	7900	1.42	6560	1.54	700	2.43
5.5"	4.89"	10640	1.1	7480	1.17	420	1 91

Equivalent or adequate grades and weights of casing may be substituted at time casing is run, depending on availability.

SURFACE CASING:

Tension	Calculated using weight of casing times landing depth without utilizing buoyancy effects
Collapse	Calculated with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run. The effects of axial load on collapse will be considered.
Burst	In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture gradients up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized.

INTERMEDIATE CASING:

Tension	Calculated using weight of casing times landing depth without utilizing buoyancy effects
Collapse	Calculated with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run. The effects of axial load on collapse will be considered.
Burst	In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture gradients up to a 1.0 psi/ft. gradient. The effects of tension on burst will not be utilized

PRODUCTION CASING:

Tension	Calculated using weight of casing times landing depth without utilizing buoyancy effects.
Collapse	Calculated with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run. The effects of axial load on collapse will be considered.
Burst	Maximum surface treating pressure will be limited to 85% of the rated burst pressure.

4. PRESSURE CONTROL EQUIPMENT: Blowout Preventer (See Attached Diagrams)
A BOP equivalent to Diagram 1 will be nippled up on the 13-3/8" casing strings. The BOP Stack, choke, kill lines, Kelly cock, inside BOP, etc., will be hydro tested to 10,000 psi prior to drill out of the first cement plug. 1500 psi test will be done on the 7.625" and the 5.5" casing by an approved pressure tester. The annular will be tested to 5,000 psi. In addition to the rated working pressure tests, a low pressure (250 psi) test will be required on the entire BOP stack. These tests will be performed:

   a) upon installation
   b) after any component changes
   c) 15 days after a previous test
   d) as required by well conditions.
   e) after a string of casing has been run and cemented and the BOP reinstalled.

A function test to insure that the preventors are operating correctly will be performed on each trip. See the attached Diagram 1 for the minimum criteria for the 10,000 psi choke manifold.

5. MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
8553'-13700'	Cut Brine	8.7-8.9	34-36	2-3	2-3	12-15	

Drill plugs with Cut Brine water and treat drilled cement with Sodium Bicarbonate and Citric Acid or SAPP. Clean out and drill out from under 7-5/8" casing with existing fluid maintaining the fluid density between 8.7 to 8.9. If necessary, circulate 10 – 15 lbs/bbl Calcium Carbonate or other acid soluble LCM to prevent seepage.

- Prior to the previous TD of 11,760' a mud up should be completed adding 10.0 lb/gal Cut Brine Water to in-crease the fluid density to 9.8-10.0. lb/gal. Addition of sack salt may be required.
- If there is sufficient stored fluid from previous operations it may be utilized as a substitute or supplement to the complete system mud up.
- ALL Zan should be added in .75-1.25 lb/bbl concentration. This will yield a funnel viscosity from 46-48 sec/qt.
- ALL Pac should be added in .5-1.0 lb/bbl concentration to reduce the fluid loss to 12-15 ml/30 min.
- At 10,400 further additions should be made to increase viscosity to 46-48 sec/qt and reduce fluid loss to 8-10 ml/30 min.
- Increases in fluid density may be necessary however they will be dictated by hole conditions. Decreases in fluid loss may also be required.
- If the fluid loss is to be maintained less than 8 ml/30 min All Tex should be used in 2-3 lb/bbl concentration.
- Increases over 10.0 lb/gal should be made using Calcium Carbonate as the weighting agent due to 97% acid solubility.
- In the event of total circulation losses substantial LCM reserves should be maintained on location to limit time in transit if the need arises.
- Pre-Hydrated High Viscosity Fresh Water Gel Pills containing 25-35 lb/ bbl varying particle size LCM Should be pumped in the event of total losses or dry drilling.
- All drilling operations will be conducted using a zero discharge closed loop system.
- If torque and drag become an issue while drilling add 1 - 2 percent by volume ALL Surfak PG to add lubricity and further chemically inhibit reactive shale in the water based drilling fluid system.
- We suggest the addition of a biocide / bactericide such as ALL STC prior to short term storage of this polymer drilling fluid and re-use on subsequent operations in the area. Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks.

Mud system monitoring equipment with derrick floor indicators and visual / audio alarms shall be installed and operative prior to drilling out the first cement plug. This equipment will remain in use until the well is completed. Monitoring equipment shall consist of the following:

- A recording pit level indicator.
- A pit volume totalizer.

- A flowline sensor.

6. TECHNICAL STAGES OF OPERATION

A. Testing: None planned.

B. Mud Logging:

- Two man unit from 8553' to TD

C. Conventional Coring: None anticipated.

D. Cement:

5.5" Liner - Cementing Program
Cement lead with 12.8ppg 1040 sacks of Premium Plus Class C 35/65 + 6% Bentonite + 0.3% C-16A(a non-retarding fluid loss additive) + 0.25# Cello Flake + 0.25% R-38(a powdered defoamer) + 3% Salt (BWOW) with yield = 1.86 cu.ft./sack & tail with 14.8ppg 150 sacks Premium Plus Class C + 0.4% C-16A + 0.2% C-35 + 0.25% R-38 with yield = 1.33 cu.ft./sack; circulate cement to surface. If cement does not circulate, will run a temperature survey to find actual top of cement and run 1" tubing into annulus and pump cement as necessary to achieve circulation to surface. 150% excess will be used.

7. ANTICIPATED RESERVOIR CONDITIONS

No abnormal temperatures or pressures are anticipated. Low levels of H2S have been monitored in producing wells in the area, so H2S may be present while drilling the well. An H2S Plan is attached to the Drilling Program. Anticipated Bottom Hole Pressure is 5800 PSI (maximum), and anticipated static Bottom Hole Temperature is 280 degrees Fahrenheit.

8. OTHER PERTINENT INFORMATION

A. Auxiliary Equipment

- Upper and lower Kelly cocks. Full opening stab in valve on the rig floor.

B. Anticipated Starting Date

- Upon approval
- 14 days drilling operations with drilling rig
- 3 days completion operations with drilling rig

9. PREVIOUS CASING CEMENT DETAIL

A. 13-3/8" Casing

- 400sx Class "C": with 2%CaCl + 0.25#/sk Celloflake

B. 9-5/8" Casing

- Lead Cement :750sx Class "C" 35/65 POZ with 2% CaCl+ 0.25#/sk Celloflake + 6% Bentonite
- Tail Cement: 200sx Class "C" with 2% CaCl

C. 7-5/8" Casing

- Lead Cement :1027sx Class "H" with 0.2% R-3 + 10% Bentonite
- Tail Cement: 200sx Class "H" with 1.2% FL-25 + 0.30% SMS, 2% KCL

- Cement was not circulated to surface. Perforations were done at 400'MD and cement was squeezed through perforations to surface.

EXISTING WELLBORE DIAGRAM

Murchison Oil and Gas

Field:			**By:** SM
Lease: Ringer	**Planned RKB-MSL:** 3352 ft		**Date:** 26-Apr-12
Well: 6	**Surface Location:**		
Rig: HWD 4	**Bottomhole Location:**		

Dir. Plan Inc.	Dir. Plan Azm.	Dir. Cntrl	Form. Press.(ppg) PP	Form. Press.(ppg) MW	Form. Press.(ppg) FG	Hole Size	MD / TVD	Casing Program	Eval. Program LWD	Eval. Program E-Line	Mud Logging
0 0	0.0						52 / 52	20"			
						17.5"	362 / 362	13⅜", 68#, J55, BTC			
						Cement plug 5 2000'-1866'					
						12.25"	1926 / 1926	9⅝", 47#, L-80 LTC			
						Cement plug 4 5500'-5321'					
						Cement plug 3 8628'-8849'					
						8 75"	8553 / 8553	7⅝", 33 7#, N-80, SJ-2			
						Cement plug 2 10292'-10049'					
						Cement plug 1 10987'-10748'					
						6.5	11,760 11,760	Open hole			

PROPOSED WELLBORE DIAGRAM

Murchison Oil and Gas

Field:			By: SM
Lease: Ringer	Planned RKB-MSL: 3340 ft		Date: 4-May-12
Well: 6	Surface Location: 1250' FSL & 1250' FEL	P 3 25-S 26-E	
Rig:			

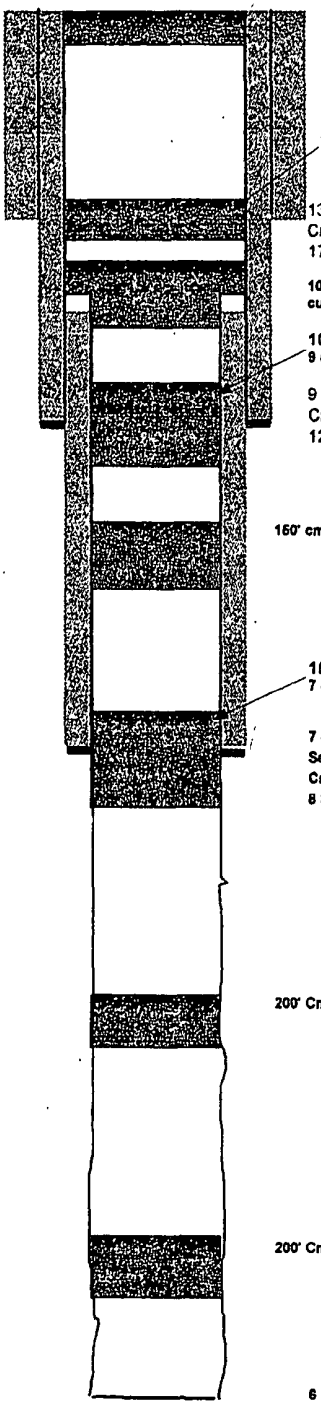
Dir. Plan Inc.	Dir. Plan Azm.	Dir. Cntrl	Formation Tops	Hole Size	MD / TVD	Casing Program	Eval. Program LWD	Eval. Program E-Line	Mud Logging
0 0	0 0				52 / 52	20"			
				17 5"	362 / 362	13¾", 68#, J55, BTC			
			Bell Canyon: 1906	12 25"	1926 / 1926	9⅝", 47#, L-80 LTC			
			Bone Springs: 5376	8 75"	8553 / 8553	7⅝", 33 7#, N-80, SJ-2			
			Wolfcamp: 8608 Strawn: 10292 Atoka: 10347 Morrow: 10937 Top Devonian: 12810	6 5"	12850 / 12850	Packer set at 12830 DV Tool and ECP on end of 5 5", 17#, P-110"			
			Montoya: 13810	6.5"	2 875" L-80 6 4# tubing 13,700 / 13,700	5 5" slotted casing			

MURCHISON OIL AND GAS, INC.
Ringer Federal Com #6
SEC. 3, T-25S, R-26E
1250' FSL AND 1250' FEL
EDDY COUNTY, NEW MEXICO
API # 30 - 015 - 33187

from SWD-1393

GL: 3340'

4". X 4" P.& A MARKER - W/ WELL INFORMATION AS ABOVE WELDED ON AND PLUG DATE



60' Cmt to surface

100' Cmt plug 50' above and below 13 3/8" csg shoe 300' to 400'

13 3/8" 68# J-55 Butt @ 350'
Cmt W/ 400 Sx "C" Cir 54 sx to pit
17 1/2" HOLE

100' cmt plug 50' above and below 7 5/8" cut off.

100' cmt plug 50' above and below 9 5/8" csg shoe 1,900' to 2,000'

9 5/8" 47# L-80 & P-110 LT&C @ 1,950'
Cmt w/ 950 sx Cir. 89 sx to pit
12 1/4" HC

150' cmt plug at top of Bone springs 6,600' and up

150' cmt plug 75' above and below 7 5/8" csg shoe to 8,603"

7 5/8" 33.7# S-95, N-80, P-110, SJ-2
Set At 8563'
Cmt W/ 1227 Sx.TOC at 1950' by Temp survey
8 3/4" hole

200' Cmt plug at top of Strawn 10,292' and up

200' Cmt plug at top of Morrow 10,937' and up

6 1/2" HOLE @ 11,760'

FORMATION TOPS

Bell Canyon	1,906'
Bone Springs	6,376'
Wolfcamp	8,608'
Strawn	10,292'
Atoka	10,347'
Morrow	10,937'

From SHD
1343

Murchison Oil and Gas

Field:				By:	SM
Lease:	Ringer	Planned RKB-MSL:	3340 ft	Date:	23-May-12
Well:	6	Surface Location:	1250' FSL & 1250' FEL P 3 25-S 26-E		
Rig:					

Dir. Plan Inc.	Dir. Plan Azm.	Dir. Cntrl	Formation Tops	Hole Size	MD / TVD	Casing Program	Eval. Program LWD	Eval. Program E-Line	Mud Logging
0.0	0.0				52 / 52	20"			
				17.5"	362 / 362	13¾", 68#, J55, BTC			
			Bell Canyon: 1906	12.25"	1926 / 1926	9⅝", 47#, L-80 LTC			
			Bone Springs: 5376	8.75"	8553 / 8553	DV Tool 7⅝", 33 7#, N-80, SJ-2			
			Wolfcamp: 8608 Strawn: 10292 Atoka: 10347 Morrow: 10937 Top Devonian: 12810	6.5"	12850 / 12850	Packer set at 12830 5 5", 17#, P-110, FJ			
			Montoya: 13810	4.125"	13,700 / 13,709	3.5" L-80 9.2# tubing Open hole			

