BC&D Operating, Inc

P.O. Box 302 Hobbs, NM 88241
(405) 837-8147

January 7, 2020

Jal Public Library Trust 23-24-35 SWD

1,550' FNL & 200 FWL, Sec 23, T24S, R35E, Lea Co, NM

Contents:

Revised March 23, 2017

RECEIVED:	REVIEWER:	TYPE:	APP NO:

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

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

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: _____ **OGRID Number:** _____
Well Name: _____ **API:** _____
Pool: _____ **Pool Code:** _____

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐ NSL ☐ NSP(PROJECT AREA) ☐ NSP(PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply.
A. ☐ Offset operators or lease holders
B. ☐ Royalty, overriding royalty owners, revenue owners
C. ☐ Application requires published notice
D. ☐ Notification and/or concurrent approval by SLO
E. ☐ Notification and/or concurrent approval by BLM
F. ☐ Surface owner
G. ☐ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **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.

_____ Date

_____ Print or Type Name

_____ Phone Number

_____ Signature

_____ e-mail Address

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 ___✓___Disposal _____Storage
Application qualifies for administrative approval? ___✓___Yes _____No

II. OPERATOR: BC&D Operating, Inc. (25670)

ADDRESS: P.O Box 302 Hobbs, New Mexico 88241

CONTACT PARTY: Richard Hill PHONE: (405) 837-8147

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

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

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

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

VII. Attach data on the proposed operation, including:

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

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

IX. Describe the proposed stimulation program, if any.

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

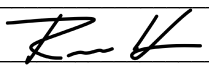
*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

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

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

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

NAME: Richard Hill TITLE: SVP Engineering

SIGNATURE:  DATE: 1/7/2020

E-MAIL ADDRESS: rhill@wellconsultant.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

Side 2

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.

Side 1

INJECTION WELL DATA SHEET

OPERATOR: BC&D Operating, Inc. (25670)

WELL NAME & NUMBER: Jal Public Library Trust 23-24-35 SWD

WELL LOCATION:	1,550' FNL & 200' FWL	E	23	24S	35E
	FOOTAGE LOCATION	UNIT LETTER	SECTION	TOWNSHIP	RANGE

WELLBORE SCHEMATIC

Please see attached wellbore schematic in the following pages.

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: _____ Casing Size:_____

Cemented with: _____ sx. ***or*** _____ ft^3

Top of Cement: _____ Method Determined: _____

Intermediate Casing

Hole Size: _____ Casing Size:_____

Cemented with: _____ sx. ***or*** _____ ft^3

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: _____ Casing Size:_____

Cemented with: _____ sx. ***or*** _____ ft^3

Top of Cement: _____ Method Determined: _____

Total Depth: _____

Injection Interval

_____feet to_____

(Perforated or Open Hole; indicate which)

Side 2

INJECTION WELL DATA SHEET

Tubing Size: 4-1/2" Lining Material: Duoline

Type of Packer: 4-1/2" TCPC Permanent Packer w/ High Temp Elastomer & Full Inconel

Packer Setting Depth: 15,850'

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

Additional Data

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

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

2. Name of the Injection Formation: Dev - Fuss

3. Name of Field or Pool (if applicable): SWD; Dev - Fuss

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

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

   Yates - Seven Rivers @ 3,589', Bone Spring at 8,050', Wolfcamp @ 11,800'

   Atoka @ 13,120', Morrow @ 13,560'

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III. Well Data

A. The following 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.

- Jal Public Library Trust 23-24-35 SWD, Sec 23, T24S, R35E, 1,550’ FNL & 200’ FWL.

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.

Casing Size	Setting Depth	Sack of Cement	Hole Size	Top of Cement	Determined
20"	1,250'	1,205	26"	Surface	Circulate
13-3/8"	5,220'	1,970	17-1/2"	Surface	Circulate
9-5/8"	12,650'	2,050	12-1/4"	Surface	Circulate
7"	12,450' - 15,900'	350	8-1/2"	11,265'	Circulate

3. A description of the tubing to be used including its size, lining material, and setting depth.

- 4-1/2” (0 – 15,800’) OD, Internally Plastic-Coated tubing set 50’ – 100’ above open hole.

4. The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

- 4-1/2” TCPC Permanent packer w/ high temp elastomer & full Inconel.

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.

- Injection Formation Devonian-Silurian Formations
- Pool Name: SWD (Devonian-Fusselman)

2. The injection interval and whether it is perforated or open-hole.

- 15,500’ – 17,500’ (15,500 - 15,900 cased hole and not perforated), (15,900' - 17,500' OH)

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

   - New well drilled for injection.

4. **Give the depths of any other perforated intervals and detail on the sacks of cementor bridge plugs used to seal off such perforations.**

   - N/A

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.**

   - Next Higher:
     - Morrow 13,560'
     - Atoka 13,120'
     - Wolfcamp 11,800'
     - Bone Spring/Avalon 8,050'
     - Yates 3,589'.
   - Next Lower:
     - None

IV.

1. **Is this an expansion of an existing project? _____Yes ✓ No**

V.

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

   - See attached map.

VI.

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

   - See attachment.

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VII. Attach data on the proposed operation, including:

1. **Proposed average and maximum daily rate and volume of fluids to be injected;**

   - Average 30,000 BWPD, Max 40,000 BWPD.
   - Rate will also be determined by maximum pressure. (.2 psi/ft to top of injection interval).

2. **Whether the system is open or closed;**

   - Closed System, Commercial SWD

3. **Proposed average and maximum injection pressure;**

   - Average injection pressure: 2,500 psi (surface pressure).
   - Maximum injection pressure: 3,100 psi (surface pressure).

4. **Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,**

   - The injection fluid is to be locally produced water. It is expected that the source water will predominantly be from the Bone Spring and Wolfcamp formations. Attached are produced water sample analyses taken from the closest wells that feature samples from the Delaware, Bone Spring, and Wolfcamp formations.

5. **If injection is for disposal purposes into a zone not productive of oil and 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.)**

   - The disposal interval is non-productive. No water samples are available from the surrounding are

VIII.

1. **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. Underground sources of drinking water within 1-mile of the proposed location.**

   - The Devonian formation is a dolomitic ramp carbonate that occurs below the Woodford shale and above the Fusselman formation. Strata found in the Devonian formation include two major groups, the Wristen Buildups and Thirtyone Deepwater Chert, with the Wristen being more abundant. The Wristen Groups is composed of mixed limestone and dolomites with mudstone to grainstone and boundstone textures. Porosity in the Wristen group is a result of both primary and secondary development. Present are moldic, vugular, karstic (including collapse breccia)

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features that allow for higher porosities and permeabilities. The Thirtyone Formation contains two end-member reservoir facies, skeletal packstones/grainstones and spiculitic chert, with most of the porosity and permeability found in the coarsely crystalline cherty dolomite. These particular characteristics allow for this formation to be a salt water disposal horizon.

- There are no wells within one mile of the proposed location. Water wells in the surrounding area have an average depth of 507’ and an average water depth of 300’ generally producing from the Santa Rosa. The upper Rustler may also be another USDW and will be protected.
- The Santa Rosa Sandstone consists primarily of red, white, gray or greenish-gray and varies from a fine grain to coarse grain sandstone. In the vicinity of the Jal Public Library Trust 9-24-35 SWD it occurs at a depth of around 700’ to 900’. In this area the Santa Rosa is of minor hydrological significance and there are no Santa Rosa water wells in the vicinity of the well in application. Consequently, the Santa Rosa quality in this area is not known. However, over southern Lea County it yields small quantities of water, with some reports of wells producing 100 gpm. Santa Rosa water in the southern part of the county usually has high sulfate content.

Formation Tops	Depth (TVD)
Rustler	1,190'
Top Salt	1,280'
Base Salt	3,700'
Top Capitan Reef	3,728'
Base Capitan Reef	5,050'
Delaware	5,220'
Bell Canyon	5,300'
Cherry Canyon	6,200'
Brushy Canyon	7,720'
Bone Spring	8,920'
Wolfcamp	11,800'
Strawn	12,622'
Atoka	13,120'
Morrow Lime	13,564'
Barnet	14,485'
Chester	15,115'
Mississippian Lime	15,226'
Woodford	15,632'
Devonian	15,882'
Fusselman	16,920'
Montoya	17,700'

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IX.

1. **Describe the proposed stimulation program, if any.**

- Stimulate with up to 50,000 gallons of acid.

X.

1. **Attach appropriate logging and test data on the well. (If well logs have been filed with the division, they need not resubmitted.**

- There are no logs or test data on the well.
- During drilling operations.
  - 0 – 1,250' mudlogging.
  - 1,250' – 5,200' mudlogging and full suite of logs consisting of GR/CNL/CDN/CBL to identify the Capitan Reef.
  - 5,200' – 12,650' mudlogging, gamma and CBL.
  - 12,650' – 15,900' mudlogging, gamma and CBL.
  - 15,900' – 17,700' mudlogging an GR/CNL/CDN/CBL.

XI.

1. **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.**

- There are no wells producing within one mile of the proposed location.
- Please see POD supplements.

XII.

1. **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.**

- BC&D Operating, Inc. has reviewed and examined geologic and engineering data in the area of interest for the Jal Public Library Trust 23-24-35 SWD and have found no evidence of faults or other hydrologic connections between Devonian disposal zones and underground sources of drinking water.

XIII.

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

- Please see "Proof of Notice" attachments.

Custer Mountain Unit #1
1,980' FSL & 1,980' FWL, Sec 9 T24S R35E

Formation	Tops
Lamar	5,320'
Delaware Sand	5,367'
Cherry Canyon	6,261'
Bonespring Shale	8,905'
Bonespring Lime	9,075'
Barnet	14,485'
Chester	15,115'
Mississippi	15,226'
Woodford	15,632'
Devonian	15,882'

Aztec State
1,650' FNL & 1,980' FEL, Sec 16 T24S R35E

Formation	Tops
Anhydrite	820'
Salt	1250'
Delaware	5245'
Wolfcamp	10,718'
Atoka	12,980'

Cinta Roja 10 #1
1,980' FNL & 1,650' FWL, Sec 10 T24S R35E

Formation	Tops
Rustler	1,190'
Tansill (Capitan)	3,728'
Cherry Canyon	6,542'
Brushy Canyon	7,743'
Bone Spring	9,048'
1st Bone Spring Sd	9,920'
Wolfcamp	11,767'
Strawn	12,622'
Atoka	13,120'
Morrow Lime	13,750'
Morrow Clastics	14,070'
Morrow "D" Marker	14,600'

Cinta Roja 17 Federal #1
1,980' FNL & 2,310' FEL, Sec 17 T24S R35E

Formation	Tops
Delaware	5,322'
Cherry Canyon	6,382'
Brushy Canyon	7,708'
Bone Spring Lime	9,306'
Wolfcamp Shale	12,150'
Strawn	13,000'
Atoka Shale	13,376'
Morrow Lime	13,870'
Morrow Clastics	14,132'
Middle Morrow	14,776'
Lower Morrow	15,287'

COUNTY LEA FIELD Wildcat STATE N.M.

WC OPR MIDWEST OIL CORP. MAP

1 Custer Mountain Unit-Federal

Sec. 9, T-24-S, R-35-E CO-ORD

1980' fr S & W Line of Sec.

Spud 8-29-63 CLASS EL 3403

Comp. 5-18-64

CSG & SX - TUBING			FORMATION	DATUM	FORMATION	DATUM
13 3/8"	390'	580	LOG:			
9 5/8"	5240'	4709	Lamar 5320			
7" Liner	12118-15360'	- 533	DelSd.5367			
			ChCyn 6261			
			BSpgSh 8905			
			BSpgLm 9075			
LOGS EL GR RA IND HC A			Barnett14485'			
			TD 16590', PB 15090'			

IP Morrow Perfs 13968-14288', CAOF 8000 MCFGPD. Pot. Based on 4-point test.

CONT. Rowan Drlg. Co. PROP DEPTH 15,500' TYPE

DATE

F. R. 8-29-63; Oper's Elev. 3404' KB.
PD 15,500' - Devonian.
Contractor - Rowan Drlg. Co.

9-3-63 Drlg. 1475' anhy. Lost Circ. @ 1100'.
9-9-63 Drlg. 4220' lm & anhy.
9-16-63 Drlg. 5232' anhy.
9-23-63 Coring @ 5292'.
Cored 5253-82', rec. 29' shly lm w/NS.
9-30-63 Drlg. 7435' lm & sd.
Cored 5282-97', rec. 15' lm w/NS.
Cored 5300-50', rec. 50' lm & sd. w/odor.
in sd. 5315-45', tr. fluor. in top 5'.
DST 5310-50', open 2 hrs.
Rec. 2500' salt wtr.
30 min. ISIP 2101#, FP 172-1143#,
30 min. FSIP 1981#.

Page 2
Cinta Roja 10 #1
C-105

No. 26 Dresser Atlas ran: Neutron-Density surface-TD, Acoustilog 5394'-TD, Dual Laterolog-Micro Laterolog 5394-TD, and Density-Neutron, BHC Acoustilog, and Dual Laterolog-Micro Laterolog 12,150-14,598'.

Schlumberger ran Gamma Ray and Spectroscopy Log (TD) 14,481-13,900' and Cement Bond Log 14,476-11,388'.

Cardinal ran Production Log, Fluid Denisty, Temperature Log, and Radioactive Tracer.

FORMATION TOPS

Permian		
Russler	1,190	
Tansill (Capitan)	3,728	
Cherry Canyon	6,542	
Brashy Canyon	7,743	
Bone Springs	9,048	
1st Bone Springs Sd	9,920	
Wolfcamp	11,767	
Penn.		
Strawn		12,622
Atoka		13,120
Morrow Lime		13,564
Morrow Clastics		13,750
Morrow "D" Marker		14,070
Total Depth		14,600

RECEIVED
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OIL CONSERVATION DIV

CINTA ROJA WELL NO. 1

		Thickness in Feet
0-422	Redbed	422
422-862	Redbed-Anhydrite	440
862-1114	Anhydrite-Salt	252
1114-1520	Redbed-Anydrite-Salt	406
1520-3581	Anhydrite-Salt	2061
3581-3663	Anhhydrite-Salt-Trace Lime	82
3663-3800	Lime	137
3800-3893	10% Anhydrite-40% Dolomite-40% Lime-10% Shale	93
3893-5624	Lime-Dolomite-Shale	1731
5624-5690	Lime-Sand	66
5690-6085	Dolomite-Sand-Lime	395
6085-6503	Dolomite-Sand-Lime-Shale	418
6503-8240	Dolomite-Sand-Lime	1737
8240-8693	Dolomite-Sand-Lime-Shale	453
8693-9078	Shale-Lime-Sand	385
9078-9793	Shale-Lime-Sand-Trace Chert	715
9793-10820	Shale-Lime-Chert	1027
10820-10914	Lime-Shale	94
10914-11060	Shale-Lime-Sand	146
11060-11136	Lime-Shale-Chert	76
11136-12834	Lime-Shale	1698
12834-12839	Lime-Shale-Chert	5
12839-12918	Lime-Shale	79
12918-12927	Shale	9
12927-13195	60% Shale-30% Lime-10% Chert	268
13195-13318	Shale-Lime	123
13318-13384	Chert-Lime-Shale	66
13384-13476	Lime-Shale	92
13476-13576	Chert-Lime-Shale	100
13576-13596	Lime-Shale	20
13596-13608	Chert-Lime	12
13608-13612	Shale-Lime	4
13612-13646	Chert-Lime-Shale	34
13646-13654	Shale-Lime	8
13654-13659	Chert-Lime-Shale	5
13659-13662	Shale	3
13662-13674	Lime-Shale-Chert	12
13674-13692	Lime-Shale-Chert-Sand	18
13692-13724	Chert-Lime-Shale	32
13724-13771	Lime-Shale	47
13771-13785	Chert-Lime-Shale	14
13785-13914	Shale-Lime	129
13914-13925	Chert-Sand-Lime-Shale	11
13925-13931	Lime-Sand-Shale	6
13931-13959	Lime-Chert-Sand	28
13959-13976	Shale-Lime	17
13976-13980	Chert-Dolomite-Lime-Shale	4
13980-13986	Shale-Dolomite-Lime	6
13986-14035	Shale-Lime	49

Petroleum Information

RE-ISSUED COMPLETION

COUNTY LEA FIELD Cinta Roja STATE NM

OPR GETTY OIL CO. API 30-025-26080

NO 1 LEASE Cinta Roja "10" MAP

Sec 10, T24S, R35E COORD

1980 FNL, 1650 FWL of Sec 6-1-20 NM

12 mi NW/Jal SPD 11-4-78 CMP 3-2-79

CSG

13 3/8-421-660 sx

9 5/8-5399-1910 sx

7-12,168-1800 sx

4 1/2-lnr-11,887-14,599-425 sx

2 3/8-13,000

WELL CLASS INIT D FIN DG LSE CODE

FORMATION	DATUM	FORMATION	DATUM

TD 14,600 (MRRW) PBD 14,185

IP (Morrow) Perfs 14,045-164 CAOF 1462 MCFGPD. GOR dry, gty (Gas) .603, SIWHP 4200, SIBHP 6005

PLC: El Paso Natural Gas Co.

CONTR Sharp #36 OPR ELEV 3375 GL PD 14,600 RT

F.R. 9-18-78

11-6-78 TD 422; WOC

11-13-78 TD 3800; Prep DST

11-27-78 Drlg 7730 lm, sh & sd
DST (Delaware) 3750-3800, op 1 hr 10 mins, rec 1230 DF + 400 FW, 1 hr ISIP 1453#, FP 242-800, 2 hr FSIP 1368, HP 1919-1930, BHT 88 deg

12-1-78 Drlg 9339 lm & sh

12-12-78 Drlg 11,910 lm & sh

12-19-78 TD 12,174; Trip Bit

12-22-78 Drlg 12,375

1-2-79 Drlg 12,914

1-8-79 Drlg 13,265

1-15-79 TD 13,548; Trip

1-23-79 Drlg 13,832

1-29-79 Drlg 14,135

2-5-79 Drlg 14,487

6-1-20 NM

LEA
GETTY OIL CO.

Cinta Roja
1 Cinta Roja "10"
Sec 10, R24S, R35E

NM
Page #2

2-12-79 TD 14,600;WOC
2-16-79 TD 14,600; MORT
2-26-79 TD 14,600; Prep Perf
3-5-79 TD 14,600; Swbg
Perf (Morrow) 14,232-426 (overall)
4-9-79 TD 14,600; Si
Frac(14,232-426) 22,000 gals +
13,800 sd + 20 ton CO2
Flwd 20 MCFPD in 4 hrs thru 48/64 chk,
TP) (14,232-426)
4-16-79 TD 14,600; Swbg
4-18-79 TD 14,600; PBD 14,185, SI
Perf (Morrow) @ 14,045, 14,049, 14,052 1/2
14,058, 14,062, 14,120, 14,122,

6-1-20 NM

4-18-79 Continued
14,124, 14,126, 14,129, 14,131, 14,134,
14,137, 14,144, 14,147, 14,153, 14,157,
14,158, 14,161, 14,164 w/1 SPI
Frac (14,045-164) 20,000 gals + CO2
9-15-80 TD 14,600; PBD 14,185; Complete
(Morrow) FOUR POINT GAUGES:
Flwd 289 MCFGPD, 2/64 chk, 60 mins, TP 3770
Flwd 393 MCFGPD, 6/64 chk, 60 mins, TP 3700
Flwd 605 MCFGPD, 8/64 chk, 90 mins, TP 3300
Flwd 724 MCFGPD, 9/64 chk, 60 mins, TP 2960
LOG TOPS: Rustler 1190, Tansill 3728, Cherry
Canyon 6542, Brushy Canyon 7743, Bone Spring
9048, 1st Bone Spring Sand 9920, Wolfcamp
11,767, Strawn, 12,622, Atoka 13,120, Morrow
Lime 13,564, Morrow Clastic 13,750, Morrow
"D" Marker 14,070

6-1-20 NM

LEA
GETTY OIL CO.

Cinta Roja
1 Cinta Roja "10"
Sec 10, T24S, R35E

NM
Page #3

9-15-80	Continued LOGS RUN: CNDL, ACSL, DILL, MLAT, BHC, GRL, SPCT, CBND, TMPL, RTRS BHT 183 deg @ 14,150 Rig Released 2-13-79
6-2-79	TEMPORARY COMPLETION ISSUED
9-20-80	RE-ISSUE OF SUSPENDED COMPLETION

6-1-20 NM
IC 30-025-70320-78

BC&D Operating, Inc
Jal Public Library Trust 23-24-35 SWD
1,550' FNL & 200' FWL
Sec 23, T24S, R35E
Lea County, NM

Surface - (Conventional)

Hole Size	26"
Casing	20" - 94# J-55 BTC Casing
Depth Top:	Surface
Depth Bottom:	1,250'
Cement:	560 sxs tail, 1.35 yield, class C + additives
	645 sxs lead, 1.75 yield, class C + additives
Cement Top:	Surface - (circulated)

Intermediate #1 - (Conventional)

Hole Size	17.5"
Casing	13-3/8" - 61# L-80HC BTC Casing
Depth Top:	Surface
Depth Bottom:	5,220'
Cement:	490 sxs tail, 1.33 yield, Class C 50/50 + additives
	1480 sxs lead, 1.75 yield, Class C + additives
Cement Top:	Surface - (circulated)

Intermediate #2 - (Conventional)

Hole Size	12.25"
Casing	9-5/8" - 40# L-80HC BTC Casing
Depth Top:	Surface
Depth Bottom:	12,650'
Cement:	Stage 1 - 520 sxs tail, 1.2 yield, Class H + additives
	Stage 1 - 620 sxs lead, 2.0 yield, Class H 50/50 + additives
	Stage 2 - 260 sxs tail, 1.33 yield, Class C + additives
	Stage 2 - 650 sxs lead, 2.5 yield, Class C 50/50 + additives
Cement Top:	Surface - (circulated)
ECP/DV Tool:	5,500'

Intermediate #3 - (Liner)

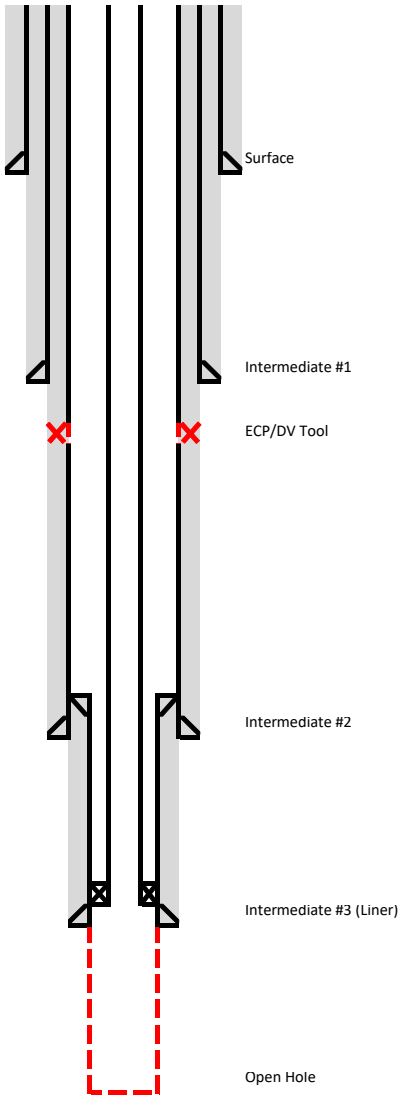
Hole Size	8.5"
Casing	7" - 32# P-110HC BTC SpCL Casing
Depth Top:	12,450'
Depth Bottom:	15,900
Cement:	350 sxs tail, 1.33 yield, Class H 50/50 + additives
Cement Top:	12,450' - (Volumetric)

Intermediate #4 - (Open Hole)

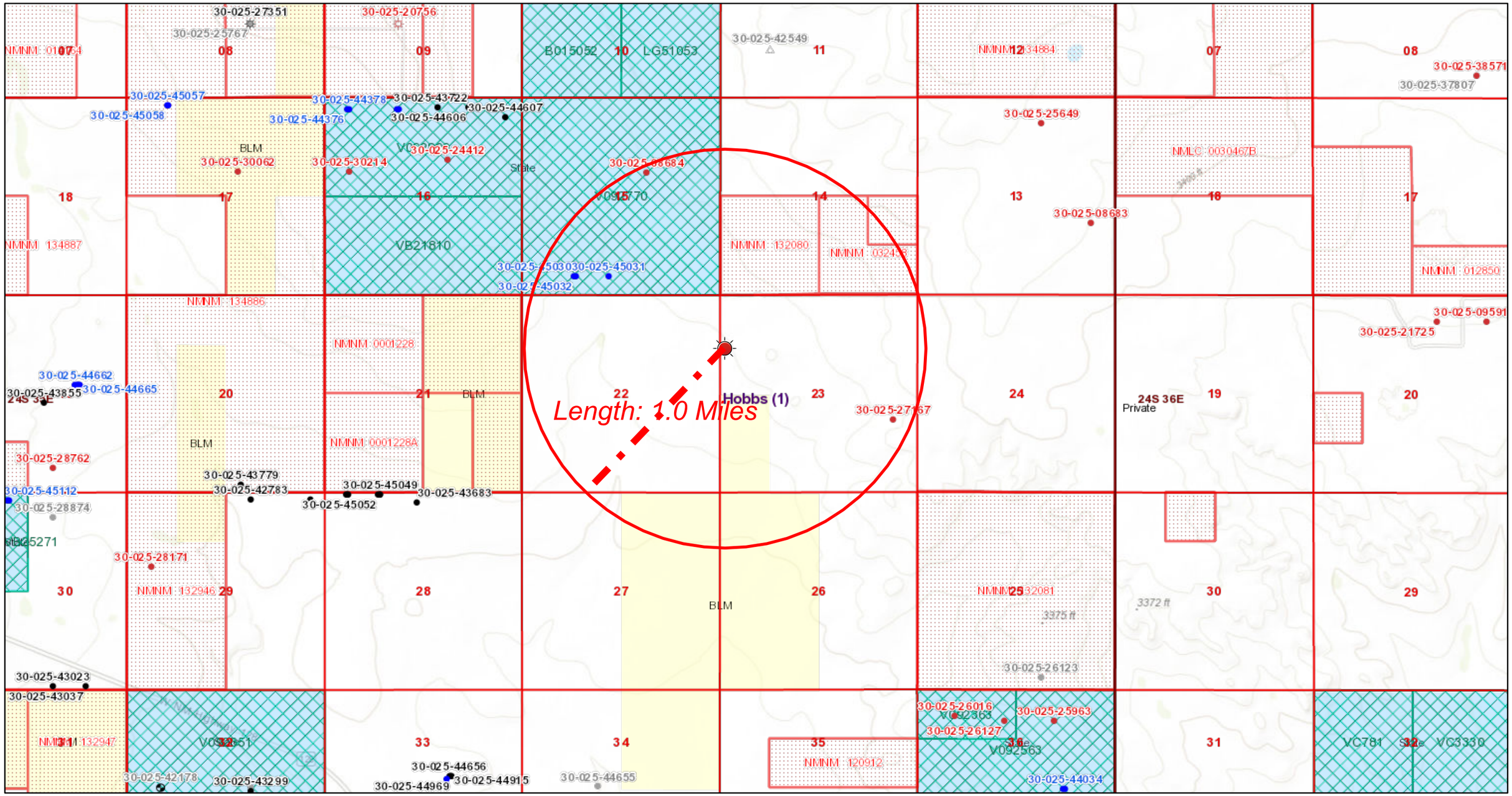
Hole Size	6"
Casing	Open Hole
Depth Top:	15,900'
Depth Bottom:	17,700'
Inj Interval:	15,500' - 15,900' (Cased hole non perforated)
	15,900' - 17,500' (Open-Hole Completion)

Tubing

Tubing Depth:	15,800'
Tubing:	4-1/2" 11.6# N-80 Duoline
Packer Depth:	15,850'
Packer:	4-1/2" TCPC Permanent packer w/ high temp elastomer & full



Jal Public Library Trust 23-24-35 SWD



11/29/2019, 5:37:31 PM

Override 1

Override 1

Override 1

Well Locations - Small Scale

Active

New

Plugged

1:36,112

0 0.38 0.75 1.5 mi

0 0.5 1 2 km

U.S. BLM, Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User

New Mexico Oil Conservation Division

NM OCD Oil and Gas Map. http://nm-emnrd.maps.arcgis.com/apps/webappviewer/: New Mexico Oil Conservation Division

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name

Property Code	Property Name	Well Number
	JAL PUBLIC LIBRARY TRUST 23-24-35 SWD	1

OGRID No.	Operator Name	Elevation
	BC & D OPERATING, INC	3339'

Surface Location

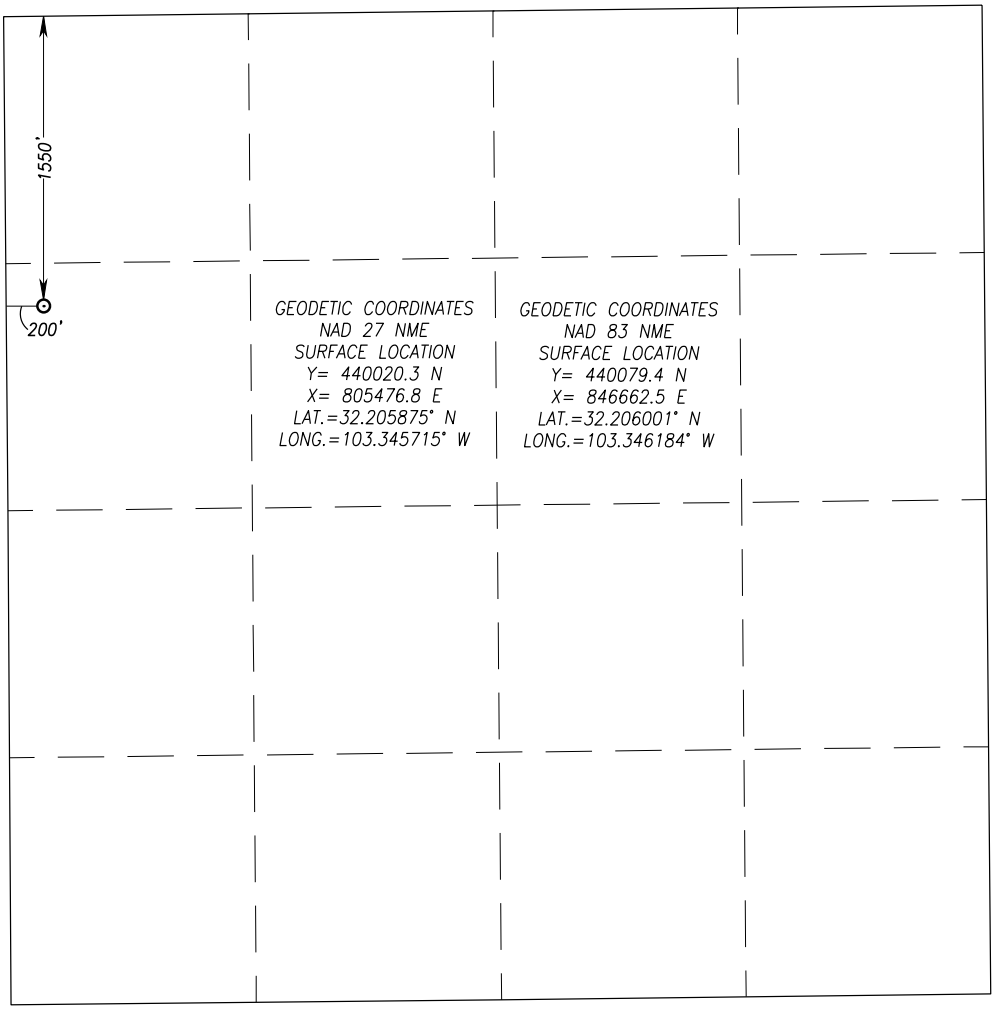
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	23	24-S	35-E		1550	NORTH	200	WEST	LEA

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 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

12/28/2019
Signature Date

Richard Hill
Printed Name

rhill@wellconsultant.com
E-mail 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 supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 11, 2019
Date of Survey

Signature & Seal of Professional Surveyor:

RONALD J. EIDSON NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

Ronald J Eidson 12/26/2019

Certificate Number Gary G. Eidson 12641
Ronald J. Eidson 3239

LSL JWSC W.O.: 19.11.1239

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name

Property Code	Property Name	Well Number
	JAL PUBLIC LIBRARY TRUST 23-24-35 SWD	1
OGRID No.	Operator Name	Elevation
	BC & D OPERATING, INC	3339'

Surface Location

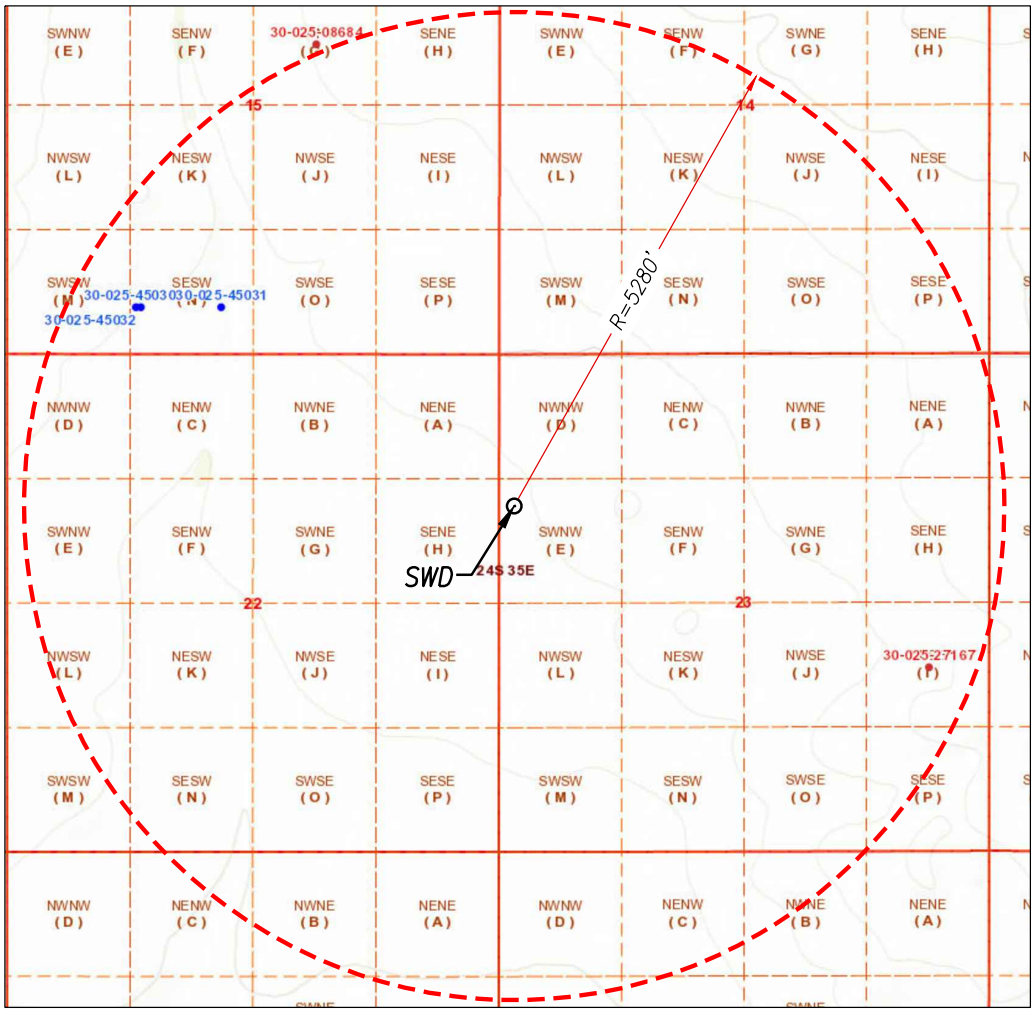
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	23	24-S	35-E		1550	NORTH	200	WEST	LEA

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



Scale:1"=2000'

LEGEND
⊙ DENOTES PROPOSED WELL

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 supervision, and that the same is true and correct to the best of my belief.

NOVEMBER 11, 2019
Date of Survey

Signature & Seal of Professional Surveyor:

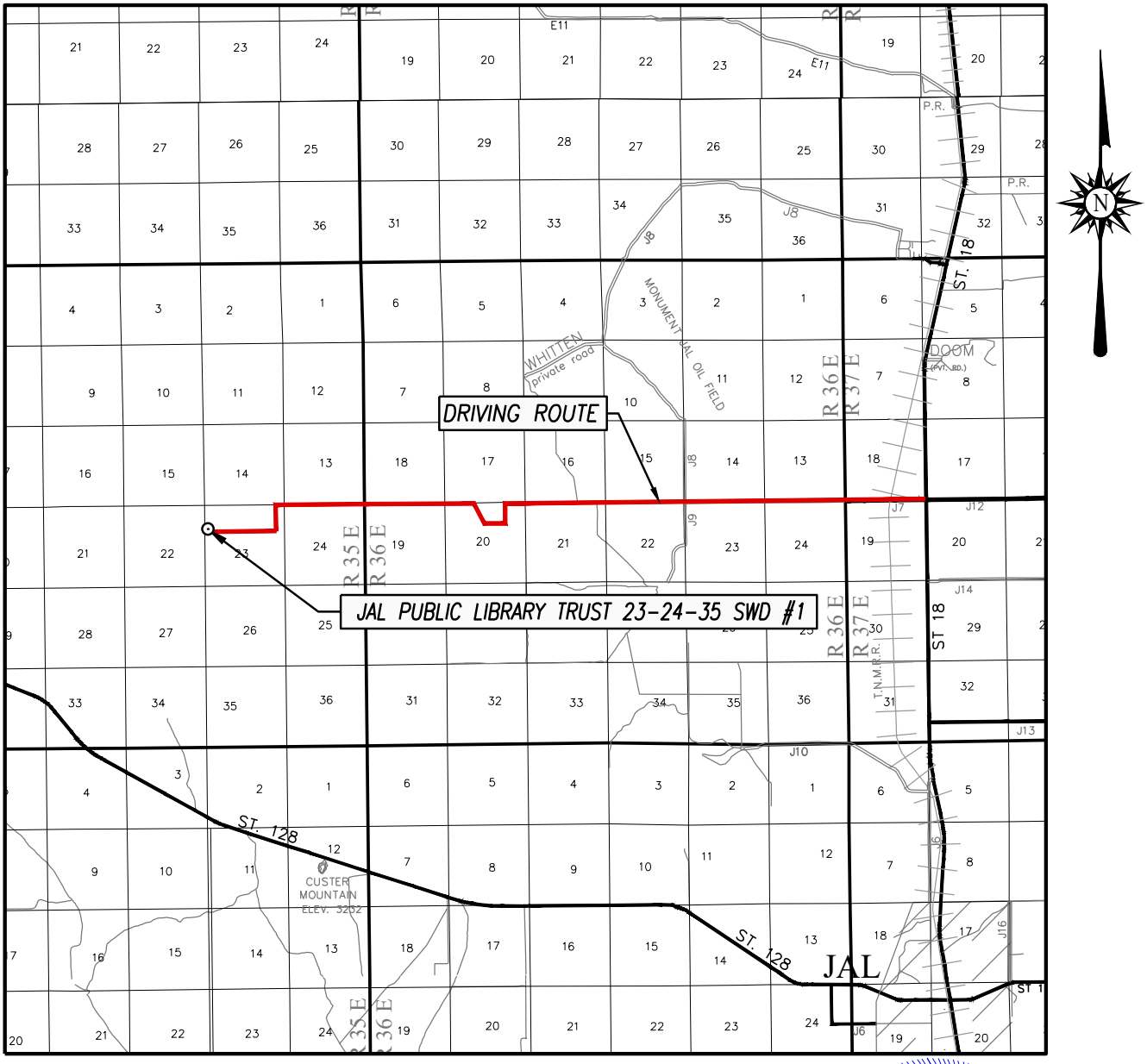
RONALD J. EIDSON
NEW MEXICO
3239
REGISTERED PROFESSIONAL SURVEYOR

Ronald J Eidson 12/26/2019

Certificate Number	Gary G. Eidson	12641
	Ronald J. Eidson	3239

LSL JWSC W.O.: 19.11.1239

VICINITY MAP



SCALE: 1" = 2 MILES

NOTE:

1) SEE "TOPOGRAPHICAL AND ACCESS ROAD MAP" FOR ACCESS ROAD LOCATION.

SEC. 23 TWP. 24-S RGE. 35-E

SURVEY N.M.P.M.

COUNTY LEA STATE NEW MEXICO

DESCRIPTION 1550' FNL & 200' FWL

ELEVATION 3339'

OPERATOR BC & D OPERATING, INC

LEASE JAL PUBLIC LIBRARY TRUST 23-24-35 SWD

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

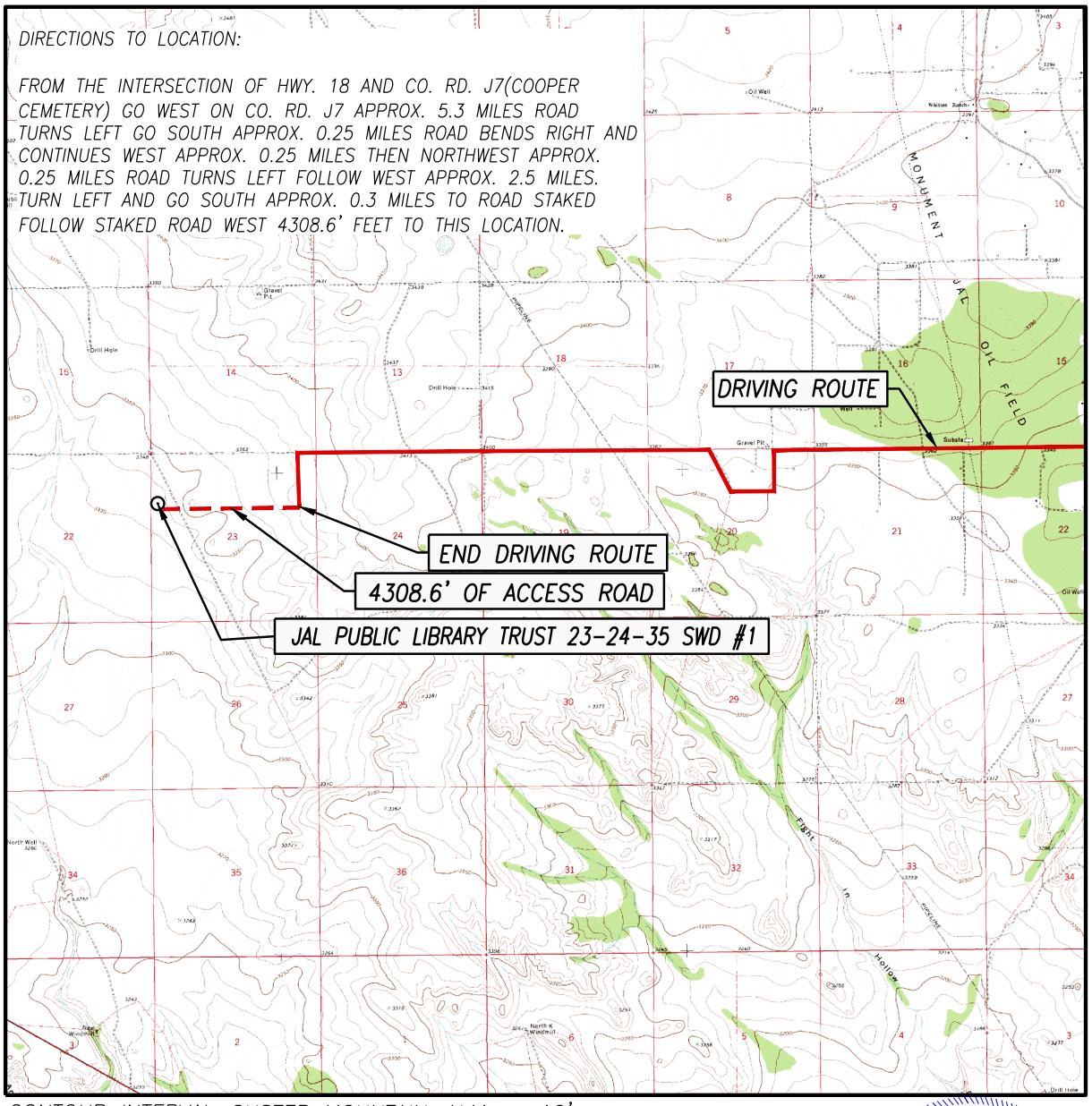
RONALD J. EIDSON Ronald J Eidson

DATE: 12/26/2019

RONALD J. EIDSON NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

TOPOGRAPHIC AND ACCESS ROAD MAP



CONTOUR INTERVAL: CUSTER MOUNTAIN, N.M. – 10'
SCALE: 1" = 5280'

SEC. 23 TWP. 24-S RGE. 35-E
SURVEY N.M.P.M.
COUNTY LEA STATE NEW MEXICO
DESCRIPTION 1550' FNL & 200' FWL
ELEVATION 3339'
OPERATOR BC & D OPERATING, INC
LEASE JAL PUBLIC LIBRARY TRUST 23-24-35 SWD
U.S.G.S. TOPOGRAPHIC MAP
CUSTER MOUNTAIN, N.M.

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR NO. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON Ronald J Eidson

DATE: 12/26/2019

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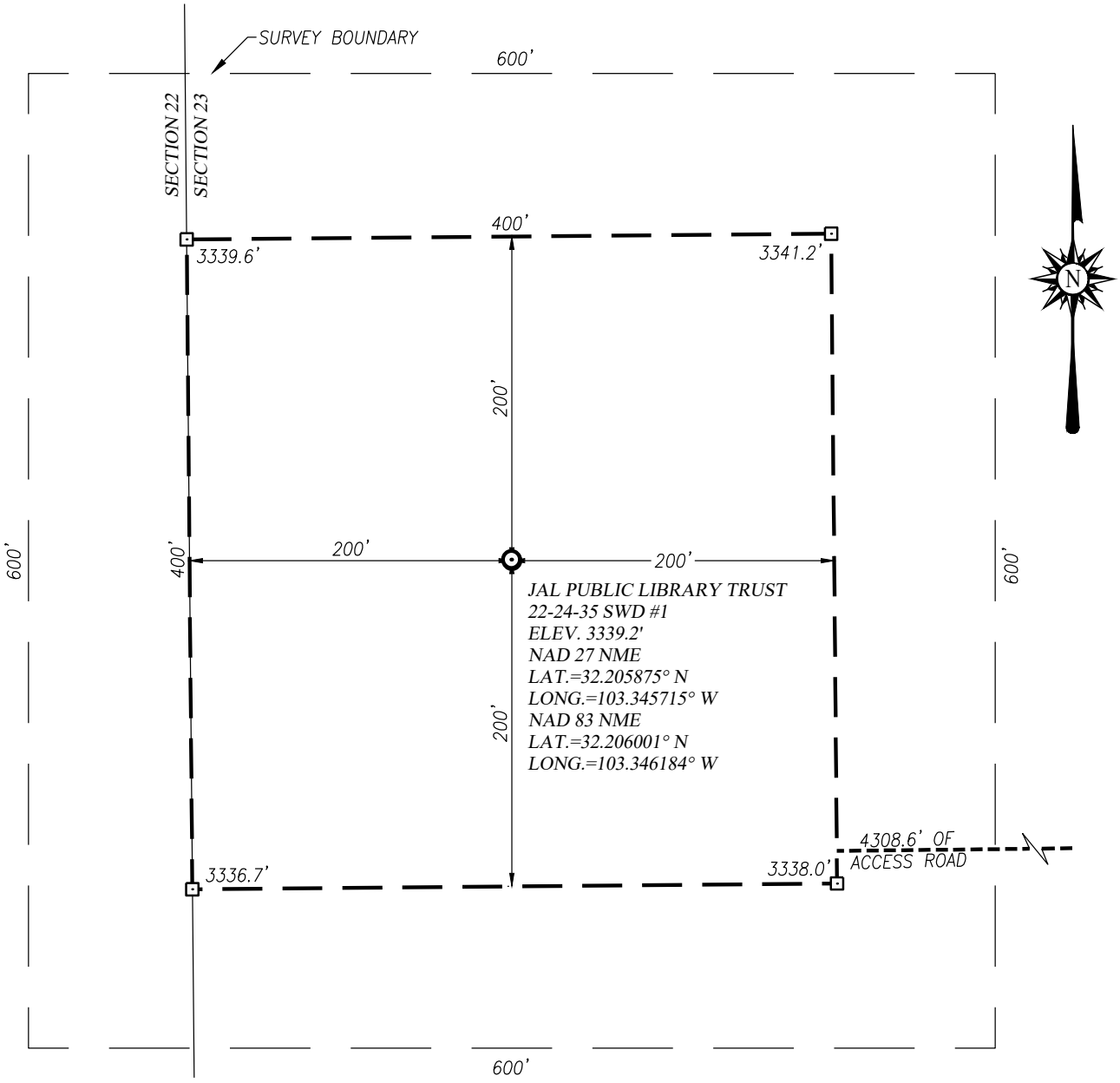
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

WELL SITE PLAN



NOTE:
1) SEE "TOPOGRAPHICAL AND ACCESS ROAD MAP" FOR ACCESS ROAD LOCATION.

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR NO. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON Ronald J Eidson

DATE: 12/26/2019

RONALD J. EIDSON NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

100 0 100 200 Feet

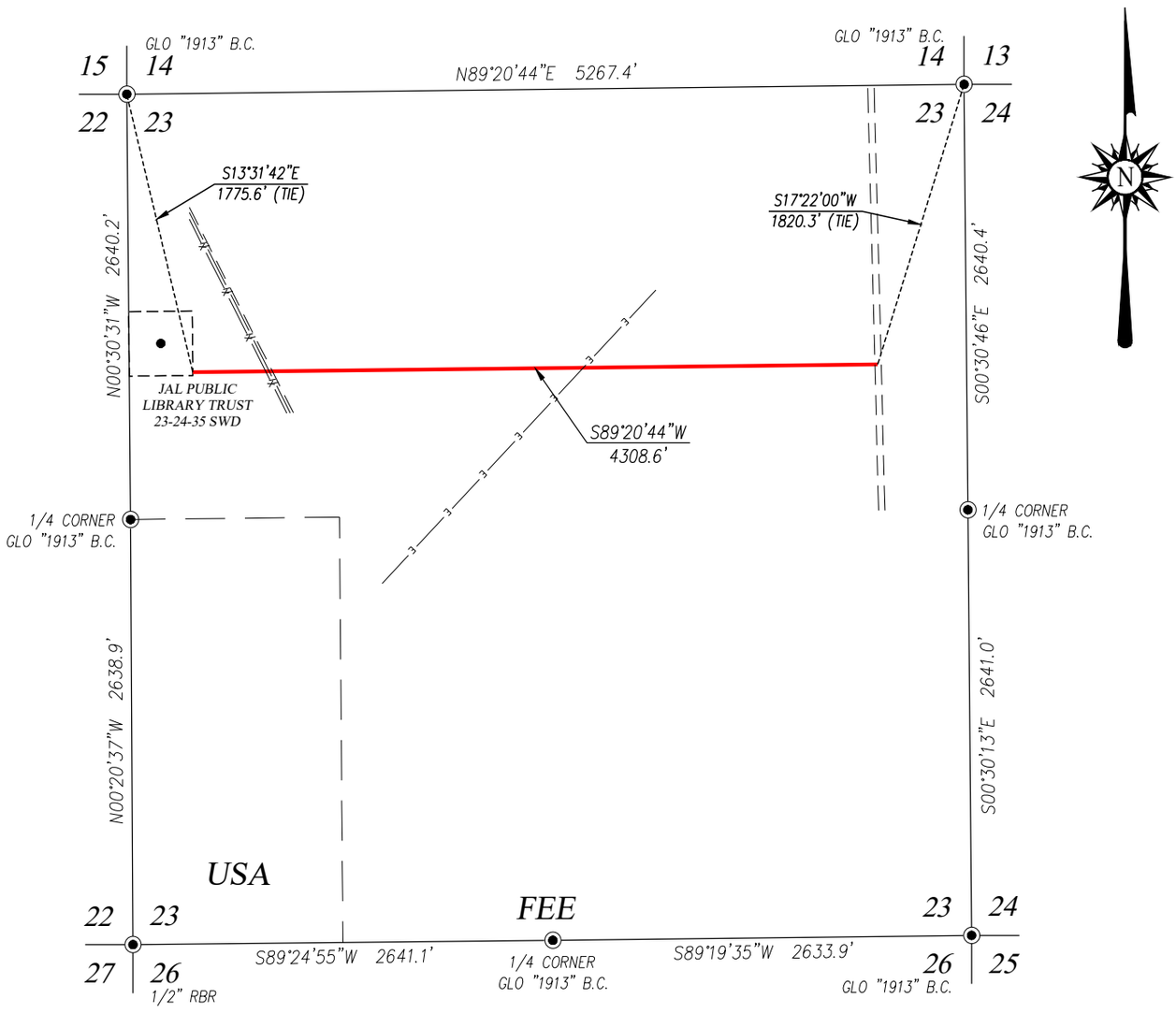
Scale: 1"=100'

BC & D OPERATING, INC

JAL PUBLIC LIBRARY TRUST 23-24-35 SWD #1 WELL LOCATED 1550 FEET FROM THE NORTH LINE AND 200 FEET FROM THE WEST LINE OF SECTION 23, TOWNSHIP 24 SOUTH, RANGE 35 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

Survey Date: 11/11/19	CAD Date: 12/24/19	Drawn By: LSL
W.O. No.: 19111239	Rev: .	Rel. W.O.:	Sheet 1 of 1



DESCRIPTION

SURVEY FOR AN ACCESS ROAD CROSSING SECTION 23, TOWNSHIP 24 SOUTH, RANGE 35 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT IN THE NORTHEAST QUARTER, WHICH LIES S17°22'00"W 1820.3 FEET FROM THE NORTHEAST CORNER; THEN S89°20'44"W 4308.6 FEET TO A POINT, WHICH LIES S13°31'42"E 1775.6 FEET FROM THE NORTHWEST CORNER.

TOTAL LENGTH EQUALS 4308.6 FEET OR 261.13 RODS.

NOTE

BEARINGS SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.

I, RONALD J. EIDSON, NEW MEXICO PROFESSIONAL SURVEYOR No. 3239, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY; THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO; AND THAT IT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

RONALD J. EIDSON Ronald J Eidson

DATE: 12/27/2019

RONALD J. EIDSON NEW MEXICO 3239 PROFESSIONAL SURVEYOR

LEGEND

◉ – DENOTES FOUND CORNER AS NOTED

——— – DENOTES CENTERLINE SURVEY

1000 0 1000 2000 FEET

Scale: 1"=1000'

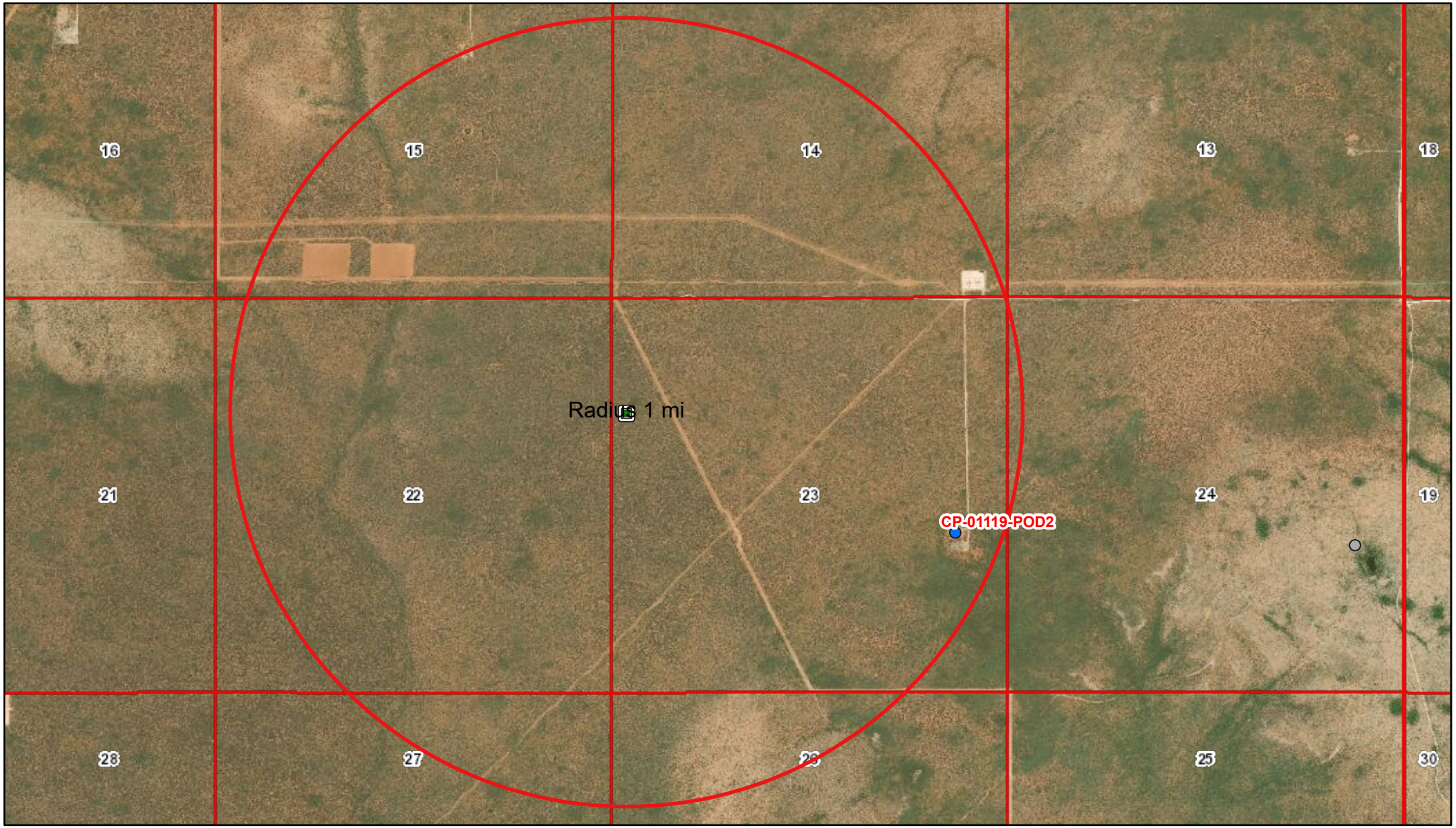
PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO HOBBS, N.M. 88240
(575) 393-3117 www.jwsc.biz
TBPLS# 10021000

BC & D OPERATING, INC

SURVEY FOR AN ACCESS ROAD CROSSING SECTION 23, TOWNSHIP 24 SOUTH, RANGE 35 EAST, N.M.P.M. LEA COUNTY, NEW MEXICO

Survey Date: 11/11/19	CAD Date: 12/27/19	Drawn By: LSL
W.O. No.: 19111239	Rev: .	Rel. W.O.:	Sheet 1 of 1

OSE PUBLIC PRINT



11/22/2019, 10:50:00 AM

Override 1

Override 1

OSE District Boundary

GIS WATERS PODs

Active

PLSSFirstDivision

PLSSTownship

BLM Land Grant

1:25,000

0 0.17 0.35 0.7 mi

0 0.28 0.55 1.1 km

Printed from Public Web Map

Unofficial Map from OSE POD Locations Web Application

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

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

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00842 POD1	CP		LE	2	4		24	24S	35E	658834	3563982*	130		
CP 01119 POD2	CP		LE		4		23	24S	35E	657210	3564007	1572		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 2

Basin/County Search:

Basin: Capitan **County:** Lea

PLSS Search:

Section(s): 13, 14, 15, 22, 23, 24, 26, 27 **Township:** 24S **Range:** 35E

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

New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	CP 01119 POD1			2	12	24S	35E	658367	3567714

Driller License: **Driller Company:**

Driller Name:

Drill Start Date: **Drill Finish Date:** **Plug Date:**

Log File Date: **PCW Rcv Date:** **Source:**

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: **Depth Well:** **Depth Water:**

New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
	CP 01119 POD2			4	23	24S	35E	657210	3564007

Driller License: 331 **Driller Company:** SBQ2, LLC DBA STEWART BROTHERS DRILLING CO.

Driller Name:

Drill Start Date:	10/20/2012	**Drill Finish Date:**	11/05/2012	**Plug Date:**	
Log File Date:	12/14/2012	**PCW Rcv Date:**		**Source:**	
Pump Type:		**Pipe Discharge Size:**		**Estimated Yield:**	
Casing Size:	8.92	**Depth Well:**	1572 feet	**Depth Water:**	

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2012 DEC 14 A 9:50

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER
www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

POD NUMBER (WELL NUMBER): ICP-095	OSE FILE NUMBER(S): CP-01119 POD 2
WELL OWNER NAME(S): Intercontinental Potash (USA)	PHONE (OPTIONAL): 575-942-2799
WELL OWNER MAILING ADDRESS: 600 West Bender Boulevard	CITY: Hobbs / STATE: NM / ZIP: 88240

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	12	5.97	N
LONGITUDE	103	19	55.39	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS

2. OPTIONAL

(2.5 ACRE)	(10 ACRE)	(40 ACRE)	(160 ACRE)	SECTION	TOWNSHIP	RANGE
¼	¼	¼	¼	23	24 ☐ NORTH ☑ SOUTH	35 ☑ EAST ☐ WEST

SUBDIVISION NAME	LOT NUMBER	BLOCK NUMBER	UNIT/TRACT

HYDROGRAPHIC SURVEY	MAP NUMBER	TRACT NUMBER

3. DRILLING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD #331	Phillip Stewart	Stewart Brothers Drilling Co.

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
10/20/2012	11/05/2012	NA	1572 FT	NA

COMPLETED WELL IS: ☐ ARTESIAN ☑ DRY HOLE ☐ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT): NA

DRILLING FLUID: ☐ AIR ☑ MUD ☐ ADDITIVES – SPECIFY: ETH GEL, PLATINUM PAC, BI-CARB, SODA ASH,

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY: TACKLE, MYLOGEL, NaCl

DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
0	1158	12.625	J-55 #36 steel	theaded	8.921	0.302	
1158	1572	8.75	NA				

4. WATER BEARING STRATA

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	YIELD (GPM)
NA		NA	NA	NA

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA	TOTAL ESTIMATED WELL YIELD (GPM)
Bypass flow	na

FOR OSE INTERNAL USE — WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	CP 01119	POD NUMBER	2	TRN NUMBER	
LOCATION	24S - 33E - 23.4214				PAGE 1 OF 2

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO

2012 DEC 11 A 9:50

5. SEAL AND PUMP

TYPE OF PUMP: ☐ SUBMERSIBLE ☐ JET ☑ NO PUMP – WELL NOT EQUIPPED
☐ TURBINE ☐ CYLINDER ☐ OTHER – SPECIFY:

ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
	NA		NA	NA	NA	NA

6. GEOLOGIC LOG OF WELL

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
0	20	20	Caliche	☐ YES ☑ NO
20	55	35	Gutuna Fm. - red siltstones and sandstones	☐ YES ☑ NO
55	1223	1168	Dewey Lake Fm.Red siltstones and mudstones, gray/green mottling	☐ YES ☑ NO
1223	1258	35	Rustler Fm./A-5, white anhydrite	☐ YES ☑ NO
1262	1291	29	H-4 sub-mbr. - milky white halite	☐ YES ☑ NO
1291	1306	15	A-4 sub-mbr. - white anhydrite	☐ YES ☑ NO
1306	1326	20	Magenta Dolomite	☐ YES ☑ NO
1326	1371	45	A-3 sub-mbr. white anhydrite	☐ YES ☑ NO
1371	1505	134	H-3 sub-mbr. - milky halite	☐ YES ☑ NO
1505	1515	10	Ore zone, anhydrite and white polyhalite	☐ YES ☑ NO
1515	1572	57	Halite, with some anhydrite	☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL

7. TEST & ADDITIONAL INFO

WELL TEST — METHOD: ☐ BAILER ☐ PUMP ☐ AIR LIFT ☐ OTHER – SPECIFY: NA

TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

ADDITIONAL STATEMENTS OR EXPLANATIONS:

8. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Frank D. Stanford — SIGNATURE OF DRILLER

12-10-12 — DATE

FOR OSE INTERNAL USE — WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	CP 0119	POD NUMBER	2	TRN NUMBER	
LOCATION	24S-33E-23.4214			PAGE 2 OF 2	

New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	CP 01119 POD3			3	31	24S	35E	649618	3560200

Driller License: **Driller Company:**

Driller Name:

Drill Start Date: **Drill Finish Date:** **Plug Date:**

Log File Date: **PCW Rcv Date:** **Source:**

Pump Type: **Pipe Discharge Size:** **Estimated Yield:**

Casing Size: **Depth Well:** **Depth Water:**

New Mexico Office of the State Engineer

Point of Diversion Summary

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest) (NAD83 UTM in meters)

Well Tag	POD Number	Q64	Q16	Q4	Sec	Twn	Rng	X	Y
	CP 00842 POD1		2	4	24	24S	35E	658834	3563982*

Driller License: **Driller Company:**

Driller Name: GRADY

Drill Start Date:	**Drill Finish Date:**	01/01/1962	**Plug Date:**
Log File Date:	**PCW Rcv Date:**		**Source:**
Pump Type:	**Pipe Discharge Size:**		**Estimated Yield:**
Casing Size:	**Depth Well:**	130 feet	**Depth Water:**

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

Water Sample Analysis

Pool	Location Section	Township	Range	Chlorides
North Justis Montoya	2	25S	37E	45440
North Justis McKee	2	25S	37E	58220
North Justis Fusselman	2	25S	37E	68533
North Justis Ellenburger	2	25S	37E	34151
Fowler Blinebry	22	24S	37E	116085
Skaggs Grayburg	18	20S	38E	84845
Warren McKee	18	20S	38E	85910
Warren Abo	19	20S	39E	91600
DK Drinkard	30	20S	39E	106855
Littman San Andres	8	21S	38E	38695
East Hobbs grayburg	29	18S	39E	6461
Halfway Yates	16	20S	32E	14768
Arkansas Junction San Andres	12	18S	36E	7171
Pearl Queen	28	19S	35E	114310
Midway Abo	17	17S	37E	36494
Lovinton Abo	31	16S	37E	22933
Lovington San Andres	3	16S	37E	4899
Lovington Paddock	31	16S	37E	93720
Mesa Queen	17	16S	32E	172530
Kemnitz Wolfcamp	27	16S	34E	49345
Hume Queen	9	16S	34E	124960
Anderson Ranch Wolfcamp	2	16S	32E	11040
Anderson Ranch Devonian	11	16S	32E	25702
Anderson Ranch Unit	11	16S	32E	23786
Caudill Devonian	9	15S	36E	20874
Townsend Wolfcamp	6	16S	36E	38695
Dean Permo Penn	5	16S	37E	44730
Dean Devonian	35	15S	36E	19525
South Denton Wolfcamp	26	15S	37E	54315
South Denton Devonian	36	15S	37E	34080
Medicine Rock Devonian	15	15S	38E	39760
Little Lucky Lake Devonian	29	15S	30E	23288
Wantz Abo	26	21S	37E	132770
Crosby Devonian	18	25S	37E	58220
Scarborough Yates Seven Rivers	7	26S	37E	3443(Reef)
Teague Simpson	34	23S	37E	114665
Teague Ellenburger	34	23S	37E	120345
Rhodes Yates 7 Rivers	27	26S	37E	144485
House SA	11	20S	38E	93365
House Drinkard	12	20S	38E	49700
South Leonard Queen	24	26S	37E	115375
Elliot Abo	2	21S	38E	55380
Scharb Bone Springs	5	19S	35E	30601
EK Queen	13	18S	34E	41890
East EK Queen	22	18S	34E	179630
Maljamar Grayburg SA	22	17S	32E	46079
Maljamar Paddock	27	17S	32E	115375
Maljamar Devonian	22	17S	32E	25418

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RICHARD HILL
BC&D OPERATING
PO BOX 302
HOBBS , NM 88241

Customer #: 67115820
Phone: (405)837-8147
Date: 11/14/2019
Ad #: 00236122
Salesperson: Ad Taker: Kayla

Class: 672
Sort Line: 34868 JAL PUBLIC LIBARY

Ad Notes:

Description	Amount
AFF2 Affidavits (Legals)	6.25
BOLD bold	1.00
	3.59
07 07 Daily News-Sun 2019-11-19	45.38

Ad Text:

LEGAL NOTICE
NOVEMBER 19, 2019

BC&D Operating, INC, P.O. BOX 302 Hobbs, NM 88241, is filing a form C-108 (Application for Authorization to inject) with the Oil Conservation Division seeking administrative approval to utilize the Jal Public Library Trust 23-24-35 SWD as a Commercial Salt Water Disposal well.

The Jal Public Library Trust 23-24-35 SWD is located at 1,550' FNL & 200 FWL, Sec. 23, T24S, R35E, Lea County New Mexico. The well will dispose of water produced from oil and gas wells into the

Payment Reference:

null

Total:	52.63
Tax:	3.59
Net:	56.22
Prepaid:	null
Total Due	**56.22**

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, 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
November 19, 2019
and ending with the issue dated
November 19, 2019.

Publisher

Sworn and subscribed to before me this 19th day of November 2019.

Business Manager

My commission expires
January 29, 2023
(Seal)

OFFICIAL SEAL
GUSSIE BLACK
Notary Public
State of New Mexico
My Commission Expires 1-29-23

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

LEGAL LEGAL

LEGAL NOTICE
NOVEMBER 19, 2019

BC&D Operating, INC, P.O. BOX 302 Hobbs, NM 88241, is filing a form C-108 (Application for Authorization to inject) with the Oil Conservation Division seeking administrative approval to utilize the Jal Public Library Trust 23-24-35 SWD as a Commercial Salt Water Disposal well.

The Jal Public Library Trust 23-24-35 SWD is located at 1,550' FNL & 200 FWL, Sec. 23, T24S, R35E, Lea County New Mexico. The well will dispose of water produced from oil and gas wells into the Devonian-Silurian Formations from 15,500' – 17,500' at a maximum rate of 40,000 barrel of water per day with a maximum pressure of 3,100 psi.

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.

Additional information can be obtained by contacting BC&D Operating, Inc at (405) 837-8147.
#34868

67115835 00236122

RICHARD HILL
BC&D OPERATING
PO BOX 302
HOBBS , NM 88241

BC&D Operating, Inc

P.O. Box 302 Hobbs, NM 88241
(405) 837-8147

November 14, 2019

BC&D Operating, INC, P.O. BOX 302 Hobbs, NM 88241, is filing a form C-108 (Application for Authorization to inject) with the Oil Conservation Division seeking administrative approval to utilize the Jal Public Library Trust 23-24-35 SWD as a Commercial Salt Water Disposal well.

The Jal Public Library Trust 23-24-35 SWD is located at 1,550' FNL & 200 FWL, Sec. 23, T24S, R35E, Lea County New Mexico. The well will dispose of water produced from oil and gas wells into the Devonian-Silurian Formations from 15,500' – 17,500' at a maximum rate of 40,000 barrel of water per day with a maximum pressure of 3,100 psi.

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.

Additional information can be obtained by contacting BC&D Operating, Inc at (405) 837-8147.

BC&D Operating, Inc

P.O. Box 302 Hobbs, NM 88241
(405) 837-8147

December 1, 2019

Surface Owner / Offset Operators

Re: Notification of Application for Authorization to Inject into the Jal Public Library Trust 23-24-35 SWD.

Ladies and Gentlemen:

BC&D Operating, Inc is seeking administrative approval to utilize the Jal Public Library Trust 23-24-35 SWD (new drill) as a Salt Water Disposal well. As required by the New Mexico Oil Conservation Division Rules, we are notifying you of the following proposed salt water disposal well. This letter is a notice only and no action is required unless you have questions or objections.

Well:	Jal Public Library Trust 23-24-35 SWD
Proposed Disposal Zone:	Devonian Formation (15,500' – 17,500')
Location:	1,550' FNL & 200 FWL, Sec. 23, T24S, R35E, Lea Co., NM
Applicants Name:	BC&D Operating, Inc
Applicants Address:	P.O. Box 302, Hobbs, NM 88241

This application for water disposal well will be filed with the New Mexico Oil Conservation Division. If they determine the application complies with the applicable regulations, then it will be approved. The New Mexico Conservation Division address is 1220 South St. Francis Dr., Santa Fe NM 87505 and their phone number is (505) 476-3460.

Please call Richard Hill with BC&D Operating, Inc if you have any questions at (405) 837-8147.

Sincerely,

Richard Hill

BC&D Operating, Inc

P.O. Box 302 Hobbs, NM 88241
(405) 837-8147

Federal Abstract Co,
P.O. Box 2288
Santa Fe, NM 87504

EOG Resources
5509 Champions Dr
Midland, Tx 79706

Franklin Mountain Energy
2401 E. 2nd Ave. Suite 300
Denver, CO 80206

Tap Rock Resources
602 Park Point Dr.
Suite 200
Golden, CO 80401

Diamondback Energy
500 W Texas Ave. #1200
Midland, Tx, 79701

Devon Energy Production
Company
333 West Sheridan Ave.
Oklahoma City, Ok 73102

COG Operating, LLC
One Concho Center
600 W Illinois Ave
Midland, Tx 79701

U.S – BLM
620 E. Green St.
Carlsbad, NM 88220

NM State Land Office
310 Old Santa Fe Trail
Santa Fe, NM 87501

Jal Public Library Fund
P.O. Box 178
Jal NM 88252-0178

BC&D Operating, Inc

P.O. Box 302 Hobbs, NM 88241
(405) 837-8147

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Jal Public Library TRUST
23-24-35 SWD

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500 W. Texas Ave #1200
Midland, Tx 79701

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COG Operating, LLC
One Concho Center
600 W Illinois Ave
Midland, Tx 79701

JAL Public
Library TRUST
23-24-35 SWD

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Devon Energy Production Co
333 West Sheridan Avenue
Oklahoma City, OK 73102

JAL Public
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EOG Resources
5509 Champions Dr
Midland, Tx ~~79706~~ 79706

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Tap Rock Resources
602 Park Point Dr. Suite 200
Golden, Co 80401

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Franklin Mountain Energy
2401 E 2nd Ave, Suite 300
Denver, Co 80206

JAL Public
Library TRUST
23-24-35 SWD

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

API	Well Name	Well Number	Operator	County	Target Formation	TD (MD)	TD (TVD)	Well Status	Spud Date	Drill Type	Section	Township	Range

No offset wells penetrated proposed injection interval

BC&D Operating, Inc

Well: Jal Public Library Trust 23-24-35 SWD

Casing Assumptions

Section	Hole Size	Csg Size	Drift	From (MD)	To (MD)	From (TVD)	To (TVD)	Tapered String	Weight (lbs)	Grade	Conn.	Collapse	Burst	Body Tension	Joint Tension	Dry/Buoyant	Mud Weight (ppg)
Surface	26.000	20	18.937	0	1250	0	1250	No	94	J-55	BTC	520	2110	1480	1402	Dry	8.4
Intermediate #1	17.500	13.375	12.359	0	5200	0	5200	No	61	HCL-80	BTC	2060	4500	1399.00	1399	Dry	9.7
Intermediate #2	12.250	9.625	8.679	0	12650	0	12650	No	40	HCL-80	BTC	3870	5750	916.00	947	Dry	9.2
Intermediate #3	8.500	7	6	12450	15900	12450	15900	No	32	P110HC	SpCL BTC	11890	12450	1025.00	1053	Dry	12.5

Safety Factors

Section	Csg Size	Weight (lbs)	Grade	Collapse	Burst	Body Tension	Joint Tension
Surface	20	94	J-55	1.919	7.786	12.596	11.932
Intermediate #1	13.375	61	HCL-80	1.393	3.043	4.410	4.410
Intermediate #2	9.625	40	HCL-80	1.184	1.759	1.810	1.872
Intermediate #3	7	32	P110HC	1.739	1.821	2.015	2.070

Clearance

Hole Size	Conn.	Tube OD	Drift	Conn. OD	Tube Clearance	Conn. Clearance
26.000	BTC	20.000	18.937	21.000	3.000	2.500
17.500	BTC	13.375	12.359	14.375	2.063	1.563
12.250	BTC	9.625	8.679	10.625	1.313	0.813
8.500	SpCL BTC	7.000	6.000	7.375	0.750	0.563

Criteria	
Collapse	1.125
Burst	1.125
Body Tension	2
Joint Tension	2

Engineering Notes:

Please see the the special clearance BTC conn. Being used with 7" casing. It has a coupling OD of 7.375" and will yield a 0.563" clearance inside of open hole. All collapse values assume vacated pipe with a gas gradient of .22 psi/ft. Body and joint tension values assume vacated pipe with no bouyancy factors.

BC&D Operating, Inc

Well: **Jal Public Library Trust 23-24-35 SWD**

Circulating Medium Table

Section	Hole Size	Top Depth	Bottom Depth	Mud Type	Min Mud Weight (ppg)	Max Mud Weight (ppg)	Gel Strength (lbs/100 sqft)	PH	Viscosity	Salinity (ppm)	Filtration	Additional Characteristics
Surface	26.000	0	1250	Fresh Water	8.4	8.4	-	7.5-8.5	28-36	-	N/C	
Intermediate #1	17.500	1250	5300	Brine Water	9.7	10	-	10-10.5	28-36	-	N/C	Lost Circulation Control
Intermediate #2	12.250	5300	12650	Cut Brine	9	9.3	-	10-10.5	28-36	-	N/C	Lost Circulation Control
Intermidiate #3	8.500	12650	15900	Oil Based Mud	11.3	11.3			55-65		N/C	70/30%
Production	6.000	15900	17700	Cut Brine	9	9	-	9	28-36	-	-	

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Jal Public Library Trust 23-24-35 SWD
Drilling plan

Surface Hole

- Drill 26" hole to 1,250' and R&C 20" 94# J-55 BTC casing. A lead and a tail slurry will be pumped with top of cement at surface (150% excess on lead and 50% excess on tail). Directional surveys will be take taken for directional control. The mud will be a freshwater system with a weight of 8.4 ppg. A 5M BOPE system will be installed and tested before drilling out the 20" casing shoe. Casing shoe depth will be 25' into the rustler and determined by mud logger.

Intermediate 1

- Drill 17-1/2" hole to 5,220' and R&C 13-3/8" 61# HCL-10 BTC casing. A lead and a tail slurry will be pumped with top of cement at surface (150% excess on lead and 100% excess on tail). Directional surveys will be take taken for directional control. The mud will be a cut brine system with weight of 8.4 – 8.9 ppg using loss circulation control. Any broken connection will be tested for well control. Casing shoe depth will be 100' past the base of the Capitan Reef and determined by mud logger. Full suite of logs consisting on GR/CNL/CDN will be ran to identify Capitan Reef. A cement bond log will be ran after casing is cemented in place. All information gathered on the Capitan Reef will be shared with NMOCD for future study and analysis.

Intermediate 2

- Drill 12-1/4" hole to 12,650' and R&C 9-5/8" 40# HCL-80 BTC casing. A Two stage cement job will be performed with the DV tool at 5,500'. A lead and a tail cement will be pumped on both stages. Stage 2 cement will be circulated to surface (150% excess on lead and 100% excess on tail). Directional surveys will be take taken for directional control. The mud will be a cut brine system with a weight of 9.4 – 10 ppg using loss circulation control. A 10M BOPE system will be installed and tested before drilling out the shoe. Casing set depth will be identified with mud logger and Gamma. The casing will be set 150' into the Strawn. Cement bond log will be ran after casing is cemented in place.

Intermediate 3

- Drill 8-1/2" hole to 15,900' and R&C 7" 32# HCP-110 BTC drilling liner. One slurry of cement will be pumped with the top of cement covering the liner top (50% excess). Directional surveys will be take taken for directional control. The mud will be a 70/30 oil base mud system with a weight of 12 – 12.5 ppg. Any broken connections will be tested for well control. Casing set depth will be identified with mud logger ang Gamma. The casing shoe will be 50' past the base of the Woodford shale. Cement bond log will be ran after casing is cemented in place.

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Open Hole

- Drill 6" hole to 17,700' and will be left open hole for the injection interval. Directional surveys will be taken for directional control. The mud will be a cut brine system with a weight of 9 –9.8 ppg using loss circulation control. TD will be defined by mud logger 100' into the Montoya. Full suite of logs will be ran. The Montoya will be plugged back with the cement top no less than a 100' above its top.

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Well Control Plan

BOP Equipment

- A BOP consisting of 3 rams with 2 pipe rams, 1 blind ram and one annular preventer. The BOP will be utilized below surface casing to TD. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating on the BOP stack. A rotating head will also be installed as needed. BOP will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position.

Testing Procedure 10M System

- Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as required by Onshore Order #2. Kelly cock sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. A third-party company will test the BOP's. After setting the surface casing, and before drilling the surface casing shoe, a minimum of 5M BOPE system will be installed. It will be tested to 250 psi low and 5000 psi high. Annular will be tested to 250 psi low and 3500 psi high. After setting intermediate 1 casing, a minimum 5M BOPE system will be installed and tested to 250 psi low and 5000 psi high. Annular will be tested to 250 psi low and 3500 psi high. After setting Intermediate #2, a 10M system will be installed and tested to 250 psi low and 8500 psi high with the annular being tested to 250 psi low and 3500 psi high. The 13-3/8" 10M flange on the wellhead will also be tested to 10,000 psi at this time.

Variance Request

- BC&D Operating requests a variance to have the option of running a speed head for the setting of intermediate 1 and 2 strings. If running speed head with landing mandrel for the 13-3/8" and 9-5/8" casing, then a minimum 5M BOPE system will be installed after surface casing is set. BOP test pressures will be 250 psi low and 5000 psi high. Annular will be tested to 250 psi low and 3500 psi high before drilling below the surface shoe. After 9-5/8" casing is set in the speed head the BOP will then be lifted to install another casing head section for the production casing. BC&D Operating will nipple up the casing head and BOP and a minimum 10M BOPE system will be installed. Pressure tests will be made to 250 psi low and 8500 psi high. BC&D Operating requests a variance to have a 5M Annular on top of a 10M BOP and will be tested to 250 psi low and 3500 psi high. A diagram of the speed head and BOP is attached. BC&D Operating requests

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a variance to drill this well using a co-flex line between the BOP and Choke manifold. Certification for the proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. If the specific hose is not available, then one of equal or higher rating will be used.

A. Component and Preventer Compatibility Table

The table below, which cover the drilling and casing of the 10M MASP portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents and that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

8-1/2" Production hole section, 10M requirement

	OD	Preventer	RWP
Drill Pipe	5"	Fixer lower 5" Upper 4.5 - 7" VBR	10M
HWDP	5"	Fixed Lower 5" Upper 4.5 - 7" VBR	10M
Jars	5"	Fixed Lower 5" Upper 4.5 - 7" VBR	10M
Drill Collars and MWD tools	6.25" - 6.75"	Upper 4.5 - 7" VBR	10M
Mud Motor	6.75"	Upper 4.5 - 7" VBR	10M
Production Casing	7"	Upper 4.5 - 7" VBR	10M
All	0 - 13-5/8"	Annular	5M
Open hole	-	Blind Rams	10M

6” Production hole section, 10M requirement.

Component	OD	Preventer	RWP
Drill Pipe	4"	Upper 3.5" - 5.5" VBR Lower 3.5 - 5.5" VBR	10M
HWDP	4"	Upper 3.5" - 5.5" VBR Lower 3.5 - 5.5" VBR	10M
Jars	4"	Upper 3.5" - 5.5" VBR Lower 3.5 - 5.5" VBR	10M
Drill Collars and MWD tools	4" - 5"	Upper 4.5 - 5.5" VBR	10M
Mud Motor	4.75" - 5"	Upper 4.5 - 5.5" VBR	10M
Production Casing	NA	Upper 4.5 - 5.5" VBR	10M
All	1" - 13-5/8"	Annular	5M
Open hole	-	Blind Rams	10M

VBR = Variable Bore Ram. Compatible range listed in chart.
HWDP = Heavy Weight Drill Pipe
MWD = Measurement While Drilling

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B. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), the pressure at which control is swapped from the annular to another compatible ram is variable, but the operator will document in the submission of their well control plan what their operating pressure limit is for the 5M annular preventer. The operator may choose an operating pressure less than or equal to RWP, but in no case will it exceed the Rated Working Pressure (RWP) of the annular preventer.

General Procedure While Drilling

- Sound alarm (alert crew).
- Space out drill string.
- Shut down pumps (stop pumps and rotary).
- Shut-in well (uppermost applicable BOP, typically annular preventer first. The hydraulic Control Remote (HCR) valve and choke will already be in the closed position).

- Confirm shut-in.
- Notify tool pusher/onsite supervisor.
- Read and record the following:
    - SIDPP and SICP
    - Pit gain
    - Time
- Regroup and identify forward plan.
- If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

General Procedure While Tripping

- Sound alarm (alert crew).
- Stab full opening safety valve and close.
- Space out drill string.
- Shut-in (uppermost applicable BOP, typically annular preventer first. The HCR and choke will already be in the closed position.
- Confirm shut-in.
- Notify tool pusher/onsite supervisor.
- Read and record the following.
    - SIDPP and SICP
    - Pit gain
    - Time

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- Regroup and identify forward plan.
- If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

General Procedure While Running Casing

- Sound alarm (alert crew).
- Stab crossover and full opening safety valve and close.
- Space out string.
- Shut-in (uppermost applicable BOP, typically annular preventer first. The HCR and choke will already be in the closed position.
- Confirm shut-in.
- Notify tool pusher/onsite supervisor.
- Read and record the following.
  - SIDPP and SICP
  - Pit Gain
  - Time
  - Regroup and identify forward plan.
  - If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to compatible pipe ram.

General Procedure with No Pipe in Hole (Open Hole)

- Sound alarm (alert crew).
- Shut-in with blind rams or BSR. (The HCR and choke will already be in the closed position).
- Confirm shut-in
- Notify tool pusher/company representative.
- Read and record the following.
  - SICP
  - Pit gain
  - Time
- Regroup and identify forward plan.

General Procedures While Pulling BHA thru Stack

- PRIOR to pulling last joint of drill pipe thru the stack.
  - Perform flow check, if flowing:
  - Sound alarm (alert crew).
  - Stab full opening safety valve and close.
  - Space out drill string with tool joint just beneath the upper pipe ram.

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- Shut-in using upper pipe ram. (The HCR and choke will already be in the closed position.
- Confirm shut-in.
- Notify tool pusher/onsite supervisor.
- Read and record the following.
  - SIDPP and SICP
  - Pit gain
  - Time
  - Regroup and identify forward plan.

- With BHA in the stack and compatible ram preventer and pipe combo immediately available.
  - Sound alarm (alert crew).
  - Stab crossover and full opening safety valve and close.
  - Space out drill string with upset just beneath the compatible pipe ram.
  - Shut-in using compatible pipe ram. (The HCR and choke will already be in the closed position.)
  - Confirm shut-in.
  - Notify tool pusher/onsite supervisor.

- With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.
  - Sound alarm (alert crew).
  - If possible to pick up high enough, pull string clear of the stack and follow “Open Hole” scenario.
  - If impossible to pick up high enough to pull the string clear of the stack.
  - Stab crossover, make up one joint/stand of drill pipe, and full opening safety valve and close.
  - Space out drill string with tool joint just beneath the upper pipe ram.
  - Shut-in using upper pipe ram. (The HCR and choke will already be in the closed position).
  - Confirm shut-in.
  - Notify tool pusher/company representative.
  - Read and record the following:
    - SIDPP and SICP
    - Pit gain
    - Time
  - Regroup and identify forward plan.

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Hydrogen Sulfide Drilling Operations Plan

1. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this will:

- The hazards and characteristics of hydrogen sulfide (H2S).
- The proper use and maintenance of personal protective equipment and life support systems.
- The proper use of H2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- The effects of H2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- The contents and requirements of the H2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H2S zone (within 3 days or 500') and weekly H2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H2S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

2. H2S Safety Equipment and systems

Note: All H2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500' above, or three days prior to penetrating the first zone containing or reasonably expected to contain H2S. If H2S greater than 100 ppm is encountered in the gas stream, we will shut in the install H2S equipment.

- Well Control Equipment:
  - Flare Line.
  - Choke manifold with remotely operated choke.
  - Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
  - Auxiliary equipment to include: annular preventer, mud-gas, separator, rotating head.

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- Protective equipment for essential personnel:
  - Mark II Surviveair 30 minute units located in the dog house and at briefing areas.
- H2S detection and monitoring equipment:
  - 2 portable H2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.
- Visual warning systems:
  - Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate.
- Mud program:
  - The mud program has been designed to minimize the volume of H2S circulated to the surface.

BC&D Operating, Inc has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal.

BC&D Operating

Contact Information

In the event of H2S release the supervising person determines the release of H2S cannot be contained to the site loction and the general public is in harm's way he will take the necessary steps to protect the workers and the public.

Key Personnel	Title	Office	Mobile
Donnie Hill	Owner/President		575-390-7626
Richard Hill	Drilling	405-837-8147	405-837-8147

Lea County	Contact
Ambulance	911
Nor Lea General Hospital (Hobbs)	575-397-0560
State Police (Hobbs)	575-392-5580
City Police (Hobbs)	575-397-9625
Sheriff's Office (Lovington)	575-396-3611
Fire Marshall (Lovington)	575-391-2983
Volunteer Fire Dept. (Jal)	575-395-2221
Emergency Management (Lovington)	575-391-2983
New Mexico Oil Conservation Division (Hobbls)	575-393-6161
BLM (Hobbs)	575-393-3612
Hobbs Animal Clinic	575-392-5563
Dal Paso Animal Hospital (Hobbs)	575-397-2286
Mountain States Equine (Hobbs)	575-392-7488
Carlsbad	
BLM	575-234-5972
Santa Fe	
New Mexico Emergency Response Commission	505-476-9600
New Mexico Emergency Response Commission (24 hrs)	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635
National	
National Emergency Response Center (Washington, D.C.)	800-424-8802
Medical	
Flight for Life - 4000 24th Lubbock, Tx	806-743-9911
Aerocare - R3, Box 49F; Lubbock, Tx	806-747-8923
Med Flight Air Amb - 2301 Yale Blvd SD, D3; Albuquerque, NM	505-842-4433
SB Air Med Service - 2505 Clark Carr Loop SE; Albuquerque, NM	505-842-4949
Other	
Boots & Coots IWC	800-256-9688
Cudd Pressure Control	432-699-0139
NM Dept. of Transportation (Roswell)	575-637-7200