



Legacy Reserves Operating LP, P.O. Box 10848, Midland, Texas 79702

RECEIVED

2014 FEB -6 10:33:23

February 3, 2014

New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505
ATTN: Mr. Phillip Goetze

RE: C-108 Application for Authorization to Inject
Hamon Federal Com #1
Quail Ridge Field
Lea County, New Mexico

Dear Phillip:

Attached is the referenced application to convert Hamon Federal Com #1 to water injection in the Delaware Brushy Canyon from 8060'-8370'. Attached are the following:

- 1) The "Application for Authorization to Inject" form C-108.
- 2) The "Injection Well Data Sheet".
- 3) Map showing the wells and leases within two miles of the proposed injection well and the half-mile radius around the proposed injection well, which defines the well's area of review. All wells within one-half mile of the proposed injection well are identified on the map.
- 4) A table of all wells within the half-mile radius area of review around the proposed injection well. Legacy Reserves Operating LP operates all wells within this half-mile radius.
- 5) An affidavit of publication signed by the publisher that notice of the application was published in a newspaper of general circulation in Lea County, New Mexico. A copy of the newspaper notice is also included.
- 6) Current and proposed wellbore diagrams of the Hamon Federal Com #1.
- 7) Geological data on the Hamon Federal Com #1, including a log section.
- 8) Engineering data on the Hamon Federal Com #1.
- 9) Lease operating statement for the past two years for the Hamon Federal Com #1.

A notice of this application was published in the Hobbs News-Sun on January 17, 2014. A copy of this application will be sent by certified mail to the surface owner of the well location, the BLM, on or before February 4, 2014. Since Legacy Reserves Operating LP currently operates all wells within the half-mile radius area of review, no offset operators were notified. —

If there are any questions regarding this application or if any additional information is needed, please contact me at 432/689-5201 or by email at blewis@legacylp.com. Thank you.

Sincerely,

Blain K. Lewis
Senior Engineer

BKL

Attachments

cc: NMOCD District Office – Hobbs
BLM Carlsbad Field Office - Carlsbad

02/06/14 DATE IN	SUSPENSE	ENGINEER PAG	02/07/14 LOGGED IN	TYPE SWD	PPRG1403843790 APP NO.
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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



ADMINISTRATIVE APPLICATION CHECKLIST

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]

[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 _____

*Legacy Reserves
Operating LP
Hamon Federal Com#1
30-025-30648*

[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.

<u>BLAIN LEWIS</u>	<u><i>Blain Lewis</i></u>	<u>SENIOR ENGINEER</u>	<u>2/3/14</u>
Print or Type Name	Signature	Title	Date
		<u>blewis@legacylp.com</u>	
		e-mail Address	

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance ☒ Disposal Storage
Application qualifies for administrative approval? ☒ Yes ☐ No
- II. OPERATOR: LEGACY RESERVES OPERATING LP
ADDRESS: P.O. BOX 10848, MIDLAND, TX 79702
CONTACT PARTY: BLAIN LEWIS PHONE: 432/689-5201
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? ☐ Yes ☒ 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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources 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: BLAIN LEWIS TITLE: SENIOR ENGINEER
SIGNATURE: [Signature] DATE: 2/3/14
E-MAIL ADDRESS: blewis@legacylp.com
- * If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances 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 the 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, New Mexico 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: LEGACY RESERVES OPERATING LPWELL NAME & NUMBER: HAMON FEDERAL COM #1WELL LOCATION: 660'FNL, 1980'FEL B 7 20S 34E
FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGEWELLBORE SCHEMATICSEE ATTACHEDWELL CONSTRUCTION DATASurface CasingHole Size: 17 1/2" Casing Size: 13 3/8"Cemented with: 450 sx. or _____ ft³Top of Cement: SURFACE Method Determined: VISUALIntermediate CasingHole Size: 12 1/4" Casing Size: 8 5/8"Cemented with: 4,510 sx. or _____ ft³Top of Cement: SURFACE Method Determined: VISUALProduction CasingHole Size: 7 7/8" Casing Size: 5 1/2"Cemented with: 550 sx. or _____ ft³Top of Cement: 8850' Method Determined: CEMENTTotal Depth: 13,700' BOND LOGInjection Interval8,060 feet to 8,370'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2 7/8" Lining Material: IPC
 Type of Packer: ARROWSET 1X
 Packer Setting Depth: 8050'
 Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____ Yes ☒ No

If no, for what purpose was the well originally drilled? PRODUCTION

2. Name of the Injection Formation: DELAWARE BRUSHY CANYON

3. Name of Field or Pool (if applicable): QUAIL RIDGE

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. MORROW 13,222'-13,533'

(CIBP AT 13,170' W/30' CMT ON TOP), ATOKA 12,524'-12,529' (WILL BE ABANDONED WITH CIBP AT 12,430' W/35' CMT ON TOP)

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: THE MAJOR PRODUCTION

IN THE IMMEDIATE VICINITY IS FROM
THE BONE SPRINGS INTERVALS BELOW
10,500'

