

State of New Mexico
Energy, Minerals & Mining Resources Department

Form C - 102

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

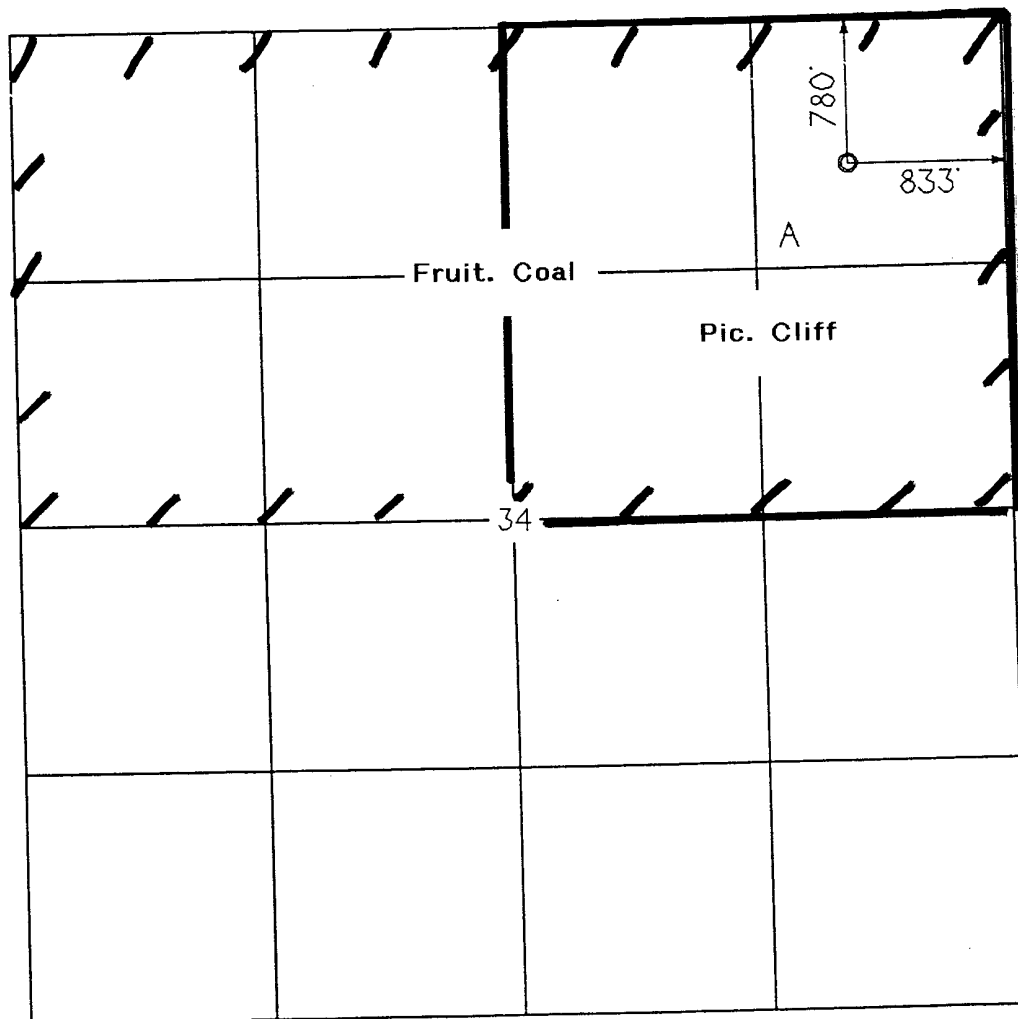
APA Number 30-045-30521	Pool Code 71629 & 79680	Pool Name FRUIT. COAL & WEST KUTZ PC EXT
Property Code 30304	Property Name NAVAJO 34	Well Number 34 1
GRID No. 019219	Operator Name RICHARDSON OPERATING COMPANY	Elevation 5778'

