

DATE IN 8-3-10	SUSPENSE	ENGINEER wj	LOGGED IN 6-3-10	TYPE SWP 1243	APP NO. 1015-452645
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



Chesapeake

China Grove Fed. #1

ADMINISTRATIVE APPLICATION CHECKLIST

30-015-27678

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

RECEIVED OGD
JUN 3 P 12:40

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners
 [B] ☐ Offset Operators, Leaseholders or Surface Owner
 [C] ☐ Application is One Which Requires Published Legal Notice
 [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
 [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,
 [F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Christian Combs

Print or Type Name

Signature

Christian Combs

Manager-Regulatory, S. Division

Title

Date

5-18-10

Christian.Combs@chk.com
e-mail Address

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE : _____ Secondary Recovery _____ Pressure Maintenance _____ X Disposal _____ Storage
Application qualifies for administrative approval? _____ X Yes _____ No

II. OPERATOR: Chesapeake Operating, Inc.

ADDRESS : P.O. Box 18496 Oklahoma City, OK 73154-0496

CONTACT PARTY : Bryan Arrant PHONE : (405)935-3782

III. WELL DATA: Complete the data required on the reverse side of this form for each well processed for injection.
Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____ Yes _____ X No
If yes, give the Division order number authorizing the project _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted.)

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the 'Proof of Notice' section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Bryan Arrant TITLE: Senior Regulatory Compliance Specialist

SIGNATURE:  DATE: 5-18-10

E-MAIL ADDRESS: bryan.arrant@chk.com

* If the information required under Sections VI, VII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstance of the earlier submittal: _____

III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, NM 87505 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

INJECTION WELL DATA SHEET

OPERATOR: Chesapeake Operating, Inc.WELL NAME & NUMBER: China Grove Federal # 1WELL LOCATION: 660' FNL & 660' FWL

FOOTAGE LOCATION

D

UNIT LETTER

1

SECTION

26 South

TOWNSHIP

29 East

RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 17 1/2" Casing Size: 13 3/8"Cemented with: 400 sxs sx. or ft³Top of Cement: Surface Method Determined: CirculatedIntermediate CasingHole Size: 11" Casing Size: 8 5/8"Cemented with: 1905 sxs sx. or ft³Top of Cement: Surface Method Determined: CirculatedProduction CasingHole Size: 7 7/8" Casing Size: 5 1/2"Cemented with: 600 sxs sx. or ft³Top of Cement: 3224' Method Determined: CBLTotal Depth: 5850'Injection Interval4200' feet to 5122' (Perforated)

(Perforated or Open Hole; indicated which)

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8" Lining Material: Plastic

Type of Packer: Baker Loc-Set

Packer Setting Depth: 4147'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is This a new well drilled for injection? _____ Yes X No

If no, for what purpose was the well originally drilled? Oil & Gas

2. Name of the Injected Formation: Cherry Canyon; Delaware

3. Name of Field or Pool (if applicable): Brushy Draw; Delaware; North

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. _____

Yes. 5645'-5718' CIBP w/35' cement, 5612'

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injected zone in this area: Bell Canyon (3262'-3284'); Lower Cherry Canyon (5293'-5365');

Brushy Canyon (5618'-5710')

New Mexico Oil Conservation Division form (C-108) Application for Authorization to Dispose

**China Grove Federal #1
Section 1, T-26-S R-29-E
660' FNL & 660' FWL, NMPM
Eddy County, New Mexico
API # 30-015-27678**

Chesapeake Operating, Inc. proposes to re-enter the above captioned well and convert to a salt water disposal well in the Cherry formation of the Delaware Mountain Group. Please find the following application for authorization to dispose (NMOCD's form C-108) along with attachments and item information.

- Item I** The purpose of this application is for disposal.
- Item II** Chesapeake Operating, Inc. (OGRID # 147179)
P.O. Box 18496
Oklahoma City, OK 73154-0496
Bryan G. Arrant, Contact phone # 405-935-3782
- Item III** See attached data sheets
- Item IV** This is not an existing project.
- Item V** See attached maps showing ½ mile and 2 mile radius.
- Item VI** See attached tabulation of wells of public record within area of review which penetrate the proposed disposal zone, and well-bore schematics of all plugged wells with ½ mile of AOR.
- Item VII**
- 1) Daily average disposal rate is expected to be 2500 BWPD. Maximum daily rate would be approximately 3000 BWPD.
 - 2) The system will be closed.
 - 3) The proposed average disposal pressure is expected to be 840 psig and the maximum pressure is expected to be 840 psig.
 - 4) The source of water to be disposed is produced salt water from surrounding wells which produce from the Bone Spring. A water analysis is attached, Item VII(4).
 - 5) Disposal will be in the Cherry Canyon formation of the Delaware Mountain Group (4200'-5122'). The Delaware is productive at much shallower & deeper intervals in the Bell Canyon formation (3262'-3284'), and the Cherry & Brushy Canyon formations(5293'-5710') within the AOR. A chemical analysis of the Delaware formation water (where we plan to dispose) is attached. Item VII (5).

Item VIII

The Cherry Canyon formation of the Delaware Mountain Group can be described very fine grained sandstones inter-bedded with shale sections.

The top and bottom of the Delaware is indicated below:

Well Name	Top of Delaware	Base of Delaware
China Grove Federal #1	3237'	NDE'

There are no known underground sources of drinking water overlying the proposed injection zone as well as any such sources immediately underlying the disposal interval.

Item IX Acidize perms w/5000 gals 15 % NeFe Acid. Frac perms per frac recommendation.

Item X Electric logs are available for public record on NMOCD's web-site.

Item XI There are no fresh water wells in the AOR. Please see attached New Mexico Office of the State Engineer document.

This well is located @ 11 miles south southwest of the secretary's potash boundary of R-111-P, and @ 26 miles east of the Capitan Reef aquifer.

Item XII There are no evidence of open faults or any other hydrological connection between the disposal zone and any underground sources of drinking water.

