

State of New Mexico  
**ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT**  
Santa Fe, New Mexico 87505



**OIL CONSERVATION DIVISION**

January 12, 1995



EnRe Corporation  
c/o Permits West, Inc.  
37 Verano Loop  
Santa Fe, New Mexico 87505

Attn: Brian Wood

**RECEIVED**  
JAN 17 1995  
**OIL CON. DIV.**  
**DIST. 3**

*Administrative Order* NSL-3459

Dear Mr. Wood:

Reference is made to your application dated December 12, 1994 on behalf of the operator, EnRe Corporation, for an unorthodox oil well location for the proposed Los Indios Canyon "11-J" Well No. 1 to be drilled 2400 feet from the South line and 2100 feet from the East line (Unit J) of Section 11, Township 27 North, Range 1 West, NMPM, to test both the Entrata formation and the West Puerto Chiquito-Mancos Oil Pool, Rio Arriba County, New Mexico.

All of said Section 11 being a standard 640-acre oil spacing and proration unit for the West Puerto Chiquito-Mancos Oil Pool and the NW/4 SE/4 of said Section 11 being a standard 40-acre oil spacing and proration unit for the Entrata interval, are to be dedicated to said well.

By the authority granted me under the provisions of Rule 5 of the "*Special Rules and Regulations for the West Puerto Chiquito-Mancos Oil Pool*", as promulgated by Division Order Nos. R-2565-B, R-2565-C, R-6469, R-6469-A, R-6469-B, R-6469-C, R-6469-D, R-6469-E, R-6469-F, R-6469-F-1, R-6469-G, R-6469-G-1, and R-6469-H, and Division General Rule 104.F(1), the above-described unorthodox oil well location is hereby approved.

Sincerely,

William J. LeMay  
Director

WJL/MES/kv

cc: Oil Conservation Division - Aztec  
U. S. Bureau of Land Management - Albuquerque

**VILLAGRA BUILDING - 408 Galisteo**  
Forestry and Resources Conservation Division  
P.O. Box 1948 87504-1948  
827-5830  
Park and Recreation Division  
P.O. Box 147 87504-1147  
827-7465

**2040 South Pacheco**  
Office of the Secretary  
827-5950  
Administrative Services  
827-5925  
Energy Conservation & Management  
827-5900  
Mining and Minerals  
827-5970  
Oil Conservation  
827-7131

## **Ernie Busch**

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**From:** Ernie Busch  
**To:** Mike Stogner  
**Subject:** EnRe CORPORATION (NSL)  
**Date:** Monday, January 09, 1995 1:53PM  
**Priority:** High

LOS INDIOS CANYON 11J #1  
2400 FSL; 2100 FEL  
J-11-27N-01W  
RECOMMEND: APPROVAL

REQUEST FOR ADMINISTRATIVE APPROVAL FOR NON-STANDARD LOCATION  
FOR THE LOS INDIOS CANYON 11 J #1 OIL WELL  
2400' FSL & 2100' FEL SEC. 11, T. 27 N., R. 1 W., RIO ARRIBA COUNTY, NM  
BY EnRe CORPORATION

I. The well is on Jicarilla Apache Tribal Trust surface and minerals. An onsite was held September 30, 1994. Onsite participants included John Atencio (BIA), Pat Hester (BLM), Mitch Michelson (EnRe), Fred Vigil (Jicarilla Apache Oil & Gas Admin.), Brian Wood (Permits West), et al. Application for Permit to Drill is attached.

II. A C-102 showing the well location, proration unit (all of Sec. 11 which totals 640 acres), and lease (all of T. 27 N., R. 1 W. is lease and totals 17,710.81 ac.) is in the APD.

III. According to NM Oil Conservation Records, there are no producing wells of any kind within a mile radius. A map and affidavit are attached showing the proposed well (square), quarter-quarter lines (dashed lines), and spacing units (solid lines). There is only one lease/mineral agreement (701-94-0011) within a 7,380' radius. It comprises all of T. 27 N., R. 1 W. Interest owners are: Ampolex, Benson-Montin-Greer, Deven Resources, EnRe, Fortune Petroleum, and the Jicarilla Apache Tribe.