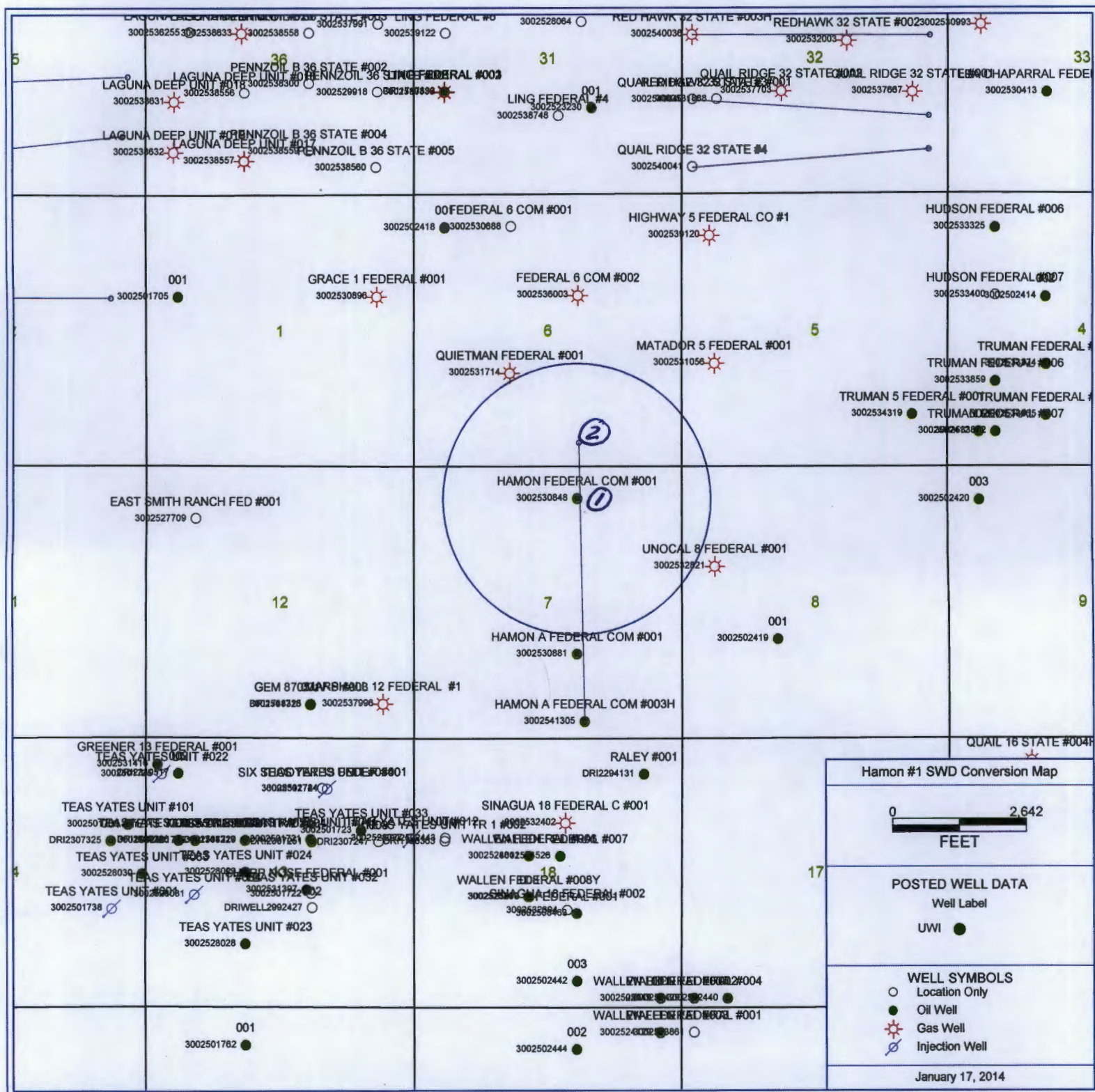


TABLE OF WELLS WITHIN A HALF-MILE RADIUS AREA OF REVIEW AROUND HAMON FEDERAL COM #1
LEA COUNTY, NEW MEXICO

Map No.	Operator	Lease	Well No.	Type Completion	API Number	Location (Sec., Twp, Range)	Spud Date	TD	Status
1	Legacy Reserves Operating LP	Hamon Federal Com	1	Gas	30-025-30848	7, 20S, 34E	Apr-90	13,700'	Producing
2	Legacy Reserves Operating LP	Hamon Fed Com A	3H	Oil	30-025-41305	6, 20S, 34E	Aug-13	16,028'	Producing