Item XIII Proof of Notice

- A copy of the application has been furnished by certified mail. A list is provided.
- A copy of the legal advertisement in the county in which the well is located is attached.
- A copy of the application has been provided to the Bureau of Land Management

Additional information:

- Procedure to convert well to SWD.
- Actual & proposed well bore diagram.
- Geological formation tops.
- New Mexico Office or the State Engineer's Water Column/Average Depth of Ground Water -No Records Found

China Grove Federal 1
Eddy County, New Mexico
Re-enter and Convert to SWD Procedure

Date: April 23, 2010

Location: 660' FNL & 660' FWL Sec. 1-T26S-R29E

Casing: 8 5/8" 24# & 32# J-55 0-3,230' ID – 7.921", Drift – 7.796", Burst – 2,950 psi
5 1/2" 15.5# J-55 1,922'-5,850' ID – 4.950", Drift – 4.825", Burst – 4,810 psi

PBTD/TD: 0'/5,850'

Current Perfs: Brushy Canyon 5,324-5,392' (below CIBP)

Propose Perfs: Cherry Canyon 4200-5122'

Recommended Procedure:

1. Dig out casing and secure casing stub. MIRU PU. NU BOP. Unload, rack and tally 2 7/8" work string.
2. RIH w/ 7 5/8" bit and drill collars on tbgs. Drill out cement plugs to 5 1/2" casing stub @ 1,922'. POH w/ bit.
3. RIH w/ 5 1/2" 15.5# J-55 casing with bell collar on bottom. Set bell collar down on top of casing stub. Cement 5 1/2" casing per cementing recommendation bringing cement back to surface. WOC.
4. RIH w/ 4 3/4" bit. Drill out cement at casing splice, and cement plugs down to CIBP @ 5,612'. Do not drill out cement on top of CIBP. Pressure test casing to 500 psi. POH w/ bit.
5. RU wireline co. Perforate Cherry Canyon 5092-5122', 1 spf w/ HSC gun.
6. RIH w/ packer on 2 7/8" tbgs to 5,000'. Acidize perfs 5092-5122' w/ 5,000 gal 15% NEFE acid. Frac perfs per frac recommendation (anticipate 50,000# sand in X-linked fluid at 30 BPM). POH w/ packer.
7. RU wireline co. Set Composite BP @ 5,000'. Perforate Cherry Canyon 4510-60', 4660-4710', 1 spf w/ HSC gun.
8. RIH w/ packer on 2 7/8" tbgs to 4,400'. Acidize perfs 4510-4710' w/ 5,000 gal 15% NEFE acid, dropping 150 perf balls evenly throughout job. Release packer and drop down through perfs and knock off balls. Pull packer back up to 4,400'. Frac perfs per frac recommendation (anticipate 50,000# sand in X-linked fluid at 30 BPM). POH w/ packer.
9. RU wireline co. Set Composite BP @ 4,450'. Perforate Cherry Canyon 4200-50', 4265-4,300' 1 spf w/ HSC gun.
10. RIH w/ packer on 2 7/8" tbgs to 4,100'. Acidize perfs 4200-4300' w/ 5,000 gal 15% NEFE acid, dropping 125 perf balls evenly throughout job. Release packer and drop down through perfs and

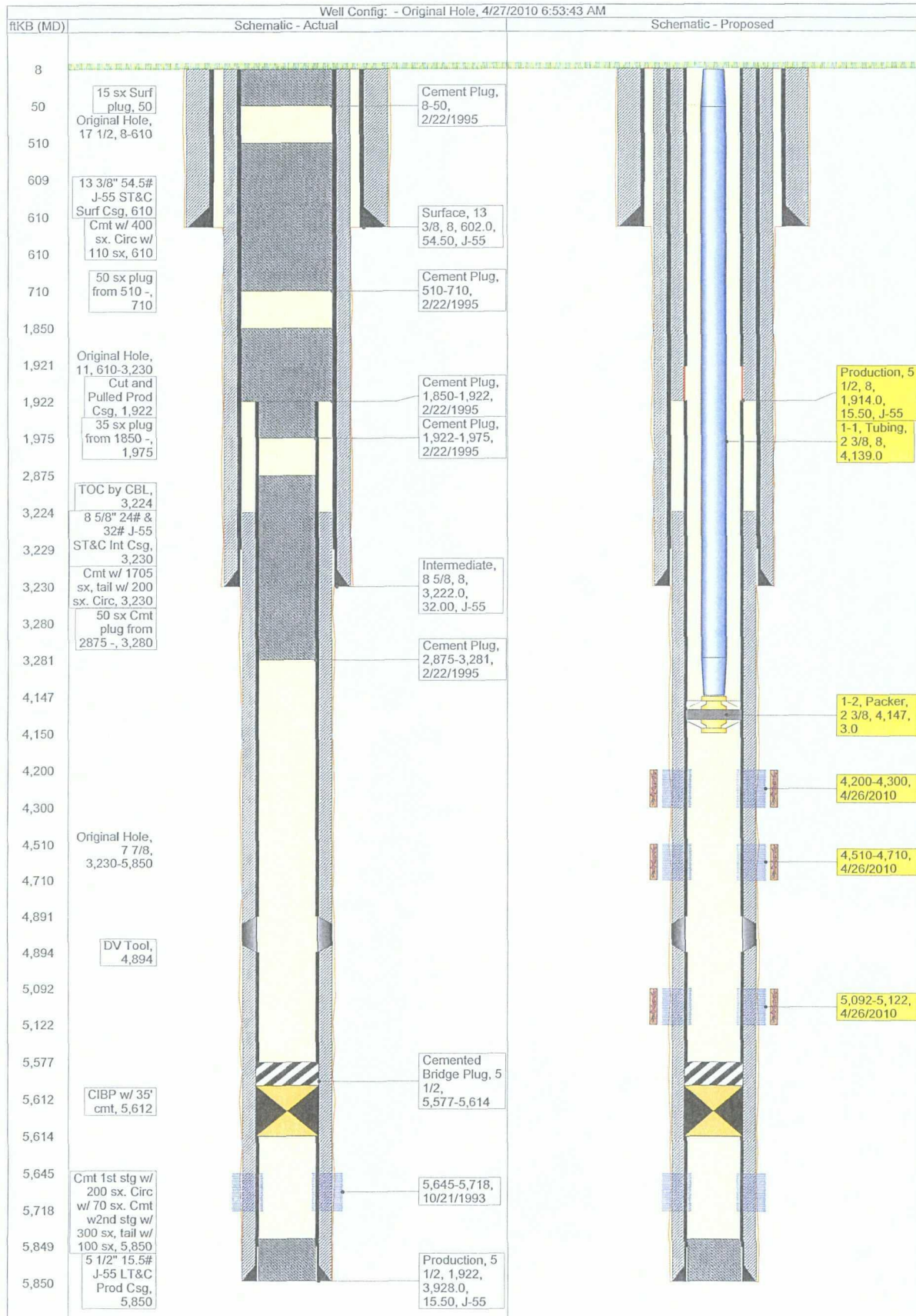
knock off balls. Pull packer back up to 4,100'. Frac perfs per frac recommendation (anticipate 50,000# sand in X-linked fluid at 30 BPM). POH w/ packer.

