

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

SEP 24 2009

Form C-101
June 16, 2008

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

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 Marbob Energy Corporation, P.O. Box 227, Artesia, NM 88211-0227		² OGRID Number 14049
		³ API Number 30 - 015-24067
⁴ Property Code	⁵ Property Name Black River SWD	⁶ Well No. 1
⁹ Proposed Pool 1. SWD; Delaware		¹⁰ Proposed Pool 2

⁷ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South	Feet from the	East/West line	County
K	5	24S	27E		1980'	South line	1980'	West Line	Eddy

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 E	¹² Well Type Code S	¹³ Cable/Rotary	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3209
¹⁶ Multiple	¹⁷ Proposed Depth 5500'	¹⁸ Formation Delaware	¹⁹ Contractor	²⁰ Spud Date 10/22/09

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
18 1/2"	16"	65	409'	350	Surface
14 3/4"	10 3/4"	40.5	2110'	700	Surface
9 3/4"	7 5/8"	33.7 / 39	9171'	2450	Surface
6 1/2"	4 1/2" Liner	13.5	8654' - 12500'	625	8654'

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.

See attached reentry/SWD conversion procedure and before and after wellbore schematics.

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief.

Signature *Nancy T. Agnew*

Printed name: **Nancy T. Agnew**

Title: **Land Department**

E-mail Address: **landtech@marbob.com**

Date: **09/22/2009**

Phone: **575-748-3303**

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

9/30/09

Expiration Date

9/30/2011

Conditions of Approval Attached ☐

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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 30 - 015-24067	² Pool Code 96100	³ Pool Name SWD; Delaware
⁴ Property Code 37857	⁵ Property Name Black River SWD	⁶ Well Number 1
⁷ OGRID No. 14049	⁸ Operator Name Marbob Energy Corporation	⁹ Elevation 3209

¹⁰ Surface Location

UL or lot no. K	Section 5	Township 24S	Range 27E	Lot Idn	Feet from the 1980'	North/South South line	Feet from the 1980'	East/West line West Line	County Eddy
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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
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¹² Dedicated Acres 40	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 	¹⁷ OPERATOR CERTIFICATION <i>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</i> <div style="display: flex; justify-content: space-between;"> <div> <i>Nancy T. Agnew</i> Signature </div> <div> 09/22/09 Date </div> </div> <div> Nancy T. Agnew Printed Name </div>	
	¹⁸ SURVEYOR CERTIFICATION <i>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</i> Date of Survey Signature and Seal of Professional Surveyor	
	Certificate Number	

District I

1625 N. French Dr., Hobbs, NM 88240

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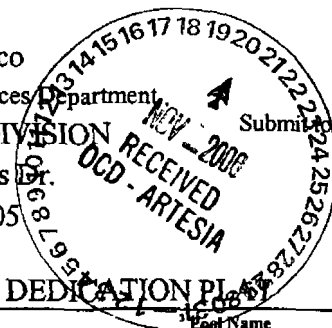
District III

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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 30-015-24067		² Pool Code		³ Well Name Black River; Bone Spring, Northeast	
⁴ Property Code		⁵ Property Name Baccarat BJC State Com			⁶ Well Number 1
⁷ OGRID No. 025575		⁸ Operator Name Yates Petroleum Corporation			⁹ Elevation 3209'GR

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
K	5	24S	27E		1980	South	1980	West	Eddy

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 160	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 	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. Signature _____ Date November 17, 2006 Tina Huerta 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 _____			