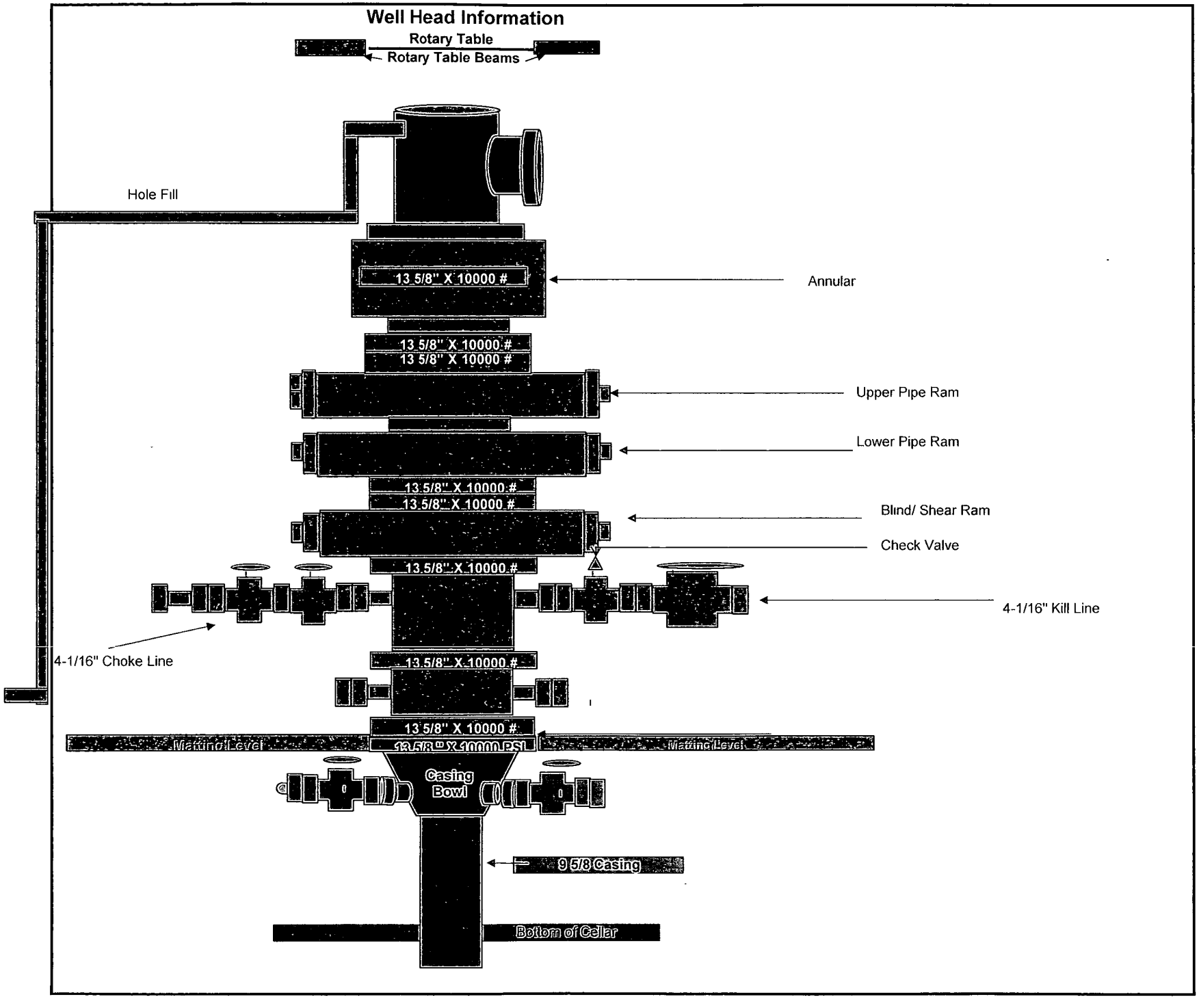
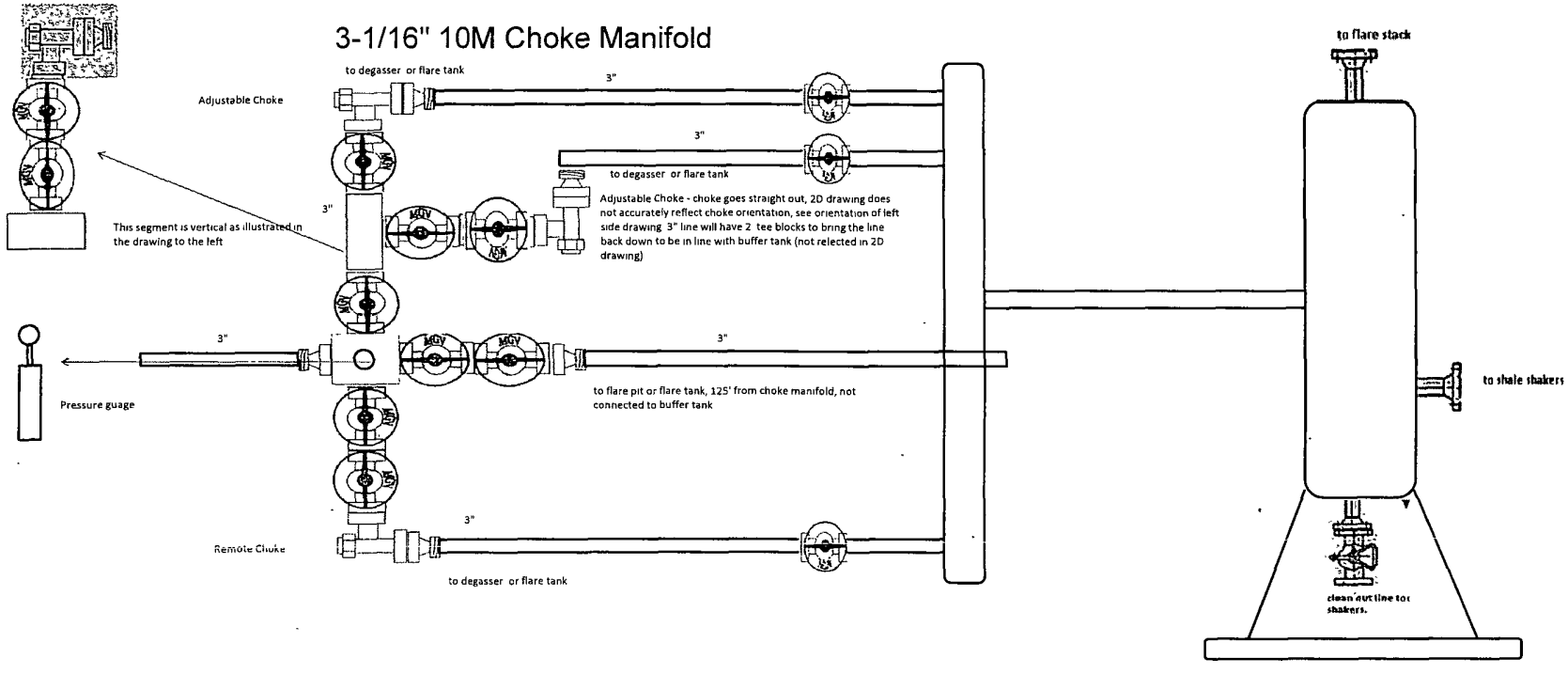

Well Head Information
Rotary Table
Rotary Table Beams
Hole Fill
13 5/8" X 10000 #
Annular
13 5/8" X 10000 #
13 5/8" X 10000 #
Upper Pipe Ram
Lower Pipe Ram
13 5/8" X 10000 #
13 5/8" X 10000 #
Blind/ Shear Ram
Check Valve
13 5/8" X 10000 #
4-1/16" Kill Line
4-1/16" Choke Line
13 5/8" X 10000 #
13 5/8" X 10000 #
Matting Level
13 5/8" X 10000 PSI
Matting Level
Casing Bowl
9 5/8 Casing
Bottom of Cellar

EXHIBIT G-1


3-1/16" 10M Choke Manifold
to degasser or flare tank
3"
Adjustable Choke
3"
to degasser or flare tank
This segment is vertical as illustrated in the drawing to the left
Adjustable Choke - choke goes straight out, 2D drawing does not accurately reflect choke orientation, see orientation of left side drawing 3" line will have 2 tee blocks to bring the line back down to be in line with buffer tank (not relected in 2D drawing)
3"
3"
Pressure guage
to flare pit or flare tank, 125' from choke manifold, not connected to buffer tank
3"
Remote Choke
to degasser or flare tank
to flare stack
to shale shakers
clean out line to shakers.

MURCHISON OIL & GAS, INC.

HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN FOR DRILLING / COMPLETING / WORKOVER / FACILITY WITH THE EXPECTATION OF H2S IN EXCESS OF 100 PPM

Murchison Oil & Gas, Inc.
REENTRY WELL
Ringer Federal #6 SWD
30-015-33187
SL: 1,250' FSL & 1,250' FEL, Unit P
Sec 3, T25S, R26E
Eddy County, New Mexico

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GENERAL H2S EMERGENCY ACTIONS

In the event of any evidence of H2S emergency, the following plan will be initiated:

1. All personnel will immediately evacuate to an upwind and if possible uphill "safe area."
2. If for any reason a person must enter the hazardous area, they must wear a SCBA (self-contained breathing apparatus).
3. Always use the "buddy system."
4. Isolate the well/problem if possible.
5. Account for all personnel.
6. Display the proper colors warning all unsuspecting personnel of the danger at hand.
7. Contact the company representative as soon as possible if not at the location (use the enclosed call list as instructed).

At this point the company representative will evaluate the situation and coordinate the necessary duties to bring the situation under control, and if necessary, the notification of emergency response agencies and residents.

EMERGENCY PROCEDURES FOR AN UNCONTROLLABLE RELEASE OF H2S

1. All personnel will don the self-contained breathing apparatus.
2. Remove all personnel to the "safe area" (always use the "buddy system").
3. Contact company representative if not on location.
4. Set in motion the steps to protect and/or remove the general public to any upwind "safe area." Maintain strict security and safety procedures while dealing with the source.
5. No entry to any unauthorized personnel.
6. Notify the appropriate agencies:
   City Police - City streets
   State Police - State Roads
   County Sheriff - County Roads
7. Call the NMOCD.

If at this time the supervising person determines the release of H2S cannot be contained to the site location and the general public is in harm's way, he will immediately notify public safety personnel.

EMERGENCY CALL LIST

	Office	Cell	Home
Jack Rankin	972-931-0700	713-582-3859	281-894-7065
Greg Boans	575-628-3932	575-706-0667	575-887-9181

EMERGENCY RESPONSE NUMBERS
Eddy County, New Mexico

State Police	**888-442-6677**
Eddy County Sheriff - Carlsbad	**575-396-3611**
Eddy County Emergency Management - Carlsbad	**575-887-7551**
State Emergency Response Center (SERC)	**575-476-9620**
Artesia Police / Fire / Ambulance Department	**575-746-5000**
New Mexico Oil Conservation Division - Artesia	**575-748-1283**
Callaway Safety Equipment, Inc.	**575-392-2973**

PROTECTION OF THE GENERAL (ROE) RADIUS OF EXPOSURE

In the event greater than 100 ppm H2S is present, the ROE calculations will be done to determine if the following conditions exist and whether the Plan must be activated:

* 100 ppm at any public area (any place not associated with this site)

* 500 ppm at any public road (any road which the general public may travel).

* 100 ppm radius of 3000' will be assumed if there is insufficient data to do the calculations, and there is a reasonable expectation that H2S could be present in concentrations greater than 100 ppm in the gas mixture.

Calculation for the 100 ppm ROE: (H2S concentrations in decimal form)

ROE = [(1.589)(H2S concentration)(Q)] (^0.6258) 10,000 ppm + = .01
1,000 ppm + = .001
Calculation for the 500 ppm ROE: 100 ppm + = .0001
10 ppm + = .00001
ROE = [(0.4546)(H2S concentration)(Q)] (^0.6258)

EXAMPLE: If a well/facility has been determined to have 650 ppm H2S in the gas mixture and the well/facility is producing at a gas rate of 200 MCFD then:

ROE for 100 ppm ROE=[(1.589)(.00065)(200,000)] ^0.6258
ROE=28.1'
ROE for 500 ppm ROE=[(.4546)(.00065)(200,000)] ^0.6258
ROE=12.8'
These calculations will be forwarded to the appropriate NMOCD district office when applicable.

PUBLIC EVACUATION PLAN

When the supervisor has determined that the general public will be involved, the following plan will be implemented.

1. Notification of the emergency response agencies of the hazardous condition and implement evacuation procedures.
2. A trained person in H2S safety shall monitor with detection equipment the H2S concentration, wind and area of exposure. This person will determine the outer perimeter of the hazardous area. The extent of the evacuation area will be determined from the data being collected. Monitoring shall continue until the situation has been resolved. All monitoring equipment shall be UL approved for use in Class I Groups A, B, C & D, Division I hazardous locations. All monitors will have a minimum capability of measuring H2S, oxygen, and flammable values.
3. Law enforcement shall be notified to set up necessary barriers and maintain such for the duration of the situation as well as aid in the evacuation procedure.
4. The company representative shall stay in communication with all agencies throughout the duration of the situation and inform such agencies when the situation has been contained and the affected area is safe to enter.

PROCEDURE FOR IGNITING AN UNCONTROLLABLE CONDITION

The decision to ignite a well should be a last resort with one, if not both, of the following conditions:

1. Human life and/or property are endangered.
2. There is no hope of bringing the situation under control with the prevailing conditions at the site.

