District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-101
Revised October 18, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐ AMENDED REPORT

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

1 Operator Name and Address.	2 OGRID Number
Lone Star Oil & Gas, Inc. P.O. Box 2735 Midland, TX 79702	161485
	3 API Number 30 - 025-29787

4 Property Code	5 Property Name	6 Well No.
21090	J. Benson	1

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
P	14	16-S	38-E		330	South	990	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
P	14	16-S	38-E		1100	South	770	East	Lea

9 Proposed Pool 1	10 Proposed Pool 2
North Knowles - Devonian	

11 Work Type Code	12 Well Type Code	13 Cable/Rotary	14 Lease Type Code	15 Ground Level Elevation
E	O	Rotary	P	3698
16 Multiple	**17 Proposed Depth**	**18 Formation**	**19 Contractor**	**20 Spud Date**
No	13,100	Devonian	N/A	≈7/15/97

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/4"	13-3/8"	54.5	319'	430	Surface
12-1/4"	9-5/8"	40.0	5017'	2015	Surface
8-3/4"	5-1/2"	20.0	13100'	See Attached Report	

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.

Lone Star Oil & Gas proposes to reenter the J. Benson #1 well. The 9-5/8" casing from the original completion is intact enabling us to drill out the plugs to the base of the 9-5/8" casing down to an open hole plug @ 6100'±. We will then whipstock at this point and drill a convention hole to 9500'±. At this point we will begin deviating the borehole in a northerly direction to a BHL approximately 800' North of our surface location to a depth of 13,100'± at the top of the Devonian formation.

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

Re-Entry

23 I hereby certify that the information given above is true and complete to the best of my knowledge and belief.	OIL CONSERVATION DIVISION
Signature:	Approved by: ORIGINAL SIGNED BY GARY WINK
Printed name: Mark L. Branum	Title: FIELD REP. II
Title: Vice-President	Approval Date: JUN 17 1997 / Expiration Date:
Date: 6-17-97 / Phone: 915-686-9390	Conditions of Approval: Attached ☐

Calculations

2ND STAGE LEAD: (5189 ft fill)

517 ft * 0.2691 ft³/ft * 10 %	= 153.02 ft³
4672 ft * 0.2526 ft³/ft * 50 %	= 1770.19 ft³
TOTAL 2ND STAGE LEAD	= 1923.21 ft³
	= 342.52 bbls

2ND STAGE TAIL: (311 ft fill)

311 ft * 0.2526 ft³/ft * 50 %	= 117.84 ft³
TOTAL 2ND STAGE TAIL	= 117.84 ft³
	= 21.0 bbls

1ST STAGE CEMENT: (3100 ft fill)

3100 ft * 0.2526 ft³/ft * 50 %	= 1174.57 ft³
TOTAL 1ST STAGE CEMENT	= 1174.57 ft³
	= 209.19 bbls

TOTAL DISPLACEMENT VOLUME: (13100 ft casing)

13100 ft * 0.0238 bbl/ft	= 311.80 bbls
	= 311.80 bbls

DISPLACEMENT VOLUME TO SHOE JOINT:

311.80 bbls - 1.00 bbls	= 310.80 bbls

Job Recommendation

FIRST STAGE

Run in hole with 5-1/2 inch casing with a TAM external casing packer and a Halliburton Hydraulic operated Multiple Stage Cementer on top of the packer. Circulate the hole volume 2 to 3 times to remove mud filter cake. Run a bow spring centralizer every 5th joint from TD to 4500 ft or approximately 50 centralizers. Activate the TAM packer then the Multiple Stage Cementer then begin the cement job. Pump the following first stage cement designed to fill from 13,100 ft to 10,000 ft. assuming 50 % excess. (Note: Assuming a mud density of 9.5 lb/gal and a cement weight of 13.0 lb/gal this collum of cement will result in a differential pressure across the packer element of 564 psi. The elements are good for 3000 psi according to the TAM International representative.)

FLUID 1: 1ST STAGE CEMENT
Modified Super Premium
1 lb/sk Salt (3 %) (Accelerator)
0.4% CFR-3 (Dispersant)
0.1% HR®-7 (Retarder)
Mixed With Fresh Water

Fluid Weight:	13.00 lb/gal
Fluid Yield:	1.65 ft³/sk
Fluid Water Ratio:	8.70 gal/sk
Total Mixing Fluid:	148.1 bbls
Top of Fluid:	10000 ft
Calculated Fill:	3100 ft
Fluid Volume:	210.19 bbls
Calculated Volume:	711.6 sks
Shoe Joint Volume:	3.40 sks
Total Volume:	715.00 sks
Proposed Volume:	**715 sks**

Displace with a mix of 2% KCl water from the TD to the Multiple Stage Cementer at 10,000 ft then regular mud from 10,000 ft. to surface. When the plug lands at TD, pressure up and open the second Stage Cementer tool. Circulate for 6 hours to allow the first stage cement time to gel and begin building strength.

Job Recommendation

SECOND STAGE

Cement the second stage as follows which is designed to fill from 10,000 ft to 4500 ft assuming 50% excess in open hole.

FLUID 1: 2ND STAGE LEAD
Halliburton Lite Premium
5 lb/sk Salt (6 %) (Accelerator)
Mixed With Fresh Water

Fluid Weight:	12.60 lb/gal
Fluid Yield:	1.99 ft³/sk
Fluid Water Ratio:	10.85 gal/sk
Total Mixing Fluid:	250.6 bbls
Top of Fluid:	4500 ft
Calculated Fill:	5189 ft
Fluid Volume:	342.52 bbls
Calculated Volume:	966.00 sks
Proposed Volume:	**970 sks**

FLUID 2: 2ND STAGE TAIL
Premium Cement
Mixed With Fresh Water

Fluid Weight:	15.60 lb/gal
Fluid Yield:	1.18 ft³/sk
Fluid Water Ratio:	5.20 gal/sk
Total Mixing Fluid:	12.4 bbls
Top of Fluid:	9689 ft
Calculated Fill:	311 ft
Fluid Volume:	21.0 bbls
Calculated Volume:	100.00 sks
Proposed Volume:	**100 sks**

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised October 18, 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	[2] Pool Code	[3] Pool Name
30-025-29787	36330	North Knowles - Devonian

[4] Property Code	[5] Property Name	[6] Well Number
21090	J. Benson	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
161485	Lone Star Oil & Gas, Inc.	3698'

[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
P	14	16-S	38-E		330	South	990	East	Lea

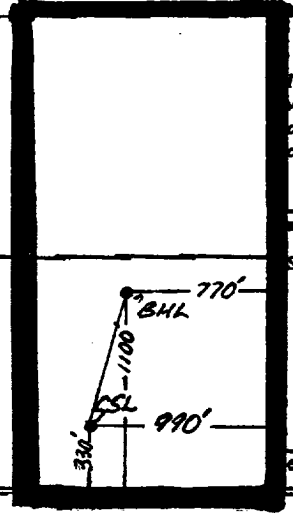
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	14	16-S	38-E		1100	South	770	East	Lea

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
80	N		

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

Signature

Mark L. Branum
Printed Name

Vice-President
Title

6-17-97
Date

[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 Surveyer:

Certificate Number