District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
May 27, 2004

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

[1] Operator Name and Address	[2] OGRID Number
ROCA Operating, Inc. P.O.Box 1981, Midland, Texas 79702	152374
	[3] API Number 30- 025-28786

[4] Property Code	[5] Property Name	[6] Well No.
~~32515~~ 23894	NM 36 State Com	1

[9] Proposed Pool 1	[10] Proposed Pool 2
EK Deleware Code - 21655	

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	36	18S	33E		660	North	1980	East	Lea

[8] Proposed 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

Additional Well Information

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level Elevation
P	G	n/a	S	KB 3856.1
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
No	6,000	Deleware	Key Energy	12-13-05

Depth to Groundwater	Distance from nearest fresh water well	Distance from nearest surface water

Pit: Liner: Synthetic ☒ ____mils thick Clay ☐ Pit Volume: 100 bbls Drilling Method:

Closed-Loop System ☐ Fresh Water ☒ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐

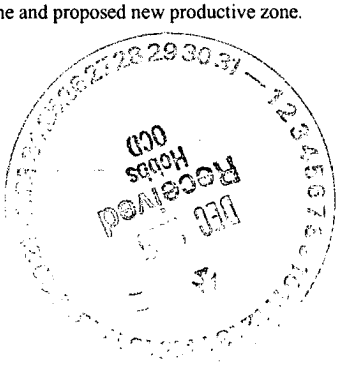
[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2	13 3/8	48 & 54.5#	308	350	circ to surface
11	8 5/8	24 & 32#	3700	1275 lite &	3400
7 7/8	2 3/8	4.7#		250 C	

[22] Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Please see attached Recompletion Procedure.

Permit Expires 1 Year From Approval Date Unless ~~Drilling~~ Underway Plugback



[23] I hereby certify that the information given above is true and complete to the best of my knowledge and belief. **I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☑, or an (attached) alternative OCD-approved plan ☐.**

Printed name: Candy Coneland

Title: Production Analyst

E-mail Address: candy@rocaresource.com

Date: 12-07-2005 Phone: 432-682-2554

OIL CONSERVATION DIVISION

Approved by:

Title: PETROLEUM ENGINEER

Approval Date: DEC 14 2005 Expiration Date:

Conditions of Approval Attached ☐

New Mexico '36' State Com #1
Recompletion Proposal
Recement, Perforate & Stimulate Delaware

Proposed Procedure

Well Construction:

Tubular	Weight	Grade	Min ID	Burst	Capacity	Tensile
5 1/2"	17 & 20#	N-80	4.778"	7,740 psi	0.9764 gal/ft	
2 3/8"	4.7#	N-80	1.995"	11,200 psi	0.1624 gal/ft	104,000 lb

2-3/8" tubing volume 0' – 13,119' = 2131 gal or 50.7 bbls

Existing perforations: Morrow: 13,234' to 13,358', (65 holes)
Bone Springs: 9,474' to 9,526' (54 holes)

Proposed perforations: 5,452' – 5,458' (6 ft., 12 holes); 5,484' – 5,492' (8 ft., 16 holes) & 5,514' – 5,520' (6 ft., 12 holes). Each zone to be perforated 2 spf, with alternating 90° phasing.

Wellhead: 6" 900 with 3000 psi working pressure.

Delaware Formation Properties:

Low permeability fine grained silty sandstone.
Est. Fracture Gradient = 0.67 (from McElvain #5)
Est. BHP = 2600 psi
Est. BHT = 110°F

Procedure:

1. MIRU WO unit. Pump 50 bbls of 6% KCL water down tubing. Observe well. ND wellhead. NU shop tested Class 1 BOP's and environmental tray.
2. Release 10K Arrowset-1X wireline set packer and POOH 2 3/8" tubing and packer laying down ~5800' of tubing. (If packer will not release, utilize on/off tool to release tubing and POOH leaving packer in place).