Instructions for Igniting the Well:

1. Two people are required. They must be equipped with positive pressure, self-contained breathing apparatus and "D"-ring style, full body, OSHA approved safety harness. Non-flammable rope will be attached.
2. One of the people will be a qualified safety person who will test the atmosphere for H2S, oxygen and LFL. The other person will be the designated company representative.
3. Ignite upwind from a distance no closer than necessary. Make sure that the ignition site has the maximum escape avenue available. A 25mm flare gun with a range of approximately +/- 500 feet shall be used to ignite the gas.
4. Before igniting, check for the presence of combustible gases.
5. After igniting, continue emergency actions and procedures as before.

REQUIRED EMERGENCY EQUIPMENT

1. **Breathing Apparatus**
   - Rescue Packs (SCBA) – 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
   - Work / Escape Packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
   - Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.

2. **Signage and Flagging**
   - One Color Code Condition Sign will be placed at the entrance to the site reflecting the possible conditions at the site.
   - A Colored Condition flag will be on display reflecting the condition at the site at that time.

3. **Briefing Area**
   - Two perpendicular areas will be designated by signs and readily accessible.

4. **Windsocks**
   - Two windsocks will be placed in strategic locations, visible from all angles.

5. **H2S Detectors and Alarms**
   - The stationary detector with three (3) sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible alarm @ 15 ppm. Calibrate a minimum of every 30 days or as needed. The three sensors will be placed in the following places: (Gas sample tubes will be stored in the safety trailer):
     - Rig Floor
     - Bell Nipple
     - End of flow line or where well bore fluid is being discharged

6. **Auxiliary Rescue Equipment**
   - Stretcher
   - Two OSHA full body harnesses
   - 100' of 5/8" OSHA approved rope
   - One 20 lb. Class ABC fire extinguisher
   - Communication via cell phones on location and vehicles on location

7. **Well Control Equipment**
   - A 10M BOP stack with an Annular, Upper Pipe Ram, Lower Pipe Ram and Blind/Shear Ram will be installed prior to drilling out the first cement plug
   - BOP's will be function tested once every 12hrs
   - BOP's will be tested by an approved pressure tester. Tests will be conducted upon installation, when any component is changed and every 15 days
   - The tests will be held on each component for 10mins at 10,000psi (high test), and 250psi (low test)
   - Mud/Gas Separator

USING SELF-CONTAINED BREATHING AIR EQUIPMENT (SCBA)

1. SCBA should be worn when any of the following are performed:
   - Working near the top or on top of a tank
   - Disconnecting any line where H2S can reasonably be expected.
   - Sampling air in the area to determine if toxic concentrations of H2S exist.
   - Working in areas where over 10 ppm of H2S has been detected.
   - At any time there is a doubt of the level of H2S in the area.
2. All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.
3. Facial hair and standard eyeglasses are not allowed with SCBA.
4. Contact lenses are never allowed with SCBA.
5. When breaking out any line where H2S can reasonably be expected.
6. After each use, the SCBA unit shall be cleaned, disinfected, serviced and inspected.
7. All SCBA shall be inspected monthly.

RESCUE & FIRST AID FOR VICTIMS OF H2S POISONING

- Do not panic.
- Remain calm and think.
- Put on the breathing apparatus.
- Remove the victim to the safe breathing area as quickly as possible, upwind and uphill from source or crosswind to achieve upwind.
- Notify emergency response personnel.
- Provide artificial respiration and/or CPR as necessary.
- Remove all contaminated clothing to avoid further exposure.
- A minimum of two (2) personnel on location shall be trained in CPR and First Aid.

TOXIC EFFECTS OF H2S POISONING

Hydrogen Sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 PPM, which is .001% by volume. Hydrogen Sulfide is heavier than air (specific gravity-1.192) and is colorless and transparent. Hydrogen Sulfide is almost as toxic as Hydrogen Cyanide and is 5-6 times more toxic that Carbon Monoxide. Occupational exposure limits for Hydrogen sulfide and other gasses are compared below in Table 1. Toxicity table for H2S and physical effects are shown in Table II.

Table 1

Permissible Exposure Limits of Various Gasses

Common Name	Symbol	Sp. Gravity	TLV	STEL	IDLH
Hydrogen Cyanide	HCN	.94	4.7 ppm	C	
Hydrogen Sulfide	H2S	1.192	10 ppm	15 ppm	100 ppm
Sulfide Dioxide	SO2	2.21	2 ppm	5 ppm	
Chlorine	CL	2.45	.5 ppm	1 ppm	
Carbon Monoxide	CO	.97	25 ppm	200 ppm	
Carbon Dioxide	CO2	1.52	5000 ppm	30,000 ppm	
Methane	CH4	.55	4.7% LEL	14% UEL	

Definitions

A. TLV – Threshold Limit Value is the concentration employees may be exposed to based on a TWA (time weighted average) for eight (8) hours in one day for 40 hours in one (1) week. This is set by ACGIH (American Conference of Governmental Hygienists and regulated by OSHA.

B. STEL – Short Term Exposure Limit is the 15 minute average concentration an employee may be exposed to providing that the highest exposure never exceeds the OEL (Occupational Exposure Limit). The OEL for H2S is 19 PPM.

C. IDLH – Immediately Dangerous to Life and Health is the concentration that has been determined by the ACGIH to cause serious health problems or death if exposed to this level. The IDLH for H2S is 100 PPM.

D. TWA – Time Weighted Average is the average concentration of any chemical or gas for an eight (8) hour period. This is the concentration that any employee may be exposed to based on an TWA.

TABLE II

Toxicity Table of H2S

Percent %	PPM	Physical Effects
.0001	1	Can smell less than 1 ppm.
.001	10	TLV for 8 hours of exposure
.0015	15	STEL for 15 minutes of exposure
.01	100	Immediately Dangerous to Life & Health. Kills sense of smell in 3 to 5 minutes.
.02	200	Kills sense of smell quickly, may burn eyes and throat.
.05	500	Dizziness, cessation of breathing begins in a few minutes.
.07	700	Unconscious quickly, death will result if not rescued promptly.
.10	1000	Death will result unless rescued promptly. Artificial resuscitation may be necessary.

PHYSICAL PROPERTIES OF H2S

The properties of all gases are usually described in the context of seven major categories:

COLOR
ODOR
VAPOR DENSITY
EXPLOSIVE LIMITS
FLAMMABILITY
SOLUBILITY (IN WATER)
BOILING POINT

Hydrogen Sulfide is no exception. Information from these categories should be considered in order to provide a fairly complete picture of the properties of the gas.

COLOR – TRANSPARENT
Hydrogen Sulfide is colorless so it is invisible. This fact simply means that you can't rely on your eyes to detect its presence, a fact that makes the gas extremely dangerous to be around.

ODOR – ROTTEN EGGS
Hydrogen Sulfide has a distinctive offensive smell, similar to "rotten eggs." For this reason it earned its common name "sour gas." However, H2S, even in low concentrations, is so toxic that it attacks and quickly impairs a victim's sense of smell, so it could be fatal to rely on your nose as a detection device.

VAPOR DENSITY – SPECIFIC GRAVITY OF 1.192
Hydrogen Sulfide is heavier than air so it tends to settle in low-lying areas like pits, cellars or tanks. If you find yourself in a location where H2S is known to exist, protect yourself. Whenever possible, work in an area upwind and keep to higher ground.

EXPLOSIVE LIMITS – 4.3% TO 46%
Mixed with the right proportion of air or oxygen, H2S will ignite and burn or explode, producing another alarming element of danger besides poisoning.

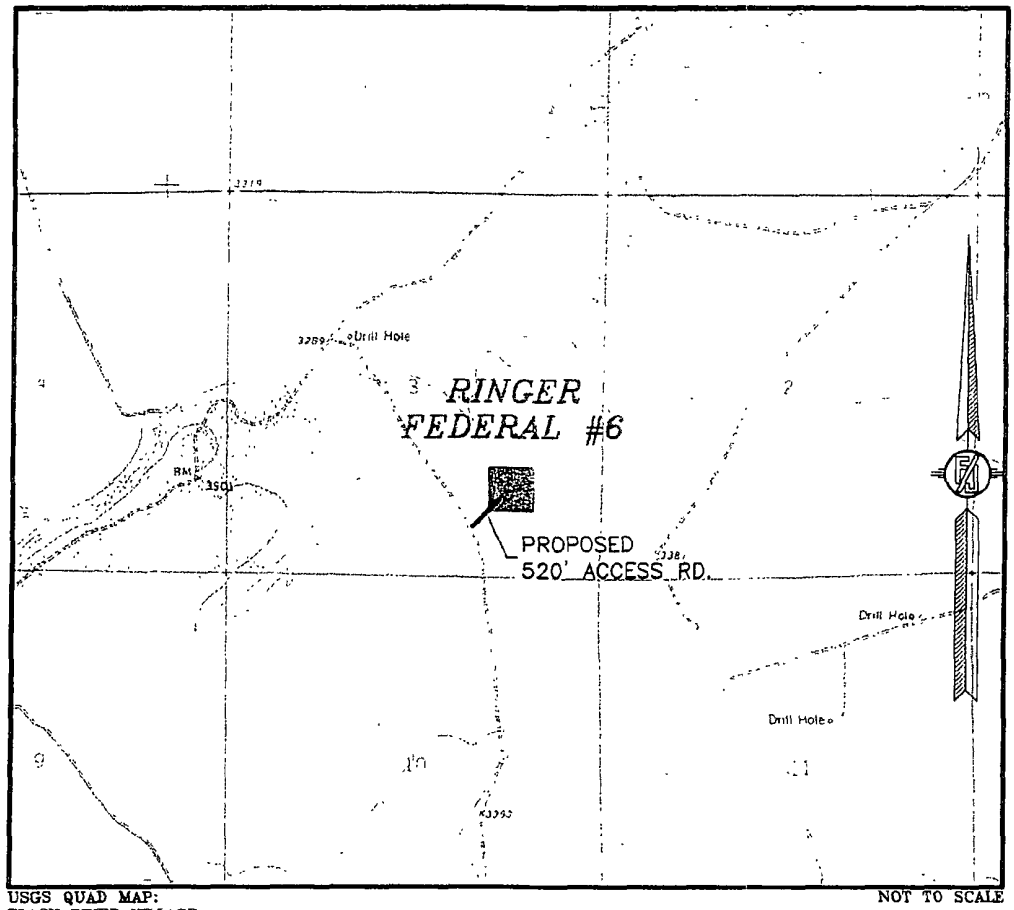
FLAMMABILITY
Hydrogen Sulfide will burn readily with a distinctive clear blue flame, producing Sulfur Dioxide (SO2), another hazardous gas that irritates the eyes and lungs.

SOLUBILITY – 4 TO 1 RATIO WITH WATER
Hydrogen Sulfide can be dissolved in liquids, which means that it can be present in any container or vessel used to carry or hold well fluids including oil, water, emulsion and sludge. The solubility of H2S is dependent on temperature and pressure, but if conditions are right, simply agitating a fluid containing H2S may release the gas into the air.

BOILING POINT – (-76 degrees Fahrenheit)
Liquefied Hydrogen Sulfide boils at a very low temperature, so it is usually found as a gas.

LOCATION MAP

SECTION 3, TOWNSHIP 25 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
BLACK RIVER VILLAGE

NOT TO SCALE

MURCHISON OIL & GAS, INC.
RINGER FEDERAL #6
LOCATED 1250 FT. FROM THE SOUTH LINE
AND 1250 FT. FROM THE EAST LINE OF
SECTION 3, TOWNSHIP 25 SOUTH,
RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

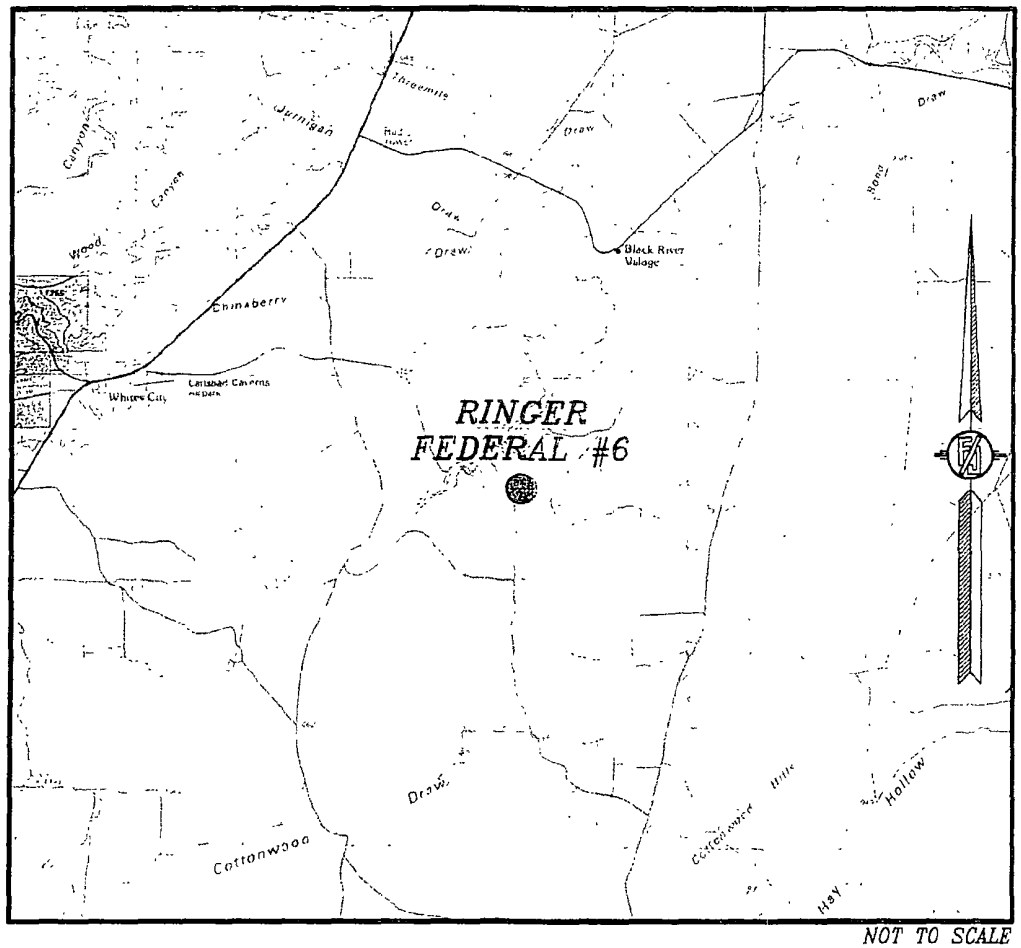
JUNE 20, 2012

SURVEY NO. 1160
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

VICINITY MAP

SECTION 3, TOWNSHIP 25 SOUTH, RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

VICINITY MAP



NOT TO SCALE

MURCHISON OIL & GAS, INC.
RINGER FEDERAL #6
LOCATED 1250 FT. FROM THE SOUTH LINE
AND 1250 FT. FROM THE EAST LINE OF
SECTION 3, TOWNSHIP 25 SOUTH,
RANGE 26 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JUNE 20, 2012

SURVEY NO. 1160
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

MUD PROGRAM

Drill plugs while treating drilled cement with Sodium Bicarbonate and Citric Acid or SAPP.