Surface Location									County
UL or Lot A	Sec. 34	Twp. 29 N.	Rge. 14 W.	Lot Idn.	Feet from > 780	North/South NORTH	Feet from > 833	East/West EAST	SAN JUAN

Bottom Hole Location If Different From Surface									County
UL or Lot	Sec.	Twp.	Rge.	Lot Idn.	Feet from >	North/South	Feet from >	East/West	

Dedication	Joint ?	Consolidation	Order No.
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NO ALLOWABLE WILL ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT 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

BRIAN WOOD

Title

CONSULTANT

Date

JAN. 20, 2001

SURVEYOR CERTIFICATION

I hereby certify that the well location 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.

Date of Survey

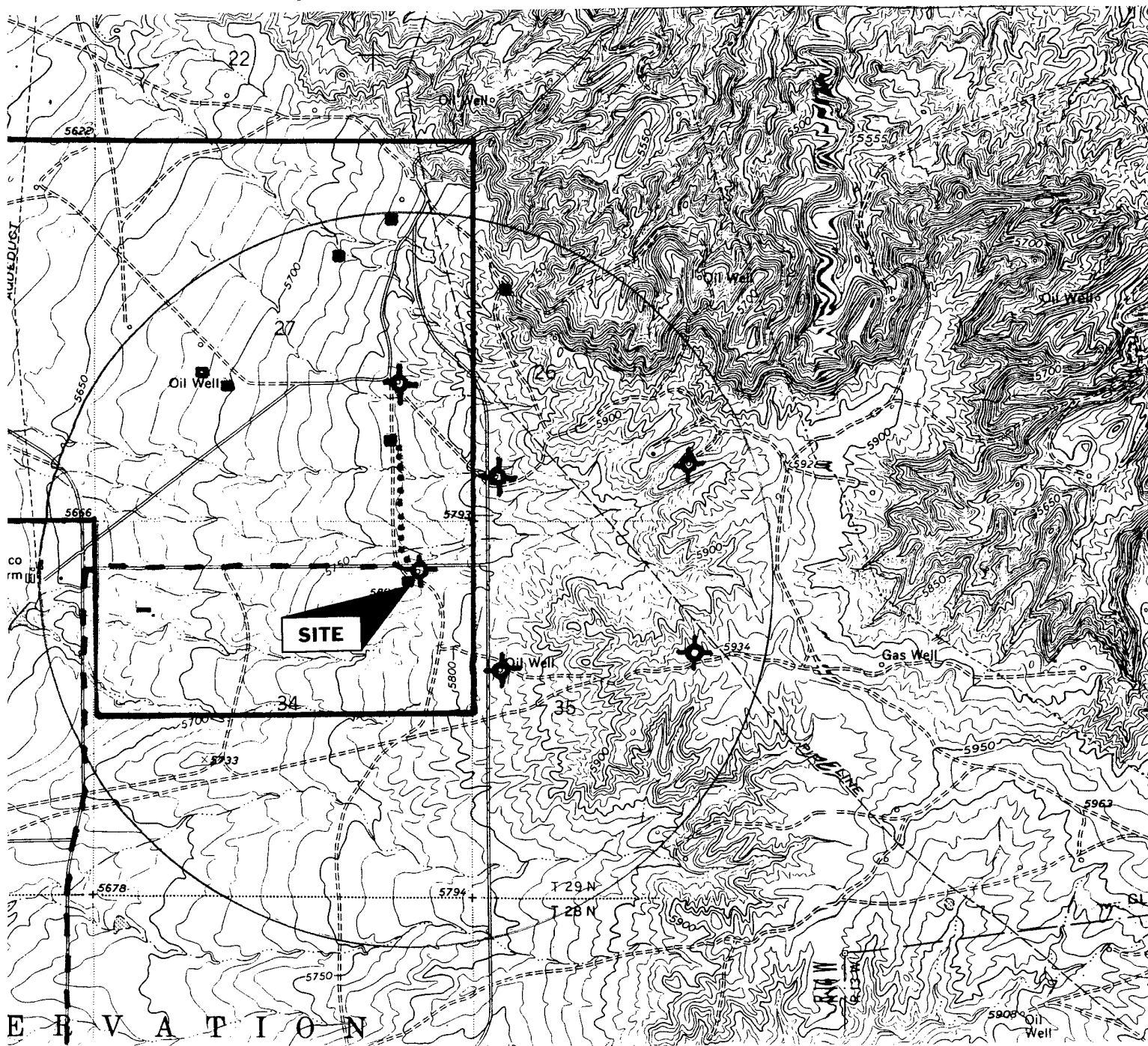
10 OCTOBER 2000

Signature and Seal of Professional Surveyor



Richardson Operating Co.
 Navajo 34 #1
 780' FNL & 833' FEL
 Sec. 34, T. 29 N., R. 14 W.
 San Juan County, New Mexico

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PROPOSED WELL: ■
 EXISTING WELL: ■
 P&A WELL: ⊕

PROPOSED PIPELINE: - - -
 EXISTING ROAD: - - -
 LEASE: └

PERMITS WEST .INC.
 PROVIDING PERMITS for LAND USERS

Richardson Operating Co.
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Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation Name</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Subsea Elevation</u>
Ojo Alamo Ss	000'	5'	+5,778'
Kirtland Sh	20'	25'	+5,758'
Fruitland Fm	830'	835'	+4,948'
Pictured Cliffs Ss	1,230'	1,235'	+4,548'
Total Depth (TD)*	1,360'	1,365'	+4,418'

* all elevations reflect the ungraded ground level of 5,778'

2. NOTABLE ZONES

<u>Gas Zones</u>	<u>Water Zones</u>	<u>Coal Zones</u>
Fruitland Fm (830')	Fruitland Fm (830')	Kirtland Sh (000')
Pictured Cliffs (1,230')		Fruitland Fm (830')

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

3. PRESSURE CONTROL

