

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1A. TYPE OF WORK DRILL <input type="checkbox"/> DEEPEN <input checked="" type="checkbox"/> PLUG BACK <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. Surf-M65963 At TD-M68000
B. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		6. IF INDIAN, ALLOTTED OR TRIBE NAME
2. NAME OF OPERATOR C. W. TRAINER		7. UNIT AGREEMENT NAME
3. ADDRESS OF OPERATOR P.O. Box 755 Hobbs, New Mexico 88240		8. FARM OR LEASE NAME Harris Fed. Comm.
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 660' FSL & 1980' FEL At proposed prod. zone 660' FSL & 660' FEL		9. WELL NO. 1
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* Approx. 12 miles NE of Halfway, NM.		10. FIELD AND POOL, OR WILDCAT Und. Grama Ridge Morrow
10. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 660'	18. NO. OF ACRES IN LEASE 160.64	11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 5-T22S-R34E
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	19. PROPOSED DEPTH MD-13,519' TVD-13,300'	12. COUNTY OR PARISH Lea
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 3630' CR	20. ROTARY OR CABLE TOOLS Rotary	13. STATE N. MEX.
22. APPROX. DATE WORK WILL START* ASAP		

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2	13 3/8"	54.5#	1120'	700 sx Lite + 200 sx C. Circ.
12 1/2	10 3/4"	45.5#/51#	4800'	1800 sx Lite + 200 sx C. Circ.
9 1/2	7 5/8"	33.7#	11,800'	850 sx. Lite + 700 sx H. TOC-1140'

ABOVE CASING IN HOLE NOW.

6 1/2 4 1/2" 11.6#/13.5# 13,519' 600 sx. "H".
No new roads or additional surface area will be needed. Pits will be in same place.
Well is currently non-productive in the Delaware Formation. Operator proposes to squeeze off Delaware
perforations, clean out to 9050' and set CTRP. CTRP will be capped w/ 50' cement. ~~Wapstock will be set at 9050' and cemented out in the 7 5/8" casing. A 6 1/2" hole will be directionally drilled in an easterly direction to the target.~~ Approximate angle to be built and maintained will be 20 Deg. Directional gyro surveys will be continuously run to verify hole course and trajectory to target. Logs will be run, 4 1/2" liner set and cemented. The well will be perforated and completed for commercial production rates.

MUD PROGRAM: Brine water to 11,800'; Brine/Polymer/Dispak/Oil from 11,800' to TD.

BOP PROGRAM: A double ram BOP stack and Annular BOP rated for 5000# will be installed and tested daily. Choke Manifold system will also be 5000# WP.

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

24. SIGNED [Signature] TITLE Agent DATE 4-28-91
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____
This Signed by Sam Swameh
APPROVED BY _____ TITLE PETROLEUM ENGINEER
CONDITIONS OF APPROVAL, IF ANY: _____ DATE 5-23-91

*See Instructions On Reverse Side

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator C. W. TRAINER			Lease Harris Fed. Com.		Well No. 1
Unit Letter 0	Section 5	Township 22 South	Range 34 East	County Lea	
Actual Footage Location of Well: 660 feet from the South line and 660' feet from the East line					
Ground level Elev. 3630'	Producing Formation Morrow		Pool Und. Grama Ridge Morrow	Dedicated Acreage: 321.36 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.

