

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-38530	Pool Code 06660 ✓	Pool Name Blinebry Oil & Gas
Property Code 36401	Property Name FEDERAL 1-17	Well Number 3
OGRID No. 227588	Operator Name RANGE OPERATING NEW MEXICO, INC.	Elevation 3387'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	17	22-S	37-E		1650	SOUTH	2310	WEST	LEA

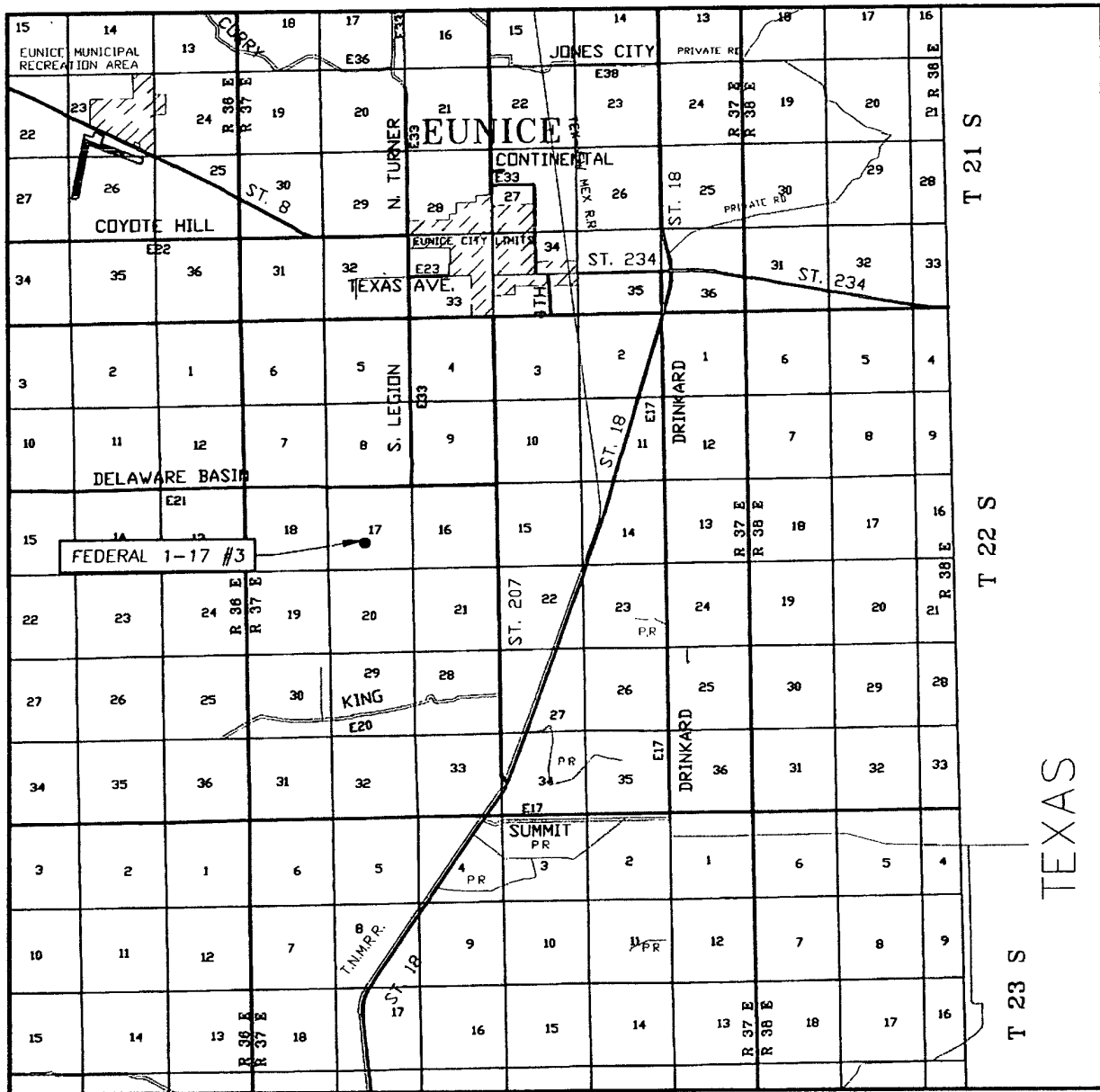
Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 40		Joint or Infill	Consolidation Code	Order No.					

