

Property Management and Consulting, Inc.  
Well Cost Estimate

Prepared By: JEFFREY J. ALBERS

Footage	Description	Dry Hole	Completion	Total
----- Tangible				
	Conductor Pipe			
130	Surface Casing, 7", 20#, J-55	\$1,000.00		\$1,000.00
	Intermediate Casing, ", #,			
	Intermediate Casing, ", #,			
1433	Production Csg, 4 1/2", 10.5#, J-55		\$5,090.00	\$5,090.00
	Production Csg, ", #,			
	Production Csg, ", #,			
1283	Prod. Tubing, 2 3/8", 4.7#, J-55		\$2,490.00	\$2,490.00
	Prod. Tubing, ", #,			
	Wellhead	\$600.00	\$670.00	\$1,270.00
	Packer/Anchor			
	Artificial Lift, Subsurface			
	Artificial Lift, Surface			
	Tank Battery			
	Other Equipment		\$21,500.00	\$21,500.00
	Total tangible	\$1,600.00	\$26,750.00	\$28,350.00
	WI percent of Tangible			
Intangible				
	Footage Drilling: 1433 ft. @ 8.50 \$/ft.	\$12,195.00		\$12,195.00
	Day Work Drilling: 1 Days @ 800 \$/day	\$800.00		\$800.00
	Completion Rig: 1 Days @ 1500 \$/day		\$1,500.00	\$1,500.00
	Rig Moving Cost		\$1,500.00	\$1,500.00
	Roustabout and Miscellaneous Labor	\$1,000.00	\$1,000.00	\$2,000.00
	Trucking	\$250.00	\$400.00	\$650.00
	Roads, Location, Damages, Clean Up	\$6,000.00		\$6,000.00
	Mud, Oil, Water, Chemicals		\$500.00	\$500.00
	Drillstem tests			
	Openhole Logging	\$2,000.00		\$2,000.00
	Cementing, Float Equipment	\$1,100.00	\$2,250.00	\$3,350.00
	Bits		\$300.00	\$300.00
	Fuel			
	Rental Equipment		\$1,360.00	\$1,360.00
	Coring			
	Cased Hole Logging, Perforating		\$2,300.00	\$2,300.00
	Acidizing, Fracturing		\$19,700.00	\$19,700.00
	Geological Services			
	Engineering Services	\$2,000.00	\$2,000.00	\$4,000.00
	Mud Logger			
	Miscellaneous & Unforeseen: 10% of IDC	\$2,533.00	\$3,381.00	\$5,914.00
	Total Intangible	\$27,003.00	\$37,191.00	\$65,054.00
	WI percent of Intangible			
	Grand Total Cost	\$29,463.00	\$66,941.00	\$96,404.00
	WI percent of Total Cost			

Well Name : GRACIA NAVAJO 5? NO.2  
Operator : PRO NEW MEXICO, INC.

Formation : FRUITLAND COAL  
Location : LOCATION IS NOT STATED  
SW/4, SEC.5, T20N, R11W, N47M  
SAN JUAN CO., NM

BEFORE EXAMINATION  
 OIL CONSERVATION DIV.  
 10615

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 checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>			5. LEASE DESIGNATION AND SERIAL NO. SF 078062		
b. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____ SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>			6. IF INDIAN, ALLOTTEE OR TRIBE NAME		
2. NAME OF OPERATOR PRO New Mexico, Inc.			7. UNIT AGREEMENT NAME		
3. ADDRESS OF OPERATOR 141 E. Palace Avenue, Santa Fe, NM 87501			8. FARM OR LEASE NAME Gracia Navajo 5K		
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.) At surface 1845' FSL - 1830' FWL At proposed prod. zone Same			9. WELL NO. 2		
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE* 21 Miles South of Bloomfield, NM			10. FIELD AND POOL, OR WILDCAT Basin Fruitland Coal		
16. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drig. unit line, if any) 792			11. SEC., T., R. M., OR BLK. AND SURVEY OR AREA Sec. 5, T25N, R11W, NMPM		
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1344			12. COUNTY OR PARISH 13. STATE San Juan NM		
21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6324 GL			17. NO. OF ACRES ASSIGNED TO THIS WELL 320 W/2		
23. PROPOSED CASING AND CEMENTING PROGRAM			20. ROTARY OR CABLE TOOLS Rotary		
22. APPROX. DATE WORK WILL START* December 1, 1992					