11. RIH w/ 4 3/4" bit and drill collars on tubing. Drill BP's @ 4,450' and 5,000'. Cleanout to PBTD. POH w/ bit laying down 2 7/8" workstring.
12. RIH w/ 2 3/8" plastic lined tbg and 5 1/2" Lock-set packer to 4,150'. Load back side with packer fluid. Set packer and pressure test to 500 psi.
13. ND BOP. NU WH. Rig down.

WORKOVER PROPOSAL WBD

WELL: China Grove Federal 1
 FIELD: North Brushy Draw - Delaware
 COUNTY / STATE: EDDY / NEW MEXICO
 LOCATION: SEC 1-26S-29E, 660 FNL & 660 FWL
 ELEVATION: 3,052.00 GR 3,060.00 RKB

API: 3001527678
 SPUD DATE: 9/27/1993



**China Grove Federal # 1
Unit D, Sec. 1, T-26-S R-29-E
Eddy Co., NM
API# 30-015-27678**

Geological Formation Tops

• Rustler	720'
• Salado	810'
• Base of Salt	3040'
• Lamar Limestone	3237'
• Bell Canyon	3277'
• Cherry Canyon	4163'
• Brushy Canyon	5392'
• Base of Brushy Canyon	NDE

Chesapeake Energy Corporation
China Grove Federal 1 Half Mile Casing Tabulation

Operator	Well Name	API No	Sec Twn Range	Type	Status	Spud Date	Comp Date	TD	PBTD	Comp Zone	Comp Interval	Casing Program	TOC	Perfs
1 Southwest Royalties Inc	North Brushy Draw 4	30-015-27805	35 T28S R28E	Oil	Producing	2/2/1994	3/10/1994	5800	5721	Delaware	5518-5680	13 3/8" 61# J-55 @ 640' w/ 685 sxs 8 5/8" 24# & 32# @ 3220' w/ 1283 sxs 5-1/2" 15-5# J-55 @ 5744' w/ 615 sxs	Circ w/ 100 sx Circ w/ 60 sx EST 2700'	5518-30 66-38, 41-66, 70-80 w/ 52 holes. ✓
2 Southwest Royalties Inc	Pogo 36 State 2	30-015-27389	36 T28S R29E	Oil	P&A	8/24/1993	9/16/1993	5900	Surf	Delaware	5680-5710	13 3/8" 54# & 50# @ 617' w/ 600 sxs 5/8" 24# & 32# J-55 @ 3256 w/ 1350 sx 5-1/2" 15-5# K-55 @ 5900 w/ 685 sxs	Circ to surf TOC @ 330 TS EST 3170'	3282-3284 5580-5710 ✓
3 Southwest Royalties Inc	Catchlaw St 1	30-015-27767	2 T28S R29E	Oil	P&A	12/28/1993	1/29/94	5815	Surf	Delaware	5620-86	13 3/8" 54# J-55 ST&C @ 5280' w/ 655 sxs 8 5/8" 24# & 32# J-55 ST&C @ 3207' w/ 1350 sx 5-1/2" 15-5# J-55 ST&C @ 5815 w/ 670 sxs	Circ w/ 60 sx Circ w/ 125 sx EST 2700'	5283-5365 5620-5688 X
4 Pre-Onward	State 1	30-015-03724	T28S R29E	Oil	D&A	6/14/1990	6/20/1990	768	Surf	None	None D&A	7 5/8" 26# & 40# J-55 @ 768' w/ 300 sx	Circ to surf	None

