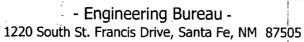
SUSPENSE

PRG

5/12/2014

PMAM1413232831

# XICO OIL CONSERVATION DIVISION





# **ADMINISTRATIVE APPLICATION CHECKLIST**

Th	HIS CHECKLIST IS M	ANDATORY FOR ALL ADMINISTRATIVE APPLIC	ATIONS FOR EXCEPTIONS TO DIVISION	N RULES AND REGULATIONS
	ation Acronym	WHICH REQUIRE PROCESSING AT		· · · · · · · · · · · · · · · · · · ·
	[NSL-Non-Star [DHC-Down [PC-Po	ndard Location] [NSP-Non-Standard nhole Commingling] [CTB-Lease C ol Commingling] [OLS - Off-Lease	ommingling] [PLC-Pool/Leas	e Commingling] easurement]
-	·	[WFX-Waterflood Expansion] [PM) [SWD-Salt Water Disposal] [IF lified Enhanced Oil Recovery Certific	PI-Injection Pressure Increase ation] [PPR-Positive Produc	tion Response]
[1]	TYPE OF AF [A]	PLICATION - Check Those Which A Location - Spacing Unit - Simultane  NSL NSP SD	Apply for [A] ous Dedication	BC openAting  in-edge of resources  BLM Product Copies
	Check [B]	One Only for [B] or [C] Commingling - Storage - Measurem DHC CTB PLC	ent Polati NMSLO  OLS OL	on -edge of resources  BLM Provided Copies  Molease
	[C]	Injection - Disposal - Pressure Incre ☐ WFX ☐ PMX X SWD	ase - Enhanced Oil Recovery  IPI EOR PP	BC Operating, Inc. No. 12 PR Berry SWD 1 with 30-025-41703
	[D]	Other: Specify		- Poul
[2]	NOTIFICAT [A]	ION REQUIRED TO: - Check Thos X Working, Royalty or Overridin	1	Apply Cherry Congo only
	[B]	X Offset Operators, Leaseholders	or Surface Owner	
	[C]	X Application is One Which Req	uires Published Legal Notice	
	[D]	X Notification and/or Concurrent U.S. Bureau of Land Management - Commissio	Approval by BLM or SLO ner of Public Lands, State Land Office	
	[E]	X For all of the above, Proof of N	Notification or Publication is Att	194 Marie 1
	[F]	☐ Waivers are Attached		30
[3]		CURATE AND COMPLETE INFOATION INDICATED ABOVE.	DRMATION REQUIRED TO	PROCESS THE TYPE
	val is accurate a cation until the re	TION: I hereby certify that the informand complete to the best of my knowled equired information and notifications at the complete to the best of my knowledge.	edge. I also understand that <b>no</b> are submitted to the Division.	action will be taken on this
Bria	Note In Wood	: Statement must be completed by an individual	Consultant	огу сарасіту. 5-9-13
	or Type Name	Signature	Title	Date
		-	brian@permits	west.com
			e-mail Address	1

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108 Revised June 10, 2003

### **APPLICATION FOR AUTHORIZATION TO INJECT**

I.	PURPOSE: Secondary Recovery Pressure Maintenance XXX Disposal Storage Application qualifies for administrative approval? Yes No
II.	OPERATOR: BC OPERATING, INC.
	ADDRESS: P. O. BOX 50820, MIDLAND TX 79710
	CONTACT PARTY: BRIAN WOOD (PERMITS WEST, INC.) PHONE: 505 466-8120
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 XXX 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.
	Belly SHD 1
VII.	Attach data on the proposed operation, including:  30-025-41703  SND - Chapter Consumer
	<ol> <li>Proposed average and maximum daily rate and volume of fluids to be injected;</li> <li>Whether the system is open or closed;</li> <li>Proposed average and maximum injection pressure;</li> <li>Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,</li> <li>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</li> </ol>
	wells, etc.).  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: BRIAN WOOD TITLE: CONSULTANT
	SIGNATURE: DATE: SEPT. 18, 2014
	E-MAIL ADDRESS: brian@permitswest.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:

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

#### 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: BC	OPERA	TING, INC.		<del></del>		
WELL NAME & NUN					· · · · · · · · · · · · · · · · · · ·	
WELL LOCATION: _			I		20 S	34 E
•	FOO	TAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE
<u>WELL</u>	BORE S	CHEMATIC	·	WELL Co Surface	ONSTRUCTION DAT Casing	<u>A</u>
77	5725'	13-3/8" 54.5# J-55 ST&C in 17-1/2" hole @ 1650'	Hole Size: 17-	-1/2"	Casing Size: 13	-3/8"
	(B)	cmt to GL w/ 1020 sx	Cemented with:	1020 sx.	or	1514_ft³
	CeRam-Kote		Top of Cement:	SURFACE	Method Determined	CIRCULATE
_ [	or CeRa			<u>Intermedia</u>	te Casing	·
	1.6# IPC	9-5/8" 40# J-55 ST&C in 12-1/4"" hole @ 3600'	Hole Size:	12-1/4"	Casing Size: 9-	5/8"
-	1.5" 11	cmt to GL w/ 1210 sx	Cemented with:	1,210 sx.	or	1831 ft <sup>3</sup>
			Top of Cement:	SURFACE	Method Determined	CIRCULATE
platsic coated or stainless steel packer @ 5700'		7" 23# J-55 LT&C in 8-3/4" hole @ 5750' cmt to GL w/ 640 sx		Production	n Casing	
	i	Ciffe to GE W/ 040 SX		8-3/4"		
dispose in Cherry Canyon		open 7-7/8" hole to 7000'	Cemented with:	640 sx.	or	ft <sup>3</sup>
5750' - 7000'		10 7000	Top of Cement:	SURFACE	Method Determined	: CIRCULATE
	i		Total Depth:	7,000'		
	1 .			Injection	Interval (OPEN HOL	Æ)
	TD = 7000	<b>ʻ.</b> 		5,750' fee	t to 7,000'	
(r	ot to sc	ale)		(Perforated or Open H	Iole; indicate which)	

# INJECTION WELL DATA SHEET

Tub	ing Size:	4-1/2"	_Lining Material:	IPC OR CERAM	-КОТЕ
Тур	e of Packer: _	IPC OR STAINLESS STEED			-
Pac	ker Setting	Depth: <u>≈</u> 5,700'	_		
Oth	er Type of	Tubing/Casing Seal (if applicable	):		
	•	<u>Addi</u>	ional Data		
1.	Is this a ne	w well drilled for injection?	XXXY	esNo	
	If no, for v	what purpose was the well origina	lly drilled?		
					<del></del>
2.	Name of th	ne Injection Formation: CHERRY	CANYON		· · · · · · · · · · · · · · · · · · ·
3.	Name of F	ield or Pool (if applicable): SWD	CHERRY CANYO	ON (97003)	
4.		ell ever been perforated in any oth nd give plugging detail, i.e. sacks	` /	<b>4</b>	N/A
5.		ame and depths of any oil or gas a			
	OVER: Y	ATES (3,680')			
	UNDER:	BONE SPRING (>8,615')			

30-025-41703

I. Goal is to drill a 7,000' deep commercial saltwater disposal well. Proposed disposal interval will be 5,750' – 7,000' in the Cherry Canyon sand. Pool is the SWD; Cherry Canyon (97003).

II. Operator:

BC Operating, Inc. (OGRID 160825)

Operator phone number:

(432) 684-9696

Operator address:

P. O. Box 50820, Midland TX 79710

Contact for Application:

Brian Wood (Permits West, Inc.)

Phone: (505) 466-8120

III. A. (1) Lease: fee

Lease Size: 320 acres (see Exhibit A for map and C-102)

Closest Lease Line: 304'

Lease Area: E2 Section 35, T. 20 S., R. 34 E.

A. (2) Surface casing (13-3/8", 54.5#, J-55, STC) will be set at 1,650' in a 16" hole and cemented to the surface with 1,020 sacks.

Intermediate casing (9-5/8", 40#, J-55, STC) will be set at 3,600' in a 12-1/4" hole and cemented with 1,275 sacks to the surface.

Production casing (7", 23#, J-55, LTC) will be set at 5,750' in 8-3/4" hole and cemented to the surface with 640 sacks.

A 6-1/8" hole will be drilled to a TD of 7,000'. Well will be completed open hole in the Cherry Canyon. TD will be 270' above the Brushy Canyon.

- A. (3) Tubing will be 4.5", 11.6#, J-55, IPC, perhaps CeRam-Kote. Setting depth will be ≈5,725'. (Disposal interval will be 5,750' to 7,000'.)
- A. (4) A plastic coated or stainless packer will be set at  $\approx 5,700$ ' ( $\approx 50$ ' above the highest proposed perforation of 5,750').



BC OPERATING, INC.
BERRY SWD #1
1620' FSL & 304' FEL SEC. 35, T. 20 S., R. 34 E.
LEA COUNTY, NEW MEXICO

30-025-41703

- B. (1) Disposal zone will be the SWD; Cherry Canyon (97003).
- B. (2) Disposal interval will be 5,750' 7,000' in the Cherry Canyon sand.
- B. (3) Well has not yet been drilled. Goal is to complete it as a disposal well.
- B. (4) Well will be completed open hole.
- B. (5) Closest Delaware production is 7,639' northeast. Closest Delaware pool (Laguna Valley; Delaware (96694)) is 6,307' northeast. The only producing zone in the area of review and above the Cherry Canyon is the Yates at a depth of 3,672'. The only production below the Cherry Canyon in the area of review is the 1st Bone Spring at a depth of 9,682'. Morrow production was found at a depth of 13,671' in a well 1/4 mile outside the area of review.
- IV. This is not an expansion of an existing injection project. It is disposal only.
- V. Exhibit B shows the 7 existing wells (4 oil and 3 P & A) within a half-mile radius. Exhibit C shows all 134 existing wells (50 oil or gas wells + 66 P & A wells 5 disposal or injection wells + 13 water wells or windmills) within a two-mile radius.

Exhibit D shows all leases and lessors (BLM, fee, and State) within a half-mile radius. Exhibit E shows all leases and lessors (BLM, fee, and State) within a two-mile radius. Details on the leases within a half-mile radius are:

T. 20 S., R. 34 E.	<u>Lessor</u>	Lease Number	Lessee(s)
E2 Sec. 35	fee	fee	Sundown & ConocoPhillips
SENW & NESW Sec. 35	BLM	NMNM-002127A	Black & Dechicchis
SESW Sec. 35	BLM	NMNM-129266	Cimarex
W2NW4 Sec. 36	NMSLO	V034740000	ВТА
SENW Sec. 36	NMSLO	BO22870003	Kerr-McGee
SW4 Sec. 36	NMSLO	VB13900001	COG
<u>T. 21 S., R. 33 E.</u>	<u>Lessor</u>	<u>Lease Number</u>	<u>Lessee(s)</u>
Lots 1-3 Sec. 1	NMSLO	VB13820001	Concho & COG



30-025-41703

T. 21 S., R. 34 E. Lot 4 Sec. 6 Lessor NMSLO Lease Number

Lessee(s)

VB13840001

GM

VI. Seven existing wells are within a 2,640' radius. Three of the seven wells penetrated the Cherry Canyon. BC will dispose in the Cherry Canyon. A summary of the penetrators is attached as Exhibit F. Wells in or near the area of review are:

OPERATOR	WELL	API#	LOCATION	ZONE(S)	STATUS	TVD	DISTANCE (FT)
Cimarex	Lynch 35 1H	3002540825	A-35-20s- 34e	Bone Spring	Oil	11293	380
COG	Stratosphere 36 State 1H	3002540618	I-36-20s- 34e	Bone Spring	Oil	11690	693'
Phillips	Neal 2 (A)	3002502512	1-35-20s- 34e	Yates - Seven Rivers	P & A	3825	939
Cimarex	Lynch 35 2H	3002540750	B-35-20s- 34e	Bone Spring	Oil	11316	1333
Getty Oil	Lynch 36 State 1	3002527496	E-36-20s- 34e	Yates - Seven Rivers	P&A	3878	1936
Phillips	Neal 1	3002502511	J-35-20s- 34e	Yates - Seven Rivers	P&A	3775	2006
Burk	Neal 4	3002502502	H-35-20s- 34e	Yates - Seven Rivers	Oil	3820	2096
Burk	Neal 2 (B)	3002502500	G-35-20s- 34e	Yates - Seven Rivers	P & A	3819	2843

- VII. 1. Average injection rate will be ≈15,000 bwpd. Maximum injection rate will be 20,000 bwpd.
  - 2. System will be open. Water will be trucked to the well.
  - 3. Average injection pressure will be  $\approx 1,100$  psi. Maximum injection pressure will be 1,150 psi (= 0.2 psi/foot x 5,750' (top of open hole)).
  - 4. There have been no reports of problems disposing into the two closest active Cherry Canyon SWD wells. At least 253,194 barrels have been disposed at the Lightning 1 State SWD 1 (30-025-40917) that is

Denfo 5550 to 7450



30-025-41703

SWD-1374

15,925' south. At least 450,271 barrels have been disposed at the Corazon 4 State SWD 1 (30-025-40944) that is 17,436' southwest. Both wells dispose into the Brushy Canyon too.

perfortuis 5550-7175

Main source of the disposal water will be produced water from Bone Spring wells. However, BC will accept produced water from other zones too. A summary of nearby water analyses (Exhibit G) follows.

Well	Neal 1	Ling Federal 1	not specified*	not specified**	Ling Federal 4	Ling Federal 2
API#	3002502499	3002528064	ditto*	ditto**	3002538748	3002530336
Location	B-35-20s- 34e	G-31-19s- 34e	ditto*	ditto**	J-31-19s- 34e	L-31-19s- 34e
Formation	Yates	Delaware	Delaware	Bone Spring	Wolfcamp	Morrow
Parameter mg/l						
barium				0	0	
bicarbonate	244	120	134	153	49	80
calcium	1760	3200	15900	5727	5176	1800
carbonate					0	
chloride	46000	25000	139500	89000	46550	9000
iron	97.6	nil	light	17	21	nil
H2S				**		
magnesium	1458	150	9300	1093	59	nil
pH	6.4	7.9	6.2	6.37	6.47	6.6
sodium				44933	24127	,
specific gravity	1.055	1.035	1.17	1.0961	1.076	1.01
strontium						
sulfate	7268	3300	light	275	96	light
sulfide					0	· .
TDS	85317		164700	137770	76078	
total hardness	10400				5272	



30-025-41703

	*from Hamon Federal 1 3002530848 B-7-20s-34e SWD-1468 application	N-16-70C-		
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5. Closest Delaware production is 7,639' northeast in Nearburg's Federal L 1 (30-025-20811). Cumulative production from 2004-2013 is 5,559 barrels of oil and 2,793 MCF of gas. Production in 2013 averaged 0.59 bopd and 1.67 Mcfd. Closest Delaware pool (Laguna Valley; Delaware (96694)) is 6,307' northeast.

The Cherry Canyon sand, based on an evaluation of the Federal C 1 well in NENW 35-20s-34e, is ≈750' thick and has very good porosity. It tested 100% water during a drill stem test. The 15,080' deep Federal C 1 (30-025-23578) is 4.239' northwest.

The Federal C 1 Completion Report listed "salty sulf wtr" in the Yates and Seven Rivers, "salty sulf wtr" in the Capitan reef, "salty wtr (157,000 ppm)" in the Bell Canyon, and "salty wtr (95,000 ppm)" in the Brushy Canyon. There is a 3,000' interval of multiple salt and anhydrite above the top perforation.

Closest possible underground sources of drinking water above the proposed disposal interval are the Quaternary and red beds at and near the surface. Water sands were reported at 60" and at 775' in oil wells the NW4 of Section 35. No water well is within a 1,610-meter (5,280) radius according to the Office of the State Engineer (Exhibit H) and a November 19, 2013 field inspection. Closest water well is ≈6,130' southeast. No underground source of drinking water is below Sorta Kosa SS 1150' the proposed disposal interval.

Formation tops are:

Quaternary = 0'

tour artesians in area

Rustler = 1,710Salado = 2,140'

bottom of potash ore zone = 3.240'\* (\*closest potash lease is >9 miles west or northwest)



30-025-41703

bottom of salt = 3,490'

Tansill = 3,540'

Yates = 3,680'

Capitan = 3,850'

Delaware = 5,580'

Cherry Canyon = 5,750'

TD = 7,000'

Brushy Canyon = 7,170'

There will be  $\approx 5,000$ ' of vertical separation and the salt and anhydrite interval between the bottom of the only likely underground water source (Quaternary and red beds) and the top of the Cherry Canyon. The Ogallala is not present. It is more than 7 miles northeast (Exhibit H).

A minimum of 703,465 barrels of produced water have been disposed into the Cherry and Brushy Canyon zones at two saltwater disposal wells within a 3.3 mile radius in less than 1 year.

- IX. The well will be stimulated with acid to clean out scale or fill.
- X. Compensated neutron density and resistivity logs will be run.
- XI. Based on a November 19, 2013 field inspection and a review of the State Engineer's records, no water well is within a one-mile radius. A water well that is 1-1/4 mile southwest was sampled and the analysis is in Exhibit H.

Endorsed by Jason Wacker, P.E. Bc operating/Midland 432-684-9696

XII. <u>BC Operating</u>, Inc. is not aware of any geologic or engineering data which may indicate the Cherry Canyon is in hydrologic connection with any underground sources of water. There are 12 Cherry Canyon saltwater disposal wells active in New Mexico. Closest fault (Guadalupe) is more than 90 miles southwest (Exhibit I).

Confirmed in phone conversation regarding

PERMITS WEST, INC.

PROVIDING PERMITS for LAND USERS

BC OPERATING, INC.
BERRY SWD #1
1620' FSL & 304' FEL SEC. 35, T. 20 S., R. 34 E.
LEA COUNTY, NEW MEXICO

PAGE 7

30-025-41703

XIII. A legal ad (see Exhibit J) was published on April 24, 2014. Notice (this application) has been sent (Exhibit K) to the surface owner (Daniel C. Berry III) and all leasehold operators or other affected persons (Black, BLM, BTA, Burk, Cimarex, COG Concho, ConocoPhillips, Dechicchis, GMT, Kerr-McGee, Magnum Hunter, NM State Land Office, & Sundown) within a half-mile.

DISTRICT I 1625 R. French Dr., Honor, HIE 88240

MALE STATES

DISTRICT III

DISTRICT IV 1220 S. St. Procedo Dr., Sinda Po., 816 67505 State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

OIL CONSERVATION DIVISION 1220 South St. Frances Dr. Santa Fe, NM 87505 Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

(Brushy Canyon deleted)

X AMENDED REPORT

#### WELL LOCATION AND ACREAGE DEDICATION PLAT

APE Numbe	<del>,</del>		Pool Code	AVD ACKEAU	E DEDICATIO	Pool Name	nyón	· · ·
30-025-417 Property Code	9 <del>3</del>		97003 SWD; Cherry Ca				Well Number	
40429				BERRY SV	and the second of the second o		#1	
00800 No. 160825			· ВС	Operator Name OPERATING			Elevation 378	*.
				Surface Loc	ation		, t	,,,,,,,
UL ar lot No. Section 31	. 11. 22	Range 34-E	Lot Idn	Feet from the 1620	North/South line	Peet from the 304	East/West line EAST	County LEA
L. L	l letter	<u>u</u>	Hole Lov	etion If Diffe	rent From Sur	face		L
UL on lat No.   Septi	m Township	Range	Est Idn	Peet from the	North/South line	Feet from the	East/West line	County
Dedicated feres   Joi	a or intim Ca	nizelidation (	Code Or	der No.	<u> </u>		<u> </u>	
						· · · · · · · · · · · · · · · · · · ·	···	
NO ALEOWARDE I					IL ALL INTERES		CONSOLIDATE	D OR A
	1							
					Plane: Coordinate: X = 749,807.9 Y = 556,263.1	I herety certify the the of the hear of my inscribing instruction under the certification of hear central with an own which you produce the distriction.  Signature  Brian Wo brian @ p  SURVEY  I hereby, certify on this play actual surpervisors or certification.	ermitswest.c	or and complete to them either come a three proposed to contract or to a critique and the contract or to a critique and the contract or to a critique and the contract of the
NOTE:  1) Plane Coordinates: Mercator Grid cadi Coordinate System, American Cation of I mean harizontal) sur	Conform to the New Vertoo East 27: Ostooces sho	"New Mexico ii Zone, North			3784-2	Date of Survival Signature	ber 24, 2013  Will Molling  Seal, at Professions  ME  12185	SJA  Surveyor

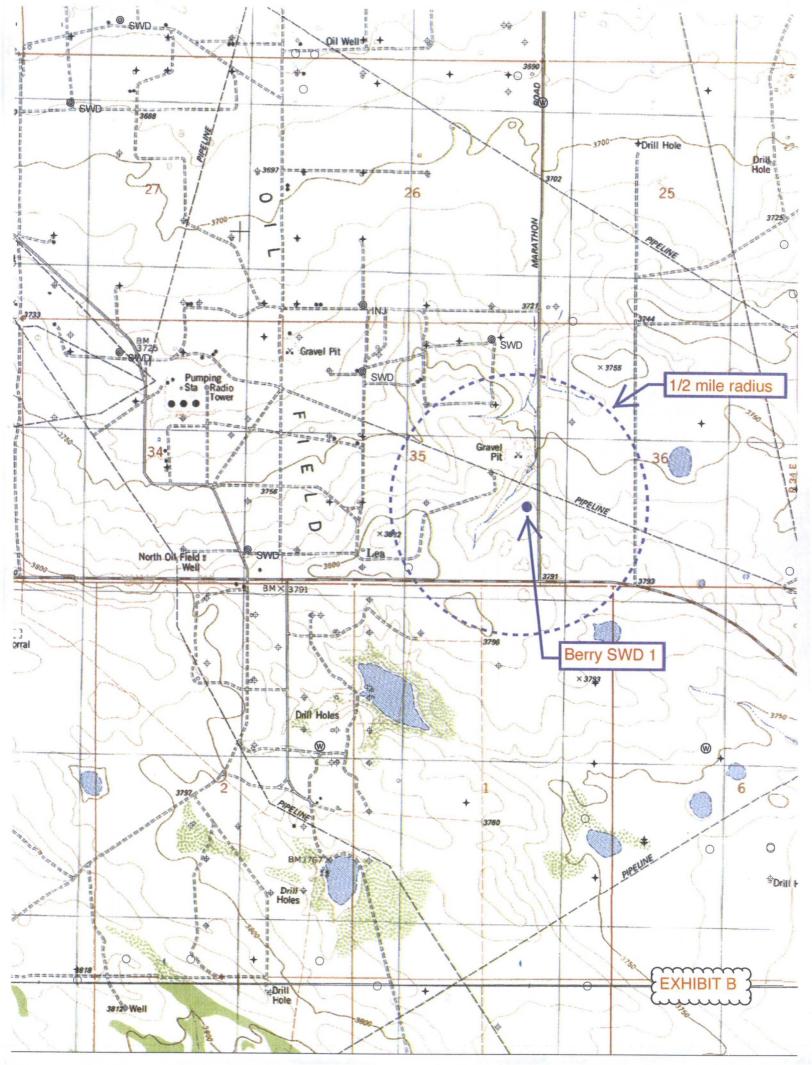


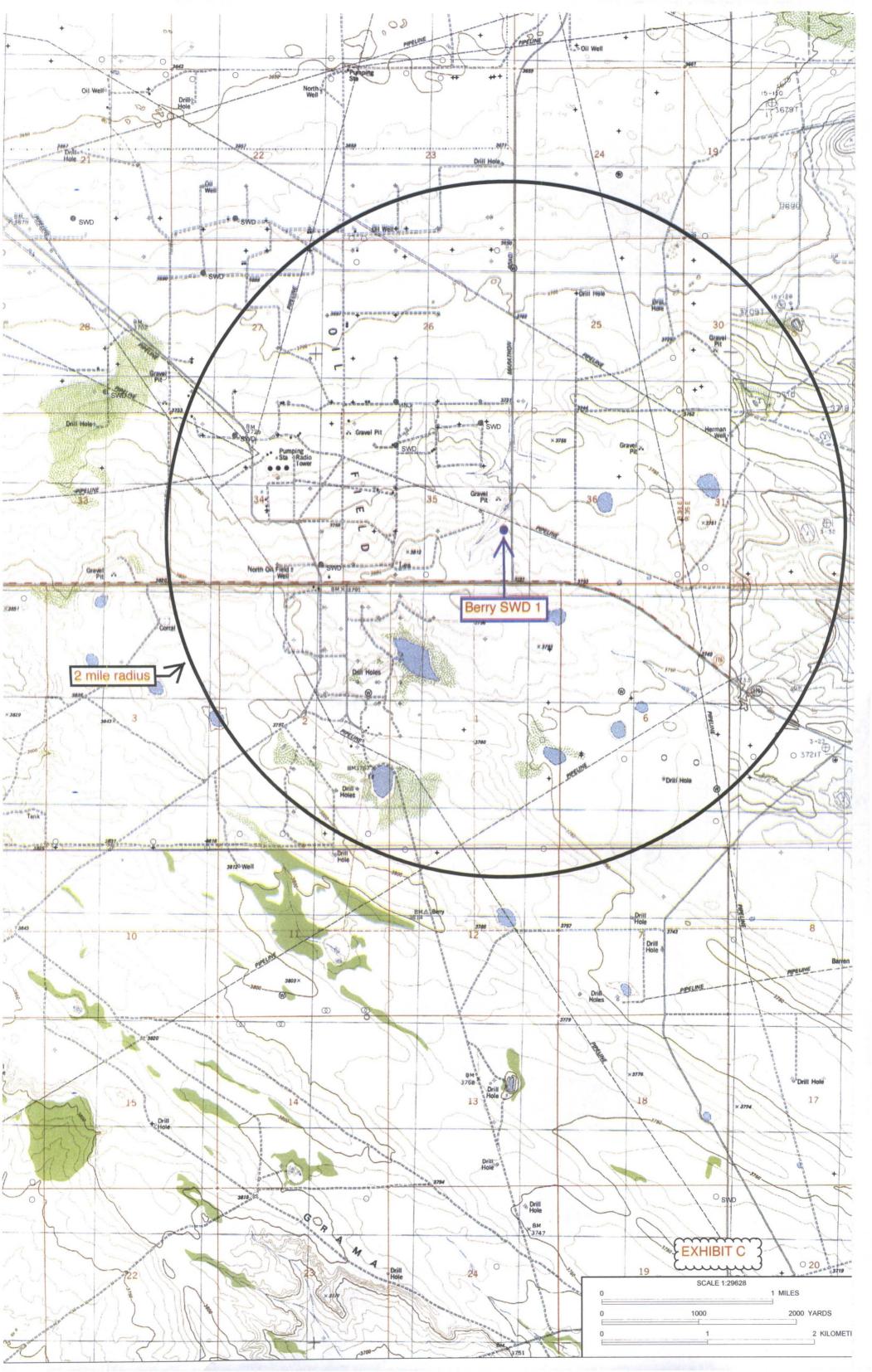


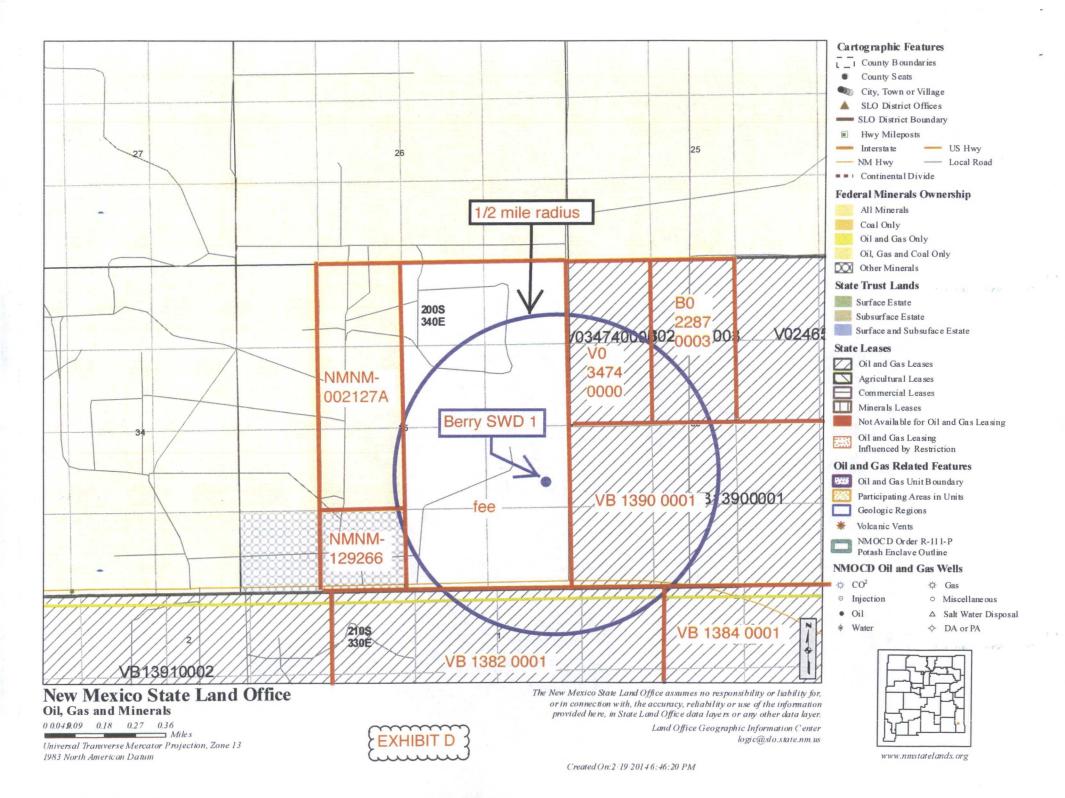
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 miles 0.0 0.5 1.0 km

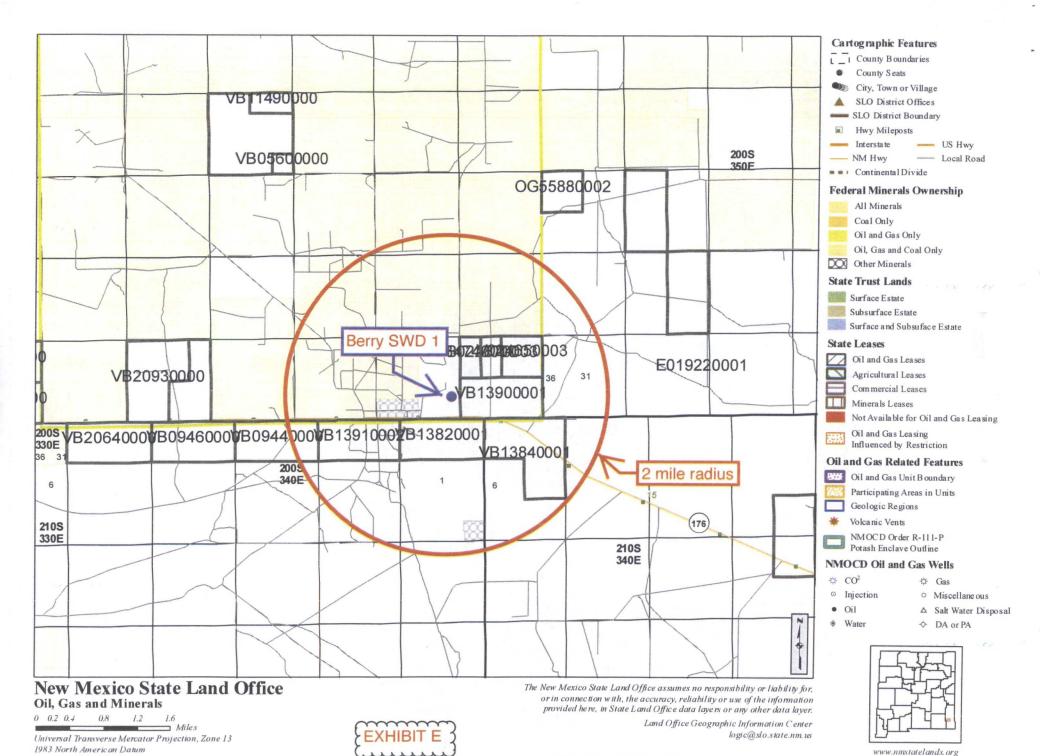


N\*MN 7°









Created On: 2:19 201 4 6:42:20 PM

# Sorted by Distance from Berry SWD 1

WELL	SPUD	TVD	POOL	WELL TYPE	HOLE O.D.	CASING O.D.	SET @	CEMENT	тос	HOW DETERMINED
Lynch 35 1H	6/6/13	11293	Berry; Bone Spring, North	0	17.5	13.375	1680	1570 sx	GL	690 sx circulated
30-025- 40825				·	12.25	9.625	<u>3760</u>	3297 sx	GL	467 sx circulated
A-35-20s-34e			·		8.5	5.5	15020	2205	4748	wireline 🗸
		:								
Stratosphere 36 State 1H	12/12/12	11690	Berry; Bone Spring, North	0	17.5	13.375	1850	1090	GL	152 sx circulated
30-025- 40618			·		12.25	9.625	5797	2500	3650	temperature survey
I-36-20s-34e					7.785	5.5	15534	2270	(GL)	circulated 93 sx
Lynch 35 2H	1/13/13	11316	Berry; Bone Spring, North	0	17.5	13.375	1682	1290	GL	53 bbl circulated
30-025- 40750			-		12.25	9.625	5592	2765	GL	955 sx circulated
B-35-20s-34e					8.5	5.5	15616	2520	1975	not reported

Botton Fineral Lealed

# TRETOLITE DIVISION 259 Marshall Arman / Saint Cours. Missouri 83119 (314: WO 1-3500/1WX 910-760-1620/11/124 44:2417

# WATER ANALYSIS REPORT

COMPANY_	Burk Royalty	Oil Co.		ADDRESS	Hobbs 11.1	4.	DATE:	1-7-72
SOURCE	Neal #1 (Ivn	ch Field)		_DATE SAM	MPLED		ANALYSIS 5692	
	Analysis	6.4		4	Mg/L	er.	NO	
1.	PH _			,			Yates sai	mple
2.	H <sub>2</sub> \$ (Qualitative)	Meg.	•					
3.	Specific Gravity	1.055		:				
4.	Dissolved Solids			:	85,317	·		
5.	Suspended Solids							
. 6.	Phenolphtholein Alko	linity (CaCO.)				_	F-10-10-10-10-10-10-10-10-10-10-10-10-10-	
7.	Methyl Orange Alkali			,	200	_		
8.	Bicarbonate (HCO <sub>3</sub>	1 .		HCO,	244	_ ÷61,	4.0	HCO1
9.	Chlorides (CI)	•	•	CI	46,000	_ ÷35.5	1,296	CI
10.	Sulfates (SO <sub>4</sub> )			SO.	7,268	_ ÷ 48	_151	so,
	Calcium (Ca)			Co	1,760	_ ÷20	- 88	Co
12.	Magnesium (Mg)	* .		Mg	1,458	÷12.2	120	Mg
13.	Total Hardness (Co	CO1)		1	10,400	_		
14.	Total Iron (Fe)	Ź		• !.	97.6 ppm	_		
15.	Barium (Qualitative	<b>e</b> }		1 .	•			
16.		•		•				
*Mi	lli equivalents per lit	er		'				

#### PROBABLE MINERAL COMPOSITION

Sate	uration Values Di Ca CO <sub>3</sub> Ca SO <sub>4</sub> • 2H <sub>2</sub> O	stilled Water 20°C 13 Mg/L 2,090 Mg/L	Mg (HCO <sub>3</sub> ) <sub>2</sub> Mg SO <sub>4</sub> Mg Cl <sub>2</sub>	73.17 60.19 47.62	67 53	4,033 2,520
	Mg CO <sub>3</sub>	103 Mg/L	Na HCOs	84.00		
	Mr. Dan Ber	rry	Na <sub>2</sub> \$O <sub>4</sub> Na CI	71.03 58.46	1,21,3	72,720
REMARKS _	(1) Copy 8	00 Oil & Gas Bldg.	Wichita Fall	ls, Texas 76	301	<del></del>

Ray Shaffner

EXHIBIT G

#### BURTON DIVISION LABORATORY

#### HALLIBURTON SERVICES MIDLAND DIVISION HOBBS, NEW MEXICO 88240

#### LABORATORY WATER ANALYSIS

No. W83-078

To David Fasken		Date	1-20-83
807 lst Nation	al B <b>ank</b> Building	it nor any part thereo or disclosed without fit of laboratory manager course of regular busin	erty of Halliburton Company and neither f nor a copy thereof is to be published rst securing the express written approval ment; it may however, be used in the less operations by any person or concern receiving such report from Halliburton
Submitted by		Date Re	c 1-20-83
Well No. Ling Feder	al #1 Depth 6,236	Formatic	Delaware
County Lea	Field W. Hobbs	Source_	DST #1
	Sampler	Tool Top	Top of Fluid
Resistivity	0.167 @ 70°F.	0.168 @ 70°F.	0.220 @ 60°F.
Specific Gravity	1.035		
	7.9	<u> </u>	
Calcium (Ca)	3,200	,	*MPL
Magnesium (Mg)	150		
Chlorides (Cl)	25,000	24,000	18,500
Sulfates (SO <sub>4</sub> )	3,300		
Bicarbonates (HCO <sub>3</sub> )	120		
Soluble Iron (Fe)	Nil		
		1	
Pit Sample -	Res. @ 70°F 0.247	Chļorides, mpl - 15	,000
Remarks:			*Milligrams per liter
		. !	EXHIBIT G
	Respectfully	y submitted,	
Analyst: Brewer	·	HALLIBURTO	ON COMPANY
CC:		Ву Ш. З.	HEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

# ATTACHMENT QUAIL RIDGE (DELAWARE) WATER PRODUCED

Resistivity0.052 € 60° F Specific GR1.170 ✓	
pH6.2	
- · ·	
Ca ( 700 Mg	
Calcium15900 Ca Magnesium9300 Mg Chlorides139500	سا
Chlorides139500	.*
Sulfateslight SO4	
Bicarbonates134 HCO3	
Soluble Ironlight Fe	

Pool Me 32 Regy 51.0 11-2-25 51.0 Frum 50-63 TO 37584



1004 S. Plainsman Road Marlow, OK 73055

Ph.: 800- 256-4703 Fx.: (580)-658-3223

Test: Date: FS-0032-0213 2/1/2013

Company:

Cudd Pumping-Fasken Oil

Submitted By:

Bill Ford

Depth: Location:

Leigh County, NM

Well Name:

Formation: Bonespring Shale

Source:

Date Taken:

THE SAMPLE CONTAINED:

**ANALYSIS OF WATER** 

WATER % by Vol. **CALCIUM** 5,727 mg/L OIL % by Vol. **MAGNESIUM** 1,093 mg/L SOLIDS % by Vol. BARIUM 0 mg/L 17 mg/L **EMULSION** % by Vol. IRON<sup>2</sup> **POTASSIUM** mg/L ANALYSIS OF OIL: CHLORIDES 89,000 mg/L **BICARBONATES** 153 mg/L BS&W % by Wt. CARBONATES mg/L API Gr. ° @ 60 °F **HYDROXIDES** mq/L % by Wt. **PARAFFIN** 275 mg/L SULFATES **ASPHALTENES** 44,933 % by Wt. SODIUM (Calc.) mg/L **CLOUD POINT** °F TDS (Calc.) 137,770 mg/L

POUR POINT °F

ANALYSIS OF SOLIDS:

IODIDES (Qual.) . pH 6.37 Sp. Gr 1.0961

 Sp. Gr.
 1.0961

 Rw
 0.070 Ohm-Meters

TEMPERATURE 70 ° F

COMMENTS:

The sodium and TDS are calculated using the French Creek DownHole SAT.

Respectfully submitted,

Sheny Baskins

Name

Sherry Gaskins

Title

Chemist

EXHIBIT G

NOTICE: This report is for information only and the content is limited to the sample described. CESI Chemical makes no warranties, express or implied, as to the accuracy of the contents or results. Any user of this report agrees CESI Chemical shall not be liable for any loss or damage, regardless of cause, including any act or omission of CESI Chemical, resulting from the use thereof.

# Endura Products Corporation P.O. Box 3394, Midland, Texas 79702

Phone (432) 684-4233 Fax (432) 684-4277

# **WATER ANALYSIS**

Date 10/7/2009 Sampling Point/Date well Company Fasken Oil and Formation		Code 10114034 State New Mexico County Lea Well #4 Wolfcamp Water
DISSOLVED SOLIDS CATIONS	mg/l	me/l
Sodium, Na+ (Calc.) Total Hardness as Ca++ Calcium Ca++ Magnesium, Mg++ Barium, Ba++ Iron (Total) Fe+++*	24,127 5,272 5,176 59 0 21	1,049 0 259 5 0
<u>ANIONS</u>		
Chlorides, Cl- Sulfate, SO4- Carbonate, CO3- Bicarbonates, HCO3- Sulfide, S-* Total Dissolved Solid	46,550 96 0 49 0 76,078	1,311 2 0 1
OTHER PROPERTIES		
pH* Specific Gravity,60/60 F.	6.470 1.076	

# **SCALING INDICIES**

266

TEMP, F	CA CO3	CASO4*2H2O	CA SO4	BA SO4
80	-0.9152	-1.2275	-1.4135	-29.0795
120	-0.6052	-1.2350	-1.2405	-29.3083
160	-0.1294	-1.2274	-1.0602	-29.5321

### **PERFORATIONS**

Turbidity

-

# HALLIBURTON DIVISION LABORATON HALLIBURTON SERVICES MIDLAND DIVISION

MIDLAND DIVISION
HOBBS, NEW MEDICO 88240

APR 1 0 1939	Compa of the
JED SFG	Wester Analysis

No. 062

#### LABORATORY WATER ANALYSIS

To Barbara Fasken		Date 4-4-89
303 West Wall Ave S	uite 1901	This report is the property of Hafilburton Company and neither it nor any part thereof nor a copy thereof is to be published
Midland TX 79701		or disclosed without first securing the express written approval of laboratory managament; it may however, by used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.
Submitted by		Date Rec. 4-4-89
		Formation Morrow
	Field	Source
Use This Sample	Ling Fed #1	Ling Fed #2
Resistivity	0.238 @ 70°	0.667 @ 70°
Specific Gravity	1.050	1.010
pH	4.1	6.6
Calcium (Ca)	4,250	1,800 *MPL
Magnesium (Mg)	Nil	Nil
Chlorides (CI)	27,000	9,000
Sulfates (SO <sub>4</sub> )	Light	Light
Bicarbonates (HCO <sub>3</sub> )	Ni1	80
Soluble Iron (Fe)	Heavy	Nil
	3/,250	12 530
Remarks:		*Milligrams per liter
•	•	
· · · · · · · · · · · · · · · · · · ·		(EXHIBIT G
<u> </u>	·	y submitted,
Analyst: Jay Bradford	1	HALLIBURTON COMPANY
cc:		Ву
•	•	CHEMIST

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# New Mexico Office of the State Engineer

# **Active & Inactive Points of Diversion**

1615 meters = 5,297 feet

(with Ownership Information)

					(R=POD has been replace	ed							
					and no longer serves this	file, (qua	rters are	1=NV	/ 2=NE 3=SW			ļ	
	(acre ft per	annum)	h van vares en s	i nor outre an of energy and in the second of the second o	C=the file is closed)	(qua	rters are	smalle	est to largest)	(NAD83	UTM in meters)	3 - 143 Series Sa	
Sub WR File Nbr basin	Da Andre W. St. Sec Sec.	on Owner	County	POD Number	Code Grant	Source	∉q∶q q 6416 4		Tws Rng	X		Distarce	
CP 01288	EXP	0 ATKINS ENGR ASSOC INC	LE	CP 01288 POD1	approved		4 4 2	34	20S 34E	637134	3600204	1615	
CP 01289	EXP	0 BERRY RANCH	LE	CP 01289 POD1	March, 2014		4 4 2	34	20S 34E	637037	3600261	1724	
CP 01290	EXP	0 ATKINS ENGR ASSOC INC	LE	CP 01290 POD1	not yet drilled		2 3 1	02	21S 33E	637113	3598855 🌎	1833	
CP 00611	PRO	0 DALE CROCKETT	LE	<u>CP 00611</u>		Shallow	2 1	06	21S 34E	639838	3598306*	1869	
CP 00579	DOL	3 BERRY RANCH	LE	<u>CP 00579</u>		Shallow	2 2	02	21S 33E	637438	3598269*	1968	
CP 00799	PLS	3 DANIEL C. BERRY	LE	CP 00799 go3	Illartesian J Sunta	1	4 3 4	34	20S 34E	636666	3599364* 🧽	2071	
CP 00803	PLS	3 DANIEL C. BERRY	LE	CP 00803 7 1929 WG		Artesian	3 2 2	02	21S 33E	637337	3598168*	2110	
CP 00804	PLS	3 DANIEL C. BERRY	LE	CP 00804 5 804	~		3 2 2	02	21S 33E	637337	3598168* 🌎	2110	
CP 00815	STK	3 DANIEL C BERRY	LE	01 00013	verifallurium Talluri	ها	3 2 2	26	20S 34E	638442	3602207* 🌎	2435	
CP 01204	EXP	0 CURTIS K SKEEN	LE	CP 01204 POD1	170 ft	Shallow	3 1 1	25	20S 34E	638755	3602250	2466	
<u>CP 00796</u>	PLS-	3 DANIEL-C. BERRY	- LE-	CP 00796	~12001		2 2 4	02 -2	21S33E	637548-	3597564*	- 2499-	
CP 00797	PDM	3 DANIEL C. BERRY	LE	CP 00797 S Allwid (	Clark		1 2 4	02 2	21S 33E	637348	3597564*	2597	
CP 00802	PLS	3 DANIEL C. BERRY	LE	CP 00802) 1933 w	11/artesian Souta	Artesian		02 2	21S 33E	636850	3597650*	2821	
CP 00791	SAN	3 ENRON GAS PROCESSING CO.	LE	<u>CP 00791</u> — iI	50 fe _ Rosc	Shallow	4 2 4	06 2	21S 34E	640754	3597413*	3141	
CP 00042	STK	3 DANIEL C REBRY	1F	CP 00942 POD1		Shallow	4 3 3	27 2	20S 34E	635742	3601060	3215	

#### \*UTM location was derived from PLSS - see Help

3/30/14 4:07 PM

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



Record Count: 15

UTMNAD83 Radius Search (in meters):

Easting (X): 638694

Northing (Y): 3599785

Radius: 3220

Sorted by: Distance

EXHIBIT H



# 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) (NA

(NAD83 UTM in meters)

1869 meters = 6,130 feet

(In feet)

POI Sub	and the British and	Ô	Q C							Denth	Depth V	Vater
POD Number Code basi	化 中央 10 0 10 10	Spring 22	max, " c	20 50	Tws	Rng	X	Y.	Distance	BELLEY BERGEL	Water Co	100
CP 00611	LE		2 1	06	21S	34E	639838	3598306* 🧗	1869	118	112	6
CP 00579	LE		2 2	02	21S	33E	637438	3598269* <table-cell></table-cell>	1968	125	100	25
<u>CP 00799</u>	LE	4	3 4	34	208	34E	636666	3599364*	2071	100		
CP 00803	LE	3	2. 2	02	218	33E	637337	3598168* 🤻	2110	1100		
CP 00804	LE	3	2 2	02	215	33E	637337	3598168* 🍕	2110	170		
CP 01204 POD1	LE	3	1	25	208	34E	638755	3602250	2466	370		
CP 00796	LE	2	2 4	02	218	33E	637548	3597564*	2499	102		
CP 00797	LE	1	2 4	02	21S	33E	637348	3597564* 🥞	2597	110		
CP 00802	LE			02	218	33E	636850	3597650* 🐔	2821	1150		
CP 00791	LE	4	2 4	1 06	218	34E	640754	3597413* 🤇	3141	85	55	30

Average Depth to Water:

89 feet

Minimum Depth:

55 feet

Maximum Depth:

112 feet

Record Count: 10

**UTMNAD83 Radius Search (in meters):** 

Easting (X): 638694

Northing (Y): 3599785

Radius: 3220

3220 meters = 10,560 feet = 2 miles

\*UTM location was derived from PLSS - see Help

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

3/30/14 4:06 PM



# TOPO! map printed on 04/01/14 from "Untitled.tpo" 103.55000° W 103.53333° W WGS84 103.51667° W Drill Hole 25 0 × 3765 Gravel Pit 32.52675° N, 103.52321° W Berry SWD North Oil Field & BM X 3791 2.51667° N 32.51691° N, 103.54137° W × 3793 Drill Holes sampled water well 6 Drill e Holes Map created with T@2010 National Geographic; @2005 Tele Atlas, Rel. 8/2005 103.53333° W WGS84 103.51667° W









#### **Analytical Report**

#### Lab Order 1311981

Date Reported: 12/6/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Permits West

Client Sample ID: Orion Tank

Project: Berry #1 SWD

**Collection Date:** 11/19/2013 12:39:00 PM

**Lab ID:** 1311981-001

Received Date: 11/21/2013 11:25:00 AM

esult	nalyses Re	RL Qual	Units DF	Date Analyzed	Batch
	EPA METHOD 300.0: ANIONS			Analyst:	JRR
21	Chloride ·	10	mg/L 20	11/22/2013 9:11:37 PM	R15036
	EPA METHOD 1664A			Analyst:	SMS
ND	N-Hexane Extractable Material	5.2	mg/L 1	11/27/2013	10504
S	SM2540C MOD: TOTAL DISSOLVED SOLIDS			Analyst:	KS
487	Total Dissolved Solids	20.0	mg/L 1	11/28/2013 5:46:00 PM	10537
-		20.0	mg/L 1	•	

Matrix: AQUEOUS

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Page 1 of 7

- P Sample pH greater than 2 for VOA and TOC only
- RL Reporting Detection Limit

EXHIBIT H

#### **Analytical Report**

#### Lab Order 1311981

Date Reported: 12/6/2013

# Hall Environmental Analysis Laboratory, Inc.

**CLIENT:** Permits West

Project:

Berry #1 SWD

Lab ID: 1311981-002 Client Sample ID: Berry Ranch Sources

Collection Date: 11/19/2013 1:30:00 PM

Matrix: AQUEOUS

Received Date: 11/21/2013 11:25:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS	•				Analys	t: JRR
Chloride	21	10	mg/L	20	11/22/2013 9:36:26 PM	И R15036
EPA METHOD 1664A					Analys	t: SMS
N-Hexane Extractable Material	ND	5.4	mg/L	1	11/27/2013	10504
SM2540C MOD: TOTAL DISSOLVE	O SOLIDS				Analys	st: KS
Total Dissolved Solids	483	20.0	mg/L	1	11/28/2013 5:46:00 PM	M 10537

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

#### Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Е Value above quantitation range
- Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Sample pH greater than 2 for VOA and TOC only



# **QC SUMMARY REPORT**

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1311981

06-Dec-13

Client:

Permits West

Project:

Berry #1 SWD

Sample ID MB-10504

SampType: MBLK

TestCode: EPA Method 1664A

Client ID:

**PBW** 

Batch ID: 10504

**PQL** 

5.0

RunNo: 15168

Prep Date:

Units: mg/L

11/25/2013

Analysis Date: 11/27/2013

SeqNo: 437409

**RPDLimit** 

Qual

Analyte N-Hexane Extractable Material Result ND

SPK value SPK Ref Val %REC LowLimit HighLimit

%RPD

Sample ID LCS-10504

SampType: LCS

TestCode: EPA Method 1664A

Client ID: LCSW

Batch ID: 10504

RunNo: 15168

Prep Date:

11/25/2013

SeqNo: 437410

Units: mg/L

Analyte

Analysis Date: 11/27/2013

34

%REC SPK value SPK Ref Val

LowLimit

HighLimit

**RPDLimit** %RPD

Qual

N-Hexane Extractable Material

Result

**PQL** 5.0

40.00

84.2

78

114

Qualifiers:

Value exceeds Maximum Contaminant Level.

Value above quantitation range Е

Analyte detected below quantitation limits

RSD is greater than RSDlimit 0

R RPD outside accepted recovery limits

Spike Recovery outside accepted recovery limits S

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded Η

ND Not Detected at the Reporting Limit

Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit RL

Page 3 of 7

### OC SUMMARY REPORT

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1311981

06-Dec-13

Client:

Permits West

Project:

Berry #1 SWD

Sample ID A5

SampType: CCV 5

Client ID:

**BatchQC** 

Batch ID: R15036

PQL

Batch ID: R15036

0.50

RunNo: 15036

Prep Date:

Analysis Date: 11/22/2013

SeqNo: 433965

Analyte

Result

SPK value SPK Ref Val

Units: mg/L

110

Chloride

7.7

8.000

%REC 96.8

LowLimit HighLimit

TestCode: EPA Method 300.0: Anions

%RPD **RPDLimit** 

Qual

Sample ID MB

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID: Prep Date:

Sample ID LCS

Client ID: LCSW

**PBW** 

Analysis Date: 11/22/2013

RunNo: 15036 SeqNo: 433967

Units: mg/L

Analyte Chloride

ND 0.50

Batch ID: R15036

POL

0.50

PQL

HighLimit

%RPD **RPDLimit** 

%RPD

Qual

SampType: LCS

TestCode: EPA Method 300.0: Anions

RunNo: 15036

%REC

96.7

LowLimit

LowLimit

HighLimit

Prep Date: Analyte

Result

4.8

Analysis Date: 11/22/2013

SeqNo: 433968

Units: mg/L

110

**RPDLimit** 

Qual

Chloride

Sample ID A6

SampType: CCV\_6

TestCode: EPA Method 300.0: Anions

Client ID:

BatchQC

BatchQC

Batch ID: R15036

RunNo: 15036

90

Prep Date:

Analysis Date: 11/22/2013

SPK value SPK Ref Val %REC

SPK value SPK Ref Val

5.000

SeqNo: 433977

Units: mg/L

Result PQL

HighLimit %RPD **RPDLimit** Qual

Analyte Chloride

0.50

SPK value SPK Ref Val 12.00

%REC 101

LowLimit

Sample ID A4

SampType: CCV\_4

TestCode: EPA Method 300.0: Anions

RunNo: 15036

110

Prep Date:

Client ID:

Batch ID: R15036 Analysis Date: 11/22/2013

SeqNo: 433989

Units: mg/L

HighLimit

110

HighLimit %RPD **RPDLimit** 

Qual

Qual

Analyte Chloride

Result 4.6

Result

7.7

**PQL** 0.50 5.000

SPK value SPK Ref Val %REC 93.0

LowLimit 90

TestCode: EPA Method 300.0: Anions

Prep Date:

Sample ID A5

Client ID: **BatchQC** 

SampType: CCV\_5 Batch ID: R15036

PQL

0.50

Analysis Date: 11/22/2013

8.000

SPK value SPK Ref Val

P

RunNo: 15036

SeqNo: 434001 %REC LowLimit

Units: mg/L

%RPD

**RPDLimit** 

Analyte Chloride

- Qualifiers:
  - E Value above quantitation range
- RSD is greater than RSDlimit 0
- Value exceeds Maximum Contaminant Level.

Spike Recovery outside accepted recovery limits

- Analyte detected below quantitation limits
- RPD outside accepted recovery limits R

- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded

Sample pH greater than 2 for VOA and TOC only.

ND Not Detected at the Reporting Limit

96.7

RLReporting Detection Limit

## **OC SUMMARY REPORT**

### Hall Environmental Analysis Laboratory, Inc.

WO#:

1311981

06-Dec-13

Client: Project: Permits West Berry #1 SWD

Sample ID A6

SampType: CCV\_6

TestCode: EPA Method 300.0: Anions

LowLimit

Client ID:

**BatchQC** 

Batch ID: R15036 Analysis Date: 11/22/2013 RunNo: 15036

%REC

101

110

Analyte

Prep Date:

Result PQL 12 0.50 SPK value SPK Ref Val 12.00

SeqNo: 434013

Units: mg/L HighLimit

Chloride Sample ID MB

SampType: MBLK

TestCode: EPA Method 300.0: Anions

Client ID:

PBW

Batch ID: R15036

RunNo: 15036

Units: mg/L

Prep Date:

Analysis Date: 11/22/2013

SeqNo: 434021

Analyte

Result PQL SPK value SPK Ref Val

SPK value SPK Ref Val

SPK value SPK Ref Val

5.000

5.000

8.000

12.00

SPK value SPK Ref Val

%REC LowLimit

HighLimit %RPD

Chloride

ND 0.50

**RPDLimit** 

**RPDLimit** 

Qual

SampType: LCS

Result

Result

5.0

TestCode: EPA Method 300.0: Anions

%RPD

%RPD

Qual

Sample ID LCS Client ID:

Prep Date:

LCSW

Analysis Date: 11/22/2013

POL

0.50

Batch ID: R15036

RunNo: 15036

SeqNo: 434022

LowLimit

Units: mg/L HighLimit

**RPDLimit** 

:Qual

Analyte Chloride

SampType: CCV\_4

90 TestCode: EPA Method 300.0: Anions

Sample ID A4 Client ID:

**BatchQC** 

Batch ID: R15036

RunNo: 15036

%REC

%REC

100

HighLimit

110

110

Prep Date:

Analysis Date: 11/22/2013

**PQL** 

SeqNo: 434025

Units: mg/L

Analyte

0.50

0

LowLimit

%RPD

**RPDLimit** ·Qual

Chloride

**BatchQC** 

SampType: CCV\_5

TestCode: EPA Method 300.0: Anions

Sample ID A5 Client ID: **BatchQC** 

Batch ID: R15036

RunNo: 15036

HighLimit

Units: mg/L

HighLimit

110

Units: mg/L

110

Sample ID A6

Prep Date:

Analysis Date: 11/23/2013 Result **PQL** SPK value SPK Ref Val

SeqNo: 434037 %REC

LowLimit

LowLimit

90

90

%RPD

**RPDLimit** Qual

Analyte Chloride

7.7

12

0.50 SampType: CCV\_6 Batch ID: R15036

Analysis Date: 11/23/2013

0.50

96.8 TestCode: EPA Method 300.0: Anions RunNo: 15036

SeqNo: 434049

%REC

100

%RPD

**RPDLimit** 

Qual

Analyte Chloride

Client ID:

Prep Date:

Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range Analyte detected below quantitation limits

0 RSD is greater than RSDlimit

RPD outside accepted recovery limits R Spike Recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit

Page 5 of 7

# **QC SUMMARY REPORT**

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1311981

06-Dec-13

Client:

Permits West

Project:

Berry #1 SWD

Sample ID A4

Prep Date:

SampType: CCV\_4

TestCode: EPA Method 300.0: Anions

Client ID:

**BatchQC** 

Batch ID: R15036

**PQL** 

RunNo: 15036

Analysis Date: 11/23/2013

SeqNo: 434058

Units: mg/L

Analyte

SPK value SPK Ref Val %REC

LowLimit HighLimit

%RPD **RPDLimit**  Qual

Chloride

4.6

0.50

5.000

92.8

90

110

Qualifiers:

Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

0 RSD is greater than RSDlimit

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Holding times for preparation of analysis exceeded Н

Not Detected at the Reporting Limit ND

Sample pH greater than 2 for VOA and TOC only.

Reporting Detection Limit

Page 6 of 7

# **QC SUMMARY REPORT**

# Hall Environmental Analysis Laboratory, Inc.

WO#:

1311981

06-Dec-13

Client:

Permits West

Project:

Berry #1 SWD

Sample ID MB-10537

SampType: MBLK

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID:

PBW

Batch ID: 10537

**PQL** 

RunNo: 15140

SPK value SPK Ref Val %REC LowLimit HighLimit

Prep Date:

Analyte

11/26/2013

Analysis Date: 11/28/2013

SeqNo: 436725

Units: mg/L

%RPD **RPDLimit** 

Qual

**Total Dissolved Solids** 

ND 20.0

Sample ID LCS-10537

SampType: LCS

TestCode: SM2540C MOD: Total Dissolved Solids

Client ID:

**LCSW** 

Batch ID: 10537

RunNo: 15140

Prep Date: 11/26/2013

Analysis Date: 11/28/2013

Result

SeqNo: 436726

Units: mg/L

Analyte

Result

SPK value SPK Ref Val **PQL** 

%REC

HighLimit

**RPDLimit** %RPD

Qual

**Total Dissolved Solids** 

1030 20.0 1000

0

103

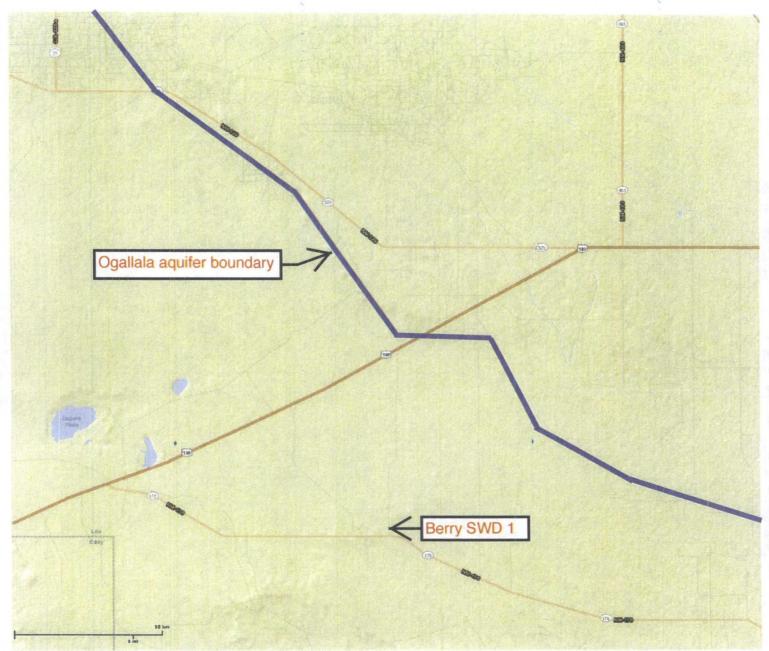
LowLimit

120

## Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- 0 RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- Sample pH greater than 2 for VOA and TOC only. Р
- RLReporting Detection Limit

Page 7 of 7



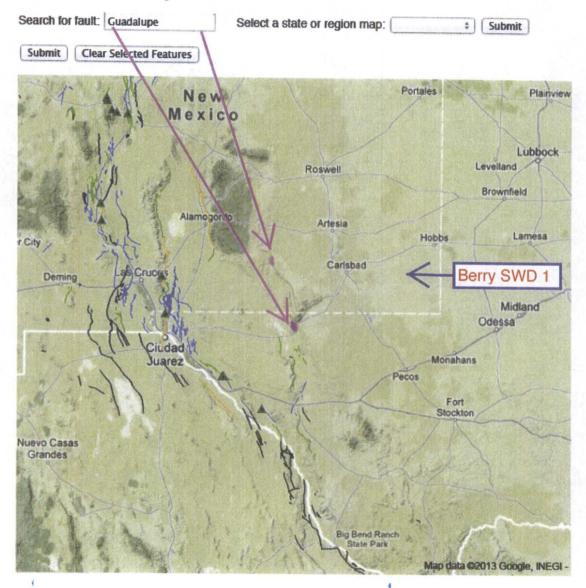
Copyright 2010 Esri. All rights reserved. Tue Apr 1 2014 11:12:21 AM.





## **Geologic Hazards Science Center**

## **EHP Quaternary Faults**





## **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 April 24, 2014 and ending with the issue dated April 24, 2014

PUBLISHER.

Sworn and subscribed to before me this 24th day of April, 2014

**Notary Public** 

My commission expires January 29, 2015

(Seal)

OFFICIAL SEAL GUSSIE BLACK **Notary Public** State of New Mexico My Commission Expires 129-1

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

LEGAL NOTICE APRIL 24, 2014

NM at 1620 FSL & 304 by contacting: Brian Wood Permits West Inc. 37 Verano Loop Santa Fe NM 87508 Phone number is (505) 466-8120

02108485

00134797

**BRIAN WOOD** PERMITS WEST 37 VERANO LOOP **SANTA FE, NM 87508** 





Daniel C. Berry III P. O. Box 160 Eunice, NM 88231

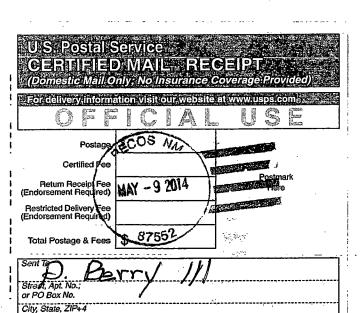
Dear Mr. Berry:

BC Operating, Inc. is applying (see attached application) to drill its Berry SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed saltwater disposal well in Lea County, NM. This letter is a notice only. No action is needed unless you have questions or objections.

Well Name: Berry SWD 1 (private lease) <u>TD</u> = 7,100'
Proposed Disposal Zone: Cherry Canyon (5,750' - 7,100')
Location: 1620' FSL & 304' FEL Sec. 35, T. 20 S., R. 34 E.
Approximate Location: 16 air miles southwest of Monument, NM
Applicant Name: BC Operating, Inc. (432) 684-9696, Ext. 738
Applicant's Address: P. O. Box 50820, Midland TX 79710

<u>Submittal Information</u>: Application for a saltwater disposal well will be filed with the NMOCD. If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr. Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.



Sincerely,

Brian Wood



May 9, 2014

BLM 620 E. Greene Carlsbad NM 88220

BC Operating, Inc. is applying (see attached application) to drill its Berry SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed saltwater disposal well in Lea County, NM. This letter is a notice only. No action is needed unless you have questions or objections.

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Please call me if you have any questions.

Sincerely,

Brian Wood

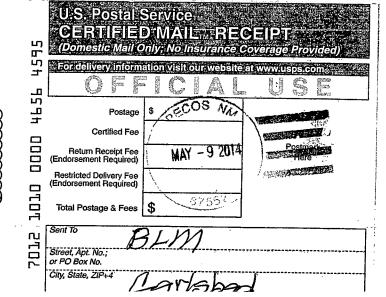


EXHIBIT K



Michael E. Black 710 N. Colorado, #115 Midland TX 79702

BC Operating, Inc. is applying (see attached application) to drill its Berry SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed saltwater disposal well in Lea County, NM. This letter is a notice only. No action is needed unless you have questions or objections.

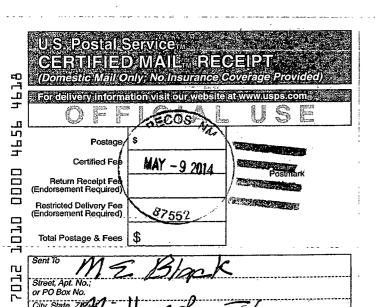
Well Name: Berry SWD 1 (private lease)  $ID = 7.100^{\circ}$ Proposed Disposal Zone: Cherry Canyon (5,750' - 7,100') Location: 1620' FSL & 304' FEL Sec. 35, T. 20 S., R. 34 E. Approximate Location: 16 air miles southwest of Monument, NM Applicant Name: BC Operating, Inc. (432) 684-9696, Ext. 738 Applicant's Address: P. O. Box 50820, Midland TX 79710

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Please call me if you have any questions.

Sincerely,

Brian Wood





May 9, 2014

BTA Oil Producers, LLC 104 S. Pecos Midland TX 79701

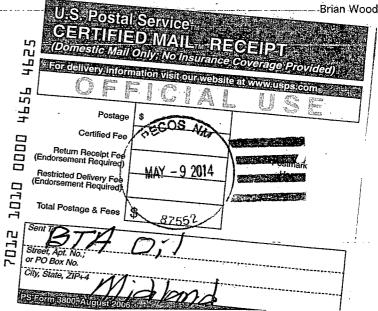
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Please call me if you have any questions.

Sincerely





Burk Royalty Co. Ltd. P. O. Box 94903 Wichita Falls TX 76308

BC Operating, Inc. is applying (see attached application) to drill its Berry SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed saltwater disposal well in Lea County, NM. This letter is a notice only. No action is needed unless you have questions or objections.

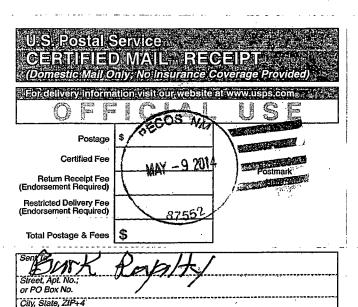
Well Name: Berry SWD 1 (private lease) TD = 7,100' Proposed Disposal Zone: Cherry Canyon (5,750' - 7,100') Location: 1620' FSL & 304' FEL Sec. 35, T. 20 S., R. 34 E. Approximate Location: 16 air miles southwest of Monument, NM Applicant Name: BC Operating, Inc. (432) 684-9696, Ext. 738 Applicant's Address: P. O. Box 50820, Midland TX 79710

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Please call me if you have any questions.

Sincerely.

Brian Wood







May 9, 2014

Cimarex Energy Co. 600 N. Marienfeld St. Midland TX 79701

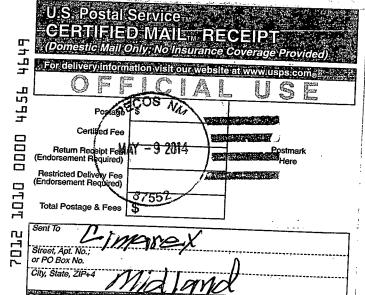
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Please call me if you have any questions.

Sincerely





COG Operating LLC & Concho Resources 600 W. Illinois Ave.
Midland TX 79701

BC Operating, Inc. is applying (see attached application) to drill its Berry SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed saltwater disposal well in Lea County, NM. This letter is a notice only. No action is needed unless you have questions or objections.

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Applicant Name: BC Operating, Inc. (432) 684-9696, Ext. 738
Applicant's Address: P. O. Box 50820, Midland TX 79710

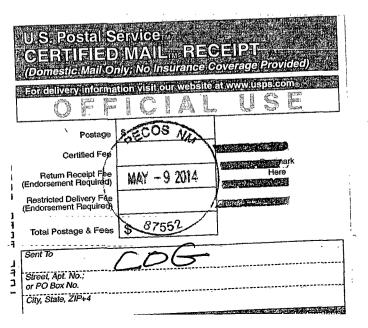
<u>Submittal Information</u>: Application for a saltwater disposal well will be filed with the NMOCD. If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr. Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Salar

Brian Wood





May 9, 2014

ConocoPhillips P. O. Box 2197 Houston TX 77252-2197

BC Operating, Inc. is applying (see attached application) to drill its Berry SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed saltwater disposal well in Lea County, NM. This letter is a notice only. No action is needed unless you have questions or objections.

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Applicant's Address: P. O. Box 50820, Midland TX 79710

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Please call me if you have any questions.

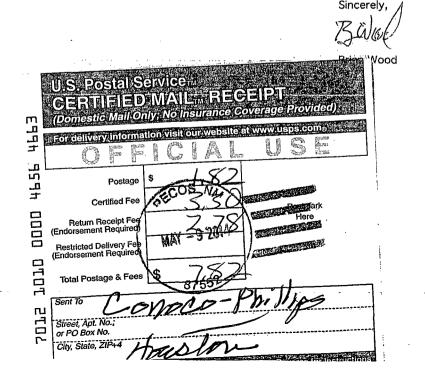


EXHIBIT K



Kerr-McGee c/o Anadarko P. O. Box 1300 Houston TX 77251

BC Operating, Inc. is applying (see attached application) to drill its Berry SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed saltwater disposal well in Lea County, NM. This letter is a notice only. No action is needed unless you have questions or objections.

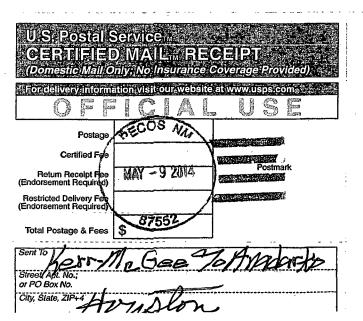
Well Name: Berry SWD 1 (private lease) TD = 7,100'
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Approximate Location: 16 air miles southwest of Monument, NM
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Applicant's Address: P. O. Box 50820, Midland TX 79710

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Please call me if you have any questions.

Sincerely,

Brian Wood.





May 9, 2014

Estate of R. Dechicchis P. O. Box 1251 Midland TX 79702

BC Operating, Inc. is applying (see attached application) to drill its Berry SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed saltwater disposal well in Lea County, NM. This letter is a notice only. No action is needed unless you have questions or objections.

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Approximate Location: 16 air miles southwest of Monument, NM
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Applicant's Address: P. O. Box 50820, Midland TX 79710

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Please call me if you have any questions.

Sincerely

-Wood

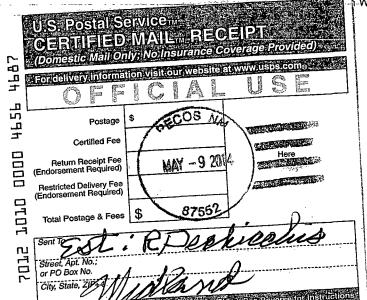


EXHIBIT K



**GMT Exploration Company LLC** 1560 Broadway, Suite 2000 Denver CO 80202

BC Operating, Inc. is applying (see attached application) to drill its Berry SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) Rules. I am notifying you of the following proposed saltwater disposal well in Lea County, NM. This letter is a notice only. No action is needed unless you have questions or objections.

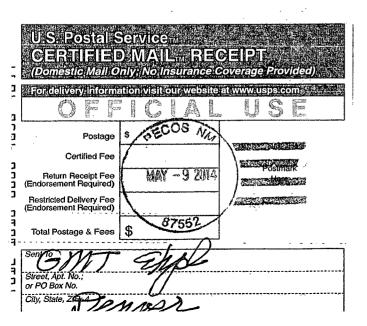
Well Name: Berry SWD 1 (private lease) <u>TD</u> = 7,100' Proposed Disposal Zone: Cherry Canyon (5.750' - 7.100') Location: 1620' FSL & 304' FEL Sec. 35, T. 20 S., R. 34 E. Approximate Location: 16 air miles southwest of Monument, NM Applicant Name: BC Operating, Inc. (432) 684-9696, Ext. 738 Applicant's Address: P. O. Box 50820, Midland TX 79710

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Please call me if you have any questions.

Sincerely,

Brian Wood





37 Verno Lonis Sasta Fo New Mexico 87508

May 9, 2014

Magnum Hunter Production Inc. 5215 N. O'Conner Blvd., #1500 Irving TX 75039

BC Operating, Inc. is applying (see attached application) to drill its Berry SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) Rules. I am notifying you of the following proposed saltwater disposal well in Lea County. NM. This letter is a notice only. No action is needed unless you have questions or objections.

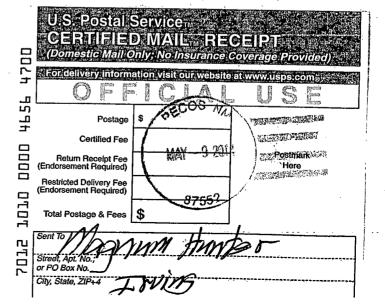
Well Name: Berry SWD 1 (private lease) ID = 7,100' Proposed Disposal Zone: Cherry Canyon (5,750' - 7,100') Location: 1620' FSL & 304' FEL Sec. 35, T. 20 S., R. 34 E. Approximate Location: 16 air miles southwest of Monument, NM Applicant Name: BC Operating, Inc. (432) 684-9696, Ext. 738 Applicant's Address: P. O. Box 50820, Midland TX 79710

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Please call me if you have any questions.

Sincerely

Brian Wood





NM State Land Office P. O. Box 1148 Santa Fe NM 87504

BC Operating, Inc. is applying (see attached application) to drill its Berry SWD 1 well as a saltwater disposal well. As required by NM Oil Conservation Division (NMOCD) Rules, I am notifying you of the following proposed saltwater disposal well in Lea County, NM. This letter is a notice only. No action is needed unless you have questions or objections.

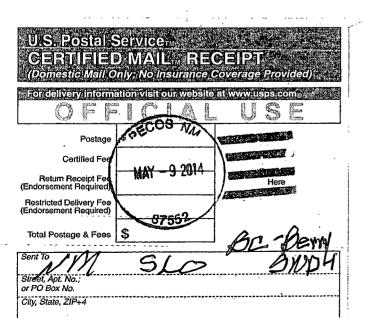
Well Name: Berry SWD 1 (private lease) Proposed Disposal Zone: Cherry Canyon (5,750' - 7,100') Location: 1620' FSL & 304' FEL Sec. 35, T. 20 S., R. 34 E. Approximate Location: 16 air miles southwest of Monument, NM Applicant Name: BC Operating, Inc. (432) 684-9696, Ext. 738 Applicant's Address: P. O. Box 50820, Midland TX 79710

Submittal Information: Application for a saltwater disposal well will be filed with the NMOCD. If you have an objection, or wish to request a hearing, then it must be filed with the NMOCD within 15 days of receipt of this letter. The New Mexico Oil Conservation Division address is 1220 South St. Francis Dr. Santa Fe, NM 87505. Their phone number is (505) 476-3440.

Please call me if you have any questions.

Sincerely,

Brian Wood





May 9, 2014

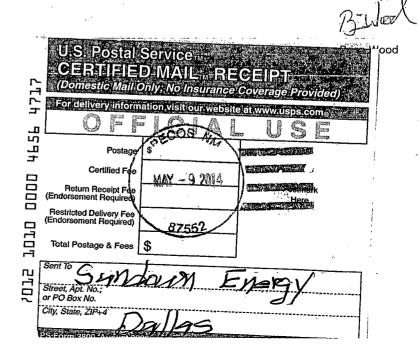
Sundown Energy LP & Sundown Production LLC 13455 Noel Rd., Suite 200 Dallas TX 75240

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Please call me if you have any questions.



### Goetze, Phillip, EMNRD

From:

Goetze, Phillip, EMNRD

Sent:

Tuesday, August 05, 2014 3:55 PM

To:

Brian Wood (brian@permitswest.com)

Cc:

Ezeanyim, Richard, EMNRD; McMillan, Michael, EMNRD

**Subject:** 

C-108 Application: Proposed Well Construction for Berry SWD No. 1

RE: Berry SWD No. 1; API 30-025-41703; application no. pMAM14133232831

#### Brian:

The review of the application for the proposed SWD well shows a construction of two strings of casing (surface and intermediate) with the injection interval in the Cherry Canyon formation to be open-hole. OCD will not administratively approve the open-hole completion for the injection interval as proposed. OCD is requesting a third string of casing with cement (circulated to surface) for the completion especially with this being a commercial disposal well within the boundaries of Division Order R-111-P. This change would not constitute major modification and would not require additional notification. Please contact your client and discuss this matter. Also, BC Operating does have the option to go to hearing to obtain the issuance of a Division order for the application with the current proposed design, if it so wishes.

Additionally, the published notification states an injection interval from 5750 ft to 7000 ft while the proposed well bore diagram states the bottom of the injection interval is a 7100 ft. As a result, the approved injection interval will be required to conform with the total depth published in the newspaper. Please contact me by e-mail or phone with any questions on this subject. PRG

### Phillip R. Goetze, P.G.

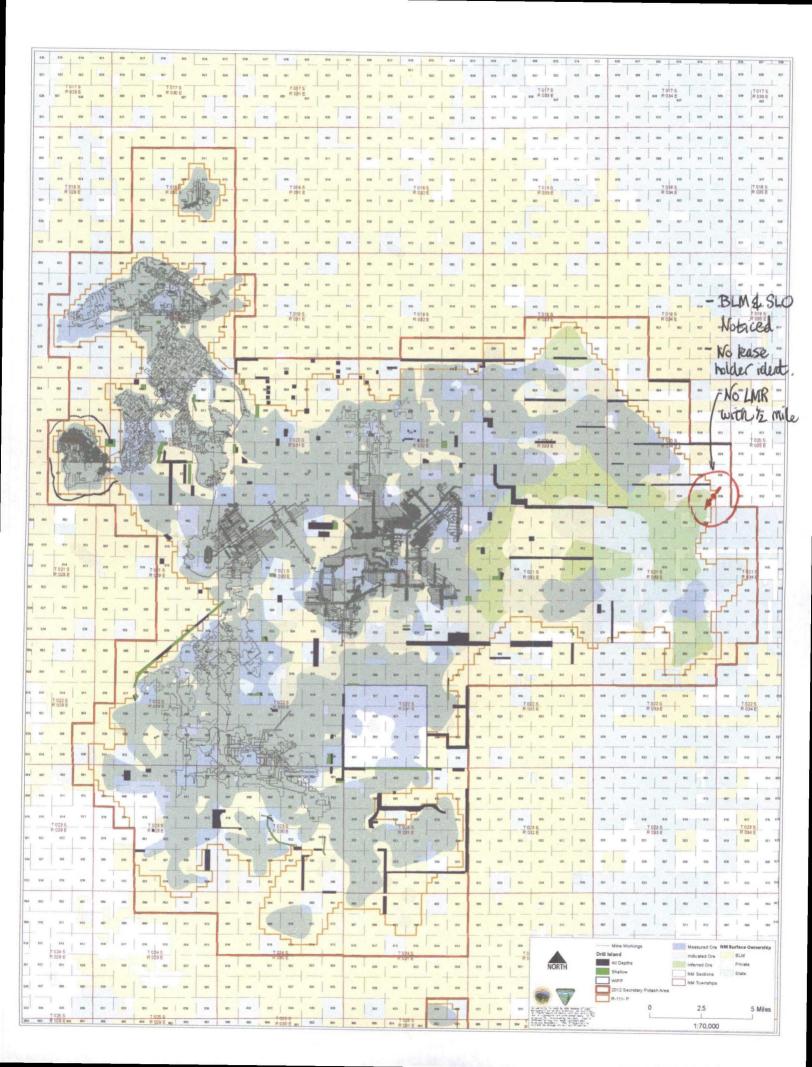
Engineering and Geological Services Bureau, Oil Conservation Division 1220 South St. Francis Drive, Santa Fe, NM 87505

O: 505.476.3466

F: 505.476.3462

phillip.goetze@state.nm.us

C-108 Review Checklist: Received 5/12/14 Add. Request: CA/19/14 Reply Date: Suspended: [Ver 15]
ORDER TYPE: WFX / PMX / SWD Number: 1516 Permit Date: 01/09/15 Legacy Permits/Orders: NA
Well No.   Well Name(s): Berry SWD Prilling Islands & Open-Hole
API : 30-0 25 - 4 703 Spud Date: 01/2015 New or Old: New (UIC Class II Primacy 03/07/1982)
Footages 1620 FSL 364 PEL Lot or Unit I Sec 35 Tsp 265 Rge 34E County Lea
General Location: Near Law / ~20 mi SW of Hobbs Pool: SWD; Cherry Conyon Pool No.: 97003
BLM 100K Map: Hobbs Operator: BC Operating, Inc. OGRID: 160825 Contact: Brian Wood
COMPLIANCE RULE 5.9: Total Wells: 54 Inactive: 2 Fincl Assur: Yes Compl. Order? No IS 5.9 OK? Yes Date: 01/09/15
WELL FILE REVIEWED & Current Status: APD on file - Second application; Brushy removed from original int
WELL DIAGRAMS: NEW: Proposed or RE-ENTER: Before Conv. After Conv. Logs in Imaging:
Planned Rehab Work to Well: NA
Well Construction Details Sizes (in) Setting Cement Cement Top and Sx or Cf Determination Method.
Planned For Existing Surface 16 13% 0 to 16 30 Stage Tool 480+540 1020 Cir. to surface
Planned for Existing InternVProd 1214/95/8 0 to 3600 None 400+810/1210 Cir. to Surface
Planned or Existing Interm/Prod 83/4/7° 0 to 5760 None 320+3640 Cir to Suffere
Planned - Existing Prod/Liner Add String of extend string -
Planned_or Existing _ Liner
Planned For Existing OH) PERF 6/8 NC 5750 to 7000 Inj Length Completion/Operation Details:
Injection Lithostratigraphic Units: Depths (ft) Injection or Confining Tops Drilled TD PBTD
Adjacent Unit: Litho. Struc. Por. Copt to 3040 NEW TD 7600 NEW PBID
Confining Unit: Litho. Struc. Por. 10 Oup. Low / Confining Unit: Litho. Por. 10
Proposed Inj Interval TOP: 5750 Cherry bruge 16 5750 Tubing Size 41/2 in. Inter, Coated?
Proposed Inj Interval BOTTOM: 7000 ft
Confining Unit: Litho. Struc. Por. + 210 Brushy Courses 7270 Min. Packer Depth 5650 (100-ft limit)
Adjacent Unit: Litho. Struc. Por. Bonesbari Proposed Max. Surface Press. 1130 psi
Admin. Inj. Press. (0.2 psi per ft)
POTASH: R-111-P) DNoticed? No/ (BLM Sec Ord ) WIPP MONoticed? NA SALT/SALADO T: B: CLIFF HOUSE NA ALLIVATION (1200)
FRESH WATER: Aquifer Capitan   Capitan   South Statement By Qualified Person By Control   South Statement By Control   South By Cont
NMOSE Basin: Capital REEF: throw adjo NAO No. Wells within 1-Mile Radius? FW Analysis V
Disposal Fluid: Formation Source(s) BS WC Delaware Analysis? Les On Lease Operator Only Or Commercial Of Control Of Of Cont
Disposal Int: Inject Rate (Avg/Max BWPD): 1500 2000 Protectable Waters? UNK source: System: Closed of Open Open Open Open Open Open Open Open
HC Potential: Producing Interval? 6 Formerly Producing? W Method: Logs/DST/P& Other Clamb 2-Mile Radius Pool Map
Nos III
AOR Wells: 1/2-M Radius Map? Yes Well List? Yes Total No. Wells Penetrating Interval: 3 Horizontals? Yes all Ditamedient Cusing on No.
Penetrating Wells: No. Active Wells 3 Num Repairs? 4 on which well(s)? Three well conted over injustice piagrams? No.
Penetrating Wells: No. P&A Wells Diagrams? On which well(s)? Diagrams?
RULE 26.7(A): Identified Tracts? Affected Persons: (Co G not). 10-Componed / 1-1732 N. DateN. DateN.
Order Conditions: Issues: Open hole commercial injection; unknown HC potential (low); wo af
Add Order Cond: Coment & Casing for injection internal; HC potential - mollog illerval
R-111-P Notice: location not within a mile of potash lease or LMR - both SLOR BLM notified



September 19, 2014

Phil Goetze NM Oil Conservation Div. 1220 S. St. Francis Dr. Santa Fe, NM 87505

Dear Phil,

As requested, BC Operating has changed its Berry SWD 1 (30-025-41703) from 2 strings to 3 strings. The revised pages for the C-108 application package are attached. Also attached is a Sundry Notice to Hobbs OCD describing the casing change and cement specifications.

Please call me if you have any questions.

Sincerely,

Brian Wood

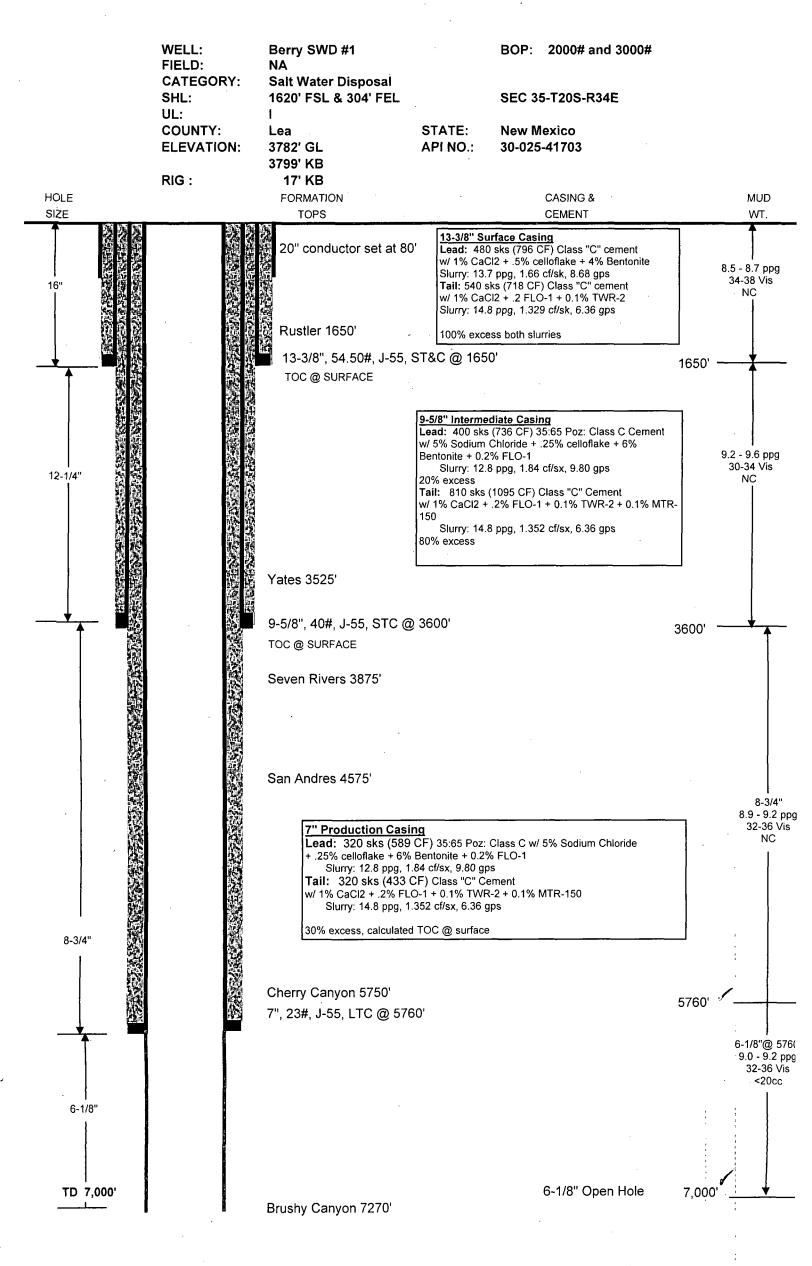
RECEIVED OUD

MIN SEP 19 A III: 23

cc: Durham

Submit 1 Copy To Appropriate District	State of New Me	•	Form C-103			
<u>District I</u> – (575) 393-6161 1625 N. French Dr., Hobbs, NM 88240	Energy, Minerals and Natu	ral Resources	Revised July 18, 2013 WELL API NO.			
<u>District II</u> – (575) 748-1283	OIL CONSERVATION	DIMICION	30-025-41703			
811 S. First St., Artesia, NM 88210 <u>District III</u> – (505) 334-6178	OIL CONSERVATION 1220 South St. Fran		5. Indicate Type of Lease			
1000 Rio Brazos Rd., Aztec, NM 87410	Santa Fe, NM 87			FEE 🛛		
<u>District IV</u> – (505) 476-3460 1220 S. St. Francis Dr., Santa Fe, NM 87505	Santa re, Nivi 87	303	6. State Oil & Gas Lease No. N/A			
SUNDRY NOTIC (DO NOT USE THIS FORM FOR PROPOSA DIFFERENT RESERVOIR. USE "APPLICA	7. Lease Name or Unit A BERRY SWD	greement Name				
PROPOSALS.)  1. Type of Well: Oil Well  G	as Well  Other SWD	٥.	8. Well Number 1			
2. Name of Operator BC OPERATING, INC.						
3. Address of Operator P. O. BOX 50820, MIDLAND TX	10. Pool name or Wildcat SWD; CHERRY CANYON					
4. Well Location						
Unit Letter: I	1620 feet from the SOU	TH line and 304 fe	eet from the EAST line			
Section 35	Township 20 SOUTH			LEA County		
	11. Elevation (Show whether DR, 3,782' GL	RKB, RT, GR, etc.	)			
12. Check Ap	opropriate Box to Indicate N	ature of Notice,	, Report or Other Data			
NOTICE OF INT PERFORM REMEDIAL WORK  TEMPORARILY ABANDON PULL OR ALTER CASING DOWNHOLE COMMINGLE CLOSED-LOOP SYSTEM	SSEQUENT REPORT RK	RING CASING 🔲				
OTHER:		OTHER:				
	ted operations. (Clearly state all pk). SEE RULE 19.15.7.14 NMAC mpletion.					
Will add 3 <sup>rd</sup> string of casing	g. See attached revised well bore	diagram.				
		•				
				•		
			•			
	•					
				; i		
Cc: BC (Durham), NMOCD (Hobbs &	& Santa Fe)			· ,		
Co. Be (Burnam), NATOCE (110003 E						
Spud Date:	Rig Release Da	ate:		•		
<u> </u>		<u> </u>				
I hereby certify that the information al	bove is true and complete to the b	est of my knowled	ge and belief.			
R 1)	. //	•				
SIGNATURE TWO	DATE SEPTEME	BER 18, 2014				
Type or print name BRIAN WOOD For State Use Only	E-mail address: brian@p	ermitswest.com	PHONE: (505) 466	-8120		
APPROVED BY:	TITLE		DATE			
Conditions of Approval (if any):			-			

### **DRILLING WELL DIAGRAM**





# New Mexico Office of the State Engineer

# **Active & Inactive Points of Diversion**

(with Ownership Information)

(acre ft per annum)					C=the file is closed)	(quarters are smallest to largest) (NAD83 UTM in meters)			
	Sub WR File Nor basi	n Use Diversi	on Owner	County	POB Number	Code Grant	q q q Source 64164 Sec Twe	s Rng X	Y
	<u>CP 01334</u>	СОМ	0 BERRY RANCH/GLENNS WW SERV INC	THE S	CP 01334 POD1		Artesian 3 2 4 35 208	34E 638402	3599879 🦫
	CP 01335	СОМ	0 BERRY RANCH/GLENNS WW SERV INC	LE	CP 01335 POD1	NON	Artesian 4 1 4 35 208	638205	3599736
	<u>CP 01369</u>	PRO	0 COG OPERATING	LE	CP 01334 POD1		Artesian 3 2 4 35 205	638402	3599879 🌎
	<u>CP 01370</u>	PRO	0 COG OPERATING	LE	CP 01334 POD1		Artesian 3 2 4 35 205	S 34E 638402	3599879 🌄
	<u>CP 01371</u>	PRO	0 COG OPERATING	LE	CP 01334 POD1		Artesian 3 2 4 35 205	638402	3599879
	CP 01375	PRO	0 COG OPERATING	LE	CP 01335 POD1	NON	Artesian 4 1 4 35 205	S 34E 638205	3599736
	CP 01376	PRO <sup>*</sup>	0 COG OPERATING	LE	CP 01335 POD1	NON	Artesian 4 1 4 35 205	34E 638205	3599736 🔑
	CP 01377	PRO	0 COG OPERATING	LE	CP 01335 POD1	NON	Artesian 4 1 4 35 208	S 34E 638205	3599736
			<ul> <li>* **</li> </ul>						

**Record Count: 8** 

POD Search:

POD Basin: Capitan

PLSS Search:

Section(s): 35

Sorted by: File Number

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