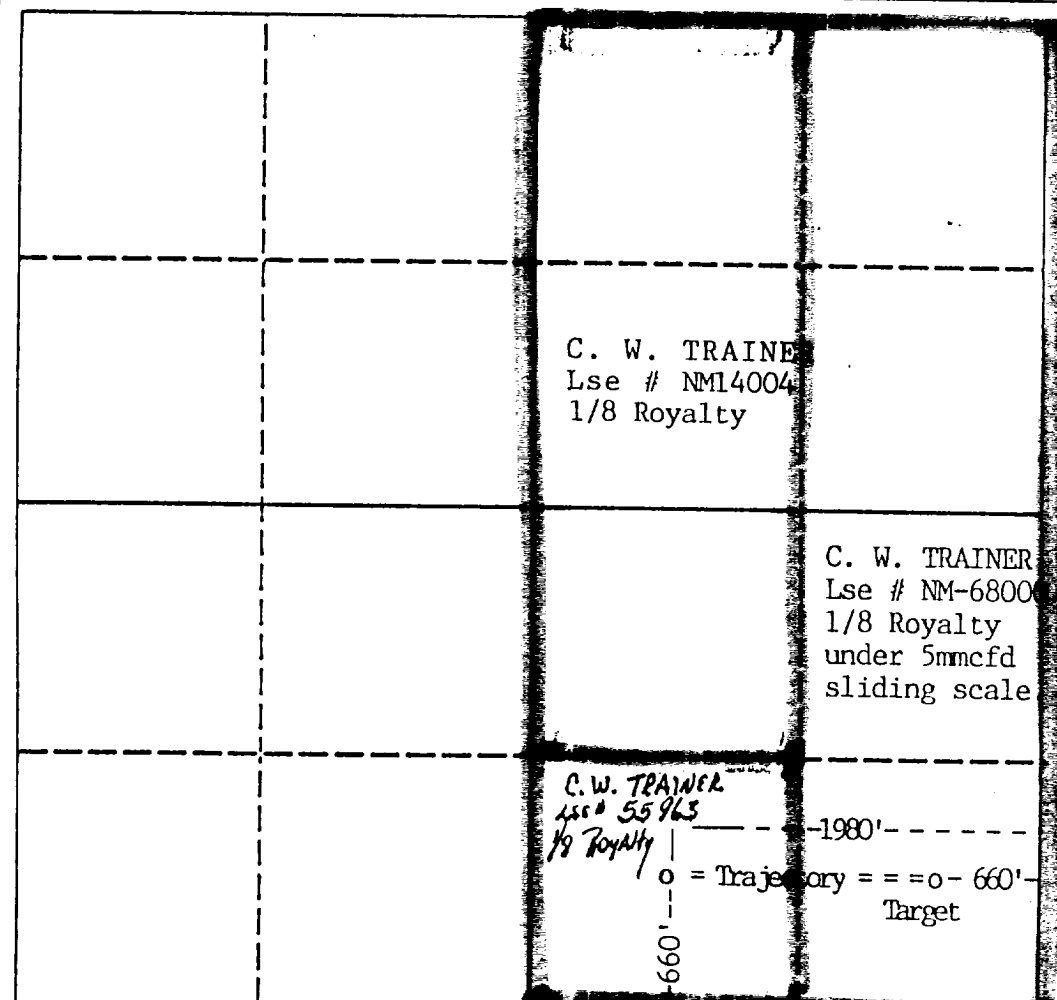
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.?

☐ Yes ☐ No If answer is "yes" type of consolidation _____

If answer is "no" list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Signature

Printed Name

Gene Lee

Position

Agent

Company

C. W. TRAINER

Date

4-28-91

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.

Date Surveyed

Signature & Seal of
Professional Surveyor

Certificate No.

SECTION

MAY 24 1961

002
HOLB 2701

DEC 13 1990

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 1D137
Order No. R-9386

APPLICATION OF C. W. TRAINER FOR
DIRECTIONAL DRILLING AND AN UNORTHODOX
GAS WELL LOCATION, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on November 28, 1990, at Santa Fe, New Mexico, before Examiner Jim Morrow.

NOW, on this 7th day of December, 1990, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, C. W. Trainer, seeks authority to directionally drill from his existing Harris Federal Well No. 1 located 660 feet from the South line and 1980 feet from the East line (Unit O) of Section 5, Township 22 South, Range 34 East, NMPM, Lea County, New Mexico, in such a manner as to bottom the well in the Undesignated Grama Ridge-Morrow Gas Pool at a target point that is no closer than 660 feet from the South line and no closer than 660 feet from the East line (Unit P) of said Section 5, which is an unorthodox gas well location for said pool. Lots 1 and 2, S/2 NE/4, and SE/4 (E/2 equivalent) of said Section 5 is to be dedicated to said well forming a 321.36-acre gas spacing and proration unit for said pool.

(3) Applicant's Harris Federal Well No. 1 is a vertically drilled dry hole in the Morrow formation at the existing location.

(4) Applicant plans to clean out and repair casing in the Harris Federal No. 1 well, set a plug at approximately 9,000 feet, and mill out a section of the 7 5/8-inch casing from about 8,930 feet to 9,000 feet. The well would be deviated from the vertical in an Easterly direction, building

angle to approximately 20 degrees from vertical so as to reach the proposed target point at a true vertical depth of approximately 13,300 feet and a measured depth of approximately 13,519 feet.