Stallan

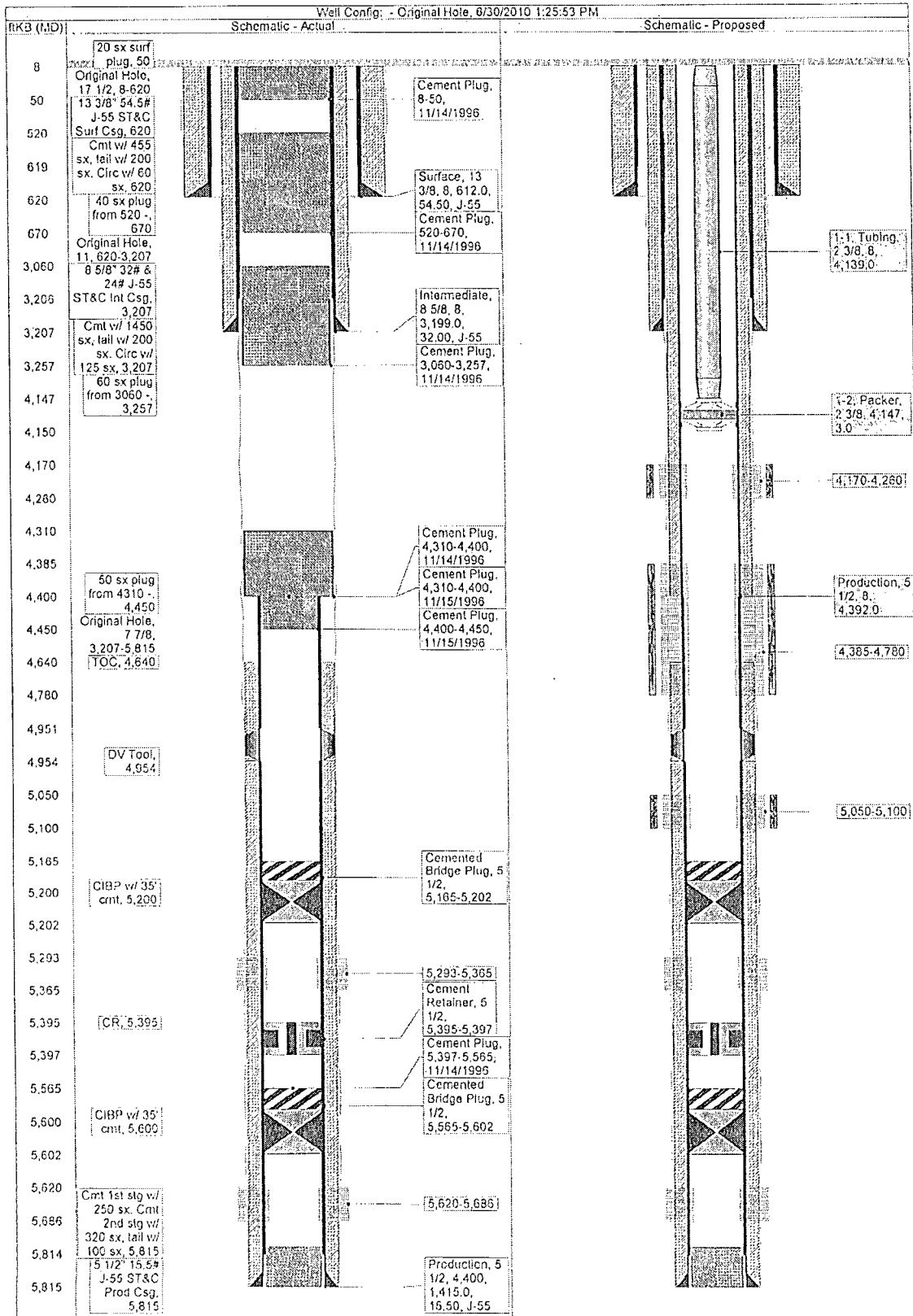
See Serp-288

Item VI
Tabulation of wells within Area of Review

WORKOVER PROPOSAL WBD

WELL: Catclaw State 1
 FIELD: North Brushy Draw Delaware
 COUNTY / STATE: EDDY / NEW MEXICO
 LOCATION: Sec 2-26S-29E, 710 FNL & 500 FEL
 ELEVATION: 3,247.00 GR 3,255.00 RKB

API: 3001527767
 SPUD DATE: 12/28/1993



Bryan Arrant

From: Jeff Finnell
Sent: Wednesday, June 30, 2010 5:08 PM
To: Bryan Arrant
Subject: Catclaw St 1

Bryan,

Will was right, on the TOC and pulled casing on this one. Here is the new procedure and WBD.



Catclaw St 1 P&A WBDRevised.pdf...



Catclaw State
1Re-enter and Co...

Jeff Finnell, P.E.
Sr. Asset Manager
Chesapeake Energy Corporation
New Phone: 405-935-4347
New e-mail: jeff.finnell@chk.com

Catclaw State 1
Eddy County, New Mexico
Re-enter and Convert to SWD Procedure

Date: June 30, 2010

Location: 710' FNL & 500' FEL Sec. 2-T26S-R29E

Casing: 5 1/2" 15.5# J-55 0-5,815' ID - 4.950", Drift - 4.825", Burst - 4,810 psi

PBTD/TD: 0'5,815'

Current Perfs: Brushy Canyon 5,293-5,686' (below CIBP)

Propose Perfs: Cherry Canyon 4170-5100'

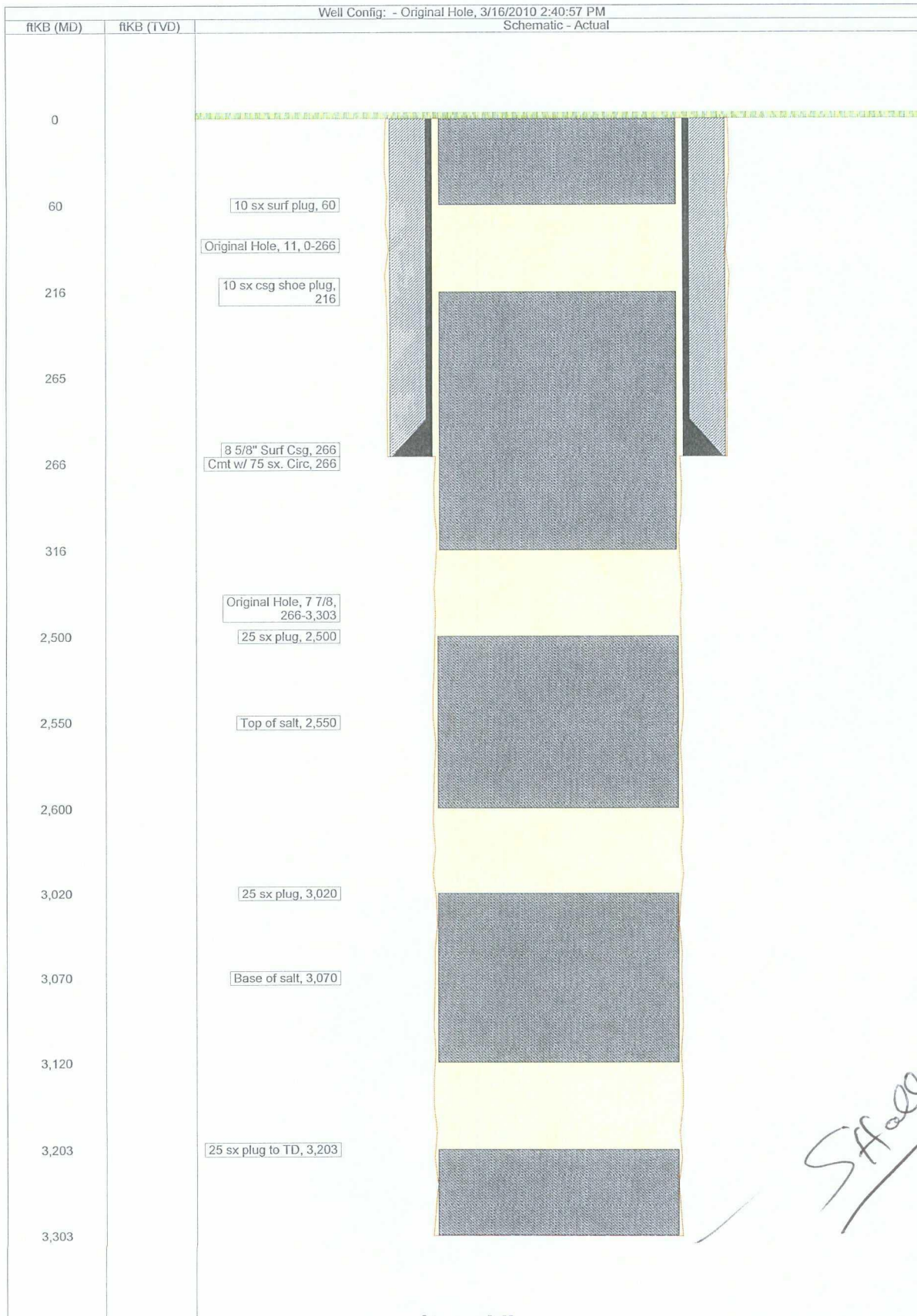
Recommended Procedure:

1. Dig out casing and secure casing stub. MIRU PU. NU BOP. Unload, rack and tally 2 7/8" L-80 work string.
2. RIH w/ 7 5/8" bit and drill collars on tbg. Drill out cement plugs down to top of casing stub @ 4400'. Circulate clean. POH w/ bit.
3. RIH w/ 5 1/2" J-55 15.5# casing with bell shoe and float collar on bottom. Land casing on top of casing stub. Cement casing back to surface per cement recommendation (anticipate 500 sxs class C).
4. RIH w/ 4 1/4" bit and drill collars on tbg. Cleanout to cement on top of CIBP @ 5,200'. Do not drill out CIBP @ 5,200'. Pressure test casing to 500 psi. POH w/ bit.
5. RU wireline co. Run CBL to determine TOC. Perforate Cherry Canyon 5050-5100', 1 spf w/ HSC gun.
6. RIH packer on 2 7/8" tbg to 4,900'. Acidize perfs 5050-5100' w/ 5,000 gal 15% NEFE acid. Frac perfs per frac recommendation (anticipate 50,000# sand in X-linked fluid at 30 BPM). POH w/ packer.
7. RU wireline co. Set Composite BP @ 5,000'. Perforate Cherry Canyon 4385-4400', 4500-20', 4,630-60', 4,735-80' 1 spf w/ HSC gun.
8. RIH packer on 2 7/8" tbg to 4,200'. Acidize perfs 4385-4780' w/ 5,000 gal 15% NEFE acid dropping 150 perf balls evenly throughout job. Release packer and drop down through perfs and knock off balls. Pull packer back up to 4,200'. Frac perfs per frac recommendation (anticipate 50,000# sand in X-linked fluid at 30 BPM). POH w/ packer.
9. RU wireline co. Set Composite BP @ 4,350'. Perforate Cherry Canyon 4170-4200', 4220-60' 1 spf w/ HSC gun.
10. RIH packer on 2 7/8" tbg to 4,100'. Acidize perfs 4170-4260' w/ 5,000 gal 15% NEFE acid dropping 100 perf balls evenly throughout job. Release packer and drop down through perfs and knock off balls. Pull packer back up to 4,100'. Frac perfs per frac recommendation (anticipate 50,000# sand in X-linked fluid at 30 BPM). POH w/ packer.
11. RIH w/ 4 1/4" bit and drill collars on tubing. Drill BP's @ 4,350' and 5,000'. Cleanout to 5,200'. POH w/ bit.
12. RIH w/ 2 3/8" plastic lined tbg and 5 1/2" Lock-set packer to 4,150'. Load back side with packer fluid. Set packer and pressure test to 500 psi.
13. ND BOP. NU WH. Rig down.

P&A WELLBORE SCHEMATIC

WELL: Continental Federal 1
 FIELD: Wildcat
 COUNTY / STATE: EDDY / NEW MEXICO
 LOCATION: SEC 1-26S-29E, 660 FSL & 1980 FEL
 ELEVATION: 3,023.00 GR 3,023.00 RKB

