Initial Application Part I

Received: **06/28/2019**

This application is placed in file for record. It MAY or MAY NOT have been reviewed to be determined Administratively Complete

06/28/2019

DATE IN	SUSPENSE	ENGINEER	LOGGED IN	SWD TYPE	APP NO. pMAM1918232097

ABOVE THIS LINE FOR DIVISION USE ONLY

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

ADMINISTRATIVE APPLICATION CHECKLIST

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

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

SWD-2178

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

Goodnight Midstream
372311

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

Check One Only for [B] or [C]

Pudge G1 SWD#1
30-025-Pending

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

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

SWD;Glorieta
96106

[D] Other: Specify _____

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

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

[B] ☒ Offset Operators, Leaseholders or Surface Owner

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

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

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

[F] ☐ Waivers are Attached

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

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

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

Nate Alleman	Nathan Alleman	Regulatory Specialist - ALL Consulting	6/28/2019
Print or Type Name	Signature	Title	Date

nalleman@all-llc.com
Date e-mail Address

McMillan, Michael, EMNRD

From: David Alleman <dalleman@all-llc.com>
Sent: Friday, June 28, 2019 2:14 PM
To: Jones, William V, EMNRD; Goetze, Phillip, EMNRD; McMillan, Michael, EMNRD; Kautz, Paul, EMNRD
Cc: Nate Alleman
Subject: [EXT] Goodnight_Midstream_Permian, _LLC_-_Pudge_SWD_G_1_-_Application_for_Permit_to_Drill
Attachments: Pudge SWD G 1 - OCD Drilling Application.pdf

Subject: Goodnight Midstream Permian, LLC – Pudge SWD G 1 – Application for Permit to Drill

To Whom It May Concern,

On behalf of Goodnight Midstream Permian, LLC (Goodnight), ALL Consulting, LLC (ALL) is submitting the enclosed Application for Permit to Drill for the Pudge SWD G 1, a proposed salt water disposal well, in Lea County, NM.

Should you have any questions regarding the enclosed application, please contact Nate Alleman at (918) 382-7581 or nalleman@all-llc.com.

Sincerely,
ALL Consulting
Nate Alleman
Project Manager

David Alleman
Senior Consultant/Project Manager
PH: 918-382-7581
Cell: 918-521-6448
www.all-llc.com
Tulsa, OK 74119

ALL CONSULTING
GOVERNMENT RELATIONS · ENERGY · PLANNING · TECHNOLOGY
ENGINEERING · ENVIRONMENTAL

June 28, 2019

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

Subject: Goodnight Midstream Permian, LLC – Pudge SWD G 1
Application for Authorization to Inject

To Whom It May Concern,

On behalf of Goodnight Midstream Permian, LLC (Goodnight), ALL Consulting, LLC (ALL) is submitting the enclosed Application for Authorization to Inject for the Pudge SWD G 1, a proposed salt water disposal well, in Lea County, NM.

Should you have any questions regarding the enclosed application, please contact Nate Alleman at (918) 382-7581 or nalleman@all-llc.com.

Sincerely,
ALL Consulting

Nate Alleman
Sr. Regulatory Specialist

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

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

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: _____Secondary Recovery _____Pressure Maintenance ___X___Disposal
_____Storage Application qualifies for administrative approval? ___X___Yes _____No

II. OPERATOR: Goodnight Midstream Permian, LLC

ADDRESS: 5910 N Central Expressway, Suite 850, Dallas, TX 75206

CONTACT PARTY: Grant Adams PHONE: 214-444-7388(0)

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

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

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

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

VII. Attach data on the proposed operation, including:

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

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

IX. Describe the proposed stimulation program, if any.

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

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

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

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

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

NAME: Nathan Alleman TITLE: Regulatory Specialist - ALL Consulting

SIGNATURE: Nate Alleman DATE: 06/28/2019

E-MAIL ADDRESS: nalleman@all-llc.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.

Application for Authorization to Inject
Well Name: Pudge SWD G 1

III – Well Data (*The Wellbore Diagram is included as **Attachment 1***)

A.

(1) General Well Information:

Operator: Goodnight Midstream Permian, LLC (OGRID No. 372311)
Lease Name & Well Number: Pudge SWD G 1
Location Footage Calls: 2,043' FNL & 2,504' FEL
Legal Location: Unit Letter G, S10 T22S R36E
Ground Elevation: 3,557'
Proposed Injection Interval: 5,750' – 6,500'
County: Lea

(2) Casing Information:

Type	Hole Size	Casing Size	Casing Weight	Setting Depth	Sacks of Cement	Estimated TOC	Method Determined
Surface	12-1/4"	9-5/8"	40.0 lb/ft	1,795'	565	Surface	Circulation
Intermediate 1	8-3/4"	7"	26.0 lb/ft	6,550'	860	Surface	Circulation/ CBL
Tubing	6-3/11"	4-1/2"	20.0 lb/ft	5,730'	N/A	N/A	N/A

(3) Tubing Information:

4-1/2" (composite weight string) of fiberglass-coated tubing with setting depth of 5,730'

(4) Packer Information: Lok-set or equivalent packer set at 5,730'

B.

(1) Injection Formation Name: Glorieta
Pool Name: SWD; GLORIETA
Pool Code: 91606
(2) Injection Interval: Perforated injection between 5,750' – 6,500'
(3) Drilling Purpose: New Drill for Salt Water Disposal
(4) Other Perforated Intervals: No other perforated intervals exist.
(5) Overlying Oil and Gas Zones: Below are the approximate formation tops for known oil and gas producing zones in the area.

- Grayburg (3,975')

Underlying Oil and Gas Zones: Below are the approximate formation tops for known oil and gas producing zones in the area.

- Tubb (7,270')

V – Well and Lease Maps

The following maps are included in ***Attachment 2***:

- 2-mile Oil & Gas Well Map
- 2-mile Lease Map
- 1/2-mile Well Detail List
- Potash Lease Map

VI – AOR Well List

There are no wells within the 1/2-mile AOR that penetrate the proposed injection zone.

A list of the wells within the 1/2-mile AOR is included in ***Attachment 2***.

VII – Proposed Operation

(1) **Proposed Maximum Injection Rate:** 20,000 bpd
Proposed Average Injection Rate: 12,500 bpd

(2) A **closed system** will be used.

(3) **Proposed Maximum Injection Pressure**: 1,150 psi (surface)
Proposed Average Injection Pressure: approximately 575 psi (surface)

(4) **Source Water Analysis:** It is expected that the injectate will consist of produced water from production wells completed in the Wolfcamp and Bone Springs formations. Analysis of water from these formations is included in ***Attachment 3***.

(5) **Injection Formation Water Analysis:** The proposed SWD will be injecting water into the Glorieta formation which is a non-productive zone known to be compatible with formation water from the Wolfcamp and Bone Springs formations. Water analyses from the Glorieta formation in the area are included in ***Attachment 4*****.**

VIII – Geologic Description

The proposed injection interval includes the Glorieta formations from 5,750 – 6,500 feet. This formation consists of interbedded carbonate rocks including dolomites, siltstones, and sands. Several thick intervals of porous and permeable rock capable of taking water are present within the subject formation in the area.

The freshwater formation is the Rustler at a depth of approximately 1,770 feet. Water well depths in the area range from approximately 70 -180 feet below ground surface.

IX – Proposed Stimulation Program

A small cleanup acid job may be used to remove mud and drill cuttings from the formation. However, no other formation stimulation is currently planned.

X – Logging and Test Data

Logs will be submitted to the Division upon completion of the well.

XI – Fresh Groundwater Samples

Based on a review of data from the New Mexico Office of the State Engineer, 3 groundwater wells are located within 1 mile of the proposed SWD location; however, according to state water well data and conversations with water well owners two (CP-01318 POD 1 & 2) of the three water wells are currently active. A water sample was collected for each well on 06/12/2019.

A water well map, details of water wells within 1-mile, and any associated water analyses are included in ***Attachment 5***.

XII – No Hydrologic Connection Statement

No faulting is present in the area that would provide a hydrologic connection between the injection interval and overlying USDWs. Additionally, the casing program has been designed to ensure there will be no hydrologic connection between the injection interval and overlying USDWs.

XIII – Proof of Notice

A Public Notice was filed with the Hobbs News-Sun newspaper and an affidavit is included in ***Attachment 6***.

A copy of the application was mailed to the OCD District Office, landowner, and leasehold operators within 1/2-mile of the proposed SWD location. A list of the recipients, as well as delivery confirmations, are included in ***Attachment 6***.

Attachments

Attachment 1: Wellbore Diagram

Attachment 2: Area of Review Information:

- 2-mile Oil & Gas Well Map
- 2-mile Lease Map
- 1/2-mile Well Detail List
- Potash Lease Map

Attachment 3: Source Water Analyses

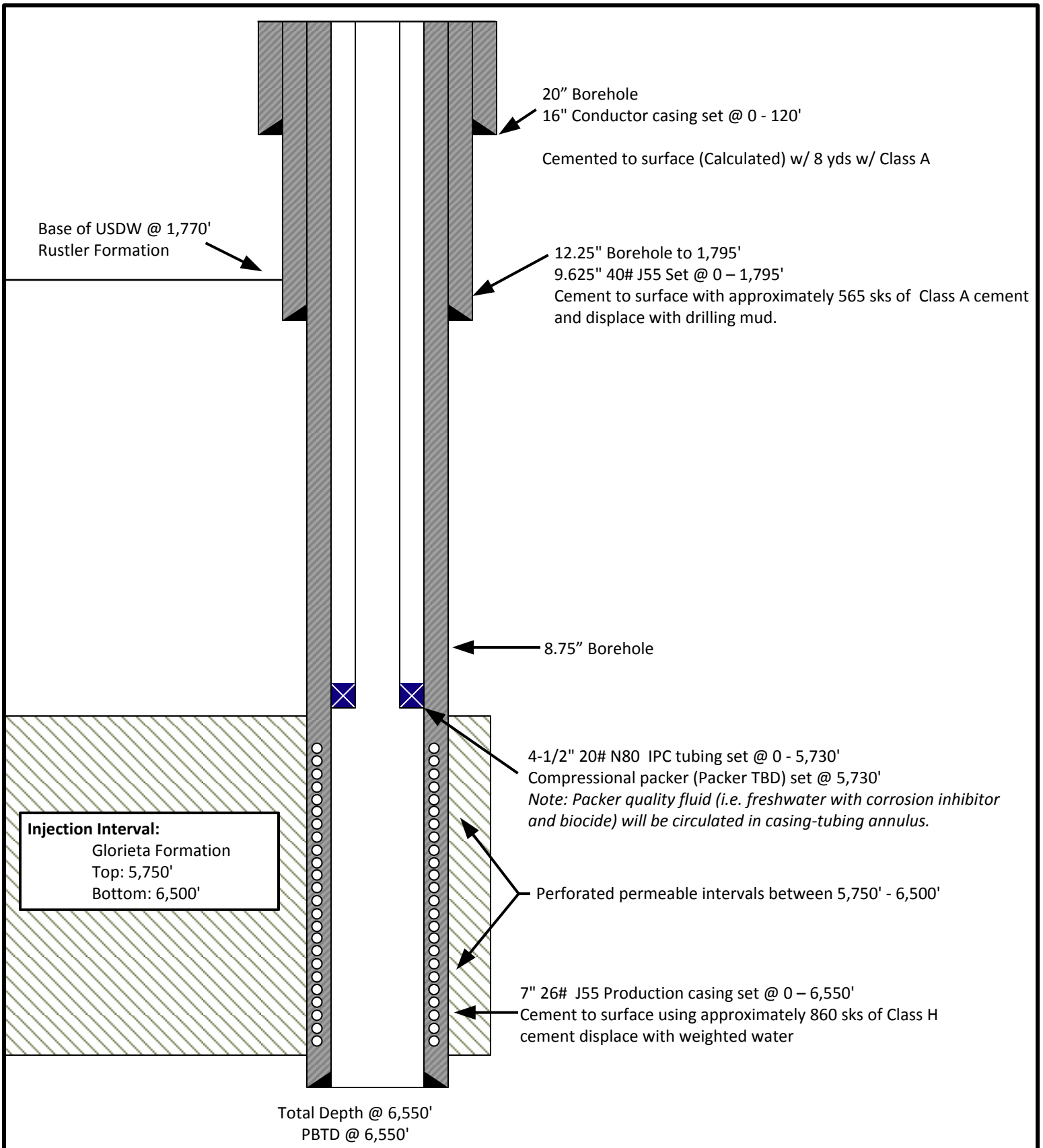
Attachment 4: Injection Formation Water Analyses

Attachment 5: Water Well Map and Well Data

Attachment 6: Public Notice Affidavit and Notice of Application Confirmations

Attachment 1

Wellbore Diagram



NOT TO SCALE

Note: Listed depths and cement volumes are approximates based on available information.

Prepared by: ALL CONSULTING	Drawn by: Joshua Ticknor	Goodnight Midstream Permian, LLC
	Project Manager: Nathan Alleman	Pudge SWD G 1
	Date: 05/30/2019	Section 10, Twp 22S, Rng 36E 2,043' FNL & 2,504' FEL Lea County, NM

A-3 and AL-2 LOK-SET Retrievable Casing Packers

Product Family No. H64630 and H64628

APPLICATION

The A-3™ LOK-SET™ packer combines advantages of a retrievable packer with the features of a permanent packer. An ability to lock down tubing forces makes the A-3 suitable for a broad range of applications, including production, injection, zone isolation, and remedial operations. The AL-2™ LOK-SET packer is similar to the A-3, and has a larger bore.

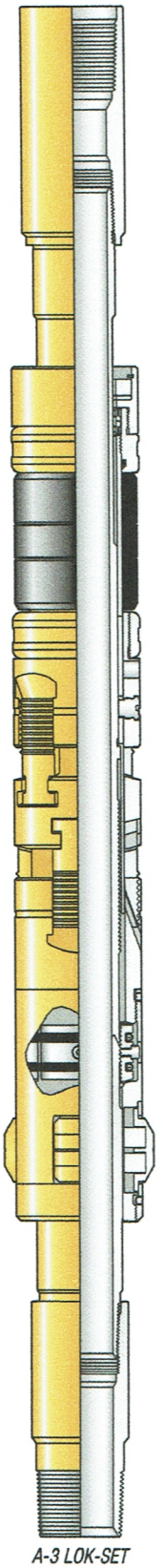
Advantages

- Holds pressure from above and below, without relying on set-down weight, tubing tension, or hydraulic hold down
- Provides tubing anchoring with tension applied, suitable for pumping wells or injection, controlling tubing forces related to change fluid temperatures
- Opposed, non-transferring, dovetail slips prevent packer movement associated with changing differential pressures, while allowing the landing of the tubing in tension, neutral or compression
- Right-hand tubing rotation controls setting and releasing
- Packing element compression locks in by ratcheting action of lock segments, which restricts rotation to one direction

Accessories

To provide a simple and reliable injection system for retrieving an injection string without having to unseat the packer:

L-10 or L-316 on-off sealing connectors, Product Family Nos. H68420 and H68422. Baker Hughes blanking plug can be used in the seating nipple profile of the on-off sealing connector to provide a means of plugging the lower zone while the tubing is being pulled.



A-3 LOK-SET
Retrievable Casing Packer
Product Family No. H64630

SPECIFICATION GUIDES

A-3™ LOK-SET Retrievable Casing Packer, Product Family No. H64630

Casing			Packer				
OD		Weight *	Size	Nom ID		Max Gage Ring OD	
in.	mm	lb/ft		in.	mm	in.	mm
4	101.6	9.5–12.9	41A2	1.500	38.1	3.244	82.4
4-1/2	144.3	21.6–23.6	41A2	1.500	38.1	3.244	82.4
4	101.6	9.5	41A4	1.500	38.1	3.423	112.4
4-1/2	114.3	18.8	41A4	1.500	38.1	3.423	112.4
		13.5–17.7	41B			3.578	90.9
		11.6–13.5	43A2	1.978	50.2	3.786	96.2
		9.5–10.5	43A4			3.786	96.2
5	127.0	15–18	43B	1.978	50.2	4.140	105.2
		11.5–15	43C			4.265	108.3
5-1/2	139.7	26	43C	1.978	50.2	4.265	108.3
		20–23	45A2			4.515	114.7
		15.5 –20	45A4			4.656	118.3
		13–15.5	45B			4.796	121.8
6	152.4	26	45B	1.978	50.2	4.796	121.8
		20–23	45C			5.078	129.0
		15–18	45D			5.171	131.3
6-5/8	168.3	34	45E	1.978	50.2	5.421	137.7
		24–32	45F			5.499	139.7
		24	47A2	2.441	62.0	5.671	144.0
		17–24	45G	1.978	50.2	5.796	147.2
		17–20	47A4	2.441	62.0	5.827	148.0
7	177.8	38	47A2	2.441	62.0	5.671	144.0
		32–35	47A4			5.827	148.0
		26–29	47B2			5.983	152.0
		23–26	47B4			6.093	154.8
		17–20	47C2			6.281	159.5
7-5/8	193.7	33.7–39	47C4	2.441	62.0	6.468	164.3
		24–29.7	47D2			6.687	169.9
		20–24	47D4			6.827	173.4
8-5/8	219.1	44–49	49A2	3.500	88.9	7.327	186.1
		32–40	49A4			7.546	191.7
		20–28	49B			7.796	198.0
9-5/8	244.5	47–53.5	51A2	3.500	88.9	8.234	209.1
		40–47	51A4			8.452	214.7
		29.3–36	51B			8.608	218.6

AL-2™ Large Bore LOK-SET Retrievable Casing Packer Product Family No. H64628

Casing		Packer							
OD		Weight *	Size	Nom ID		Max Gage Ring OD		Max Diameter of Compressed Drag Block	
in.	mm	lb/ft		in.	mm	in.	mm	in.	mm
5-1/2	139.7	20	45A2 x 2-3/8	2.375	60.3	4.562	115.9	4.592	116.6
		15.5–17	45A4 x 2-3/8			4.656	118.3	4.750	120.7
		13	45B x 2-3/8			4.796	121.8	4.902	124.5
6	152.4	26	45B x 2-3/8	2.375	60.3	4.796	121.8	4.902	124.5

* *When selecting a packer for a casing weight common to two weight ranges (same OD), choose the packer size shown for the lighter of the two weight ranges. Example: for 7-in. (177.8 mm) OD 26 lb/ft casing use packer size 47B4. Under certain circumstances the other packer size may be run, such as when running in mixed casing strings.*

Repair kits, including such items as packing elements, seal rings, etc., are available for redressing Baker Retrievable Packers. Contact your Baker Hughes representative. Use only Baker Hughes repair parts.

Attachment 4

Injection Formation Water Analyses

Injection Formation Water Analysis																	
Goodnight Midstream Permian, LLC - Glorieta Formation																	
Wellname	API	Latitude	Longitude	Section	Township	Range	Unit	Ftgns	Ftgew	County	State	Company	Field	Formation	Tds_mgL	Chloride_mgL	Bicarbonate_mgL	Sulfate_mgL
V M HENDERSON #002	3002506908	32.4553299	-103.1957474	30	21S	37E	A	660N	660E	LEA	NM		BLINEBRY	GLORIETA	138153	81610	744	2735
APACHE STATE Q #001	3002506116	32.5712776	-103.255394	16	20S	37E	J	1980S	2310E	LEA	NM		MONUMENT	GLORIETA	19087	8250	430	3400
C H WEIR A #007	3002506073	32.5858192	-103.2114944	12	20S	37E	L	1985S	660W	LEA	NM		SKAGGS	GLORIETA	135670	79600	1680	3100

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ALL CONSULTING, LLC 1718 S. CHEYENNE AVE. TULSA OK, 74119	Project: DASCO CATTLE CO Project Number: 32.400000 / - 103.259722 Project Manager: DAVID ALLEMAN Fax To: NA	Reported: 20-Jun-19 09:31

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9061207 - Filtration										
Blank (9061207-BLK1)				Prepared: 13-Jun-19 Analyzed: 14-Jun-19						
TSS	ND	2.00	mg/L							
Duplicate (9061207-DUP1)	**Source: H902002-01**			Prepared: 13-Jun-19 Analyzed: 14-Jun-19						
TSS	265	2.00	mg/L		218			19.5	52.7	
Batch 9061308 - Filtration										
Blank (9061308-BLK1)				Prepared: 13-Jun-19 Analyzed: 14-Jun-19						
TDS	ND	5.00	mg/L							
LCS (9061308-BS1)				Prepared: 13-Jun-19 Analyzed: 14-Jun-19						
TDS	436		mg/L	527		82.7	80-120			
Duplicate (9061308-DUP1)	**Source: H902024-03**			Prepared: 13-Jun-19 Analyzed: 14-Jun-19						
TDS	436	5.00	mg/L		439			0.686	20	
Batch 9061310 - General Prep - Wet Chem										
Blank (9061310-BLK1)				Prepared: 13-Jun-19 Analyzed: 18-Jun-19						
Chloride	ND	4.00	mg/L							
LCS (9061310-BS1)				Prepared: 13-Jun-19 Analyzed: 18-Jun-19						
Chloride	96.0	4.00	mg/L	100		96.0	80-120			
LCS Dup (9061310-BSD1)				Prepared: 13-Jun-19 Analyzed: 18-Jun-19						
Chloride	100	4.00	mg/L	100		100	80-120	4.08	20	

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

ALL CONSULTING, LLC 1718 S. CHEYENNE AVE. TULSA OK, 74119	Project: DASCO CATTLE CO Project Number: 32.400000 / - 103.259722 Project Manager: DAVID ALLEMAN Fax To: NA	Reported: 20-Jun-19 09:31

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9061403 - General Prep - Wet Chem										
LCS (9061403-BS1)				Prepared & Analyzed: 14-Jun-19						
pH	7.09		pH Units	7.00		101	90-110			
Conductivity	45800		uS/cm	50000		91.6	80-120			
Duplicate (9061403-DUP1)		**Source: H902047-01**		Prepared & Analyzed: 14-Jun-19						
pH	7.48	0.100	pH Units		7.52			0.533	20	
Conductivity	7110	1.00	uS/cm		7170			0.840	20	
Resistivity	1.41		Ohms/m		1.39			0.840	20	
Batch 9061405 - General Prep - Wet Chem										
Blank (9061405-BLK1)				Prepared & Analyzed: 14-Jun-19						
Alkalinity, Carbonate	ND	1.00	mg/L							
Alkalinity, Bicarbonate	5.00	5.00	mg/L							
Alkalinity, Total	4.00	4.00	mg/L							
LCS (9061405-BS1)				Prepared & Analyzed: 14-Jun-19						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120			
Alkalinity, Bicarbonate	305	12.5	mg/L				80-120			
Alkalinity, Total	250	10.0	mg/L	250		100	80-120			
LCS Dup (9061405-BSD1)				Prepared & Analyzed: 14-Jun-19						
Alkalinity, Carbonate	ND	2.50	mg/L				80-120		20	
Alkalinity, Bicarbonate	318	12.5	mg/L				80-120	4.02	20	
Alkalinity, Total	260	10.0	mg/L	250		104	80-120	3.92	20	
Batch 9061708 - General Prep - Wet Chem										
Blank (9061708-BLK1)				Prepared & Analyzed: 17-Jun-19						
Sulfate	ND	10.0	mg/L							

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

ALL CONSULTING, LLC 1718 S. CHEYENNE AVE. TULSA OK, 74119	Project: DASCO CATTLE CO Project Number: 32.400000 / - 103.259722 Project Manager: DAVID ALLEMAN Fax To: NA	Reported: 20-Jun-19 09:31

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9061708 - General Prep - Wet Chem										
LCS (9061708-BS1)				Prepared & Analyzed: 17-Jun-19						
Sulfate	16.2	10.0	mg/L	20.0		81.2	80-120			
LCS Dup (9061708-BSD1)				Prepared & Analyzed: 17-Jun-19						
Sulfate	16.1	10.0	mg/L	20.0		80.4	80-120	1.11	20	

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

ALL CONSULTING, LLC 1718 S. CHEYENNE AVE. TULSA OK, 74119	Project: DASCO CATTLE CO Project Number: 32.400000 / - 103.259722 Project Manager: DAVID ALLEMAN Fax To: NA	Reported: 20-Jun-19 09:31

Total Recoverable Metals by ICP (E200.7) - Quality Control

Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B906147 - Total Rec. 200.7/200.8/200.2										
Blank (B906147-BLK1)				Prepared: 17-Jun-19 Analyzed: 19-Jun-19						
Magnesium	ND	0.100	mg/L							
Sodium	ND	1.00	mg/L							
Calcium	ND	0.100	mg/L							
Potassium	ND	1.00	mg/L							
Iron	ND	0.050	mg/L							
Strontium	ND	0.100	mg/L							
Barium	ND	0.050	mg/L							
LCS (B906147-BS1)				Prepared: 17-Jun-19 Analyzed: 19-Jun-19						
Strontium	4.26	0.100	mg/L	4.00		106	85-115			
Sodium	3.63	1.00	mg/L	3.24		112	85-115			
Potassium	8.34	1.00	mg/L	8.00		104	85-115			
Magnesium	20.2	0.100	mg/L	20.0		101	85-115			
Iron	4.05	0.050	mg/L	4.00		101	85-115			
Calcium	4.15	0.100	mg/L	4.00		104	85-115			
Barium	2.07	0.050	mg/L	2.00		104	85-115			
LCS Dup (B906147-BSD1)				Prepared: 17-Jun-19 Analyzed: 19-Jun-19						
Potassium	8.19	1.00	mg/L	8.00		102	85-115	1.81	20	
Barium	2.03	0.050	mg/L	2.00		101	85-115	2.12	20	
Iron	3.99	0.050	mg/L	4.00		99.7	85-115	1.65	20	
Sodium	3.48	1.00	mg/L	3.24		107	85-115	4.43	20	
Strontium	4.19	0.100	mg/L	4.00		105	85-115	1.64	20	
Calcium	4.04	0.100	mg/L	4.00		101	85-115	2.61	20	
Magnesium	19.9	0.100	mg/L	20.0		99.3	85-115	1.67	20	

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	All Consulting	**BILL TO**	
Project Manager:		P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	Dasco Cattle Co	State: Zip:	
Project Location:	32.400000 - 103.259722	Phone #:	
Sampler Name:	Rolando Hernandez	Fax #:	

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE:	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Cation / Anions	TSS	Resistivity	T. Hardness 200.7	Ba, Fe, Sr 200.7
H902049																			
1	CP-01318-Pool #1												6-12	4:07	✓	✓	✓	✓	✓
2	CP-01318-Pool #2												6-12	4:17	✓	✓	✓	✓	✓
	~~CP-01320-Pool #1~~												6-12	4:50	TO	6/13/19			

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:	Date: 6-13-19	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #:
	Time: 8:15	Tamara Oldaker	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Relinquished By:	Date:	Received By:	REMARKS: Rush!
	Time:		

Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)
Sampler - UPS - Bus - Other: -0.1° #97	Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	TO

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

Attachment 7

Public Notice Affidavit and Notice of Application Confirmations