2 active wells
 → (one is application well)
 for 1 active well
 Ø P&A wells



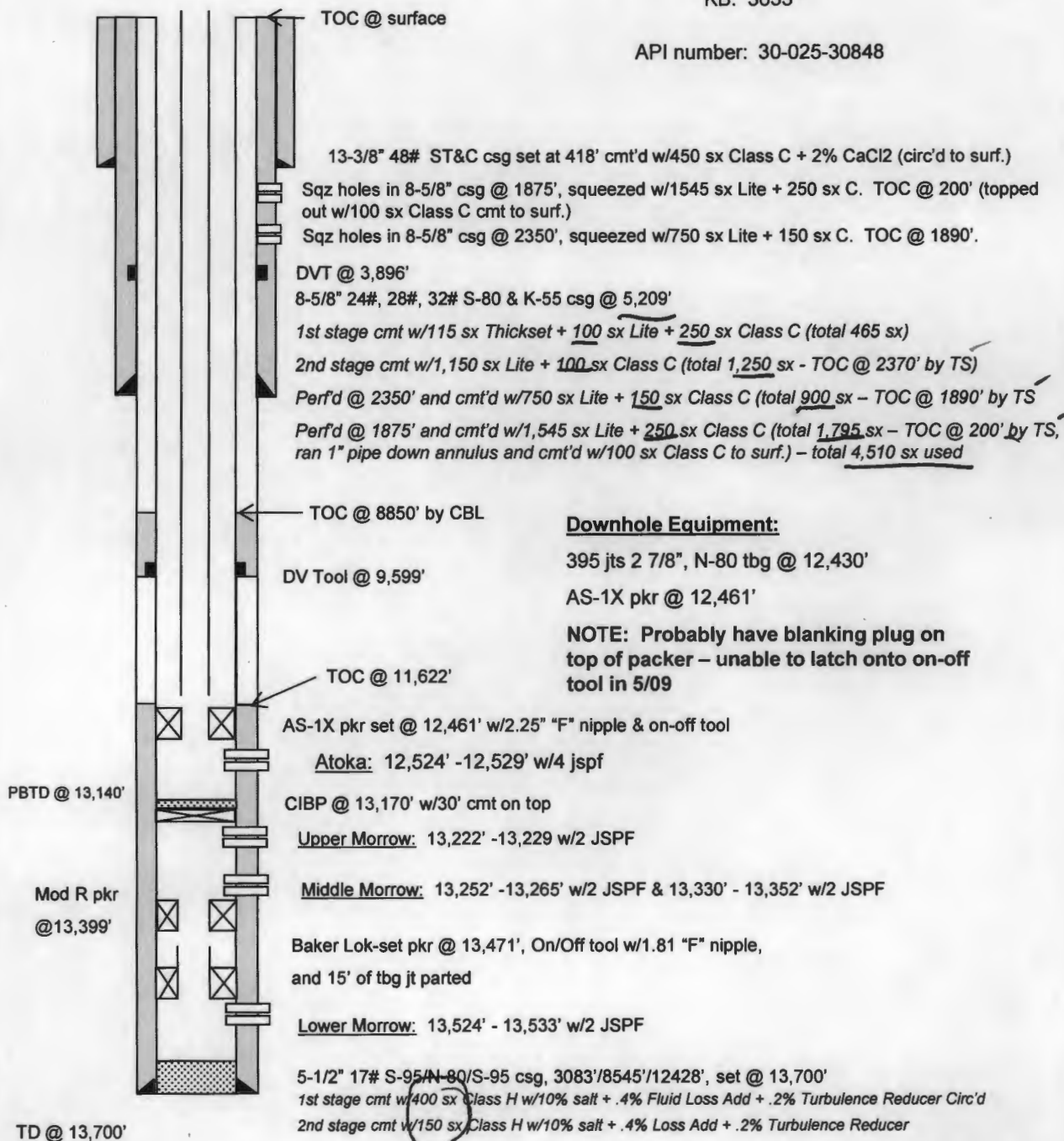
CURRENT WELLBORE DIAGRAM

FIELD: QUAIL RIDGE (ATOKA)
 LEASE: HAMON FEDERAL COM
 COUNTY: LEA
 STATE: NEW MEXICO
 WELL: 1
 LOCATION: 1980' FEL & 660' FNL,
 Sec. 7, T20S, R34E

GL: 3610'

KB: 3633'

API number: 30-025-30848



Downhole Equipment:

395 jts 2 7/8", N-80 tbg @ 12,430'

AS-1X pkr @ 12,461'

NOTE: Probably have blanking plug on top of packer - unable to latch onto on-off tool in 5/09

DATE: 11/12/13

BKL



PROPOSED WELLBORE DIAGRAM

FIELD: QUAIL RIDGE (ATOKA)
 LEASE: HAMON FEDERAL COM
 COUNTY: LEA
 STATE: NEW MEXICO
 WELL: 1
 LOCATION: 1980' FEL & 660' FNL,
 Sec. 7, T20S, R34E

GL: 3610'

KB: 3633'

API number: 30-025-30848

TOC @ surface

13-3/8" 48# ST&C csg set at 418' cmt'd w/450 sx Class C + 2% CaCl₂ (circ'd to surf.)