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
8 3/4"	7"	20#	130'	50 sks. (1.18cuft/sk)cement to surf.
6 1/4"	4 1/2"	10.5#	1400	125sks. Lead (1.74 cuft/sk)
				50 sks. Tail (1.18cuft/sk) cem. to surf

It is proposed to spud into the San Jose formation and drill an 8 3/4" hole with lime and gel to a depth of 130' KB. It is then proposed to run 130' of 7", J-55, 20 ppf casing and cement to surface with 50 sxs Class B + 2% CaCl2 + 1/4#/sk flocele. Excess volume will be 100%. WOC, then pressure test to 600 psi for 30 min. prior to drilling shoe. It is then proposed to drill a 6 1/4" hole to a TD of 1400' KB. E-Logs to be run at TD. Then run 1400' of 4 1/2", J-55, 10.5 ppf casing and cement to surface with 125 sxs of 65/35/6 + 2% CaCl2 + 1/4#/sk flocele followed by 50 sxs of Class B + 2% CaCl2. Excess volume will be 75%. WOC 12 hours and pressure test to 1500 psi for 30 min. prior to completing.

(See Drilling Procedure for details)

Surface ownership is Tribal Trust

24. SIGNED RE Fields TITLE Agent DATE 11/20/92

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

\*See Instructions On Reverse Side

**OIL CONSERVATION DIVISION**  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT OFFICE:  
P.O. Box 1980, Hobbs, NM 88240

DISTRICT OFFICE:  
P.O. Drawer DD, Artesia, NM 88210

DISTRICT OFFICE:  
1000 Rio Grande Bldg., Alamosa, NM 87410

**WELL LOCATION AND ACREAGE DEDICATION PLAT**  
All Distances must be from the clear boundaries of the section

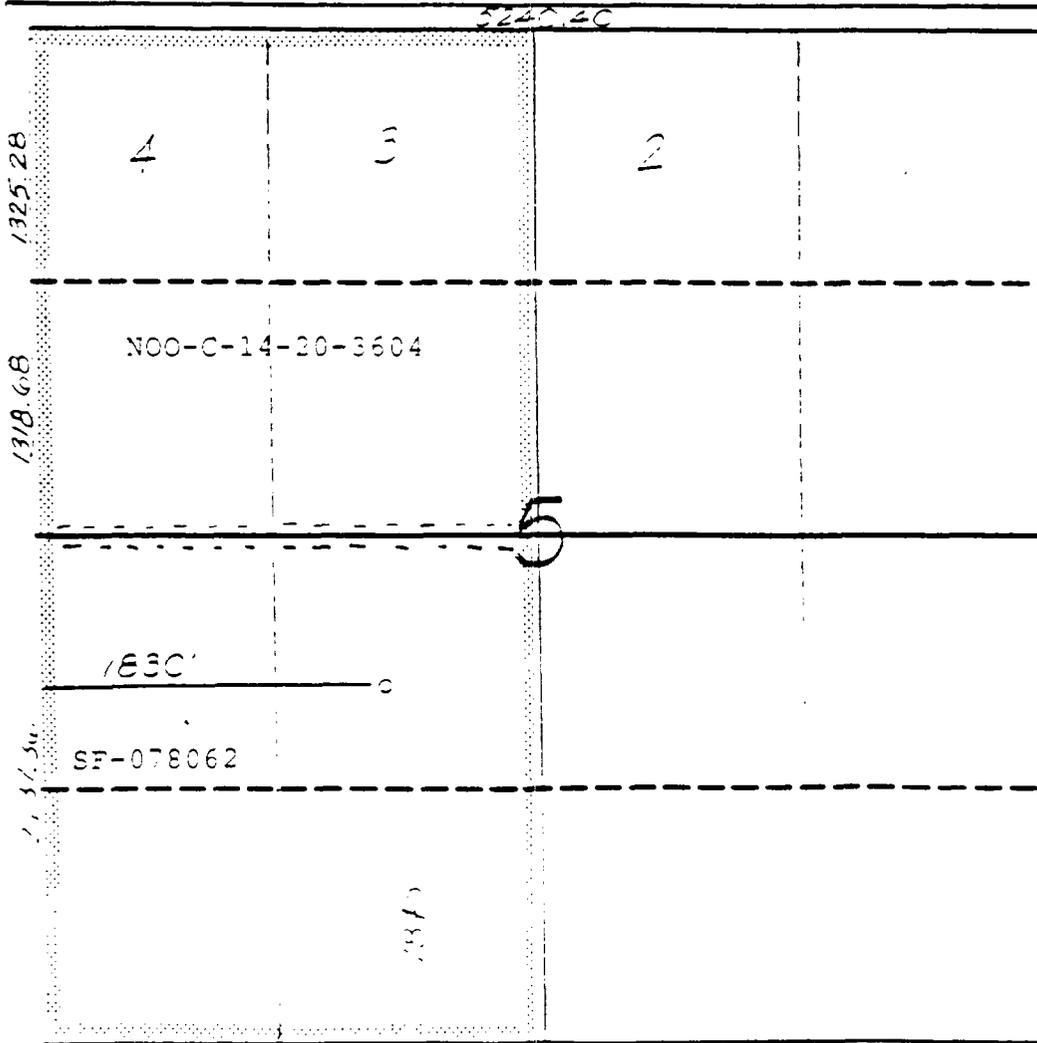
Operator		Section		Township		Range		County	
PRO New Mexico Inc.		5		25 North		11 West		San Juan	
Well No.		Section		Township		Range		County	
42		5		25 North		11 West		San Juan	
Admits Footage Location of Well:									
1845'		feet from the		South		1830'		feet from the	
West		Section		Township		Range		County	
6324'		Fruitland Coal		Basin Fruitland Coal		320		Acres W/	