API: 3001503723
 SPUD DATE: 12/2/1959



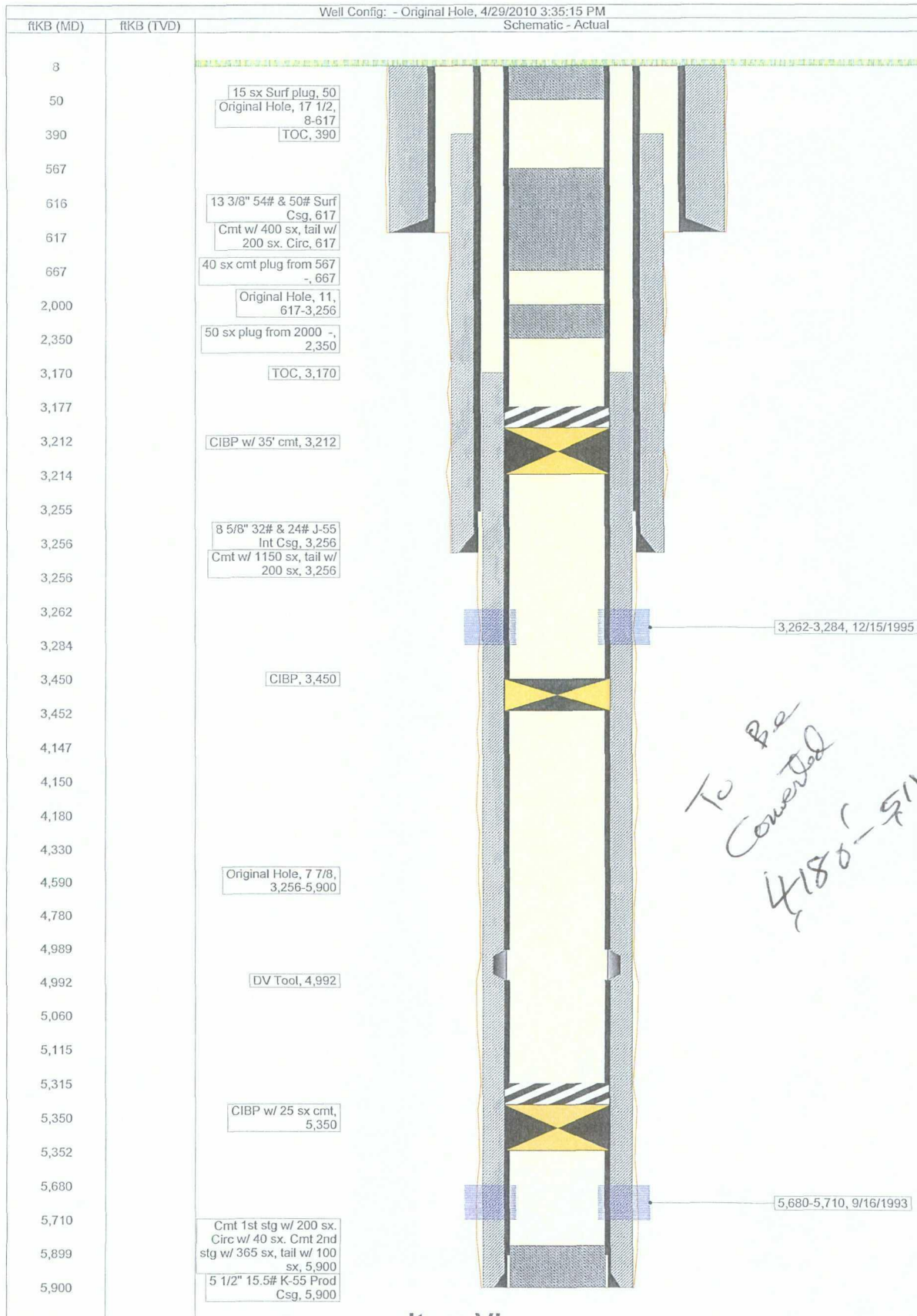
Item VI
 Plugged well within AOR

Printed on: 3/16/2010

P&A WELLBORE SCHEMATIC

WELL: Pogo 36 State 2
 FIELD: North Brushy Draw Delaware
 COUNTY / STATE: EDDY / NEW MEXICO
 LOCATION: SEC 36-25S-29E, 330 FSL & 330 FWL
 ELEVATION: 3,044.00 GR 3,052.00 RKB

API: 3001527399
 SPUD DATE: 8/24/1993



Item VI
 Plugged well within AOR

Printed on: 4/29/2010

709 W. INDIANA
MIDLAND, TEXAS 79701
FAX (432) 682-8819

RESULT OF WATER ANALYSES

TO: Melvin Harper
P.O. Box 190 Hobbs NM 88241

LABORATORY NO.	409-90
SAMPLE RECEIVED	4/13/09
RESULTS REPORTED	4/14/09

COMPANY Chesapeake LEASE PLU Pierce Canyon 17 Fed. #1H
FIELD OR POOL Poker Lake
SECTION BLOCK SURVEY COUNTY Eddy STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Submitted water sample - taken 4/8/09 from PLU Pierce Canyon 17 Fed #1H.

REMARKS:

[illegible]

Form No. 3

20.

Greg Ogden, B.S.

Item VII (4) Bone Spring Water Analysis

P.O. BOX 98
MIDLAND, TX. 79702
PHONE (432) 683-4521

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
FAX (432) 682-8819

RESULT OF WATER ANALYSES

TO: Mr. Melvin Harper LABORATORY NO. 709-79
PO Box 190 Hobbs, NM 88241 SAMPLE RECEIVED 7-13-09
RESULTS REPORTED 7-13-09

COMPANY Chesapeake Energy LEASE Brushy 12 Federal #1

FIELD OR POOL _____

SECTION _____ BLOCK _____ SURVEY _____ COUNTY Eddy STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Submitted water sample - taken 7-7-09.

NO. 2 _____

NO. 3 _____

NO. 4 _____

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1960			
pH When Sampled				
pH When Received	4.53			
Bicarbonate as HCO ₃	61			
Supersaturation as CaCO ₃				
Undersaturation as CaCO ₃				
Total Hardness as CaCO ₃	101.000			
Calcium as Ca	32.400			
Magnesium as Mg	4.860			
Sodium and/or Potassium	76.997			
Sulfate as SO ₄	38			
Chloride as Cl	190.280			
Iron as Fe	305			
Barium as Ba	0			
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	304.636			
Temperature °F.				
Carbon Dioxide, Calculated	1.200			
Dissolved Oxygen				
Hydrogen Sulfide	0.0			
Resistivity, ohm-cm at 77° F. - calculated	0.045			
Resistivity, ohm-cm at 77° F. - measured	0.040			
Corrosiveness	Severe			
Barium Sulfate Scaling Tendency	None			
CaCO ₃ S.I. @ 77° F. (Stiff-Davis)	1.34			
CaCO ₃ S.I. @ 122° F. (Stiff-Davis)	1.30			
Calcium Sulfate Scaling Tendency	None			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks

CaCO₃ S.I. - A positive fig. signifies a scaling potential proportionate to the magnitude of the number, and a negative fig. signifies no scaling potential.

Please feel free to contact us for any details or discussions concerning these results.

Form No. 3

By 

Item VII (5)
Delaware Water Analysis

Item XIII
Notice List

Name	Address	City	State	Zip
Surface:				
Byron Wayne Paschal	PO Box 992	Pecos	TX	79772
Conoco Phillips	PO Box 7500	Bartlesville	OK	74005
Chase Oil Corporation	P.O. Box 1767	Artesia	NM	88211
Chevron U.S.A. Inc.	15 Smith Rd.	Midland	TX	79705
OGX Resources, LLC	PO Box 2064	Midland	TX	79702
Yates Petroleum Corporation	105 South Fourth St.	Artesia	NM	88210
Yates Drilling Co.	105 South Fourth St.	Artesia	NM	88210
ABO Petroleum Corp.	105 South Fourth St.	Artesia	NM	88210
MYCO Industries, Inc.	105 South Fourth St.	Artesia	NM	88210
Southwest Royalties, Inc.	PO Box 11390	Midland	TX	79702
Espero Energy Corporation	407 N. Big Spring, Suite 300	Midland	TX	79701