Sqz holes in 8-5/8" csg @ 1875', squeezed w/1545 sx Lite + 250 sx C. TOC @ 200' (topped out w/100 sx Class C cmt to surf.) ✓

Sqz holes in 8-5/8" csg @ 2350', squeezed w/750 sx Lite + 150 sx C. TOC @ 1890'. ✓

DVT @ 3,896'

8-5/8" 24#, 28#, 32# S-80 & K-55 csg @ 5,209'

1st stage cmt w/115 sx Thickset + 100 sx Lite + 250 sx Class C (total 465 sx)

2nd stage cmt w/1,150 sx Lite + 100 sx Class C (total 1,250 sx - TOC @ 2370' by TS)

Perf'd @ 2350' and cmt'd w/750 sx Lite + 150 sx Class C (total 900 sx - TOC @ 1890' by TS)

Perf'd @ 1875' and cmt'd w/1,545 sx Lite + 250 sx Class C (total 1,795 sx - TOC @ 200' by TS, ran 1" pipe down annulus and cmt'd w/100 sx Class C to surf.) - total 4,510 sx used

Brushy Canyon perms for SWD: 8140' - 8317' w/2 jspf, overall permitted injection interval 8060' - 8370'

Sqz perms @ 8530', cement with 600 sx CI "C" thru CR @ 8430', design TOC @

5100' inside 8-5/8" csg

TOC @ 8850' by CBL

DV Tool @ 9,599'

Downhole Equipment:

2 7/8", J-55, IPC tbg @ 8050'

Arrowset 1X pkr @ 8050'

CIBP @ 12,430'

w/35' cmt on top

TOC @ 11,622'

AS-1X pkr set @ 12,461' w/2.25" "F" nipple & on-off tool

Atoka: 12,524' - 12,529' w/4 jspf

CIBP @ 13,170' w/30' cmt on top

PBTD @ 13,140'

Upper Morrow: 13,222' - 13,229 w/2 JSPF

Middle Morrow: 13,252' - 13,265' w/2 JSPF & 13,330' - 13,352' w/2 JSPF

Baker Lok-set pkr @ 13,471', On/Off tool w/1.81 "F" nipple, and 15' of tbg jt parted

Lower Morrow: 13,524' - 13,533' w/2 JSPF

5-1/2" 17# S-95/N-80/S-95 csg, 3083'/8545'/12428', set @ 13,700'

1st stage cmt w/400 sx Class H w/10% salt + .4% Fluid Loss Add + .2% Turbulence Reducer Circ'd

2nd stage cmt w/150 sx Class H w/10% salt + .4% Loss Add + .2% Turbulence Reducer

TD @ 13,700'

DATE: 11/12/13

BKL

within 60' of lowest perf
CIBP w/cont cap

GEOLOGICAL DESCRIPTION

DELAWARE BRUSHY CANYON FORMATION

HAMON FEDERAL COM #1

Rock type: Sand

Thickness: 310' of gross sand interval with at least 40' of porosity greater than 10% in Hamon Federal Com #1

Depth: 8060'-8370'

Porosity: 10 to 16%

Permeability: Highly variable from 1 to 50 md (estimated)

Reservoir description: Lenticular stacked channel sands with inter-bedded shale intervals

Advantages for water injection: 1) Injection interval relatively deep below the surface, allowing for generally lower surface water injection pressures because of the hydrostatic fluid column.

2) A water aquifer is present; therefore, water injection or water disposal will simply supplement the natural recharge of the underlying aquifer.

3) More than 4,000' below the Capitan Reef, the deepest potential source of brackish water that might be economically used as a source of drinking water or as a source of water for hydraulic fracturing. There are no faults that could potentially transmit injection water into any underground sources of drinking water.

4) Porous and permeable allowing for a relatively high volume of water injection capacity without approaching or exceeding fracture pressure. An acid stimulation using up to 100 gallons per foot of perforated injection interval is planned prior to initiating water injection.

5) The Hamon Federal Com #1 has produced an average of only \$408 per month net cash flow in the past two years. The well has lost a total of \$31,276 in the past three months (see the attached lease operating statement). The well is operating at a loss as a producing well and has no economic recompletion potential as a producer.

6) There are no known active fresh water wells within one mile of the Hamon Federal Com #1.

Planned maximum injection rate: 10,000 barrels of water per day (BWPD)

