Susana Martinez
Governor

John Bemis
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey
Division Director
Oil Conservation Division

Administrative Order SWD-1409
March 22, 2013

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of 19.15.26.8B NMAC, BOPCO, L.P. seeks an administrative order to utilize its Nash Draw 8 Federal No. 1 (API 30-015-NA) to be located 2075 feet from the South line and 630 feet from the West line, Unit letter L of Section 8, Township 24 South, Range 30 East, NMPM, Eddy County, New Mexico, for produced water disposal purposes.

THE DIVISION DIRECTOR FINDS THAT:

The application has been duly filed under the provisions of 19.15.26.8B NMAC and satisfactory information has been provided that affected parties as defined in said rule have been notified and no objections have been received within the prescribed waiting period. The applicant has presented satisfactory evidence that all requirements prescribed in 19.15.26.8 NMAC have been met and the operator is in compliance with 19.15.5.9 NMAC.

IT IS THEREFORE ORDERED THAT:

The applicant, BOPCO, L.P., is hereby authorized to utilize its Nash Draw 8 Federal No. 1 (API 30-015-NA) to be located 2075 feet from the South line and 630 feet from the West line, Unit letter L of Section 8, Township 24 South, Range 30 East, NMPM, Eddy County, New Mexico, for disposal of oil field produced water (UIC Class II only) into the Devonian formation through an open hole interval from 15750 feet to 17225 feet through internally coated tubing and a packer set within 100 feet of the permitted interval.

IT IS FURTHER ORDERED THAT:

The operator shall take all steps necessary to ensure that the disposed water enters only the proposed disposal interval and is not permitted to escape to other formations or onto the surface.

After installing tubing, the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge or an approved leak detection device in order to determine leakage in the casing, tubing, or packer. The casing shall be pressure tested from the surface to the packer setting depth to assure casing integrity.

The well shall pass an initial mechanical integrity test ("MIT") prior to initially commencing disposal and prior to resuming disposal each time the disposal packer is unseated.

All MIT testing procedures and schedules shall follow the requirements in Division Rule 19.15.26.11A. NMAC. The Division Director retains the right to require at any time wireline verification of completion and packer setting depths in this well.

The wellhead injection pressure on the well shall be limited to **no more than 3150 psi**. In addition, the disposal well or system shall be equipped with a pressure limiting device in workable condition which shall, at all times, limit surface tubing pressure to the maximum allowable pressure for this well.

The Director of the Division may authorize an increase in tubing pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the disposed fluid from the target formation. Such proper showing shall be demonstrated by sufficient evidence including but not limited to an acceptable Step-Rate-Test.

The operator shall notify the supervisor of the Division's district office of the date and time of the installation of disposal equipment and of any MIT test so that the same may be inspected and witnessed. The operator shall provide written notice of the date of commencement of disposal to the Division's district office. The operator shall submit monthly reports of the disposal operations on Division Form C-115, in accordance with Division Rules 19.15.26.13 and 19.15.7.24 NMAC.

Without limitation on the duties of the operator as provided in Division Rules 19.15.29 and 19.15.30 NMAC, or otherwise, the operator shall immediately notify the Division's district office of any failure of the tubing, casing or packer in the well, or of any leakage or release of water, oil or gas from around any produced or plugged and abandoned well in the area, and shall take such measures as may be timely and necessary to correct such failure or leakage.

The injection authority granted under this order is not transferable except upon division approval. The division may require the operator to demonstrate mechanical integrity of any injection well that will be transferred prior to approving transfer of authority to inject.

The division may revoke this injection permit after notice and hearing if the operator is in violation of 19.15.5.9 NMAC.

The disposal authority granted herein shall terminate two years after the effective date of this order if the operator has not commenced injection operations into the subject well. One year after the last date of reported disposal into this well, the Division shall consider the well abandoned, and the authority to dispose will terminate *ipso facto*. The Division, upon written request mailed by the operator prior to the termination date, may grant an extension thereof for good cause.

Compliance with this order does not relieve the operator of the obligation to comply with other applicable federal, state or local laws or rules, or to exercise due care for the protection of fresh water, public health and safety and the environment.

Jurisdiction is retained by the Division for the entry of such further orders as may be necessary for the prevention of waste and/or protection of correlative rights or upon failure of the

operator to conduct operations (1) to protect fresh or protectable waters or (2) consistent with the requirements in this order, whereupon the Division may, after notice and hearing, terminate the disposal authority granted herein.

JAMI BAILEY
Director

JB/prg

cc: Oil Conservation Division – Artesia District Office
Bureau of Land Management – Carlsbad Field Office

DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.
03/04/2013		WJ	03/05/13	SWD 1409	PPRG1306438314

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505

30-015-TBD

Nash Draw 8

ADMINISTRATIVE APPLICATION CHECKLIST Federal SWD #1

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

BOPCO, LP

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]

RECEIVED OCD
2013 MAR -4 P 12:21

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Print or Type Name	Signature	Title	Date
Emma Galindo	Emma Galindo	Engineering Assistant	2/26/2013

ezgalindo@basspet.com
e-mail Address

SWD-1409

pPRG1306438314

Injection Permit Checklist: Received 03/05/13 First Email Date: — Final Reply Date: — Final Notice Date: 03/22/2013

Issued Permit: Type: WFX/PMX/SWD Number: 1409 Permit Date 03/20/2013 (Legacy Permit: NA)

Wells 1 Well Name(s): Nash Draw 8 Federal SWD

API Num: 30-0 Pending Proposed Spud Date: 04/01/2013 New/Old: N (UIC Cl II Primacy March 7, 1982)

Footages 2075' FSL/630' FWL Lot — Unit L Sec 8 Tsp 24S Rge 30E County Eddy

General Location or Pool Area: 14 mi E of Malaga; Poker Lake Unit; SW (Devonian)

Operator: BOPCO, LP Contact Emma Galindo

OGRID: 260737 RULE 5.9 Compliance (Wells) 2/496 (Finan Assur) OK IS 5.9 OK?

Well File Reviewed NA Current Status: New well - API pending

Planned Work to Well: Well will be drilled and completed for SWD permit; no Conversion

Diagrams: Before Conversion N/A After Conversion New well N/A Are Elogs in Imaging?: N/A

Well Details:	Sizes Hole.....Pipe	Setting Depths	Stage Tool	Cement Sx or Cf	Cement Top and Determination Method
Planned ✓ or Existing — Surface *	18 1/8" 16"	0-1207'	—	460	Circulate to surf
Planned ✓ or Existing — Interm	14 3/4" 13 3/8"	0-3519'	—	760	Circulate to surf
Planned ✓ or Existing — LongSt	12 1/2" 9 5/8"	3019'-11300'	DV tool at 5500	2060	3019
Planned ✓ or Existing — Liner	8 1/2" 7 5/8"	11100'-15750'	—	580	11100/TOL
Planned ✓ or Existing — OpenHole	6 1/2" —	(15750-17225)	—	—	N/A

Depths/Formations:	Depths, Ft.	Formation	Tops *
Contact Above	+140'	Mississippian LS	15296
Contact Above	+24'	Woodford Shale	15586
Proposed Interval TOP:	15700	Devonian	15726
Proposed Interval BOTTOM:	17225/TD	Devonian	—
Gas Pot. Below	—	Fusselman	—
Below	—	Montoya	—

Max. PSI 3150 OpenHole (X) Perfs —

Tubing Size 4 1/2" Packer Depth 15700

* Estimated tops

* Conductor: 0'-120' 26" hole / 20" casing / cement to surf / circulate

Capitan Reef? (in — /thru —), Potash? — Noticed? N [WIPP? N Noticed? N] Salado Top 1217' Bot 3499' Cliff House? N/A

→ Outside R-111 / inside Sec. Order - classified barren potash

Fresh Water: MaxDepth: 300' FW Formation Rustler Wells? 1 Analysis? — Affirmative Statement —

reported 30-015-22327-00-00 converted wildcat

Disposal Fluid: Formation Source(s) Delaware / Bone Spring On Lease — Only from Operator ✓ or Commercial —

Gas potential: Fusselman / Montoya have production at NM/TX border - not closer

Disposal Interval: Protectable Waters? N H/C Potential: Log — /Mudlog — /DST — /Tested — /Depleted — Other —

Notice: Newspaper Date 02/07/2013 02/08/2013 02/09/2013 Mineral Owner Fed Surface Owner Federal - Letter & APD N. Date March 1, 2013

RULE 26.7(A) Identified Tracts? — Affected Persons: None identified N. Date —

AOR: Maps? ✓ Well List? N - all wells completed to Morrow (Gas) or shallower - see map / no penetration of Devonian

Producing in Interval? N Formerly Produced in Interval? N

Penetrating.....No. Active Wells 0 Num Repairs? 0 on which well(s)? N/A

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

Permit Conditions:

Issues:

Issues:

Issues:

BOPCO, L. P.
6 DESTA DRIVE, SUITE 3700 (79705)
P. O. BOX 2760
MIDLAND, TEXAS 79702

(432) 683-2277 FAX (432) 687-0329

March 1, 2013

Re: Notice of Application for Authorization to Complete this well as a SWD Well
Nash Draw 8 Federal SWD #1
Eddy County, New Mexico
File: 100-WF: ND8FedSWD1.C108

Oil Conservation Division
Attention: William Jones
1220 S. St. Francis
Santa Fe, New Mexico 87505

Mr. Jones:

Enclosed please find BOPCO, L.P.'s **Application for Authorization to Drill and Complete** this well for disposal purposes only into the Nash Draw 8 Federal SWD #1 located in Section 8, T24S, R30E, Eddy County, New Mexico.

The subject well is on Federal land and a complete copy of the application has been sent to the BLM's Carlsbad office via Certified Mail, Cert #7160-3901-9846-4644-8024. Please find a copy of the notice attached. I will provide a copy of the signed receipt card when it returns.

If additional information is required, please contact Emma Z. Galindo at the letterhead address, phone number or via email at ezgalindo@basspet.com.

Sincerely,

Emma Z. Galindo
Engineering Assistant

ezg
Attachments

CC: BLM

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 __X__Disposal _____Storage
Application qualifies for administrative approval? _____Yes _____No

II. OPERATOR: BOPCO, L.P.

ADDRESS: P O BOX 2760 MIDLAND TX 79702

CONTACT PARTY: Emma Z. Galindo PHONE: (432)683-2277

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? _____Yes __X__No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Emma Z. Galindo TITLE: Engineering Assistant

SIGNATURE: Emma Z. Galindo DATE: 2/26/2013

E-MAIL ADDRESS: ezgalindo@basspet.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: Attached

(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.

III. Well Data

A. 1) Lease name: Nash Draw 8 Federal SWD
Well #: 1
Section: 8
Township: T24S
Range: 30E
Footage: 2075' FSL & 630' FWL

2) Casing Info:

Casing size	Set depth	Sacks cmt	Hole size	TOC	Method
20", 157.68#, X52, PE	120		26"	Surface	Contractor Design
16", 84#, J-55, BTC	1207'	460	18-1/8"	Surface	Circulated
13-3/8", 68#, HCN-80, UltraFlushJt	3519'	760	14-3/4"	Surface	Circulated
9-5/8", 53.50#, P-110, LT&C **	11,300'	2,060	12-1/4"	3019'	Circulated
7-5/8", 42.80#, P-110, Ultra FJ	11,100'-15,750'	580	8-1/2"	TO T.O.L.	Circulated
	15,750'-17,225'		6-1/2"	OH	

**DV Tool @ 5,500'

3) Tubing to be used (size, lining material, setting depth):
4-1/2" 12.75#, L-80, RTS-8 IPC tbg set @15,700'.

4) Name, model, and depth of packer to be used:
4-1/2" Baker FA Nickel Plated EXT/INT PC Pkr set @ 15,700'.

B. 1) Name of the injection formation and, if applicable, the field or pool name:
Devonian

2) The injection interval and whether it is perforated or open hole:
Open hole from 15,750 - 17,225 O.H.
BOPCO will evaluate the open hole interval by mudlogging the well as well as running open hole logs as in the ND 19 SWD.

3) State if the well was drilled for injection or, if not, the original purpose of the well:
Newly drilled well for injection.

4) Give the depths of any other perforated intervals and detail on the sacks of cement or BPs used to seal off such perforations:
NA

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:
Higher: Bone Spring - 7,304' Lower: None

C-108 DATA

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 wells type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

There are no wells that penetrate the proposed injection zone. [Wells reviewed in 1/2-mile radius]

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected: **30,000 average, 35,000 maximum BWPD**
2. Whether the system is open or closed: **closed**
3. Proposed average and maximum injection pressure: **3,150 psi maximum, 2,500 psi average**
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water: Produce water will come from the Delaware formation.
5. If injection is for disposal purposes into a zone not productive of oil & gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water: N/A

VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with TDS 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:

Lithologic Detail:	**Carbonate**
Geological Name:	**Devonian**
Thickness:	**1499'**
Depth:	**15,726' - 17,225'**

The Rustler Formation is a known source of fresh water throughout this geographic area. Average depth of Rustler is 148-540'. No sources of fresh water are known to exist below the proposed disposal zone.

IX. Describe the proposed stimulation program, if any:
The open hole section from 15,750'-17,225' will be acidized with approximately 50 gallons 15% NEFE HCl per foot for a total of 73,750 gallons.

X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted.)
Logs will be submitted. This will be a newly drilled well.

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.
No known fresh water wells within one mile of proposed well. X one converted oil wildcat well in Sec. 18 (API 30-015-22327-00-00) - PB to 300'/stock watering - no indications of any other wells

XII. Applicants for disposal wells must make an affimative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydology connection between the disposal zone and any underground sources of drinking water.
Applicant hereby affirms that he has examined the available geologic and engineering data and finds no evidence of open faults, or other hydrologic connection between the disposal zone and any underground source of drinking water.

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Kathy McCarroll, being first duly sworn, on oath says:

That she is the Classified Supervisor of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

February 7 2013

February 8 2013

February 9 2013

That the cost of publication is **$146.00** and That payment thereof has been made and will be assessed as court costs.

Kathy McCarroll

Subscribed and sworn to before me this

12th day of February 2013

Stephanie Dobson

My commission expires 1/25/2014
Notary Public

OFFICIAL SEAL
STEPHANIE DOBSON
Notary Public
State of New Mexico
My Comm. Expires 1/25/2014

February 7, 8, and 9, 2013

NOTICE OF APPLICATION FOR SALT WATER DISPOSAL WELL PERMIT

BOPCO, L.P. is in the process of applying to the New Mexico Oil Conservation Division for a permit to dispose of produced salt water into a porous formation not productive of oil or gas.

The applicant proposes to dispose of produced water into the Nash Draw 8 Federal SWD #1 (Devonian Formation). The maximum allowable injection pressure will be 3,150 psi and the estimated maximum rate will be 30,000 bbls produced water/day. The proposed disposal well is located in Eddy County, New Mexico in Section 8, T24S, R30E. The produced salt water will be disposed at a subsurface depth of 15,750'-17,225'.

Any questions concerning this application should be directed to Emma Z. Galindo, Engineering Assistant, BOPCO, L. P., P. O. Box 2760, Midland, Texas 79702-2760, (432) 683-2277.

Interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 S. St. Francis Dr., Santa Fe, New Mexico 87505 within 15 days.

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

No records found.

Basin/County Search:

Basin: Carlsbad **County:** Eddy **Subbasin:** Carlsbad

PLSS Search:

Section(s): 8 **Township:** 24S **Range:** 30E

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416 4	Sec	Twn	Rng	X	Y
C 02108		STK	3	A PARTNERSHIP M&M CATTLE CO	ED	C 02108				1 3	08	24S	30E	602702	3566487*

Record Count: 1

POD Search:

POD Basin: Carlsbad

Basin/County Search:

Basin: Carlsbad County: Eddy

PLSS Search:

Section(s): 8 Township: 24S Range: 30E

Sorted by: File Number

*UTM location was derived from PLSS - see Help

BJ SERVICES

Frac Water Analysis

Date: 2-28-2013

2708 West County Road, Hobbs NM 88240
Phone (505) 392-5556 Fax (505) 392-7307

Source Water
1

Analyzed For

Company	Well Name	County	State
BOPCO	Corral Well		

Specific Gravity	**0.998**	*SG @ 60 °F*	**0.999**
pH	**7.86**	*Sulfides*	
Temperature (°F)	**65**	*Reducing Agents*	

Cations

Sodium (Calc)	*in Mg/L*	**82**	*in PPM*	**82**
Calcium	*in Mg/L*	**40**	*in PPM*	**40**
Magnesium	*in Mg/L*	**12**	*in PPM*	**12**
Soluable Iron (FE2)	*in Mg/L*	**0.0**	*in PPM*	**0**

Anions

Chlorides	*in Mg/L*	**80**	*in PPM*	**80**
Sulfates	*in Mg/L*	**50**	*in PPM*	**50**
Bicarbonates	*in Mg/L*	**200**	*in PPM*	**200**

Total Hardness (as CaCO3)	*in Mg/L*	**150**	*in PPM*	**150**
Total Dissolved Solids (Calc)	*in Mg/L*	**464**	*in PPM*	**465**

Remarks **Fresh Water**

Report # **5605**

P.O. BOX 98
MIDLAND, TX. 79702
PHONE (432) 683-4521

Martin Water Laboratories, Inc.

709 W. INDIANA
MIDLAND, TEXAS 79701
FAX (432) 682-8819

RESULT OF WATER ANALYSES

LABORATORY NO. 1112-73
SAMPLE RECEIVED 10-25-12
RESULTS REPORTED 10-31-12

TO: Carlos Cruz
PO Box 2267, Midland, TX 79702

COMPANY BOPCO LEASE

FIELD OR POOL

SECTION BLOCK SURVEY COUNTY Eddy STATE NM

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 JR #29. 10-19-12
NO. 2 JR #124. 10-19-12
NO. 3 PLU #78. 10-19-12
NO. 4 PLU #213. 10-19-12

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1976	1.2000	1.1942	1.1990
pH When Sampled				
pH When Received	5.50	5.40	5.40	5.40
Bicarbonate as HCO_3	12	10	12	10
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	95,000	87,000	84,000	84,000
Calcium as Ca	31,200	28,400	26,800	29,200
Magnesium as Mg	4,131	3,888	4,131	2,673
Sodium and/or Potassium	82,557	94,524	85,775	90,371
Sulfate as SO_4	153	151	153	136
Chloride as Cl	194,540	207,320	191,700	198,800
Iron as Fe	91	44	89	51
Barium as Ba	0	0	0	0
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	312,593	334,293	308,571	321,189
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0	0.0	0.0	0.0
Resistivity, ohms/m at 77° F.	0.044	0.039	0.045	0.044
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

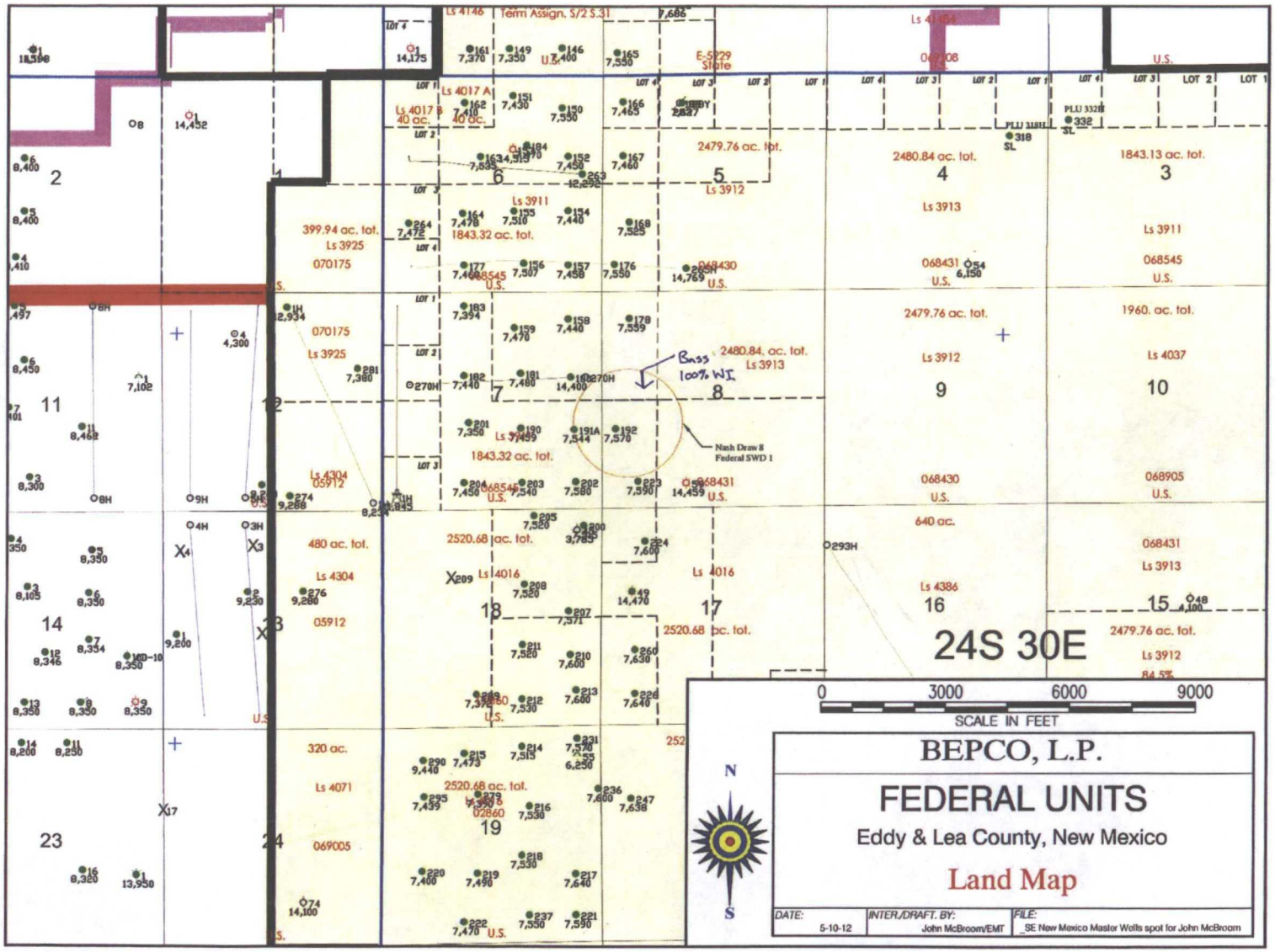
Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

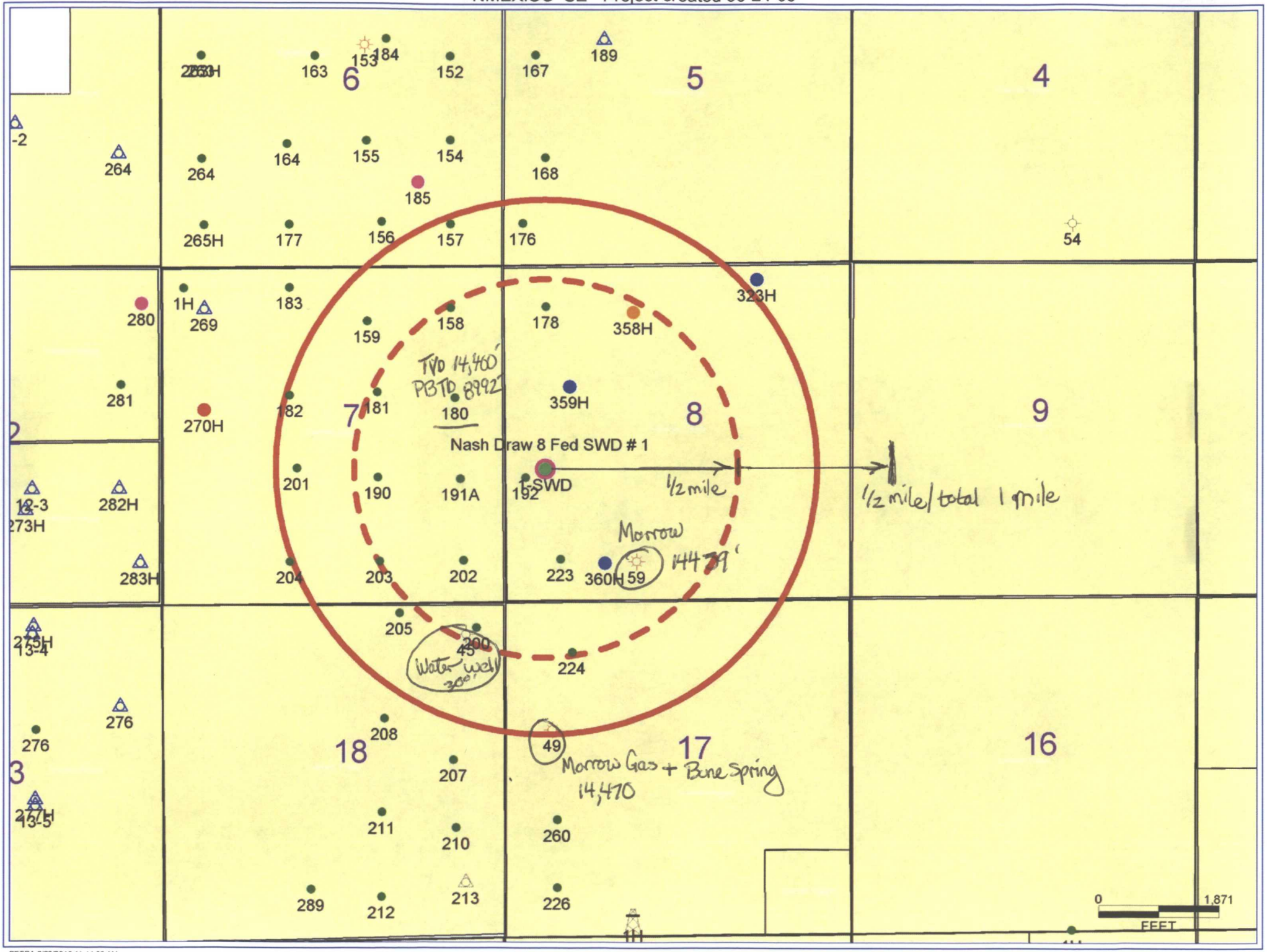
Form No. 3

By Greg Ogden, B.S.

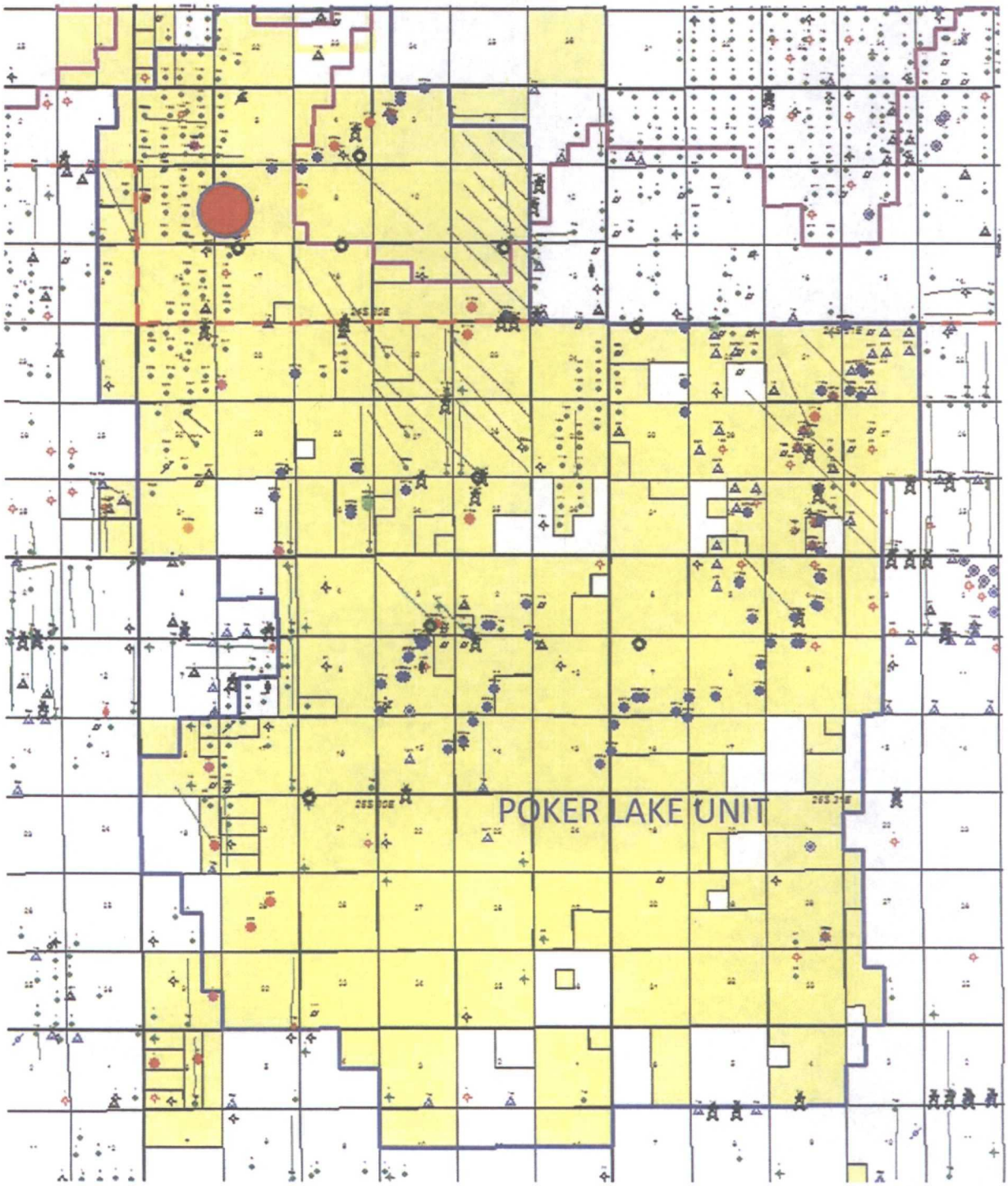
LATHAM PRINTING CO. - 333-1292



F:\DRAFTING\WTD\NM\Federal Units\WORK MAPS_SE New Mexico Master Wells spot for John McBroom.dwg, 8.5x11 Well half mile boundary 5-10-12 (2), 5/10/2012 11:21:43 AM, eteddy


NMEXICO SE - Project created 06-24-08
6
5
4
7
8
9
18
17
16
Nash Draw 8 Fed SWD # 1
1-SWD
TVD 14,460'
PBTD 8992'
1/2 mile
1/2 mile/total 1 mile
Morrow
14439'
Water well
300'
49
Morrow Gas + Bone Spring
14,470
0
1,871
FEET
PETRA 2/26/2013 11:14:06 AM

Nash Draw 8 Federal SWD No. 1



PROPOSED WELLBORE DIAGRAM

Lease: Nash Draw 8 Federal SWD **Well No.:** 1
Injection
Reservior: Devonian
Location: 2075' FSL & 630' FWL S8-T24S-R30E
County: EDDY **St:** NM **API:** 30-015-

Elevation GL:	
Elevation KB:	
Spud:	
Completed	

Surface Csg.

Size:	16"
Wt	84#
Grd	J-55, BTC
Set @:	1207'
Sxs cmt:	460
TOC:	Surface
Hole Size:	18 1/8"

Intermediate Csg.

Size:	13 3/8"
Wt	68#
Grd	HCN-80, Ultra Flush Jt
Set @:	3519'
Sxs Cmt:	760
TOC:	Surface
Hole Size:	14 3/4"

Production Csg.

Size:	9 5/8"
Wt	53.5#
Grd	P-110, LT&C
Set @:	11300'
Sxs Cmt:	2060
TOC:	3019'
Hole Size:	12 1/4"

Liner

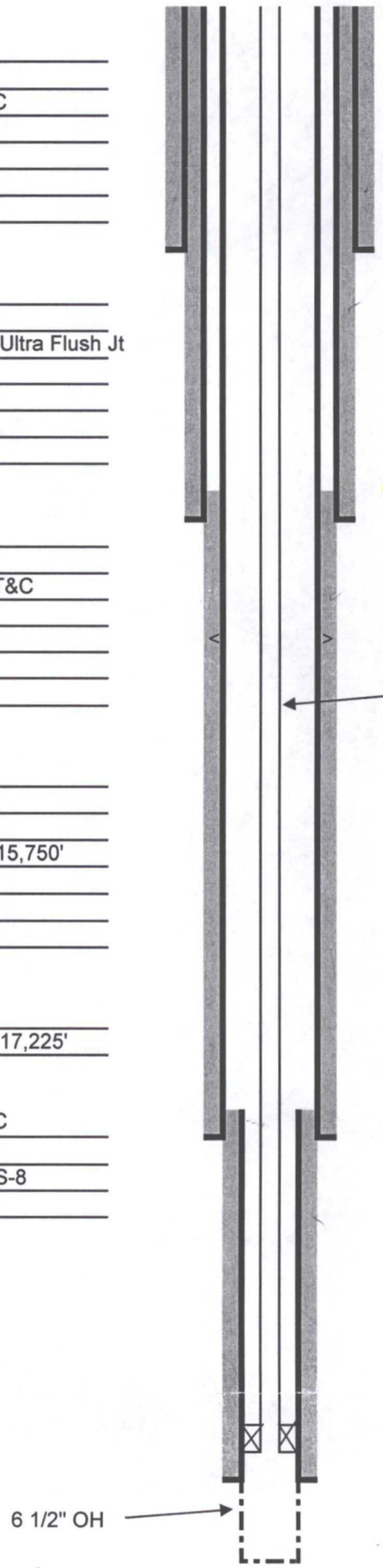
Size:	7 5/8"
Wt	39#
Grd	P-110 FJ
Set @:	11,100 - 15,750'
Sxs Cmt:	580
TOC:	11,100'
Hole Size:	8 1/2"

Open Hole

Size:	6 1/2"
Depth:	15,750' - 17,225'

Tubing

Size:	4 1/2" IPC
Wt	12.75#
Grd	L-80, RTS-8
Set @:	15,700'



TD: 17,225

Updated: 2/6/2013
Author: ezg
Engr: CCC

REVISED GEOLOGICAL PROGNOSIS

BOPCO, L. P.	WEST TEXAS DIVISION	Issue Date: 4/23/2012

FIELD OR PROSPECT	WELL NAME	WELL NO.	API CLASS	EXP/DEV	EST. W.I	EST. N.R.I.
Poker Lake	Nash Draw 8 Federal SWD	1	1	SWD	1.00	

LOCATION		COUNTY	STATE	PRIMARY OBJECTIVE
Surface:	2,075' FSL & 630' FWL, Sec. 8, T24S-R30E	Eddy	NM	Devonian
Bottom Hole:		Lateral Length:		

TOTAL DEPTH	DRILLING TARGETS	
MD: 17,225'	Target 1:	TVD:
TVD:	Target 2:	TVD:
	TD:	TVD:

Pilot Hole Y/N	NA	Pilot Hole Depth:	Lateral Drilling Direction

FORMATION / MARKER	ELEVATIONS GL: 3,200' KB: 3,226'			BEST GEOLOGICAL CORRELATION WELL	
				Operator	BOPCO
	ESTIMATED DEPTHS			Well	Poker Lake Unit No. 192
				KB:	3,213'
	MD	TVD	SUBSEA	SUBSEA	Actual from Log
Rustler	870'		2,356'	2,356'	857'
Salado	1,217'		2,009'	2,009'	1,204'
Lamar	3,499'		-273'	-273'	3,486'
Delaware Sands	3,529'		-303'	-303'	3,516'
Bone Spring	7,304'		-4,078'	-4,078'	7,291'
Wolfcamp	10,614'		-7,388'	-7,349'	10,591' *
Middle Wolfcamp	11,870'		-8,644'	-8,613'	11,856' *
Strawn	12,706'		-9,480'	-9,428'	12,672' *
Atoka	12,816'		-9,590'	-9,538'	12,782' *
Morrow	13,611'		-10,385'	-10,349'	13,594' *
Middle Morrow	14,001'		-10,775'	-10,740'	13,986' *
Lower Morrow	14,416'		-11,190'	-11,157'	14,403' *
Mississippian Lime	15,296'		-12,070'	-12,806'	16,184' **
Woodford	15,586'		-12,360'	-13,115'	16,493' **
Devonian	15,726'		-12,500'	-13,242'	16,620' **
TD	17,225'		-13,999'		

RESERVOIR OBJECTIVES	PRIMARY	SECONDARY	DEPTH
Devonian	X		15,726' - 17,225'

SIGNIFICANT OFFSET WELLS

OPERATOR	WELL NAME	WELL NO.	LOCATION	COUNTY	STATE
BOPCO	Poker Lake Unit	59	660' FSL & 1,980' FWL, Sec. 8, T24S-R30E	Eddy	NM
BOPCO	Poker lake Unit	180	2,080' FNL & 760' FEL, Sec. 7, T24S-R30E	Eddy	NM
BOPCO	Harrison Federal	1	660' FNL & 660' FWL, Sec 12, T25S-R30E	Eddy	NM

drilled to 14,459
drilled to 14,400

TARGET SAND TOP DEPTHS	MUD LOGGER
Top target sand @ SL	VENDOR: MORCO
Top target sand @ EOC=	UNIT ON BY: Surface to pick surface casing
Top target sand @ Target 1=	SAMPLES FROM: Surface TO: TD
	SAMPLE INTERVAL (FT.): 10'

WIRELINE LOGGING PROGRAM

Spectral GR, Neutron-Density, Resistivity, Sonic from top of Delaware to TD. Cased hole GR-Neutron to surface.

Elemental Capture Spectroscopy Log from Bone Spring to Devonian. Rotary sidewall cores in Bone Spring and Wolfcamp.

MUST COMMENCE BY

REMARKS

Revised for total depth to maximize SWD capability.

* These offset formation tops are from the BOPCO Poker lake Unit No. 180.

** These offset formation tops are from the BOPCO Harrison Federal No. 1.

The PLU #59 (2,025' SE of Proposed Location) has produced 1.6 BCF from the Middle Morrow @ a depth of 14,297'-14,325'.

The PLU #49 (4,100' south of Proposed Location) has produced 3.7 BCF from the Middle Morrow @ a depth of 14,307'-14,349'.

Recommended by: (GEO)	Brian Pregger	Approved by (signature)	Date
XC: L. Muncy, S. Neuse, G. Hillis, W. Dannels, R. Sutton, C. Addington, Well File	EX: M. Roper, F. McCreight, K. Adams, J. Smitherman, B. Brigham, S. Johnson, S. Martinez, S. Doyle, K. Holster, W. McKee	Lee Muncy	4-23-12

Form 3160-3
(April 2004)

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC 0068431

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
Poker Lake Unit NMNM 71016X

1b. Type of Well: ☐ Oil Well ☐ Gas Well ☑ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
Nash Draw 8 Federal SWD #1

2. Name of Operator
BOPCO, L. P.

9. API Well No.

3a. Address **P. O. Box 2760**
Midland, TX 79702

3b. Phone No. *(include area code)*
432-683-2277

10. Field and Pool, or Exploratory
Poker Lake Unit SW (Devonian)

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **NWSW, UL L, 2,075' FSL & 630' FWL, Lat: N32.230492, Lg:W103.909636**
At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area
Sec 8, T24S-R30E

14. Distance in miles and direction from nearest town or post office*
10 miles north east of Malaga, NM

12. County or Parish
Eddy

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any)
630' FWL of lease line
8,550' from unit line

16. No. of acres in lease
2480.84

17. Spacing Unit dedicated to this well
40

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
385'

19. Proposed Depth
17,225'

20. BLM/BIA Bond No. on file
COB 000050

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3,200' GL

22. Approximate date work will start*
04/01/2013

23. Estimated duration
110 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature: Jeremy Braden
Name *(Printed/Typed)*: **Jeremy Braden**
Date: 1/14/13
Title: **Engineering Assistant**

Approved by *(Signature)*
Name *(Printed/Typed)*
Date
Title
Office

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**(Instructions on page 2)*

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

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-102
Revised July 16, 2010

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	96101	SWD; Devonian

Property Code	Property Name	Well Number
	NASH DRAW "8" FEDERAL	1 SWD

OGRID No.	Operator Name	Elevation
260737	BOPCO, L.P.	3200'

Surface Location

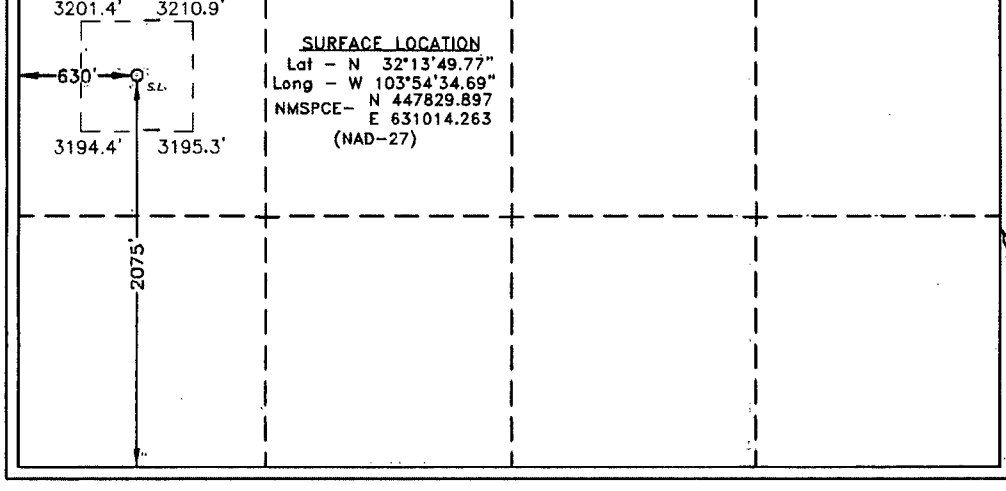
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	8	24 S	30 E		2075	SOUTH	630	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Jeremy Braden 1-14-13
Signature Date

Jeremy Braden
Printed Name

jdbraden@basspet.com
Email Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

AUGUST 10, 2011
Date Surveyed

Signature & Seal of Professional Surveyor

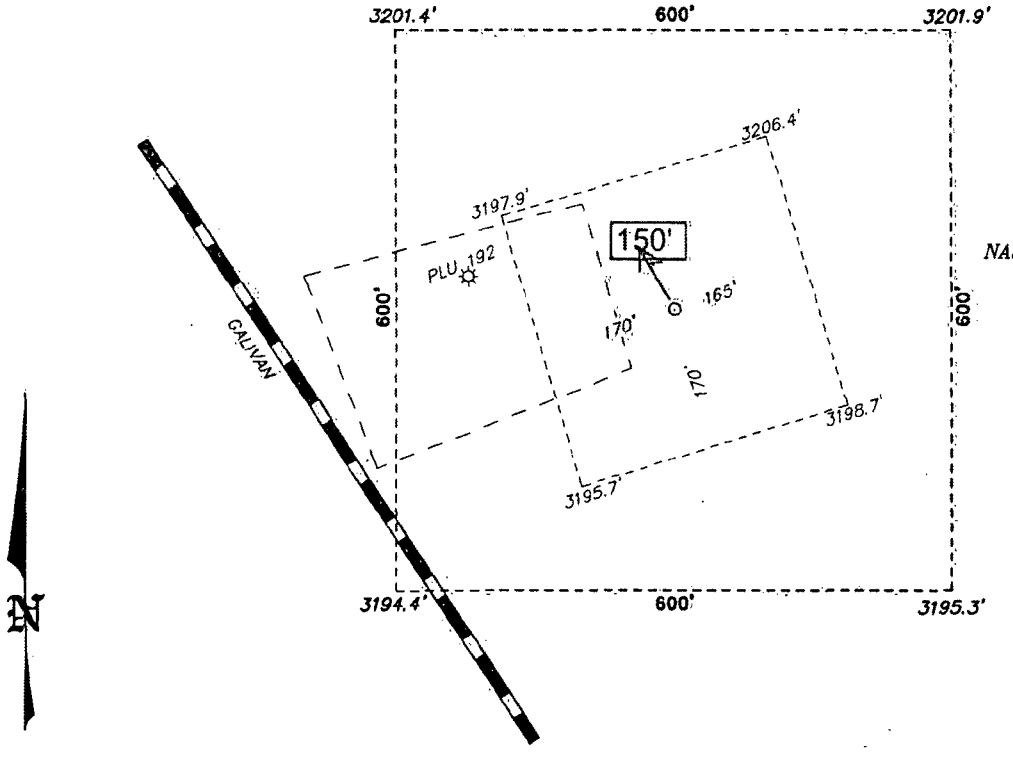
NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR

Certificate No. Gary L. Jones 7977

BASIN SURVEYS 25142

SECTION 8, TOWNSHIP 24 SOUTH, RANGE 30 EAST, N.M.P.M.,

EDDY COUNTY, WELL PAD LAYOUT **NEW MEXICO.**



BOPCO, L.P.
NASH DRAW "8" FEDERAL 1 SWD
ELEV. - 3200'
Lat - N 32°13'49.77"
Long - W 103°54'34.69"
NMSPCE- N 447829.897
E 631014.263
(NAD-27)

200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF GALIVAN AND McDONALD, GO NORTH ON GALIVAN FOR 3.4 MILES TO WELL PAD FOR 192 AND PROPOSED LOCATION.

BOPCO, L.P.

REF: NASH DRAW "8" FEDERAL 1 SWD / WELL PAD TOPO

THE NASH DRAW "8" FEDERAL 1 SWD LOCATED 2075' FROM THE SOUTH LINE AND 630' FROM THE WEST LINE OF SECTION 8, TOWNSHIP 24 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 – HOBBS, NEW MEXICO

W.O. Number: 25142	Drawn By: J. SMALL		
Date: 08-06-2011	Disk: JMS 25142	Survey Date: 08-22-2011	Sheet 1 of 6 Sheets

NASH DRAW "8" FEDERAL 1 SWD

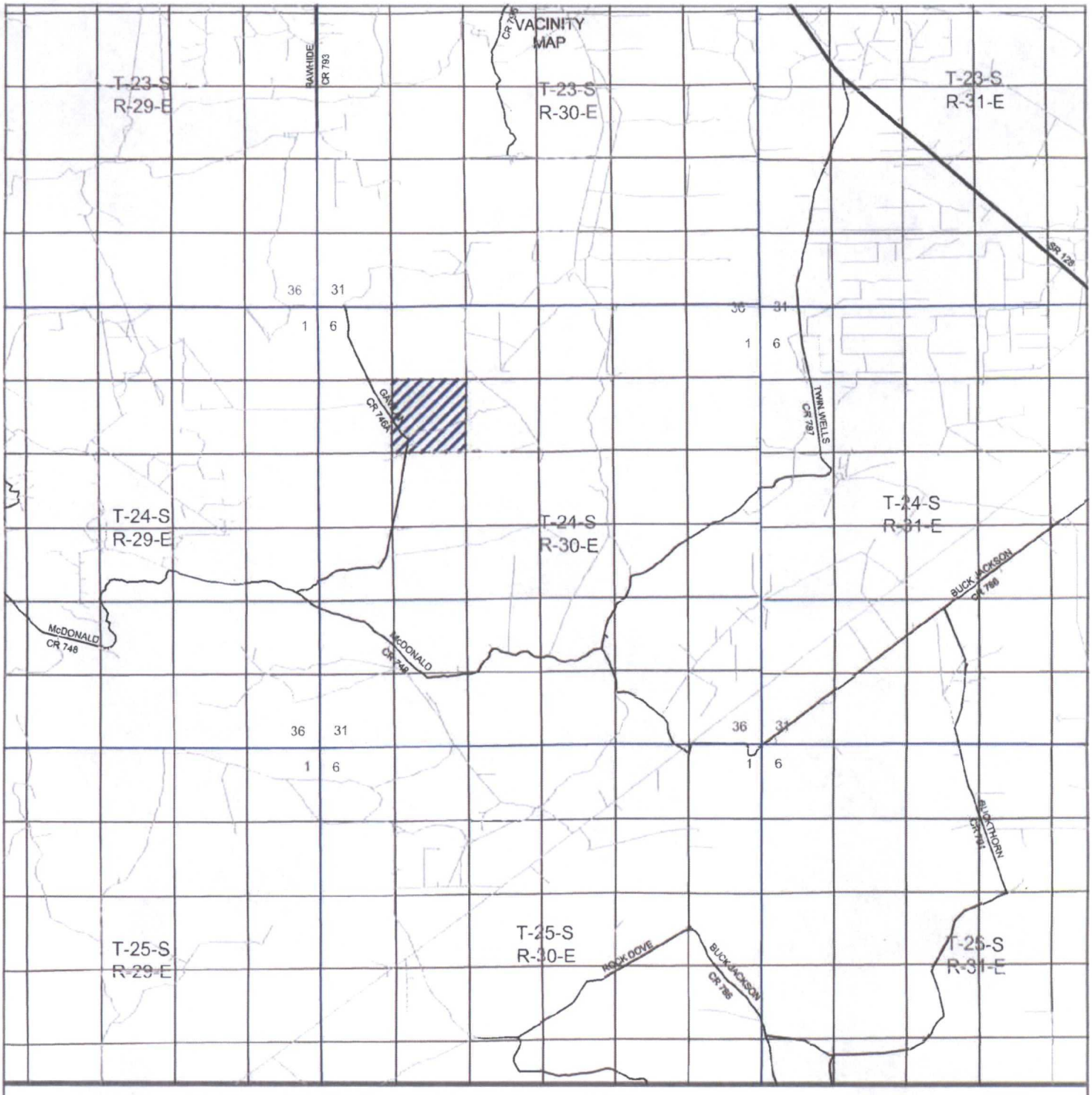
Located 2075' FSL and 630' FWL
Section 8, Township 24 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

basin surveys
focused on excellence in the oilfield

P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

W.O. Number:	JMS 25142
Survey Date:	08-22-2011
Scale:	1" = 2000'
Date:	08-06-2011

BOPCO, L.P.



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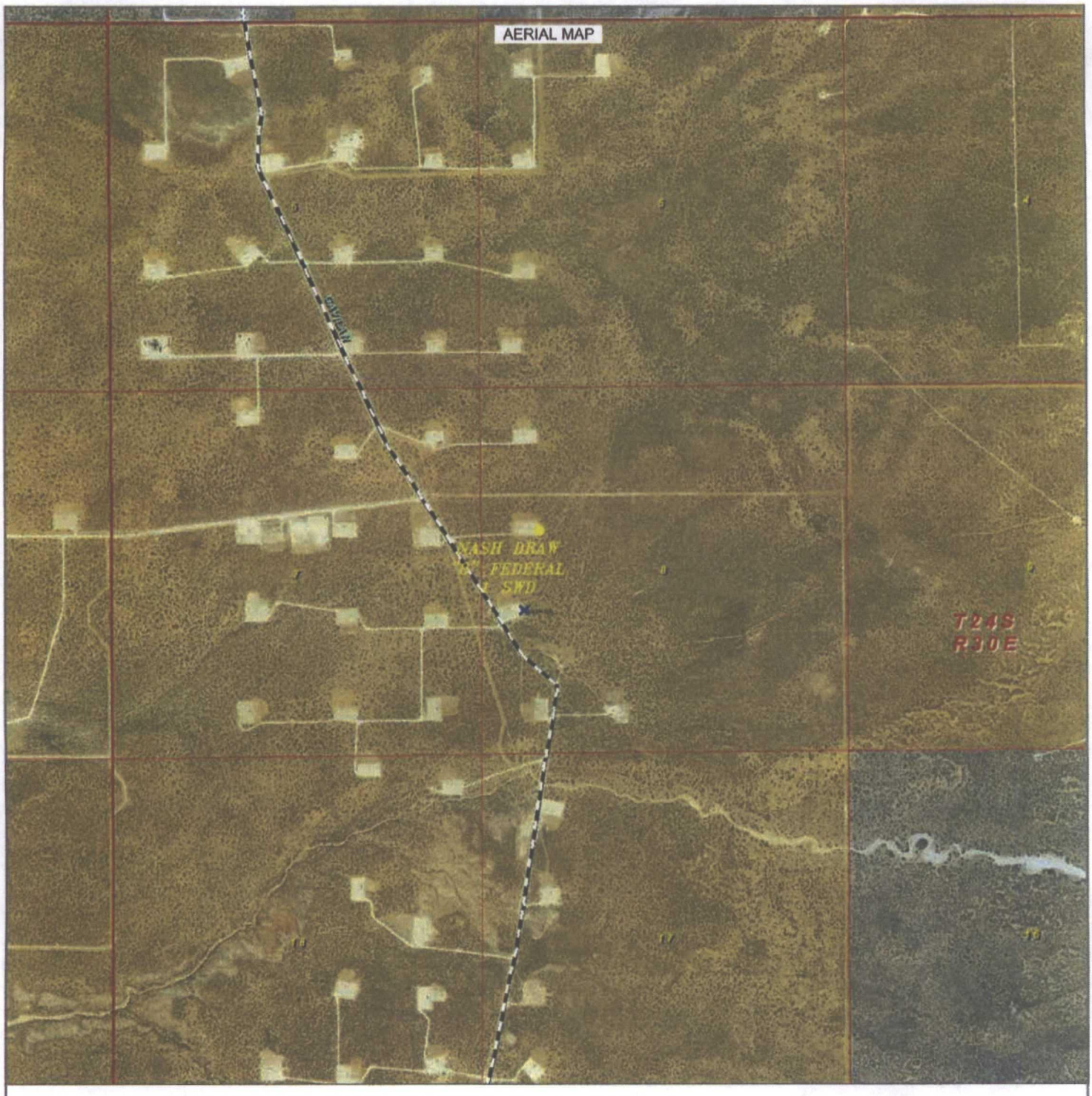
basinsurveys.com

W.O. Number:	JMS 25142
Survey Date:	08-22-2011
Scale:	1" = 2 Miles
Date:	08-06-2011

BOPCO, L.P.



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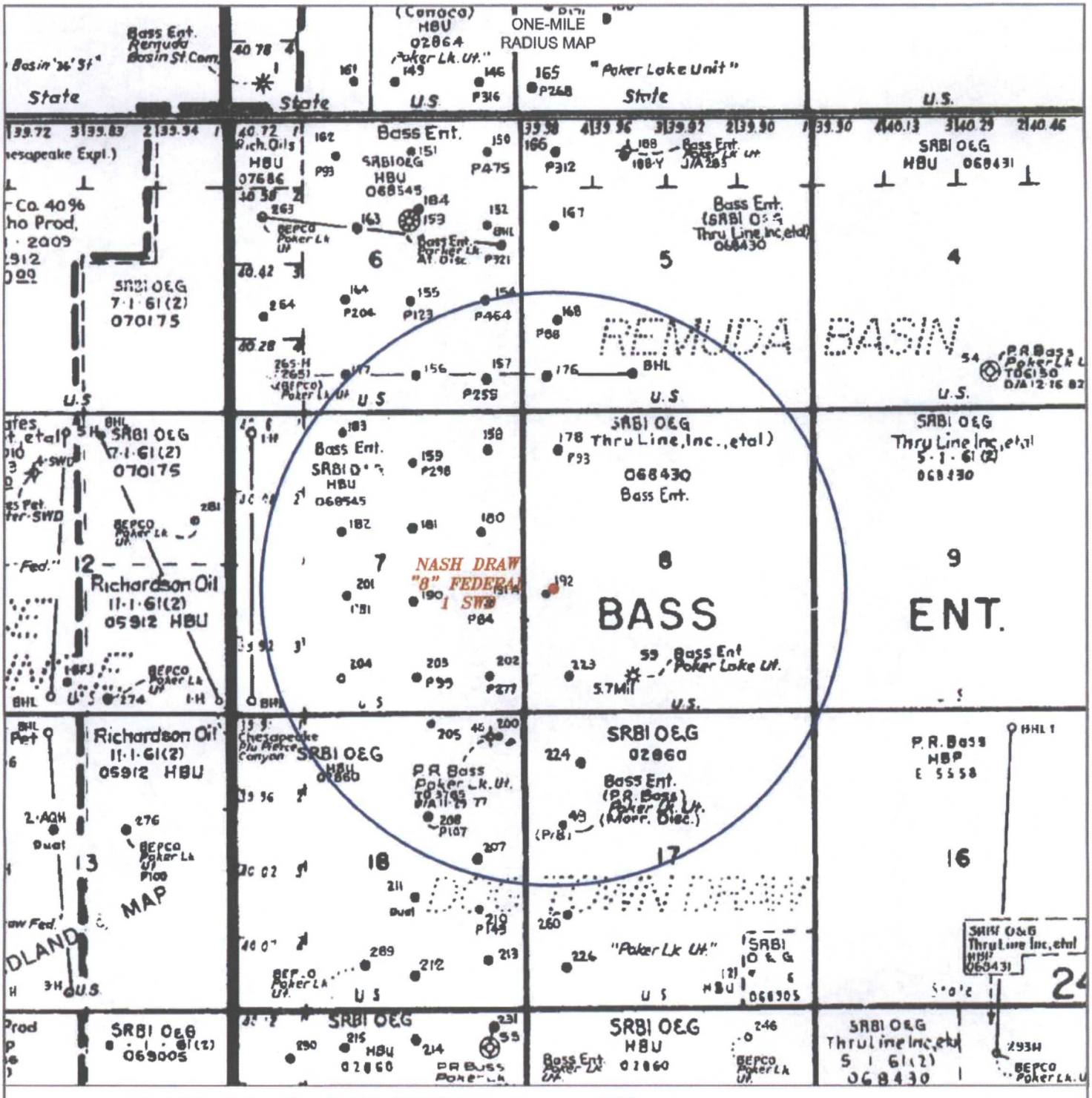
W.O. Number: JMS 25142

Scale: 1" = 2000'

YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

BOPCO, L.P.



NASH DRAW "8" FEDERAL 1 SWD
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Section 8, Township 24 South, Range 30 East,
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(575) 393-7316 – Office
(575) 392-2206 – Fax
basinsurveys.com

W.O. Number: JMS 25142

Scale: None

YELLOW TINT – USA LAND
BLUE TINT – STATE LAND
NATURAL COLOR – FEE LAND

BOPCO, L.P.

16" Surface casing is to be set into the Rustler below all fresh water sands at an approximate depth of 1,207' and cement circulated to surface.

13-3/8" OD salt protection string will be set into the Lamar Lime at 3,519' and cement will be circulated to surface.

9-5/8" OD protection casing will be set at 11,300' and cemented in two stages with DV tool set at approximately 5,500'. Cement will be circulated 500' into the 1st intermediate casing string.

Drilling procedure, BOP diagram, and anticipated tops are attached.

This well is located outside the R-111 Potash area but inside the Secretary's Order Potash area.

The surface location is nonstandard and located inside the Poker Lake Unit.

Surface Lease Numbers- Federal Lease: NMLC 0068431

BOPCO, L.P., at P. O. Box 2760, Midland, TX, 79702 is a subsidiary of BOPCO, L.P., 201 Main Street, Ft. Worth, TX, 76102. Bond No. COB000050 (Nationwide).

EIGHT POINT DRILLING PROGRAM
BOPCO, L.P.

NAME OF WELL: Nash Draw 8 Federal SWD #1
LEGAL DESCRIPTION - SURFACE: 2,075' FSL, 630' FWL, Section 8, T24S, R30E, Eddy County, NM.

POINT 1: ESTIMATED FORMATION TOPS (See No. 2 Below)

POINT 2: WATER, OIL, GAS AND/OR MINERAL BEARING FORMATIONS

Anticipated Formation Tops: KB 3,226' (estimated)
GL 3,200'

Formation Description	Est from KB (TVD)	Est (MD)	SUB-SEA TOP	BEARING
T/Fresh Water	130'	130'	+ 3,045'	Fresh Water
T/Rustler	870'	870'	+ 2,356'	Barren
T/Salado	1,217'	1,217'	+ 2,009'	Barren
T/Lamar	3,499'	3,499'	- 273'	Oil/Gas
Delaware Sands	3,529'	3,529'	- 303'	Oil/Gas
Bone Spring	7,304'	7,304'	- 4,078'	Oil/Gas
Wolfcamp	10,614'	10,614'	- 7,388'	Oil/Gas
Middle Wolfcamp	11,870'	11,870'	- 8,644'	Oil/Gas
Strawn	12,706'	12,706'	- 9,480'	Oil/Gas
Atoka	12,816'	12,816'	- 9,590'	Oil/Gas
Morrow	13,611'	13,611'	- 10,385'	Oil/Gas
Middle Morrow	14,001'	14,001'	- 10,775'	Oil/Gas
Lower Morrow	14,416'	14,416'	- 11,190'	Oil/Gas
Mississippian Lime	15,296'	15,296'	- 12,070'	Oil/Gas
Woodford	15,586'	15,586'	- 12,360'	Oil/Gas
Devonian	15,726'	15,726'	- 12,500'	Disposal
TD	17,225'	17,225'	- 13,999'	Disposal

POINT 3: CASING PROGRAM

TYPE	INTERVAL MD	HOLE SIZE	PURPOSE	INSTALLATION TYPE
20"	0' – 120'	26"	Conductor	Contractor Design
16", 84 ppf, J-55, BTC	0' – 1,207'	18-1/8"	Surface	New
13-3/8", 68 ppf, HCN-80, Ultra Flush Joint	0' – 3,519'	14-3/4"	1st Intermediate	New
9-5/8", 53.50 ppf, P-110, LTC*	0' – 11,300'	12-1/4"	2nd Intermediate	New
7-5/8, 42.80 ppf, P-110 Ultra Flush Joint	11,100' - 14,500'	8-1/2"	Production Liner	New
7-5/8, 42.80 ppf, P-110 Ultra Flush Joint	14,500' – 15,750'	8-1/2"	Production Liner	New

***9-5/8", 53.50, P-110, LTC will be special drift to 8.5"**

CASING DESIGN SAFETY FACTORS:

TYPE	Tension	Burst	Collapse
16", 84 ppf, J-55, BTC	15.50	2.39	1.92
13-3/8", 68 ppf, HCN-80, Ultra Flush	5.26	1.43	2.56
9-5/8", 53.50 ppf, P-110, LTC*	2.74	1.18	1.73
7-5/8, 39 ppf, P-110 Ultra Flush	7.93	1.14	1.60
7-5/8, 42.80 ppf, P-110 Ultra Flush	22.47	1.29	1.77

***9-5/8", 53.50, P-110, LTC will be special drift to 8.5"**

POINT 6: TECHNICAL STAGES OF OPERATION CONT...

Mud Logger: Rigged up at 100'

C) CONVENTIONAL CORING - Rotary sidewall cores in Bone Spring and Wolfcamp.

None anticipated

D) CEMENT

INTERVAL	AMOUNT SXS	FT OF FILL	TYPE	GALS/SX	PPG	FT^3/SX
SURFACE: Lead: 0' – 907'	280	907	EconoCem-HLC+0.9%Econolite+5.0Lbm/sk salt	9.99	12.90	1.88
Tail: 907' – 1,207'	180	300	Cemex Premium Plus C + 1%CaCl2	6.36	14.80	1.34
1st INTERMEDIATE: Lead: 0' – 3,019'	600	3019	EconoCem Cement; HLC + 3.0% Salt + 0.1% HR-601	9.66	12.90	1.82
Tail: 3,019' – 3,519'	160	500	HalCem C	6.34	14.80	1.33
2^{ND} INTERMEDIATE Stage 1: Lead: 5,500' – 7,300'	320	1800	Tuned Light + 0.75% + CFR-3 + 1.5#/sk CaCl	12.41	10.20	2.76
Tail: 7,300' – 11,300'	1160	4000	VersaCem-PBSH2 + 0.4% Halad-9	8.76	13.0	1.67
DV Tool @ 5,500' Stage 2: Lead: 3,019' – 5,000'	480	1981	EconCem HLC + 1% Econolite + 5% CaCl + 5#/sk Gilsonite	10.71	12.60	2.04
Tail: 5,000' – 5,500'	100	500	HalCem C	6.34	14.80	1.33
Liner Tail: 11,100' – 15,750'	580	4650	VersaCem H + 0.5% Halad – 344 + 0.30% HR-601	5.05	14.40	1.24

Cement excesses will be as follows:

Surface – 100% excess with cement circulated to surface.

1st Intermediate – 50% excess above fluid caliper with cement circulated to surface.

2nd Intermediate – 50% excess above fluid caliper with cement circulated 500' into the 1st intermediate casing string.

Liner – 50% above gauge hole or 35% above electric log caliper with cement circulated to the top of the liner @ 11,100'.

Cement volumes will be adjusted proportionately for depth changes of the multi stage tool.

E) H_2S SAFETY EQUIPMENT

As stated in the BLM Onshore Order 6, for wells located inside the H2S area, H_2S equipment will be rigged up after setting surface casing. For the wells located inside the H2S area the flare pit will be located 150' from the location. For wells located outside the H2S area flare pit will be located 100' away from the location. **(See page 6 of Survey plat package for flare line reference)** There is not any H_2S anticipated in the area, although in the event that H_2S is encountered, the H_2S contingency plan attached will be implemented. **(Please refer to diagram A or B for choke manifold and closed loop system layout when H2S is present) Please refer to H2S location diagram for location of important H2S safety items.**

F) CLOSED LOOP AND CHOKE MANIFLOLD

Please see diagram A or B depending on configuration.

POINT 7: ANTICIPATED RESERVOIR CONDITIONS

Normal pressures are anticipated throughout Delaware section. Lost circulation may exist, but not likely, in the Delaware Section from 4,060'-7,900' TVD. Once in the Bone Spring, pore pressures will gradually increase to the top of the Wolfcamp. 9-5/8" casing will be set in the Wolfcamp and pore pressures will continue to increase through the Strawn and Atoka sections. A 7-5/8" production liner will be set into the Devonian with mud weights at 12.5 ppg or less. The Devonian BHP is 7200 psi and can be drilled with 8.5 ppg fresh water. Maximum surface pressures in the Devonian if productive could be 5500 psi with 7500 ppm H2S and 5% CO2; however, we anticipate drilling down dip in a non-productive area. There is no Devonian production within +/- 4 miles.

POINT 8: OTHER PERTINENT INFORMATION

A) Auxiliary Equipment

Upper and lower kelly cocks. Full opening stab in valve on the rig floor.

B) Anticipated Starting Date

Upon approval

110 days drilling operations

10 days completion operations

JDB

DESIGN CRITERIA AND CASING LOADING ASSUMPTIONS:

SURFACE CASING - (16")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.2 ppg).

Collapse — A 1.0 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.3 design factor with a surface pressure equal to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure a that depth. Backup pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient. The effects of tension on burst will not be utilized.

1st Intermediate - (13-3/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (10.2 ppg).

Collapse — A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

In the case of development drilling, collapse design should be analyzed using internal evacuation equal to 1/3 the proposed total depth of the well. This criterion will be used when there is absolutely no potential of the protective string being used as a production casing string.

Burst — A 1.0 surface design factor and a 1.3 downhole design factor with a surface pressure equivalent to the fracture gradient at setting depth less a gas gradient to the surface. Internal burst force at the shoe will be fracture pressure at that depth. Back pressure will be formation pore pressure. In all cases a conservative fracture pressure will be used such that it represents the upper limit of potential fracture resistance up to a 1.0 psi/ft gradient.

2nd Intermediate CASING - (9-5/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (9.5 ppg).

Collapse — A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

Production Liner - (7-5/8")

Tension — A 1.6 design factor utilizing the effects of buoyancy (12.5 ppg).

Collapse — A 1.125 design factor with full internal evacuation and a collapse force equal to the mud gradient in which the casing will be run (0.48 psi/ft). The effects of axial load on collapse will be considered.

Burst — A 1.25 design factor with anticipated maximum tubing pressure (5000 psig) on top of the maximum anticipated packer fluid gradient. (0.433 psi/ft) Backup on production strings will be formation pore pressure. (0.433 psi/ft) The effects of tension on burst will not be utilized.

POINT 4: PRESSURE CONTROL EQUIPMENT (SEE ATTACHED DIAGRAMS A, B, or C)

The BOPE when rigged up on the 16" surface casing head (18-1/2" hole) will consist of 20" annular and diverter system per Diagram B (2,000 psi WP). The annular when installed on surface casing will be tested to 1,000 psi. There will be a 6", 3000 psi gate valve installed on the drilling spool for fill up. The choke manifold system will be rigged up to the hydraulic gate valve on the drilling spool.

After running the 13-3/8" intermediate casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the 13-3/8" intermediate casing spool (12-1/4" open hole), used, maintained and tested as per Onshore Order 2. In addition to the high pressure test, a low pressure (250-300 psig) test will be performed.

After running the 9-5/8" intermediate casing, a 13-5/8" system with a minimum rating of 10M will be installed on the 9-5/8" intermediate casing spool (8-1/2" open hole), used, maintained and tested as per Onshore Order 2. In addition to the high pressure test, a low pressure (250-300 psig) test will be performed.

After running the 7-5/8" intermediate casing, a 13-5/8" system with a minimum rating of 10M will be installed on the 9-5/8" intermediate casing spool (6-1/8" open hole), used, maintained and tested as per Onshore Order 2. In addition to the high pressure test, a low pressure (250-300 psig) test will be performed.

H2S contingency

H2S monitors shall be installed prior to drilling out the surface shoe. If H2S is encountered in quantities greater than 10 PPM, the well will be shut in and H2S equipment will be installed, including a flare line that will be extended pursuant to onshore oil and gas order #6.

These tests will be performed:

a) Upon installation
b) After any component changes
c) Thirty days after a previous test
d) As required by well conditions
e) Any time a seal is broken within a system

A function test to insure that the preventers are operating correctly will be performed on each trip.

BOPCO, LP would like to request a variance to utilize a 3-1/2", 10,000 psi WP, armored flex hose to be installed between the BOP stack and choke manifold in the drilling of this well. This well will be drilled to a maximum TVD of 15,750' and a maximum surface pressure should be +\- 3414 psi, which is max BHP minus 0.22 psi/ft.

Please refer to diagrams A for the 5M system and diagram B for the 10M system. Both diagrams show the choke manifold and closed loop system layout. If an armored flex hose is utilized, the company man will have all of the proper certified paper work for that hose available on location.

POINT 5: MUD PROGRAM

DEPTH	MUD TYPE	WEIGHT	FV	PB	YP	FL	PH
0 -1,207'	FW Spud Mud	8.5 – 9.2	38-70	70-40	20	12	NC
1,207' – 3,519'	Brine Water	9.8 – 10.2	28-30	NC	NC	NC	NC
3,519' – 9,000'	FW/Gel	8.7 – 9.0	28-32	NC	NC	NC	NC
9,000' – 11,300'	Cut Brine\Brine Mud	9.0 – 9.5	34-42	10	8	< 25	9.5 – 10.5
11,300' – 15,750'	XCD Brine Mud	11.0 – 12.5	45-48	20	10	< 5	9.5 – 10.5
15,750' – 17,225'	Fresh Water Mud	8.4 – 8.6	28-30	NC	NC	NC	9.5 – 10.5

NOTE: May increase vis for logging purposes only.

MUD MONITORING SYSTEM

1. BOPCO L.P. plans to drill the proposed well with water and does not expect to mud up. In the event of abnormal pressures that require mudding up, BOPCO L.P will record slow pump rates on the daily drilling report on a daily basis.
2. Visual mud monitoring equipment will be installed to detect volume changes.
3. Pit volume totalizers are installed on rig before spud.
4. BOPCO L.P. has the drilling mud checked every 24 hrs., and the daily mud check will be posted in the company man's trailer.
5. BOPCO L.P will be using a 3M, 5M and 10M system. Trip tanks will not be required per On-shore order #2 for the 3M or 5M system, but will be rigged up for the 10M system.
6. Gas detections systems will be installed on exploratory wells per On-shore order #2. Please refer to section G under point 6 in the 8pt drilling program for H2S safety information.

Sufficient mud materials will be kept at the well site to maintain mud properties and meet minimum lost circulation and weight increase requirements at all times (sack or bulk barite will not be on location until 500' above the top of the Wolfcamp.)

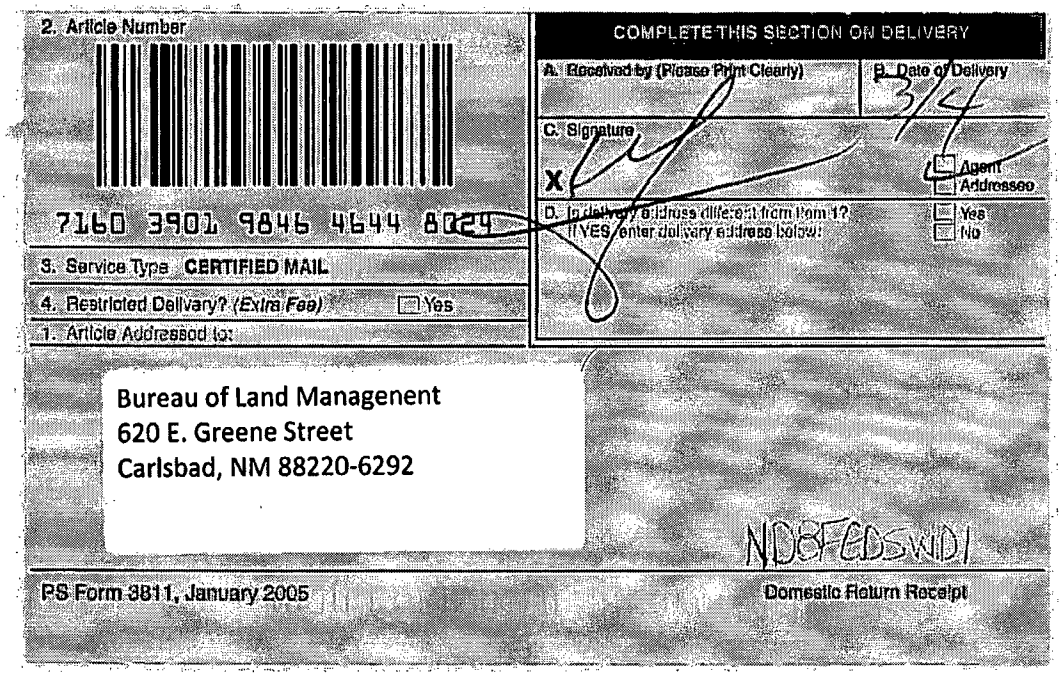
POINT 6: TECHNICAL STAGES OF OPERATION

A) TESTING
None anticipated.

B) LOGGING

Run #1: Spectral GR, Neutron-Density, Resistivity, Sonic from top of the Delaware to TD. Cased hole GR Neutron to surface.

Run #2: Elemental Capture Spectroscopy Log from Bone Spring to Devonian.



2. Article Number

7160 3901 9846 4644 8024

3. Service Type CERTIFIED MAIL

4. Restricted Delivery? (Extra Fee) ☐ Yes

1. Article Addressed to:

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly)

B. Date of Delivery 3/4

C. Signature

X

☐ Agent
☐ Addressee

D. Is delivery address different from item 1?
If YES, enter delivery address below:

☐ Yes
☐ No

Bureau of Land Managenent
620 E. Greene Street
Carlsbad, NM 88220-6292

NDBFEDSWD1

PS Form 3811, January 2005

Domestic Return Receipt

Summary of Wells Within 0.5 Mile of Nash Draw 8 Federal No. 1 *

pPRG1306438314

API WELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf_Owner	UL	Sec	Twp	N/S	Rng	W/E	Feet	NS	Ft	EW	Last Insp	Order_No	Pool No.	Formation	TVD
30-015-32043-00-00	POKER LAKE UNIT	176	BOPCO, L.P.	O	A	Eddy	F	M	5	24	S	30	E	660	S	460	W	2/21/2013		47545	Delaware/Bone Spring (BS) (Avalon Sand)	7460
30-015-31689-00-00	POKER LAKE UNIT	157	BOPCO, L.P.	O	A	Eddy	F	P	6	24	S	30	E	660	S	660	E	2/21/2013	CTB-534	47545	Delaware/BS (Avalon Sand)	7458
30-015-32929-00-00	POKER LAKE UNIT	201	BOPCO, L.P.	O	A	Eddy	F	K	7	24	S	30	E	2130	S	2100	W	2/21/2013		47545	Delaware/BS (Avalon Sand)	7357
30-015-32127-00-00	POKER LAKE UNIT	181	BOPCO, L.P.	O	A	Eddy	F	G	7	24	S	30	E	1980	N	1980	E	2/21/2013	CTB-534	47545	Delaware/BS (Avalon Sand)	7480
30-015-32128-00-00	POKER LAKE UNIT	182	BOPCO, L.P.	O	A	Eddy	F	F	7	24	S	30	E	2030	N	1980	W	2/21/2013	CTB-534	47545	Delaware/BS (Avalon Sand)	7440
30-015-31691-00-00	POKER LAKE UNIT	159	BOPCO, L.P.	O	A	Eddy	F	B	7	24	S	30	E	860	N	1980	E	2/21/2013	CTB-534	47545	Delaware/BS (Avalon Sand)	7470
30-015-32883-00-00	POKER LAKE UNIT	203	BOPCO, L.P.	O	A	Eddy	F	O	7	24	S	30	E	660	S	1980	E	2/21/2013		47545	Delaware/BS (Avalon Sand)	7540
30-015-32142-00-00	POKER LAKE UNIT	190	BOPCO, L.P.	O	A	Eddy	F	J	7	24	S	30	E	1980	S	1980	E	2/21/2013		47545	Delaware/BS (Avalon Sand)	7459
30-015-34781-00-00	POKER LAKE UNIT	191	BOPCO, L.P.	O	A	Eddy	F	I	7	24	S	30	E	1980	S	660	E	2/21/2013		47545	Delaware/BS (Avalon Sand)	7544
30-015-31690-00-00	POKER LAKE UNIT	158	BOPCO, L.P.	O	A	Eddy	F	A	7	24	S	30	E	660	N	660	E	2/21/2013	CTB-534	47545	Delaware/BS (Avalon Sand)	7440
30-015-32934-00-00	POKER LAKE UNIT	202	BOPCO, L.P.	O	A	Eddy	F	P	7	24	S	30	E	660	S	660	E	2/21/2013		47545	Delaware/BS (Avalon Sand)	7580
30-015-32126-00-00	POKER LAKE UNIT	180	BOPCO, L.P.	O	A	Eddy	F	H	7	24	S	30	E	2080	N	760	E	2/21/2013		47545	***Delaware/BS (Avalon Sand); plugged back to BS with CIBPs at ~8992 and ~11833***	**14400**
30-015-32928-00-00	POKER LAKE UNIT	204	BOPCO, L.P.	O	A	Eddy	F	N	7	24	S	30	E	660	S	1980	W	2/21/2013		47545	Delaware/BS (Avalon Sand)	7450
30-015-32052-00-00	POKER LAKE UNIT	178	BOPCO, L.P.	O	A	Eddy	F	D	8	24	S	30	E	660	N	660	W	2/21/2013		47545	Delaware/BS (Avalon Sand)	7559
30-015-33362-00-00	POKER LAKE UNIT	192Q	BOPCO, L.P.	O	A	Eddy	F	L	8	24	S	30	E	2130	S	380	W	2/21/2013		47545	Delaware/BS (Avalon Sand)	7570
30-015-33642-00-00	POKER LAKE UNIT	223	BOPCO, L.P.	O	A	Eddy	F	M	8	24	S	30	E	660	S	810	W	2/21/2013		47545	Delaware/BS (Avalon Sand)	7590
30-015-24196-00-00	POKER LAKE UNIT	059	BOPCO, L.P.	**G**	A	Eddy	F	N	8	24	S	30	E	660	S	1980	W	2/21/2013		76082	**Dog Town Draw; Morrow Gas**	**14459**
30-015-23430-00-00	POKER LAKE UNIT	049	BOPCO, L.P.	**G**	A	Eddy	F	E	17	24	S	30	E	1980	N	990	W	2/21/2013		76082 + 47545	**Dog Town Draw; Morrow Gas + Delaware/BS (Avalon Sand)**	**14470**
30-015-34108-00-00	POKER LAKE UNIT	224	BOPCO, L.P.	O	A	Eddy	F	D	17	24	S	30	E	860	N	990	W	2/21/2013		47545	Delaware/BS (Avalon Sand)	7600
30-015-22327-00-00	PRE-ONGARD WELL	045	PRE-ONGARD WELL OPERATOR	O	P	Eddy	F	A	18	24	S	30	E	460	N	660	E			NA	Three plugs (300 to 400; 1550 to 1650; 3460 to 3560); turned over to rancher as water well".	3785
30-015-32882-00-00	POKER LAKE UNIT	200	BOPCO, L.P.	O	A	Eddy	F	A	18	24	S	30	E	410	N	450	E	2/21/2013		47545	Delaware/BS (Avalon Sand)	7515
30-015-33423-00-00	POKER LAKE UNIT	205	BOPCO, L.P.	O	A	Eddy	F	B	18	24	S	30	E	160	N	1650	E	2/21/2013	NSL-5048	47545	Delaware/BS (Avalon Sand)	7520

*All new wells and cancelled APDs have been removed from the summary