N MEXICO OIL CONSERVATION COMMISS
WELL LOCATION AND ACREAGE DEDICATION PLAT

RECEIVED

Form C-102
Supersedes C-128
Effective 1-1-65

FEB 9 1982

All distances must be from the outer boundaries of the Section

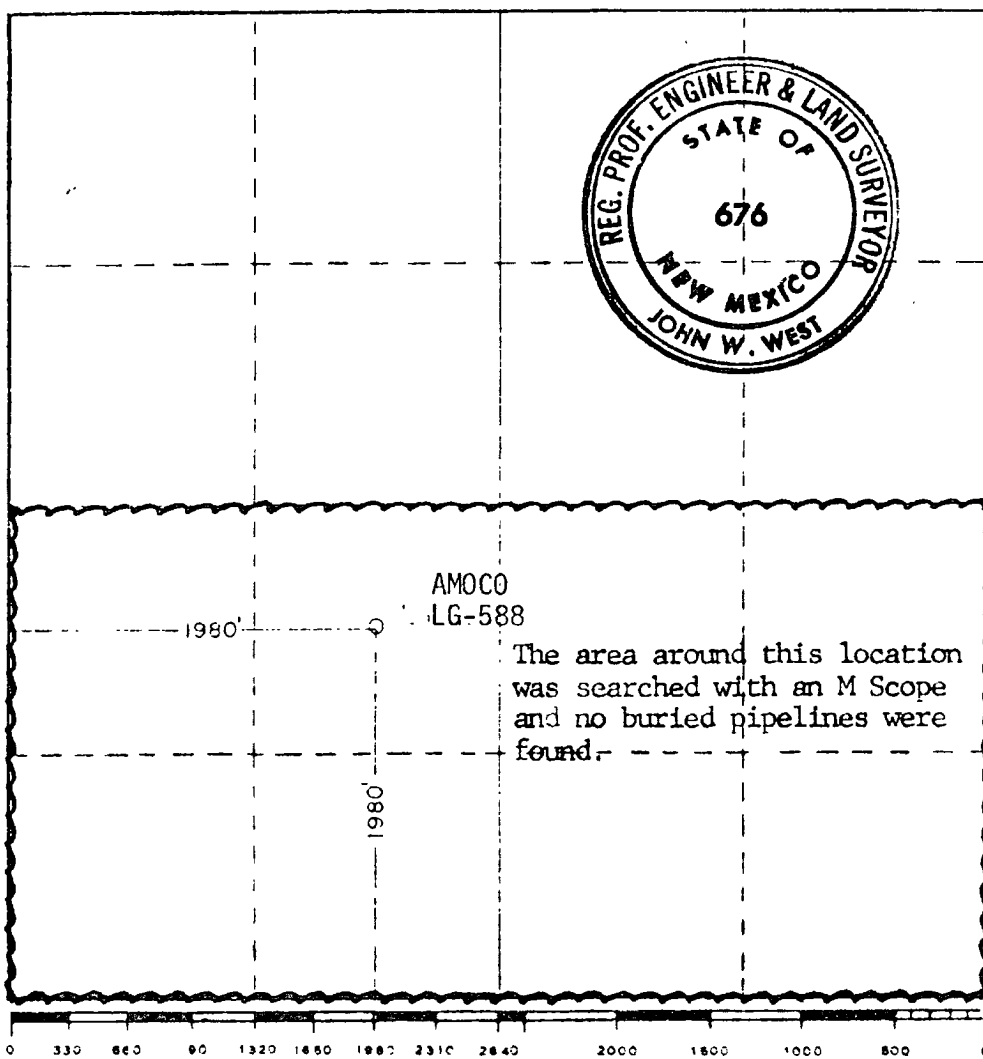
Operator Amoco Production Co.			Lease State ME		O. C. D. 1	
First Letter K	Section 5	Township 24 South	Range 27 East	County Eddy		
Actual Postage Location of Well: 1980 feet from the South line and 1980 feet from the West line						
Ground Level Elev. 3208.9'	Producing Formation Morrow		Pool Wildcat Morrow		Dedicated Acreage 320	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name
Mark Randolph
Position
Assist. Admin. Analyst
Company
Amoco Production Company
Date
2-8-82

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 knowledge and belief

Date Surveyed
Dec. 19, 1981

Registered Professional Engineer and/or Land Surveyor

John W. West
Certificate No. **JOHN W. WEST 676**
PATRICK A. ROMERO 8883
Ronald J. Edison 3239

Black River SWD 1
(formerly Yates Baccarat BJG St Com 1)
K-5-24s-27e
Eddy Co., NM

Reentry/SWD Conversion Procedure
18 Sep 09

Basic Data:

16" @ 409' Circ. Cmt.
10-3/4" @ 2110' Circ. Cmt.
7-5/8" @ 9171' Circ. Cmt. Both Stages DV @ 5438'
4-1/2" liner @ 8654-12500' Circ. Cmt.

7-5/8"/33.7ppf/S95/LTC Burst=9380 psi, 7504 psi at 80% Nom. ID=6.765" Drift ID=6.640" (.0444 B/F)
7-5/8"/39ppf/S95/LTC Burst=10900 psi, 8720 psi at 80% Nom. ID=6.625" Drift ID=6.500" (.0426 B/F)

Objective: Reenter well and convert to Delaware SWD. Original perfs 2132-2198', 4174-4550', 4764-4774'. See wellbore schematic. Give OCD Artesia 24 hrs notice to witness MIT after running injection packer and tubing (Order SWD-1187). Injection pressure limit = 835 psi.