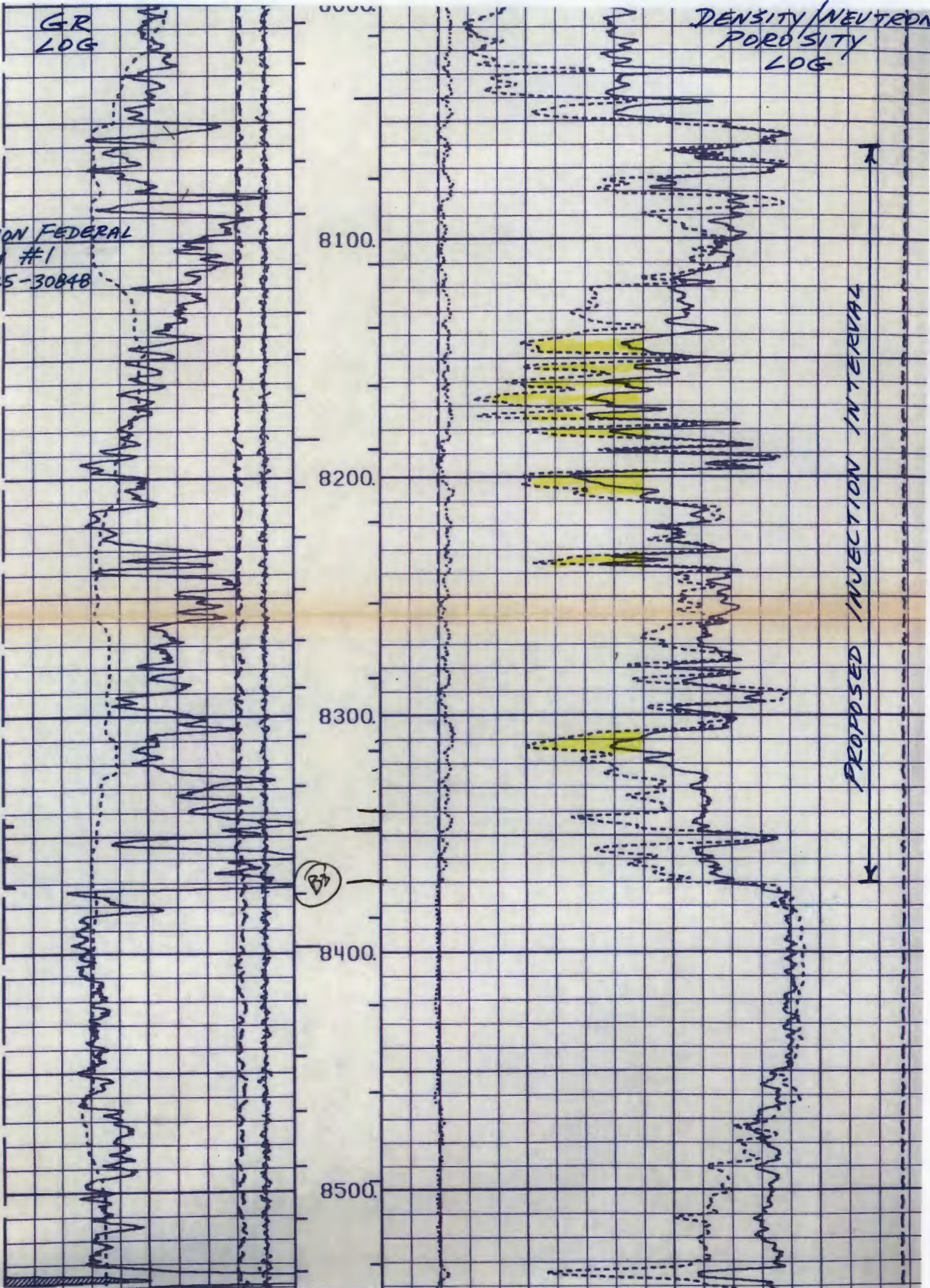
Planned maximum injection pressure: ~~4,000 pounds per square inch (psi)~~

admin
0.2 psi/ft
 $8060 \times 0.2 = 1612 \text{ psi}$

GR
LOG

HAMON FEDERAL
COM #1
30-025-30848

DENSITY/NEUTRON
POROSITY
LOG



ENGINEERING DATA
HAMON FEDERAL COM #1

Planned maximum injection rate: 10,000 barrels of water per day (BWPD)

Planned average injection rate: 5,000 barrels of water per day (BWPD)

Planned maximum injection pressure: ~~4,000~~ pounds per square inch (psi)

Admin
0.2 psi/ft

Injection will be within an entirely closed system. ✓

Produced water compatibility: The Bone Spring produced water of all Hamon Fed Com A✓
producing wells is expected to be compatible with the
waters of the Delaware Brushy Canyon proposed salt water
disposal interval in Hamon Federal Com #1.

Hamon Federal Com #1 Lease Operating Statement 12/1/11 - 11/30/13 (last 2 years)

