

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



☐ AMENDED REPORT

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

¹ Operator Name and Address Chesapeake Operating Inc. 2010 Rankin Hwy Midland, TX 79701		² OGRID Number 147179
³ Property Code 30428		⁴ Property Name STATE IE
⁵ Proposed Pool 1 HACKBERRY HILLS; CANYON		⁶ Well No. 2
⁷ Proposed Pool 2 EST		

7 Surface Location

UL or lot no. M	Section 16	Township 22S	Range 26E	Lot Idn	Feet from the 660	North/South line SOUTH	Feet from the 660	East/Westline WEST	County EDDY
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8 Proposed Bottom Hole Location If Different From Surface

UL or lot no. M	Section 16	Township 22S	Range 26E	Lot Idn	Feet from the 660	North/South line SOUTH	Feet from the 660	East/Westline WEST	County EDDY
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Additional Well Information

¹¹ Work Type Code P	¹² Well Type Code G	¹³ Cable/Rotary	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 3447 GR
¹⁶ Multiple	¹⁷ Proposed Depth 11750	¹⁸ Formation CANYON	¹⁹ Contractor	²⁰ Spud Date 03/11/2007
Depth to Groundwater 220		Distance from nearest fresh water well 1000		Distance from nearest surface water 1000
Pit: Liner: Synthetic <input checked="" type="checkbox"/> 12 mil thick Clay <input type="checkbox"/> Pit Volume: 12129 bbls Drilling Method: Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				
Closed-Loop System <input type="checkbox"/>				

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# H-40 ST&C	760	800 SX	
12 1/2	9 5/8	40# J-55	2525	400 SX	
8 3/4	5 1/2	17# S-95, N-80	11750	2090 SX	

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.
CHESAPEAKE, RESPECTFULLY, REQUEST PERMISSION TO RECOMPLETE THIS WELL IN THE CANYON ZONE PER THE ATTACHED PROCEDURE.

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: Shay Stricklin

Title: Regulatory Tech.

E-mail Address: sstricklin@chkenegy.com

Date: 03/01/2007

Phone: (432)687-2992

OIL CONSERVATION DIVISION

Approved by:

BRYAN G. ARRANT
DISTRICT II GEOLOGIST

Title:

Approval Date: MAR 07 2007

Expiration Date:

MAR 07 2008

Conditions of Approval Attached ☒

See STIPs

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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

'API Number 30-015-32410		'Pool Code 77960		'Pool Name HACKBERRY HILLS; CANYON Ec. ST	
'Property Code 30428		'Property Name STATE IE			'Well Number 2
'OGRID No. 147179		'Operator Name Chesapeake Operating Inc.			'Elevation 3447 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
M	16	22S	26E		660	SOUTH	660	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
M	16	22S	26E		660	SOUTH	660	WEST	EDDY
"Dedicated Acres 320		"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.

	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: <u>Shay Stricklin</u> Date: <u>03/01/2007</u> Printed Name: <u>Shay Stricklin</u>	
	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: _____	

**State IE Com #2
Plug Back to Canyon
Eddy County, New Mexico**



GENERAL INFORMATION

Location: 660' FSL & 660' FWL, Sec 16 - T22S - R26E
API No.: 30-015-32410

WELL INFORMATION

<u>String OD</u>	<u>Weight & Grade</u>	<u>Depth</u>	<u>ID</u>	<u>Drift</u>	<u>Burst</u>	<u>TOC</u>
13-3/8"	48# H40 STC	0' - 760'	12.715"	12.559"	1730	0'
9-5/8"	40# J55 STC	0' - 2525'	8.835"	8.679"	3950	0'
5-1/2"	17# S95/N80	0' - 11750'	4.892"	4.767"	7740	3100'

Morrow Perforations: 11126 - 11378' (OA)

TD/PBTD: 11750'/11631'

Recommended Perforations

Canyon Lime 9955 - 68'