   Note: Tally tubing and visually inspect tubing condition for integrity, paraffin, scale, etc.
3. RU wireline. RIH with gauge ring to 9,400 ft. POOH.
4. RIH with CIBP. Set at 9,400 ft. Dump bail 10 ft. of cement on CIBP.
5. Pressure test casing to 3000 psi.
6. RIH with squeeze gun. Perforate 5 1/2" casing with 4 – 1/2" diameter squeeze holes at 7,330 ft. (Schlumberger CBL dated 9-10-84 shows TOC at 7,430 ft.) POOH with squeeze gun. RD wireline.
7. RIH with cement retainer on 2 3/8" tubing string. With retainer hanging at 7,300 ft. reverse tubing at least 2 tubing volumes (min 57 bbl.) then set retainer. Establish circulation up 8 5/8" x 5 1/2" annulus with 2% KCL water. Record pressure & rates, check for losses.

New Mexico '36' State Com #1
Recompletion Proposal
Recement, Perforate & Stimulate Delaware

8. Cement 5 1/2" casing per attached cementing procedure. Estimated new TOC will be 3400' (300' inside 8 5/8" casing) Sting out of retainer, pull up one joint and reverse tubing until clean. (min 30 bbls)

   Note: If circulation cannot be established up the 8 5/8" x 5 1/2" annulus, a second set of squeeze holes will be perforated at ~6000'. If no circulation is established at this point a block squeeze will be performed through the squeeze holes at 6000' and followed by a second block squeeze above the targeted completion zone through additional squeeze perforations at ~5000'. This contingency will require drill out of the upper retainer (5000') and necessitate the stimulation be performed down tubing beneath a treating packer.

9. POOH to 5520'. With EOT at 5520' circulate hole with 6% KCL water. Spot 200 gal of 10% acetic acid with inhibitor across perforating interval. POOH with 2 3/8" tubing laying down an additional ~1800' of tubing.

10. RU wireline. Run correlation log. (Optional CBL)

    Perforate Delaware as follows:

    5,452' – 5,458' (6 ft., 12 holes)
    5,484' – 5,492' (8 ft., 16 holes)
    5,514' – 5,520' (6 ft., 12 holes)
    Each interval perforated with 3 1/8"" slick guns, 2 spf, 90° phasing

    Note: Observe well following perforating. Record observation.

11. Allow well to flowback at least one casing volume (131 bbl) if possible. Once well dies, ND BOP. NU wellhead and prepare to fracture stimulate Delaware formation down casing. Frac Delaware formation per the attached stimulation program.

12. Immediately following fracture stimulation, shut well in for a minimum of 3 hours allowing the fracturing fluids to break and the hydraulic fracture to close on the proppant. If possible at this time, flowback through variable choke and flowback iron into a flowback tank recording the load recovery. (If well continues to flow once a significant hydrocarbon cut is established turn the well to sales)

13. Once the well no longer flows, RIH with 2 3/8" completion string including open ended mud anchor, perforated sub, seating nipple, tubing anchor, etc. Place seating nipple below perforations and set tubing anchor in tension. RIH with rods and pump.

14. Install pumping unit and hang well off. RDMO WO unit. Install heater treater, electric service, etc.

15. Place well on production – Monitor daily results for 30 days.

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-025-28786	21655	EK Deleware

[4] Property Code	[5] Property Name	[6] Well Number
32515	New Mexico 36 State Com	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
152374	ROCA Operating, Inc.	

[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
B	36	18S	33E		660	North	1980	East	Lea

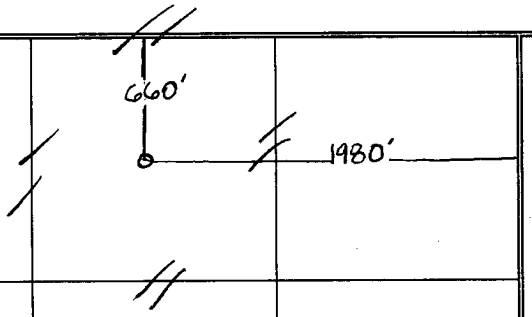
[11] Bottom Hole Location If Different From Surface

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	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
40			

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



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

12/7/05

Signature Date

Candy Copeland

Printed Name

[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

Signature and Seal of Professional Surveyor:

Certificate Number