LOS LINE DESCRIPTION (GLOSA)	Dec 2011	Jan 2012	Feb 2012	Mar 2012	Apr 2012	May 2012	Jun 2012	Jul 2012	Aug 2012	Sep 2012	Oct 2012	Nov 2012	Dec 2012	Jan 2013	Feb 2013	Mar 2013	Apr 2013	May 2013	Jun 2013	Jul 2013	Aug 2013	Sep 2013	Oct 2013	Nov 2013	TOTAL	AVERAGE	
REVENUE																											
OIL VOLUME - BBLs	0	0	0	0	0	341	0	184	0	0	0	0	0	0	0	0	370	0	0	0	181	0	0	30	1,106	46	
GAS VOLUME - MCF	18	0	5	10	6	413	859	131	272	87	91	167	120	88	164	0	197	192	297	326	165	14	0	1	3,623	151	
NGL VOLUME - GALS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
OIL PRICE						85.48		81.91									88.49			104.38				89.24	89.09	18.73	
GAS PRICE	6.62		5.02	5.31	4.87	4.08	3.69	4.03	4.44	4.30	4.47	4.69	4.61	4.32	4.44		4.60	4.70	4.72	4.62	4.83	4.91		4.37	4.32	4.07	
NGL PRICE																											
OIL REVENUE	0	0	0	0	0	29,128	0	15,063	0	0	0	0	0	0	0	0	32,762	0	0	0	18,896	0	0	2,640	98,489	4,104	
GAS REVENUE	119	0	25	53	29	1,687	3,173	528	1,209	374	406	783	553	380	728	0	907	902	1,403	1,506	798	69	0	4	15,638	652	
NGL REVENUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL OPERATING REVENUE	119	0	25	53	29	30,815	3,173	15,591	1,209	374	406	783	553	380	728	0	33,669	902	1,403	1,506	19,694	69	0	2,644	114,127	4,755	
PRODUCTION TAXES	11	0	2	5	3	2,618	292	1,322	111	34	37	72	51	35	67	0	2,842	83	129	138	1,665	6	0	224	9,746	406	
TOTAL REVENUE NET	108	0	23	48	27	28,197	2,881	14,269	1,098	340	369	711	503	345	662	0	30,827	820	1,274	1,368	18,029	62	0	2,420	104,380	4,349	
TOTAL BOEs																											
	3	0	1	2	1	410	143	206	45	15	15	28	20	15	27	0	403	32	50	54	209	2	0	30	1,709	71	
OPERATING																											
LE-COMPANY LABOR & SERVICES	45	145	45	48	74	68	68	68	70	68	71	71	71	41	20	22	17	41	41	41	41	41	43	43	1,300	54	
LE-LABOR BURDEN	16	33	18	19	32	30	30	30	31	30	31	31	31	8	12	13	9	15	15	15	15	15	16	16	508	21	
LE-MILEAGE	13	13	17	16	28	20	28	26	27	25	26	25	21	10	11	9	11	19	24	16	17	22	19	21	464	19	
LE-CONTRACT PUMPING	287	287	287	287	287	287	287	287	287	287	287	293	293	320	321	321	321	315	321	321	321	321	321	321	321	7,265	303
LE-CHEMICAL TREATING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE-SUPPLIES & MATERIALS	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	1	0	0	1	1	0	0	0	0	6	
LE-ELECTRICITY & POWER	0	0	0	0	0	0	0	0	1	0	0	3	1	0	186	182	187	196	205	179	196	486	0	282	2,103	88	
LE-NATURAL GAS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE-PROPANE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE-COMPRESSOR/VRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE-SUB PUMP RENTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE-SALT WATER DISPOSAL - TRUCK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	188	0	0	806	0	0	0	994	41	
LE-WATER DISPOSAL SYSTEMS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE-COMMUNICATIONS	2	3	2	4	1	1	1	2	1	3	2	2	2	2	0	0	0	0	0	0	0	0	1	1	0	31	
LE-CHARTS / GAS MEASUREMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	804	0	0	804	33	
LE-HOT OILERS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE- CO2 PURCHASED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE-RULE 15 COMPLIANCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE-GHG TESTING	0	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	
LE-NET PROFITS PAYMENTS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE-NET PROFITS EXPENSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
LE-OTHER	37	36	34	232	36	29	31	631	38	39	43	40	42	36	31	31	36	60	32	25	1,308	201	189	26	3,243	135	
TOTAL LEASE EXPENSE	401	519	403	606	459	436	447	1,043	455	453	461	464	463	415	580	578	581	833	637	597	2,704	1,890	588	708	16,720	697	
SURFACE MAINTENANCE																											
SM-SUPERVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SM-CONTRACT SERVICES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	999	454	0	0	1,453	61		
SM-ELECTRICAL REPAIRS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SM-SURFACE MAINT SUPPLIES	1	0	2	72	1	0	2	0	0	0	0	0	263	0	0	0	1	1	1	0	0	0	7	0	351	15	
SM-ENVIRONMENTAL CLEANUP	0	0	1	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	0	0	0	0	0	0	7	0	
SM-EQUIPMENT RENTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	4	1	12	1		
SM-SURFACE EQUIPMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SM-ARTIFICIAL LIFT MAINTENANCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SM-CHEMICALS/EQUIP SCALE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SM-TRANSPORTATION, TRUCKING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,293	0	0	2,753	529	0	0	4,574	191		
SM-SURFACE MAINT OTHER	0	0	0	0	0	0	0	0	344	3	0	0	0	0	273	0	0	0	0	0	0	0	0	0	619	26	
TOTAL SURFACE MAINTENANCE EXPENSE	1	0	3	72	1	0	2	0	344	3	0	0	264	0	278	0	1,294	1	1	0	3,755	986	11	1	7,017	292	
SUBSURFACE MAINTENANCE																											
SSM-SUPERVISION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SSM-CONTRACT SERVICES	0	0	0	0	0	5,640	0	0	6,223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11,863	494	
SSM-DOWNHOLE P																											

Hamon Federal Com #1 Lease Operating Statement 12/1/11 - 11/30/13 (last 2 years)

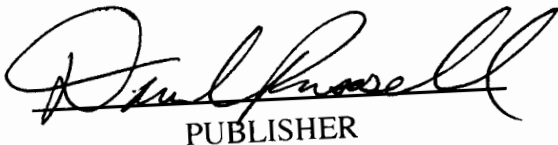
[illegible]

Affidavit of Publication

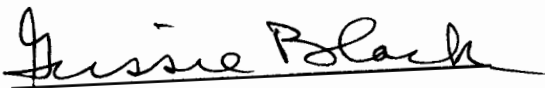
State of New Mexico,
County of Lea.