- HydScav will be mixed in the drilling fluid if any H2S is detected.
- Prior to the previous TD of 11,760' a mud up should be completed adding 10.0 lb/gal Brine Water to in-crease the fluid density to 9 8-10.0. lb/gal. Addition of sack salt may be required.
- If there is sufficient stored fluid from previous operations it may be utilized as a substitute or supplement to the complete system mud up.
- ALL Zan should be added in .75-1.25 lb/bbl concentration This will yield a funnel viscosity from 46-48 sec/qt.
- ALL Pac should be added in .5-1.0 lb/bbl concentration to reduce the fluid loss to 12-15 ml/30 min
- At 10,400 further additions should be made to increase viscosity to 46-48 sec/qt and reduce fluid loss to 8-10 ml/30 min.
- Increases in fluid density may be necessary however they will be dictated by hole conditions. Decreases in fluid loss may also be required
- If the fluid loss is to be maintained less than 8 ml/30 min All Tex should be used in 2-3 lb/bbl concentra-tion.
- Increases over 10.0 lb/gal should be made using Calcium Carbonate as the weighting agent due to 97% acid solubility.
- In the event of total circulation losses substantial LCM reserves should be maintained on location to limit time in transit if the need arises.
- Pre-Hydrated High Viscosity Fresh Water Gel Pills containing 25-35 lb/ bbl varying particle size LCM Should be pumped in the event of total losses or dry drilling.
- All drilling operations will be conducted using a zero discharge closed loop system.
- If torque and drag become an issue while drilling add 1 - 2 percent by volume ALL Surfak PG to add lubricity and further chemically inhibit reactive shale in the water based drilling fluid system.
- We suggest the addition of a biocide / bactericide such as ALL STC prior to short term storage of this polymer drilling fluid and re-use on subsequent operations in the area. Sufficient mud materials will be kept on location at all times in order to combat lost circulation, or unexpected kicks.

Mud system monitoring equipment with derrick floor indicators and visual / audio alarms shall be installed and operative prior to drilling out the first cement plug. This equipment will remain in use until the well is completed. Monitoring equipment shall consist of the following:

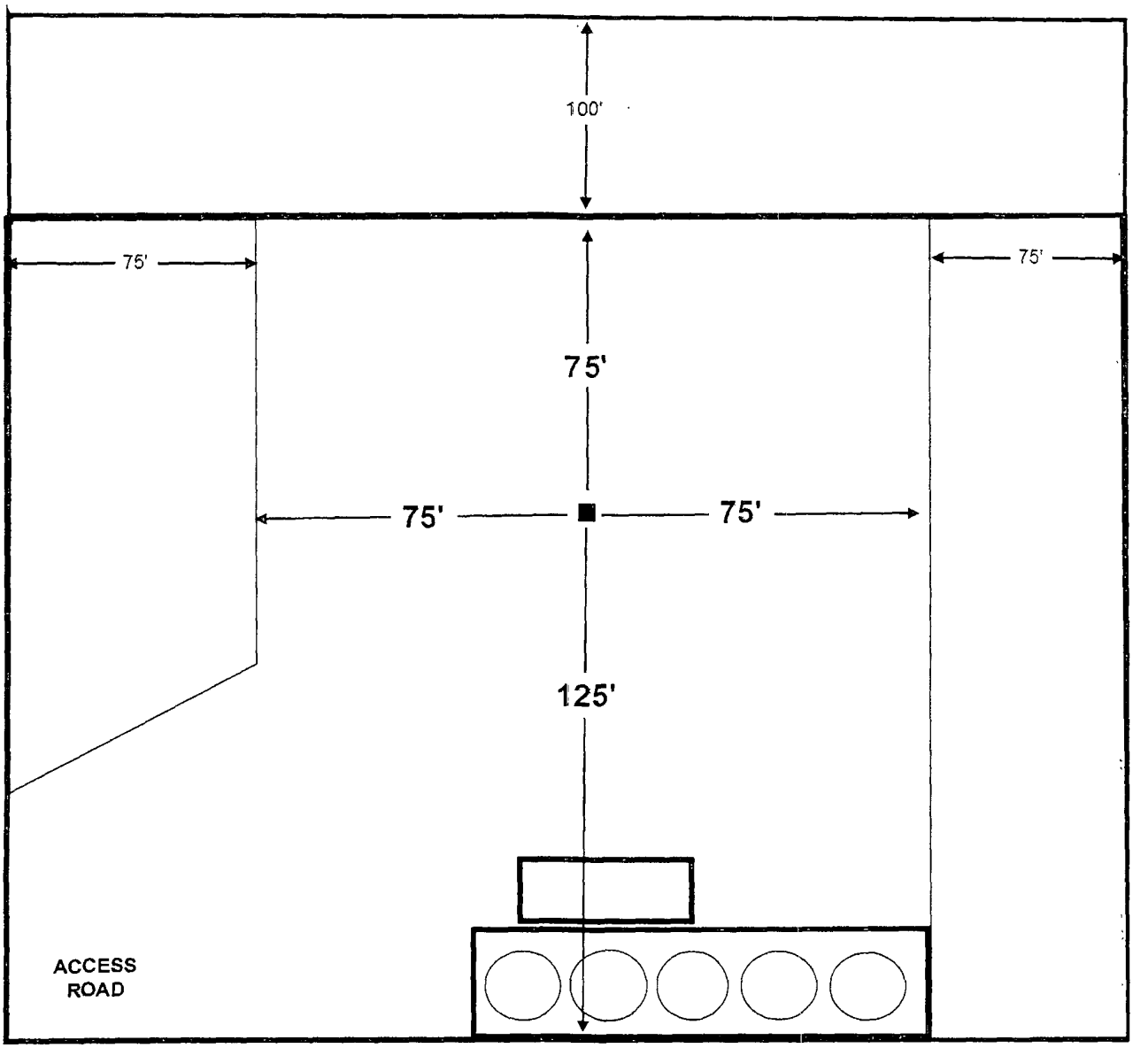
- A recording pit level indicator.
- A pit volume totalizer.
- A flowline sensor.

NOTE: All drill pipe used in the drill string will be sour service (SS135).

Exhibit F

NORTH

Ringer Federal Com #6 SWD
Production Facility and Interim
Reclamation Wellsite Layout



1 - 750 bbl tank
4 - 500 bbl tanks
1 - triplex pump

DATE IN	SUSPENSE	ENGINEER	LOGGED IN	SWD TYPE	APP NO

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☒ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U S Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Michael S. Daugherty		Chief Operating Officer	05/14/12
Print or Type Name	Signature	Title	Date

mdaugherty@jdmii.com
e-mail Address

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance __X__Disposal _____Storage
Application qualifies for administrative approval? _____Yes _____No

II. OPERATOR: Murchison Oil and Gas

ADDRESS: 1100 Mira Vista Blvd , Plano, TX. 75093

CONTACT PARTY: Jack Rankin PHONE: 972-931-0700

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes __X__No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Jack Rankin TITLE: VP Operations

SIGNATURE: _____ DATE: 23 May 2012

E-MAIL ADDRESS: jrankin@jdmii.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application The data must be both in tabular and schematic form and shall include:

(1) Lease name, Well No.: Location by Section, Township and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) The intended purpose of the injection well: with the exact location of single wells or the Section, Township, and Range location of multiple wells;

(3) The formation name and depth with expected maximum injection rates and pressures; and,

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Murchison Oil and Gas

WELL NAME & NUMBER: Ringer Fed Com 6

WELL LOCATION:	1250' FSL & 1250' FEL	P	3	25-S	26-E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

See attached well bore schematic.

Production Casing

Hole Size: 6.5" Casing Size: 5.5", 17#, P-110
fr/ Surface to 12850'MD
Cemented with: 600sx
Top of cement: Surface Method Determined: Circulate
4.125" Open Hole fr/ 12850'-13700'

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 17-1/2" Casing Size: 13-3/8", 68#, J-55, BTC @ 350'MD
Cemented with: 400 sx. *or* ft³
Top of Cement: Surface Method Determined: Circulated

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 9-5/8", 47# L-80, LTC @ 1914'MD
Cemented with: 750 sx. *or* ft³
Top of Cement: Surface Method Determined: Circulated

Intermediate Casing 2

Hole Size: 8-3/4" Casing Size: 7-5/8", 33.7# N-80 SJ-2 @ 8553'MD
Cemented with: 1227 sx. *or* ft³
Top of Cement: Surface Method Determined: Perforated the 7.5 P" casing @ 100 MD and circulated to surface
Total Depth: 8553'MD

Injection Interval

12850 feet to 13700

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 3.5" Lining Material: Nylon

Type of Packer: 5.5" Hydraulic set production packer

Packer Setting Depth: 12830'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____Yes X No

   If no, for what purpose was the well originally drilled? Gas producer well that was dry.

2. Name of the Injection Formation: Devonian

3. Name of Field or Pool (if applicable): White City Penn

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used.

   No

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:

   Bone Spring - 5376'

   Wolfcamp - 8608'

Murchison Oil and Gas

Field:			By: SM
Lease: Ringer	Planned RKB-MSL: 3340 ft		Date: 23-May-12
Well: 6	Surface Location: 1250' FSL & 1250' FEL	P 3 25-S 26-E	
Rig:			

Dir. Plan Inc.	Azm.	Dir. Cntrl	Formation Tops	Hole Size	MD / TVD	Casing Program	Eval. Program LWD	E-Line	Mud Logging
0.0	0.0				52 / 52	20"			
				17.5"	362 / 362	13¾", 68#, J55, BTC			
			Bell Canyon. 1906	12.25"	1926 / 1926	9⅝", 47#, L-80 LTC			
			Bone Springs: 5376			DV Tool			
				8.75"	8553 / 8553	7⅝", 33.7#, N-80, SJ-2			
			Wolfcamp: 8608						
			Strawn: 10292						
			Atoka: 10347						
			Morrow: 10937						
			Top Devonian: 12810						
				6.5"	12850 / 12850	Packer set at 12830 5.5", 17#, P-110, FJ			
					3.5" L-80 9.2# tubing				
				4.125"	13,700 / 13,705	Open hole			
			Montoya: 13810						

District I
1625 N. French Dr. Hobbs, NM 88240

District II
811 South First, Artesia, NM 88210

District III
1000 Rio Brazos Rd., Aztec NM 87410

District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, N M 87505

Form C-102
Revised March 17, 1999
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	87280	WHITE CITY PENN (GAS)