1. Outline the acreage dedicated to the subject well by concrete blocks or accurate marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the operator 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 commutation, unconditional force-pooling, etc.?

Yes  No If answer is "yes" type of consolidation Force-pooling pending

If answer is "no" list the owners and their acreage which have already been consolidated. (Use reverse side of this form if necessary.)

No acreage will be assigned to the well until all interests have been consolidated (by commutation, unconditional force-pooling, or otherwise) or until a non-consolidated unit, encompassing such interest, has been approved by the Division.



**OPERATOR CERTIFICATION**

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

Signature: R.E. Fielder  
Printed Name: R.E. Fielder  
Position: Agent  
Company: PRO New Mexico, Inc.  
Date: 11/19/92

**SURVEYOR CERTIFICATION**

I hereby certify that the well location and/or the data well distance from lease holes herein were 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: 11/19/92  
Name: G. EDWARDS  
Signature: [Signature]  
Professional Surveyor  
1988  
New Mexico State Board of Professional Surveyors

PRO New Mexico, Inc.  
Gracia Navajo 5K No.2  
1845' FSL - 1830' FWL  
Section 5, T25N, R11W, NMPM  
San Juan Co., New Mexico

Field: Basin Fruitland Coal

Elevation: 6324' GL

Geology:

Formation Tops:	San Jose	- Surface
(Referenced: 6336' K.B.)	Ojo Alamo	- 373'
	Kirtland	- 528'
	Fruitland	- 750'
	Fruitland Coal	- 996'
	Pictured Cliff	- 1262'
	Total Depth P.B.	- 1360'
	Total Depth	- 1400'

Logging Program: Compensated Density - Neutron logs with Gamma Ray will be run at TD.

Drilling :

Contractor: Not Assigned

Toolpusher: Not Assigned

Operator's Representative: Property Management & Consulting, Inc.

Mud Program: 0 - 130': Spud mud of gel and lime.  
130'- 1400': Fresh water, or fresh water low solids mud. Mud weight - 9.5 to 10.0 ppg, as necessary to control well. 35-40 sec/qt. viscosity. 6-8 cc water loss.

