

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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OPERATOR	

5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/>
5. State Oil & Gas Lease No. OG-2001

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> DRY <input type="checkbox"/> OTHER <input type="checkbox"/>				7. Unit Agreement Name	
2. TYPE OF COMPLETION NEW WELL <input checked="" type="checkbox"/> WORK OVER <input type="checkbox"/> OPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER <input type="checkbox"/>				8. Form or Lease Name Quail State	
3. Name of Operator Read & Stevens, Inc.				9. Well No. 1	
4. Address of Operator P.O. Box 2126, Roswell, New Mexico 88201				10. Field and Pool, or Wildcat Quail Queen	
5. Location of Well UNIT LETTER 0 LOCATED 660 FEET FROM THE South LINE AND 1980 FEET FROM THE East LINE OF SEC. 11 TWP. 19-S RGE. 34-E NMPM				12. County Lea	
13. Date Spudded 6-2-77	16. Date T.D. Reached 7-1-77	17. Date Compl. (Ready to Prod.) 10-12-77	18. Elevations (DF, R&B, RT, GR, etc.) 3963.77' GR-3974' RKE	19. Elev. Casinghead 3964'	
20. Total Depth 5500'	21. Plug Back T.D. 5484'	22. If Multiple Compl., How Many -----	23. Intervals Drilled By Rotary Tools 0-5500'	Cable Tools None	
24. Producing Interval(s), of this completion - Top, Bottom, Name 5036'-5043', 5097'-5107', 5132'-5140' & 5168'-5170', Queen Sand				25. Was Directional Survey Made No	
26. Type Electric and Other Logs Run R-CN-CDL, DLL-RXD				27. Was Well Cored Yes	

CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9 5/8"	36#	400'	12 1/4"	240 sx-circulated	None
4 1/2"	9.5# & 10.5#	5484'	7 7/8"	1115 sx- 2 stages w/ DV tool @ 2000'	None

LINER RECORD				TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET
					2 3/8"	5224'
						5193'

(seating nipple)

31. Perforation Record (Interval, size and number) 4792'-4804' w/ 24( $\frac{1}{2}$ ") shots-Squeezed 5036'-5043' w/ 14( $\frac{1}{2}$ ") shots-Producing 5097'-5107' w/ 18( $\frac{1}{2}$ ") shots-Producing 5132'-5140' w/ 16( $\frac{1}{2}$ ") shots-Producing 5168'-5170' w/ 4( $\frac{1}{2}$ ") shots-Producing				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED See Schedule	
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33. PRODUCTION Date First Production 7-17-77		Production Method (Flowing, gas lift, pumping - Size and type pump) Pumping				Well Status (Prod. or Shut-in) Producing	
Date of Test 10-12-77	Hours Tested 24	Choke Size -----	Prod'n. For Test Period -----	Oil - Bbl. 30	Gas - MCF TSTM	Water - Bbl. 30	Gas - Oil Ratio TSTM
Flow Tubing Press. -----	Casing Pressure -----	Calculated 24-Hour Rate -----	Oil - Bbl. 30	Gas - MCF TSTM	Water - Bbl. 30	Oil Gravity - API (Corr.) 33°	

34. Disposition of Gas (Sold, used for fuel, vented, etc.) Fuel	Test Witnessed by Dan Lough
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35. List of Attachments 2 copies Logs & Inclination Report
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36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED John L. Anderson TITLE Agent DATE 10-13-77

## INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radioactivity logs on the well and a summary of all special tests conducted, including drill stem tests. All of the reported data shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 26 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

## INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

## Southeastern New Mexico

## Northwestern New Mexico

T. Anhy 1846' (+2128)	T. Canyon _____	T. Ojo Alamo _____	T. Penn. "B" _____
T. Salt 1973' (+2001)	T. Strawn _____	T. Kirtland-Fruitland _____	T. Penn. "C" _____
T. Salt 3312' (+662)	T. Atoka _____	T. Pictured Cliffs _____	T. Penn. "D" _____
T. Yates 3577' (+397)	T. Miss _____	T. Cliff House _____	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee _____	T. Madison _____
T. Queen 4750' (-776)	T. Silurian _____	T. Point Lookout _____	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos _____	T. McCracken _____
T. San Andres _____	T. Simpson _____	T. Gallup _____	T. Ignacio Qtzite _____
T. Glorieta _____	T. McKee _____	T. Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____	T. _____
T. Blinberry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____	T. Granite _____	T. Todilto _____	T. _____
T. Drinkard _____	T. Delaware Sand _____	T. Entrada _____	T. _____
T. Abo _____	T. Bone Springs _____	T. Wingate _____	T. _____
T. Wolfcamp _____	T. _____	T. Chinle _____	T. _____
T. Penn. _____	T. _____	T. Permian _____	T. _____
T. Cisco (Bough C) _____	T. _____	T. Penn. "A" _____	T. _____

## OIL OR GAS SANDS OR ZONES

No. 1, from 5036' to 5043' oil sand	No. 4, from 5168' to 5170' oil sand
No. 2, from 5097' to 5107' oil sand	No. 5, from _____ to _____
No. 3, from 5132' to 5140' oil sand	No. 6, from _____ to _____

## IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from 4792' to 4804' feet.	Pump 92 BSWPD
No. 2, from _____ to _____ feet.	
No. 3, from _____ to _____ feet.	
No. 4, from _____ to _____ feet.	

## FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	1846'	1846'	Red Beds				
1846'	1973'	127'	Anhy.				
1973'	3312'	1339'	Salt				
3312'	3577'	265'	Anhy. & dolo.				
3577'	4750'	1173'	Anhy., dolo., sand & shale				
4750'	5500'	750'	Sand, dolo., anhy. & shale				

Read & Stevens, Inc. #1 Quail State  
Schedule

32. Acid, Shot, Fracture, Cement Squeeze, etc.

4792'-4804'	Acidized w/ 1000 gals. 15% NE acid & Fraced w/ 20,000 gals. gelled water & 25,000# 20/40 sand & 5000# 10/20 sand. Squeezed w/ 100 sx. Class "C" cement w/ .5 of 1% CFR-2.
5036'-5043'	Acidized w/ 500 gals. 15% NE acid & Fraced w/ 16,200 gals. gelled water & 10,000# 20/40 sand & 4,000# 10/20 sand.
5097'-5107'	Acidized w/ 500 gals. 15% NE acid & Fraced w/ 20,000 gals. gelled water & 23,000# 20/40 sand & 5,000# 10/20 sand.
5132'-40' & 5168'-70'	Acidized w/ 600 gals. 15% NE acid & Fraced w/ 25,500 gals. gelled water & 35,000# 20/40 sand & 5,000# 10/20 sand.

Cores

See attached core descriptions on six conventional cores and selected sidewall cores taken in this well.

Drill Stem Tests

There were no drill stem tests taken in this well.

Read & Stevens, Inc.  
Quail State No. 1

660' FSL & 1980' FEL Sec. 11, T-19S, R-34E  
Lea Co., New Mexico

Core No. 1 3980-4041  
Cut 61 feet, Recovered 61 feet

- 3980 -81 Anhydrite clear, dense-crystalline w/bff, dense dolomite crystals
- 82 Anhydrite light red, dense-w/interbedded thin red & gray shale laminations
- 83 Anhydrite clear, finely crystalline
- 84 Shale red & gray, laminated w/anhydrite nodule inclusions
- 85 Anhydrite, clear, dense-crystalline w/interbedded thin red & gray shale laminations
- 86 Anhydrite, light red, dense-crystalline
- 87 Anhydrite, clear, dense-crystalline
- 88 Anhydrite, clear, dense-crystalline
- 89 Anhydrite, light tan red, dense w/interbedded thin red shale laminations
- 3990 Anhydrite, light tan red, dense w/interbedded thin red shale laminations
- 91 Shale, dark gray w/interbedded buff, dense dolomite & clear anhydrite crystals
- 92 Shale, dark gray w/interbedded buff, dense dolomite & clear anhydrite crystals
- 93 Anhydrite, red, crystalline w/interbedded tan, dense dolomite
- 94 Anhydrite light red, crystalline
- 95 Anhydrite, clear-lt. red, crystalline
- 96 Anhydrite, clear-lt. red, crystalline
- 97 Anhydrite, clear crystalline w/interbedded thin gray shale laminations
- 98 Shale red slightly anhydritic
- 99 Shale red w/anhydrite nodules
- 4000 Dolomite, light red-tan, dense, sl. fractured w/interbedded red, anhydritic shale
- 01 Anhydrite, light red, crystalline
- 02 Anhydrite, light red, crystalline w/interbedded buff, dense dolomite
- 03 Dolomite, buff-light tan red, dense w/anhydrite nodules
- 04 Anhydrite, clear-light red, crystalline w/thin, dark gray shale laminations

