

DATE IN 10/24/07	SUSPENSE	ENGINEER W Jones	LOGGED IN 10/29/07	TYPE SWD	APP NO. PKVR0730229058
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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 _____

[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.

Print or Type Name	Signature	Title	Date
e-mail Address			



Synergy Operating, LLC

PO Box 5513
Farmington, NM 87499
(505) 325-5449
Fax (505) 566-3750

Return Receipt #7005 1820 0002 8601 4125

October 19, 2007

N.M. Oil Conservation Division
Engineering Bureau
1220 So. Saint Francis St
Santa Fe, NM 87505

Attn: Will Jones

RECEIVED
2007 OCT 24 PM 3 52

Re:

C-108 (Class II water disposal well)
Application for Authorization to Inject
Caleb Mesa SWD #1
Sandoval Co., NM

Attached please find Synergy Operating LLC's application for disposal of produced water in the proposed Caleb Mesa SWD #1 well. An 'Application for Permit to Drill' has been filed with the Farmington BLM office. In fulfilling the requirements of New Mexico statute 19.25.9.701 the following materials are provided herein:

1. NM OCD Form C-108, 'Application for Authorization to Inject',
2. Tabular and schematic data for the proposed injection well,
3. A map that identifies all wells and leases within two miles of the proposed injection well with a one-half mile radius circle drawn around the proposed well,
4. A table of data on all wells of public record within the area of review which penetrate the proposed injection zone,
5. An operating plan for the proposed injection well, which includes a water analysis of the proposed Fruitland Coal produced water,
6. Geologic Data for the injection zone in the proposed well,
7. Proposed stimulation program,
8. Proposed well logging and test program,
9. The chemical analyses from a fresh water well within a mile of the proposed well,
10. An affirmation statement of hydrological conditions,
11. Proof of notice in the form of 'Notification Letters' sent to surface owners and offset operators and a copy of the 'Affidavit of Publication' of the notice as it appeared in the Farmington Daily Times.

Should you have any questions, please contact me at (505) 325-5449, Ext #2 during business hours, or at the above letterhead address.

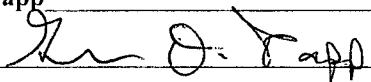
Sincerely,

A handwritten signature in black ink, appearing to read 'Glen O. Papp', with a stylized flourish at the end.

Glen O. Papp, P.E.
Principal / Operations Manager

Attachments
xc: file

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: _____ Secondary Recovery _____ Pressure Maintenance X Disposal _____ Storage
Application qualifies for administrative approval? _____ Yes _____ No
- II. OPERATOR: _____ Synergy Operating LLC (OGRID: 163458) _____
ADDRESS: _____ P.O. Box 5513, Farmington, NM 87499 _____
CONTACT PARTY: _____ Glen Papp _____ PHONE: 505-325-5449 _____
- 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 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. **See Attached**
- 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. **See Attached**
- VII. Attach data on the proposed operation, including: **See Attached**
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. **See Attached**
- IX. Describe the proposed stimulation program, if any. **See Attached**
- *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. **See Attached**
- 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. **See Attached**
- 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: _____ Glen O. Papp _____ TITLE: Operations Manager _____
SIGNATURE: _____  _____ DATE: Oct 19, 2007 _____
E-MAIL ADDRESS: gpapp@synergyoperating.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: **See Attached**

- (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 **See Attached**

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.

Subpart III

INJECTION WELL DATA SHEET

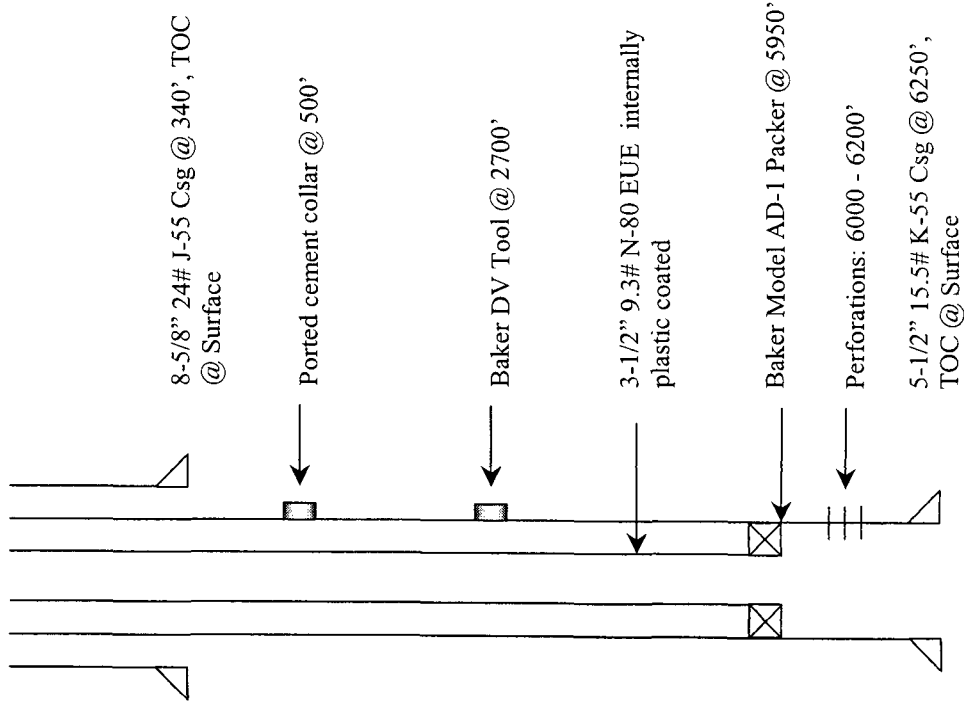
OPERATOR: Synergy Operating LLC

WELL NAME & NUMBER: Caleb Mesa SWD #1

WELL LOCATION: 2080'FSL & 1750' FEL, UNIT LETTER J SECTION 07 TOWNSHIP 21N RANGE 07W

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA



Hole Size: 12-1/4" Casing Size: 8-5/8"