Property Code	Property Name	Well Number
	RINGER FEDERAL COM	*6*

OGRID No.	Operation Name	Elevation
015363	*MURCHISON OIL & GAS, INC.*	*3340*

Surface Location

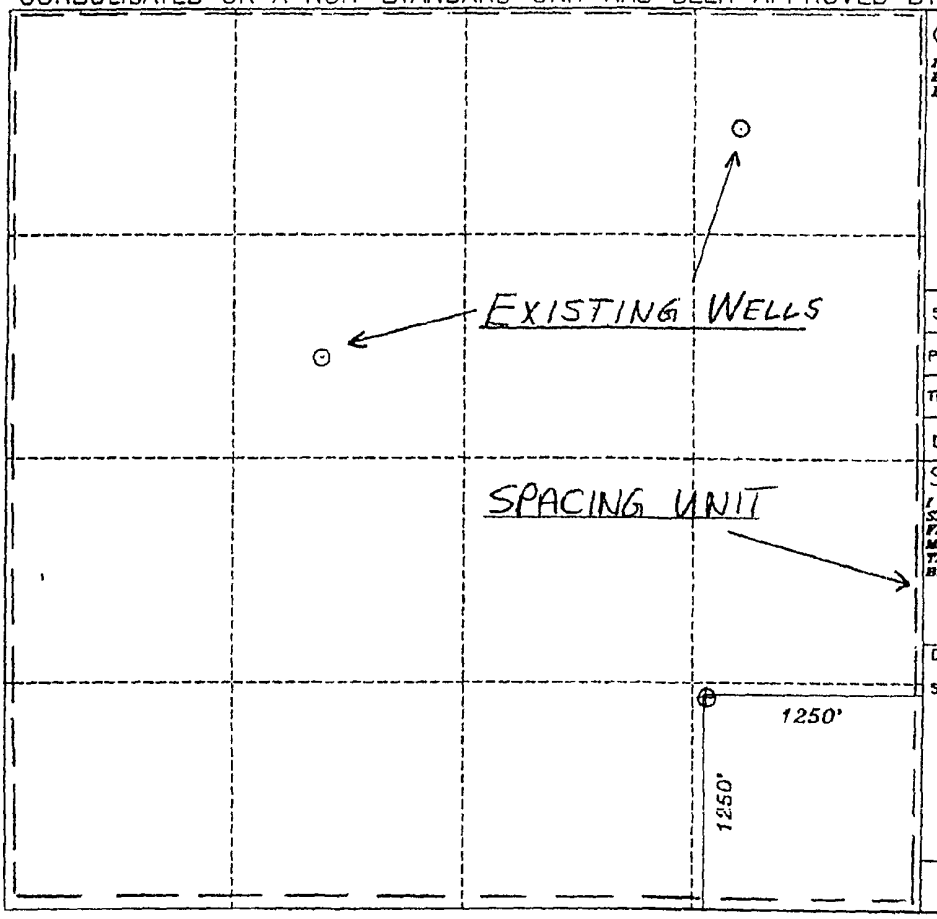
UL or Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County
P	*3*	*25-S*	*26-E*		*1250*	*SOUTH*	*1250*	*EAST*	*EDDY*

Bottom Hole Location If Different From Surface

UL or Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No
640	INFILL		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTEREST HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION HEREIN IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Signature

Printed Name MICHAEL S. DAUGHERTY

Title VICE PRESIDENT OPERATIONS

Date 11/14/03

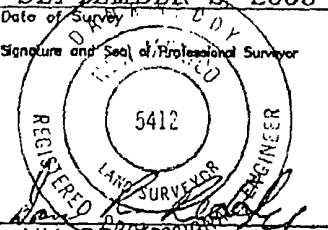
SURVEYOR CERTIFICATION

I HEREBY CERTIFY THAT THE WELL LOCATION SHOWN ON THIS PLAT WAS PLOTTED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION, AND THAT THE SAME IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SEPTEMBER 2, 2003

Date of Survey

Signature and Seal of Professional Surveyor



NM PE&LS #5412

Certificate Number

Pro-Kem, Inc.
WATER ANALYSIS REPORT

SAMPLE

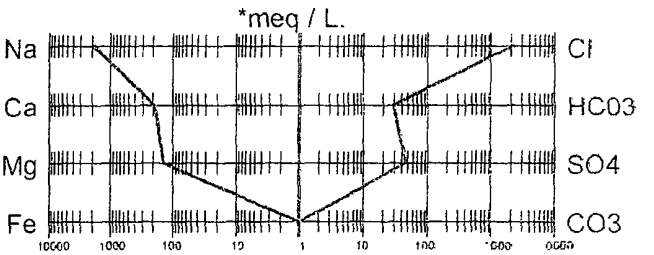
Oil Co. : **Murchinson**
Lease : **Ogden**
Well No.: **5A**
Location:
Attention:

Date Sampled : **16-March-2012**
Date Analyzed: **22-March-2012**
Lab ID Number: **Mar2212.001- 2**
Salesperson :
File Name : **Mar2212.001**

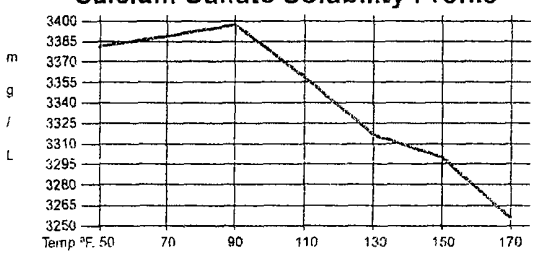
ANALYSIS

1.	Ph			7.800		
2.	Specific Gravity 60/60 F			1.083		
3.	CACO3 Saturation Index	@ 80F		1.998	Severe	
		@140F		2.878	Severe	
	Dissolved Gasses			**MG/L.**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide			1000		
5.	Carbon Dioxide			0		
6.	Dissolved Oxygen			Not Determined		
	Cations					
7	Calcium	(Ca++)		3,687	/ 20.1 =	183.43
8.	Magnesium	(Mg++)		1,653	/ 12.2 =	135.49
9.	Sodium	(Na+)	(Calculated)	41,628	/ 23.0 =	1,809.91
10.	Barium	(Ba++)		Below 10		
	Anions					
11.	Hydroxyl	(OH-)		0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)		1,665	/ 61.1 =	27.25
14.	Sulfate	(SO4=)		2,150	/ 48.8 =	44.06
15.	Chloride	(Cl-)		72,984	/ 35.5 =	2,055.89
16.	Total Dissolved Solids			123,767		
17.	Total Iron	(Fe)		6.00	/ 18.2 =	0.33
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO3			16,014		
20.	Resistivity @ 75 F. (Calculated)			0.064 Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	27.25		81.04		2,208
CaSO4	44.06		68.07		2,999
CaCl2	112.13		55.50		6,223
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	135.49		47.62		6,452
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	1,808.27		58.46		105,711

* milliequivalents per Liter

Tony Abernathy. Analyst

Pro-Kem, Inc.
WATER ANALYSIS REPORT

SAMPLE

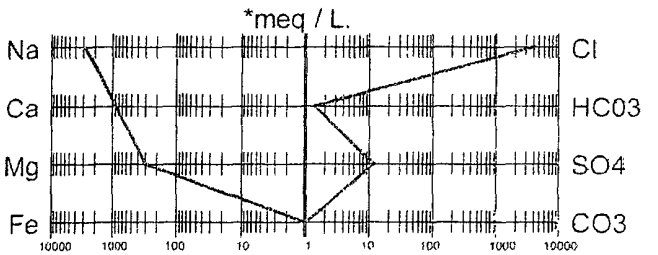
Oil Co. : **Murchinson**
Lease : **Ogden**
Well No.: **9H**
Location:
Attention:

Date Sampled : **16-March-2012**
Date Analyzed: **22-March-2012**
Lab ID Number: **Mar2212.001- 3**
Salesperson :
File Name : **Mar2212.001**

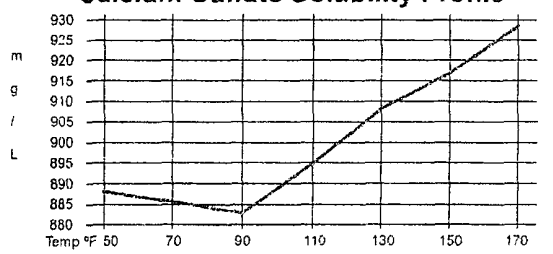
ANALYSIS

1.	Ph			5.800		
2.	Specific Gravity 60/60 F.			1.163		
3.	CACO3 Saturation Index	@ 80F		0.244	Mild	
		@140F		2.004	Severe	
	Dissolved Gasses			**MG/L.**	**EQ. WT.**	***MEQ/L**
4.	Hydrogen Sulfide			0		
5.	Carbon Dioxide			400		
6.	Dissolved Oxygen			Not Determined		
	Cations					
7.	Calcium	(Ca++)		16,834	/ 20.1 =	837.51
8.	Magnesium	(Mg++)		3,452	/ 12.2 =	282.95
9.	Sodium	(Na+)	(Calculated)	63,919	/ 23.0 =	2,779.09
10.	Barium	(Ba++)		Not Determined		
	Anions					
11.	Hydroxyl	(OH-)		0	/ 17.0 =	0.00
12.	Carbonate	(CO3=)		0	/ 30.0 =	0.00
13.	Bicarbonate	(HCO3-)		78	/ 61.1 =	1.28
14.	Sulfate	(SO4=)		550	/ 48.8 =	11.27
15.	Chloride	(Cl-)		137,969	/ 35.5 =	3,886.45
16.	Total Dissolved Solids			222,802		
17.	Total Iron	(Fe)		6.50	/ 18.2 =	0.36
18.	Manganese	(Mn++)		Not Determined		
19.	Total Hardness as CaCO3			56,250		
20.	Resistivity @ 75 F. (Calculated)			0.001 Ohm · meters		

LOGARITHMIC WATER PATTERN



Calcium Sulfate Solubility Profile



PROBABLE MINERAL COMPOSITION

COMPOUND	*meq/L	X	EQ. WT.	=	mg/L.
Ca(HCO3)2	1.28		81.04		103
CaSO4	11.27		68.07		767
CaCl2	824.97		55.50		45,786
Mg(HCO3)2	0.00		73.17		0
MgSO4	0.00		60.19		0
MgCl2	282.95		47.62		13,474
NaHCO3	0.00		84.00		0
NaSO4	0.00		71.03		0
NaCl	2,778.53		58.46		162,433

* milliequivalents per Liter

Tony Abernathy, Analyst

Murchison Oil and Gas

Southern Eddy County New Mexico

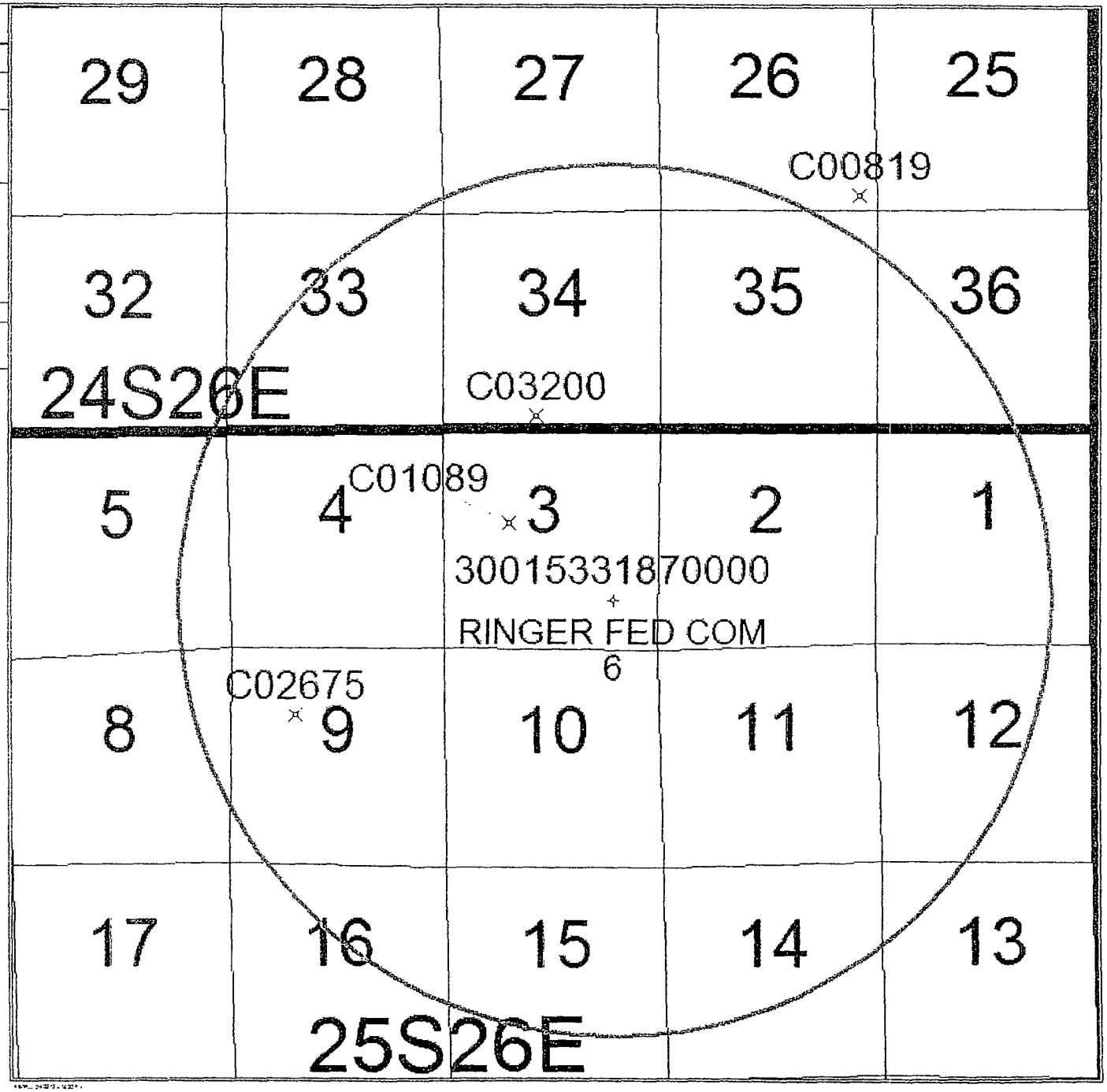
SWD Ringer #6

0 500 1,000 1,500 2,000 2,500
METERS

WELL SYMBOLS
Dry Hole
Water Well

By: Amanda Hood

May 4, 2012



Oil Cons.
N.M. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

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.
NM 19836

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No
8138

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
RINGER FED COM #6

2. Name of Operator
MURCHISON OIL & GAS, INC.

9. API Well No.
30-015-33187

3a. Address
1100 MIRA VISTA BLVD.
PLANO, TX. 75093-4698

3b. Phone No. *(include area code)*
(972) 931-0700

10. Field and Pool, or Exploratory Area
WHITE CITY PENN

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
SEC. 3, T25S, R26E
1250' FSL & 1250' FEL SE/SE (P)

11. County or Parish, State
EDDY, NM.

JUL 2004
RECEIVED
OCD - ARTESIA

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ 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	☐ Other
	☐ 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 in 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.)