I, DANIEL RUSSELL
PUBLISHER
of the Hobbs News-Sun, a
newspaper published at Hobbs, New
Mexico, do solemnly swear that the
clipping attached hereto was
published in the regular and entire
issue of said newspaper, and not a
supplement thereof for a period

of 1 issue(s).
Beginning with the issue dated
January 17, 2014
and ending with the issue dated
January 17, 2014

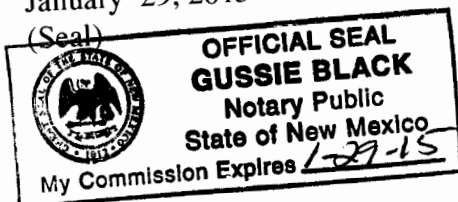

PUBLISHER

Sworn and subscribed to before me
this 27th day of
January, 2014



Notary Public

My commission expires
January 29, 2015



This newspaper is duly qualified to
publish legal notices or
advertisements within the meaning of
Section 3, Chapter 167, Laws of
1937 and payment of fees for said
publication has been made.

LEGAL NOTICE January 17, 2014

NOTICE OF APPLICATION FOR FLUID INJECTION WELL PERMIT

APPLICANT: Legacy Reserves Operating LP
P.O. Box 10848
Midland, Texas 79702

CONTACT: Blain Lewis (432/689-5200)

Legacy Reserves Operating LP is applying to the New Mexico Oil Conservation Division for a permit to inject fluid into a formation which is productive of oil and gas. Injection will be into the lower section of the Delaware Brushy Canyon formation, an interval that is not oil or gas productive in the immediate vicinity and is not expected to ever be produced.

The applicant proposes to inject fluid into the Delaware Brushy Canyon formation in the Hamon Federal Com lease, well number 1. The proposed salt water disposal well is located 660' FNL, 1980' FEL, Section 7, Township 20 South, Range 34 East, approximately 25 miles west of Hobbs, New Mexico in the Quail Ridge Field, Lea County. Fluid will be injected into strata in the subsurface depth interval from 8060' to 8370'. The proposed maximum permitted water injection rate is 10,000 barrels of water per day (BWPD) at a maximum pressure of 4,000 pounds per square inch (psi).

LEGAL AUTHORITY: Statewide Rules and Regulations of the New Mexico Oil Conservation Division.

Requests for a public hearing from persons who can show they are adversely affected, or requests for further information concerning any aspect of the application should be submitted in writing, within fifteen days of publication, to the New Mexico Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505.
#28699

67110800

00129182

LEGACY RESERVES OPERATING LP
PO BOX 10848
MIDLAND, TX 79702

**C-108 Review Checklist:**

Received 02/07/14 Add. Request: Reply Date: Suspended: [Ver 12]
 PERMIT TYPE: WFX / PMX (SWD) Number: 1468 Permit Date: 03/20/14 Legacy Permits/Orders: None

Well No. 1 Well Name(s): Harmon Federal Com.

API: 30-0 25-30848 Spud Date: 04/28/1990 New or Old: New (UIC Class II Primacy 03/07/1982)

Footages 660 FNL / 1980 FEL Lot - or Unit B Sec 7 Tsp 20S Rge 34E County Lea

General Location: ~8mi NE of Halfway / south of US180 Pool: Morrow & Atoka / Quay Ridge* Pool No.: 83280

BLM 100K Map: Hobbs Operator: Legacy Reserves Operating GRID: 240 974 Contact: Blaine Lewis

COMPLIANCE RULE 5.9: Inactive Wells: 10 Total Wells: 1366 Fincl Assur: Yes Compl. Order? No IS 5.9 OK? Date: 03/20/14 OK

WELL FILE REVIEWED ☒ Current Status: Depleted Morrow producer; well has packer above Atoka perms.