IV. A copy of the Los Indios Canyon 7.5' USGS map is attached. The proposed wellsite is marked by a square. Proration units (sections) are marked by solid lines. Quarter-quarter lines are dashed lines. Closest existing well is EnRe's 2A-1 well 7,631' north in N2N2 2-27n-1w. Closest proposed well is EnRe's Los Indios 15 J #1 over a mile southwest in the NWSE 15-27n-1w.

V. Request for a non-standard location is based on the Tribe's desire to minimize road construction (the pad touches the road) and its impacts on their trophy elk hunts and to minimize the loss of timber. Most of the trees to be felled are small "dog hair" ponderosa pine saplings (see attached photos). Moving 90' further south to an orthodox location would require more road and the felling of larger salable timber.

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OIL CON. DIV.  
BUREAU OF LAND MANAGEMENT

VI. No archaeology sites were found.

VII. Location was moved out of orthodox drilling window due to presence of large ponderosa pines which Tribe wants to preserve for future timber sales. Wellsite is staked in an area with fewer and smaller trees.

VIII. Directional drilling is not feasible because it is not cost effective. EnRe's recent Cedar Canyon 22-G well (22-28n-1w) required 4 sidetracks.

IX. I hereby certify that notice has been sent to the following lessees, lessors, surface management agencies, operators of spacing units, or owners of undrilled leases which adjoin the applicant's spacing unit on one or more of the two sides or the single closest corner to the proposed well and that the information is current and correct:

Ampolex  
Benson-Montin-Greer  
BIA  
Deven Resources  
Fortune Petroleum  
Jicarilla Apache Tribe

*Brian Wood*

Consultant

12-12-94

Signature, Title, & Date

STATE OF

*New Mexico*

COUNTY OF

*Santa Fe*

) SS:

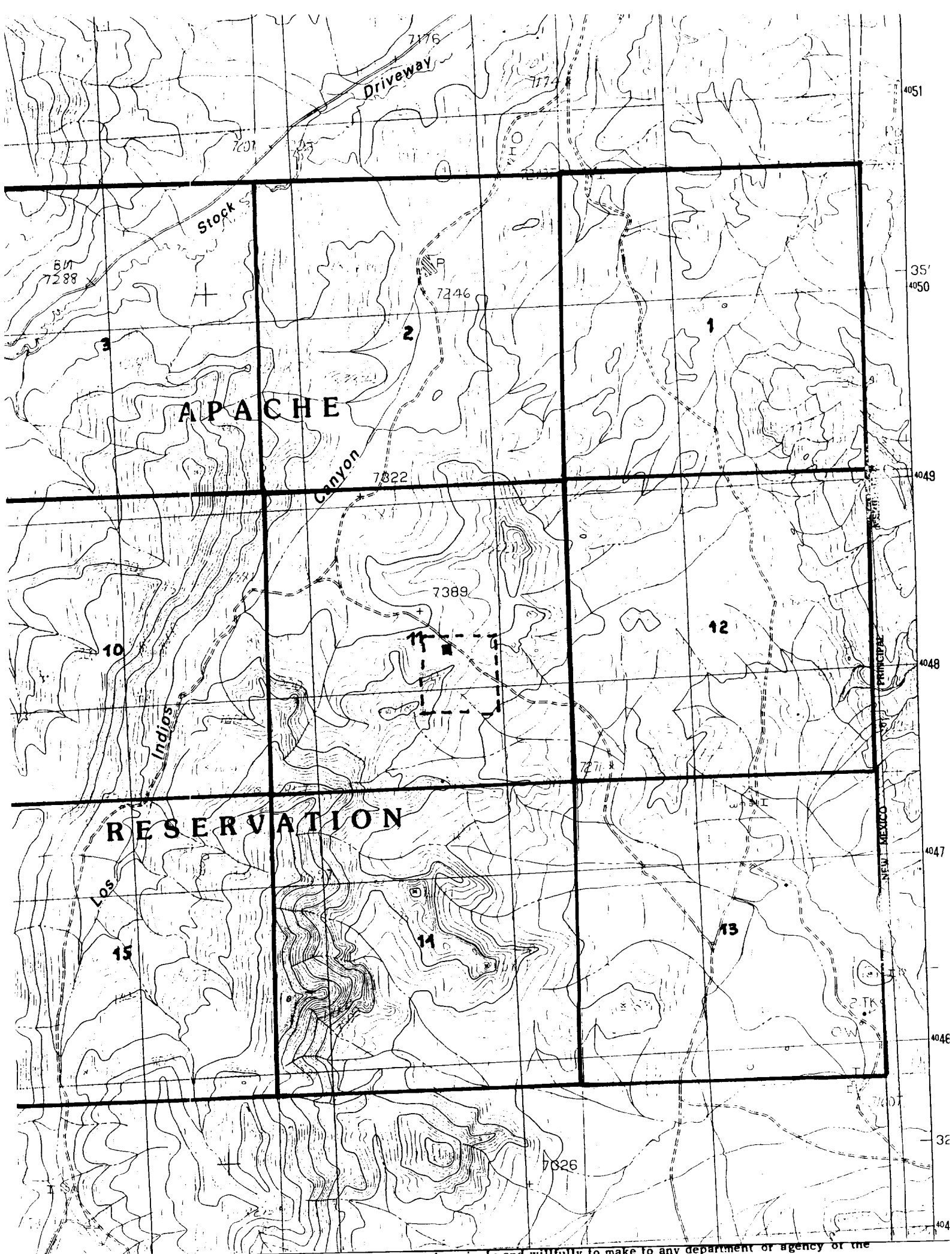
The foregoing instrument was acknowledged before me this *12<sup>th</sup>* day of *December*, 1994 by *Brian Wood*.