The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. (A typical 2,000 psi model is on PAGE 3.) Double ram or annular system with a rotating head will be used. All ram preventers and related equipment will be hydraulically tested at nipple up and after any use under pressure to 1000 psi.

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Blind rams will be hydraulically activated and checked for operational readiness each time pipe is pulled out of the hole. All checks of the BOP stack and equipment will be noted on the daily drilling report. BOP equipment will include a kelly cock, floor safety valve, and choke manifold all rated to 2000 psi. Maximum expected pressure is ≈ 350 psi.

4. CASING & CEMENT

<u>Hole Size</u>	<u>O.D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Age</u>	<u>GL Setting Depth</u>
8-3/4"	7"	20	K-55	New	120'
6-1/4"	4-1/2"	10.5	K-55	New	1,360'

Surface casing will be cemented to surface with ≈ 36 cu. ft. (≈ 30 sx) Class B + 2% CaCl_2 . Volume is based on 100% excess, yield of 1.18 cu. ft./sk, and slurry weight of 15.6 PPG. WOC = 12 hours. Pressure test surface casing to 600 psi for 30 minutes.

Production casing hole will first be cleaned of rock chips by circulating at least 150% of hole volume with mud to the surface. Thirty barrels of fresh water will next be circulated. Lead with ≈ 155 cu. ft. (≈ 75 sx) of Class B with 2% metasilicate (yield = 2.06 cu. ft./sk, slurry weight = 12.5 PPG). Tail with ≈ 89 cu. ft. (≈ 75 sx) of Class B with 2% CaCl_2 (yield = 1.18 cu. ft./sk, slurry weight = 15.6 PPG). Total cement volume is ≈ 244 cu. ft. based on 75% excess and circulating to surface.

Production casing will have 4-1/2" cement guide shoe and self fill float collar. Float will be placed one joint above the shoe. Five centralizers will be spaced on every other joint starting above the shoe. Five turbolizers will be placed on every other joint starting from the top of the well.