SEE ATTACHED

Approved as to plugging of the well bore.
Liability under bond is retained until
surface restoration is completed.

ACCEPTED FOR RECORD
JUL 7 2004
LES BABYAK
PETROLEUM ENGINEER

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
MICHAEL S. DAUGHERTY
Title VICE PRESIDENT OPERATIONS

Signature Michael S. Daugherty
Date 6/30/04

Accepted for record - NMOCD

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.

(Instructions on reverse)

Ringer Fed Com #6
Eddy Co., NM.
Attachment to Form 3160-5 dated 6/30/04
Plug and Abandon

Drilled 6-1/2" hole to total depth of 11760' on 5/22/04. Spot cement plug above Morrow from 10987' to 10748' with 50 SXS Class "H" + 1.2% BA-50 + .40% CD-32 + .10% SMS + 5% NACL.

Spot cement plug above Strawn from 10292' to 10049' with 50 SXS Class "H" + 1.2% BA-50 + .40% CD-32 + .10% SMS + 5% NACL.

Spot cement plug 7-5/8" across casing shoe @ 8553'. Cement from 8628' to 8449' Class H + 1.2% BA-50 + .40% CD-32 + .10% SMS + 5% NACL, WOC and tag top of plug at 8488'

Spot cement plug above Bone Springs from 5500' to 5321' with 40 SXS Class H + 1.2% BA-50 + .40% CD-32 + .10% SMS + 5% NACL.

Spot cement plug across 9-5/8" casing shoe @ 1914'. Cement plug from 2000' to 1866' 30 SXS Class "H" + 1.2% BA-50 + .40% CD-32 + .10% SMS + 5% NACL.

Perforate 7-5/8" casing @ 400' with 4 SPF. Pump 79 SXS Class "C" 2% CACL until good cement to surface.

Pits fenced, location cleaned, mouse and rat hole filled and P&A marker installed. Pit remains to be closed and location reclaimed. Will submit final P&A notice when complete.

GEOLOGICAL TOPS

Bell Canyon	1906'
Bone Springs	5376'
Wolfcamp	8608'
Strawn	10292'
Atoka	10347'
Morrow	10937'

NOTE: Notified Kathy with BLM of Plugging operations @ 1700 HR. 5/26/04 prior to plugging.

2 mi radius
3218.7 meters

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Subbasin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
C 01089	C		ED	3	4	1	03	25S	26E	567505	3558398*	900	96	45	51
C 03200	C		ED	4	4	3	34	24S	26E	567708	3559212*	1455	80	52	28
C 02675	C		ED	1	4	1	09	25S	26E	565907	3556978*	2470	180	45	135

Average Depth to Water: **47 feet**

Minimum Depth: **45 feet**

Maximum Depth: **52 feet**

Record Count: 3

Basin/County Search:

Basin: Carlsbad **County:** Eddy

UTMNAD83 Radius Search (in meters):

Easting (X): 568218.54 **Northing (Y):** 3557849.36 **Radius:** 3218.7

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 03200
Primary Purpose: STK 72-12-1 LIVESTOCK WATERING
Primary Status: EXP EXPIRED
Total Acres:
Total Diversion: 0
Owner: FRED BEARD
Owner: DEBORAH BEARD

Documents on File

	Doc	File/Act	Status 1	2	3	Transaction Desc.	From/To	Acres	Diversion	Consumptive
get images	72121	2005-06-02	EXP	EXP	ABS	C 03200	T		3	

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Source	Q Q Q 64 16 4	Sec	Tws	Rng	X	Y	Other Location Desc
C 03200	Shallow	4 4 3	34	24S	26E	567708	3559212*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer
Point of Diversion Summary

POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Twp	Rng	(NAD83 UTM in meters) X	Y
C 03200	4	4	3	34	24S	26E	567708	3559212*

Driller License: BRAZEAL, JOHN
Driller Name: WAYNE BRAZEAL

Drill Start Date:	08/12/2005	**Drill Finish Date:**	08/20/2005	**Plug Date:**	
Log File Date:	08/18/2006	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	8
Casing Size:		**Depth Well:**	80 feet	**Depth Water:**	52 feet

Water Bearing Stratifications:	Top	Bottom	Description
	65	75	Sandstone/Gravel/Conglomerate

*UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer
Point of Diversion Summary

POD Number	Q64	Q16	Q4	Sec	Twws	Rng	X	Y
	(quarters are 1=NW 2=NE 3=SW 4=SE)			(quarters are smallest to largest)			(NAD83 UTM in meters)	
C 02675	1	4	1	09	25S	26E	565907	3556978*

Driller License: DUBOSE DRILLING, INC.
Driller Name: BILL DUBOSE, JR.

Drill Start Date:	02/09/2000	**Drill Finish Date:**	02/15/2000	**Plug Date:**	
Log File Date:	03/01/2000	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	20
Casing Size:	6.00	**Depth Well:**	180 feet	**Depth Water:**	45 feet

Water Bearing Stratifications:	Top	Bottom	Description
	25	85	Shallow Alluvium/Basin Fill

Casing Perforations:	Top	Bottom
	60	80
	140	180

Meter Number:	1288	**Meter Make:**	UNKNOWN
Meter Serial Number:	NONE	**Meter Multiplier:**	10.0000
Number of Dials:	6	**Meter Type:**	Diversion
Unit of Measure:	Barrels 42 gal.	**Return Flow Percent:**	
Usage Multiplier:		**Reading Frequency:**	Monthly (No Reading Expected)

Meter Readings (in Acre-Feet)

Read Date	Year	Mtr Reading	Flag	Rdr	Comment	Mtr Amount
04/01/2000	2000	26874	A	ms		0
04/01/2000	2000	26993	A	ms	project completed	0.153

**YTD Meter Amounts:	Year	Amount
	2000	0.153

*UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 01089
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: PMT PERMIT
Total Acres:
Total Diversion: 0
Owner: GULF OIL CORPORATION
Contact: J. M. RUSSELL

Documents on File

	Doc	File/Act	Status 1	2	3	Transaction Desc.	From/To	Acres	Diversion	Consumptive
get images	72121	1962-07-27	PMT	LOG	PRC	C 01089	T			3

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Source	Q Q Q 64 16 4	Sec	Tws	Rng	X	Y	Other Location Desc
C 01089	Shallow	3 4 1	03	25S	26E	567505	3558398*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer
Point of Diversion Summary

POD Number	Q64	Q16	Q4	Sec	Twp	Rng	X	Y
C 01089	3	4	1	03	25S	26E	567505	3558398*

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)
(NAD83 UTM in meters)

Driller License: ABBOTT BROTHERS COMPANY
Driller Name: ABBOTT, FLOYD

Drill Start Date:	08/06/1962	**Drill Finish Date:**	08/07/1962	**Plug Date:**	11/01/1962
Log File Date:	08/17/1962	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	7.00	**Depth Well:**	96 feet	**Depth Water:**	45 feet

Water Bearing Stratifications:	Top	Bottom	Description
	45	65	Sandstone/Gravel/Conglomerate
	65	75	Sandstone/Gravel/Conglomerate
	75	90	Sandstone/Gravel/Conglomerate

Casing Perforations:	Top	Bottom
	45	90

*UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer
Water Right Summary

get image list

WR File Number: C 00819
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: PMT PERMIT
Total Acres:
Total Diversion: 0
Owner: UNION OIL CO. OF CALIFORNIA

Documents on File

	Doc	File/Act	Status 1	2	3	Transaction Desc.	From/To	Acres	Diversion	Consumptive
get images	72121	1958-02-28	PMT	LOG	ABS	C 00819	T			3

Current Points of Diversion

(NAD83 UTM in meters)

POD Number	Source	Q Q Q 64 16 4	Sec	Tws	Rng	X	Y	Other Location Desc
C 00819	Shallow	4 4	26	24S	26E	570022	3560935*	

*An (*) after northing value indicates UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer
Point of Diversion Summary

POD Number	(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) Q64	Q16	Q4	Sec	Tws	Rng	(NAD83 UTM in meters) X	Y
C 00819		4	4	26	24S	26E	570022	3560935*

Driller License: BARRON, EMMETT
Driller Name: EMMETT BARRON

Drill Start Date:	02/23/1958	**Drill Finish Date:**	02/25/1958	**Plug Date:**	
Log File Date:	03/25/1958	**PCW Rcv Date:**		**Source:**	Shallow
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:		**Depth Well:**	62 feet	**Depth Water:**	42 feet

Water Bearing Stratifications:	Top	Bottom	Description
	42	62	Sandstone/Gravel/Conglomerate

*UTM location was derived from PLSS - see Help

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Kathy McCarroll, being first duly sworn, on oath says:

That she is the Classified Supervisor of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county, that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

May 9 2012

That the cost of publication is **$65.40** and that payment thereof has been made and will be assessed as court costs

Kathy McCarroll

Subscribed and sworn to before me this

14th day of May, 2012

Shirley Maxwell

My commission Expires on May 18, 2015

Notary Public

OFFICIAL SEAL
Shirley Maxwell
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires 5/18/15

May 9, 2012

CARLSBAD CURRENT ARGUS
LEGAL NOTICE

Murchison Oil & Gas, Inc., 1100 Mira Vista Blvd., Plano, TX 75093 is filing an Application for Authorization to Inject (Oil Conservation Division Form C-108) with the New Mexico Oil Conservation Division seeking administrative approval for a salt water disposal well. The proposed well, the Ringer Federal Com No 6 is located 1250 ft FSL and 1250 ft FEL of Section 3, T-25-S, R-26-E, NMPM Eddy County, NM. The source of the disposal water will be wells in the area operated by Murchison that produce from the Delaware, Strawn, Bone Springs, Morrow, Atoka and Wolfcamp formations. The disposal water will be injected into the Devonian formation of the Devonian system at a depth interval of 12850 ft to 13700 ft at a maximum injection pressure of 3043 PSI (subject to increase after Division approved testing) and a maximum rate of 5000 BWPD. Any interested party with questions or comments may contact Jack Rankin at Murchison Oil & Gas, Inc., 1100 Mira Vista Blvd., Plano, TX 75093 or call 972-931-0700. Objections to this application or requests for hearing must be filed with the Oil Conservation Division, 1220 South Saint Francis Dr., Santa Fe, NM 87505, within fifteen days of the date of the publication of this notice.

CARLSBAD CURRENT ARGUS
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June 27, 2012

Mr William Jones
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Re: Ringer Federal Com #6 (30-015-33187)
Sec. 3, T25S, R26E, Eddy County, NM
SWD Administrative Application - Additional Information

Mr. Jones:

In response to your email dated June 12th, please find the following:

a. Wellbore diagram of the existing well attached.
b. Map of wells drilled within ½ mile radius attached The only well within the ½ mile radius was completed in the Wolfcamp formation, Sage Draw Pool (Ringer Fed Com 12, 30-015-39760).
c. There have been no wells drilled to the Devonian within the ½ mile radius.
d. Map showing lease ownership within the ½ mile radius attached
e. The Ogden 5A water analysis is from the Ramsey Sand and the Ogden 9H water analysis is from the Cherry Canyon formation.
f. We plan to take a water sample from water well C01089 and take it to Cardinal Laboratories in Hobbs. We will forward the report upon receipt
g. The BLM and Cimarex received notification on May 17, 2012 Copies of the signed return receipts are attached.
h. A copy of the drilling program is attached. A two man mud logging unit will be operating from 8,553' to TD to determine if hydrocarbons are present (Page 3,6B).

Please contact me at 972-931-0700 ext. 110 or mdaugherty@jdmii com, if you have any questions or need additional information.

Sincerely,

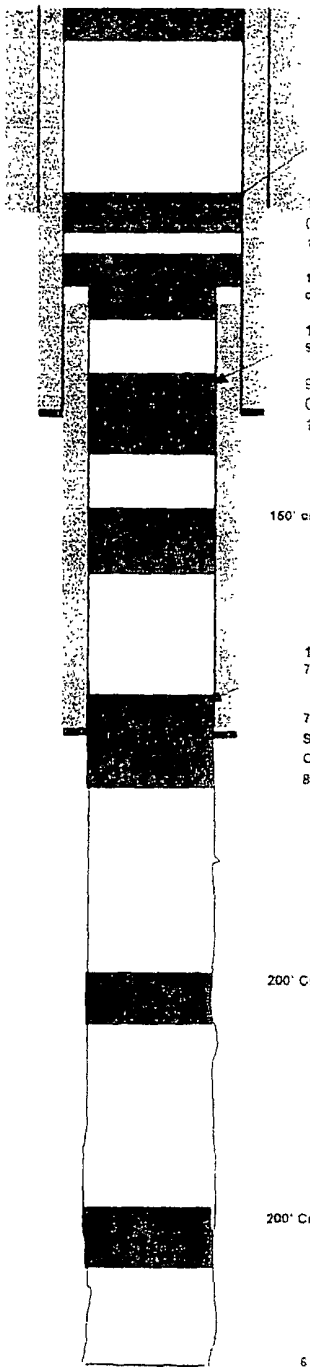
Michael S. Daugherty
COO

Enclosures

MURCHISON OIL AND GAS INC
Ringer Federal Com #6
SEC 3 T-25S, R-26E
1250' FSL AND 1250' FEL
EDDY COUNTY, NEW MEXICO
API # 30 - 015 - 33187

GL 3340

4 X 4" P & A MARKER W/ WELL INFORMATION AS ABOVE WELDED ON AND PLUG DATE



60 Cmt to surface

100' Cmt plug 50' above and below 13 3/8" csg shoe 300' to 400'

13 3/8" 68# J-55 Butt @ 350
Cmt W/ 400 Sx "C" Cir 54 sx to p.
17 1/2" HOLE

100' cmt plug 50' above and below 7 5/8" cut off.