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

<p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=507135.4 N X=854264.1 E</p> <p>LAT.=32.389005° N LONG.=103.185687° W</p> <p>3391.5' 600' 3389.6'</p> <p>2310' 3391.0' 3388.2' 1650'</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Paula Hale</i> 7-16-07 Signature Date Paula Hale Printed Name</p> <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>RONALD J. EIDSON NEW MEXICO Professional Seal of 3239 6/06/07</p> <p>Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p>
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VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 17 TWP. 22-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1650' FSL & 2310' FWL

ELEVATION 3387'

OPERATOR RANGE RESOURCES

LEASE FEDERAL 1-17

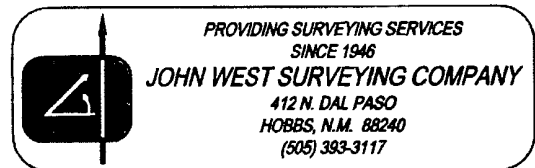
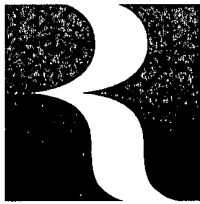


EXHIBIT B



EUNICE FIELD (Blinebry/Tubb/Drinkard)
Range Operating NM, Inc. Federal 1-17 #3
Geological Data for Permit
Prepared by Terri Mayfield-Cowan 6/13/2007

I) WELL OBJECTIVES

The objective of the well is to drill and evaluate the Penrose-Skelly through Drinkard Formations and complete the well as a Blinebry/Tubb/Drinkard producer. Secondary target is the San Andres Formation.

II) LOCATION

	1650' FSL & 2310' FWL
	Section 17-T22S-R37E
	Lea County, New Mexico
	Lat: 32.389005
	Long: -103.185687
Bottom-hole Location:	same, vertical
Elevation:	GL: 3387 ft Est. KB: 3397 ft
Directions to Location:	From the intersection of St. Rd. #207 & Co. Rd. # E-21 (Delaware Basin), Go W on Co. Rd. E21 ~ 1.1 mi. Turn left & Go S on caliche lease road ~ 0.5 mi. Turn right & Go W-SW on caliche lease road ~0.45 mi. to proposed road survey. Follow flags SE ~ 490 ft. to the pad site.
Access to Location:	Unrestricted

III) PROGNOSIS

Upr Permian Rustler Fm	+2335 ft	1062 ft MD	Not Reservoir Rock
Upr Permian Penrose-Skelly Fm	-65 ft	3462 ft MD	Oil, gas, water poss
Upr Permian San Andres Fm	-485 ft	3882 ft MD	Gas, oil, water likely
Upr Permian Glorieta Fm	-1675 ft	5072 ft MD	Oil, gas, water likely
Upr Permian Blinebry Fm	-2030 ft	5427 ft MD*	Oil, gas, water likely
Lwr Permian Tubb Fm	-2675 ft	6072 ft MD+	Oil, gas, water poss
Lwr Permian Drinkard Fm	-2840 ft	6237 ft MD+	Oil, gas, water likely
Lwr Permian Abo	-3235 ft	6632 ft MD+	Tight oil & gas poss
Proposed TD:	-3503 ft	6900 ft MD	Tight oil & gas likely
Est. BHP @TD: 2650 psi			Water poss

*= Primary Reservoir Targets
+= Secondary Reservoir Targets

IV) PRIMARY RESERVOIR TARGETS

Upper Permian Blinebry Formation	
Rock Type:	Dolostone
Thickness:	Est. 640 ft, 30 ft. net pay
Avg. Porosity:	10%; ranges from 6% -15%
Est. Reservoir Temp.:	120° F
Est. Reservoir Press.:	2200 psi (assuming no pressure depletion)
Lower Permian Tubb Formation	
Rock Type:	Silty Dolostone
Thickness:	Est. 170 ft., 10 ft. net pay
Avg. Porosity:	8%, Ranges from 2%-15%
Est. Reservoir Temp.:	130 degrees F
Est. Reservoir Press.:	2500 psi, assuming no pressure depletion