Re-Completion Procedure

- STIPS
1. MIRU Service Rig and requisite equipment. Kill well as required with 2% KCL. NDWH, NU BOP. Release M1-X 10K packer and POOH laying down 2-7/8" N80 tubing.
 2. MIRU Wireline Service Unit. Set a 5-1/2" CIBP at 11080'. Bail 2 sx of cement on 5-1/2" plug. Correlate to CBL/GR/CCL dated 12/09/2002.
 3. Load hole with 2% KCL and pressure test casing and plug to 1500#.
 4. RIH w/ casing gun. Perforate the Canyon Lime w/ 4 SPF, 23 gram charge, .37" holes, 90 deg. phasing, from 9955' - 68' (53 holes). Correlate to same CBL.
 5. RIH w/ 5-1/2" treating packer and SN picking up tested and inspected 2-3/8" N80 tubing as follows: Re-entry guide, 4' sub, 'XN' nipple, 10' sub, Arrow Set packer, on/off tool w/ 'X' profile nipple. Space out with the EOT at 9968'.
 6. RU Acid Service Company. Spot 200 gal of 15% HCL Acid containing 4 gpt of iron control, 1 gpt each of corrosion inhibitor, surface tension reducer, and non-emulsifier. Pull packer to ~9900'. Reverse circulate to ensure packer is clear of acid, set packer. Pressure test annulus to 1000#.
 7. ND BOP. NU tree. Pressure annulus to 1000 psi. Displace spot acid, establish rate of 4 to 5 BPM w/ 2% KCL. (Keep KCL water usage to a minimum). Acidize w/ 2,300

gal of same acid. Displace w/ 2% KCL. Do not over-displace. Pump at 4 to 5 BPM max. Launch 60 ball sealers during job. Note rates and pressures. Note ISIP. Max pressure 6000#.

8. Flow/swab back job. Swab/flow test zone.
9. Re-treat as warranted. Pressure backside to 1000# and retreat with 10,000 gal of 20% gelled NeFe HCL acid containing 4 gpt of iron control, 2 gpt each of corrosion inhibitor, surface tension reducer, and non-emulsifier. Treat via 2-3/8" production tubing at 10 - 12 BPM. Maximum pressure 8000#.
10. Flow back job. Swab to clean up and test.
11. Put well to sales. RDMO.

CURRENT WELLBORE SCHEMATIC

CHESAPEAKE OPERATING INC.



Chesapeake
Natural Gas.
Natural Advantages.

WELL : STATE "IE" #2

SURF. LOC. : 660' FSL & 660' FWL OF SEC. 16-R22S-T26E.

COUNTY : EDDY STATE : NM

FIELD : HAPPY VALLEY (MORROW GAS)