100' cmt plug 50' above and below 9 5/8" csg shoe 1,900' to 2,000'

9 5/8" 47# L-80 & P-110 LT&C @ 1,950
Cmt w/ 950 sx Cir 89 sx to pit
12 1/4" HOLE

150' cmt plug at top of Bone springs 5,600' and up

150' cmt plug 75' above and below 7 5/8" csg shoe to 8,603

7 5/8" 33.7# S-95, N-80, P-110, SJ-2
Set At 8653
Cmt W/ 1227 Sx,TOC at 1660' by Temp survey
8 3/4" hole

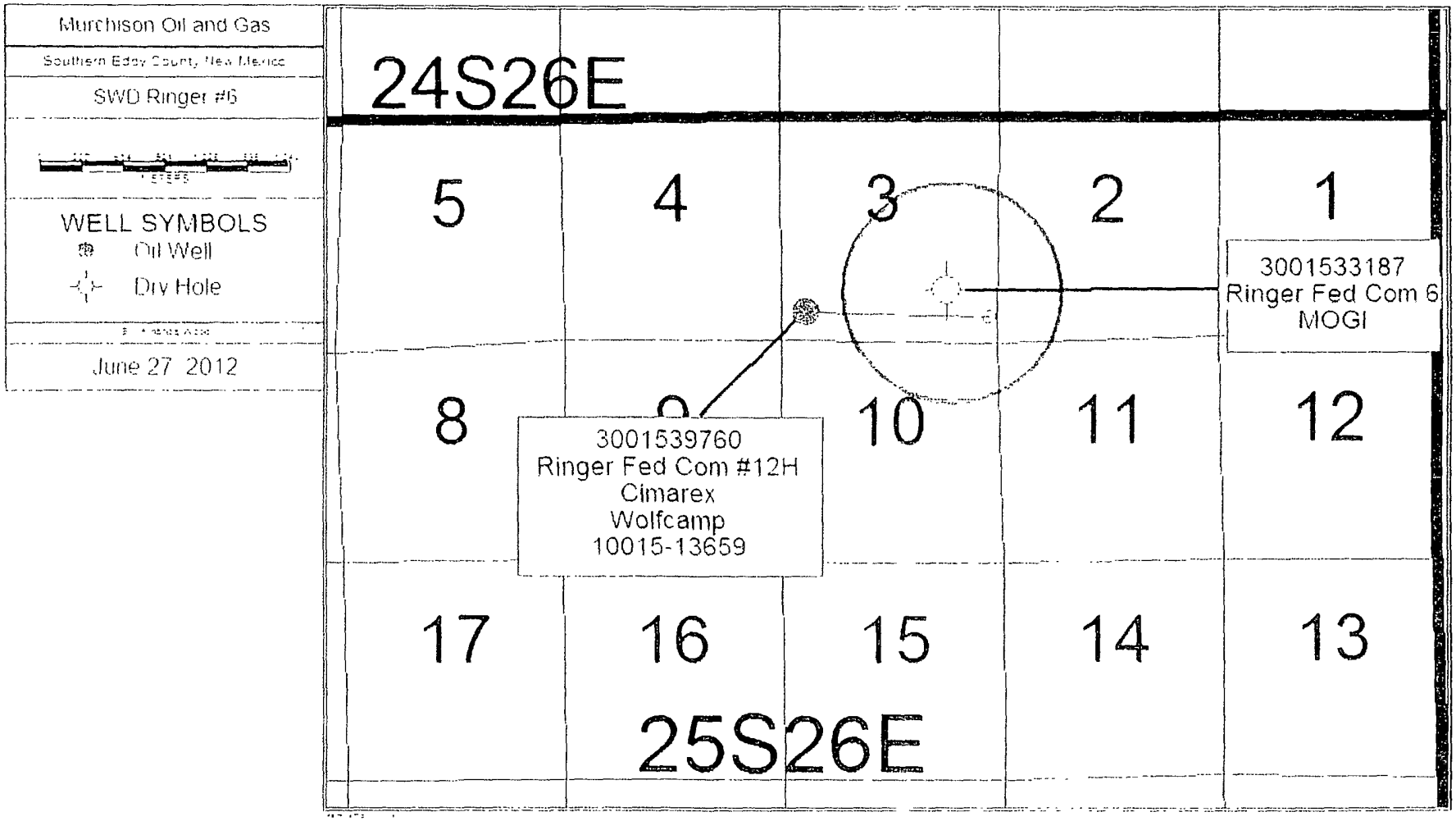
200' Cmt plug at top of Strawn 10,292 and up

200' Cmt plug at top of Morrow 10,937' and up

6 1/2" HOLE @ 11,760

FORMATION TOPS

Bell Canyon	1,906'
Bone Springs	5,376'
Wolfcamp	8,608
Strawn	10,292'
Atoka	10,347'
Morrow	10,937'


Murchison Oil and Gas
Southern Eddy County, New Mexico
SWD Ringer #6
WELL SYMBOLS
Oil Well
Dry Hole
June 27 2012
24S26E
5
4
3
2
1
3001533187
Ringer Fed Com 6
MOGI
8
9
10
11
12
3001539760
Ringer Fed Com #12H
Cimarex
Wolfcamp
10015-13659
17
16
15
14
13
25S26E

Murchison Oil and Gas

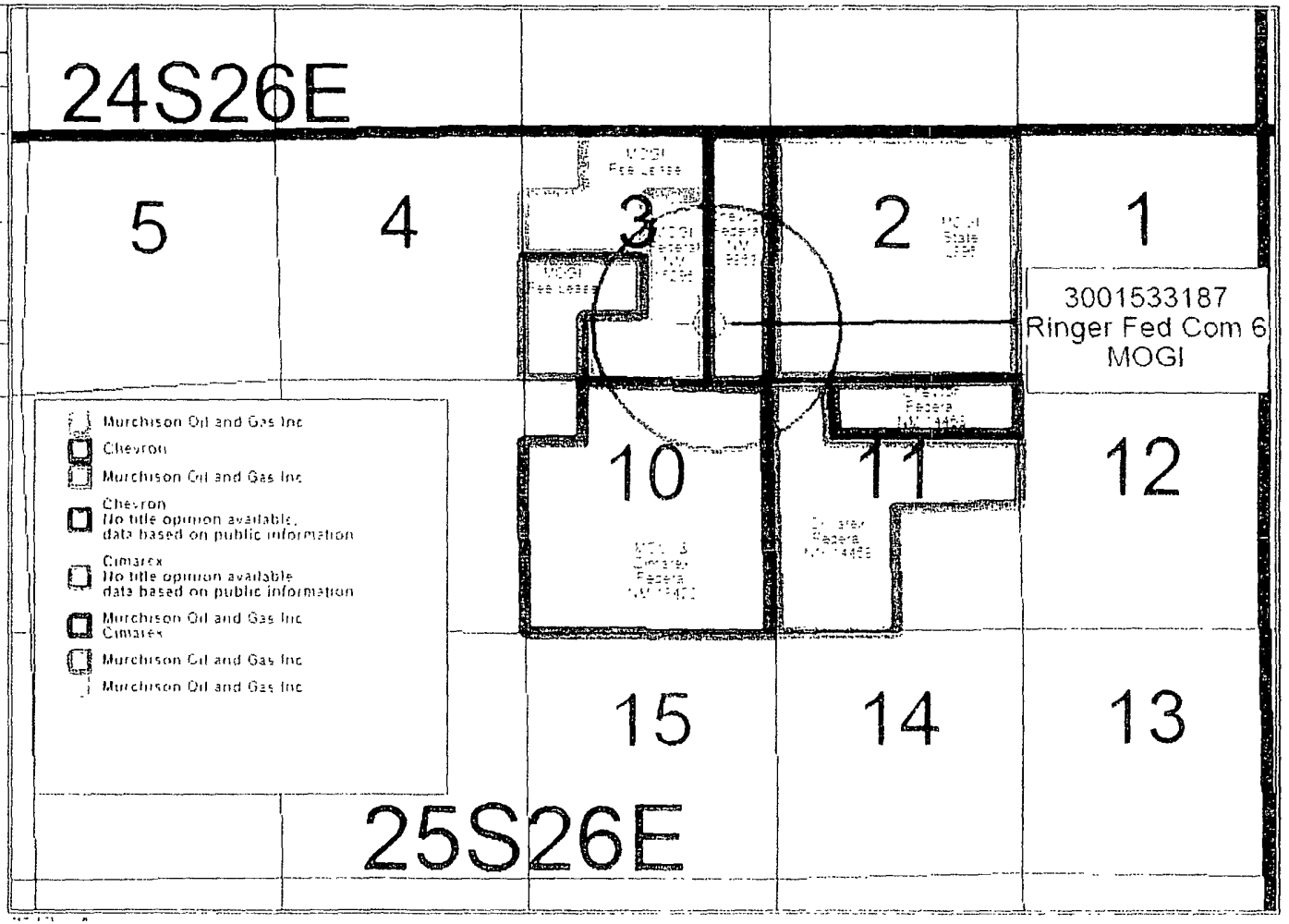
Southern Eddy County, New Mexico

SWD Ringer #6

WELL SYMBOLS

Dry Hole

June 27 2012



UNITED STATES POSTAL SERVICE.

Date Produced 05/21/2012

WALZ CERTIFIED MAIL SOLUTIONS LLC

The following is the delivery information for Certified Mail™ item number 7196 9008 9040 0936 2124. Our records indicate that this item was delivered on 05/17/2012 at 12:25 p.m. in CARLSBAD, NM, 88220. The scanned image of the recipient information is provided below.

Signature of Recipient.

Delivery Section

Heather Shatz

Address of Recipient.

620 E. Greene

Thank you for selecting the Postal Service for your mailing needs. If you require additional assistance, please contact your local post office or Postal Service representative

TO: Carlsbad Field Office
Bureau of Land Management
620 E. Greene St
Carlsbad, NM 88220-6292

SENDER:

REFERENCE: Ringer #6 SWD Notice

7196 9008 9040 0936 2124

PS Form 3800, January 2005

Postage	0.45
Certified Fee	2.95
Return Receipt Fee	1.15
Restricted Delivery	0.00
Total Postage & Fees	4.55

RETURN RECEIPT SERVICE

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided
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POSTMARK OR DATE

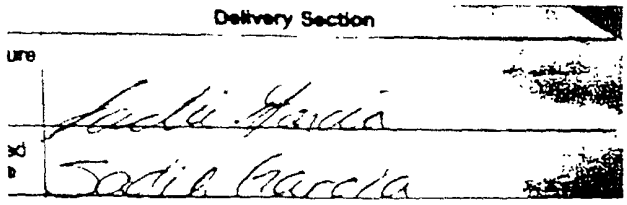
UNITED STATES POSTAL SERVICE

Date Produced 05/21/2012

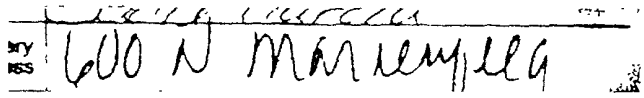
WALZ CERTIFIED MAIL SOLUTIONS LLC

The following is the delivery information for Certified Mail™ item number 7196 9008 9040 0936 2438. Our records indicate that this item was delivered on 05/17/2012 at 12.26 p.m. in MIDLAND, TX, 79701. The scanned image of the recipient information is provided below:

Signature of Recipient:



Address of Recipient:



Thank you for selecting the Postal Service for your mailing needs. If you require additional assistance, please contact your local post office or Postal Service representative.