Witness my hand and official seal.

*Rufina Ortega*  
Notary Public

My Commission Expires: *4-20-96*

Business Address: *1 La Hacienda Loop - S.F., N.M. 87505*



Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the  
falsely statements or representations as to any matter within its jurisdiction.

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102  
Revised February 21, 1994

Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 20-039-25475		2 Pool Code 50440		3 Pool Name West Puerto Chiquito Mancos	
4 Property Code 16410		5 Property Name LOS INDIOS CANYON			6 Well Number 11 J-1
7 OGRID No. 133182		8 Operator Name EnRe Corporation			9 Elevation 7441

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
J	11	27N	1W		2400	South	2100	East	Rio Arriba

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 640	13 Joint or Infill	14 Consolidation Code	15 Order No.
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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 2640.00 WEST 2640.00 159.95 AC ± 2640.00 160.05 AC ± 2640.00 2641.65 2100' 2640.00 159.83 AC ± 2640.00 160.12 AC ± 2643.30 N 89° 59' W 2643.30		17 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: November 9, 1994	
	18 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.  Date of Survey: September 20, 1994 Signature and Seal of Professional Surveyor: Certificate Number: 9672			

EnRe Corporation  
Los Indios Canyon 11 J #1  
2400' FSL & 2100' FEL  
Sec. 11, T. 27 N., R. 1 W.  
Rio Arriba County, NM

PAGE 1

## Drilling Program

### 1. FORMATION TOPS

Estimated tops of important geologic markers (based on an ungraded ground elevation of 7,441') are:

<u>Formation Name</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Subsea Depth</u>
San Jose	000'	13'	+7,441'
Ojo Alamo Ss	1,088'	1,101'	+6,353'
Fruitland	1,321'	1,334'	+6,120'
Pictured Cliffs Ss	1,478'	1,491'	+5,963'
Lewis Shale	1,611'	1,624'	+5,830'
Cliffhouse Ss	3,695'	3,708'	+3,746'
Pt. Lookout Ss	3,905'	3,918'	+3,536'
Mancos Shale	4,131'	4,144'	+3,310'
Gallup (Niobrara)	4,572'	4,585'	+2,869'
Mancos "A" Zone	5,041'	5,054'	+2,400'
Mancos "A" Ss	5,066'	5,079'	+2,375'
Mancos "B" Ss	5,112'	5,125'	+2,329'
Mancos "C" Ss	5,230'	5,243'	+2,211'
7" Casing Seat	5,357'	5,370'	+2,084'
Sanostee	5,518'	5,531'	+1,923'
Greenhorn Ls	5,818'	5,831'	+1,623'
Dakota Ss	5,971'	5,984'	+1,470'
Todilto	6,491'	6,504'	+950'
Entrada Ss	6,591'	6,604'	+850'
Total Depth	6,737'	6,750'	+704'

### 2. NOTABLE ZONES

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PAGE 2

The Fruitland, Pictured Cliffs, Cliffhouse, Pt. Lookout, Mesa Verde, Mancos, Dakota, and Entrada zones are most likely to have oil or gas. Mancos is the primary goal. Lost circulation may occur in the Pictured Cliffs and Mancos. Only likely water zone is the San Jose. If any other water zones are found, they will be recorded and protected with casing, cement, and weighted mud. Oil and gas shows will be tested for commercial potential based on the well geologist's recommendations.

### 3. PRESSURE CONTROL

BOP systems will follow Onshore Order #2 and API RP 53. The drilling contract has not yet been awarded, thus the exact BOP model to be used is not yet known. A typical model is on PAGE 4. Maximum pressure will be  $\approx 2,700$  psi.

BOP controls will be installed before drilling the surface casing plug and remain in use until the well is completed or abandoned. Once out from under the surface casing, a 10" minimum 3,000 psi BOP and choke manifold system will be used. System will include upper and lower kelly cock with handle, test plug, drill pipe float, mud logging unit with gas detector to detect any influx of formation fluids, and a sub on the floor with a full opening valve to be stabbed into the drill pipe when a kelly is not in the string.

Ram type preventers and associated equipment (e.g., choke manifold and kelly cock) will be pressure tested to 100% of their rated working pressure for a minimum of 10 minutes. A test plug will isolate the BOP stack from the casing. Annular preventers will be tested to  $\geq 50\%$  of their rated working pressure for at least 10 minutes. Tests will be run after installation, before drilling out the surface casing shoe, and after any use under pressure, or a minimum of once every 14 days. Pipe rams will be operationally checked each 24 hour period, as will blind rams



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and annular preventer each time pipe is pulled out of the hole. Annular preventers will be functionally operated at least weekly. BOP checks will be noted on the daily drilling report.

#### 4. CASING & CEMENT

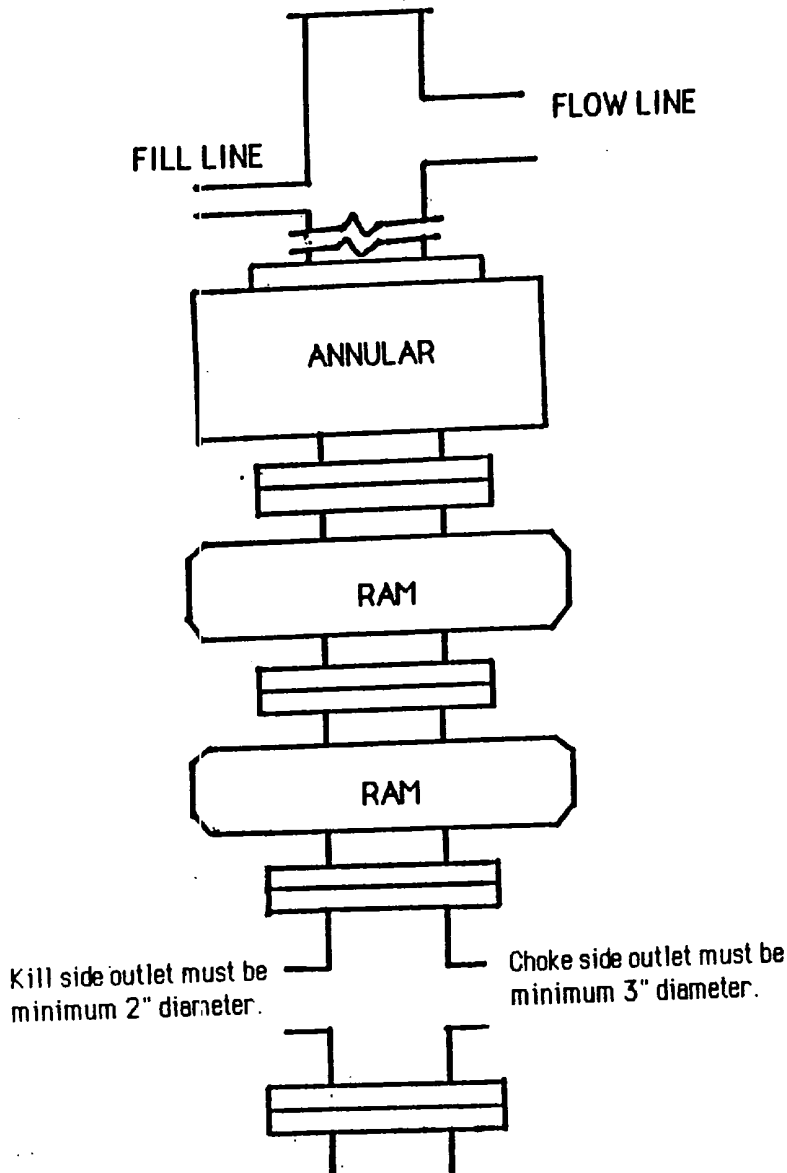
<u>Hole Size</u>	<u>O.D.</u>	<u>Weight (lb/ft)</u>	<u>Grade</u>	<u>Type</u>	<u>Age</u>	<u>KB Setting Depth</u>
12-1/4"	9-5/8"	36	K-55	ST&C	New	≥250'
8-3/4"	7"	23	N-80	ST&C	New	5,370'
6-1/4"	4-1/2"	11.6	N-80	ST&C	New	6,750'

Surface casing will be cemented to the surface with  $\approx 177$  cubic feet ( $\approx 150$  sx) Class B with 3% salt + 1/4#/sk celloflake + 2%  $\text{CaCl}_2$ . Volume calculated at 100% excess. Use  $\approx 20$  sx for top job. Run regular pattern guide shoe and insert float in top of shoe joint. Place one stop ring 10' from bottom of shoe joint for first centralizer. Place 2 additional centralizers on the casing at 100' intervals.

Production casing will be cemented to the surface. Calculations based on 150% excess. Actual volumes will be calculated at 20% excess as measured by caliper log. First stage will be cemented from  $\approx 5,370'$  to  $\approx 4,200'$  (DV collar) with  $\approx 265$  cubic feet ( $\approx 200$  sx) of 50/50 Poz "B" with 2% gel and 1/4#/sk celloflake mixed at 13.7#/gal. Second stage lead will be cemented from  $\approx 4,200'$  to the surface with  $\approx 950$  cubic feet of  $\approx 200$  sx Class B nitrofiged to 4.24#/gal in lead and  $\approx 50$  sx Class B + 1/4#/sk celloflake in tail. Cap with 50 sx Class B with 2%  $\text{CaCl}_2$  to hold nitrofiged cement (previous experience shows denser cement will not easily circulate to surface). DV tool may be installed just below Picture Cliffs. Centralizers will be used.

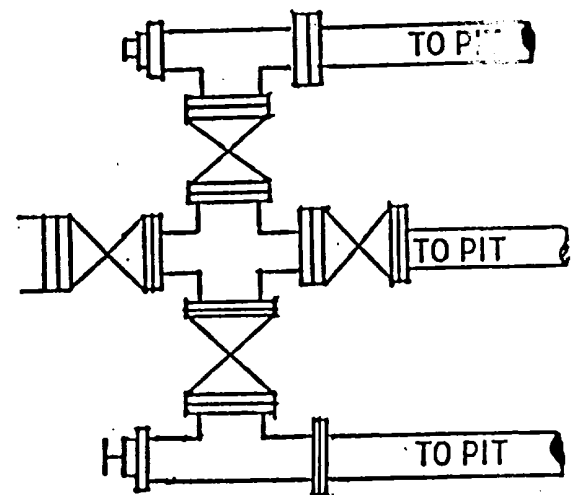
Liner will be run with at least 100' of overlap and cemented with  $\approx 225$  cubic feet ( $\approx 180$  sx) Class B with 0.7% CFR 322.

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TYPICAL BOP STACK  
 & CHOKE MANIFOLD

There will be at least 2 chokes and 2 choke line valves (3" minimum). The choke line will be 3" in diameter. There will be a pressure gauge on the choke manifold.



Kill line will be minimum 2" diameter and have 2 valves, one of which shall be a minimum 2" check valve.

Upper kelly cock will have handle available.  
 Safety valve and subs will fit all drill string connections in use.  
 All BOPE connections subjected to well pressure will be flanged, welded, or clamped.

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## 5. MUD PROGRAM

<u>Depth</u>	<u>Type</u>	<u>ppg</u>	<u>Viscosity</u>	<u>Fluid Loss cc</u>
0' - 250'	Fresh water gel & lime	9.0-10.0	40-50	NC
250' - 1,500'	Gel & PHPA polymer	8.7-8.8	29-33	15-20
1,500' - 5,000'	Gel polymer	8.7-8.9	30-35	12-15
5,000' - 5,370'	Gel polymer & KCl	8.7-8.9	34-38	12-15

At  $\approx 4,500'$  will rig up air compressors and booster sufficient to move 1.5MMcf/D with an 800Mcf/d compressor on standby. Rig up separate 500 bbl mud tank with Quadco separator (gas buster), Drilco style degasser, oil skimmer, and 50 hp transfer pump. From 5,000 to TD will control lost circulation with sufficient air to lower mud gradient to 0.22 psi/ft or equivalent mud density of 4.25 ppg. From 5,370' to 6,505' will drill with air mist (foam) as hole requires. At 6,505' will pull back into 7" casing to add mud phase to air stream to drill remainder of well with aerated mud to stay slightly under balanced with the Entrada.

Sufficient mud material to maintain mud properties, control lost circulation, and contain a blowout will be at the wellsite while drilling. Mud will be checked frequently by rig personnel. Mud logging unit, gas detector, and flow sensor will be used.

## 6. CORING, TESTING, & LOGGING

Mud loggers will rig up at  $\approx 1,200'$ . No cores are planned. A DST may be run in the Entrada. Triple combination, Sonic, Dual Induction - Gamma Ray, Spectral Density, and Compensated Neutron logs may be run from TD to base of surface casing.

## 7. DOWNHOLE CONDITIONS

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No abnormal temperatures pressures, nor hydrogen sulfide are expected.

8. OTHER INFORMATION

Tentative spud date is November 20, 1994. Drilling will take  $\approx$ 20 days.  
Completion will take  $\approx$ 10 days.

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## Surface Use Plan

### 1. DIRECTIONS & EXISTING ROADS (See Pages 12 & 13)

From the junction of US 64 and NM 537, go south 9.1 miles on NM 537.  
 Then turn left onto J-16 and go SE 8.5 mi. to J-8.  
 Then turn right onto J-8 and go S 1.35 mi. to J-17 at a green LACT.  
 Then turn right onto J-17 and go SW 0.9 mi. to J-55.  
 Then bear right and go SW 1.25 mi.  
 Then turn left and go SE 0.5 mi. to the proposed well.

Roads will be maintained at least equal to their present condition.  
 Only upgrading needed will be to limb or fell a few trees along J-55.

### 2. ROAD TO BE BUILT (See Page 14)

Seventy-five feet of new road will be built. It will have a  $\approx 15'$  wide running surface within a maximum disturbed width of 40'. It will be crowned and ditched. No culverts, gates, or cattleguards are needed. Maximum grade is 5%.

### 3. EXISTING WELLS (See PAGE 12)

According to NM Oil Conservation Division records, there are no oil, injection, water, or gas wells within a mile.

### 4. PROPOSED PRODUCTION FACILITIES

The exact type, location, and layout of the production facilities are not known now. It is expected they may include a meter run,

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dehydrator, separator, tank battery, and/or heater-treater. All will be painted a flat juniper green color. A flowline will be buried north to a possible production facility at the LACT on J-17. A Sundry Notice and or right-of-way will be submitted for approval before installation.

#### 5. WATER SUPPLY

Water will be trucked from Tribal land. Primary source will be a new water hole recently dug by EnRe in Cisneros Canyon. A secondary source will be an existing seep pond below Hayden Dam. Exact source will depend on availability.

#### 6. CONSTRUCTION MATERIALS & METHODS

Large ponderosa pines will be felled and limbed, but the trunks will be left intact and pushed to the side. Other smaller trees will be felled, cut into 16" lengths for firewood, and stacked by the road. A diversion ditch to be cut along the south side of the pad will run along the toe of the slope, rather than above it.

Brush and the top 6" of topsoil will be stripped and stockpiled south of the pad. The reserve pit will be terraced down so at least half its capacity is in cut and lined with minimum 12 mil plastic.

#### 7. WASTE DISPOSAL

The reserve pit will be fenced sheep tight on 3 sides with woven wire fence topped with barbed wire. The 4th side will be fenced once the rig moves off. The fence will be kept in good repair while the pit dries. No oil will be discharged into the pit. All oil will go into tanks.

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All trash will be placed in a portable trash cage. It will be hauled to an approved landfill. There will be no burial or burning.

Human waste will be disposed of in chemical toilets or minimum 10' deep ratholes under trailers. Ratholes will be immediately filled when the trailers are removed.

#### 8. ANCILLARY FACILITIES

There will be no air strips or camps. Camper trailers will be on site for the company man, tool pusher, and mud loggers.

#### 9. WELL SITE LAYOUT

See Pages 14-16 for depictions of the well pad, cross section, cut and fill diagram, reserve pit, trash cage, access onto the location, parking, living facilities, and rig orientation.

#### 10. RECLAMATION

Reclamation starts once the reserve pit is dry. It usually takes a year for the pit to fully evaporate, at which point it will be backfilled. The wellpad and backfilled pit will be recontoured to a natural shape, water barred, stockpiled topsoil spread evenly over disturbed areas, and disturbed areas ripped or harrowed. A seed mix will be drilled at a depth and time to be determined by the Tribe.

If seed is broadcast, the rate will be increased as determined by the Tribe. A harrow or cable will be dragged over the area to assure seed cover. After seeding is done, the stockpiled brush and limbs will be

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scattered evenly over disturbed areas.

If the well is a producer, then the reserve pit and any other areas not needed for workovers will be reclaimed as previously described.

#### 11. SURFACE OWNER

The well and road are on Jicarilla Apache Tribal trust land.

#### 12. OTHER INFORMATION

The nearest hospital is a  $\approx$ 2 hour drive away in northwest Espanola.  
Hospital phone number is (505) 753-7111.

#### 13. REPRESENTATION

Anyone having questions concerning the APD should call:

Brian Wood, Consultant  
Permits West, Inc.  
37 Verano Loop  
Santa Fe, NM 87505  
(505) 466-8120  
FAX: (505) 466-9682  
Cellular: (505) 699-2276

The field representative while drilling will be:

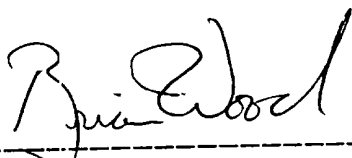
Harvey Ashford  
(505) 325-1873, Unit 2895  
or dial (505) 327-1870 and ask for Rig 7  
or cellular phone (505) 320-7626 then (210) 415-4235