WELL DIAGRAMS: NEW: Proposed ☐ or RE-ENTER: Before Conv. ☒ After Conv. ☒ Logs in Imaging: 3 Density / DG Neutron Log
DLI / MicroGL & Sonic

Planned Rehab Work to Well: Squeeze cmt 5 1/2 in casing from 8530' to 5100'; CBIP; perf Brushy

Well Construction Details:		Sizes (in) Borehole / Pipe	Setting Depths (ft)	Cement (Sx) or Cf	Cement Top and Determination Method
Planned ___ or Existing ___	Conductor	—	—	—	—
Planned ___ or Existing ___	Surface	17 1/2 / 13 3/8	0 to 418	450	Circulate to surf
Planned ___ or Existing ___	Interm/Prod	12 1/4 / 8 5/8	0 to 5209	100+4510+1545	Circulate to surf
Planned ___ or Existing ___	Prod/Interm	7 7/8 / 5 1/2	0 to 13700	400+150	15 CBL / numas attempts
Planned ___ or Existing ___	Liner/Prod	—	—	—	—
Planned ___ or Existing ___	OH / PERF	5 1/2	8000 to 8370	Inj Length 310'	—

Injection Stratigraphic Units:	Depths (ft)	Injection or Confining Units	Tops?
Adjacent Unit: Litho. Struc. Por.	—	—	—
Confining Unit: Litho. <u>Struc.</u> Por.	+1560	Delaware Gp	6360
Proposed Inj Interval TOP:	8060	Brushy Canyon	8370
Proposed Inj Interval BOTTOM:	8370	Formation	8370
Confining Unit: Litho. Struc. <u>Por.</u>	—	Bore Spring	8540*
Adjacent Unit: Litho. Struc. Por.	—	Wolfcamp	8370

Completion/Operation Details:	
Drilled TD	13700
PBTD	13140
NEW TD	—
NEW PBTD	~8520
NEW Open Hole <input type="checkbox"/> or NEW Perfs <input checked="" type="checkbox"/>	
Tubing Size	2 7/8 in. Inter Coated? <u>Yes</u>
Proposed Packer Depth	8050 ft
Min. Packer Depth	7960 (100-ft limit)
Proposed Max. Surface Press.	4000 psi
Admin. Inj. Press.	1612 (0.2 psi per ft)

AOR: Hydrologic and Geologic Information

POTASH: R-111-P ☒ Noticed? No BLM Sec Ord ☒ WIPP ☒ Noticed? NA SALADO: T: — B: — CLIFF HOUSE NA

FRESH WATER: Aquifer Mineral Max Depth ~2300 ft Mile Wells? No FW Analysis NA HYDRO AFFIRM STAT By Qualified Person ☒

Disposal Fluid: Formation Source(s) Capitan Basin / NMSE0 Bore Spring Analysis? Yes On Lease ☐ Operator Only ☒ or Commercial ☐

Disposal Interval: Inject Rate (Avg/Max BWPD): 5000/10000 Protectable Waters?: No CAPITAN REEF thru adj ☒ NA ☐

HC Potential: Producing Interval? Unk Formerly Producing? No Method: Logs/DST/P&A/Other 2-Mile Radius Pool Map ☐

AOR Wells: 1/2-M Radius Map? Yes Well List? Yes Total No. Wells Penetrating Interval: 1 Horizontals? Yes

Penetrating Wells: No. Active Wells 1 Num Repairs? 0 on which well(s)? Citamon Fed Com A #3H Diagrams? NA

Penetrating Wells: No. P&A Wells 0 Num Repairs? 0 on which well(s)? Diagrams?

NOTICE: Newspaper Date 01/17/2014 Mineral Owner BLM Surface Owner BLM / Lease N. Date 02/04/2014

RULE 26.7(A): Identified Tracts? No Affected Persons: Legacy - only operator within 1/2 mile N. Date NA

Permit Conditions: Issues: *BLM / old production; CBIP not noted on proposed; HC potential - not identified

Add Permit Cond: cmt for 5 1/2 in - cmt to be squeezed.
CBIP specified; CBL to be completed following cmt squeeze

Goetze, Phillip, EMNRD

From: Ingram, Wesley <wingram@blm.gov>
Sent: Monday, February 24, 2014 12:08 PM
To: Goetze, Phillip, EMNRD; Blain Lewis
Subject: Hamon Federal Com 1

Phillip and Blain,

The BLM does not have any objections to the conversion of this well.

However, the plugback procedure when submitted will be modified to place some missing plugs and verify others.

The well bore schematic indicates that the well was re-completed to the Atoka. The BLM never received a request to come up hole as is required by 43 CFR and received no sundries or completion report for this formation. The BLM records still show a Morrow completion. These records are required to be updated prior to any approval for conversion.

Also, the proposed injection pressure is equivalent to 0.49 psi/ft with the usual approval at 0.22 psi/ft. However, this is for NMOCD to decide.

Sincerely,
Wesley W. Ingram
Supervisory Petroleum Engineer
Bureau of Land Management
Carlsbad Field Office
620 E. Greene Street
Phone: 575-234-5982
Fax: 575-234-5927

ATTACHMENT
QUAIL RIDGE (DELAWARE) WATER PRODUCED

Resistivity.....0.052 @ 60° F
Specific GR.....1.170✓
pH.....6.2
Calcium.....15900 }
Ca }
Magnesium.....9300 } 164,700 mg/L
Mg }
Chlorides.....139500 }
Cl }
Sulfates.....light
SO4 }
Bicarbonates.....134
HCO3 }
Soluble Iron.....light
Fe }

Pool Merge Request
11-2-25

From 50463
To 37584

AP✓

Hamon Federal Com. #1

