

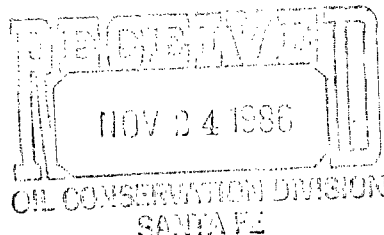
*Release Immediately  
No effect*

## Boyd & McWilliams

*Oil & Gas Properties*

Kline Boyd  
Toby McWilliams

704 Western United Life Bldg.  
Midland, Texas 79701  
(915) 684-7921



November 20, 1986

Oil Conservation Division  
P. O. Box 2088  
Santa Fe, New Mexico 87504

Attention: David Catanach

### STATEMENT OF FACTS AND INFORMATION

Boyd & McWilliams Corporation  
704 Western United Life Bldg.  
Midland, Texas 79701

Empire Federal Well #1  
2100' FNL & 1980' FEL Section 6, T-17-S, R-29-E  
Eddy County, New Mexico  
API No. 30-015-25642  
NM-45223

Drilled as a Morrow test. TD - 10,546'  
PBTD - 2591'

*San Ancho*

Completed in Grayburg Formation (Cave Grayburg) and the Queen Formation (Red Lake East Queen).

Requesting permission to co-mingle production downhole.

The estimated bottom hole pressure of the Grayburg formation is 900 psi.

The estimated bottom hole pressure of the Queen formation is 720 psi.

The approximate gravity of the oil from both formations is 36°.

Due to the production rate of each zone, it is necessary to co-mingle these two zones in order to accumulate a production rate sufficient to be commercial.

The value of the co-mingled production will not be less than the value of the production from each zone if produced separately.

For purposes of allocation, the total production can be allocated at a rate of 50% to each zone.

*Common Ownership - Verified*  
*GB-2416-2439 2514-2518*  
*Queen 1888-1903*


All offset operators as well as the Bureau of Land Management have been notified in writing of our proposed co-mingling.

Boyd & McWilliams Corporation is the operator of all lands immediately offsetting the 40 acre unit dedicated to the above mentioned well.

The above information is accurate, true & correct to the best of my knowledge.

Yours very truly,

BOYD & MCWILLIAMS CORPORATION



Toby McWilliams

TM/md

WELL SUMMARY  
BOYD & McWILLIAMS CORPORATION  
704 Western United Life Bldg., Midland, Texas 79701  
Empire Federal, Well No. 1

Located 2100 feet from the North Line and 1980 feet from the East line of Section 6, T17S, R29E, Eddy County, New Mexico, API NO. 30-015-25642, NM-45223, Elev. 3708.6' Gr., Federal lease. Drilled as a Wildcat, preparing to commingle in the Grayburg-Queen zones.

8/6/86 - Spudded 17½" hole. Drilled to 323'. Ran 8 jts. (321') of 13-3/8" 54/50 lb. J-55 casing; set at 320' w/325 sx. Class C cement w/2% CC. Circulated 30 sx. good cement to pit; WOC 6½ hrs.

8/11/86 - Schlumberger ran a Compensated Neutron, Compensated Density, Dual Laterolog, MSFL log, Calliper & Gamma-Ray logs from wireline TD 2637' back to surface casing at 320'. Ran 66 jts. (2647') of 8-5/8" 24 lb. & 32 lb. J-55 casing, set @ 2635' w/800 sx. Halliburton lite cement w/15 lbs. salt/sack & ¼ lb. flo-cele per sx; 520 sx. Class C w/6 lb. salt per sx. & 3/10 of 1% CFR-3. Raised BOP stack. Circulated 140 sx. good cement to pit.

8/28/86 - DST #1: (8632-8651'); 30" pre flow - fair to strong blow; Pressure 32 psi, inc. to 128 psi; 60" ISIP - 128 inc. to 2934 psi; 90" 2nd. flow - 160 psi inc. to 288 psi - Fair to good blow; 180" - final close in - 288 inc. to 3027 psi; IHS 4341; FHS - 4213; Recovered 508' gas cut drilling mud; Sampler recovery - 1800 cc's of O&GC drlg. mud; no water. 0.46 cu. ft. gas @ 165 psi sampler pressure.

9/8/86 - DST #2: (10,354-10,484') - 30" preflow - Pressure 182-296 psi, strong blow; close in 60", pressure 296-2867 psi; 120" flow, 2nd. flow - 364-568 psi, strong blow, 1 lb. on bubble; 4 hr. SIP 568-3137 psi. Recovered 900' drlg. mud, no gas; 260 psi BHT 152°.

9/10/86 - Ran Dual Laterolog & RXO from wireline TD of 10,546' back to intermediate casing @ 2635'.

Plug back as follows: Plug #1 - 80 sx. Class H neet @ 10,550' (200')  
Plug #2 - 80 sx. Class H neet from 8555-8355' (200').  
Plug #3 - 80 sx. Class H from 6550-6350' (200').  
Plug #4 - 80 sx. Class H from 4550-4350' (200').  
Plug #5 - 35 sx. Class H from 2685-2585' (100').  
50' in 50' out 8-5/8" casing seat. Circulated 1 hr.  
@ 2541'.

Released rig 9/12/86.

9/17/86 - Rigged up Pulling unit. Set CIBP at 2591' KB. Spotted 300 gals. 15% HCL acid from 2518-2402' (116' acid).

9/18/86 - Ran GR-Collar log from 2593' to 1200'. Perforated 8-5/8" casing w/0.45" jet shots as follows: 2416', 2417', 2418', 2419', 2422', 2423', 2424', 2426', 2427', 2428', 2431', 2433', 2434', 2435', 2436', 2437', 2438', 2439', 2514', 2515', 2516', 2517' & 2518' (23 holes). Acidized perfs w/500 gals. 15% HCL acid.

9/19/86 - Set retrievable bridge plug at 2470'. Tested plug to 2400#, okay. Set RTTS packer at 2439'. Spotted acid up to 2403'. Moved packer to 2293'. Reversed 5½ bbls. water down annulus. Set RTTS packer at 2293'. Broke down perfs from 2416-2439' w/2000 gals. 15% HCL acid.

9/20/86 - Reperforated zone as follows: 2428', 2431', 2433', 2434', 2435', 2436', 2437', 2438' & 2439' (9 - 0.42" holes). Treated perfs w/1000 gals. 15% HCL acid.

9/20/86 - Sand fraced perfs from 2416' to 2439' and 2514' to 2518' w/40,000 gals. gelled 2% KCL water, 20,000# of 20/40 sand and 20,000# of 10/20 sand (last 14,000 gals. contained 20,000# of 10/20 sand). Flushed w/1500 gals. KCL water.

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Well Summary  
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NM-45223  
API No. 30-015-25642

9/23/86 - Latched onto bridge plug and tripped out of hole. Reversed sand w/220 bbls. KCL water (54'). Ran tubing as follows: 1 jt. mud anchor; perforated tubing sub (4' x 2-7/8"); 2-7/8" seating nipple and 72 jts. 2-7/8" tubing. Set tubing @ 2318'.

9/24/86 - Ran 2 1/2" x 1-3/4" x 13' insert pump; 1 - 3/4" x 2' pony rod; 89 - 3/4" x 25' rods; and, 1 - 3/4" x 4' pony rod. Released pulling unit and shut well in.

10/13/86 - Pulled rods, pump and tubing. Sand jet 8-5/8" casing w/2 cuts @ 1903', 2 cuts @ 1901' and 2 cuts @ 1899' (total 6 holes). Used a total of 75 sx. 20/40 sand @ 4000#. Spotted 1000 gals. 15% HCL acid over holes. TOH w/sand jet tool. PU & TIH w/RTTS packer and set packer @ 1780'. Pumped 1000 gals. 15% HCL acid into perfs @ 1903', 1901' & 1899'.

10/14/86 - Fraced well w/20,000 gals. gelled 2% KCL water, 20,000# of 20/40 sand and 20,000# of 12/20 sand.

10/15/86 - Ran 57 jts. 2-7/8" tubing, seating nipple @ 1775' KB. Set tubing @ 1812' KB. Ran 2 1/2" x 1-3/4" x 12' pump; 69 - 3/4" rods; 1 - 3/4" x 2' and 1 - 3/4" x 4' pony rod. Hung rods and balanced unit. Left well pumping. Recovering load water only.

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# NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102  
Supersedes C-128  
Effective 1-1-85

All distances must be from the outer boundaries of the Section

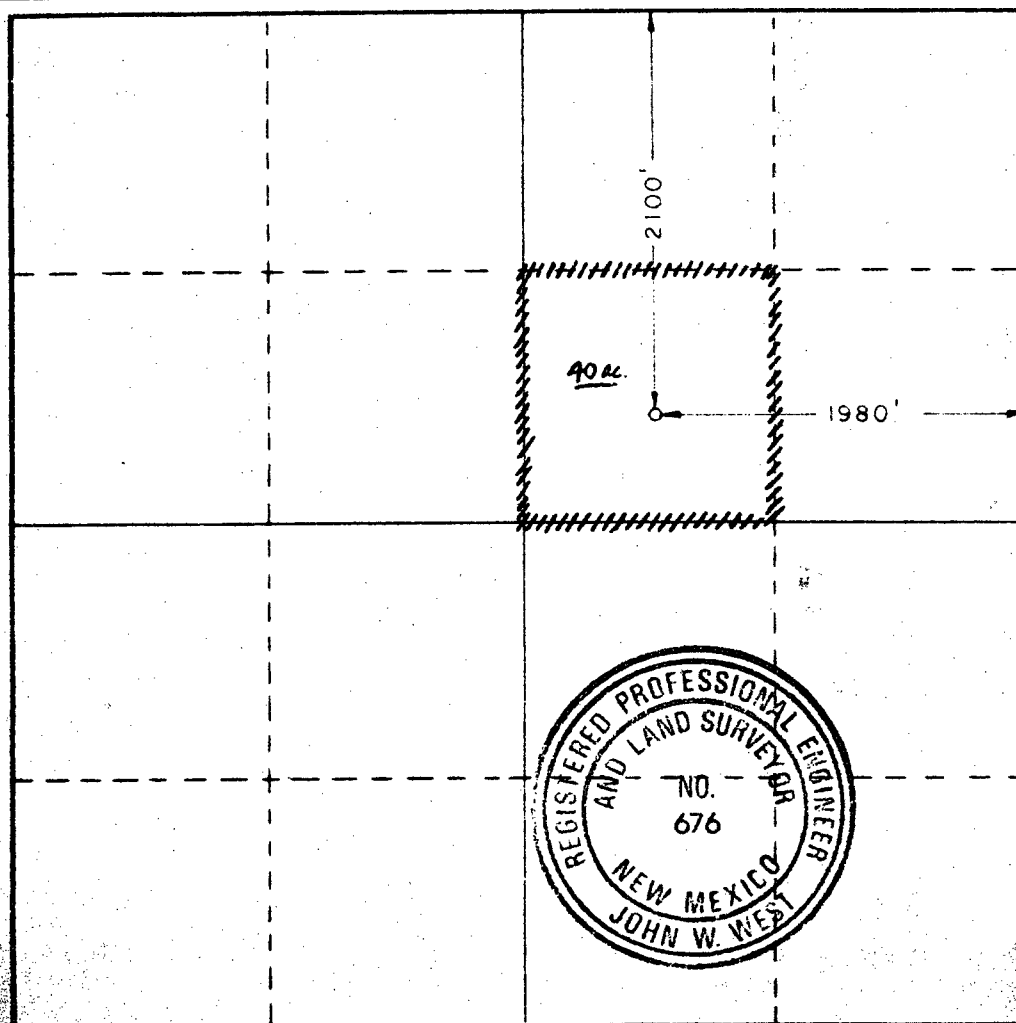
Operator <b>BOYD &amp; McWILLIAMS CORP.</b>			Lease <b>EMPIRE FEDERAL</b>		Well No. <b>1</b>
Unit Letter <b>G</b>	Section <b>6</b>	Township <b>17S</b>	Range <b>29E</b>	County <b>EDDY</b>	
Actual Footage Location of Well: <div style="display: flex; justify-content: space-between; align-items: center;"> <span>2100 feet from the NORTH line and</span> <span>1980 feet from the EAST line</span> </div>					
Ground Level Elev. <b>3708.6</b>	Producing Formation <b>Queen - Grayburg</b>	Pool <b>Red Lake East(Queen) Cave(Grayburg)</b>		Dedicated Acreage: <b>40</b> 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 interests 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 interests, has been approved by the Commission.



## CERTIFICATION

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

Name \_\_\_\_\_

Position \_\_\_\_\_

Company \_\_\_\_\_

Date \_\_\_\_\_

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  
**JUNE 17, 1986**

Registered Professional Engineer  
and/or Land Surveyor

Certificate No. **JOHN W. WEST 676**  
**RONALD J. EIDSON 3239**

## GAS - OIL RATIO TESTS

Operator		Pool		County											
Boyd & McWilliams Corporation		Grayburg-Queen		Eddy											
704 Western United Life Bldg., Midland, Texas 79701				TYPE OF TEST - (X)	Scheduled <input type="checkbox"/>	Completion <input checked="" type="checkbox"/>	Special <input type="checkbox"/>								
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	Number of TEST runs	PROD. DURING TEST			GAS - OIL RATIO CU.FT/BBLS		
		U	S	T						R	WATER BBLS.	CRAY. OIL		OIL BBLS.	GAS M.C.F.
Empire Federal (Grayburg)	1		6	17S	29E	10/06/86	P None	0	0	24	0	33.0	6	140	2333
Empire Federal (Queen)	1		6	17S	19E	10/24/86	P None	0	0	24	0	33.0	11	45	4091

NOTE: TESTS FOR DOWNHOLE COMMINGLING

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.80.

Report casing pressure in flow of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 381 and appropriate pool rules.

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

GOODRUM OIL & GAS PROD. ACCTG.  
Agent for: Boyd & McWilliams Corp.D. Goodrum (Signature)  
Agent(Title)  
November 17, 1986

(Print)



OFFSET OWNERSHIP MAP

Boyd & McWilliams Corporation  
704 Western United Life Bldg.  
Midland, Texas 79701

Empire Federal Well #1  
2100' FNL & 1980' FEL Section 6,  
T-17-S, R-29-E  
Eddy County, New Mexico  
API No. 30-015-25642  
NM-45223

TENNECO-BETTIS BROTHERS

Beach  
Kincaid &  
Watson

165  
28E (36)

T-16-S (31)  
R-29-E (32)

175  
28E (1)

T-17-S (6)  
R-29-E (5)

Boyd & McWilliams Corp.

Boyd & McWilliams Corp.

Kincaid &  
Watson

Boyd & McWilliams Corp.

40 ac  
Boyd & McWilliams Corp.

Boyd & McWilliams Corp.

JEM RESOURCES, INC.

Tenneco

Boyd & McWilliams Corp.

Boyd & McWilliams Corp.

Boyd & McWilliams Corp.

Boyd & McWilliams Corp.

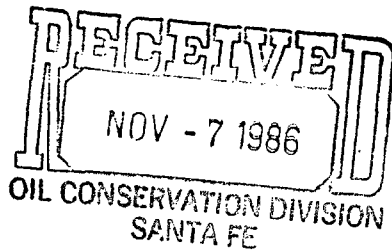
Beach Exploration

Kincaid & Watson

# Boyd & McWilliams

*Oil & Gas Properties*

Kline Boyd  
Toby McWilliams



704 Western United Life Bldg.  
Midland, Texas 79701  
(915) 684-7921

October 30, 1986

Re: NM-45223  
Empire Federal #1  
Section 6, T-17-S,  
R-29-E  
2100' FNL & 1980'  
FEL  
Eddy County, New Mexico

Bureau of Land Management

*Cave Grayburg*

Dear Sir:

Boyd & McWilliams Corporation recently drilled a Morrow Test at the above referenced location. The well was non-productive in all deep horizons and subsequently plugged back to approximately 2600'.

We have two productive zones, these being the Grayburg at 2416' and the Queen at 1899'.

The Grayburg zone was completed September 27, 1986 and potentialed October 6, 1986 for 140 MCF and 6 barrels of oil per day and no water.

We set a bridge plug @ 2200' and came up and completed in the Queen Sand. October 24, the Queen was potentialed for 45 MCF and 11 barrels of oil per day and no water.

As I am sure you are very much aware, in order for us to profitably operate and develop this lease, it is essential that we be allowed to co-mingle these two zones. It will take the combined gas rate from the two zones to justify laying a gas line.

I feel like this well could level off at a combined production rate of 10 barrels of oil and 150 MCF per day, which would be economical.

We respectfully request your consideration of our request to co-mingle the production from the Grayburg and Queen zones in the captioned well.

Yours very truly,

*Toby McWilliams*  
Toby McWilliams