Section 1-26S-29E

Name

NE/4, N/2SE/4 All Depths ✓

Conoco Phillips ✓

W2. All depths

Chase Oil Corporation ✓

Chevron U.S.A. Inc. ✓

Section 2-26S-29E

All - All depths

OGX Resources, LLC ✓

Section 36-25S-29E

SW/4 - All Depths

Yates Petroleum Corporation ✓

Yates Drilling Co. ✓

ABO Petroleum Corp. ✓

MYCO Industries, Inc. ✓

W/2 SE/4 - All Depths

Southwest Royalties, Inc. ✓

Espero Energy Corporation ✓

Section 35-25S-29E

Southwest Royalties, Inc. is operator of E/2 SE/4, SW/4 SE/4

Surface

Byron Wayne Paschal ✓

<u>Attention</u>	<u>Address</u>	<u>City</u>	<u>State</u>	<u>Zip</u>
PO Box 7500		Bartlesville	OK	74005
P.O. Box 1767		Artesia	NM	88211
15 Smith Rd.		Midland	TX	79705
PO Box 2064		Midland	TX	79702
105 South Fourth St.		Artesia	NM	88210
105 South Fourth St.		Artesia	NM	88210
105 South Fourth St.		Artesia	NM	88210
105 South Fourth St.		Artesia	NM	88210
PO Box 11390		Midland	TX	79702
407 N. Big Spring, Suite 300		Midland	TX	79701
PO Box 992		Pecos	TX	79772

Item XIII Notice list w/Certified numbers

China Grove Federal #1

OGX Resources-Gary Lang #7007 3020 0002 4935 2370

Byron Wayne Paschal #7007 3020 0002 4935 2332

Conoco Phillips #7007 3020 0002 4935 2349

Chase Oil Corporation #7007 3020 0002 4935 2356

Chevron U.S.A. Inc. #7007 3020 0002 4935 2363

Yates Petroleum Corporation #7007 3020 0002 4935 2387

Yates Drilling Co. #7007 3020 0002 4935 2394

ABO Petroleum Corp. #7007 3020 0002 4935 2400

MYCO Industries, Inc. #7007 3020 0002 4935 2431

Southwest Royalties, Inc. #7007 3020 0002 4935 2417

Espero Energy Corporation #7007 3020 4935 2424

7007 2650 0001 2796 3482

U.S. Postal Service _{TM}	
CERTIFIED MAIL _® RECEIPT	
(Domestic Mail Only, No Insurance Coverage Provided)	
For delivery information visit our website at www.usps.com	
OFFICIAL USE	
Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total	
Sent to: Bureau of Land Management	
620 E. Greene St.	
City, State, or PO: Carlsbad, NM 88220-6296	
City, State	
PS Form 3800, August 2004	
See Reverse for Instructions	

Postmark
Here

1/22/10 on
file

China Grove Fed #11
30-015-27678
C108 application

Affidavit of Publication

NO. 21160

Copy of Publication:

STATE OF NEW MEXICO

County of Eddy:

GARY D. SCOTT being duly

sworn, says: That he is the PUBLISHER of The

Artesia Daily Press, a daily newspaper of general

circulation, published in English at Artesia, said county

and county and state, and that the here to attached

Legal Notice

was published in a regular and entire issue of the said

Artesia Daily Press, a daily newspaper duly qualified

for that purpose within the meaning of Chapter 167 of

the 1937 Session Laws of the state of New Mexico for

1 Consecutive week/days on the same

day as follows:

First Publication May 9, 2010

Second Publication _____

Third Publication _____

Fourth Publication _____

Fifth Publication _____

Subscribed and sworn to before me this

9 Day

May

2010



OFFICIAL SEAL

Jo Morgan

NOTARY PUBLIC-STATE OF NEW MEXICO

My commission expires: 6/26/2012

Jo Morgan

Jo Morgan

Notary Public, Eddy County, New Mexico

Chesapeake Operating, Inc. intends to convert the following well to a salt water disposal well: China Grove Federal #1 which is located in Unit D of Section 1, Township 26 South, Range 29 East 660' FNL & 660' FWL Eddy County, New Mexico. The formation to be injected is for disposal purposes into the Cherry Canyon formation of the Delaware Mountain Group through perforated intervals: 4200'-4250', 4265'-4300', 4510'-4560', 4660'-4710' & 5092'-5122'.

The average disposal rate is expected to be 2500 BWPD and a maximum disposal rate of 3000 BWPD. The injection pressure is expected to be 840 psig with a maximum pressure of 840 psig. Questions or objections can be

addressed to Chesapeake Operating, Inc. 6100 N. Western Ave., Oklahoma City, OK 73118 or call Jeff Finnell at: 405-935-4347. Any interested parties that have objections or request a hearing must be filed within 15 days of this notice to the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, NM 87505.

Published in the Artesia Daily Press, Artesia, NM May 9, 2010.
Legal No. 21160

Item XIII

Legal Advertisement

Additional Information

- Procedure to convert well to SWD
- Actual & proposed well bore diagram
- Geological formation tops
- New Mexico Office of the State Engineer's Water Column/Average Depth of Ground Water-No records found



New Mexico Office of the State Engineer **Water Column/Average Depth to Water**

No records found.

PLSS Search:

Section(s): 35, 36

Township: 25S

Range: 29E

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/3/10 7:35 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER



New Mexico Office of the State Engineer Water Column/Average Depth to Water

No records found.

PLSS Search:

Section(s): 1, 2

Township: 26S

Range: 29E

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

5/3/10 7:34 AM

WATER COLUMN/ AVERAGE
DEPTH TO WATER

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Tuesday, June 29, 2010 4:00 PM
To: 'Bryan Arrant'
Cc: Ezeanyim, Richard, EMNRD; Reeves, Jacqueta, EMNRD; Dade, Randy, EMNRD
Subject: Disposal application from Chesapeake Operating, Inc.: China Grove Federal #1 30-015-27678

Hello Bryan:

Thank you for this application, just a couple questions,

- a. Is the surface of this well owned by Mr. Pashal or the ~~State Land Office~~ ^{BLM}? If it is the ~~SLO~~ ^{BLM}, send them notice.
- b. We ask that applicants for Salt Water disposal break up the ½ mile AOR into "tracts" and list each tract and the owners ("affected persons") of that tract. If your Landman gave you the "affected persons" surrounding this well and you noticed them, then don't worry about the Tract thing for these applications.
- c. Send a new diagram of the Catclaw State #1 well 30-015-27767.

We can look this over again and see what to do.

Take Care,

Thank You,

William V Jones, P.E.
Engineering, Oil Conservation Division
1220 South St. Francis Drive, Santa Fe, NM 87505
Tel 505.476.3448 ~ Fax 505.476.3462



Bryan Arrant

From: Bryan Arrant
Sent: Thursday, July 01, 2010 6:56 AM
To: Jeff Finnell; Justin Zerkle; Linda Good
Subject: FW: Disposal application from Chesapeake Operating, Inc.: China Grove Federal #1 30-015-27678

FYI.
Bryan

From: Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]
Sent: Tuesday, June 29, 2010 5:55 PM
To: Bryan Arrant
Subject: RE: Disposal application from Chesapeake Operating, Inc.: China Grove Federal #1 30-015-27678

Bryan - I meant the BLM in "a." below....