ELEVATION : 3,447' GL 3,457 KB

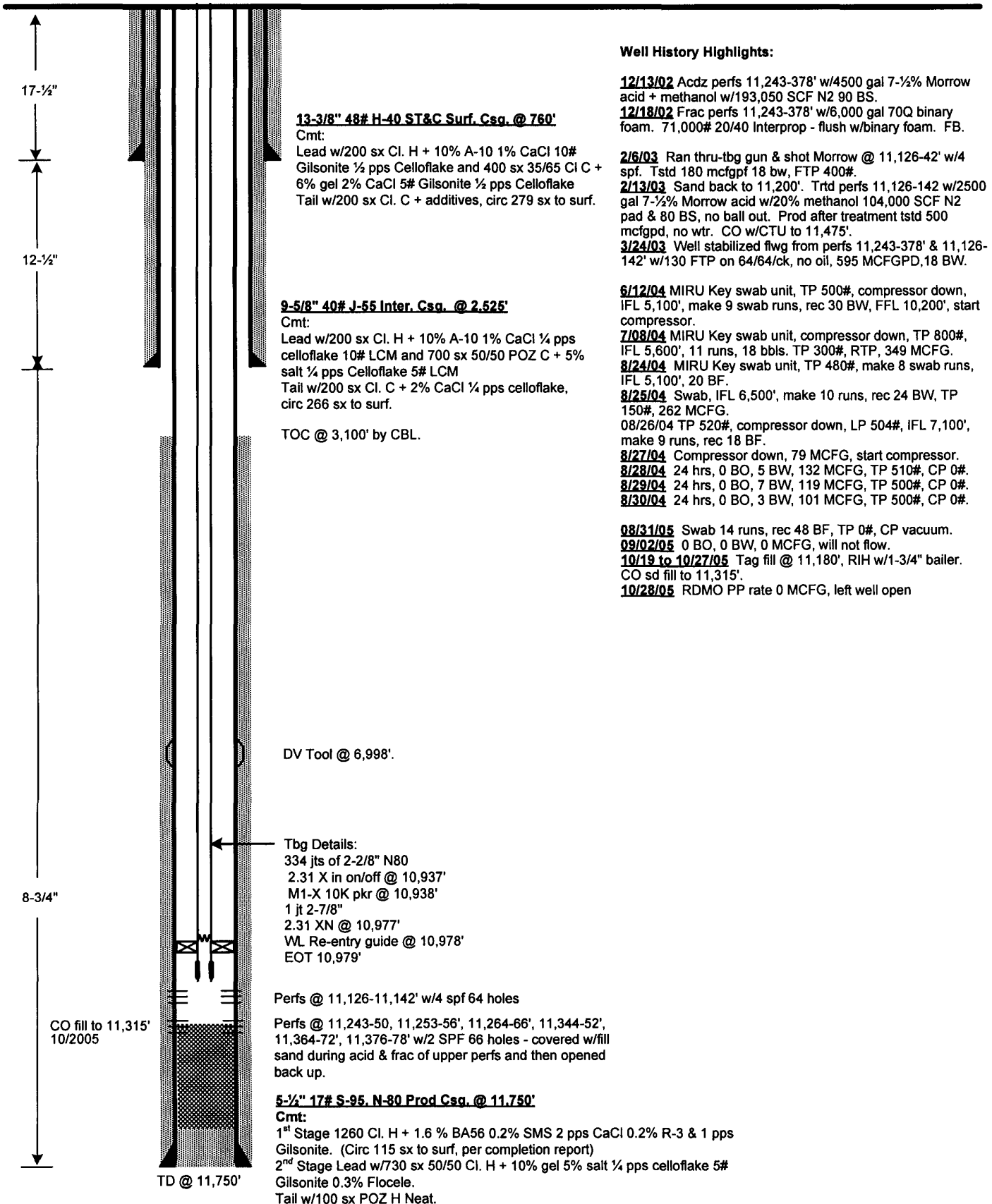
API #: 30-015-32410

SPUD DATE: 10/15/02

COMPL DATE: 02/06/78

CHK Property #: 890593

Hole Size



Well History Highlights:

12/13/02 Acdz perfs 11,243-378' w/4500 gal 7-1/2% Morrow acid + methanol w/193,050 SCF N2 90 BS.

12/18/02 Frac perfs 11,243-378' w/6,000 gal 70Q binary foam. 71,000# 20/40 Interprop - flush w/binary foam. FB.

2/6/03 Ran thru-tbg gun & shot Morrow @ 11,126-42' w/4 spf. Tstd 180 mcgpf 18 bw, FTP 400#.

2/13/03 Sand back to 11,200'. Trtd perfs 11,126-142 w/2500 gal 7-1/2% Morrow acid w/20% methanol 104,000 SCF N2 pad & 80 BS, no ball out. Prod after treatment tstd 500 mcgpd, no wtr. CO w/CTU to 11,475'.

3/24/03 Well stabilized flwg from perfs 11,243-378' & 11,126-142' w/130 FTP on 64/64/ck, no oil, 595 MCFGPD, 18 BW.

6/12/04 MIRU Key swab unit, TP 500#, compressor down, IFL 5,100', make 9 swab runs, rec 30 BW, FFL 10,200', start compressor.

7/08/04 MIRU Key swab unit, compressor down, TP 800#, IFL 5,600', 11 runs, 18 bbls. TP 300#, RTP, 349 MCFG.

8/24/04 MIRU Key swab unit, TP 480#, make 8 swab runs, IFL 5,100', 20 BF.

8/25/04 Swab, IFL 6,500', make 10 runs, rec 24 BW, TP 150#, 262 MCFG.

08/26/04 TP 520#, compressor down, LP 504#, IFL 7,100', make 9 runs, rec 18 BF.

8/27/04 Compressor down, 79 MCFG, start compressor.

8/28/04 24 hrs, 0 BO, 5 BW, 132 MCFG, TP 510#, CP 0#.

8/29/04 24 hrs, 0 BO, 7 BW, 119 MCFG, TP 500#, CP 0#.

8/30/04 24 hrs, 0 BO, 3 BW, 101 MCFG, TP 500#, CP 0#.

08/31/05 Swab 14 runs, rec 48 BF, TP 0#, CP vacuum.

09/02/05 0 BO, 0 BW, 0 MCFG, will not flow.

10/19 to 10/27/05 Tag fill @ 11,180', RIH w/1-3/4" bailer. CO sd fill to 11,315'.

10/28/05 RDMO PP rate 0 MCFG, left well open

PREPARED BY: Linda S. Fries

DATE: 08/30/04

UPDATED BY:

DATE:

Arrant, Bryan, EMNRD

From: Arrant, Bryan, EMNRD
Sent: Tuesday, March 06, 2007 9:10 AM
To: 'Shay Stricklin'
Subject: State IE # 2/API # 30-015-32410

Good morning Shay,

Can I get the procedure of recompletion for the above noted well?
I didn't find it attached to the information that we received and
I am not holding for approval any previous regulatory information on this well.

Thanks,

Bryan
505-748-1283 ext. 103

3/6/2007