Lower Permian **Drinkard Formation**
Rock Type: Dolostone
Thickness: Est. 400 ft., 75 ft. Net Pay
Avg. Porosity: 12%, Ranges from 2%-20%
Est. Reservoir Temp.: 135 degrees F
Est. Reservoir Press.: 2650 psi, assuming no pressure depletion

V) SECONDARY RESERVOIR TARGETS

- 1) Upper Permian **Penrose-Skelly** through **Grayburg Dolostones** likely significant depletion

VI) EVALUATION

Mudlogging: Mud System 10.1 lbs/gal Brine-Suttles Unit on @2500' w/ gas monitoring equipment & cuttings collected
Wireline Logs: Upon TD Halliburton will run DLL, MGRD, CSNG, DSN, SDL w/Sonic & Rotary Sidewall Cores as optional services

VII) POTENTIAL HAZARDS/PITFALLS

Abnormal Pressure/Temperature Zones: Possibility of partial depletion within Queen to Grayburg Formations

Fractured/Lost Circulation Zones: See above-**Please tag mud if circulation is lost in primary pay interval**

Presence of H₂S or CO₂: None expected

Faults Intersecting the Wellbore: None expected

Revised Drilling Program

Federal 1-17 #3

Lea County, NM

August 29, 2007

Surface Location: **1650' FNL & 2310' FWL**
Section 17-T22S-R37E
Lea County, New Mexico
Lat: 32.389005
Long: -103.185687'

Bottom-hole Location: same, vertical

Elevation: GL: 3387 ft
Est. KB: 3282 ft

Directions to Location: From intersection of St. Rd. #207 and Co. Rd. #E21 (Delaware Basin), go West on Co. Rd. #E21 approx. 1.1 miles. Turn left and go South on caliche lease road approx. 0.5 miles. Turn right and go West-Southwest on caliche lease road approx. 0.45 miles to proposed road survey. Follow flags South-East approx. 490 feet to the Northeast corner of proposed pad.

Access to Location: Unrestricted

1. **Geologic Name of Surface Formation**

a. Permian

2. **Estimated Top of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:**

Upr Permian Rustler Fm	+2335 ft	1062 ft MD	Not Reservoir Rock
Upr Permian Penrose-Skelly Fm	-65 ft	3462 ft MD	Oil, gas, water poss
Upr Permian San Andres Fm	-485 ft	3882 ft MD	Oil, gas, water poss
Upr Permian Glorieta Fm	-1675 ft	5072 ft MD	Oil, gas, water poss
Upr Permian Blinbry Fm	-2030 ft	5427 ft MD*	Oil, gas, water poss
Lwr Permian Tubb Fm	-2675 ft	6072 ft MD+	Tight oil & gas poss
Lwr Permian Drinkard Fm	2840 ft	6237 ft MD+	Tight oil & gas poss
Lwr Permian Abo	-3235 ft	6632 ft MD+	Tight oil & gas poss

Proposed TD:	-3503 ft	6900 ft MD	Tight oil & gas likely
Est. BHP @TD: 2100 psi			Water poss

*= Primary Reservoir Targets

+ = Secondary Reservoir Targets

PRIMARY RESERVOIR TARGETS

Upper Permian **Blinebry Formation**

Rock Type:	Dolostone
Thickness:	~625 ft
Avg. Porosity:	10%; ranges from 6% -15%
Est. Reservoir Temp.:	110° F
Est. Reservoir Press.:	2100 psi (assuming no pressure depletion)

SECONDARY RESERVOIR TARGETS

- 1) Upper Permian **Blinebry Formation** through **San Andres Dolostone** likely significant depletion
- 2) Lower Permian **Tubb & Drinkard Siliciclastics & Dolostones** likely lower quality Hydrocarbon reservoirs with low permeability & possibly water

