

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 \_\_\_\_\_

*Endurance Resources  
 LLC  
 Momentum 36 State #1  
 30-025-37517*

*Delaware*

2014 JUL - 8 P 1:52  
 RECEIVED OOD

- [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.

Ben Stone	<i>[Signature]</i>	Agent for Endurance Resources, LLC	7/05/14
Print or Type Name	Signature	Title	Date
		ben@sosconsulting.us	
		e-mail Address	



July 7, 2014

New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Attn: Ms. Jami Bailey, Director

*Re: Application of Endurance Resources, LLC to permit the Momentum '36' State No.1 for salt water disposal, located in Section 36, Township 25 South, Range 35 East, NMPM, Lea County, New Mexico.*

Dear Ms. Bailey,

Please find enclosed form C-108 Application for Authority to Inject, supporting the above-referenced request to convert for disposal, the Momentum '36' State Well No.1.

Endurance Resources seeks to optimize efficiency, both economically and operationally, of its operations. Approval of this application is consistent with that goal as well as the NMOCD's mission of preventing waste and protection of correlative rights.

Of particular note with this project, this conversion to SWD is part of a larger effort to accommodate the produced water expected to be generated by Endurance's upcoming efforts to drill and complete several horizontal producers in the area. The wells will be completed in various Bone Spring Pools in the area and are expected to yield several thousand barrels of oil per month.

Published legal notice ran in the July 1, 2014 edition of the Hobbs Daily News-Sun and all offset operators and other interested parties have been notified. The legal notice affidavit is included in this application package. This application also includes wellbore schematics, area of review maps, leaseholder plats and other required information for a complete Form C-108. The well is located on state land and minerals and a copy of this application has been submitted to the State Land Office.

I respectfully request that the approval of this salt water disposal well proceed swiftly and if you or your staff requires additional information or has any questions, please do not hesitate to call or email me.

Best regards,

A handwritten signature in black ink, appearing to read 'Ben Stone', is written over a white background.

Ben Stone, Partner  
SOS Consulting, LLC  
Agent for Endurance Resources, LLC

Cc: Application attachment and file

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: ***Salt Water Disposal – Application Meets Qualifications for Administrative Approval.***
- II. OPERATOR: ***Endurance Resources, LLC.***  
ADDRESS: ***P.O. Box 1466, Artesia, NM 88211***
- CONTACT PARTY: ***Randall Harris (575) 308-0722***  
***Agent: SOS Consulting, LLC – Ben Stone (903) 488-9850***
- III. WELL DATA: ***All well data and applicable wellbore diagrams are attached hereto.***
- IV. ***This is not an expansion of an existing project.***
- V. ***A map is attached*** 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. ***A tabulation is attached*** of data on all wells of public record within the area of review which penetrate the proposed injection zone. ***The data includes*** a description of each well's type, construction, date drilled, location, depth, and a schematic of any plugged well illustrating all plugging detail. ***There are NO wells within the ½-mile Area of Review.***
- VII. ***The following data is attached*** 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. ***Appropriate geologic data on the injection zone is attached*** 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. ***The disposal interval may be acidized w/ 5000 gallons HCl upon completion.***
- \*X. ***There is no applicable test data on the well however, any previous well logs (3 well logs available via OCD Online) have been filed with the Division and they need not be resubmitted. A log strip across proposed interval included.***
- \*XI. ***State Engineer's records indicates that there are NO domestic water wells within one mile the proposed salt water disposal well.***
- XII. ***An affirmative statement is attached that available geologic and engineering data has been examined and no evidence was found*** of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
- XIII. ***"Proof of Notice" section on the next page of this form has been completed. NM State Land Office and BLM (Offset) There are 4 offset lessees within one mile - all have been noticed via U.S. Certified Mail.***
- 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: ***Ben Stone*** TITLE: ***SOS Consulting, LLC agent / consultant for Endurance Resources, LLC***

SIGNATURE:  DATE: ***7/05/2014***

E-MAIL ADDRESS: ***ben@sosconsulting.us***

- \* 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 – ***The following information and data is included:***

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 ***pursuant to the following criteria is 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.**

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**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.

# CURRENT CONFIGURATION

## PLUGGED WELL SCHEMATIC Momentum '36' State Well No.1

API 30-025-37517

1650' FSL & 2310' FWL, SEC. 36-T25S-R35E  
LEA COUNTY, NEW MEXICO

Spud Date: 2/21/2006

P&A Date: 4/02/2006

Well plugged by:  
Momentum Energy Corp.

<PLUGGING ITEMS LISTED LEFT>

PLUGS:

Spot Cmt  
660'-0'

P&A Marker

G.R. 3072'

<PRE-P&A EXISTING ITEMS LISTED RIGHT>

**Surface Casing**

13.375", 48.0# Csg. (17.5" Hole) @ 549'  
475 sx - Circulated to Surface

**Intermediate Casing**

9.625", 40.0# Csg. (12.25" Hole) @ 5028'  
1300 sx - Circulated to Surface

*105 @ 530'*

Spot 200' Cmt  
1900' - 1700'

Spot 250 sx  
5300' - 4500' (Tag)

Spot 105 sx  
7500' - 7300'

Circ w/ 9.4# Mud  
(Previous Day / Logging)

Spot 100 sx  
9700' - 9500'

DTD @ 9700'

<P&A SUBSEQUENT SUNDRY>

State of New Mexico Energy, Minerals and Natural Resources OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505		Form C-103 May 27, 2004
Well API No. 30-025-37517	Lease Name or Unit Agreement Name Momentum '36' State	7. Lease Name or Unit Agreement Name Momentum '36' State
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> OIL <input type="checkbox"/> GAS <input type="checkbox"/>	8. Well Number 3072	9. O.C.R.D. Number 277092
6. State Oil & Gas Lease No. 55169	10. Pool name or Wildcat Wildcat/Bone Spring	11. Elevation (Show whether DR, J&L, RT, GR, etc.) 872'
1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>	2. Name of Operator Momentum Energy Corporation	3. Address of Operator P.O. Box 1398, Midland, TX 79702
4. Well Location Unit Letter: K, Section: 36, Township: 25S, Range: 35E, NMPM: Lea County	12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/> PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL. <input type="checkbox"/> OTHER <input type="checkbox"/>	SUBSEQUENT REPORT OF: REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/> COMMENCE DRILLING OPER. <input type="checkbox"/> P&A <input type="checkbox"/> CASING/REPAIR JOB <input type="checkbox"/>

13. Describe proposed or completed operations. (Check, state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. See RULE 1103. For Multiple Completions, Attach separate diagrams of proposed completions or completions.)

04/01/06 Day 39 Present Operation: Wait on cement. Depth: 9700', footage: 0'. Activity past 24 hrs. Trip in hole with drill collars. Cut drill line. RU lay down machine. Lay down drill collars. THH open ended to set cement plugs. P: 20 jts. Tag bottom. RI Halliburton to ramp cement plugs. Set 100 sx plug from 5700' to 9500'. LD drill pipe. Set 105 sx plug from 7500' to 7300'. LD drill pipe. Set 250 sx plug from 5300' to 4900'. POOH: 10 stands. Pump 10 bbls through Kelly. Wait on cement.  
DC: \$28,793 AC: \$1,954,410

04/02/06 Day 40 Present Operation: R.g. released @ 11:00 p.m. 4/1/06 Activity past 24 hrs: Wait on cement THH & tag cement plug @ 4500' L.D. drill pipe. Set cement plug @ 1700' to 1900'. LD drill pipe. Set cement plug @ Surface to 660'. PU & break Kelly. LD drill pipe. NU BOPS. Cut off 13-5/8" head. Weld plate on 9-5/8" casing & dry hole marker. Well P&A. Rig down.  
DC: \$65,053 AC: \$2,070,467

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any job or behavior which has been or is being conducted in accordance with the provisions of this permit is being conducted in accordance with the O.C.D. approval plan.

SIGNATURE: *Russ Mathis* TITLE: Consultant DATE: 6/14/06  
Type or print name: Russ Mathis E-mail address: consultant@momentumenergy.com Telephone No: 432-842-0595  
For State Use Only: *Chris Williams* O.C.D. DISTRICT SUPERVISOR/GENERAL MANAGER JUL 2 4 2007  
APPROVED BY: TITLE: DATE:   
Conditions of Approval (if any):

**Production Casing - NEVER SET**

Drilled as Wildcat Bone Spring - non-economic  
(8.75" Hole Size)



Drawn by: Ben Stone, 6/26/2014



# WELL SCHEMATIC - PROPOSED Momentum '36' State Well No.1 SWD

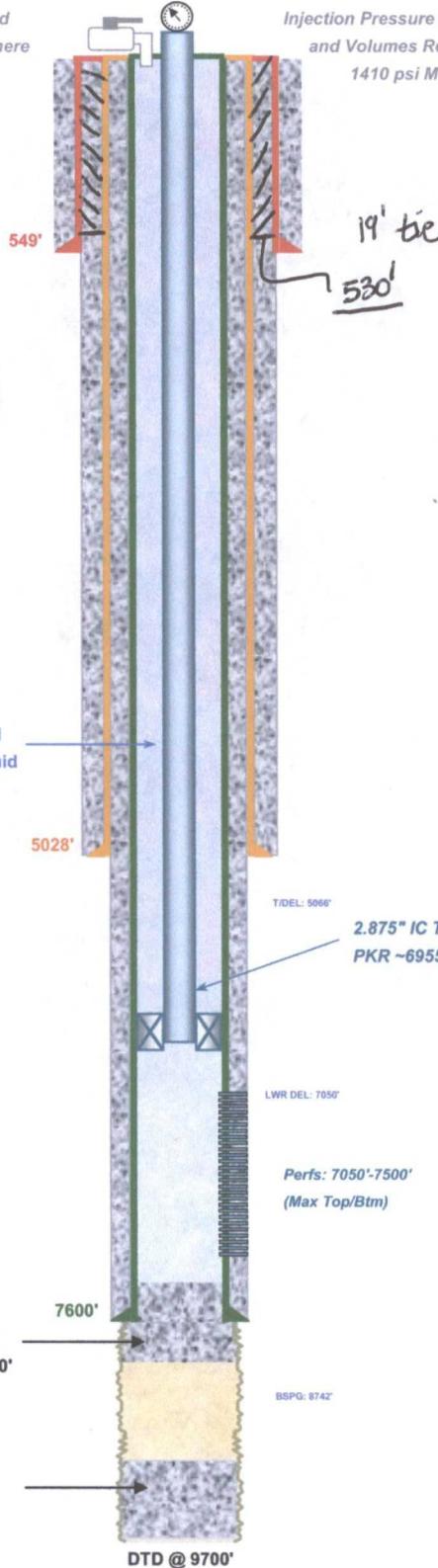
API 30-025-37517

1650' FSL & 2310' FWL, SEC. 36-T25S-R35E  
LEA COUNTY, NEW MEXICO

P&A Date: 4/02/2006  
Re-Entry Date: ~9/01/2014

Annulus Monitored  
or open to atmosphere

Injection Pressure Regulated  
and Volumes Reported  
1410 psi Max



**Surface Casing**

13.375", 48.0# Csg. (17.5" Hole) @ 549'  
475 sx - Circulated to Surface

**ENDURANCE RESOURCES, LLC**

- Convert to SWD: D/O & C/O Existing Plugs to 7650'.
- Run & Set New 5-1/2" - Set @ 7600'
- Cement w/ ~2100 sx - Circulate to Surface. ✓
- Spot 30 sx Cmt 7650' - 7580' for BH integrity.
- Perf 7050' to 7500' as specified by rep.
- Run PC Tubing and PKR - Conduct MIT.
- Commence Disposal Operations.

Annulus Loaded  
w/ Inert Packer Fluid

**Intermediate Casing**

9.625", 40.0# Csg. (12.25" Hole) @ 5028'  
1300 sx - Circulated to Surface

T/DEL: 5060'  
2.875" IC Tubing  
PKR ~6955'

TOC @ 530'  
Momentum Daily 03/09/06  
TS shows TOC @ 530'

LWR DEL: 7050'

Perfs: 7050'-7500'  
(Max Top/Btm)

**NEW Production Casing**

5.5", 17.0# Csg - Surface to 7600'  
Est. ~2100 sx w/ excess - Circulate to Surface  
(No CBL if Circulated.)

Spot 30 sx Cmt  
Apprx. 7650' - 7580'

Existing Plug  
9700'-9500'

DTD @ 9700'

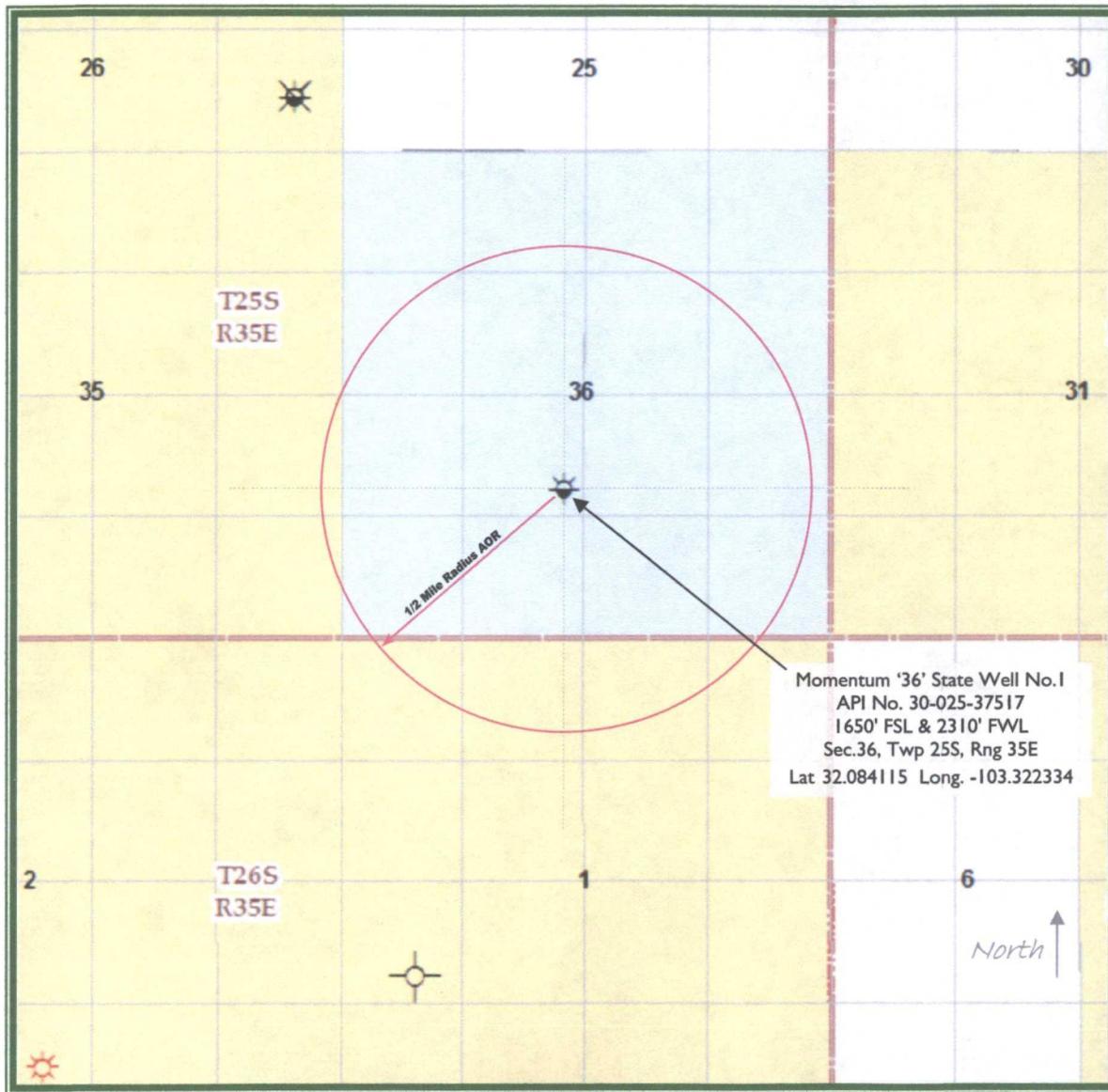
BSPG: 8742'



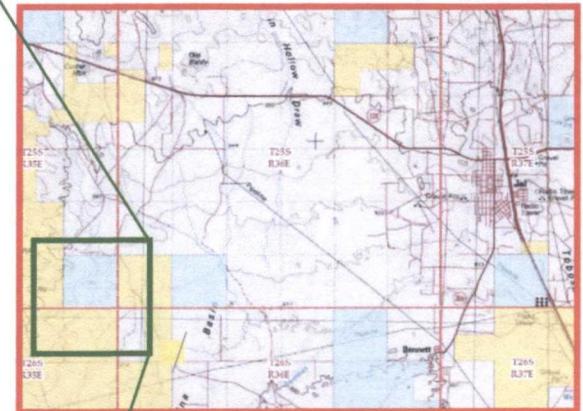
Drawn by: Ben Stone, 06/26/2014

# Momentum '36' State Well No.1 - Area of Review / Overview Map

(Attachment to NMOCD Form C-108 - Item V)



9.2 miles W/SW of Jal, NM



Lea County, New Mexico



**C-108 ITEM VI – AOR WELL INFORMATION**

**There are no wells within the one-half mile radius  
Area of Review.**

## **C-108 ITEM VII – PROPOSED OPERATION**

The Momentum '36' State Well No.1 SWD will be operated as a private disposal facility for Endurance Resources, LLC wells only. This well is part of a multi-well SWD system to facilitate disposal of Bone Spring produced water from the company's existing wells and projects. (Samples are included in this application from Delaware and Bone Spring indicating formation waters - chlorides and TDS are relatively compatible.)

The system will be closed utilizing a tank battery facility located at the well site to accommodate all produced water. Pipelines will be laid from some current and future wells owned and operated by Endurance Resources.

Injection pressure will be 1410 psi with rates limited only by that pressure. In the future, Endurance may opt to conduct a step rate test if it is determined that greater rates may be required. This would be submitted to OCD as a request to increase the injection pressure.

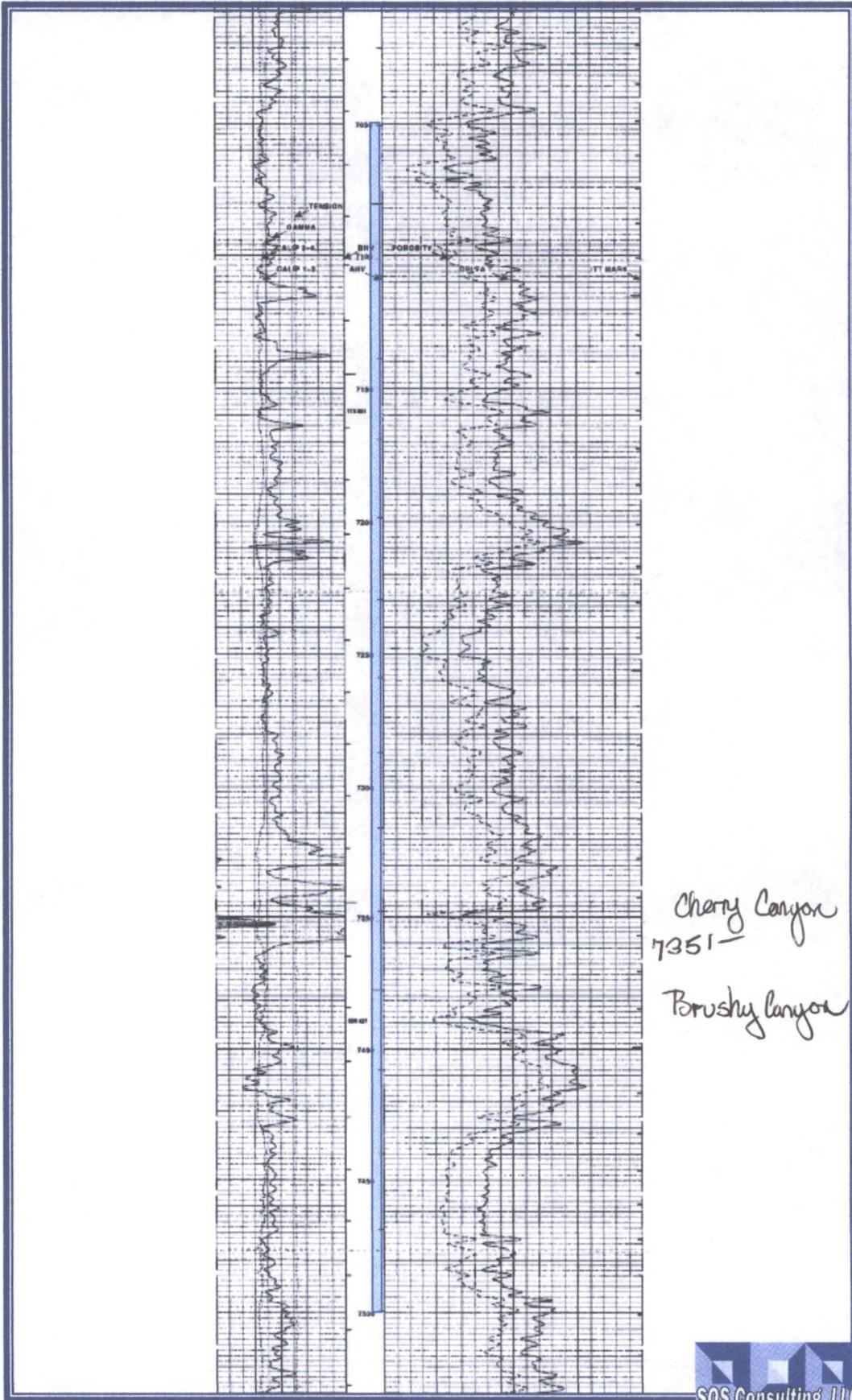
Routine maintenance will be ongoing and any releases will be reported within 24 hours to OCD on form C-141 pursuant to various portions of 19.15.30 NMAC.

The facility will not be manned but will be available for inspections at any time deemed necessary by OCD.

# Momentum '36' State No.1 SWD

## Log Strip with Top to Bottom Interval

Perforate Intervals Between 7050' and 7500' as Specified by Company Rep on Location



Cherry Canyon  
7351-

Brushy Canyon

# C-108 - Item VII.4

## Water Analysis - Disposal Zone - DELAWARE

(Representative of Delaware Formation Water in Area)

### WATER ANALYSIS REPORT

Company : YATES PET.  
 Address : ARTESIA  
 Lease : MEDANO BA ✓ A  
 Well : 1  
 Sample Pt. : WELLHEAD

Date : 10-22-90  
 Date Sampled : 10-19-90  
 Analysis No. : 1

ANALYSIS		mg/L		* meq/L	
1.	pH	7.1			
2.	H2S	POS			
3.	Specific Gravity	1.085			
4.	Total Dissolved Solids	115832.4 ✓			
5.	Suspended Solids	NR			
6.	Dissolved Oxygen	NR			
7.	Dissolved CO2	NR			
8.	Oil In Water	NR			
9.	Phenolphthalein Alkalinity (CaCO3)				
10.	Methyl Orange Alkalinity (CaCO3)				
11.	Bicarbonate	HCO3	207.0	HCO3	3.4
12.	Chloride	Cl	68799.0	Cl	1940.7
13.	Sulfate	SO4	1750.0	SO4	36.4
14.	Calcium	Ca	1480.0	Ca	73.0
15.	Magnesium	Mg	268.2	Mg	22.1
16.	Sodium (calculated)	Na	43328.2	Na	1884.7
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		4800.0		

### PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt X meq/L	= mg/L
74 *Ca <----- *HCO3 : 3	Ca (HCO3)2	81.0	3.4 275
22 *Mg -----> *SO4 : 36	CaSO4	68.1	36.4 2480
1885 *Na -----> *Cl : 1941	CaCl2	55.5	34.0 1888
	Mg (HCO3)2	73.2	
	MgSO4	60.2	
	MgCl2	47.8	22.1 1050
	NaHCO3	84.0	
	Na2SO4	71.0	
	NaCl	58.4	1884.7 110139
Saturation Values Dist. Water 20 C.			
CaCO3 13 mg/L			
CaSO4 * 2H2O 2090 mg/L			
BaSO4 2.4 mg/L			

REMARKS:

Patrolite Oilfield Chemicals Group

Respectfully submitted,  
 L MALLETT

# C-108 - Item VII.4

## Water Analysis - Source Water - BONE SPRING



Laboratory Analysis  
**Endurance**  
**Jazzmaster 17 State #4H**

Sample Date: 1/31/2014

Requested by: T. Ratliff

Lea Co. NM

		Water Analysis Measurements		Cations (+)		Anions (-)	
					mg/L		mg/L
Oxygen (mg/L)	1.00	Oil in Water (ppm)	n/a	Barium (Ba)	0	Carbonate (CO <sub>3</sub> )	0
Carbon Dioxide (mg/L)	699.16	Specific Gravity	1.150	Calcium (Ca)	16,440	Bicarbonate (HCO <sub>3</sub> )	38.60
Hydrogen Sulfide (mg/L)	0.0	Total Dissolved Solids (TDS)		Magnesium (Mg)	380	Chloride (mg/L)	118,520
pH	5.7	(mg/L) Calc	189,969 ✓	Sodium (Na) Calc.	54,270	Sulfate (SO <sub>4</sub> )	319
Temperature °F	73	Total Hardness (mg/L)	18,000	Iron (Fe)	3.00		
				Manganese (Mn)	0.00		

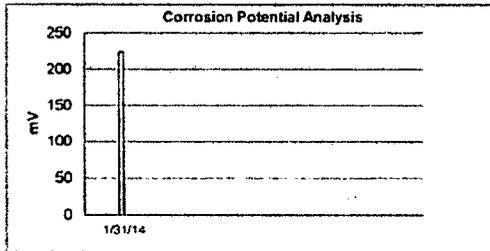
### Scaling Potential: Stiff Davis Scale Indicator (SDI)

	1/31/2014								
80° F	0.1								
120° F	-								
200° F	-								

Negative SDI = no scaling potential      Positive SDI = scaling potential (scale can form and precipitate)      SDI close to zero = borderline scaling potential

### Corrosion Potential: ORP Analysis (mV)

1/31/2014									
224.1									



Negative numbers indicate the potential for severe corrosion.

Red & Negative Corrosion  
 Yellow & Positive Scale

C-108 ITEM VIII - GEOLOGIC INFORMATION

Nance & Kerns

Disposal will be into the Lower Delaware formation.

Both recognize group status with three formations - well's interval is Cherry Canyon & Brushy Canyon Fms

The Delaware is composed predominately of sandstones and shales. All the Delaware members are interbedded, poorly consolidated, light gray sandstones and shales with occasional dense dolomite horizons. The lateral transmissivities of the sandstone beds are highly variable and often forms elective barriers to the movement of hydrocarbons while allowing down-gradient movement of water. The transmissivity variations are fundamentally due to the very-fine grained nature of the sands and the local percentage of silt and clay. The Delaware sandstone members are typically overlain and underlain by bounding shale, dolomite and/or silty shale horizons.

The top of the Delaware in this area is generally 5000' to 5100' with the lower portions coming in about 7000'. Production quality porosity in these intervals is accompanied by low resistivity yielding high water saturations.

Fresh water in the area is generally available from the Santa Rosa formation. State Engineer's records show water wells in the area to have an average depth of 240 feet.

There are no water wells located within one mile of the proposed SWD.

HC Potential:

Federal Mounsey "C" No.1 (20-T255-R35E)  
tested Bell Canyon/Ramsey sand - P&A

Federal "A" No.1 (1-T265-R35E)  
tested Bell Canyon/lamar - no shows - P&A

Well excludes portion of Brushy Canyon above Bone Spring (7500' to 8742' ~1300' of lower Brushy)  
see Dinwiddie 23 Fed. No.1 below.

Closest Pools: Jal, Delaware Sec 24, T255, R36E

Wildcat - NE 1/4 of Sec 23, T255, R35E. (Pool Code 97779)

Dinwiddie 23 Federal No.1 (30-025-38242); perfed 8443'-8492'

DHC with Wolfcamp; production 11/6/14 - 2.5 BOPD / 1.7 McFPD / 12 BWPD

**C-108 ITEM VIII – GEOLOGIC INFORMATION**

**Depth to Groundwater**



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

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced,  
O=orphaned,  
C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest) (NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q	Q	Q	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 01194 POD1	C	LE	3 3 3	06	26S	36E	659282	3548984				500	280	220
CP 01267 POD1		LE	3 4 3	06	26S	36E	659845	3548922				585	200	385

Average Depth to Water: 240 feet  
 Minimum Depth: 200 feet  
 Maximum Depth: 280 feet ✓

**Record Count: 2**

**PLSS Search:**

Section(s): 6                      Township: 26S                      Range: 36E

*Borders Capitan UG Basin; well in Carlsbad UG Basin  
 review of Carlsbad dataset showed no wells within one-mile also.*

*[Signature]*

# C-108 - Item XI

## Water Wells Within One Mile

A search of the State Engineer's database returned 7 records in a Section 6-26S-36E however, none of the water wells fall within one mile of the proposed SWD.



### New Mexico Office of the State Engineer Active & Inactive Points of Diversion (with Ownership Information)

No PODs found.

PLSS Search:

Section(s): 25, 26, 35, 36 Township: 25S Range: 35E

Carlsbad Basin

Ø wells  
Closest well - Sec-21  
(Santa Rosa ss)

No PODs found.

PLSS Search:

Section(s): 1, 2 Township: 26S Range: 35E

Capital Basin

No PODs found.

PLSS Search:

Section(s): 30, 31 Township: 25S Range: 36E

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	64	16	4	Sec	Twp	Range	X	Y
CP 01194		CLS	0	BECKHAM RANCH INC	LE	CP 01194 POD1		C	Shallow	3	3	3	06	26S	36E	659281	3548984
CP 01264		EXP	0	BECKHAM RANCH	LE	CP 01264 POD1				2	1	3	06	26S	36E	659541	3549660
CP 01265		EXP	0	BECKHAM RANCH	LE	CP 01265 POD1				2	1	3	06	26S	36E	659541	3549660
CP 01267		EXP	0	BECKHAM RANCH INC	LE	CP 01267 POD1			Shallow	3	4	3	06	26S	36E	659845	3548922
CP 01282		PRO	0	CONCHO OIL AND GAS	LE	CP 01287 POD1			Shallow	3	4	3	06	26S	36E	659845	3548922
CP 01293		PRO	0	CONCHO OIL AND GAS	LE	CP 01287 POD1			Shallow	3	4	3	06	26S	36E	659845	3548922
CP 01294		PRO	0	CONCHO OIL AND GAS	LE	CP 01287 POD1			Shallow	3	4	3	06	26S	36E	659845	3548922

Record Count: 7

PLSS Search:

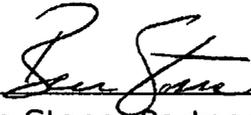
Section(s): 6 Township: 26S Range: 36E

Sorted by: File Number

The data is furnished by the NMOSEASC 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.

## C-108 ITEM XII – GEOLOGIC AFFIRMATION

We have examined available geologic and engineering data and have found no evidence of open faults or other hydrologic connection between the disposal interval and any underground sources of drinking water.

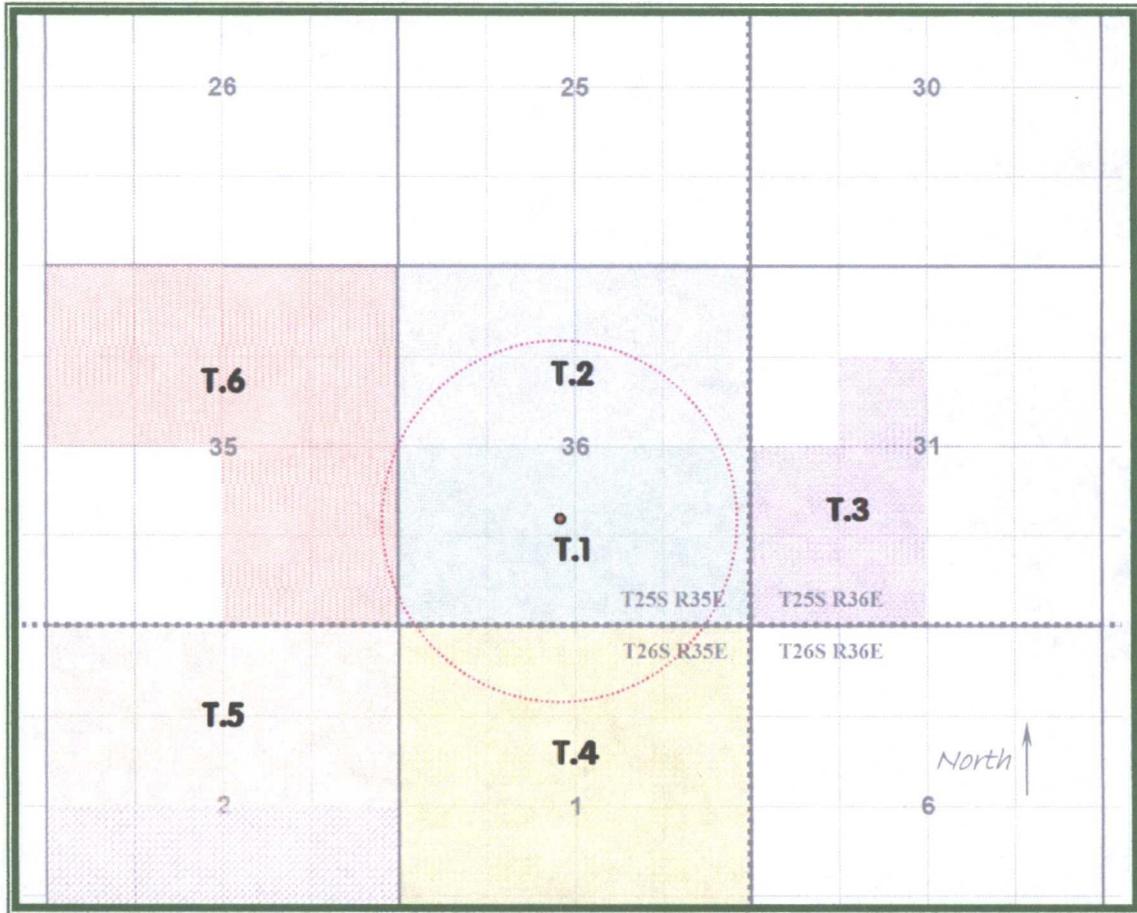


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Ben Stone, Partner  
SOS Consulting, LLC

Project: Endurance Resources, LLC  
Momentum '36' State Well No.1  
Reviewed 6/26/2014

**Momentum '36' State Well No.1 - Leasehold Plat**  
(Attachment to NMOCD Form C-108, Application for Authority to Inject.)



**LEGEND**

- T.1 - VB-1837-0000 – Yates Petroleum Corporation
- T.2 - VB-1836-0000 – Yates Petroleum Corporation
- T.3 - NMNM-114360 – Momentum Energy Corporation
- T.4 - NMNM-117126 – Chevron USA, Inc. and Devon Energy Production Co.
- T.5 - VB-1934-0000 – Yates Petroleum Corporation
- T.6 - NMNM-112943 – Chevron USA, Inc. and Devon Energy Production Co.

**C-108 ITEM XIII – PROOF OF NOTIFICATION  
INTERESTED PARTIES LIST**

**SURFACE OWNER**

STATE OF NEW MEXICO (FedEx'ed copy)  
Oil, Gas and Minerals Division  
310 Old Santa Fe Trail  
Santa Fe, NM 87504

**OFFSET MINERALS LESSEES and OPERATORS (All Notified via USPS Certified Mail)**

**State Lease VB-1837-0000**

***Lessee***

- 1 YATES PETROLEUM CORPORATION  
105 S. 4<sup>TH</sup> STREET  
ARTESIA, NM 88210

**State Lease VB-1836-0000**

***Lessee***

YATES PETROLEUM CORPORATION  
105 S. 4TH STREET  
ARTESIA, NM 88210

**BLM Lease NMNM-114360**

***Lessee***

- 2 MOMENTUM ENERGY CORPORATION  
P.O. Box 3398  
Midland, TX 79702

**BLM Lease NMNM-117126**

***Lessees***

- 3 CHEVRON, USA  
15 Smith Road  
Midland, TX 79705
- 4 DEVON ENERGY PRODUCTION COMPANY, LP  
333 W. Sheridan  
OKC, OK 73102

**State Lease VB-1934-0000**

***Lessee***

YATES PETROLEUM CORPORATION  
105 S. 4TH STREET  
ARTESIA, NM 88210

**C-108 ITEM XIII – PROOF OF NOTIFICATION  
INTERESTED PARTIES LIST (cont.)**

**BLM Lease NMNM-117126**

***Lessees***

CHEVRON, USA  
15 Smith Road  
Midland, TX 79705

DEVON ENERGY PRODUCTION COMPANY, LP  
333 W. Sheridan  
OKC, OK 73102

**OFFSET MINERALS OWNER**

- 5 U.S. DEPARTMENT OF INTERIOR  
Bureau of Land Management  
Oil & Gas Division  
620 E. Greene St.  
Carlsbad, NM 88220

**REGULATORY**

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed original and copy)  
1220 S. St. Francis Dr.  
Santa Fe, NM 87505

NEW MEXICO OIL CONSERVATION DIVISION (FedEx'ed copy)  
811 S. First St.  
Artesia, NM 88210

NEW MEXICO STATE LAND OFFICE (FedEx'ed copy)  
Commissioner of Public Lands  
310 Old Santa Fe Trail  
Santa Fe, NM



July 5, 2014

**NOTIFICATION TO INTERESTED PARTIES**  
**via U.S. Certified Mail**

To Whom It May Concern:

Endurance Resources, LLC, Artesia, New Mexico, has made application to the New Mexico Oil Conservation Division to convert for salt water disposal its Momentum '36' State Well No.1. The proposed commercial operation will be for use by Endurance Resources, LLC. As indicated in the notice below, the well is located in Section 36, Township 25 South, Range 35 East in Lea County, New Mexico.

The disposal interval will be through existing perforations 7050 feet to 7500 feet in the Delaware formation.

Following is the legal notice published in the Hobbs News-Sun, Hobbs, New Mexico on July 1, 2014.

**LEGAL NOTICE**

Endurance Resources, LLC, P. O. Box 1466, Artesia, NM 88211 is filing Form C-108 (Application for Authority to Inject) with the New Mexico Oil Conservation Division for administrative approval to reenter and permit for salt water disposal its Momentum '36' State Well No.1. The well, API No.30-025-37517 is located 1650 FSL & 2310 FWL in Section 36, Township 25 South, Range 35 East in Lea County, New Mexico. The SWD well will be for the operator's sole use to dispose of area produced water into the Delaware formation through perforations from a top of 7050 feet to a bottom depth of 7500 feet. Maximum injection pressure will be 1410 psi with a maximum rate limited only by such pressure.

Interested parties wishing to object to the proposed application must file with the New Mexico Oil Conservation Division, 1220 St. Francis Dr., Santa Fe, NM 87505, (505)476-3460 within 15 days of the date of this notice. Additional information may be obtained from the applicant's agent, SOS Consulting, LLC, (903)488-9850 or, email [info@sosconsulting.us](mailto:info@sosconsulting.us).

***You have been identified as a party who may be interested as an offset lessee or operator.***

You are entitled to a full copy of the application. A full copy in PDF format on a mini-CD will be arriving within a few days of this notice. If you do not receive it, please call or email SOS Consulting, LLC at 903-488-9850, [info@sosconsulting.us](mailto:info@sosconsulting.us), and a copy will be expedited to you and may also be sent via email if preferred.

Thank you for your attention in this matter.

Best regards,

A handwritten signature in black ink, appearing to read "Ben Stone". The signature is written in a cursive style with a large initial "B".

Ben Stone, SOS Consulting, LLC  
Agent for Endurance Resources, LLC

Cc: Application File

# C-108 - Item XIV

Proof of Notice (Certified Mail Receipts)

7012 2210 0002 0335 5597  
7012 2210 0002 0335 55  
7012 2210 0002 0335 55  
7012 2210 0002 0335 55  
7012 2210 0002 0335 55  
7012 2210 0002 0335 55

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Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	\$6.49	

Sent To  
Street, Apt. N or PO Box N  
City, State, Z  
YATES PETROLEUM CORP.  
105 S. 4TH STREET  
ARTESIA, NM 88210  
PS Form 3800

For delivery information visit our website at [www.usps.com](http://www.usps.com)  
**OFFICIAL USE**

Postage	\$ .49	
Certified Fee	3.30	
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Total Postage & Fees	\$6.49	

Sent To  
Street, Apt. N or PO Box N  
City, State, Z  
DEVON ENERGY PRODUCTION COMPANY, LP  
333 W. Sheridan Ave.  
OKC, OK 73102  
PS Form 3800

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Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	\$6.49	

Sent To  
Street, Apt. N or PO Box N  
City, State, Z  
MOMENTUM ENERGY CORP.  
P.O. Box 3398  
Midland, TX 79702  
PS Form 3800

For delivery information visit our website at [www.usps.com](http://www.usps.com)  
**OFFICIAL USE**

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Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	\$6.49	

Sent To  
Street, Apt. No. or PO Box No.  
City, State, ZIP+4  
CHEVRON, USA  
15 Smith Road  
Midland, TX 79705  
PS Form 3800

**OFFICIAL USE**

Postage	\$ .49	
Certified Fee	3.30	
Return Receipt Fee (Endorsement Required)	2.70	
Restricted Delivery Fee (Endorsement Required)		
Total Postage & Fees	\$6.49	

Sent To  
Street, Apt. N or PO Box N  
City, State, Z  
BUREAU OF LAND MANAGEMENT  
Oil & Gas Division  
620 E. Greene St.  
Carlsbad, NM 88220  
PS Form 3800

# 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  
July 01, 2014  
and ending with the issue dated  
July 01, 2014



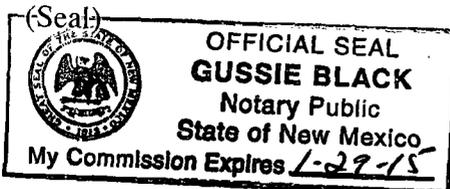
PUBLISHER

Sworn and subscribed to before me  
this 1st day of  
July, 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

LEGAL NOTICE  
July 1, 2014

Endurance Resources, LLC,  
P. O. Box 1466, Artesia, NM  
88211 is filing Form C-108  
(Application for Authority to  
Inject) with the New Mexico  
Oil Conservation Division for  
administrative approval to  
reenter and permit for salt  
water disposal its  
Momentum '36' State Well  
No.1. The well, API  
No.30-025-37517 is located  
1650 FSL & 2310 FWL in  
Section 36, Township 25  
South, Range 35 East in  
Lea County, New Mexico.  
The SWD well will be for the  
operator's sole use to  
dispose of area produced  
water into the Delaware  
formation through  
perforations from a top of  
7050 feet to a bottom depth  
of 7500 feet. Maximum  
injection pressure will be  
1410 psi with a maximum  
rate limited only by such  
pressure.