Materials:

Casing Program:

<u>Hole Size</u>	<u>Depth Set</u>	<u>Casing Size</u>	<u>WT. &amp; Grade</u>
8 3/4"	130'	7 "	20# , J-55
6 1/4"	1400'	4 1/2"	10.50# , J-55

**Float Equipment:**

- 7" surface casing -Texas pattern guide shoe. Threadlock guide shoe.
- 4 1/2" production casing -Texas pattern guide shoe. Self fill insert float valve run one joint above shoe. Threadlock shoe and float valve. Five (5) bow spring centralizers run every other joint above shoe.

Turbolizers will be run through the Ojo Alamo on every joint, plus: 1-60' above Ojo Alamo top & 1-60' below Ojo Alamo bottom.

**Wellhead Equipment:**

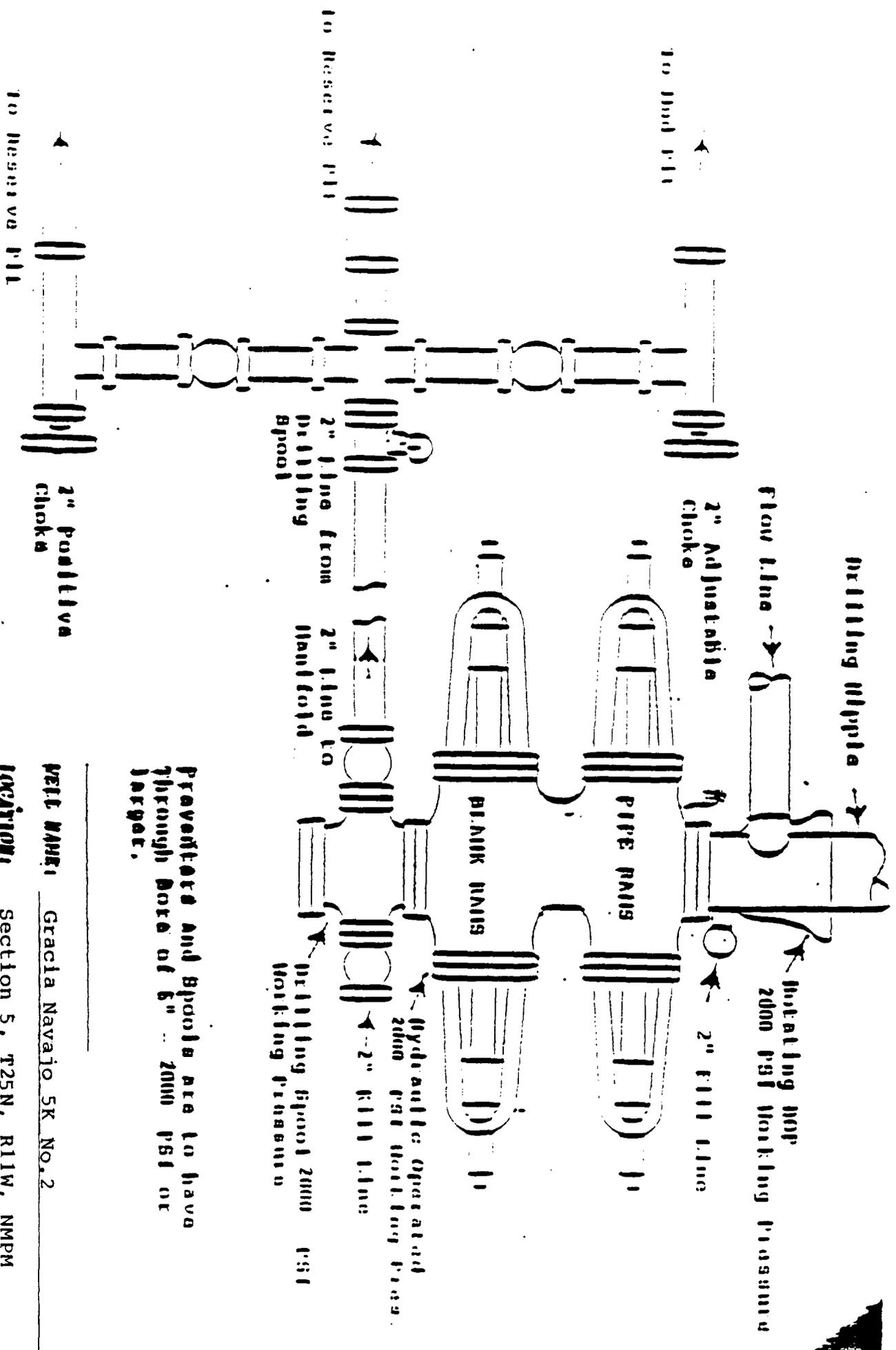
- 7" 8rd X 4 1/2" slip type 2000 W.P. casinghead.  
4 1/2" 8rd X 2 3/8: slip type 2000 W.P. tubinghead.

**Cement Program:**

- 7" surface casing -50 sacks (60 cubic ft) B + 2% CaCl<sub>2</sub> + 1/4# per sack flocele (15.6 ppg, 1.19 yield). 100% excess to circulate to surface. WOC for 8 hours if 500 psi compressive strength is obtained (based on confirmed rheology tests). Pressure test to 600 psi for 30 minutes prior to drilling surface shoe.
- 4 1/2" production -125 sacks (216 cubic ft) 65/35 B Poz +6% gel + 1/4# per sack flocele + 2% CaCl<sub>2</sub> (12.7 ppg, 1.73 yield) followed by 50 sacks (60 cubic ft) B + 2% CaCl<sub>2</sub> (15.6 ppg, 1.19 yield). 75% excess to circulate to surface. WOC for 12 hours. Pressure test to 1500 psi for 30 minutes. Run temperature survey at eight (8) hours if cement does not circulate.

**Miscellaneous:**

Operate pipe rams daily and record in tour reports.  
Operate blind rams on each trip and record in tour reports.  
4 1/2" casing rams are to be installed prior to running the production casing.



Preventers and Spools are to have through bore of 6" - 2000 PSI or larger.

NOTE: Upper Kelly cock valve with handle will be used. Safety valves for all drill strings used will be on the rig floor.

WELL NAME: Gracia Navajo 5K No. 2  
 LOCATION: Section 5, T25N, R11W, NMPM  
1845' FSL - 1830' FWL  
 COUNTY: San Juan  
 STATE: New Mexico

## Surface Use Plan

Operator: PRO New Mexico, Inc.

Lease Name: Gracia Navajo

Lease Number: SF-078062

Location: 1845' FSL - 1830' FWL, Section 5, T25N, R11W, NMPM  
San Juan Co., New Mexico

### 1. Existing Roads:

- A. See attached Area Map and Vicinity Plat.
- B. Route and distance from nearest town: Follow Hwy. 44 south from Bloomfield, New Mexico for approximately 13 miles. Turn right on San Juan County Road 7150 and follow for 7 miles. Turn right on San Juan County Road 7250 and follow for 1 3/4 miles. Turn right and follow road for 2/10 mile. Turn right and follow road for 1/10 mile. Turn right and go 150' to location.
- C. This well will require 675' of new access road.
- D. Exploratory Well - N/A
- E. Development Well - all existing roads are shown on the attached Area and Vicinity Maps.
- F. Plans for improvement and maintenance - Existing roads are bladed dirt. All existing roads will be maintained in their present condition during the drilling and completion of this well.

### 2. Access Road: (existing)

- A. Width: 20' running surface.
- B. Maximum Grade: 2%
- C. Turnouts: None anticipated.
- D. Drainage Design: As per BLM operating standards.
- E. Upgrade existing road: 0'.  
New construction: 675' of new location access road will be required.
- F. Location and size of culverts: None.
- G. Major cuts and fills: None.
- H. Surface Materials: Gates - None. Cattleguards - None.  
Fence cuts - None. Road base - None.
- I. Centerline flagging: New access road will be centerline flagged.
- J. PRO New Mexico, Inc. applies for new road ROW of 675' of location access road and 1320 ft. of existing road ROW in the SW/4 of Section 5, T25N, R11W as shown on the Vicinity Map.

### 3. Location of Existing Wells:

This is a development location. All existing and proposed wells within a one mile radius are shown on the attached Vicinity Plat.

### 4. Location of Existing and Proposed Production Facilities:

- A. Existing facilities: Amoco and Giant Oil and Gas Companies own or control collectively 16 gas wells and 1 oil well. Each location has a separator. Some have condensate storage tanks owned by the operators. El Paso Natural Gas Company, Giant E & P and Gas Company of New Mexico own and operate

meter runs on each location. El Paso and Giant E & P and GCNM own and operate several miles of gas gathering lines within a one mile radius of the proposed well.

- B. Proposed facilities: This well location will have a separator, meter run, and one 4' high x 16' diameter fiberglass water storage pit. A gas sales line will be run to one of the existing gathering lines located in the W/2 of Section 5. Exact connection will be determined at a later date.
  - C. Plans for Rehabilitation of the Surface: All surface areas not needed for operation of the well will be recontoured to blend with the existing topography and seeded with a mixture specified by the surface managing agency. All pits will be fenced until they are covered.
5. Location and Type of Water Supply:
- A. Location: Bloomfield, NM
  - B. Supply: city
  - C. Method of transportation: Truck.
  - D. Water wells to be drilled: None.
6. Source of Construction Materials:  
All construction materials will come from the location.
7. Methods of Handling Waste Disposal:
- A. Cuttings and drilling fluids: Cuttings will be placed in a 8 mil lined reserve pit. Drilling fluids will be kept in the reserve pit. All cuttings will be pushed into the reserve pit and buried during the clean up operation. The drilling fluid will be allowed to dry in the reserve pit and buried during the clean up operation.
  - B. Produced fluids: Tanks will be used for the storage of all produced liquids during testing and production. Oil will be retained in the tanks until it can be treated and sold. Water from testing operations will be drained into the reserve pit. Produced water will be stored in a fiberglass pit on the location and hauled to a commercial disposal as necessary. Gas will be flared during testing and sold to a pipeline during production.
  - C. Sewage: Sewage will be contained in a portable chemical latrine.
  - D. Garbage: Garbage will be contained in a trash cage. This will be hauled to the nearest dump facility and disposed of upon completion of the well.
  - E. Wellsite Clean Up: Upon completion of the drilling operation, all trash will be gathered up and placed in the trash cage. The pits will be fenced with a woven wire material on three sides during drilling. The fourth side will be fenced upon completion of the drilling operation. The pits will remain fenced until the pits have dried enough to backfill.
8. Ancillary Facilities: None.

9. Wellsite Layout: Cuts and fills, location of pits and drilling equipment, and orientation are shown on the attached Wellsite Layout.
10. Plans for Restoration of the Surface:
- A. Backfilling of the pits will be done as soon as they dry sufficiently. Contouring will be done in conjunction with the backfilling. Waste disposal will commence as soon as the drilling is complete. Topsoil will be stockpiled.
  - B. Revegetation will be done during the appropriate season. This will be conducted using BLM specified seed mixtures and planting times. All areas not necessary for production operations will be seeded.
  - C. All drilling pits will be fenced until they are covered. Any oil accumulation will be removed or overhead flagging installed to protect waterfowl.
  - D. Rehabilitation will commence when drilling is completed. Completion of rehabilitation depends on the weather and the time it takes the pits to dry.
11. Other Information:
- A. This location is south of the Navajo Indian Irrigation Project. Vegetation is sage brush.
  - B. Surface use and Ownership: Grazing/Tribal Trust.
  - C. Proximity of water, dwellings, etc.  
Nearest Water - 2 miles - water well  
Nearest Dwelling - 2 miles.

12. Lessee or Operators Field Representatives:

J.E. Gallegos  
PRO New Mexico, Inc.  
141 East Palace Ave.  
Santa Fe, NM 87501

Property Management & Consulting, Inc.  
1155 Dowell Road  
Farmington, NM 87401  
505-325-5220

13. Certification:

I hereby certify that I, or persons under my supervision, have inspected the proposed drillsite; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the proposed operations herein will be performed by PRO New Mexico, Inc. and it's contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Pro New Mexico, Inc.

11.23.92  
Date

J E Gallegos  
By: J.E. Gallegos, President

Reservation  
Dormitory

To SJ CR #7150

SJ CR #7250

Proposed Location

New Road ROW

Existing Road ROW

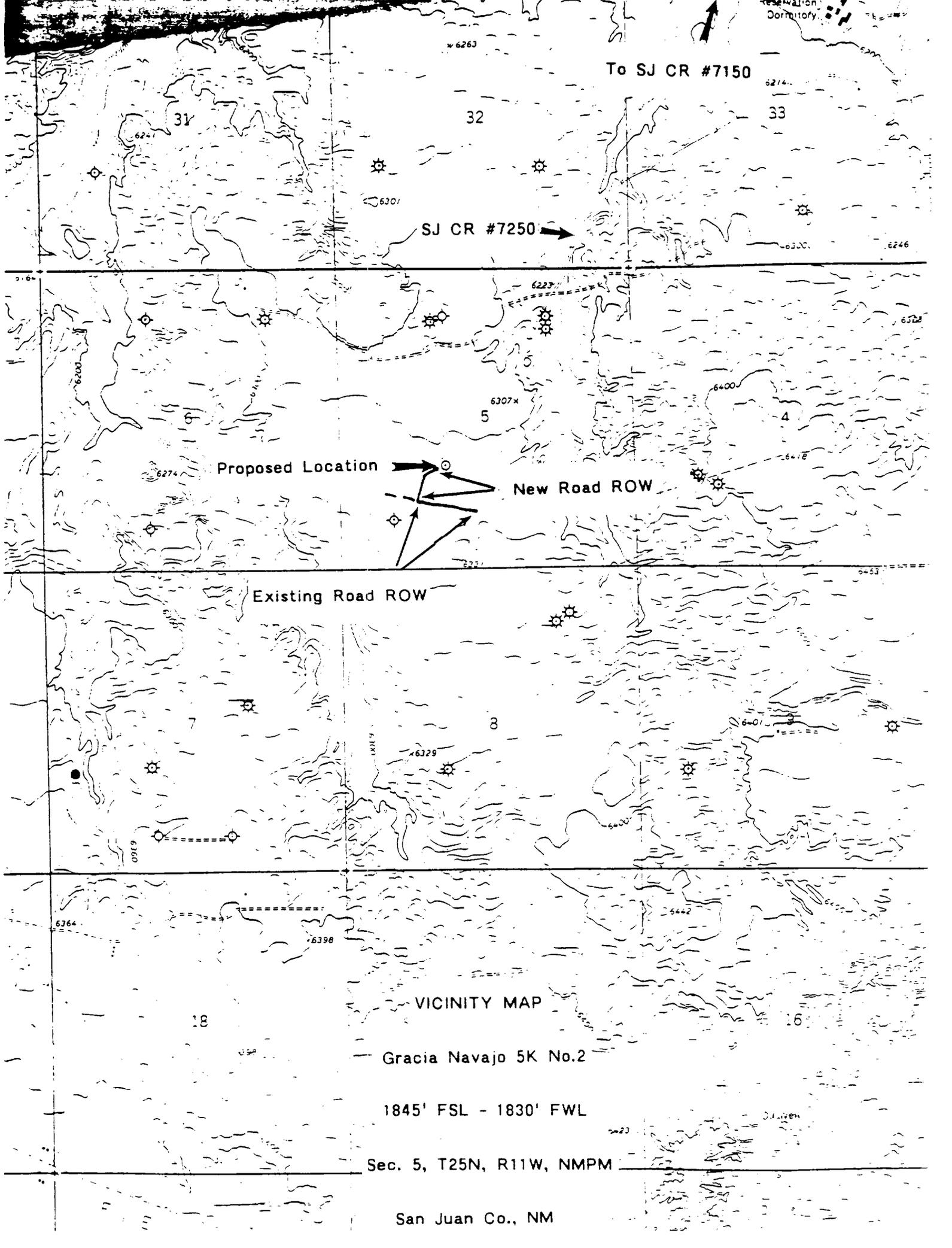
VICINITY MAP

Gracia Navajo 5K No.2

1845' FSL - 1830' FWL

Sec. 5, T25N, R11W, NMPM

San Juan Co., NM



30 X 60 MINUTE SERIES (TOPOGRAPHIC)

400

R 12 W 78 425

R 11 W 450 000 FEET 108°00'

36°30'

2 000 000 FEET

SJ CR #7150

Gallegos

Canyon

SJ CR #7250

Proposed Location

Proposed Access

FIELD

AREA MAP

Gracia Navajo 5K No.2

1845' FSL - 1830' FWL

Sec. 5, T25N, R11W, NMPM

San Juan Co., NM

T 26 N

404

1 975

T 25 N

403

1 950

T 24 N

1 925

402

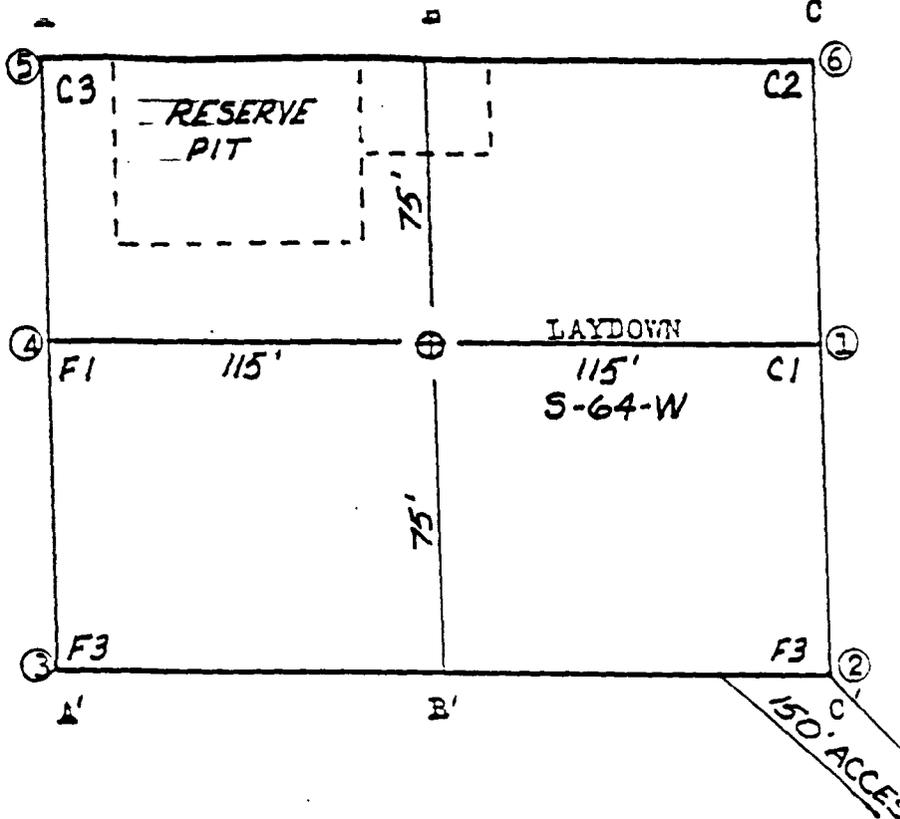
36

31

Alamo

Flats

PRO New Mexico Inc.  
 Gracia Navajo 5K #2  
 1845' FST, 1830' FWL  
 Sec. 5, T25N, R11W, NMPM  
 San Juan County, N.M.



A-A'	Vert. 1" = 1'	Horiz. 1" = 1'	C/L
6334			
6324			
6314			

B-B'	C/L
6334	
6324	
6314	

C-C'	C/L
6334	
6324	
6314	

# PRO NEW MEXICO, INC. LOCATION LAYOUT

GRACIA NAVAJO 5K NO. 2  
1845' FSL - 1830' FWL  
SEC. 5, T25N, R11W, NMPM  
SAN JUAN CO., NEW MEXICO

SCALE: 1"=50'