3. **Casing Program;**

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
12 1/4"	0' - +/-1200'	8 5/8"	0' - +/-1200'	24#	STC	J-55
7 7/8"	0' - +/-6900'	5 1/2"	0' - +/-6900'	15.5#	LT&C	J-55

17#

per operator

9-5-07

Design Parameter Factors:

<u>Casing Size</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
8 5/8"	2.4	4.7	9.8
5 1/2"	1.3	1.5	2.7

4. **Cement Program: (Hole conditions may require cementing in two stages)**

- a. 8 5/8 Surface Cement to surface with Lead: 350 sks of 35/65 POZ:Class C + 6% Gel + 5% (BWOW) NaCl, Slurry weight = 12.8 ppg, Yield = 1.94 ft³/sk..
Tail: 150 sks Class C + 1% CaCl₂ Slurry weight 14.8 ppg, Yield = 1.32 ft³/sk. Displace with fresh water, bump plug with 500 psi over final pump pressure. TOC - surface.
- b. 5 1/2 Production Cement Lead: 370 sks of 50/50 POZ:Class C + 10% Gel + 5% NaCl. Slurry weight= 11.8 ppg, Yield = 2.4 cf/sk
Tail: 300 sks of 50/50 POZ:Class C + 2% Gel + 5% (BWOW) NaCl, Slurry weight = 14.2 ppg, Yield = 1.38 cf/sk. Displace with fresh water. TOC +/-1000'

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement on surface casing is designed to reach the surface. All casing is new and API approved.

5. **Pressure Control Equipment:**

The blowout preventor equipment (BOP) as shown below will consist of a (2M system) double ram type (3000 psi WP) preventor and rotating head. Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 1/2 " drill pipe rams on bottom. The BOP will be installed on the 8 5/8" surface casing and utilized continuously until total depth is reached. **ALL**

BOP's and associated equipment will be tested to 1000 psi high and 250 psi low with the rig pump. Prior to drilling out the 8 5/8" casing shoe, the BOP's AND Hydril will be tested per BLM Drilling Operations Order #2.

Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily driller's log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having a minimum 2000 psi WP rating.

6. Proposed Mud Circulation System

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc.</u>	<u>Fluid Loss</u>	<u>Type System</u>
0 – 1200'	8.4 – 9.4	32-34	NC	Water
1200 – 6000'	10.0	28	NC	Brine
6000' – 6900'	10.0 – 10.2	30-33	10cc	Dispersed

The necessary mud products for weight addition and fluid loss control will be on location at all times.

7. Auxiliary Well Control and Monitoring Equipment:

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve having the appropriate connection will be on the rig floor at all times.
- c. Hydrogen Sulfide detection equipment will be in operation after drilling out the 8 5/8" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 8 5/8" shoe until total depth is reached.

8. Logging, Coring, and Testing Program:

Mudlogging: Mud System 10.1 lbs/gal Brine-Suttles Unit on @2500' w/ gas monitoring equipment & cuttings collected

Drillstem Tsts: No DST's are planned-should the need for a DST arise, a procedure, equipment to be used & safety measures will be provided via sundry notice to the BLM

Wireline Logs: 1. Upon TD, the following open hole logs will be run from TD to surface casing point: Dual Laterolog-Micro Guard, Spectral Gamma Ray, Compensated neutron, Spectral Density

2. Delta T Sonic & Rotary Sidewall Cores are optional services for the open hole

3. From Surface Casing point to Surface, Compensated neutron & Gamma Ray will be run in cased portion of hole

Whole Coring: No Whole Coring in planned.

9. Potential Hazards:

No abnormal pressures or temperatures are expected. All personnel will be familiar with all aspects of safe operations of equipment being used to drill this well. Estimated BHP 2800 psi and Estimated BHT 130'.