TO: Cimarex Energy Co of CO
600 N Marienfeld St
Suite 600
Midland, TX 79701

SENDER:

REFERENCE: Ringer #6 SWD Notice

7196 9008 9040 0936 2438

PS Form 3800, January 2005

Postage	0.45
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RETURN RECEIPT SERVICE

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided
Do Not Use for International Mail

POSTMARK OR DATE

ATTACHMENT TO FORM 3160-3
Murchison Oil & Gas, Inc.
Ringer Federal Com #6H SWD
SL: 1,250' FSL & 1,250' FEL, Unit P
Sec 3, T25S, R26E
Eddy County, New Mexico

1 ESTIMATED FORMATION TOPS

Salado	350'
Base of Salt	1687'
Lamar Lime	1900'
Bell Canyon	1906'
Cherry Canyon	2804'
Bone Spring	5376'
3rd Bone Spring	8156'
Wolfcamp	8608'
Strawn	10292'
Atoka	10347'
Morrow Limestone	10937'
Morrow Clastics	11288
Devonian	12810'
Montoya	13810'

PROPOSED DEPTH 13,700' MD

2. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL, OR GAS

Anticipated Formation Tops. RKB +/- 3360' Ground Elevation 3340'

Fresh Water	50' – 300'	Surface Fresh Water Sands
Oil/Gas	1906	Delaware
Oil/Gas	5376'	Bone Spring
Oil/Gas	8608'	Wolfcamp
Oil/Gas	10,292'	Strawn
Oil/Gas	11,288'	Morrow

3 CASING PROGRAM

Casing Size	Hole Size	From To	Weight	Grade	Joint	Condition	Purpose
13 375"	17 5"	0' – 362'	68#	J-55	BTC	New	Surface
9 625"	12 25"	0' – 1926'	47 #	L-80	LTC	New	Intermediate
7 625"	8.75"	0' – 8553'	33.7 #	N-80	SJ-2	New	Intermediate
5 5"	6 5"	8553 – 12850'	17#	P-110	FJ	New	Liner

Casing Size	Casing ID	Burst Rating, psi	Safety Factor	Collapse Rating, psi	Safety Factor	Tension Rating, 1000 lbs.	Safety Factor
13.375"							
9.625"	8 681"	6870	2 5	4760	3 71	893	9 8
7 625"	6 756"	7900	1 42	6560	1 54	700	2.43
5 5"	4 89"	10640	1.1	7480	1 17	420	1 91

Equivalent or adequate grades and weights of casing may be substituted at time casing is run, depending on availability

SURFACE CASING

Tension	Calculated using weight of casing times landing depth without utilizing buoyancy effects
Collapse	Calculated with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run. The effects of axial load on collapse will be considered
Burst	In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture gradients up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized

INTERMEDIATE CASING

Tension	Calculated using weight of casing times landing depth without utilizing buoyancy effects
Collapse	Calculated with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run. The effects of axial load on collapse will be considered
Burst	In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture gradients up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized

PRODUCTION CASING

Tension	Calculated using weight of casing times landing depth without utilizing buoyancy effects
Collapse	Calculated with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run. The effects of axial load on collapse will be considered
Burst	Maximum surface treating pressure will be limited to 85% of the rated burst pressure

4 PRESSURE CONTROL EQUIPMENT Blowout Preventer (See Attached Diagrams)
A BOP equivalent to Diagram 1 will be nippled up on the 13-3/8" casing strings. The BOP Stack, choke, kill lines, Kelly cock inside BOP, etc. will be hydro tested to 10,000 psi and 1500 psi on the intermediate casing by an approved pressure tester. The annular will be tested to 3000 psi. In addition to the rated working pressure tests, a low pressure (250 psi) test will be required. These tests will be performed:

a) upon installation
b) after any component changes
c) 15 days after a previous test
d) as required by well conditions

A function test to insure that the preventors are operating correctly will be performed on each trip. See the attached Diagram 1 for the minimum criteria for the 5000 psi choke manifold.

5 MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PV	YP	FL	Ph
8553'-13700'	Brine	8.7-8.9	34-36	2-3	2-3	12-15	

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks In order to run open-hole logs and casing, the viscosity and water loss may have to be adjusted to meet these needs

Mud system monitoring equipment with derrick floor indicators and visual / audio alarms shall be installed and operative prior to drilling into the Paddock formation This equipment will remain in use until the production casing is run and cemented Monitoring equipment shall consist of the following

- A recording pit level indicator
- A pit volume totalizer
- A flowline sensor

6. TECHNICAL STAGES OF OPERATION

A. Testing None planned.

B Mud Logging.

- Two man unit from 8553' to TD

C Conventional Coring. None anticipated

D Cement

5.5" Liner - Cementing Program
Cement lead with 12.8ppg 1040 sacks of Premium Plus Class C 35/65 + 6% Bentonite + 0 3% C-16A + 0 25# Cello Flake + 0 25% R-38 + 3% Salt (BWOW) with yield = 1 86 cu ft./sack & tail with 14 8ppg 150 sacks Premium Plus Class C + 0 4% C-16A + 0 2% C-35 + 0.25% R-38 with yield = 1 33 cu.ft./sack, circulate cement to surface If cement does not circulate, will run a temperature survey to find actual top of cement and run 1" tubing into annulus and pump cement as necessary to achieve circulation to surface 150% excess will be used.

7 ANTICIPATED RESERVOIR CONDITIONS

No abnormal temperatures or pressures are anticipated. Low levels of H2S have been monitored in producing wells in the area, so H2S may be present while drilling the well. An H2S Plan is attached to the Drilling Program Anticipated Bottom Hole Pressure is 5800 PSI (maximum), and anticipated static Bottom Hole Temperature is 280 degrees Fahrenheit.

8 OTHER PERTINENT INFORMATION

A Auxiliary Equipment

- Upper and lower Kelly cocks Full opening stab in valve on the rig floor

B Anticipated Starting Date

- Upon approval
- 14 days drilling operations with drilling rig
- 3 days completion operations with drilling rig

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MURCHISON OIL & GAS
LEASE NO.:	NM19836
WELL NAME & NO.:	6-RINGER FEDERAL
SURFACE HOLE FOOTAGE:	1250'/S. & 1250'/E.
BOTTOM HOLE FOOTAGE	
LOCATION:	Section 3, T. 25 S., R. 26 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

☐ **General Provisions**
☐ **Permit Expiration**
☐ **Archaeology, Paleontology, and Historical Sites**
☐ **Noxious Weeds**
☒ **Special Requirements**
- **Berming**
- **ROW**
- **Bonding**
- Cave/Karst

☐ **Construction**
- Notification
- Topsoil
- Closed Loop System
- Federal Mineral Material Pits
- Well Pads
- Roads

☐ **Road Section Diagram**
☒ **Drilling**
- Waste Material and Fluids

☐ **Production (Post Drilling)**
- Well Structures & Facilities
- Pipelines
- Electric Lines

☐ **Interim Reclamation**
☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Berming

The entire well pad will be bermed to prevent contaminants or produced water from leaving the location.

ROW

A ROW grant shall be obtained prior to starting construction of the well pad and access road.

Bonding

A surety bond shall be obtained prior to beginning drilling process.

Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:

The pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the pad. All sides will be bermed.

Tank Battery Liners and Berms:

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing

electronic sensors to alarm when a leak is present. **Leak detection plan will be submitted to BLM for approval.**

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:
Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-6235 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty (20) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

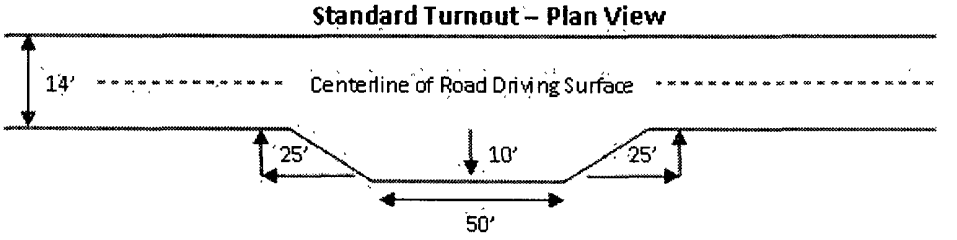
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

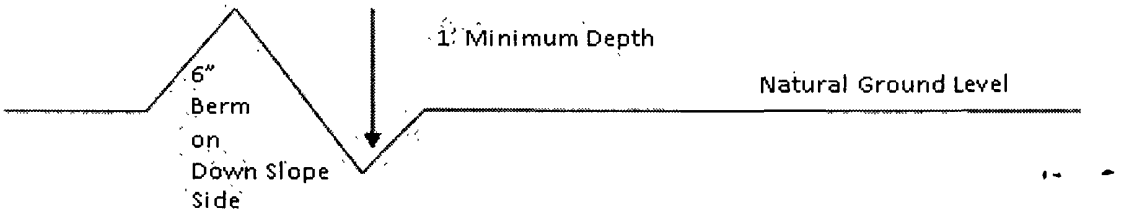
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$\text{400 foot road with 4\% road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

Fence Requirement

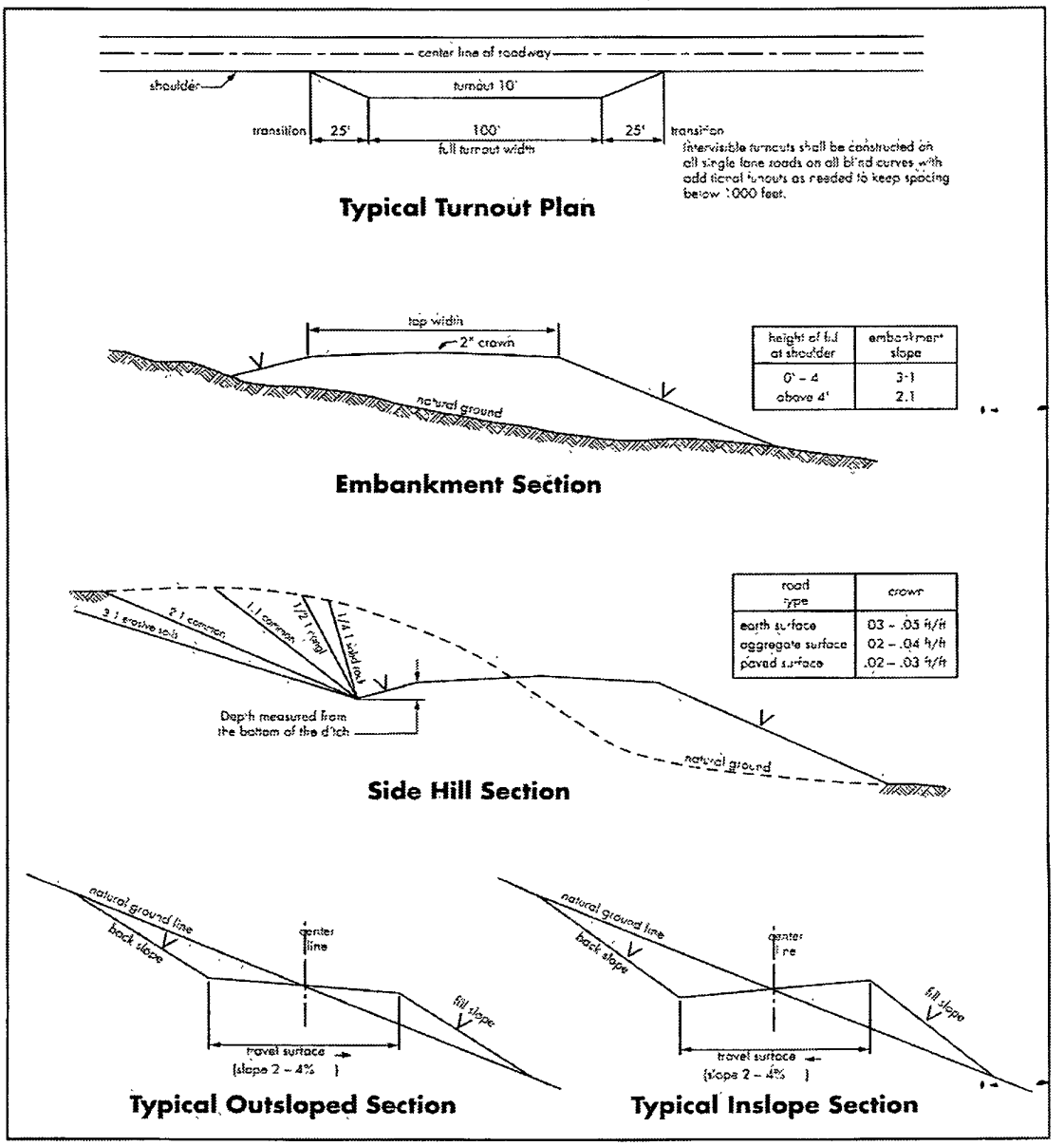
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING – RE-ENTRY

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. BOPE tests
b. Setting and Cementing the production casing strings
c. CIT test

☒ **Lea County**
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. **Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface plug. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

B. CASING – Re-entry

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

Possible High pressure gas in the Wolfcamp and Pennsylvanian section.

1. The 13-3/8" surface casing is set at 362 feet with cement circulated to surface.

2. The 9-5/8" intermediate casing is set at 1926 feet with cement circulated to surface.

3. The 7-5/8" 2nd intermediate casing is set at 8553 feet. Cement did not circulate to surface. Casing was perforated at 400' and cement was squeezed to surface.

A CIT is to be performed on the 7-5/8 inch casing per Onshore Oil and Gas Order 2.III.B.1.h prior to drilling the shoe plug. Test pressure to be 2570 psi.

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   ☒ Cement to top of liner. If cement does not circulate, contact the appropriate BLM office.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. **Prior to drilling surface plug the BOP is to be tested.** Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **10M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

   a. The tests shall be done by an independent service company.

   b. The results of the test shall be reported to the appropriate BLM office.

   c. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

   d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

   e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

Proposed mud weight may not be adequate for drilling through Wolfcamp and Pennsylvanian section.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

CRW 110212

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

B. PIPELINES (not applied for in APD)

C. ELECTRIC LINES (not applied for in APD)

IX. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 4, for Gypsum Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Alkali Sacaton (Sporobolus airoides)	1.0
DWS Four-wing saltbush (Atriplex canescens)	5.0

DWS: DeWinged Seed

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed