

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 10/1/2019

Well information;

Operator NR, Well Name and Number North Alamo 100W #1

API# 30-045-38185, Section 1, Township 22N/S, Range 8 E/W

Conditions of Approval: (See the below checked and handwritten conditions)

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☒ If cement doesn't circulate on any casing string or stage tool a CBL will be required. Contact the regulatory agencies prior to proceeding.
- ☐ Hold C-104 for directional survey & "As Drilled" Plat
- ☐ Hold C-104⁵ for: NSL, NSP, DHC, 5.9 Compliance
- ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ☐ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ☐ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☐ Submit Gas Capture Plan form prior to spudding or initiating recompletion operations
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ☒ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

*** Must comply with SWD Order #2255

Brandon Powell
NMOCD Approved by Signature

9/28/20
Date



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM117143
1b. Type of Well: <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other INJ-DIS		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No. /1/NORTH ALAMITO UNIT / NMNM13522
2. Name of Operator DJR OPERATING LLC		8. Lease Name and Well No. NORTH ALAMITO UNIT WDW 1
3a. Address 1600 Broadway #1960 Denver CO 80202	3b. Phone No. (include area code) (303)595-7430	9. API Well No. 30-045-38185
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NENE / 908 FNL / 1176 FEL / LAT 36.1735625 / LONG -107.6283821 At proposed prod. zone NENE / 908 FNL / 1176 FEL / LAT 36.1735625 / LONG -107.6283821		10. Field and Pool, or Exploratory Wildcat
11. Sec. T. R. M. or Blk. and Survey or Area SEC 1 / T22N / R8W / NMP		12. County or Parish SAN JUAN
13. State NM		14. Distance in miles and direction from nearest town or post office* 39 miles
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 908 feet	16. No of acres in lease 962.4	17. Spacing Unit dedicated to this well 0
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1225 feet	19. Proposed Depth 6875 feet / 7070 feet	20. BLM/BIA Bond No. in file FED: NMB001464
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6939 feet	22. Approximate date work will start* 10/30/2019	23. Estimated duration 10 days
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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

25. Signature (Electronic Submission) 	Name (Printed/Typed) Shaw-Marie N. Ford / Ph: (505)632-3476	Date 10/01/2019
Title Regulatory Specialist		
Approved by (Signature) 	Name (Printed/Typed) Office FARMINGTON	DEC 03 2019
Title AFN		

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.

**DRILLING OPERATIONS
AUTHORIZED ARE SUBJECT TO
COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS"**

**BLM'S APPROVAL OR ACCEPTANCE OF
THIS ACTION DOES NOT RELIEVE THE
LESSEE AND OPERATOR FROM
OBTAINING ANY OTHER AUTHORIZATION
REQUIRED FOR OPERATIONS ON
FEDERAL AND INDIAN LANDS**

This action is subject to technical
and procedural review pursuant to
43 CFR 3165.3 and appeal
pursuant to 43 CFR 3165.4

DISTRICT I
1605 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-8181 Fax: (575) 393-0720

DISTRICT II
511 E. First St., Artesia, N.M. 88210
Phone: (575) 748-1288 Fax: (575) 748-9780

DISTRICT III
1000 Rio Brazos Rd., Artesia, N.M. 87410
Phone: (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, N.M. 87505
Phone: (505) 476-3480 Fax: (505) 476-3482

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, N.M. 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 30-045-38185		*Pool Code 96436	*Pool Name SWD, Entrada
*Property Code 329714	*Property Name North Alamito WDW		*Well Number 1
*OGRD No. 371838	*Operator Name DJR Operating, LLC		*Elevation 6939

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	1	22 N	8 W	LOT 1	908	North	1176	East	San Juan

11 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

16

Legend:
● = Surface Location
○ = Bottom Hole Location (BHL)
+ = Well Location
⊕ = Found 1947 USGLO Brass Cap

Surface Location
908' FNL & 1176' FEL
Sec 1 T22N R8W
Lot = 36.1735626° N
Long = 107.6283821° W
NAD 83

17 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 undivided 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.

Paul Lehman 5-29-19
Signature Date
Printed Name
E-mail Address *p.lehman@djrlc.com*

18 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.

5/08/19
Date of Survey
Signature and Seal
MARSHALL W. LINDEN
NEW MEXICO
17078
5-2019
PROFESSIONAL SURVEYOR
17078
Certificate Number

surface = Indian

**Attachment to Application for Permit to Drill
Drilling program**

DJR Operating, LLC
1600 N. Broadway Suite 1960
Denver, CO 80202
U.S.A

North Alamito WDW No. 1

Surface Location: 908' FNL & 1176' FEL
Section 1, T22N, R8W
Ungraded GL Elev: 6939'
San Juan County, NM

1. Proposed Bit and Casing Program

a. Bit Program

12 1/4" Surface Hole = Surface to 500'

8-3/4" hole = 500' to 7070' = Production casing point

b. Casing Program – all casing strings are new casing

Casing & Hole Size	Weight	Grade	Coupling	Setting Depth (MD)	Comments
9-5/8" (12 1/4")	36 ppf	J-55	ST&C	0' - 500'	New casing. Cement to surface.
7" (8-3/4")	26 ppf	L-80	LT&C	0' - 7070' MD	New Casing. Cement to surface.
				DV tool at ~ 3795'	

Casing strings below the conductor casing will be tested to .22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield.

Minimum casing design factors used:

Collapse -	1.125
Burst -	1.0
Jt. Strength -	1.60

Surface casing shall have a minimum of 1 centralizer per joint on the bottom three (3) joints, starting with the shoe joint for a total of (4) minimum centralizers. Centralizers will be placed 10' above the shoe on the shoe joint, on the 1st, 2nd and 3rd casing collars then every other joint to surface.

The production casing will be centralized using 1 centralizer on the first 10 joints and then every 4th joint to the surface. The stage tool will have turbolizers placed on the joint above and below.

Attachment to Application for Permit to Drill Drilling program

DJR Operating, LLC
1600 N. Broadway Suite 1960
Denver, CO 80202
U.S.A

North Alamito WDW No. 1

Surface Location: 908' FNL & 1176' FEL
Section 1, T22N, R8W
Ungraded GL Elev: 6939'
San Juan County, NM

Drilling program written in compliance with onshore Oil and Gas Order No. 1
(001 III.D.3, effective May 2007) and Onshore Order No. 2 Dated November 18, 1988

1. Geological Name of Surface Formation / Estimate Formation Top

The following table identifies the geologic markers and formation tops (depth in feet from surface) based on open hole logs from off set wells in the area.

Formation Tops	Subsea	TVD	MD	O/G/W	Pressure	KB>>	6835
Ojo Alamo	6110	725	725	W	normal		
Kirtland	6070	765	765	W	normal		
Fruitland	5810	1025	1025	G/W	sub-normal		
Pictured Cliffs	5555	1280	1280	G/W	sub-normal		
Lewis	5375	1460	1460	G/W	normal		
Chacra	4800	2035	2035	G/W	normal		
Cliff House	4105	2730	2730	G/W	sub-normal		
Menefee	4070	2765	2765	G/W	normal		
Point Lookout	3160	3675	3675	G/W	normal		
Mancos	2990	3845	3845	O/G	normal		
Gallup	2320	4515	4515	O/G	normal		
Greenhorn	1210	5625	5625	O/G/W	normal		
Dakota	1060	5775	5775	O/G/W	normal		
Todilto	20	6815	6815	G/W	normal		
Entrada	-40	6875	6875	W	normal		
Total Depth	-235	7070	7070				

Surface: Nacimiento

Oil & Gas Zones: Oil & gas can be expected from multiple zones in the wellbore, target is the Entrada which is expected to be water bearing

Pressure: Normal or sub-normal pressure expected (0.43 psi/ft or less)

Maximum BH pressure 2956.25

No H2S expected

d. BOP Testing

- i. Initial 11" 2K BOP stack will be installed in casing head after setting 9.625" casing.
- ii. The BLM and NMOCD will be notified 24 hours in advance of all BOP pressure tests.
- iii. Pressure tests will be conducted on the BOP stack using a test plug and independent test company after nipple up.
- iv. Subsequent BOP tests will be conducted a minimum of every 30 days. A new test will be conducted each time the stack is altered.
- v. All BOP and manifold tests will be in accordance with the requirements of Onshore Order No. 2.

e. BOP Test Pressures

11" BOP			
Pressure Test	Ram Test	Manifold Test	
High Pressure	2000 psi	2500 psi	
Low Pressure	250 psi	250 psi	

4. Proposed Bit and Casing Program

a. Bit Program

12 1/4" Surface Hole = Surface to 500'

8-3/4" hole = 500' to 7070' = Production casing point

b. Casing Program – all casing stings are new casing

Casing & Hole Size	Weight	Grade	Coupling	Setting Depth (MD)	Comments
9-5/8" (12 1/4")	36 ppf	J-55	ST&C	0' - 500'	New casing. Cement to surface.
7" (8-3/4")	26 ppf	L-80	LT&C	0' - 7070' MD	New Casing. Cement to surface.
				DV tool at ~ 3795'	

Casing strings below the conductor casing will be tested to .22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield.

Minimum casing design factors used:

Collapse -	1.125
Burst -	1.0
Jt. Strength -	1.60

Surface casing shall have a minimum of 1 centralizer per joint on the bottom three (3) joints, starting with the shoe joint for a total of (4) minimum centralizers. Centralizers will be placed 10' above the shoe on the shoe joint, on the 1st, 2nd and 3rd casing collars then every other joint to surface.

The production casing will be centralized using 1 centralizer on the first 10 jts and then every 4th joint to the surface. The stage tool will have turbolizers placed on the joint above and below.

5. PROPOSED CEMENTING PROGRAM

The proposed cementing program has been designed to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. All indications of useable water shall be reported.

a) The proposed cementing program is as follows:

Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a pre-flush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.

Surface Casing Single Stage Job - (0-500'):

Excess - 125% over gauge hole - 12-1/4" hole and 9-5/8" casing - 0.3132 ft/ft

Top of Cement - Surface

Lead: 253 sx (352 cf) of Type III w/ 2% bwoc Calcium Chloride, 0.25 lbs/sx CelloFlake, 59.2% Fresh Water, 14.6 ppg, yield 1.39 cf/sx - 0.3132 ft3/ft

Total sacks of surface cement pumped = 253 sx

Production Casing - Two Stage Job - (0-7070'MD):

Excess - 50% over gauge hole - 8-3/4" hole and 7" casing - DV tool at 3795' (50' above Mancos) - 0.1503 ft3/ft

Top of Cement - Surface.

1st Stage – (7070' – 3795')

1st Stage Lead (6570' – 3795') – 315 sx (626 cf) Premium Lite High Strength FM, 0.25% lbs/sx CelloFlake, 0.3% bwoc CD-32, 6.25 lbs/sx LCM-1, 1% bwoc FL-52A, 98% Fresh Water – 12.5 ppg, yield 1.99 cf/sx

1st Stage Tail – (7070'-6570') -82 sx (113 cf) Type III, 1% bwoc Calcium Chloride, 0.25 lbs/sx Cello Flake, 0.2% bwoc FL-52A, 58.9% Fresh Water – 14.6 ppg, yield 1.38 cf/sx

Circulate minimum 4 hrs between stages

2nd Stage – (3795'-0)

2nd Stage Lead (3295' – 0') – 373 sx (626 cf) Premium Lite High Strength FM, 0.25% lbs/sx CelloFlake, 0.3% bwoc CD-32, 6.25 lbs/sx LCM-1, 1% bwoc FL-52A, 98% Fresh Water – 12.5 ppg, yield 1.99 cf/sx

2nd Stage Tail – (3795'-3295') -82 sx (113 cf) Type III, 1% bwoc Calcium Chloride, 0.25 lbs/sx Cello Flake, 0.2% bwoc FL-52A, 58.9% Fresh Water – 14.6 ppg, yield 1.38 cf/sx

Total sacks of production cement pumped = 852 sx

Cement volumes are minimums and may be adjusted based on caliper log results.

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and State of New Mexico Oil & Gas Division requirements. Slurries used will be the slurries listed above or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected.

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

6. Proposed Drilling Fluid Program

a. Mud type and properties

Hole Size (in)	TVD (ft)	Mud Type	Density (lb/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
12 1/4"	0-500'	Fresh Mud LSND	8.8 - 9.0	45 - 100	6 or less
8-3/4"	500' - 7070'	Fresh Mud LSND	8.8- 9.8	45 - 100	6 or less

- ✓ i. A closed loop mud system will be used per NMOCD requirements.
- ii. Enough barite will be kept onsite to weight mud sufficiently to contain any unexpected pressures.

b) Monitoring

Mud volume and flow will be monitored visually.

7. Formation Evaluation Program

Cores	None anticipated
Testing	None anticipated
Sampling	None anticipated
Surveys	Deviation surveys only
Log program	DIL-GR-SP, FDC-CNL-GR-Caliper from 9200' to minimum logging depths

8. Drilling Conditions

a. Anticipated abnormal pressures or temperatures.

i. No abnormal pressures or temperatures or other hazards are anticipated.

ii. Maximum bottom hole pressure equals approximately 2956 psig (pounds per square inch gauge)*

* Max mud wt x 0.052 x TD = A (bottom hole pressure)
 $9 \times 0.052 \times 7070' = 3309 \text{ psig}$

** Maximum surface pressure = A - (0.22 x TD)
 $3309 - (0.22 \times 7070) = 1753 \text{ psig}$

Hydrogen Sulfide (H2S)

H2S has not been an issue on the wells drilled in the immediate area so at this time no H2S monitoring is proposed for this well.

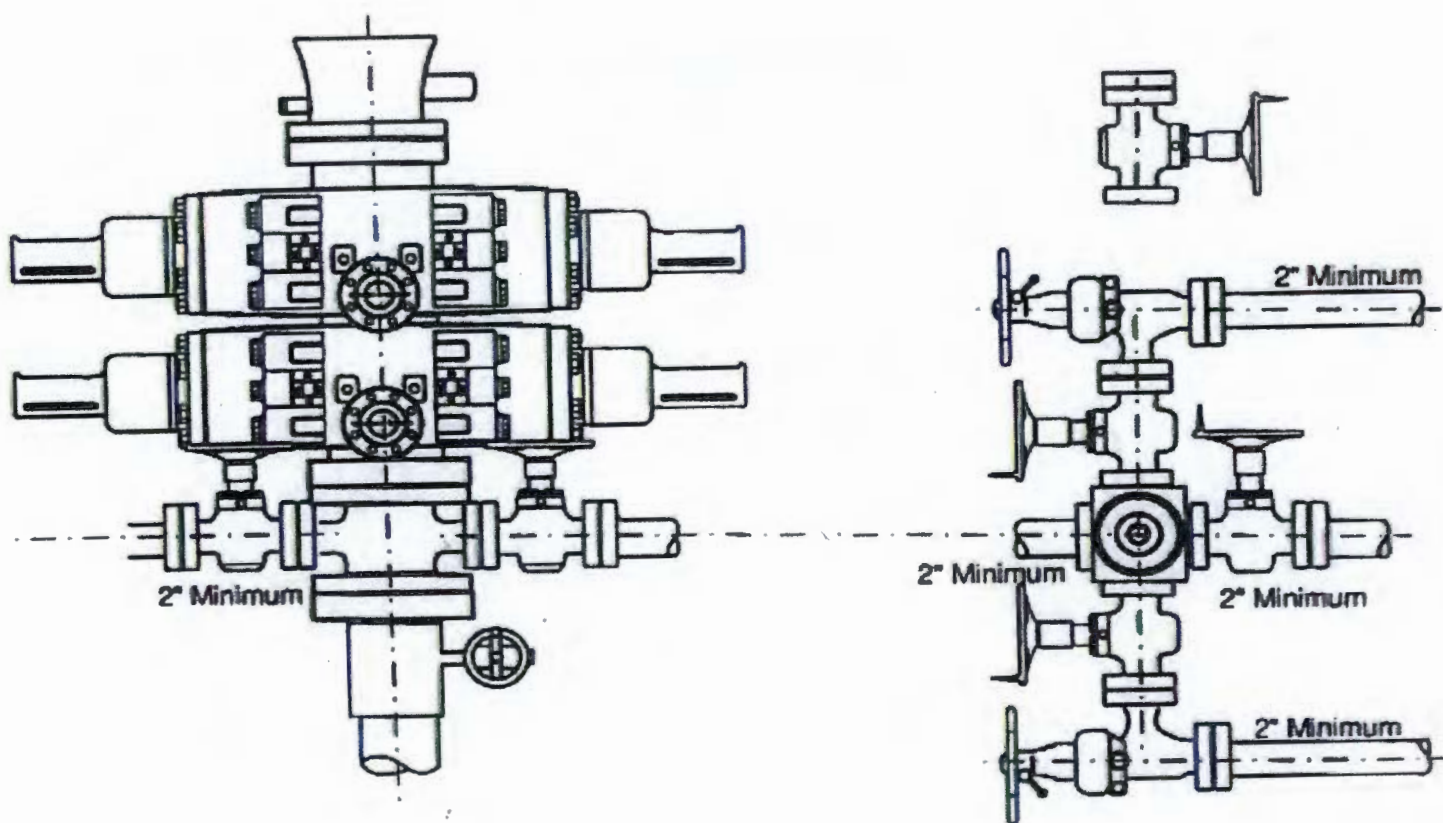
9. Other Information

a. Drilling Schedule

Activity	Date
Location Construction	October 2019
Spud	October 2019
Total Duration	14 days drilling time
	10 days completion time

BOP DIAGRAM

2000 psi System



DJR Operating, LLC
North Alamito Unit Liquids Facility and
North Alamito WDW 1 Driving Directions
Sec. 1, T22N, R8W, NMPM,
San Juan County, New Mexico

From the intersection of U.S. Hwy. 550 and U.S. Hwy. 64 in Bloomfield:
Travel Southeasterly on U.S. Hwy. 550 for 39.1 miles to CR 7900 Intersection.
Turn right and travel Southeasterly on CR 7900 for 5.1 miles to CR 7950 Intersection.
Continue Southeasterly on CR 7900 for 0.1 mile.
Turn left and proceed Easterly 2.8 miles.

Lybrook NW Quadrangle



P.O. Box 3651
Farmington, NM 87499
Office: (505) 334-0408

DWG. No. : 11327-Directions		Revision/By: 2/C.B.	
Drawn by: A.D.	Date Drawn: 5/20/19	Rev. Date: 8/07/19	
Surveyed: 3/29-4/11/19	App by: M.W.L.	Sheet: 1 of 1	