Procedure:

1. Dig out cellar, dress off 10-3/4" stub and 7-5/8" stub, weld extension onto 7-5/8", install Larkin Fig 92 casing head (or similar) onto 10-3/4", plumb one side outlet to surface and install 7-5/8" x 2-7/8" Larkin Fig 92 (or similar) wellhead onto 7-5/8". Tape up exposed casing and wellhead equipment and fill cellar with gravel.
2. Set anchors, MIRU WSU, reverse unit and other reentry equipment. NU BOP and basic choke manifold routed to flowback tank and test pipe rams and blind rams to 300 psi for 30 minutes then 2000 psi for 30 minutes.
3. Take delivery of 2-7/8" L80/N80 work string and DCs. Pick up 6-1/2" bit and drill out plugs shown below with fresh water. After drilling out plug 2008-2236', circulate well clean, close pipe rams and test old perfs 2132-2198' to 1000 psi. If they test OK, continue with procedure. If perfs won't test, establish injection rate to ensure adequate injectivity exists for a squeeze job. If they didn't pressure test and adequate injectivity exists, stop here and squeeze them off. Recommend running scraper, set retainer at approx. 2080', pump tubing volume, sting into retainer, trap 500 psi on annulus, establish injection into perfs and squeeze with 50 sx. "C" with 2% CaCl₂ and fluid loss control followed by 50-100 sx. "C" with 2% CaCl₂. When squeeze obtained, sting out, reverse circulate and TOOH. After WOC 24 hrs. drill out squeeze and test to 1000 psi. Resqueeze if necessary.

20 sx. surface plug 0-95'
35 sx. plug 296-473'
50 sx. plug 2008-2236'
Close rams and test old perfs 2132-98' to 1000 psi
35 sx. plug 3883-4032'
CIBP + 35' cement 4714'

4. RIH and tag CIBP + 35' cement at approx. 5500' (don't drill out).
5. RU lubricator and run GR/CCL Log from PBD to 4000'. RU lubricator and perf Delaware with one shot at the depths shown below (inclusive) using 4" casing gun.

Delaware: 4210-4244', 4372-4382', 4414-4432', 4457-4468', 4542-4550', 4832-4840',
4887-4926', 5058-5066', 5122-5150', 5202-5238' (210) OH Log

6. RIH with packer, spot 800 gals NE Fe 15% HCl acid at 5225', pull packer to 4700', reverse 10 bbls water down annulus, set packer and acidize 4764-5238' (146) with 5000 gals NE Fe 15% HCl acid at 5-7 bpm while limiting treating pressure to 5500 psi and holding 500 psi on annulus. Drop 9 slugs of 20 ball sealers (180) through job. Unseat packer, knock balls off perms and TOOH to pick up RBP.
7. RIH with packer/RBP (ball catcher) to 4600', set RBP, test to 3000 psi, spot 650 gals NE Fe 15% HCl acid at 4550', pull packer to 4100', reverse 10 bbls water down annulus, set packer and acidize 4174-4550' (120) with 4000 gals NE Fe 15% HCl acid at 5-7 bpm while limiting treating pressure to 5500 psi and holding 500 psi on annulus. Drop 7 slugs of 20 ball sealers (140) through job. POOH with packer/RBP.
8. RIH with packer, set at 2500', test annulus to 500 psi, and frac Delaware down 2-7/8" workstring with low gel crosslink carrying total of 150,000 lbs 20/40 brown sand (3ppg max) at 40-45 bpm in six stages as follows. Pump 25,000 lbs sand stage 1, drop 30 ball sealers at tail end of 3 ppg stage, pump 25,000 lbs sand stage 2, drop 30 ball sealers at tail end of 3 ppg stage, pump 25,000 lbs sand stage 3, drop 30 ball sealers at tail end of 3 ppg stage, pump 25,000 lbs sand stage 4, drop 30 ball sealers at tail end of 3 ppg stage, pump 25,000 lbs sand stage 5, drop 30 ball sealers at tail end of 3 ppg stage, and pump 25,000 lbs sand stage 6. Limit treating pressure to 5500 psi while holding 500 psi on annulus. Pump into annulus as/if necessary to maintain 500 psi while fracing. Flush to 4100'. Shut well in overnight then bleed pressure down.
9. TOOH with packer, pick up bit and collars and clean well out to approx. 5350'. May have to use foam air unit or drill bailer if circulation is a problem.
10. TOOH and lay down tubing work string. Pick up nickel plated injection packer on 2.875"/6.5/J55/EUE Duoline 20 internally lined tubing and RIH to 4125'. Reverse circulate the annulus full of clean inhibited packer fluid (175 bbls annular volume), set packer, test annulus to 500 psi for 30 minutes and record the data on a chart for submission to OCD. OCD must be given 24 hrs notice to witness this test. Plumb tubing x casing annulus so that pressure can be monitored at surface. Limit injection pressure to 835 psi using a pressure limiting device.