- 4004-05 Shale, dark gray-red, anhydritic w/interbedded clear, crystalline anhydrite
- 06 Anhydrite, light red, crystalline w/interbedded dark gray shale
- 07 Shale, red w/clear crystalline anhydrite nodules
- 08 Anhydrite, light red w/interbedded dark red-gray shale
- 09 Anhydrite, clear-light red, crystalline-dense
- 4010 Anhydrite, clear-light red, crystalline-dense
- 11 Anhydrite, light red, crystalline, w/interbedded thin red & gray shale & buff, dense dolomite
- 12 Anhydrite, light red, crystalline
- 13 Anhydrite, light red, crystalline w/interbedded buff, dense dolomite
- 14 Dolomite, red-gray, dense-very finely crystalline, anhydritic
- 15 Shale, red w/anhydrite nodules
- 16 Shale
- 17 Anhydrite, light red, crystalline w/interbedded tan-red, dense shaly dolomite
- 18 Anhydrite, light red, crystalline w/interbedded thin, red shale laminations
- 19 Anhydrite, clear, crystalline
- 4020 Anhydrite, clear, crystalline
- 21 Anhydrite, clear, crystalline w/buff, dense dolomite nodules
- 22 Anhydrite clear crystalline
- 23 Dolomite, buff, dense w/clear, crystalline anhydrite Slight bleeding oil, slight odor good stain on anhydrite crystals, fair-good bright yellow Fluoresence
- 24 Anhydrite, clear, crystalline
- 25 Dolomite, buff, dense w/thin, gray shale laminations & clear, crystalline anhydrite nodules staining, slight odor, good fluorensence
- 26 Dolomite, buff, very fine-coarsely crystalline w/clear, crystalline anhydrite nodules
- 27 Dolomite, buff, dense w/scattered coarse crystals
- 28 Dolomite, buff, dense
- 29 Dolomite, tan, dense w/interbedded clear-red, crystalline anhydrite
- 4030 Shale, dark gray-black, anhydritic w/buff-tan, dense dolomite nodules
- 31 Anhydrite, light red-clear, crystalline
- 32 Shale, dark red-gray w/clear anhydrite crystal inclusions
- 33 Siltstone, red, anhydritic, shaly
- 34 Siltstone, red-gray, shaly w/anhydrite nodules
- 35 Sandstone, gray, very fine grained, anhydritic, shaly (clay filled?)

Read & Stevens, Inc.

Quail State No. 1

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- 4035-36 Sandstone, gray, very fine grained, anhydritic, shaly w/clear crystalline anhydrite
- 37 Sandstone, gray, very fine grained, anhydritic, less shaly
- 38 Sandstone, gray, very fine grained, anhydritic, less shaly w/tr D. O. S.
- 39 Sandstone, gray, very fine grained, slightly anhydritic, less shaly, w/tr D. O. S.
- 4040 Sandstone, gray, very fine grained, more anhydritic, less shaly, w/tr D. O. S.
- 41 Sandstone, light gray, very fine grained, slightly anhydritic, less shaly, sl. tr D. O. S.

Read & Stevens, Inc.

Quail State No. 1

660' FSL & 1980' FEL Sec. 11, T-19S, R-34E

Lea Co., New Mexico

Core No. 2 4505-4565

Cut 60 feet, Recovered 60 feet

- 4505-06 Anhydrite, clear, crystalline
- 07 Anhydrite, clear, crystalline w/buff, dense dolomite inclusions
- 08 Anhydrite, clear, crystalline.
- 09 Anhydrite, clear, crystalline w/buff, dense dolomite inclusions
- 10 Anhydrite clear, crystalline
- 11 Anhydrite clear, crystalline
- 12 Anhydrite clear, crystalline
- 13 Anhydrite clear, crystalline w/buff, dense dolomite inclusions & thin, black shale, laminations
- 14 Anhydrite clear, crystalline w/buff, dense
- 15 Anhydrite clear, crystalline
- 16 Anhydrite clear, crystalline w/buff, dense dolomite inclusions
- 17 Anhydrite clear, crystalline
- 18 Anhydrite clear, crystalline w/buff, dense dolomite inclusions
- 19 Dolomite, buff, dense w/crystalline anhydrite nodules
- 20 Dolomite, buff, dense w/small anhydrite crystals, thin black shale laminations
- 21 Dolomite, buff, dense w/crystalline anhydrite nodules, thin black shale laminations
- 22 Sand gray, very fine grained, slightly dolomitic, anhydritic, (clay filled?)
- 23 Sand gray, very fine grained, slightly dolomitic, anhydritic, (clay filled?)
- 24 Sand gray, very fine grained, slightly dolomitic, anhydritic, (clay filled?)
- 25 Sand gray, very fine grained, slightly dolomitic, anhydritic, (clay filled?)
- 26 Sand gray, very fine grained, slightly dolomitic, anhydritic, (clay filled?)
- 27 Sand gray, very fine grained, slightly dolomitic, anhydritic, (clay filled?)

- 4527-28 Sand gray, very fine grained, slightly dolomitic, anhydritic,  
(clay filled?)
- 29 Sand gray, very fine grained, slightly dolomitic, anhydritic,  
(clay filled?)
- 30 Sand gray, very fine grained, slightly dolomitic, anhydritic,  
(clay filled?)
- 31 Sand gray, very fine grained, slightly dolomitic, anhydritic,  
(clay filled?)
- 32 Sand gray, very fine grained, slightly dolomitic, anhydritic,  
(clay filled?)
- 33 Anhydrite clear, crystalline w/interbedded thin black shale
- 34 Anhydrite clear, crystalline slightly dolomitic, silty
- 35 Siltstone gray, very fine grained dolomitic, anhydritic
- 36 Siltstone gray, very fine grained dolomitic, anhydritic
- 37 Anhydrite clear, crystalline w/interbedded siltstone as above
- 38 Anhydrite clear, crystalline w/interbedded siltstone as above
- 39 Anhydrite clear, crystalline w/interbedded siltstone as above
- 40 Dolomite, buff, tan gray, dense w/crystalline anhydrite  
inclusions
- 41 Dolomite, buff, tan gray, dense w/crystalline anhydrite  
inclusions
- 42 Dolomite, buff, tan gray, dense w/crystalline anhydrite  
inclusions
- 43 Anhydrite clear, crystalline
- 44 Dolomite, buff-tan, dense w/crystalline anhydrite, thin black  
shale laminations
- 45 Anhydrite clear, crystalline
- 46 Dolomite, buff-tan, dense w/crystalline anhydrite
- 47 Anhydrite clear, crystalline
- 48 Anhydrite clear, crystalline w/buff, dense dolomite inclusions,  
thin, black shale laminations
- 49 Anhydrite clear, crystalline w/buff, dense dolomite inclusions
- 50 Dolomite, buff-tan, dense w/crystalline anhydrite, thin black  
shale laminations
- 51 Dolomite, buff-tan, dense w/crystalline anhydrite, thin black  
shale laminations
- 52 Anhydrite clear, crystalline w/buff, dense dolomite inclusions
- 53 Dolomite tan, dense w/crystalline anhydrite inclusions
- 54 Anhydrite clear, crystalline
- 55 Anhydrite clear, crystalline