Interested parties wishing to  
object to the proposed  
application must file with the  
New Mexico Oil  
Conservation Division, 1220  
St. Francis Dr., Santa Fe,  
NM 87505, (505)476-3460  
within 15 days of the date of  
this notice. Additional  
information may be obtained  
from the applicant's agent,  
SOS Consulting, LLC,  
(903)488-9850 or, email  
info@sosconsulting.us.  
#29187

67104417

00139505

BEN STONE  
SOS CONSULTING, LLC.  
P.O. BOX 300  
COMO, TX 75431



ORDER TYPE: WFX / PMX **(SWD)** Number: 1519 Order Date: 01/13/14 Legacy Permits/Orders: —

Well No. 1 Well Name(s): Momentum 36 State

API: 30-0 25-37517 Spud Date: 02/21/2006 New or Old: New (UIC Class II Primacy 03/07/1982)

Footages 1650 FBL / 2310 FWL Lot — or Unit K Sec 36 Tsp 25S Rge 35 E County Lea

General Location: 7 miles W of Jul Pool: BS; wildcat / SWD; Delaware Pool No.: —

BLM 100K Map: Jul Operator: Endurance Resources LLC OGRID: 270329 Contact: D. Stone / sas consulting

COMPLIANCE RULE 5.9: Total Wells: 117 Inactive: 4 Fincl Assur: OK Compl. Order? No IS 5.9 OK? Yes Date: 11/13/15

WELL FILE REVIEWED  Current Status: P&A - surface remed. completed 2008; DST #1 8350' to 8514' 2 BS wildcat  
DST #2 8640' to 8776'

WELL DIAGRAMS: NEW: Proposed  or RE-ENTER: Before Conv.  After Conv.  Logs in Imaging: New / Dens / Induction / CST

Planned Rehab Work to Well: Run new production casing; cmt to surface, perf and inject.

Well Construction Details		Sizes (in) Borehole / Pipe	Setting Depths (ft)	Stage/Tool	Cement Sx or Cf	Cement Top and Determination Method
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/>	Surface	17 1/2 / 13 3/8	0 to 549		475	Circulated to surf
Planned <input type="checkbox"/> or Existing <input checked="" type="checkbox"/>	Interm/Prod	12 1/4 / 9 5/8	0 to 5028	None	1300	Toc @ 530
Planned <input checked="" type="checkbox"/> or Existing <input type="checkbox"/>	Interm/Prod	7 1/2 / 5.5	0 to 7600	None	2100	Circulate to surface
Planned <input type="checkbox"/> or Existing <input type="checkbox"/>	Prod/Liner	—	—	—	—	—
Planned <input type="checkbox"/> or Existing <input type="checkbox"/>	Liner	—	—	—	—	—
Planned <input checked="" type="checkbox"/> or Existing <input type="checkbox"/>	OH / PERF	7 / 5 1/2	7050 to 7500	Inj Length 450'	Completion/Operation Details:	
Injection Lithostratigraphic Units:		Depths (ft)	Injection or Confining Units	Tops	Drilled TD	PBSD
Adjacent Unit: Litho. Struc. Por.			Cherry Canyon	—	9700	P&A-
Confining Unit: Litho. Struc. Por.	1990	Delaware Sand		5066	NEW TD	7600
Proposed Inj Interval TOP:	7050	Cherry Canyon			NEW Open Hole <input type="checkbox"/>	NEW Perfs <input checked="" type="checkbox"/>
Proposed Inj Interval BOTTOM:	7500	Bushy Canyon		7351	Tubing Size	2 1/8 in. Inter Coated? <u>Yes</u>
Confining Unit: Litho. Struc. Por.	+1391	Bone Spring		8742	Proposed Packer Depth	6955 ft
Adjacent Unit: Litho. Struc. Por.		Wolfcamp			Min. Packer Depth	6950 (100-ft limit)
AOR: Hydrologic and Geologic Information					Proposed Max. Surface Press.	1410 psi
POTASH: R-111-P	No	Noticed? <u>NA</u>	BLM Sec Ord <u>110</u>	WIPP <u>No</u>	Noticed? <u>NA</u>	Salt/Salado T: <u>—</u> B: <u>—</u> NW: Cliff House fm <u>NA</u>
FRESH WATER: Aquifer	Alluvial / Santa Rosa ss	Max Depth	< 400'	HYDRO AFFIRM STATEMENT By Qualified Person <input checked="" type="checkbox"/>		
NMOSE Basin:	Carlsbad / Wolfcamp	CAPITAN REEF: thru <input type="checkbox"/>	adj <input checked="" type="checkbox"/>	NA <input checked="" type="checkbox"/>	No. Wells within 1-Mile Radius?	0
Disposal Fluid: Formation Source(s)	Delaware & Bone Spring	Analysis?	Yes	On Lease <input type="checkbox"/>	Operator Only <input checked="" type="checkbox"/>	Commercial <input type="checkbox"/>
Disposal Int: Inject Rate (Avg/Max BWPD):	None provided	Protectable Waters?	No	Source: <u>Yes</u>	System: Closed <input checked="" type="checkbox"/>	Open <input type="checkbox"/>
HC Potential: Producing Interval?	No	Formerly Producing?	No	Method: Logs/DST/P&A/Other	in area 2-Mile Radius Pool Map <input type="checkbox"/>	
AOR Wells: 1/2-M. Radius Map?	Yes	Well List?	NA	Total No. Wells Penetrating Interval:	0	Horizontals? <u>NA</u>
Penetrating Wells: No. Active Wells	0	Num Repairs?	—	on which well(s)?	—	Diagrams? <u>—</u>
Penetrating Wells: No. P&A Wells	0	Num Repairs?	—	on which well(s)?	—	Diagrams? <u>—</u>
NOTICE: Newspaper Date	07/01/14	Mineral Owner	SLO	Surface Owner	SLO	N. Date <u>7/7/14</u>
RULE 26.7(A): Identified Tracts?	Yes	Affected Persons:	Yates / Momentum Energy / Davon / Chera / BLM	N. Date	7/7/14	

Order Conditions: Issues: "Delaware formation" - Cherry & Bushy  
Add Order Cond: No Special Requirements