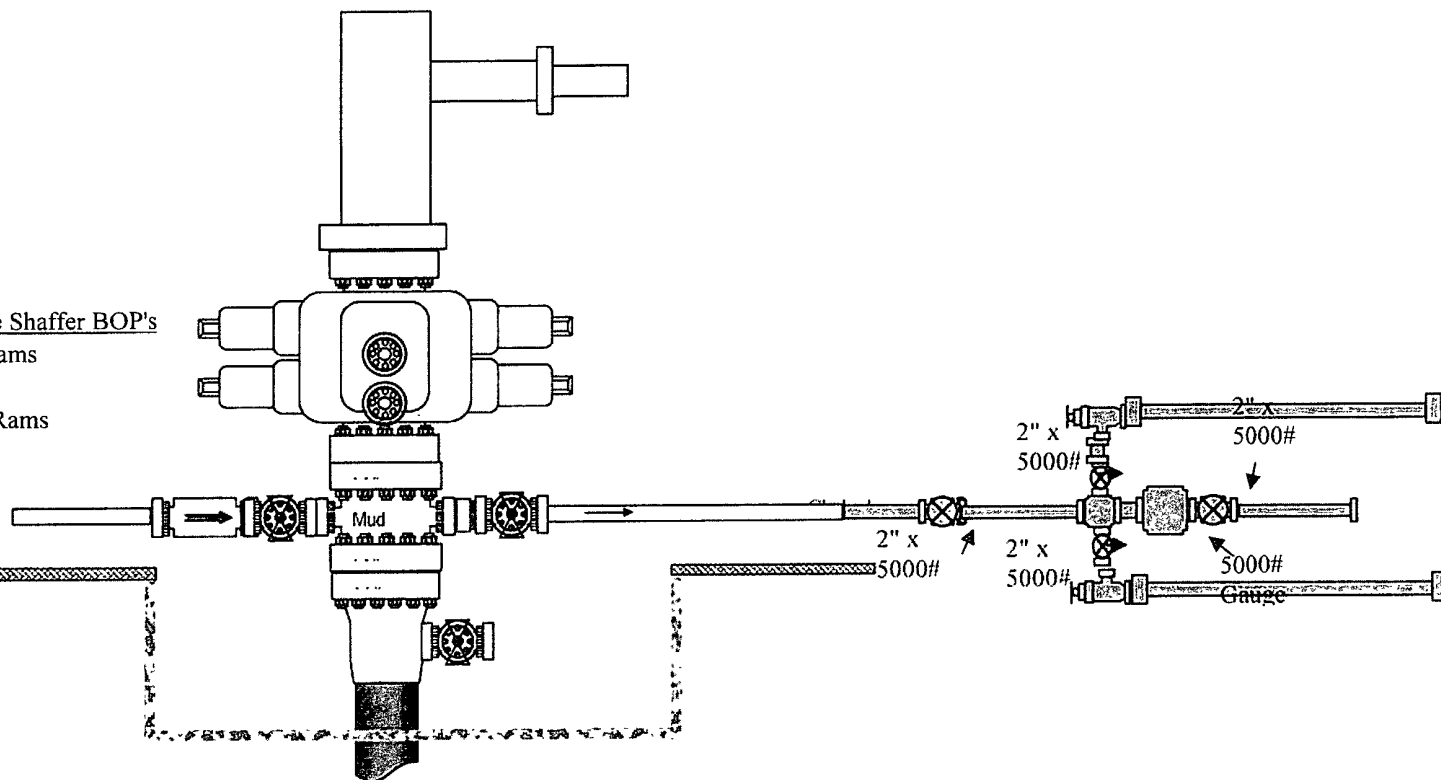
10. Anticipated Starting Date and Duration of Operations:

- a. Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon after BLM approval and as soon as a rig will be available. Move in operations and drilling is expected to take 7-10 days. If production casing is run then an additional 30 days will be needed to complete well and construct surface facilities and/or lay flow lines in order to place well on production.

Double Shaffer BOP's
Pipe Rams

Blind Rams

Kill
Line



UNITED DRILLING INC.