(5) Applicant's witness presented geological evidence that both the Morrow "A" and Morrow "C" pay zones should be present at the proposed target point. These Morrow intervals are productive in wells to the East of the Harris Federal Well No. 1.

(6) Applicant's witness further testified that the proposed project would be expected to recover from 1 to 1.5 billion cubic feet of gas from the productive intervals in the Morrow formation.

(7) No interested party appeared and objected to the applicant's requests.

(8) The proposed project will protect correlative rights and prevent waste and should therefore be approved.

IT IS THEREFORE ORDERED THAT:

(1) The application of C. W. Trainer for directional drilling and an unorthodox gas well location for the Harris Federal Well No. 1, Undesignated Grama Ridge-Morrow Gas Pool, Lea County, New Mexico, is hereby approved.

(2) Surface location is 660 feet from the South line and 1980 feet from the East line (Unit O) of Section 5, Township 22 South, Range 34 East, NMPM, Lea County, New Mexico.

(3) Applicant is authorized to directionally drill from the Harris Federal Well No. 1 by deviating from the vertical in an Easterly direction at a depth of approximately 9,000 feet through the existing 7 5/8-inch casing to a target location approximately 1320 feet East of the surface location.

(4) Bottomhole location of the directionally drilled well will be in the Undesignated Grama Ridge-Morrow Gas Pool at a true vertical depth of approximately 13,300 feet (measured depth of about 13,519 feet) and shall be no closer than 660 feet from the South line and 660 feet from the East line (Unit P) of said Section 5.

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Order No. R-9386
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(5) Lots 1 and 2, S/2 NE/4, and SE/4 (E/2 equivalent) of said Section 5 shall be dedicated to the well forming a 321.36-acre gas spacing and proration unit for said pool.

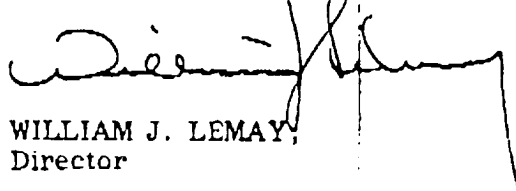
(6) The applicant shall conduct directional drilling surveys during drilling operations and shall notify the supervisor of the Hobbs district office of the Division of the progress of the deviated well so that operations may be witnessed.

(7) Upon completion of drilling operations, the applicant shall file a copy of a directional survey of the entire wellbore with both the Santa Fe and the Hobbs office of the Division.

(8) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY,
Director

S E A L

dr/

TRAINER1 C.W. TRAINED FED. #1
Plane of Vertical Section 90.00

Section	1	(Const Dogleg)									
MD	Inc	Dir	Tvd	Vsec	Lat	Dep	Build	Turn	Dleg	T	Face
9000	0.00	90.00	9000.0	0.0	0.0	0.0	1.5	0.0	1.5		0.0
9100	1.50	90.00	9100.0	1.3	0.0	1.3	1.5	0.0	1.5		0.0
9200	3.00	90.00	9199.9	5.2	0.0	5.2	1.5	0.0	1.5		0.0
9300	4.50	90.00	9299.7	11.8	0.0	11.8	1.5	0.0	1.5		0.0
9400	6.00	90.00	9399.3	20.9	0.0	20.9	1.5	0.0	1.5		0.0
9500	7.50	90.00	9498.6	32.7	0.0	32.7	1.5	0.0	1.5		0.0
9600	9.00	90.00	9597.5	47.0	0.0	47.0	1.5	0.0	1.5		0.0
9700	10.50	90.00	9696.1	64.0	0.0	64.0	1.5	0.0	1.5		0.0
9800	12.00	90.00	9794.2	83.5	0.0	83.5	1.5	0.0	1.5		0.0
9900	13.50	90.00	9891.7	105.5	0.0	105.5	1.5	0.0	1.5		0.0
10000	15.00	90.00	9988.6	130.2	0.0	130.2	1.5	0.0	1.5		0.0
10100	16.50	90.00	10084.9	157.3	0.0	157.3	1.5	0.0	1.5		0.0
10200	18.00	90.00	10180.4	187.0	0.0	187.0	1.5	0.0	1.5		0.0
10300	19.50	90.00	10275.0	219.1	0.0	219.1	1.5	0.0	1.5		0.0

Section	2	(Hold Section)									
MD	Inc	Dir	Tvd	Vsec	Lat	Dep	Build	Turn	Dleg	T	Face
10333	20.00	90.00	10306.5	230.4	-0.0	230.4	0.0	0.0	0.0		0.0
10400	20.00	90.00	10369.1	253.2	-0.0	253.2	0.0	0.0	0.0		0.0
10500	20.00	90.00	10463.0	287.4	-0.0	287.4	0.0	0.0	0.0		0.0
10600	20.00	90.00	10557.0	321.6	-0.0	321.6	0.0	0.0	0.0		0.0
10700	20.00	90.00	10651.0	355.8	-0.0	355.8	0.0	0.0	0.0		0.0
10800	20.00	90.00	10744.9	390.0	0.0	390.0	0.0	0.0	0.0		0.0
10900	20.00	90.00	10838.9	424.2	0.0	424.2	0.0	0.0	0.0		0.0
11000	20.00	90.00	10932.9	458.4	0.0	458.4	0.0	0.0	0.0		0.0
11100	20.01	90.00	11026.8	492.6	0.0	492.6	0.0	0.0	0.0		0.0
11200	20.01	90.00	11120.8	526.8	0.0	526.8	0.0	0.0	0.0		0.0
11300	20.01	90.00	11214.8	561.0	0.0	561.0	0.0	0.0	0.0		0.0
11400	20.01	90.00	11308.8	595.2	0.0	595.2	0.0	0.0	0.0		0.0
11500	20.01	90.00	11402.7	629.4	0.0	629.4	0.0	0.0	0.0		0.0
11600	20.01	90.00	11496.7	663.6	0.0	663.6	0.0	0.0	0.0		0.0
11700	20.01	90.00	11590.7	697.8	0.0	697.8	0.0	0.0	0.0		0.0
11800	20.01	90.00	11684.6	732.0	0.0	732.0	0.0	0.0	0.0		0.0
11900	20.01	90.00	11778.6	766.2	0.0	766.2	0.0	0.0	0.0		0.0
12000	20.01	90.00	11872.6	800.4	0.0	800.4	0.0	0.0	0.0		0.0
12100	20.01	90.00	11966.5	834.6	0.0	834.6	0.0	0.0	0.0		0.0
12200	20.01	90.00	12060.5	868.8	0.0	868.8	0.0	0.0	0.0		0.0
12300	20.01	90.00	12154.5	903.0	0.0	903.0	0.0	0.0	0.0		0.0
12400	20.01	90.00	12248.4	937.2	0.0	937.2	0.0	0.0	0.0		0.0
12500	20.01	90.00	12342.4	971.4	0.0	971.4	0.0	0.0	0.0		0.0
12600	20.01	90.00	12436.4	1005.6	0.0	1005.6	0.0	0.0	0.0		0.0
12700	20.01	90.00	12530.3	1039.8	0.0	1039.8	0.0	0.0	0.0		0.0
12800	20.02	90.00	12624.3	1074.1	0.0	1074.1	-0.0	0.0	0.0	180.0	

TRAINER1 C.W. TRAINER FED. #1
 MD Inc Dir Tvd Vsec

Lat Dep Build Turn Dleg T Face

Section 3 (Const Build/Turn)

MD	Inc	Dir	Tvd	Vsec
12881	20.00	90.00	12700.0	1101.6
12900	20.00	90.00	12718.3	1108.3
13000	20.00	90.00	12812.3	1142.5
13100	20.00	90.00	12906.2	1176.7
13200	20.00	90.00	13000.2	1210.9
13300	20.00	90.00	13094.2	1245.1
13400	20.00	90.00	13188.1	1279.3
13500	20.00	90.00	13282.1	1313.5
13519	20.00	90.00	13300.0	1320.0

Lat	Dep	Build	Turn	Dleg	T	Face
0.0	1101.6	0.0	0.0	0.0		0.0
0.0	1108.3	0.0	0.0	0.0		0.0
0.0	1142.5	0.0	0.0	0.0		0.0
0.0	1176.7	0.0	0.0	0.0		0.0
0.0	1210.9	0.0	0.0	0.0		0.0
0.0	1245.1	0.0	0.0	0.0		0.0
0.0	1279.3	0.0	0.0	0.0		0.0
0.0	1313.5	0.0	0.0	0.0		0.0
0.0	1320.0	0.0	0.0	0.0		0.0