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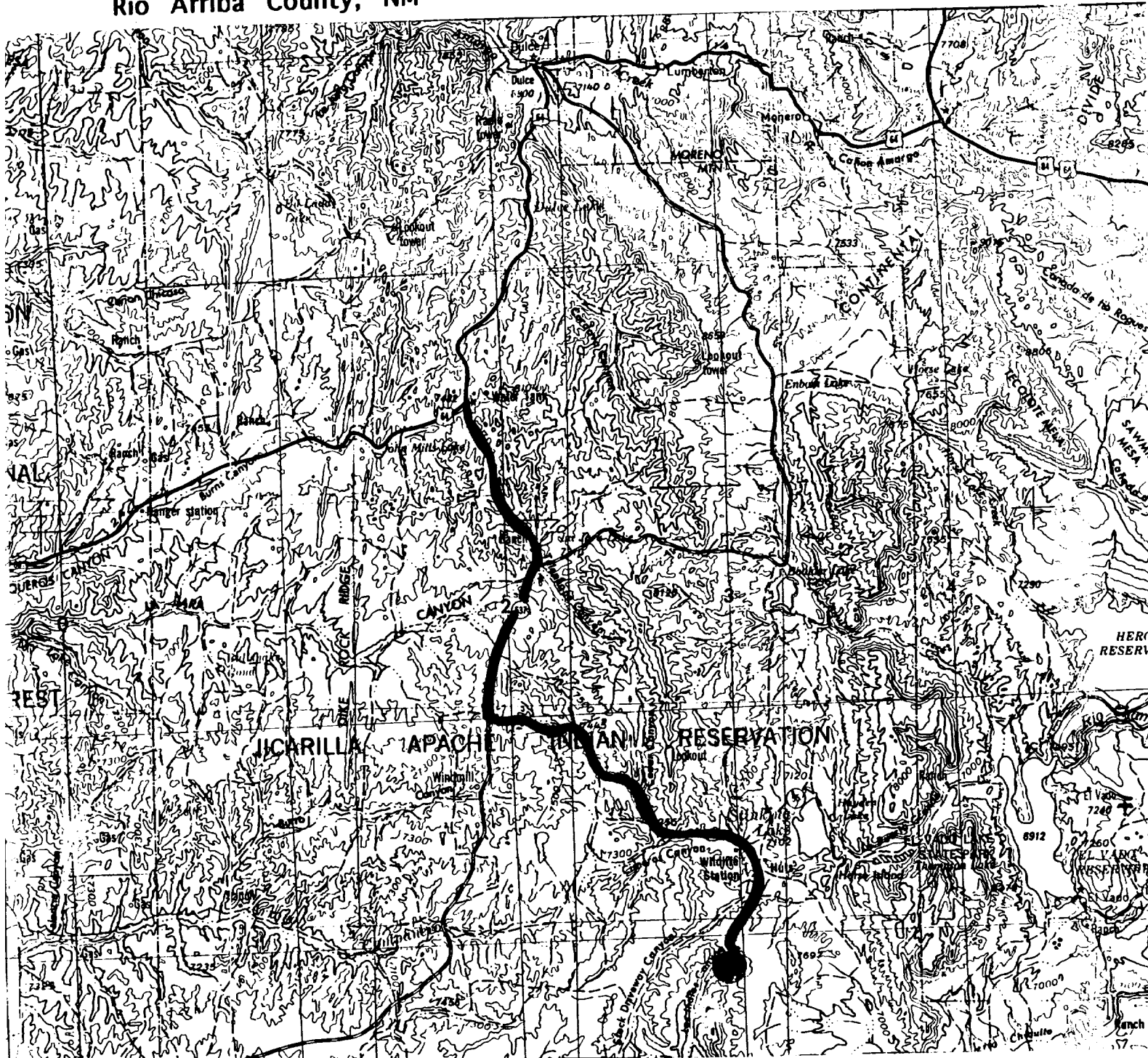
EnRe Corporation has the necessary consents from the proper lease owners to conduct lease operations in conjunction with this well. Bond coverage pursuant to 43 CFR 3104 for lease activities and operations is being provided by EnRe Corporation.

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 currently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by EnRe Corporation and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

  
 \_\_\_\_\_  
 Brian Wood, Consultant

November 9, 1994  
 Date

EnRe Corporation  
 Los Indios Canyon 11 J #1  
 2400' FSL & 2100' FEL  
 Sec. 11, T. 27 N., R. 1 W.  
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PROPOSED WELL: ●

ACCESS ROUTE: ~