Read & Stevens, Inc.

Quail State No. 1

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- 4555-56 Anhydrite clear, crystalline
- 57 Anhydrite clear, crystalline w/buff, dense dolomite  
interbedded
- 58 Anhydrite clear, crystalline
- 59 Anhydrite clear, crystalline
- 60 Anhydrite clear, crystalline
- 61 Anhydrite clear, crystalline
- 62 Dolomite buff-tan, dense w/crystalline anhydrite,  
thin black shale laminations
- 63 Dolomite buff-tan, dense w/crystalline anhydrite,  
thin black shale laminations
- 64 Anhydrite clear, crystalline
- 65 Anhydrite clear, crystalline

Read & Stevens, Inc.

Quail State No. 1

660' FSL & 1980' FEL Sec. 11, T-19S, R-34E

Lea Co., New Mexico

Core No. 3 4750-4811

Cut 61 feet, Recovered 61 feet

- 4750-51 Anhydrite clear, crystalline w/buff, dense, sandy-silty dolomite interbedded
- 52 Anhydrite clear, crystalline
- 53 Anhydrite clear, crystalline
- 54 Anhydrite clear, crystalline w/tr dense, sandy-silty dolomite interbedded
- 55 Dolomite buff, dense w/tr anhydrite crystal inclusions
- 56 Dolomite buff, dense w/tr anhydrite crystal inclusions
- 57 Anhydrite clear, crystalline w/buff, dense, sandy-silty dolomite interbedded
- 58 Dolomite buff, dense, sandy-silty w/crystalline anhydrite nodules
- 59 Same as above
- 60 Same as above
- 61 Same as above
- 62 Anhydrite clear, crystalline w/tr buff, dense dolomite interbedded
- 63 Dolomite buff, dense w/tr crystalline anhydrite & tr black, sandy shale nodules - pale yellow fluorescence
- 64 Dolomite buff, dense w/interbedded very fine-fine grained sand, tr FQG's, tite-pale yellow fluorescence
- 65 Sand clear-light gray, very fine-fine grained-clay filled (?), very slightly dolomitic
- 66 Same as above
- 67 Same as above
- 68 Same as above
- 69 Sand clear-light gray, very fine-fine grained-clay filled (?), very slightly dolomitic w/many anhydrite crystals, dull yellow flourescence, tr very faint cut
- 70 Same as above
- 71 Dolomite gray, dense, very sandy, crystalline anhydrite inclusions
- 72 Same as above
- 73 Sand, light gray, very fine grained, tight w/thin, shaley dolomite laminations, dull yellow fluorescence tr very faint cut

- 4773 -74 Sand, light gray, very fine grained, tight clay filled w/thin, shaley dolomite laminations, dull yellow fluorescence tr very faint cut
- 75 Same as above
- 76 Same as above
- 77 Same as above
- 78 Same as above
- 79 Same as above
- 80 Sand, light gray, very fine grained, tight, very slightly dolomitic cement, dull yellow fluorescence, tr very faint cut
- 81 Same as above
- 82 Same as above
- 83 Same as above
- 84 Same as above
- 85 Same as above
- 86 Sand, light gray, very fine grained, tight very slightly dolomitic cement, w/some crystalline anhydrite nodules w/some medium grained, rounded FQG's, dull yellow fluorescence, tr very faint cut
- 87 Sand, light brown, very fine grained, tight, very slightly dolomitic cement, dull yellow fluorescence, fair to good cut
- 88 Sand, light gray, very fine grained, tight, very slightly dolomitic cement, dull yellow fluorescence, fair to good cut
- 89 Sand, light brown, very fine grained, tight very slightly dolomitic cement, dull yellow fluorescence, fair to good cut
- 90 Sand, light brown, very fine grained, tight very slightly dolomitic cement, w/many medium grained, rounded FQG's, dull yellow fluorescence, fair to good cut
- 91 Sand, light brown-gray, very fine grained, tight very slightly dolomitic cement, w/many medium grained rounded FQG's, dull yellow fluorescence, fair to good cut
- 92 Sand, light gray, very fine grained, tight very slightly dolomitic cement, w/tr medium grained, rounded FQG's, dull yellow fluorescence, fair to good cut
- 93 Sand, light brown-gray, very fine grained, tight very slightly dolomitic cement, w/tr medium grained, rounded FQG's, dull yellow fluorescence, fair to good cut

Read & Stevens, Inc.

