Application Part II



New Mexico Office of the State Engineer Active & Inactive Points of Diversion

(with Well Drill Dates & Depths)

				(I a	R=POD has been repland no longer serves the	aced iis file, (quarters ar	e 1=NW 2=	NE 3=SW 4=8	SE)					
	(acre ft	per annum)		C	=the file is closed)	(quarters ar	e smallest	to largest) (N	NAD83 UTM	in meters)			(in fe	eet)
WR File Nbr	Sub basin Use Dive	ersion County	POD Number	Well Tag	Code Grant	c Source 6	1 9 9 416 4 Sec	: Tws Rng	х	Y	Start Date	Finish Date	Depth Well	Depth Water
<u>CP 00182</u>	CP PLS	0 LE	CP 00182 POD1			:	34305	25S 36E	661231	3558680* 🌍				

Record Count: 1

POD Search:

POD Number: CP 00182

Sorted by: File Number

*UTM location was derived from PLSS - see Help

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



New Mexico Office of the State Engineer **Point of Diversion Summary**

		(quarters are 1≃NW (quarters are small			
Well Tag	POD Number	Q64 Q16 Q4 Se	c Tws Rng	X Y	
	CP 01170 POD5	2 2 2 19	25S 36E	660687 3555164	t_{zt}
Driller Licen	se: 1607	Driller Company:	URAN DRILL	ING	
Driller Name	DURAN, LUIS (1	(ONY)			
Drill Start Da	ate: 10/28/2014	Drill Finish Date:	11/04/2014	Plug Date:	
Log File Dat	e: 02/19/2015	PCW Rcv Date:		Source:	Shallow
Pump Type:		Pipe Discharge Size	:	Estimated Yield	: 35 GPM
Casing Size:	8.00	Depth Well:	505 feet	Depth Water:	270 feet

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make ne warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data. Page 1 of 1 POD SUMMARY - CP 01170 PCD5



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Analytical Results For:

BC & D OPERATING P. O. BOX 302 HOBBS NM. 88241	Project: Project Number: Project Manager	TOMMIE DINWIDDIE PWW #1 NONE GIVEN	Reported: 19-Sep-13 15:26
	Fax To:	(575) 942-2005	

TOMMIE DINWIDDIE FWW #1

H302139-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
		Cardin	al Laborat	ories					Construction of the Association
Inorganic Compounds	53								
Alkalinity, Bicarbonate	249	5.00	mg/L	1	3082302	AP	00.8 12	210.1	Participan Statement of the
Alkalinity, Carbonate	ND	0.00	mg/L	1	3082302	AP	09-Sep-13	310.1	
Conductivity	80.0	4.00	mg/L	1	3090904	AP	09-Sep-13	4500-CI-B	
oH*	1060	1.00	uS/cm	1	3091004	AP	10-Sep-13	120.1	
Sulfate*	7.50	0.100	pH Units	1	3091003	AP	10-Sep-13	9045	
TDS*	£34 694	50.0	mg/L	5	3090903	AP	09-Sep-13	375.4	
Alkalinity, Total*	204	3.00	mg/L	1	3083008	AP	06-Sep-13	160.1	
	201	4.00	mgr	1	3082302	AP	09-Sep-13	310.1	
		Green Analy	tical Labo	ratories					
Total Recoverable Metals by ICP (E200.7)									

Calcium"	60 r					and the second secon	Support of the state of the support of the support		
Magnasium	09.6	1.00	mg/L	1	B309142	JGS	17-Sep-13	EPA200.7	
TATABUESIUDI -	48.8	1.00	mg/L	1	B309142	165	17 5 10	TTDI 200 7	
Potassium *	7.41	1.00	mall		Decer	.00	17-Sep-13	EPA200.7	
Sodium*	10.1	1.00	mg/L	1	B309142	JGS	17-Sep-13	EPA200.7	
	104	1.00	mg/L	1	B309142	JGS	17-Sep-13	EPA200.7	

Cardinal Laboratories

*=Accredited Analyte

SLEASE VOTE: Jability and Damages. Cardnet's lability and client's exclusive remedy for any dam artiship, whether based in contract or tort, shall be limited to the amount path by client for analyses. All cleans, including those for registrance and including, whether based in contract or tort, shall be limited to the amount path by client for analyses. All cleans, including those for registrance and including, what limitation, baseds in iterative, lin no event shall cardned by client for analyses. All cleans, including those for registrance and including, without limitation, baseds interruptions, loss of use, or loss of profils incurred by client, is subsidier, efficience or accessors analing out of or related to the performance of the services hareunder by Cardnel, regardless of whether such client is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except to Li with written approval of Cardnel Juboretories.

Celey Di Keine

Celey D. Keene, Lab Director/Quality Manager

Page 3 of 5

ζ.				
R R				
Water Sample Analysis	e.			
	i i	Location	5	•
Pool	Section	Township	Range	Chlorides
North Justis Montova	2	255	37E	45440
North Justis McKee	2	258	37F	58220
North Justis Eusselman	2	255	375	68533
North Justic Ellenhumer	2	255	376	34151
Fowler Blineboy	22	245	375	118085
Skoge Grouburg	18	200	295	84845
Mamo Mokan	10	200	205	85010
	10	200	205	01800
Wanen Abo	18	205	JAE	91000
DK Dhinkard	30	205	385	100055
Liturian San Andres	8	215	JOE	30093
East Hobbs grayburg	29	185	39E	6461
Hailway Yates	16	205	32E	14/68
Arkansas Juncuon San Andres	12	185	36E	/1/1
Péarl Queen	28	195	35E	114310
Midway Abo	17	175	37E	38494
Lovinton Abo	31	16S	37E	22933
Lovington San Andres	3	18S	37E	4899
Lovington Paddock	31	16S	37E	93720
Mesa Queen	17	165	32E	172530
Kemnitz Wolfcamp	27	16S -	34E	49345
Hume Queen	9	16S	34E	124960
Anderson Ranch Wolfcamp	2	165	32E	11040
Anderson Ranch Devonian	11	16S	32E	25702
Anderson Ranch Unit	11	18S	32E	23788
Caudill Devonian	9	15S	36E	20874
Townsend Wolfcamp	6	16S	38E	38695
Dean Permo Perin	5	165	37E	44730
Dean Devonian	35	158	36E	19525
South Denton Wolfcamp	26	155	37E	54315
South Denton Devonian	36	155	375	34080
Medicine Rock Devonian	15	158	385	30760
Little Lucky Lake Devonian	29	155	205	26266
Wantz Abo	28	219	97E	420770
Crosby Devonian	18	258	375	58220
Scarborough Yatas Seven Rivers	7	285	375	2442/2000
Teaque Simoson	34	230	972	44400E
Teague Filenburger	34	230	275	114005
Rhodes Yatas 7 Rivers	27	230	3/6	120345
House SA	44	200	3/6	144465
House Orinkard	10	205	38E	93385
South Leonard Ouena	12	205	38E	49700
	24	265	37E	115375
Cilluc ADO	.2	215	38E	55380
Scharb Bone Springs	5	195	35E	30601
En Queen	13	185	34E	41890
	22	185	34E	179830
maijamar Grayburg SA	22	175	32E	46079
Maijamar Paddock	27	17\$	32E	115375
Maijamar Devonian	22	178	32E	25418

BC&D Operating, Inc

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

June 6, 2019

Surface Owner / Offset Operators

Re: Notification of Application for Authorization to Inject into the West Jal Deep SWD #6 Well.

Ladies and Gentlemen:

BC&D Operating, Inc is seeking administrative approval to utilize the West Jal Deep SWD #6 (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. No action is required unless you have questions or objections.

<u>Well:</u>	West Jal Deep SWD #6
Proposed Disposal Zone:	Devonian Formation (14,544' – 17,100')
Location:	1,200' FNL & 1,300 FEL, Sec. 8, T25S, R36E, 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

Surface Owner

Intrepid Potash 220 Red Cloud Carlsbad, NM 88220

Ameredev II, LLC 5707 Southwest Pkwy Bldg. 1 Ste. 275 Austin, Tx 78735

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

Lilis Energy 1800 Bering Drive Houston, Tx 77057

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

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

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

New Mexico Oil Conservation Division – Hobbs Field Office 1625 N. French Drive Hobbs, NM 88240





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

June 6, 2019

BC&D Operating, INC, P.O. BOX 302 Hobbs, NM 88241, has filed a form C-108 (Application for Authorization to inject) with the Oil Conservation Division seeking administrative approval to utilize the West Jal Deep SWD #6 as a Commercial Salt Water Disposal well.

The West Jal Deep SWD #6 is located at 1,200' FNL & 1,300 FEL, Sec. 8, T25S, R36E, Lea County New Mexico. The well will dispose of water produced from oil and gas wells into the Devonian-Silurian Formations from 14,544' – 17,100' at a maximum rate of 40,000 barrel of water per day with a maximum pressure of 2,908 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.

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 June 09, 2019 and ending with the issue dated June 09, 2019.

Lesa II

Publisher

Sworn and subscribed to before me this 9th day of June 2019.

ie Black

Business Manager

My commission expires January 29, 2023 (Seal)



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

LEGALS

JUNE 9, 2019

BC&D.Operating, INC, P.O. BOX 398-Hobbs, NM 88241 has fired a form C-108 (Application for Authorization to inject) with the Oil Conservation Division seeking administrative approval to utilize the West Jal Deep SWD #6 as a Commercial Salt Water Disposal well.

The Weet Jal Deep SWD #6 is located at 1,200 FNL & 1,300 FFL, Sec. 8, T255; R36E, Lea County New Mexico. The well will dispose of water produced from oil and gas wells into the Devonian-Silurian Formations from 14,544' – 17,100° at a maximum rate of 40,000 barrel of water per day, with a maximum pressure of 2,908 psi.

Interesting parties must file objections or requests for hearing, with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, withhan15 days

Addir[0][a] information can be obtained by contacting BC&D Operating, Inc at (405) \$37-8147. #34263...

67115835

RICHARD HILL BC&D OPERATING PO BOX 302 HOBBS , NM 88241 00229368

API	Well Name	Well Number	Operator Company Name	County	Target Formation	(TD) md	TVD	Well Status	Spud Date	Drill Type	Section	Township	Range
3002521411	C Elliott Federal	1	Texaco E&P	LEA (NM)	Atoka	12,200	12,200	P&A	8/13/1965	V	8	25S	36E
3002512741	Pre-Ongard		Marland Oil Co	LEA (NM)	NA	4,125	4,125	P&A	NA	V	4	25S	36E

No wells within a mile have penitrated proposed injection interval in the area of review.

	Co2 meL		14.6	Nor.	200	1067	POT OF	me				1000
	suffate mgt	260	56m	5101	Lag		5	Car.	507	210	43.8	1005
	bicarbonate_mgl	512	244	159	171	281	7196	13		CX.	61.1	
	chloride met.	130000	104576.4	131397	108190	59071		163000	COUPEL	NUMBER	35.5	50281.2
	nanganese mgl		1.1	0	0.69	0.5	0.38					
,			1023	834	942	394	474.5				7.71	326.7
	1.1.1 2.10 UAL		40.4	THE STREET	11	10	0.3			-		1797
and the second se	Tim unous		nets	6238	1326	3196	3289			1.00		1971247
andium mal	The second	F 63633	J'CDCCC	103/2	64666	9901E					- Useac	1467507
ph his mel	204652	5.61 171476 a	6.3	67	C 7 0000	10 10 10 10 10 10 10 10 10 10 10 10 10 1	Arores -	24444	575567	5.5	7 3 8:266 4	L'ANTIN ANTI
/ formation	BONE SPRING	BONE SPRING 1ST SAND	BONE SPRING 2ND SAND	BONE SPRING ZND SAND	BONE SPRING 3RD SAND	BONE SPRING 3RD SAND	DELAWARF	DELAWARE		NWANIS	WOLFCAMP	
api count	3002520261 LEA	3002542425 Lea	3002541517 Lea	3002541516 Lea	3002541293 Lea	3002541293 Lea	3002508440 LEA	3002508407 LEA	3003576ADE LEA	NT ACLOVER	3001542688 EDDY	
weiname	DELL LAKE UNIT #009	HIMAN INTO A LONG	OLLI UNE 19 STATE #004H	SELL LAKE 19 STATE #003H	ALADO DRAW 5 FEDERAL #001H	AUADO DRAW 6 FEDERAL #001H	ORTH ELMAR UNIT #057	OFDFKF #002	RONGHCRN AHO FEDERAL MODI	WADDING S CTATE NOT ALL	HETOH SIVIC SOULLASS	

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Well: West Jal Deep SWD #6

	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	1399	Dry	9.7
Intermediate #2	12.250	9.625	8.679	0	11564	0	11564	No	40	HCL-80	BTC	3870	5750	916	947	Dry	9.8
Intermediate #3	8.500	7	6	11,364	15250	11364	15250	No	32	P110HC	SpCL BTC	11890	12450	1025	1053	Dry	12.5

Safety Factors											
Section	Csg Size	Weight (Ibs)	Grade	Collapse	Burst	Body Tension	Joint Tension				
Surface	20	94	J-55	1.919	3.864	12.596	11.932				
Intermediate #1	13.375	61	HCL-80	1.393	1.716	4.410	4.410				
Intermediate #2	9.625	40	HCL-80	1.156	1.717	1.980	2.047				
Intermediate #3	7	32	P110HC	1.813	1.899	2.100	2.158				

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

Engineering Notes:

Please see the the special clearance BTC conn. being used with the 7" casing. It has an 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 gradiat .22 psi/ft.

Criteria	a
Collapse	1.125
Burst	1.125
Body Tension	2
Joint Tension	2

Well: West Jal Deep SWD #6

Circulating Medium Table												
Section	Hole Size	Top Depth	Bottom Depth	Mud Type	Min Mud Weight (ppg)	Max Mud Weight (ppg)	Gel Strength (Ibs/100 sqft)	РН	Viscosity	Salinity (ppm)	Filtration	Additional Characteristics
Surface	26.000	0	1250.00	Fresh Water	8.4	8.4	-	9	28-36	-	N/C	
Intermediate #1	17.500	1250	5400.00	Cut Brine	8.4	9.7	-	9	28-36	-	N/C	Loss Circulation Control
Intermediate #2	12.250	5400	11564.00	Cut Brine	9.6	9.8	-	10-10.5	28-36	-	N/C	Los Circulation Control
Intermediate #3	8.500	11564	15250.00	Oil Base Water	12	12.5	-	-	60	-	N/C	30/70 %
Production	6.000	15250	17100.00	Cut Brine	9	9	-	9	28-36	-	-	

West Jal Deep SWD #6

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 5,200' 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 w 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 11,564' 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 9.6 – 10 ppg using loss circulation control. A 10M BOPE system will be installed and tested before drilling out the shoe. Casing set depth well 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 15,250' 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.

Open Hole

Drill 6" hole to 17,100' 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.

West Jal Deep SWD #6

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

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.

	OD	Preventer	RWP
DrillPipe	5"	Fixer lower 5"	10M
		Upper 4.5 - 7" VBR	
HWDP	5"	Fixed Lower 5"	10M
		Upper 4.5 - 7" VBR	
Jars	5"	Fixed Lower 5"	10M
		Upper 4.5 - 7" VBR	
Drill Collars and MWD	6.25" -		1014
tools	6.75"	Upper 4.5 - 7" VBR	10101
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

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

6" Production hole section, 10M requirement.

Component	OD	Preventer	RWP
Drill Pipe	4"	Upper 3.5" - 5.5" VBR	10M
		Lower 3.5 - 5.5" VBR	
HWDP	4"	Upper 3.5" - 5.5" VBR	10M
		Lower 3.5 - 5.5" VBR	
Jars	4"	Upper 3.5" - 5.5" VBR	10M
		Lower 3.5 - 5.5" VBR	
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

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
 - o 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
 - o Pit gain
 - o 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 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
 - o Pit Gain
 - o 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.
 - o SICP
 - o Pit gain
 - o 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.

- Shut-in using upper pipe ram. (The HCR and choke will already be in the closed position.
- \circ 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.
 - \circ 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.
 - \circ $\;$ 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.
 - \circ $\;$ 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).
 - \circ Confirm shut-in.
 - Notify tool pusher/company representative.
 - \circ $\;$ Read and record the following:
 - ➢SIDPP and SICP
 - ≻Pit gain
 - ≻Time
 - Regroup and identify forward plan.

Hydrogen Sulfide Drilling Operations Plan

1. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted, or employed on a 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:
 - o Flare Line.
 - \circ $\;$ Choke manifold with remotely operated choke.
 - Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
 - 0

- Auxiliary equipment to include: annular preventer, mud-gas, separator, rotating head.
- 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.

Contact Information

In at this time 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