Cemented with: 260 sx. or 307 ft³

Top of Cement: Surface Method Determined: Will Circulate

Intermediate Casing

Hole Size: N/A Casing Size: N/A

Cemented with: sx. or ft³

Top of Cement: Method Determined:

Production Casing

Hole Size: 7-7/8" Casing Size: 5-1/2"

Cemented with: 805 sx. or 1569 ft³

Top of Cement: Surface Method Determined: Will Circulate

Total Depth: 6250'

Injection Interval

6000' (TBD from logs) feet to 6200' (TBD from logs)

TD: 6250'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 3-1/2" Lining Material: Plastic or Seal-Tite

Type of Packer: Baker Model AD-1 internally coated

Packer Setting Depth: 5950' (50' + over top perf)

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

Additional Data

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

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

2. Name of the Injection Formation: Entrada Sandstone

3. Name of Field or Pool (if applicable): N/A

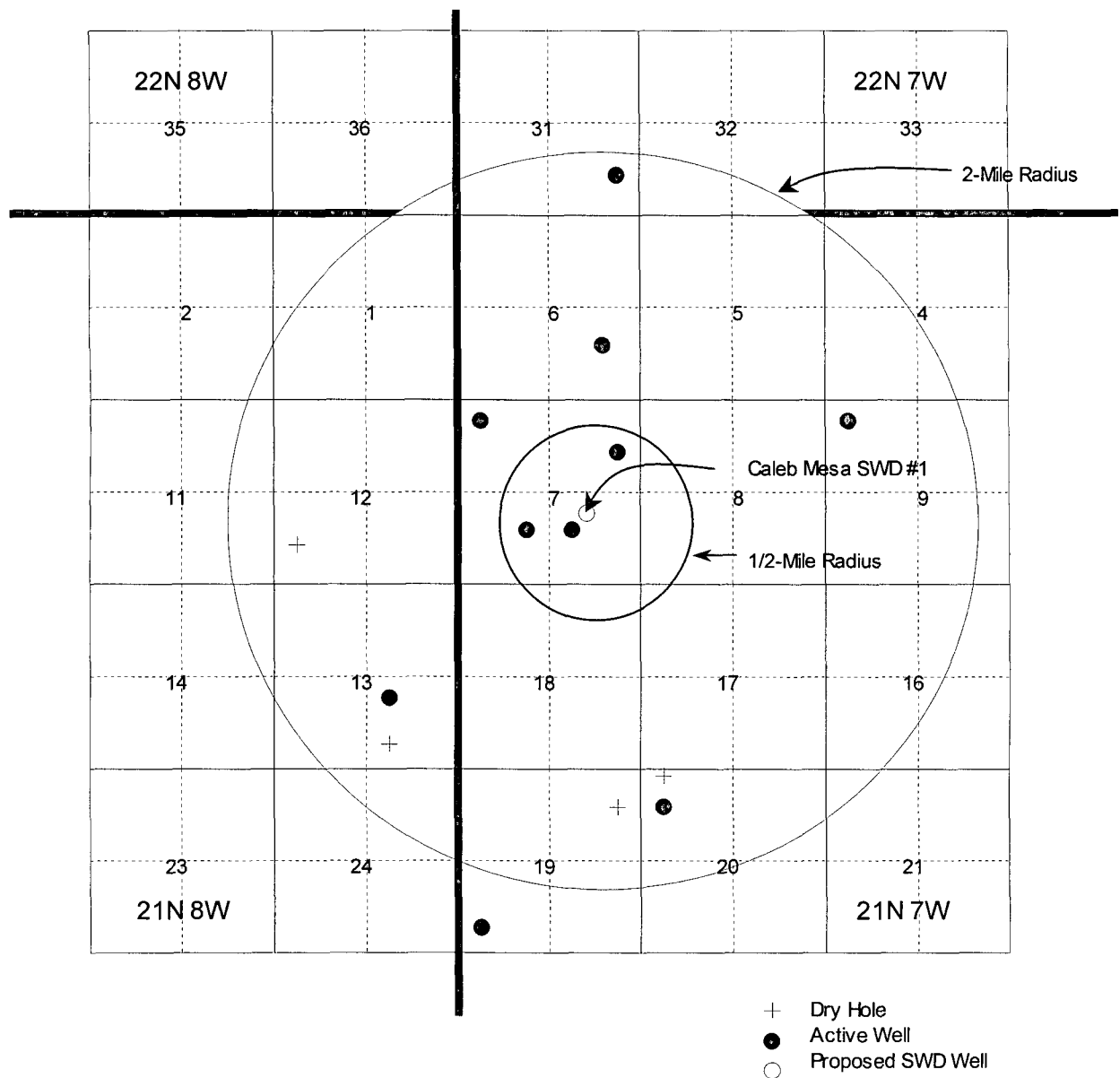
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. This is a new well to be drilled for the sole propose of disposal into the and no other zones will be perforated

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

Fruitland Coal @ 540', Pictured Cliffs @ 607 and Gallup @ 3825'

Subpart V

V(a) - Well Map

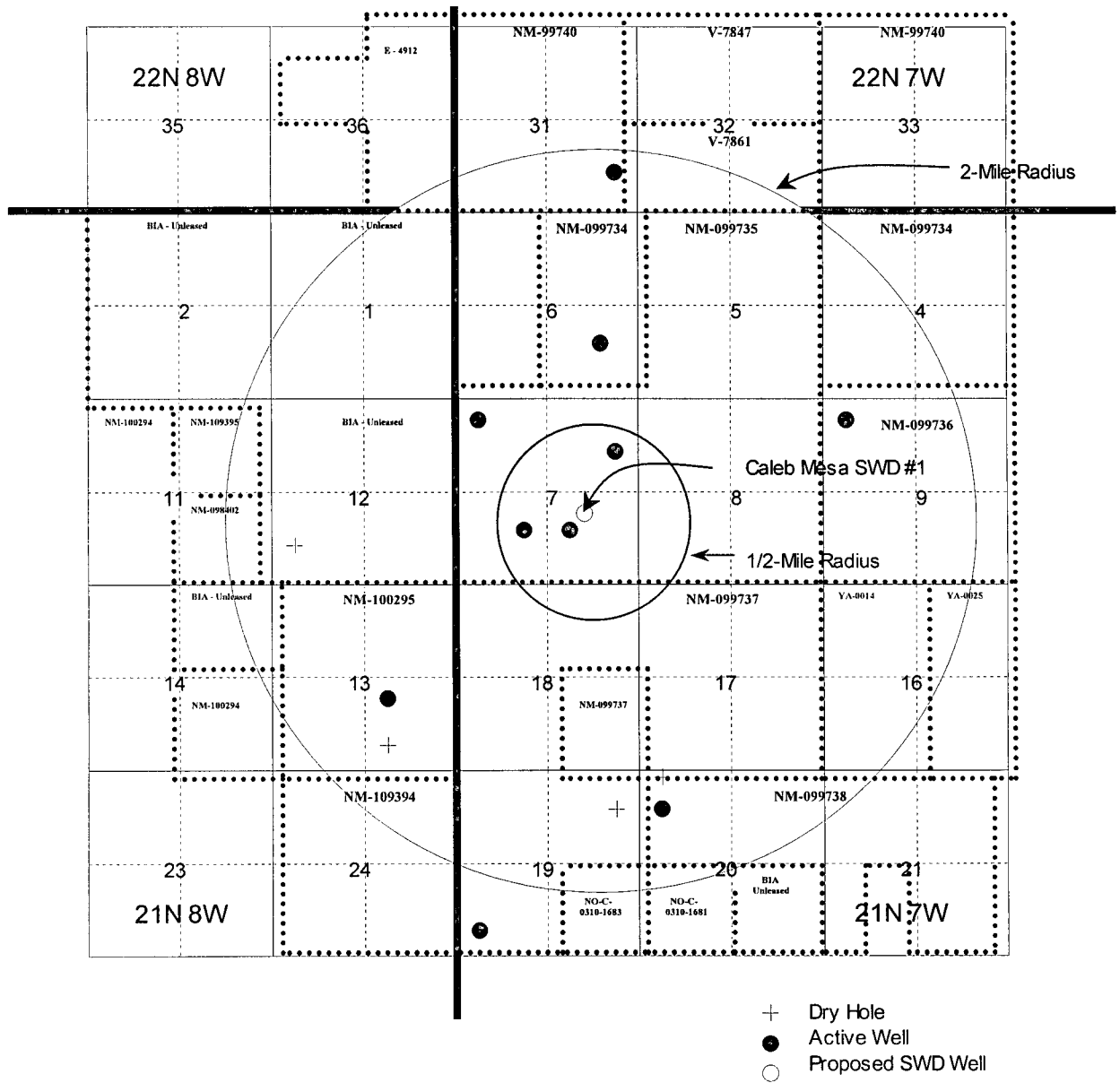


Synergy Operating LLC

Caleb Mesa SWD #1
2080' FSL & 1750' FEL
Sec 7, T21N-R07W
Sandoval Co., NM

C-108 (Salt Water Disposl Appliation)

V(b) - Lease Map



Synergy Operating LLC

Caleb Mesa SWD #1
 2080' FSL & 1750' FEL
 Sec 7, T21N-R07W
 Sandoval Co., NM

C-108 (Salt Water Disposal Application)

Synergy Operating: C-108 Application
Caleb Mesa SWD #1

V (b)

Lease Number	Leasee	Address	Acreage
NM-099740	SG Interests VII Ltd	909 Fannin #2600, Houston, TX 77010	Sec 31 & 33, T22N-R7W
NM-099734	Yates Petroleum	105 S. 4th St, Artesia, NM 88210	W/2 Sec 6, Sec 4, T21N-R7W
NM-099735	Yates Petroleum	105 S. 4th St, Artesia, NM 88210	Secs 5, 7 & 8, T21N-R7W
NM-099736	Yates Petroleum	105 S. 4th St, Artesia, NM 88210	Sec 9, T21N-R7W
NM-099737	Yates Petroleum	105 S. 4th St, Artesia, NM 88210	Sec 17, N/2 & SW/4 Sec 18, N/2 & SW/4 Sec 19, T21N-R7W
NM-100288	SG Interests VII Ltd	909 Fannin #2600, Houston, TX 77010	SE/4 Sec 18, T21N-R7W
NM-099738	Yates Petroleum	105 S. 4th St, Artesia, NM 88210	N/2 Sec 20, N/2 + SE/4 + W/2 SW/4 Sec 21, T21N-R7W
NM-100295	SG Interests VII Ltd	909 Fannin #2600, Houston, TX 77010	Sec 13, T21N-R8W
NM-109394	SG Interests VII Ltd	909 Fannin #2600, Houston, TX 77010	Sec 24, T21N-R8W
NM-109395	CDX Gas	5485 Beltline Rd - Ste 190, Dallas, TX 75254-7672	NE/4 Sec 11, T21N-R8W
NM-098402	Wyotex Oil Co.	5501 W. Milan, Lakewood, CO 80235	SE/4 Sec 11, T21N-R8W
NO-C-0310-1683	CDX Gas	5485 Beltline Rd - Ste 190, Dallas, TX 75254-7672	SE/4 Sec 19, T21N-R7W
NO-C-0310-1681	CDX Gas	5485 Beltline Rd - Ste 190, Dallas, TX 75254-7672	SW/4 Sec 20, T21N-R7W
NM-100294	SG Interests VII Ltd	909 Fannin #2600, Houston TX 77010	SE/4 Sec 14, T21N-R8W
E-4912	BP America Production Co.	P.O. Box 3092, Houston, TX 77253	S/2 NW/4, NE/4 & SE/4 Sec 36, T22N-R8W
V-7861	Dugan Production	P.O. Box 420, Farmington, NM 87400-0430	S/2 Sec 32, T22N-R7W
V-7847	Dugan Production	P.O. Box 420, Farmington, NM 87400-0430	N/2 Sec 32, T22N-R7W
BIA	Unleased	N/A	Sec 1, Sec 2, Sec 12, NE/4 Sec 14, T21N-R8W

Subpart VI

Synergy Operating: C-108 Application

VI (a)

Operator	Well Name & number	Status	TD	U/L	Location	Pool	Penetrated Proposed Inj Zone ?
Wells within 1/2-Mile area of review							
Synergy Operating LLC	Synergy 21-7-7 #131	Active	861	H	Sec 7, T21N-R7W	Basin Fruitland Coal	No
Synergy Operating LLC	Synergy 21-7-7 #135	Active	826	K	Sec 7, T21N-R7W	Basin Fruitland Coal	No
Synergy Operating LLC	Synergy 21-7-7 #136	Active	764	J	Sec 7, T21N-R7W	Basin Fruitland Coal	No
Wells within 2-Mile area of review							
Synergy Operating LLC	Synergy 21-7-7 #130	Active	888	D	Sec 7, T21N-R7W	Basin Fruitland Coal	No
Synergy Operating LLC	Synergy 21-7-6 #134	Active	881	I	Sec 6, T21N-R7W	Basin Fruitland Coal	No
Synergy Operating LLC	Synergy 22-7-31 #144	Drilling	950(Est)	P	Sec 31, T22N-R7W	Basin Fruitland Coal	No
Synergy Operating LLC	Synergy 21-7-9 #190	Drilling	900(Est)	D	Sec 9, T21N-R7W	Basin Fruitland Coal	No
Synergy Operating LLC	Synergy 21-7-20 #159	Drilling	950(Est)	E	Sec 20, T21N-R7W	Basin Fruitland Coal	No
SG Interests I, Ltd	Federal 21-8-13 #4	Active	885	J	Sec 13, T21N-R8W	Basin Fruitland Coal	No
Tesoro Petroleum Corp	Andele #1	P&A	5124	L	Sec 12, T21N-R8W	Wildcat	No
Eastern Petroleum Corp	Andele Lease #1	P&A	5080	O	Sec 13, T21N-R8W	Wildcat	No
Chance Oil Company, Inc	Rattlesnake-Federal #1	P&A	6050	A	Sec 19, T21N-R7W	Wildcat-Entrada	Yes
Davis Oil Co.	Gov't Coop #1	P&A	5295	D	Sec 20, T21N-R7W	Wildcat	No

Subpart VII

Synergy Operating: C-108 Application

VII . Operating Plan

- 1) The expected Average Daily Rate of Injection: 2500-Bbls Water per Day
The Maximum Daily Rate of Injection: 5000-Bbls Water per Day
- 2) The injection system will be a closed-loop system.
- 3) The expected Average Injection Pressure: 800-PSIG
The Maximum Injection Pressure: 1500-PSIG
- 4) The water to be disposed of will be from the Fruitland Coal formation in the area of the proposed injection well (T21N-R07W & T21N-R08W). Attached are water analyses from two Fruitland Coal wells, Synergy 21-7-7 #135 and Synergy 21-7-7 #136, within the project area. The Fruitland coal water is compatible with the Entrada formation water and scaling should not be a problem.
- 5) Injection into the Entrada sandstone is for disposal purposes only. The Entrada sandstone is not productive of oil or gas within a one-mile radius of the proposed injection site. An analysis of the Entrada formation water will not be available until the well is complete.

Key Pressure Pumping Services

Water Analysis Result Form

Farmington, NM.

708 S. Tucker

Phone:(505)325-4192

Fax:(505)564-3524

Zip:87401



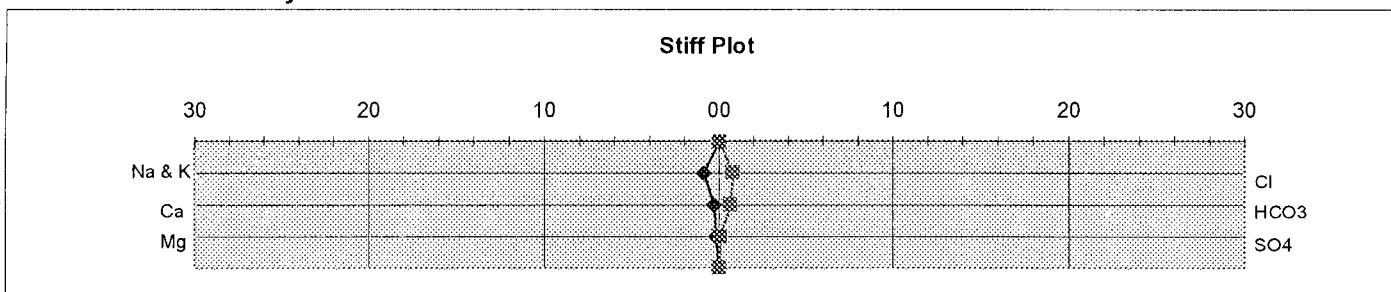
Operator: Synergy	Sample Date: January 18, 2007
	Analysis Date: January 18, 2007
Well :135	District: Farmington
Formation:	Requested By: Tom Mullins
County:	Technician: MELVIN JIM
Depth:	Source:

PHYSICAL AND CHEMICAL DETERMINATION

SPECIFIC GRAVITY: 1.010	67 (°F)	S.G. (Corrected): 1.011
pH: 7.00	MAGNESIUM: 2165 ppm	
RESISTIVITY: 10.00 ohm/meter	CALCIUM: 5545 ppm	
IRON: 0.38 ppm	BICARBONATES: 85 ppm	
H2S: 0 ppm	CHLORIDES: 16832 ppm	
POTASSIUM: 14 ppm	SODIUM : 1506 ppm	
SULFATES: 51 ppm	TDS: 26207 ppm	

CaCO3 Scale Tendency = Remote

CaSO4 Scale Tendency = Probable



Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

Key Pressure Pumping Services

Water Analysis Result Form

Farmington, NM.

708 S. Tucker

Phone:(505)325-4192

Fax:(505)564-3524

Zip:87401



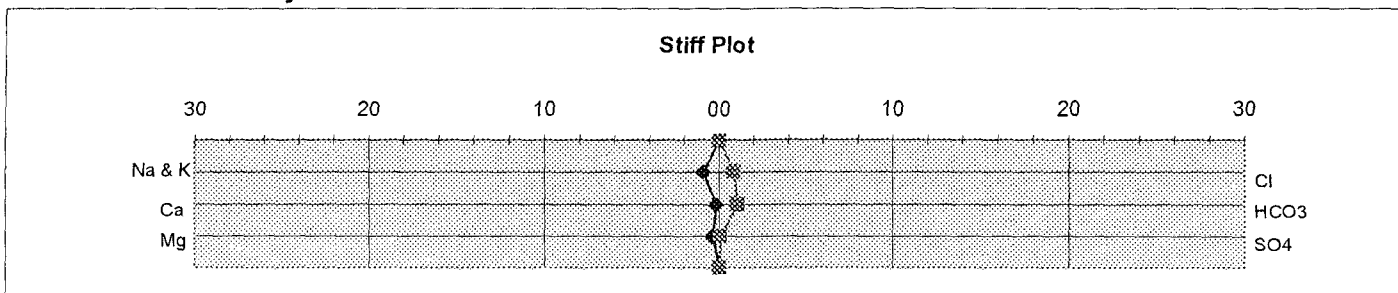
Operator: Synergy	Sample Date: January 18, 2007
	Analysis Date: January 18, 2007
Well :136	District: Farmington
Formation:	Requested By: Tom Mullins
County:	Technician: MELVIN JIM
Depth:	Source:

PHYSICAL AND CHEMICAL DETERMINATION

SPECIFIC GRAVITY: 1.005	65 (°F)	S.G. (Corrected): 1.006
pH: 6.20	MAGNESIUM: 4352 ppm	
RESISTIVITY: 1.00 ohm/meter	CALCIUM: 3184 ppm	
IRON: 0.36 ppm	BICARBONATES: 134 ppm	
H2S: 0 ppm	CHLORIDES: 16915 ppm	
POTASSIUM: 13 ppm	SODIUM : 1218 ppm	
SULFATES: 47 ppm	TDS: 25865 ppm	

CaCO3 Scale Tendency = Remote

CaSO4 Scale Tendency = Probable



Data contained in this document is based on the best information & most current test procedures and materials available. No liability is expressed or implied.

Subpart VIII

Synergy Operating: C-108 Application

VIII . Geologic Data

Injection Zone:

Geologic Name: Entrada
Lithologic Detail: Sandstone
Depth: 6000'
Injection Interval: 6000 – 6200'

Zones Overlying the proposed location:

<i>Formations:</i>	<i>Tops/Depth</i>	<i>Fluids</i>
Fruitland Coal	540'	Natural gas & produced water
Pictured Cliffs	607'	Natural gas & produced water
Lewis Shale	717'	
Mesa Verde	1385'	Produced water
Mancos	2997'	
Gallup	3825'	Oil, natural gas & produced water
Graneros	4814'	
Dakota	4844'	Produced water
Burro Canyon	5124'	
Morrison	5156'	
Entrada	6014'	
TOTAL Depth	6250'	

The Ojo Alamo is not present at the proposed location. The only known source of stock water in the area exists in arroyos at depths less than 50' below ground level.

Zones Underlying the proposed location:

There are no know sources of drinking water below the projected total depth of 6250'

Subpart(s) IX, X & XI

Synergy Operating: C-108 Application

IX . Stimulation Program

It is not anticipated that the proposed injection interval, in the Entrada sandstone, will require stimulation. However, if after performing injectivity tests the well is not handling the volumes of water at the expected pressures a stimulation treatment will be contemplated. Initially an acidize stimulation would be attempted. If the anticipated volumes and pressure are still not achieved, a propped sand/water fracture treatment will be tried.

X . Logging and Test Data

It is anticipated to run a suite of open-hole logs to include the following tools: GR-SP-Induction/Resistivity-Neutron-Density

The final logs copies will be submitted to the New Mexico Oil Conversation Division's Aztec, NM office.

X I. Fresh Water Wells

There is only one known water well within a one-mile radius of the proposed well. The water from the well is produced from the Fruitland formation. The Caleb Mesa School uses the water as potable water. A water analysis is from this well, Vincent Water well, is attached.



BJ SERVICES

Farmington District Lab

Water Analysis Report

Test # 0

Customer/Well Information

Company: Synergy Operating, LLL
Well Name: Vincent Water Well
Location: Zin-7w-Section 7
State: SJ County, NM
Formation: unknown
Depth: 680
Date: 5/26/2006
Prepared for: Tom Mullins
Submitted by: Tom Mullins
Prepared by: Cassandra Begay
Water Type: Well Water

Background Information

Reason for Testing: routine
Completion type:
Well History:
Comments:

Sample Characteristics

Sample Temp: 74 (°F)
pH: 7.56
Specific Gravity: 1.010
S.G. (Corrected): 1.013 @ 60 °F
Resistivity (Meas.): 0.86 Ω-m
Viscosity: 1cP
Color: Clear
Odor: None
Turbidity: None
Filtrates: None

Sample Composition

CATIONS	mg/l	me/l	ppm
Sodium (calc.)	3599	156.5	3563
Calcium	72	3.6	71
Magnesium	87	7.2	87
Barium	0	0.0	0
Potassium	16	0.4	16
Iron	0.00	0.0	0.00

ANIONS

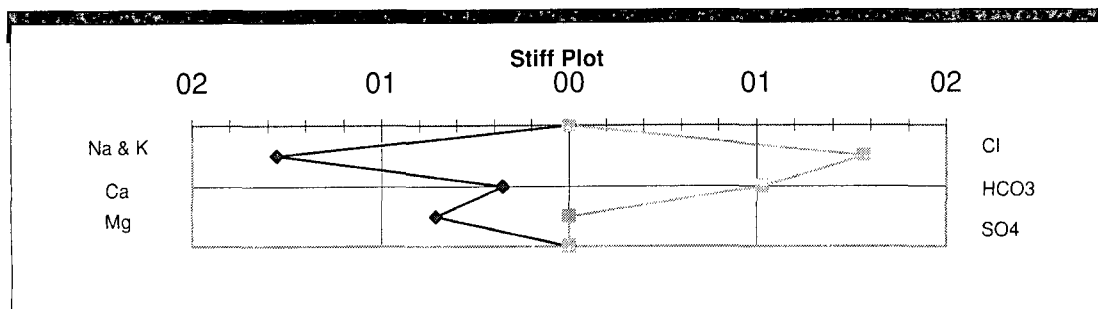
Chloride	5600	158.0	5545
Sulfate	0	0.0	0
Hydroxide	0	0.0	0
Carbonate	< 1	----	----
Bicarbonate	634	10.4	628

SUMMARY

Total Dissolved Solids(calc.)	9993		9894
Total Hardness as CaCO3	540	10.8	535

Scaling Tendencies

CaCO3 Factor 45790.99 Calcium Carbonate Scale Probability --> REMOTE
CaSO4 Factor 0 Calcium Sulfate Scale Probability -----> REMOTE



Back

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number Tws Rng Sec q q q Zone X Y
SJ 03562 21N 07W 07 1 3 3

Driller Licence: 1451 BOHANNON, WESTON

Driller Name: LOPEZ, CLIFFORD

Source: Shallow

Drill Start Date: 03/24/2005

Drill Finish Date: 03/26/2005

Log File Date: 07/19/2005

PCW Received Date:

Pump Type:

Pipe Discharge Size:

Casing Size: 4

Estimated Yield: 25

Depth Well: 680

Depth Water: 240

Water Bearing Stratifications:	Top	Bottom	Description
	640	680	Sandstone/Gravel/Conglomerate
Casing Perforations:	Top	Bottom	
	580	660	


Subpart XII

Synergy Operating: C-108 Application

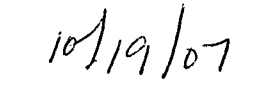
Caleb Mesa SWD #1

XII . Statement of Geologic and Engineering Data

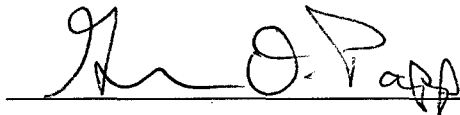
I have examined the geologic and engineering data that is available in the public domain and find no evidence of open faults or any other hydrologic connection between the proposed disposal zone and any underground sources of drinking water.




Lisa Gusek, Geologist



Date



Glen O. Papp, P.E.



Date

Subpart XIII

Synergy Operating: C-108 Application

Caleb Mesa SWD #1

XIII . Proof of Notice

- 1) Attached are copies of certified letters sent to the owners of the surface of the land on which the proposed well is to be located and to each leasehold operator within one-half mile of the proposed well.
- 2) Attached is a proof of publication with an affidavit of publication and a copy of the legal advertisement that appeared in the Farmington Daily Times on October 8 & 9, 2007. The well is located Sandoval County, but straddles the San Juan County / Sandoval County border. Therefore, the legal advertisement was published in the Farmington Daily Times to reach the greatest number of potential respondents.



PO Box 5513
Farmington, NM 87499
(505) 325-5449
Fax (505) 566-3750

Return Receipt #7005 1820 0002 8601 4132

October 19, 2007

Bureau of Land Management
1235 La Plata Hwy
Farmington, NM 87401

Attn: David Mankiewicz

Re:

Notice of Intent
C-108 (Class II water disposal well)
Application for Authorization to Inject
Caleb Mesa SWD #1
Sandoval Co., NM

Synergy Operating LLC has filed an application for administrative approval, Form C-108, with the New Mexico Oil Conservation Division for authorization to disposal of produced water in the Caleb Mesa SWD #1 well, Sec 7, T21N-R07W, 2080' FSL & 1750' FEL, Sandoval County, New Mexico. Injection will be in the Enrada Sandstone at an interval from 6000' to 6200' below the surface. A copy of the application is attached.

As the surface owner of the land that the well is to be located on, as well as an oil and gas interest owner of the minerals beneath the surface, the Bureau of Land Management, is being notified of this application. If you wish to object or request the matter for hearing, please contact the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days. Should you have any questions, please contact me at (505) 325-5449, Ext #2 during business hours, or at the above letterhead address.

Sincerely,

Glen O. Papp, P.E.
Principal / Operations Manager

Attachments
xc: file



PO Box 5513
Farmington, NM 87499
(505) 325-5449
Fax (505) 566-3750

Return Receipt #7005 1820 0002 8601 4149

October 12, 2007

Yates Petroleum
105 S. 4th St.
Artesia, NM 88210


Attn: Regulatory Affairs

Re:
Notice of Intent
C-108 (Class II water disposal well)
Application for Authorization to Inject
Caleb Mesa SWD #1
Sandoval Co., NM

Synergy Operating LLC has filed an application for administrative approval, Form C-108, with the New Mexico Oil Conservation Division for authorization to disposal of produced water in the Caleb Mesa SWD #1 well, Sec 7, T21N-R07W, 2080' FSL & 1750' FEL, Sandoval County, New Mexico. Injection will be in the Enrada Sandstone at an interval from 6000' to 6200' below the surface. A copy of the application is attached.

Yates Petroleum, as an offsetting lease owner, is being notified of this application. If you wish to object or request the matter for hearing, please contact the New Mexico Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days. Should you have any questions, please contact me at (505) 325-5449, Ext #2 during business hours, or at the above letterhead address.

Sincerely,



Glen O. Papp, P.E.
Principal / Operations Manager

Attachments
xc: file

AFFIDAVIT OF PUBLICATION

Ad No. 55780

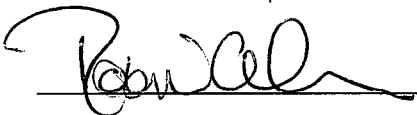
STATE OF NEW MEXICO County of San Juan:

ROBIN ALLISON, being duly sworn says:
That she is the CLASSIFIED MANAGER of
THE DAILY TIMES, a daily newspaper of
general circulation published in English at
Farmington, said county and state, and that
the hereto attached Legal Notice was
published in a regular and entire issue of the
said DAILY TIMES, a daily newspaper duly
qualified for the purpose within the meaning of
Chapter 167 of the 1937 Session Laws of the
State of New Mexico for publication and
appeared in the Internet at The Daily Times
web site on the following day(s):

Monday, October 8, 2007

Tuesday, October 9, 2007

And the cost of the publication is \$64.74



ON 10/15/07 ROBIN ALLISON
appeared before me, whom I know personally
to be the person who signed the above
document.


My Commission Expires November 17, 2008

COPY OF PUBLICATION

NOTICE	
Synergy Operation LLC, P.O. Box 5513, Farmington, New Mexico 87499 is making application for administrative approval to dispose of produced water by underground injection. Contact person is Glen Papp, phone 505-325-5449. The proposed disposal site is the Caleb Mesa SWD #1, located 2080' FSL & 1750' FEL, Sec. 7, T21N-R07W, Sand oval Co., NM. Water is to be injected into the Entrada Sandstone be	tween 6000" and 6200" below the surface. Maximum injection pressure is 1500 PSI. Maximum injection rate is 5000 barrels of water per day. Any interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South Saint Francis Drive, Santa Fe, NM 87505 within 15 days.
	Legal No. 55780 published in The Daily Times, Farmington, New Mexico on Monday and Tuesday October 8, 9, 2007

Jones, William V., EMNRD

From: Glen Papp [gpapp@synergyoperating.com]
Sent: Thursday, January 03, 2008 8:52 AM
To: Jones, William V., EMNRD
Subject: Re: SWD Application from Synergy Operating LLC: Caleb Mesa SWD #1 in the Entrada from 6000 to 6200 feet

Will:

Sorry, I didn't respond sooner, but I've been out of the office. The APD was approved by the BLM on 12-17-07, the API number is 30-043-21055, and is posted on the NM OCD's website.

----- Original Message -----

From: Jones, William V., EMNRD
To: Glen Papp
Sent: Friday, December 14, 2007 12:59 PM
Subject: RE: SWD Application from Synergy Operating LLC: Caleb Mesa SWD #1 in the Entrada from 6000 to 6200 feet

Glenn:
Thank You,
I will wait for the API next week and release. I won't specify tubing size in the permit - leave it up to you.

So Yates has leased the minerals in the Entrada?

Take Care

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

From: Glen Papp [mailto:gpapp@synergyoperating.com]
Sent: Friday, December 14, 2007 11:57 AM
To: Jones, William V., EMNRD
Subject: Re: SWD Application from Synergy Operating LLC: Caleb Mesa SWD #1 in the Entrada from 6000 to 6200 feet

Will;

Thanks for the reply, I will attempt to answer your concerns below:

- 1) The two Federal/BLM leases within the 1/2-Mile radius of the proposed SWD well are held by Yates Petroleum. The leases include 'All Depths'. Attached to the application was a copy of the letter sent to both parties, a pdf is attached of both 'Return Receipts'.
- 2) The APD was submitted to the BLM on Oct 10, 2007. I checked with Mike Flaniken of the BLM's FFO this morning and was told that it is awaiting final signature, wither today or Monday (Dec 17, 2007).
- 3) A swabbed water sample will not be a problem. Should we send the completed analysis to your attention, or to someone else?
- 4) The 5-1/2" casing size is a function of the cost to drill the well. The larger hole size, equates to increased drilling costs, cementing costs and casing costs. The internal casing diameter of 5-1/2" 15.5# casing is still sufficient to allow 3-1/2" PCID tubing, which would be the maximum size of a tubing string that we would run in the well. We decided to permit the larger

1/3/2008

Jones, William V., EMNRD

From: Glen Papp [gpapp@synergyoperating.com]

Sent: Friday, December 14, 2007 11:57 AM

To: Jones, William V., EMNRD

Subject: Re: SWD Application from Synergy Operating LLC: Caleb Mesa SWD #1 in the Entrada from 6000 to 6200 feet

API = 32

3043-21055

Will;

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Let me know if there is anything else that we need to do to satisfy all the requirements. I will be in and out of the office for the rest of the year should you need to get a hold of me.