Please send a copy of the C-108 to the BLM whether they are the surface owner or not.

Thanks again,

Will Jones
New Mexico
Oil Conservation Division
Images Contacts

From: Jones, William V., EMNRD
Sent: Tuesday, June 29, 2010 4:00 PM
To: 'Bryan Arrant'
Cc: Ezeanyim, Richard, EMNRD; Reeves, Jacqueta, EMNRD; Dade, Randy, EMNRD
Subject: Disposal application from Chesapeake Operating, Inc.: China Grove Federal #1 30-015-27678

Hello Bryan:

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- c. Send a new diagram of the Catclaw State #1 well 30-015-27767.

We can look this over again and see what to do.

Take Care,

Thank You,

William V Jones, P.E.
Engineering, Oil Conservation Division



Regulatory Department

July 12, 2010

New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
Attn: Mr. Will Jones (NMOCD's Hearing Examiner)

RE: China Grove Federal # 1
Unit A, Sec. 2, T-26-S R-29-E
Eddy Co., N.M.
API# 30-015-27767
Supplement to NMOCD's C-108 SWD Application

Will,

Per your request, please find the following requesting information for the:
China Grove Federal # 1 (API # 30-015-27767):

- Current well bore diagram for the Catclaw State # 1 (API # 30-015-27767) and a proposed SWD well bore diagram procedure for future consideration.
- The China Grove Federal # 1 is on Federal minerals.
- A proof of notice to the BLM is attached.
- A list of each owner in the ½ "AOR" and "affected persons" of that tract.

Yours truly,

Bryan Arrant
Senior Regulatory Compliance Specialist
Office: (405)-935-3782
Fax: (405) 849-3782
E-mail: Bryan.Arrant@chk.com

Bryan Arrant

From: Bryan Arrant
Sent: Tuesday, July 13, 2010 3:46 PM
To: 'Jones, William V., EMNRD'
Cc: Jeff Finnell; Justin Zerkle
Subject: Request for information
Attachments: China Grove Fed 1 Supplement.pdf; Pogo 36 State 2 Supplement.pdf; Pogo 36 State 2 Production.xls

Will,

Please find additional information you have requested for the Pogo 36 State # 2 and the China Grove Federal #1 wells. I will UPS hard copies today.

As for the Phillips Federal #1, apparently we did not send a notification of the C-108 application to Bass for this well. Bass is a working interest owner within the ½ mile radius. We do not anticipate them objecting to our application (it will benefit both parties that we lower our costs for the PLU wells).

A copy of the C-108 application has been sent to them. I will send to you a proof of notice as soon as possible.

Thanks,

Bryan Arrant

Senior Regulatory Compliance Specialist
Chesapeake Energy Corporation
6100 N. Western Avenue
Oklahoma City, OK 73118
Office: (405)-935-3782
Fax: (405) 849-3782
E-mail: Bryan.Arrant@chk.com

Will
27678 is logged in
as PTGW1015452645
TW.

RECEIVED OCD
2010 JUL 15 P 2:05

Injection Permit Checklist (06/24/2010)

Case SWD 1243 WFX PMX IPI Perm Date 9/13/10 UIC Qtr (A/S)

Wells 1 Well Name: China Grove Fed #1

API Num: (30-) 015-27678 Spud Date: 9/27/93 New/Old: N (UIC primacy March 7, 1982)

Footages 660 FNL/660 FNL Unit D 1 Ts 265 Rge 29E County EDDY

Operator Changshu Operating, Inc. Contact Changshu/Bya account

Operator Address: P.O. Box 18496, OKC, OK 74154-0496

OGRID 147179 RULE 5.9 Compliance (Wells) #1785 (Finan Assur) OK IS 5.9 OK? OK

Well File Reviewed Current Status: P&A

General Location: 9 1/2 mi SSW of R-111-P

Diagrams: Before Conversion ✓ After Conversion ✓ Elogs in Imaging File: ✓

Planned Work to Well:

	Sizes Hole.....Pipe	Setting Depths	Cement Sx or Cf	Cement Top and Determination Method
Existing <u>✓</u> Surface	17 1/2 3 7/8	610	400	CIRC
Existing <u>✓</u> Intern	11 8 5/8	3230	1905	CIRC
New <u>✓</u> Existing <u>✓</u> LongSt	7 7/8 5 1/2	5850	600	3224 CBL
DV Tool <u>4894</u>	Liner	Open Hole	250/400	Total Depth <u>5850</u> Deviated Hole? <u>NO</u>

From
A22

OK
FIRST
STAGE
CIRCED

Intervals:	Depths, Ft.	Formation	Producing?
Formation Above			
Formation Above	3237	Top Del.	
Injection TOP:	4200	Changshu	Max. PSI <u>840</u> Open Hole? <u>✓</u> Perfs? <u>✓</u>
Injection BOTTOM:	5122	" "	Tubing Size <u>2 3/8</u> Packer Depth <u>4147</u>
Formation Below			
Formation Below			

Sensitive Areas: Gephan Reef Cliff House Salt Depths 810-3040

... Potash Area (R-111-P) Potash Lessee Noticed? (WIPP?) Noticed?

Fresh Water: Depths: none Formation none Wells? none Analysis? ✓ Affirmative Statement ✓

Disposal Fluid Sources: B.S. Analysis? ✓

Disposal Interval Production Potential/Testing: wet bond on Analysis? ✓

Notice: Newspaper(Y/N) ✓ Surface Owner PASCH Mineral Owner(s) 3

RULE 26.7(A) Affected Parties: See app.

Area of Review: Adequate Map (Y/N) ✓ and Well List (Y/N) ✓

Active Wells 1 Num Repairs 0 Producing in Injection Interval in AOR

P&A Wells 2 Num Repairs 1 All Wellbore Diagrams Included? ✓

Questions/Required Work:

Re-enter
to set new
PLUG or
change app.
New Golden #1 DIAGRAM
OPTIONALLY TO CMT New 5 1/2" ask BLM