Kbc/black river swd 1

Black River SWD No. 1

(Formerly Yates Baccarat OJG St Com 1)

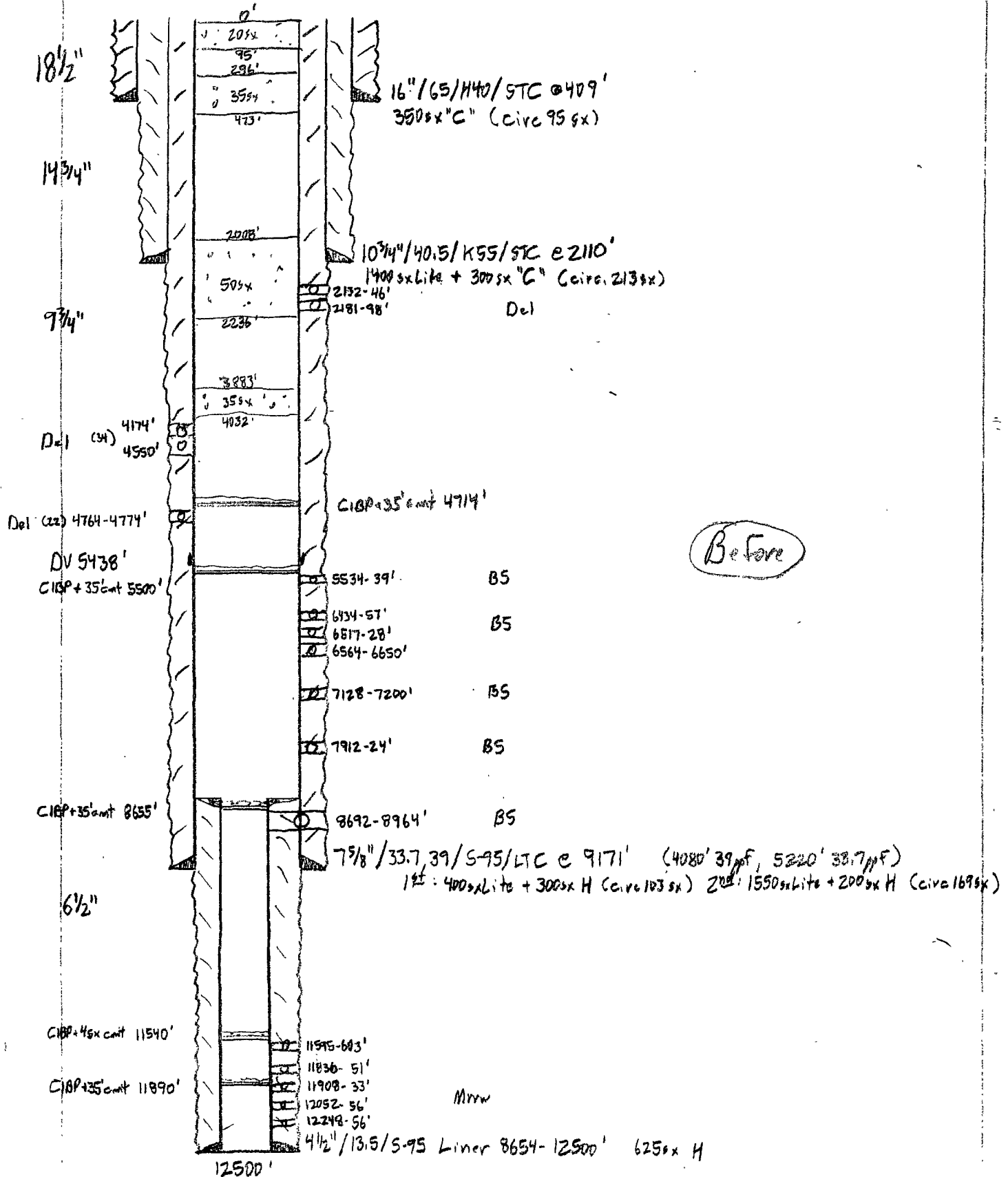
(Formerly Amoco State MF #1)

1980' FSL, 1980' FWL

Unit K - 5 - 24s - 27e

Eddy NM

30-015-24067



Black River SWD No. 1

(Formerly Yates Baccarat BJO St Gem 1)

(Formerly Amoco State MF #1)

1980' FSL, 1780' FWL

Unit K - 5-24s-27e

Eddy NM

30-015-24067