Quail State No. 1

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- 4793 -94 Sand, light gray, very fine grained, tight very slightly dolomitic cement, w/tr medium grained, rounded FQG's dull yellow fluorescence, fair to good cut
- 95 Same as above
- 96 Sand, light gray, very fine grained, tight very slightly dolomitic cement w/crystalline anhydrite nodules, very scattered fluorescence, slight trace very faint cut
- 97 Sand, light gray, very fine grained, intergranular porosity, dull yellow fluorescence, trace very faint cut
- 98 Same as above
- 99 Same as above
- 4799-4800 Sand, light brown-gray, very fine grained, friable, intergranular porosity, saturated yellow gold, excellent cut, good odor
- 01 Same as above
- 02 Same as above
- 03 Same as above
- 04 Same as above
- 05 Same as above
- 06 Same as above
- 07 Sand, light gray, very fine grained, friable, intergranular porosity, saturated dull yellow fluorescence, trace cut
- 08 Sand, light brown, very fine grained, friable, intergranular porosity, saturated yellow gold fluorescence, excellent cut, good odor
- 09 Sand, light red, very fine grained, friable, intergranular porosity, slightly saturated dull yellow fluorescence, trace cut, slight odor
- 10 Sand, light red, very fine grained, friable, intergranular porosity, trace dull yellow fluorescence, trace cut, slight odor
- 11 Same as above

Read & Stevens, Inc.  
Quail State No. 1

660' FSL & 1980' FEL Sec. 11, T 19S, R 34E  
Lea Co., New Mexico

Core No. 4 5029-5089  
Cut 60 feet, Recovered 58 feet

- 5029-30 Dolo., tan & brown VF-VCX, Dense, No show  
31 Dolo., AA, N.S.  
32 Dolo., AA, N.S.  
33 Dolo, AA w/inclusions of clr CX anhydrite, N.S.  
34 Dolo, w/anhydrite AA, N.S.  
35 Dolo, gray tan, micro x-VFX w/incl. Brn CX Dolo & clr VCX  
anhy. Dense, N.S.  
36 Dolo, gray tan, VFX w/inclusions Gry VCX Anhy. Dense, N.S.  
37 Dolo, gray, Micro-VFX, w/scattered incl. MX Brn-gray Anhy,  
Dense, N.S.  
38 Anhy, gray, FX, argill, Dolo., N.S.  
39 Anhy, clr-gray, VFX Dense w/incl. Whi-clr. massive anhy, N.S.  
40 Dolo, gray, micro-VFX, w/scattered incl. MX Brn-gray anhy.,  
Dense, N.S.  
41 Dolo., Tan-Brn, VF-MX, Dns, anhy., N.S.  
42 Dolo, gray-tan, Micro-VFX w/scattered incl. CX Dolo & anhy.,  
Dense, N.S.  
43 Dolo, AA, N.S.  
44 Dolo, AA, N.S.  
45 Dolo, AA, N.S.  
46 Dolo, AA, N.S.  
47 Dolo, AA, N.S.  
48 Shale, Dk gray, mic, anhy., Dolo., sli sdy, N.S.  
49 Sandstone, tan-gray, FG, A-SA, Dolo. & anhy. cmt & matrix,  
fair light brn oil staining & good spotty yellow fluor.  
Looks tight.  
50 Sandstone, light gray, VFG, A-SA, Dolo & Anhy. cmt & matrix,  
Looks tight, N.S.  
51 Sandstone, AA, N.S.  
52 Sandstone, AA, showing scattered areas w/fair porosity and  
light brown oil staining & good yellow fluor.  
53 Sandstone, tan, FG, SA-SR, well sorted, sli friable, showing  
fair porosity w/good even light brown oil stain & yellow  
fluorescence. Traces bleeding oil on outside of core.  
54 Sandstone, AA, w/show oil.

- 5054-55 Sandstone, light gray, VFG-FG, SA-SR, Dolo cmt & Anhy. filling looks tight, N.S.
- 56 Sandstone, AA w/incr. in Anhy.
- 57 Dolo, Gray, F-MX, Sandy, Anhy., N.S.
- 58 Siltstone, Gray, sandy, argill, anhy., Dolo., N.S.
- 59 Dolo., Gray-tan, VF-MX, w/CX Anhy., incl., sli sdy, N.S.
- 60 Sandstone, FG, SA-SR, Glau., Sli Dolo, Fair sorting, Fair porosity, N.S.
- 61 Sandstone, AA, N.S.
- 62 Sandstone, AA, w/incr. in Dolo. matrix, Dense, N.S.
- 63 Sandstone, AA, Dense, N.S.
- 64 Dolo, gray, FX, sandy, Dense, N.S.
- 65 Sandstone, gray, FG, SR-R, Dolo. cmt, fair porosity, N.S.
- 66 Sandstone, tan-gray, FG, A-SR, well sorted w/laminae of fair to good porosity showing light brown oil staining and good yellow fluor. intercalated w/laminae having denser matrix and no show.
- 67 Sandstone, gray VFG-FG, SR, Dolo. cmt, w/5-10% Dark minerals Scattered medium-size grains of well rounded, frosted qtz. grains, No show.
- 68 Dolo, tan-brn, Micro X, interlamin w/brn argill VFX Dolo, N.S.
- 69 Dolo, Gray, VFX, sandy, Anhy., Dense, N.S.
- 70 Sandstone, gray, VFG-FG, SA-SR, Fair srtg, Dolo & Anhy. matrix, poor-fair porosity, N.S.
- 71 Sandstone, AA, N.S.
- 72 Sandstone, AA, w/denser matrix - incr. anhy (?), N.S.
- 73 Dolo., Gray, VF-FX, anhy., V/sandy, N.S.
- 74 Sandstone, gray, VF-FG, SR-SA, Dolo. cmt., Tight, N.S.
- 75 Sandstone, AA, N.S.
- 76 Sandstone, AA, W/scattered fair porosity, N.S.
- 77 Sandstone, AA, AA, N.S.
- 78 Dolo, gray, VF-FX, anhy, V/sandy, N.S.
- 79 Dolo, AA, N.S.
- 80 Sandstone, light gray, VFG, Dolo, cmt., N.S.
- 81 Sandstone, light gray, FG, A-SR, well sorted, pyr., Dolo, cmt. w/scattered areas of good porosity, Tr Stain & Fluor.
- 82 Sandstone, AA, N.S.
- 83 Sandstone, light gray, VFG, well sorted w/matrix of Dolo & anhy., Dense, tight, N.S.
- 84 Dolo, tan, micro-X, Dense, N.S.
- 85 Dolo, AA
- 86 Dolo, AA
- 87 Dolo, AA w clr VCX anhy. incl., N.S.
- 88 1/4 Dolo, Brn, VFX, Dense, N.S.
- 89 No recovery

# George R. Reddy

Consulting Geologist

Bus. (505) 623-6233

Res. (505) 623-3767

200 West First Street  
Roswell, New Mexico 88201

Read & Stevens, Inc.

No. 1 Quail State

660' FSL & 1980' FEL Sec. 11, T 19S, R 34E

Lea Co., New Mexico

Core No. 5 5089-5149

Cut 60 feet, Recovered 60 feet

- 5089-90 Dolo, gray-brown, FX, Dns w/scattered incl. CX Dolo, N.S.  
91 Shale, Dark gray, Dolo, N.S.  
92 Shale, gray, Dolo, N.S.  
93 Shale, AA, sandy, N.S.  
94 Sandstone, gray, FG, SR-R, Dolo cmt, argill partings, Fair porosity, N.S.  
95 Sandstone, AA, N.S.  
96 Dolo, gray, FX w/scattered CX Dolo, sandy, N.S.  
97 Dolo, AA, N.S.  
98 Dolo, Dk gray, FX, argill, carbonaceous, sdy, N.S.  
99 Sandstone, gray, FG, SA-SR, well sorted, Dolo, cmt, Fair porosity, N.S.  
5100 Dolo, tan, Micro-VFX w/scattered MX Dolo, Dns, N.S.  
01 Dolo, AA, N.S.  
02 Dolo, gray-tan, AA, N.S.  
03 Dolo, gray, AA  
04 Dolo, tan, AA w/incl. carbonaceous anhy (?), N.S.  
05 Dolo, tan, Micro-CX, Dns, N.S.  
06 Dolo, gray-tan, VFX, Dns, N.S.  
07 Dolo, gray, AA  
08 Dolo, gray, AA  
09 Dolo, tan, VFX, oolitic, Dns, N.S.  
10 Dolo, gray, VFX, Dns, N.S.  
11 Shale, gray, Dolo, N.S.  
12 Sandstone, lt. gray, VF-FG, SA-SR, Poor-Fair porosity, lamin, Dolo, cmt, glauc., porous laminae have light oil staining and bright yellow fluor. About 20% of sample has show.  
13 Sandstone, AA, w/more even staining & fluor, looks tight.  
14 Sandstone, AA, w/more even staining & fluor, fair porosity.  
15 Sandstone, gray, VFG-FG, silty, Dolo, matrix filling most pores. Spotty light oil stain & fluor (80%).  
16 Sandstone, AA, w/similar show.  
17 Sandstone, AA, w/similar show, Denser, more Dolo.  
18 Shale, Gray-Brn, Dolo, sdy, N.S.  
19 Shale, gray-brown, Dolo, sdy, N.S.  
20 Sandstone, gray, VFG, silty, w/Dolo, matrix, Dns, spotty stain lt brown oil & yellow fluor.

- 5120-5121 Sandstone, gray, VF-FG, SR-R, w/Dolo, matrix, V/Dns, N.S.  
22 Dolo, gray, VFX-CX, argill, lamin, N.S.  
23 Dolo, gray, VFX-MX, Dns, N.S.  
24 Dolo, tan, VFX, Dns, N.S.  
25 Sandstone, lt gray, FG, glauc., Dolo, cmt, Fair porosity, N.S.  
26 Sandstone, lt gray, VFG-FG, Dolo, cmt, Fair porosity, N.S.  
27 Sandstone, AA, N.S.  
28 Sandstone, AA, lamin, argill, N.S.  
29 Dolo, gray, VFX-MX, Dns, N.S.  
30 Dolo, AA  
31 Dolo, AA, w/incl. of CX Whi anhy, N.S.  
32 Dolo, gray, VFX-CX, Dns, N.S.  
33 Dolo, gray, Micro-VFX, Dns, w/gray shale partings, N.S.  
34 Dolo, gray, VFX-MX, V/sandy, Dns, N.S.  
35 Dolo, lt gray, Micro X w/CX anhy, N.S.  
36 Anhy, Brn, VFX, Dns, N.S.  
37 Dolo, tan, Micro X, Dns, N.S.  
38 Dolo, tan, Micro-VFX, Dns, N.S.  
39 Dolo, gray-tan, AA, N.S.  
40 Dolo, tan, AA, N.S.  
41 Dolo, tan-gray, VFX, Dns, N.S.  
42 Sandstone, lt gray, FG, SA-R, Dolo, cmt, tight, N.S.  
43 Sandstone, gray, VF-FG, A-SA, poor sorting, Dolo cmt, N.S.  
44 Dolo, Gray, VFX, V/sandy, Dns, lamin w/shale partings, N.S.  
45 Shale, Dk gray, lamin w/sandy Dolo, N.S.  
46 Sandstone, tan-gray, FG, SA-SR, friable, sl. Dolo cmt, even  
stain of light brown oil and bright yellow fluor, good odor.  
47 Sandstone, AA, cleaner, solid staining and fluor, good odor.  
48 Sandstone, AA, cleaner, solid staining and fluor, good odor.  
49 Sandstone, AA, w/more cement, tighter, good staining & fluor.



# George R. Reddy

Consulting Geologist

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200 West First Street  
Roswell, New Mexico 88201

READ & STEVENS, INC.  
No. 1 Quail State

660' FSL & 1980' FEL Sec. 11, T 19S, R 34E  
Lea Co., New Mexico

Core No. 6 5149-5209  
Cut 60 feet, Recovered 57 feet

- 5149-50 Sandstone, gray, FG, SA-R, Glauc., fair sorting, Dolo cnt.  
fair porosity, No visible stain or fluor, Fair cut.
- 51 Sandstone, AA, w/poor porosity, No visible stain or fluor,  
Fair cut.
- 52 Sandstone, AA, w/poor porosity, No visible stain or fluor,  
Fair cut.
- 53 Sandstone, AA, N.S.
- 54 Sandstone, AA, N.S.
- 55 Dolo, tan, Micro-VFX, oolitic, N.S.
- 56 Dolo, gray, VFX, V/sandy, Dns, N.S.
- 57 Dolo, lt gray, VFX, V/sandy, N.S.
- 58 Dolo, gray, VFX, Sli. sandy, Dns, N.S.
- 59 Dolo, tan, VFX, Dns, N.S.
- 60 Dolo, gray, VFX, Dns, N.S.
- 61 Dolo, gray-tan, AA
- 62 Dolo, brn-gray, VFX-CX, Dns w/carbonaceous incl., N.S.
- 63 Dolo, gray, VFX, Dns, N.S.
- 64 Dolo, AA, N.S.
- 65 Shale, dk gray, lamin w/Dolo, AA, N.S.
- 66 Shale, AA
- 67 Dolo, gray, Micro-X, Dns, N.S.
- 68 Dolo, AA, N.S.
- 69 Dolo, AA, N.S.
- 70 Dolo, AA, N.S.
- 71 Dolo, AA, N.S.
- 72 Dolo, AA, w/dk gray shale partings
- 73 Dolo, AA, N.S.
- 74 Dolo, gray-tan, VFX, Dns, N.S.
- 75 Dolo, AA, N.S.
- 76 Dolo, AA, N.S.
- 77 Dolo, gray, Micro-X, Dns, N.S.
- 78 Sandstone, dk gray, VF-FG, SR-R, Dns Dolo matrix, N.S.
- 79 Dolo, gray, VFX, Dns, N.S.

- 5179-80 Dolo, AA, lamin w/black shale, N.S.  
81 Shale, dk gray & blk, lamin w/Dolo, AA, N.S.  
82 Shale, AA  
83 Sandstone, gray, VF-FG, SR-R, Dolo cmt, looks tight,  
Trace dull yellow fluor, weak cut  
84 Dolo, gray, VFX, Dns, N.S.  
85 Dolo, AA, w/shale partings, N.S.  
86 Dolo, AA, w/shale partings, N.S.  
87 Dolo, tan, VFX, Dns, N.S.  
88 Dolo, AA, w/scattered incl. CX brn Dolo, N.S.  
89 Dolo, AA, N.S.  
90 Dolo, AA, N.S.  
91 Dolo, tan-gray, VFX, Dns, N.S.  
92 Dolo, Brn-gray, VFX, Dns, N.S.  
93 Dolo, AA, w/blk shale partings, N.S.  
94 Dolo, gray, VFX, Dns, w/black shale partings, N.S.  
95 Sandstone, lt gray, FG, SR-R, Glauc., Dolo cmt, tight, No  
visible staining, spotty yellow fluor, sli odor, v/weak cut.  
96 Dolo, gray, VFX matrix w/scattered VCS clr Dolo, N.S.  
97 Dolo, AA  
98 Dolo, Dk Gray, VFX, Sdy, Dns, N.S.  
99 Dolo, AA, N.S.  
5200 Dolo, AA, N.S.  
01 Dolo, gray, VFX, Dns, w/incl. VCX clr anhy., N.S.  
02 Dolo, AA  
03 Dolo, AA  
04 Dolo, AA  
05 Anhy, gray, massive w/incl. VFX Dolo, N.S.  
06 Dolo, gray, VFX, Dns, w/scattered incl. CX clr anhy, N.S.  
07 No recovery  
08 NR  
09 NR

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660' FSL & 1980 FEL Sec. 11, T 19S, R 34E  
Lea County, New Mexico

## Sidewall Cores

<u>Depth</u>	<u>Recovery</u>	<u>Description</u>
3606	1 $\frac{1}{2}$ "	SS, red, VFG, SA, N.S.
3607	$\frac{1}{2}$ "	Anhy, whi, massive, w/red shale
3875	$\frac{1}{4}$ "	Dolo, tan, shy, N.S.
3876	1 $\frac{1}{4}$ "	Anhy, whi, massive & SS, red, VFG, N.S.
3877	3/4"	Anhy, AA.
4041	1"	SS, red & gray, VFG-FG, SR, loosely consol, N.S.
4127		NR
4156		NR, Barrell Chipped
4490 $\frac{1}{2}$	1"	SS, gray, VFG-FG, SR, loosely consol, N.S.
4529		NR
4761 $\frac{1}{2}$		NR
4785	$\frac{1}{4}$ "	SS, tan, FG, SR, Dolo. cmt, N.S.
4795	3/4"	SS, gray, VFG, A-SA, Dolo. cmt, Soft, N.S.
4797	1 $\frac{1}{4}$ "	SS, gray, FG, SA-R, clean, solid lt brn stains, yellow fluor.
4801	1 $\frac{1}{4}$ "	SS, AA
4802	1 $\frac{1}{4}$ "	SS, gray, VFG-FG, SA-A, glauc, Dolo. cmt, N.S.
4803	1 $\frac{1}{2}$ "	SS, gray, FG, SA-R, clean, scattered brn oil stain, Fluor
5037		NR, broke core
5041	$\frac{1}{2}$ "	SS, Gray, FG, SR, V/Dolo, gray, hard, N.S.
5042	fragments	SS, Gray, MG, SR-R, Fria, clean, oil stain and Fluor
5098	3/4"	SS, gray, VF-FG, SR, clean, oil stain & Fluor.
5099	$\frac{1}{2}$ " soft	SS, AA
5100 $\frac{1}{2}$	1 "	SS, lt gray, VFG-FG, A-SR, looks tight, Dolo cmt, stain, Tr Fluor
5102 $\frac{1}{2}$	1 $\frac{1}{4}$ "	SS, gray, FG, SR-A, clean, spotty lt brn stain, solid fluor
5111 $\frac{1}{2}$	1 "	SS, AA, Lt brn oil stain, good fluor.

<u>Depth</u>	<u>Recovery</u>	<u>Description</u>
5132	N.R.	
5133	$\frac{1}{4}$ "	SS, gray, FG, SR, Dolo. cmt, hrd, N.S.
5134	1 "	SS, gray, FG, SA-SR, V/clean, even oil stain & Fluor.
5138	1"	SS, gray, FG, SA-SR, Shly, spotty oil stain
5236	$\frac{1}{2}$ "	SS, lt gray, FG, SR, Glauc, Dolo. cmt, N.S.
5237 $\frac{1}{2}$	$\frac{1}{4}$ "	SS, gray, FG, SR, Dolo, cmt, N.S.
5254	1 "	SS, lt gray, FG, SR-SA, Dolo. cmt, clean, N.S.
5257	$\frac{3}{4}$ "	SS, lt gray, FG, SA-SR, Dolo. cmt, tight, N.S.
5295	1"	SS, V lt gray, VF-FG, SA-SR, V/clean, unconsol., N.S.
5332	$\frac{1}{2}$ "	SS, lt gray, FG, SR-R, Clean, Dolo. cmt, N.S.
5338	$\frac{3}{4}$ "	SS, lt gray, FG, SR-R, Clean, Dolo. cmt, N.S.
5388 $\frac{1}{2}$	Shot Barrell Off	