Thanks,

----- Original Message -----

From: Jones, William V., EMNRD

To: gpapp@synergyoperating.com

Cc: Ezeanyim, Richard, EMNRD ; Hayden, Steven, EMNRD

Sent: Wednesday, December 12, 2007 3:49 PM

Subject: SWD Application from Synergy Operating LLC: Caleb Mesa SWD #1 in the Entrada from 6000 to 6200 feet

Hello Glen:

I can't really find any fault with this application, but have the following items to discuss:

- 1) Would you guys please read the Division's Rule 701B(2) and send proof of notice to all "affected" parties within the Area of Review (in the Entrada depth interval) as it states in that Rule?
You may need to ask your Landman for a takeoff? or you may have it in your application already. Your application shows proof of notice to the surface owner and to one surrounding operator but you did not say anything about the Lessee's within the Entrada - which must be noticed if no operator is present - which there are no Entrada "Operators of Record" because there are no Entrada wells. If there are no mineral lessees in the Entrada then you must notice all mineral interest owners - which may only be the BLM and BIA? Let me know.
- 2) Our database uses API numbers to keep track of wells - you don't even have a well file started on this well. How far along are you in getting approval to drill from the BLM and getting an API number?
- 3) We will require a swab sample and water analysis from the Entrada proposed injection interval.
- 4) You are installing 5-1/2 inch casing then running 3-1/2 inch plastic coated tubing? Why not run bigger casing?

After the notice issue is resolved, we can approve this SWD well, but will ask you to send me an email with the API number as soon as you get it from Aztec. That way I can update our database.

12/14/2007

Jones, William V., EMNRD

From: Jones, William V., EMNRD
Sent: Wednesday, December 12, 2007 3:49 PM
To: 'gpapp@synergyoperating.com'
Cc: Ezeanyim, Richard, EMNRD; Hayden, Steven, EMNRD
Subject: SWD Application from Synergy Operating LLC: Caleb Mesa SWD #1 in the Entrada from 6000 to 6200 feet

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Regards,

William V. Jones PE
New Mexico Oil Conservation Division
1220 South St. Francis
Santa Fe, NM 87505
505-476-3448

12/12/2007

SENDER: COMPLETE THIS SECTION

- Complete Items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Attn: Regulatory Affairs
Yates Petroleum
105 S. 4th Street
Artesia, NM 88210

2. Article Number
(Transfer from service label)

7005 1820 0002 8601 4149

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X Kathy Donoghue ☐ Agent ☒ Addressee

B. Received by (Printed Name)

KATHY DONOGHE

C. Date of Delivery

- D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

- ☒ Certified Mail ☐ Express Mail
☐ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

SENDER: COMPLETE THIS SECTION

- Complete Items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Attn: Will Jones
NM Oil Conservation Division
Engineering Bureau
1220 S. Saint Francis St.
Santa Fe, NM 87505

2. Article Number
(Transfer from service label)

7005 1820 0002 8601 4125

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X Will Jones ☐ Agent ☒ Addressee

B. Received by (Printed Name)

C. Date of Delivery

10-24

- D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

- ☒ Certified Mail ☐ Express Mail
☐ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes

Injection Permit Checklist 2/8/07

SWD Order Number _____ Dates: Division Approved _____ District Approved _____

Well Name/Num: Caleb Mesa SWD# 1 Date Spudded: New

API Num: (30-) 043-NA County: SANDOVAL

Footages 2080 FSL/1750 FEL Sec 7 Tsp 21N Rge 7W 163458

Operator Name: SYNERGY OPERATING, LLC Contact GLENN O. PAPP, P.E.

Operator Address: PO BOX 5513 FARMINGTON, NM 87499

Current Status of Well: New Well Planned Work: _____ Inj. Tubing Size: 3 1/2 @ 5750'

	Hole/Pipe Sizes	Depths	Cement	Top/Method
Surface	<u>12 1/4 8 5/8</u>		<u>260</u>	<u>will CIRC</u>
Intermediate				
Production	<u>7 1/8 5 1/2</u>		<u>805</u>	<u>will CIRC</u>
Last DV Tool		<u>2700</u>		
Open Hole/Liner				
Plug Back Depth		<u>6250</u>		

Diagrams Included (Y/N): Before Conversion ☒ After Conversion ☒

Checks (Y/N): Well File Reviewed (NONE Yet) Logs in Imaging not yet

Intervals:	Depths	Formation	Producing (Yes/No)
Salt/Potash			
Capitan Reef			
Cliff House, Etc:	<u>5156</u>	<u>Morrison</u>	
Formation Above	<u>3825</u>	<u>Gallegos</u>	
Top Inj Interval	<u>6000</u>	<u>Entrada</u>	
Bottom Inj Interval	<u>6200</u>	<u>"</u>	
Formation Below			

1200 PSI Max. WHIP

NO Open Hole (Y/N)

Deviated Hole (Y/N)

Fresh Water: Depths: 0-50 Wells (Y/N) Yes Analysis Included (Y/N): Yes Affirmative Statement ☒

Salt Water Analysis: Injection Zone (Y/N/NA) _____ Disp Waters (Y/N/NA) _____ Types: FRC

Notice: Newspaper (Y/N) Yes Surface Owner BLM Mineral Owner(s) _____

Other Affected Parties: SIG, YOG, CDX, WYOTEX, BP, DUGAN, BIA

AOR/Repairs: NumActiveWells 0 Repairs? _____ Producing in Injection Interval in AOR _____

AOR Num of P&A Wells 0 Repairs? _____ Diagrams Included? _____ RBDMS Updated (Y/N) _____

Well Table Adequate (Y/N) _____ AOR STRs: Sec _____ Tsp _____ Rge _____ UIC Form Completed (Y/N) _____

New AOR Table Filename _____ Sec _____ Tsp _____ Rge _____ This Form completed _____

Conditions of Approval: Sec _____ Tsp _____ Rge _____ Data Request Sent _____

analyze Entrada Sample
Send NOTICE as 701 B2
API

AOR Required Work: _____

Required Work to this Well: _____