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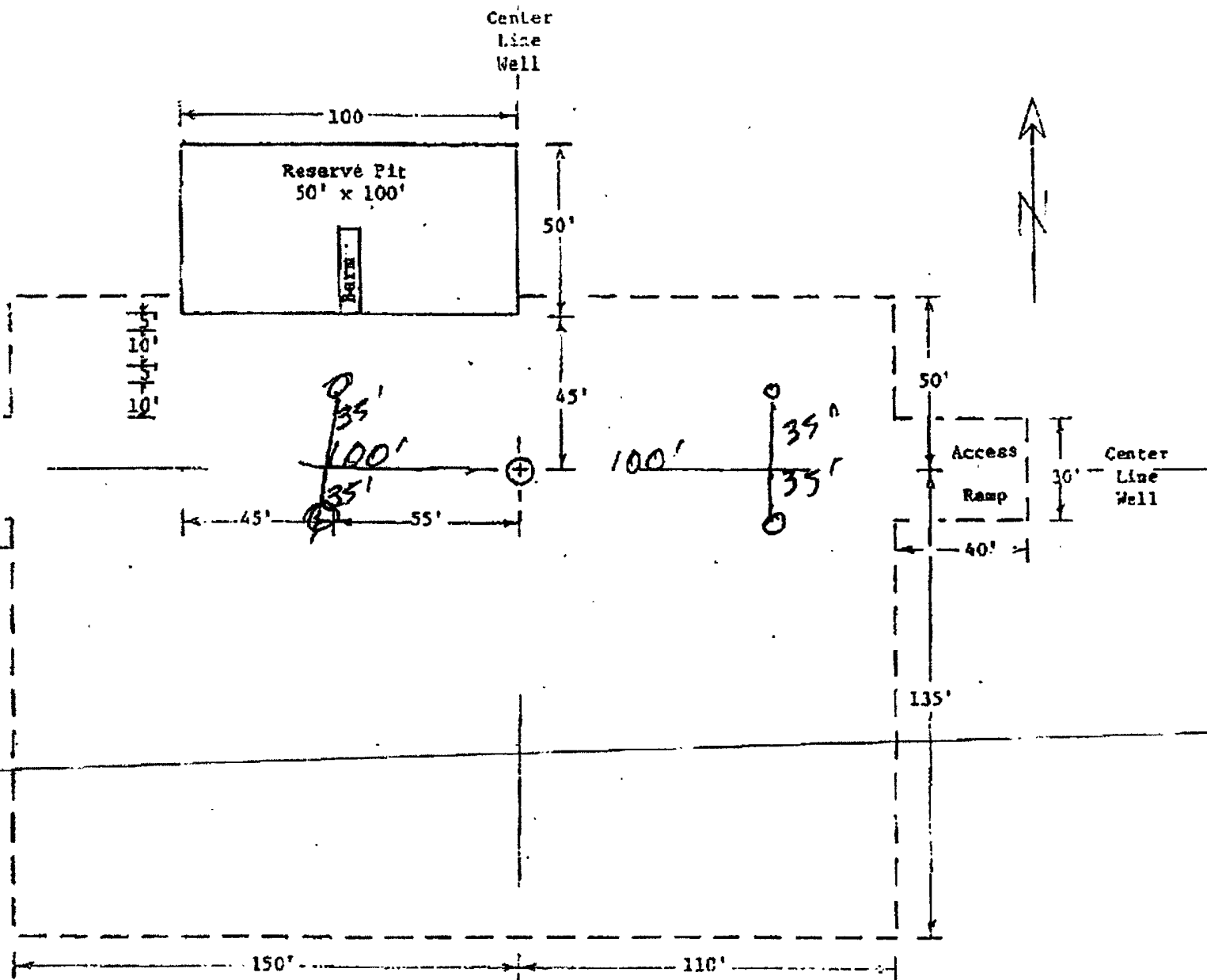


EXHIBIT C

UNITED DRILLING, INC.

LOCATION PLAN

SIC # 28630

WELL : FEDERAL 1-17 #3
SL : 1650' FSL & 2310' FWL, Sec 17-T22S-R37E
COUNTY : LEA COUNTY
STATE : NEW MEXICO

AFE:
FIELD: Blinebry/Tubb/Drinkard
TD: 6900'
PERMIT NO:

