

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: 5/8/2019_____

Well information.

Operator DJR_____, Well Name and Number: Betonne Tsosie Wash Unit 731H

API# 30-045-35511_____, Section 10_, Township 23 N/S, Range 8 E/W

Re-entry status will
change when
C-104 is Rec'd

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-104 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.

NMOCD Approved by Signature

4/2/2020

Date

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

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM076842
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: <input type="checkbox"/> Hydraulic Fracturing <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		7. If Unit or CA Agreement, Name and No. NMNM135219A
2. Name of Operator DJR OPERATING LLC		8. Lease Name and Well No. BETONNIE TSOSIE WASH UNIT 731H
3a. Address 1600 Broadway #1960 Denver CO 80202		9. API Well No. 30-045-35511
3b. Phone No. (include area code) (505)632-3476		10. Field and Pool, or Exploratory BETONNIE TSOSIE WASH UNIT / BASIN
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NESE / 2490 FSL / 508 FEL / LAT 36.241134 / LONG -107.661722 At proposed prod. zone SESE / 346 FSL / 1018 FEL / LAT 36.220874 / LONG -107.627739		11. Sec., T, R. M. or Blk. and Survey or Area SEC 10 / T23N / R8W / NMP
14. Distance in miles and direction from nearest town or post office* 43 miles		12. County or Parish SAN JUAN
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 346 feet		13. State NM
16. No of acres in lease 2400		17. Spacing Unit dedicated to this well 760
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 60 feet		20. BLM/BIA Bond No. in file FED: NMB001464
19. Proposed Depth 5323 feet / 18084 feet		21. Estimated duration 10 days
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 6933 feet		22. Approximate date work will start* 04/11/2020
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) Vanessa Cameron / Ph: (303)868-6449	Date 05/08/2019
Title Regulatory Manager		
Approved by (Signature) (Electronic Submission)	Name (Printed/Typed) Dave Mankiewicz / Ph: (505)564-7761	Date 03/12/2020
Title AFM-Minerals Office FARMINGTON		

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.

APPROVED WITH CONDITIONS
Approval Date: 03/12/2020

1005 N. French Dr., Hobbs, N.M. 88240
Phone: (505) 398-8181 Fax: (505) 398-0720

DISTRICT II

611 S. First St., Artesia, N.M. 88210
Phone: (505) 745-1803 Fax: (505) 745-5790

DISTRICT III

1000 Rio Grande Rd., Aztec, N.M. 87410
Phone: (505) 334-8178 Fax: (505) 334-8179

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, NM 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 30-045-35511		*Pool Code 98175	*Pool Name BETONNIE TSOSIE WASH UNIT MANCOS OIL POOL	
*Property Code 325179	*Property Name BETONNIE TSOSIE WASH UNIT		*Well Number 731H	
*OGRID No. 371838	*Operator Name DJR OPERATING, LLC		*Elevation 6933'	

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
1	10	23N	8W		2490'	SOUTH	508'	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
P	13	23N	8W		346'	SOUTH	1018'	EAST	SAN JUAN

* Dedicated Acres PENETRATED SPACING UNIT:
 SEC. 11: SW/NW, SE/NW, NW/NW, NE/SW, SE/SW, NW/SE,
 SW/SE & SE/SE (320 AC.); SEC 14: NW/NE, NE/NE &
 SE/NE (120 AC.); SEC 13: NW/NW, SW/NW, SE/NW, NW/SW,
 NE/SW, NW/NE, SW/SE & SE/SE (320 AC.) =
 760 ACRES TOTAL

¹⁸ Joint or In

¹⁴ Consolidation Code**10 Order No.**

R-13930, R-13930A

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

LINE TABLE

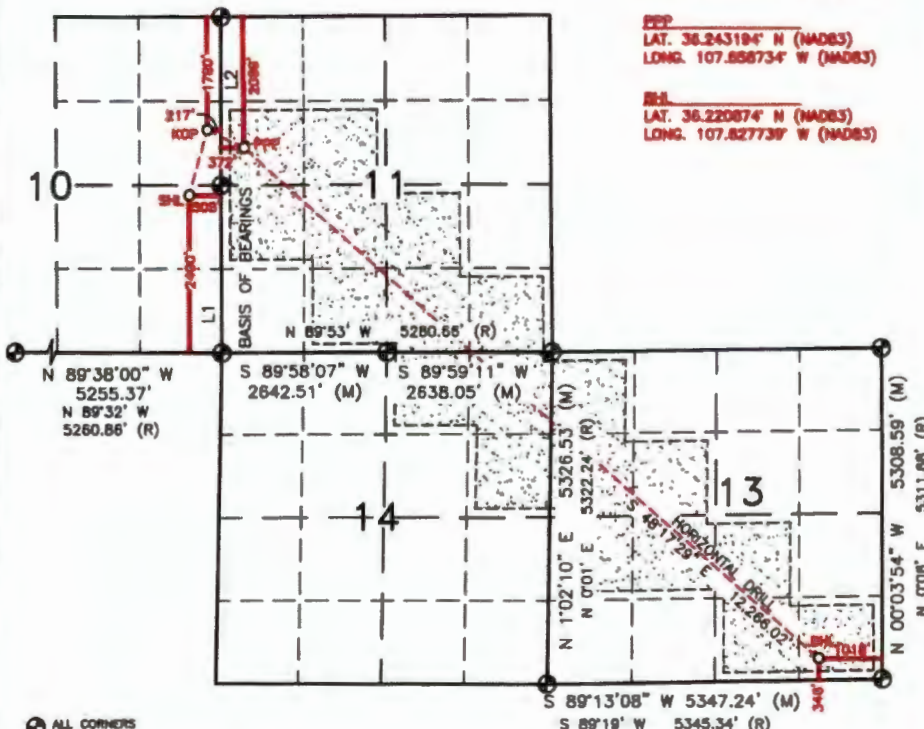
L1: N 00°09'22" W 2653.00'
L2: N 00°01'25" E 2655.84'
N 0°04' W 5304.42' (R)

524
LAT. 38.241134° N (NAD83)
LONG. 107.861722° W (NAD83)

MDP
LAT. 38.243981° N (MAD83)
LONG. 107.860728° W (MAD83)

PEP
LAT. 36.243194° N (NAD83)
LONG. 107.656734° W (NAD83)

LAT. 36.220874° N (NAD83)
LONG. 107.827739° W (NAD83)



ALL CORNERS
FND 2.5" BC
GLD 1947

18	17	OPERATOR CERTIFICATION
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I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or is a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Steven Powell
Signature

5/30/19
Date

Steven Merrell

Printed Name _____

Smerrell@djrlc.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.

Date of Survey _____

Signature and Seal of Professional Surveyor:



Certificate Number

11393

Surface=Indian

DRILLING PLAN Bettonnie Tsosie 731H San Juan County, New Mexico

Surface Location

508-ft FEL & 2491-ft FSL
Sec 10 T23N R8W
Graded Elevation 6933' MSL
RKB Elevation 6947' (14' KB)

SHL Geographical Coordinates (NAD-83)

Latitude 36.2411340° N
Longitude 107.6617220° W

Kick Off Point for Horizontal Build Curve

4778-ft MD
3533-ft TVD

Local Coordinates (from SHL)

1037-ft North
291-ft East

Heel Location (Pay zone entry)

372-ft FWL & 2066-ft FNL
Sec 11 T23N R8W

Heel Geographical Coordinates (NAD-83)

Latitude 36.24319366° N
Longitude 107.65873406° W

Bottom Hole Location (TD)

1018-ft FEL & 346-ft FSL
Sec 13 T23N R8W

BHL Geographical Coordinates (NAD-83)

Latitude 36.22087358° N
Longitude 107.6277387° W

Well objectives

This well is planned as a 12230-ft lateral in the Gallup C sand.

Bottom Hole temperature and pressure

The temperature in the Gallup C horizontal objective is 142°F. Bottom hole pressure in the Gallup C is forecast to be 1985 psi.

Formation Tops (Sd = Sand; Sh = Shale; Siltstone = Slt, Coal = C; W = water; O = oil; G = gas; NP = no penetration)

Name	MD (ft)	TVD (ft)	Lithology	Pore fluid	Expected Pore Pressure (ppg)	Planned Mud Weight (ppg)
Ojo Alamo	1047	1043	Sd	W	8.3	8.4 – 8.8
Kirtland	1152	1145	Sh	-	8.3	8.4 – 8.8
Fruitland	1329	1316	C	G	8.3	9.0 - 9.5
Pictured Cliffs	1675	1648	Sd	W	8.3	9.0 - 9.5
Lewis	1899	1864	Sh	-		9.0 - 9.5
Chacra	2502	2444	Sd	-	8.3	9.0 - 9.5
Menefee	3301	3212	Sd, C	G	8.3	9.0 - 9.5
Point Lookout	4191	4068	Sd	-	8.3	9.0 - 9.5
Mancos	4395	4264	Sh	-		9.0 - 9.5
Mancos Silt	4738	4594	Slt	O/G	6.6	9.0 - 9.5
Gallup A	5229	5049	Slt	O/G	6.6	9.0 - 9.5
Gallup B	5283	5091	Sd	O/G	6.6	8.8 - 9.0
Gallup C	5410	5179	Sd	O/G	6.6	8.8 - 9.0
Target	5854	5323	Sd	O/G	6.6	8.8 - 9.0

Casing Program

Casing OD	Hole Size	Weight (#/ft)	Grade	Coupling	MD Top	MD Bottom	TVD Top	TVD Bottom	Top of Cement
9-5/8"	12-1/4"	36	K-55	STC	surf	350	surf	350	surface
7"	8-3/4"	26	K-55	LTC	surf	5844	surf	5323	surface
4-1/2"	6-1/8"	11.6	P-110	BTC	5644	18084	5290	5323	5644

Note: all casing will be new

Casing Design Load Cases

Description		Casing String		
		9-5/8" Surface	7" Intermediate	4-1/2" Production Liner
Collapse	Full internal evacuation ¹	✓	✓	✓
	Cementing	✓	✓	✓
Burst	Pressure test	✓ ²	✓ ²	✓
	Gas kick		✓ ³	
	Fracture at shoe, 1/3 BHP at surface		✓ ⁴	
	Injection down casing			✓ ⁵
Axial	Dynamic load on casing coupling ⁶	✓	✓	✓
Axial	Overpull ⁷	✓	✓	✓

Note

- 1 Fluid level at shoe, air column to surface, pore pressure outside
- 2 Tested to 80% of minimum internal yield with freshwater inside, pore pressure outside
- 3 50 bbl kick at TD, 0.50 ppg intensity, 4" drill pipe, 9.0 ppg mud, fracture gradient at shoe
- 4 2060 psi BHP, 687 psi surface pressure, 12.5 ppg EMW shoe integrity
- 5 Surface stimulation pressure of 8000 psi on 8.3 ppg fluid column. Stimulation will be down frac string, so load does not apply to 7" intermediate casing.
- 6 Shock load from abrupt pipe deceleration, evaluated against coupling rating
- 7 Overpull values as follows: Surface casing 20,000 lbs, Intermediate & Production 100,000 lbs

Casing Design Factors

Casing string		Design Factors			
Casing string	Casing OD	Burst	Collapse	Axial	Triaxial
Surface	9-5/8"	1.25	13.38	8.16	1.56
Intermediate	7"	1.25	1.50	1.68	1.34
Production liner	4-1/2"	1.37	3.68	1.88	1.69

Cement Design

Additives: A=Accelerator; B=Bond Enhancer; De=Defoamer; Di=Dispersant; Ex=Extender; FI=Fluid Loss L=Lost Circulation; R=Retarder; SA=Suspending Agent; THX=Thixotropic Additive; V=Viscosifier

9-5/8" Surface Casing

	Lead
Name	Redi-Mix
Type	I-II
Additives	20% Fly Ash
Planned top	Surface
Density (ppg)	14.50
Yield (cf/sx)	1.61
Mix water (gal/sx)	7.41
Volume (sx)	114
Volume (bbls)	33
Volume (cu. ft.)	185
Excess %	50

7" Intermediate Casing

	Lead	Tail
Halliburton Name	HALCEM	VARICEM
Type	Poz/G	Poz/G
Additives	Ex, L, SA	Ex, FI, SA, L, THX
Planned top	Surface	3895-ft
Density (ppg)	12.30	13.50
Yield (cf/sx)	1.95	1.30
Mix water (gal/sx)	10.14	5.64
Volume (sx)	494	389

Volume (bbls)	172	90
Volume (cu.ft.)	964	507
Excess %	70	70

<u>4-1/2" Production Liner</u>	<u>Lead</u>
Halliburton Name	EXTENDACEM
Type	Poz/G
Additives	B, De, Di, Fl, Re, V
Planned top	5644-ft
Density (ppg)	13.3
Yield (cf/sx)	1.36
Mix water (gal/sx)	5.94
Volume (sx)	1256
Volume (bbls)	304
Volume (cu.ft)	1708
Excess %	30

Wellhead & Pressure Control

The well head will be an 11" 5M multi-bowl system. A 3M BOPE conforming to Onshore Order #2 will be installed on the surface casing. The BOP and accumulator will meet API 16D and 16E respectively.

A PVT mud monitoring system and a trip tank will be rigged up and operational for all hole intervals. An electronic geograph will be employed to monitor and record drilling data (ROP, WOB, SPM, Pressure, RPM and torque).

Mud Program

Surface hole will be drilled with a fresh water, native mud system. In intermediate hole, a low weight 7% KCl LSND drilling fluid will be used, with KCl providing chemical stability for the young shales and clays present in the interval. In production hole a LSND system with polymer and lubricant additives is programmed. Sufficient drill water and mud additives will be on hand to maintain adequate pit volumes and maintain well control.

Hole Section	Fluid type	Interval (MD)	Density (ppg)	Funnel Viscosity	Yield Point	Fluid Loss (cc/30 min)
Surface	Fresh water spud mud	0 – 350	8.4 – 8.8	32 – 44	2 – 12	NC
Intermediate	7% KCl Low solids, non-dispersed	350 – 5844	9.0 – 9.5	38 – 45	8 – 14	<20
Production	Low solids, non-dispersed	5844 – 18084	8.8 – 9.2	34 – 38	6 – 8	6 – 8

Cores, tests and logs

Wellbore surveying: Drift (inclination only) surveys will be obtained in surface hole. MWD directional surveys will be taken in intermediate and production hole.

Logging while drilling: None in surface hole. MWD GR in intermediate and production hole.

Mud logging: a two-person mud logging unit with C1 – C4 gas analysis will be operational in intermediate and production hole.

Electric logging: No open hole electric logs are programmed. A cased hole GR/CCL will be run during completions for perforating depth control.

Cuttings and drilling fluids management

A closed loop, steel tank-based circulating system will be used. In addition to the rig solids control equipment, a dewatering centrifuge and chemical flocculation system will be operational to strip solids from the whole mud. All solids will be collected in 3-sided bins and will then be put into transports with a bucket loader. Drying agents will be used if necessary. The solids will be taken to a licensed commercial disposal facility. Whole mud will be dewatered back to drill water and used as make up for subsequent wells or hauled off for disposal. A diagram of the closed loop system is included.

Completion

It is envisioned that this well will be completed with a multi-stage sand frac, using the plug and perf technique. After drilling out the plugs, the current plan is to install a 2-7/8" plunger-assisted gas lift tubing string. The stimulation and completion plan will be sundried at a later date.



DJR Operating

Betonne Tsoie Unit

I10 2308

731H

Original drilling

Plan: APD

Standard Planning Report

01 May, 2019

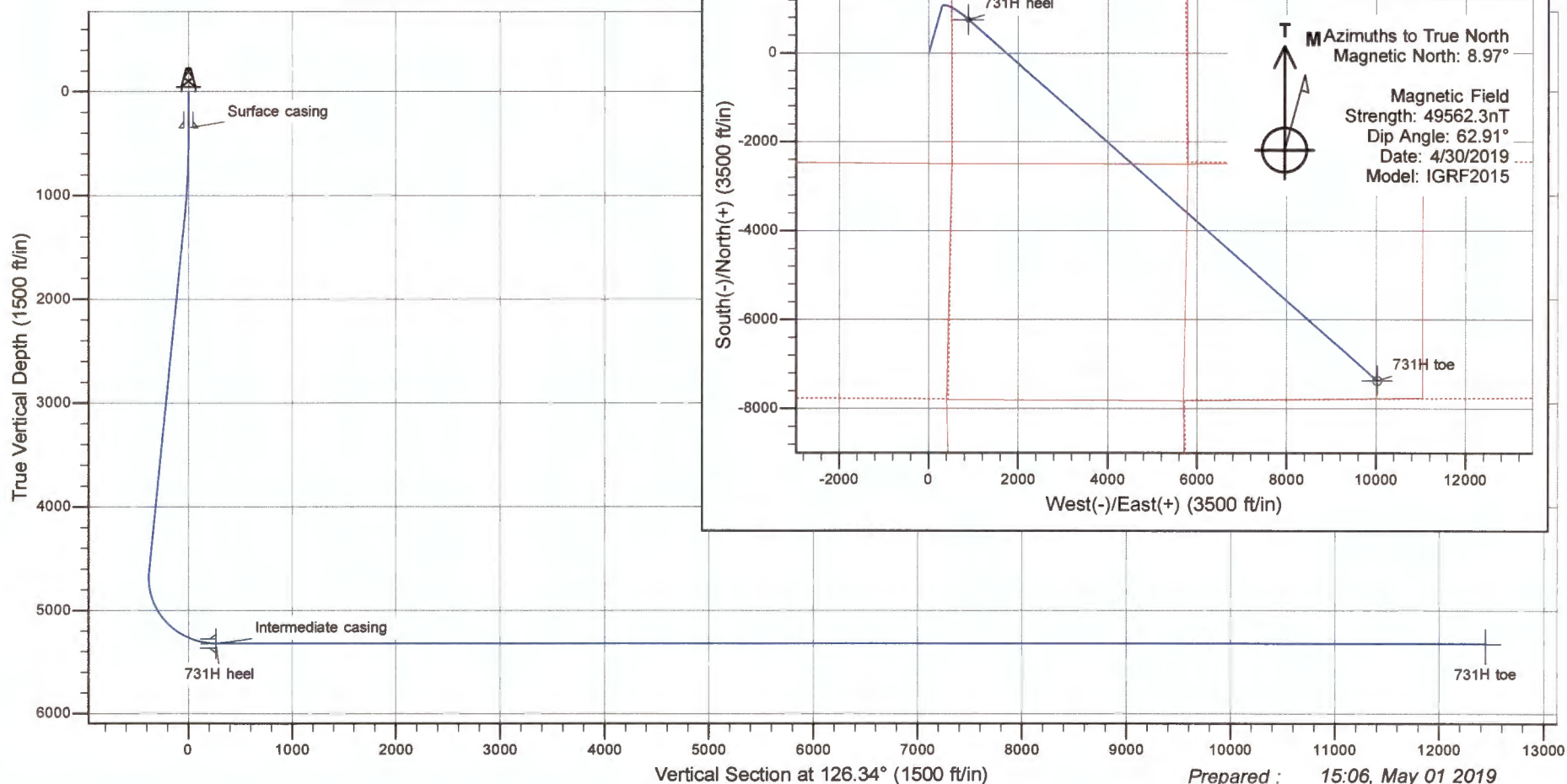


Pad name : I10 2308

Well name : Betonnie Tsosie Wash Unit #731H

SHL Latitude : 36.24113400
SHL Longitude : -107.66172200

US State Plane 1983
North American Datum 1983
New Mexico Western Zone



Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well # 731H
Company:	DJR Operating	TVD Reference:	RKB @ 6947ft (RIG TBD)
Project:	Betonne Tsoie Unit	MD Reference:	RKB @ 6947ft (RIG TBD)
Site:	I10 2308	North Reference:	True
Well:	# 731H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original drilling		
Design:	APD		

Project	Betonne Tsoie Unit		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site		I10 2308			
Site Position:		Northing:	1,907,116 usft	Latitude:	36.24113400
From:	Lat/Long	Easting:	2,773,697 usft	Longitude:	-107.66172200
Position Uncertainty:	0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.10 °

Well	# 731H					
Well Position	+N/-S	0 ft	Northing:	1,907,116 usft	Latitude:	36.24113400
	+E/-W	0 ft	Easting:	2,773,697 usft	Longitude:	-107.66172200
Position Uncertainty		0 ft	Wellhead Elevation:		Ground Level:	6933 ft

Wellbore	Original drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	4/30/2019	8.97	62.91	49,562.25021564

Design	APD			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0	0	0	126.34

Plan Survey Tool Program	Date	5/1/2019		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0	18,084	APD (Original drilling)	MWD+IGRF OWSG MWD + IGRF or WMM

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0	0.00	0.00	0	0	0	0.00	0.00	0.00	0.00	
450	0.00	0.00	450	0	0	0.00	0.00	0.00	0.00	
1245	15.90	15.68	1235	106	30	2.00	2.00	0.00	15.68	
4778	15.90	15.68	4632	1037	291	0.00	0.00	0.00	0.00	
5854	90.00	131.62	5323	750	881	9.00	6.88	10.77	115.08	731H heel
18,084	90.00	131.62	5323	-7374	10,024	0.00	0.00	0.00	0.00	731H toe

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well # 731H
Company:	DJR Operating	TVD Reference:	RKB @ 6947ft (RIG TBD)
Project:	Betonne Tsoie Unit	MD Reference:	RKB @ 6947ft (RIG TBD)
Site:	I10 2308	North Reference:	True
Well:	# 731H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original drilling		
Design:	APD		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0	0.00	0.00	0	0	0	0	0.00	0.00	0.00
100	0.00	0.00	100	0	0	0	0.00	0.00	0.00
200	0.00	0.00	200	0	0	0	0.00	0.00	0.00
300	0.00	0.00	300	0	0	0	0.00	0.00	0.00
350	0.00	0.00	350	0	0	0	0.00	0.00	0.00
Surface casing									
400	0.00	0.00	400	0	0	0	0.00	0.00	0.00
450	0.00	0.00	450	0	0	0	0.00	0.00	0.00
500	1.00	15.68	500	0	0	0	2.00	2.00	0.00
600	3.00	15.68	600	4	1	-1	2.00	2.00	0.00
700	5.00	15.68	700	10	3	-4	2.00	2.00	0.00
800	7.00	15.68	799	21	6	-8	2.00	2.00	0.00
900	9.00	15.68	898	34	10	-12	2.00	2.00	0.00
1000	11.00	15.68	997	51	14	-19	2.00	2.00	0.00
1047	11.95	15.68	1043	60	17	-22	2.00	2.00	0.00
Ojo Alamo									
1100	13.00	15.68	1094	71	20	-26	2.00	2.00	0.00
1152	14.04	15.68	1145	82	23	-30	2.00	2.00	0.00
Kirtland									
1200	15.00	15.68	1191	94	26	-34	2.00	2.00	0.00
1245	15.90	15.68	1235	106	30	-39	2.00	2.00	0.00
1300	15.90	15.68	1288	120	34	-44	0.00	0.00	0.00
1329	15.90	15.68	1316	128	36	-47	0.00	0.00	0.00
Fruitland									
1400	15.90	15.68	1384	146	41	-54	0.00	0.00	0.00
1500	15.90	15.68	1480	173	48	-63	0.00	0.00	0.00
1600	15.90	15.68	1576	199	56	-73	0.00	0.00	0.00
1675	15.90	15.68	1648	219	61	-80	0.00	0.00	0.00
Picture Cliffs									
1700	15.90	15.68	1672	226	63	-83	0.00	0.00	0.00
1800	15.90	15.68	1769	252	71	-92	0.00	0.00	0.00
1899	15.90	15.68	1864	278	78	-102	0.00	0.00	0.00
Lewis									
1900	15.90	15.68	1865	278	78	-102	0.00	0.00	0.00
2000	15.90	15.68	1961	305	85	-112	0.00	0.00	0.00
2100	15.90	15.68	2057	331	93	-121	0.00	0.00	0.00
2200	15.90	15.68	2153	357	100	-131	0.00	0.00	0.00
2300	15.90	15.68	2249	384	108	-141	0.00	0.00	0.00
2400	15.90	15.68	2346	410	115	-150	0.00	0.00	0.00
2500	15.90	15.68	2442	437	123	-160	0.00	0.00	0.00
2502	15.90	15.68	2444	437	123	-180	0.00	0.00	0.00
Chacra									
2600	15.90	15.68	2538	463	130	-170	0.00	0.00	0.00
2700	15.90	15.68	2634	489	137	-179	0.00	0.00	0.00
2800	15.90	15.68	2730	516	145	-189	0.00	0.00	0.00
2900	15.90	15.68	2827	542	152	-199	0.00	0.00	0.00
3000	15.90	15.68	2923	568	160	-208	0.00	0.00	0.00
3100	15.90	15.68	3019	595	167	-218	0.00	0.00	0.00
3200	15.90	15.68	3115	621	174	-228	0.00	0.00	0.00
3300	15.90	15.68	3211	648	182	-237	0.00	0.00	0.00
3301	15.90	15.68	3212	648	182	-237	0.00	0.00	0.00
Menefee									
3400	15.90	15.68	3307	674	189	-247	0.00	0.00	0.00

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well # 731H
Company:	DJR Operating	TVD Reference:	RKB @ 6947ft (RIG TBD)
Project:	Betonneie Tsosie Unit	MD Reference:	RKB @ 6947ft (RIG TBD)
Site:	I10 2308	North Reference:	True
Well:	# 731H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original drilling		
Design:	APD		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3500	15.90	15.68	3404	700	197	-257	0.00	0.00	0.00
3600	15.90	15.68	3500	727	204	-266	0.00	0.00	0.00
3700	15.90	15.68	3596	753	211	-276	0.00	0.00	0.00
3800	15.90	15.68	3692	779	219	-286	0.00	0.00	0.00
3900	15.90	15.68	3788	806	226	-295	0.00	0.00	0.00
4000	15.90	15.68	3884	832	234	-305	0.00	0.00	0.00
4100	15.90	15.68	3981	859	241	-315	0.00	0.00	0.00
4191	15.90	15.68	4068	883	248	-323	0.00	0.00	0.00
Point Lookout									
4200	15.90	15.68	4077	885	248	-324	0.00	0.00	0.00
4300	15.90	15.68	4173	911	256	-334	0.00	0.00	0.00
4395	15.90	15.68	4264	936	263	-343	0.00	0.00	0.00
Mancos									
4400	15.90	15.68	4269	938	263	-344	0.00	0.00	0.00
4500	15.90	15.68	4365	964	271	-353	0.00	0.00	0.00
4600	15.90	15.68	4461	990	278	-363	0.00	0.00	0.00
4700	15.90	15.68	4558	1017	285	-373	0.00	0.00	0.00
4738	15.90	15.68	4594	1027	288	-376	0.00	0.00	0.00
Mancos Silt									
4778	15.90	15.68	4633	1037	291	-380	0.00	0.00	0.00
KOP									
4800	15.16	22.65	4654	1043	293	-382	9.13	-3.38	31.69
4850	14.37	40.11	4702	1054	300	-383	9.00	-1.57	34.92
4900	14.94	57.82	4751	1062	309	-380	9.00	1.13	35.44
4950	16.71	73.06	4799	1067	321	-374	9.00	3.55	30.46
5000	19.37	84.84	4846	1070	337	-363	9.00	5.31	23.57
5050	22.59	93.63	4893	1070	354	-349	9.00	6.46	17.58
5100	26.18	100.22	4939	1068	375	-331	9.00	7.18	13.19
5150	30.00	105.29	4983	1063	398	-309	9.00	7.64	10.13
5200	33.98	109.28	5025	1055	423	-284	9.00	7.95	7.99
5229	36.35	111.25	5049	1049	439	-268	9.00	8.12	6.74
Gallup A									
5250	38.05	112.52	5066	1044	450	-256	9.00	8.21	6.11
5283	40.79	114.35	5091	1036	470	-235	9.00	8.28	5.54
Gallup B									
5300	42.21	115.22	5104	1031	480	-224	9.00	8.34	5.09
5350	46.41	117.51	5139	1016	511	-190	9.00	8.41	4.59
5400	50.66	119.50	5173	998	544	-153	9.00	8.49	3.98
5410	51.53	119.88	5179	994	551	-145	9.00	8.53	3.69
Gallup C									
5450	54.93	121.26	5203	978	578	-113	9.00	8.56	3.48
5500	59.23	122.85	5230	955	614	-72	9.00	8.60	3.17
5550	63.55	124.30	5254	931	650	-28	9.00	8.63	2.90
5600	67.88	125.64	5274	905	688	18	9.00	8.66	2.69
5644	71.70	126.76	5290	880	721	59	9.00	8.68	2.54
Top of liner									
5650	72.22	126.91	5292	877	726	65	9.00	8.69	2.47
5700	76.57	128.11	5305	848	764	113	9.00	8.70	2.41
5750	80.92	129.27	5315	817	802	162	9.00	8.71	2.32
5800	85.28	130.41	5321	785	840	212	9.00	8.71	2.27
5854	89.98	131.62	5323	750	881	265	9.00	8.72	2.24
Target - Intermediate casing									
5900	90.00	131.62	5323	719	915	311	0.04	0.03	0.01

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well # 731H
Company:	DJR Operating	TVD Reference:	RKB @ 6947ft (RIG TBD)
Project:	Betonne Tsoie Unit	MD Reference:	RKB @ 6947ft (RIG TBD)
Site:	I10 2308	North Reference:	True
Well:	# 731H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original drilling		
Design:	APD		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
6000	90.00	131.62	5323	653	990	411	0.00	0.00	0.00	
6100	90.00	131.62	5323	587	1065	510	0.00	0.00	0.00	
6200	90.00	131.62	5323	520	1140	610	0.00	0.00	0.00	
6300	90.00	131.62	5323	454	1214	709	0.00	0.00	0.00	
6400	90.00	131.62	5323	387	1289	809	0.00	0.00	0.00	
6500	90.00	131.62	5323	321	1364	909	0.00	0.00	0.00	
6600	90.00	131.62	5323	254	1439	1008	0.00	0.00	0.00	
6700	90.00	131.62	5323	188	1513	1108	0.00	0.00	0.00	
6800	90.00	131.62	5323	122	1588	1207	0.00	0.00	0.00	
6900	90.00	131.62	5323	55	1663	1307	0.00	0.00	0.00	
7000	90.00	131.62	5323	-11	1738	1406	0.00	0.00	0.00	
7100	90.00	131.62	5323	-78	1812	1506	0.00	0.00	0.00	
7200	90.00	131.62	5323	-144	1887	1606	0.00	0.00	0.00	
7300	90.00	131.62	5323	-211	1962	1705	0.00	0.00	0.00	
7400	90.00	131.62	5323	-277	2037	1805	0.00	0.00	0.00	
7500	90.00	131.62	5323	-343	2111	1904	0.00	0.00	0.00	
7600	90.00	131.62	5323	-410	2186	2004	0.00	0.00	0.00	
7700	90.00	131.62	5323	-476	2261	2103	0.00	0.00	0.00	
7800	90.00	131.62	5323	-543	2336	2203	0.00	0.00	0.00	
7900	90.00	131.62	5323	-609	2410	2303	0.00	0.00	0.00	
8000	90.00	131.62	5323	-675	2485	2402	0.00	0.00	0.00	
8100	90.00	131.62	5323	-742	2560	2502	0.00	0.00	0.00	
8200	90.00	131.62	5323	-808	2635	2601	0.00	0.00	0.00	
8300	90.00	131.62	5323	-875	2709	2701	0.00	0.00	0.00	
8400	90.00	131.62	5323	-941	2784	2800	0.00	0.00	0.00	
8500	90.00	131.62	5323	-1008	2859	2900	0.00	0.00	0.00	
8600	90.00	131.62	5323	-1074	2934	3000	0.00	0.00	0.00	
8700	90.00	131.62	5323	-1140	3008	3099	0.00	0.00	0.00	
8800	90.00	131.62	5323	-1207	3083	3199	0.00	0.00	0.00	
8900	90.00	131.62	5323	-1273	3158	3298	0.00	0.00	0.00	
9000	90.00	131.62	5323	-1340	3233	3398	0.00	0.00	0.00	
9100	90.00	131.62	5323	-1406	3308	3497	0.00	0.00	0.00	
9200	90.00	131.62	5323	-1473	3382	3597	0.00	0.00	0.00	
9300	90.00	131.62	5323	-1539	3457	3697	0.00	0.00	0.00	
9400	90.00	131.62	5323	-1605	3532	3796	0.00	0.00	0.00	
9500	90.00	131.62	5323	-1672	3607	3896	0.00	0.00	0.00	
9600	90.00	131.62	5323	-1738	3681	3995	0.00	0.00	0.00	
9700	90.00	131.62	5323	-1805	3756	4095	0.00	0.00	0.00	
9800	90.00	131.62	5323	-1871	3831	4195	0.00	0.00	0.00	
9900	90.00	131.62	5323	-1937	3906	4294	0.00	0.00	0.00	
10,000	90.00	131.62	5323	-2004	3980	4394	0.00	0.00	0.00	
10,100	90.00	131.62	5323	-2070	4055	4493	0.00	0.00	0.00	
10,200	90.00	131.62	5323	-2137	4130	4593	0.00	0.00	0.00	
10,300	90.00	131.62	5323	-2203	4205	4692	0.00	0.00	0.00	
10,400	90.00	131.62	5323	-2270	4279	4792	0.00	0.00	0.00	
10,500	90.00	131.62	5323	-2336	4354	4892	0.00	0.00	0.00	
10,600	90.00	131.62	5323	-2402	4429	4991	0.00	0.00	0.00	
10,700	90.00	131.62	5323	-2469	4504	5091	0.00	0.00	0.00	
10,800	90.00	131.62	5323	-2535	4578	5190	0.00	0.00	0.00	
10,900	90.00	131.62	5323	-2602	4653	5290	0.00	0.00	0.00	
11,000	90.00	131.62	5323	-2668	4728	5389	0.00	0.00	0.00	
11,100	90.00	131.62	5323	-2735	4803	5489	0.00	0.00	0.00	
11,200	90.00	131.62	5323	-2801	4877	5589	0.00	0.00	0.00	
11,300	90.00	131.62	5323	-2867	4952	5688	0.00	0.00	0.00	

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well # 731H
Company:	DJR Operating	TVD Reference:	RKB @ 6947ft (RIG TBD)
Project:	Betonnies Tsoie Unit	MD Reference:	RKB @ 6947ft (RIG TBD)
Site:	I10 2308	North Reference:	True
Well:	# 731H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original drilling		
Design:	APD		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
11,400	90.00	131.62	5323	-2934	5027	5788	0.00	0.00	0.00
11,500	90.00	131.62	5323	-3000	5102	5887	0.00	0.00	0.00
11,600	90.00	131.62	5323	-3067	5176	5987	0.00	0.00	0.00
11,700	90.00	131.62	5323	-3133	5251	6086	0.00	0.00	0.00
11,800	90.00	131.62	5323	-3199	5326	6186	0.00	0.00	0.00
11,900	90.00	131.62	5323	-3266	5401	6286	0.00	0.00	0.00
12,000	90.00	131.62	5323	-3332	5475	6385	0.00	0.00	0.00
12,100	90.00	131.62	5323	-3399	5550	6485	0.00	0.00	0.00
12,200	90.00	131.62	5323	-3465	5625	6584	0.00	0.00	0.00
12,300	90.00	131.62	5323	-3532	5700	6684	0.00	0.00	0.00
12,400	90.00	131.62	5323	-3598	5774	6783	0.00	0.00	0.00
12,500	90.00	131.62	5323	-3664	5849	6883	0.00	0.00	0.00
12,600	90.00	131.62	5323	-3731	5924	6983	0.00	0.00	0.00
12,700	90.00	131.62	5323	-3797	5999	7082	0.00	0.00	0.00
12,800	90.00	131.62	5323	-3864	6073	7182	0.00	0.00	0.00
12,900	90.00	131.62	5323	-3930	6148	7281	0.00	0.00	0.00
13,000	90.00	131.62	5323	-3996	6223	7381	0.00	0.00	0.00
13,100	90.00	131.62	5323	-4063	6298	7480	0.00	0.00	0.00
13,200	90.00	131.62	5323	-4129	6372	7580	0.00	0.00	0.00
13,300	90.00	131.62	5323	-4196	6447	7680	0.00	0.00	0.00
13,400	90.00	131.62	5323	-4262	6522	7779	0.00	0.00	0.00
13,500	90.00	131.62	5323	-4329	6597	7879	0.00	0.00	0.00
13,600	90.00	131.62	5323	-4395	6671	7978	0.00	0.00	0.00
13,700	90.00	131.62	5323	-4461	6746	8078	0.00	0.00	0.00
13,800	90.00	131.62	5323	-4528	6821	8178	0.00	0.00	0.00
13,900	90.00	131.62	5323	-4594	6896	8277	0.00	0.00	0.00
14,000	90.00	131.62	5323	-4661	6971	8377	0.00	0.00	0.00
14,100	90.00	131.62	5323	-4727	7045	8476	0.00	0.00	0.00
14,200	90.00	131.62	5323	-4794	7120	8576	0.00	0.00	0.00
14,300	90.00	131.62	5323	-4860	7195	8675	0.00	0.00	0.00
14,400	90.00	131.62	5323	-4926	7270	8775	0.00	0.00	0.00
14,500	90.00	131.62	5323	-4993	7344	8875	0.00	0.00	0.00
14,600	90.00	131.62	5323	-5059	7419	8974	0.00	0.00	0.00
14,700	90.00	131.62	5323	-5126	7494	9074	0.00	0.00	0.00
14,800	90.00	131.62	5323	-5192	7569	9173	0.00	0.00	0.00
14,900	90.00	131.62	5323	-5258	7643	9273	0.00	0.00	0.00
15,000	90.00	131.62	5323	-5325	7718	9372	0.00	0.00	0.00
15,100	90.00	131.62	5323	-5391	7793	9472	0.00	0.00	0.00
15,200	90.00	131.62	5323	-5458	7868	9572	0.00	0.00	0.00
15,300	90.00	131.62	5323	-5524	7942	9671	0.00	0.00	0.00
15,400	90.00	131.62	5323	-5591	8017	9771	0.00	0.00	0.00
15,500	90.00	131.62	5323	-5657	8092	9870	0.00	0.00	0.00
15,600	90.00	131.62	5323	-5723	8167	9970	0.00	0.00	0.00
15,700	90.00	131.62	5323	-5790	8241	10,069	0.00	0.00	0.00
15,800	90.00	131.62	5323	-5856	8316	10,169	0.00	0.00	0.00
15,900	90.00	131.62	5323	-5923	8391	10,269	0.00	0.00	0.00
16,000	90.00	131.62	5323	-5989	8466	10,368	0.00	0.00	0.00
16,100	90.00	131.62	5323	-6056	8540	10,468	0.00	0.00	0.00
16,200	90.00	131.62	5323	-6122	8615	10,567	0.00	0.00	0.00
16,300	90.00	131.62	5323	-6188	8690	10,667	0.00	0.00	0.00
16,400	90.00	131.62	5323	-6255	8765	10,766	0.00	0.00	0.00
16,500	90.00	131.62	5323	-6321	8839	10,866	0.00	0.00	0.00
16,600	90.00	131.62	5323	-6388	8914	10,966	0.00	0.00	0.00
16,700	90.00	131.62	5323	-6454	8989	11,065	0.00	0.00	0.00

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well # 731H
Company:	DJR Operating	TVD Reference:	RKB @ 6947ft (RIG TBD)
Project:	Betonnie Tsosie Unit	MD Reference:	RKB @ 6947ft (RIG TBD)
Site:	I10 2308	North Reference:	True
Well:	# 731H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original drilling		
Design:	APD		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
16,800	90.00	131.62	5323	-6520	9064	11,165	0.00	0.00	0.00
16,900	90.00	131.62	5323	-6587	9138	11,264	0.00	0.00	0.00
17,000	90.00	131.62	5323	-6653	9213	11,364	0.00	0.00	0.00
17,100	90.00	131.62	5323	-6720	9288	11,464	0.00	0.00	0.00
17,200	90.00	131.62	5323	-6786	9363	11,563	0.00	0.00	0.00
17,300	90.00	131.62	5323	-6853	9437	11,663	0.00	0.00	0.00
17,400	90.00	131.62	5323	-6919	9512	11,762	0.00	0.00	0.00
17,500	90.00	131.62	5323	-6985	9587	11,862	0.00	0.00	0.00
17,600	90.00	131.62	5323	-7052	9662	11,961	0.00	0.00	0.00
17,700	90.00	131.62	5323	-7118	9736	12,061	0.00	0.00	0.00
17,800	90.00	131.62	5323	-7185	9811	12,161	0.00	0.00	0.00
17,900	90.00	131.62	5323	-7251	9886	12,260	0.00	0.00	0.00
18,000	90.00	131.62	5323	-7318	9961	12,360	0.00	0.00	0.00
18,084	90.00	131.62	5323	-7374	10,024	12,444	0.00	0.00	0.00

Design Targets

Target Name: - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
731H toe - plan hits target center - Circle (radius 100)	0.00	0.00	5323	-7374	10,024	1,899,760	2,783,734	36.22087358	-107.62773872
731H heel - plan hits target center - Circle (radius 50)	0.00	0.00	5323	750	881	1,907,867	2,774,577	36.24319366	-107.65873406

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
350	350	Surface casing	9.625	12.250
5854	5323	Intermediate casing	7.000	8.750

Planning Report

Database:	EDM	Local Co-ordinate Reference:	Well # 731H
Company:	DJR Operating	TVD Reference:	RKB @ 6947ft (RIG TBD)
Project:	Betonnies Tsosie Unit	MD Reference:	RKB @ 6947ft (RIG TBD)
Site:	I10 2308	North Reference:	True
Well:	# 731H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original drilling		
Design:	APD		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1047	1043	Ojo Alamo		0.00	
1152	1145	Kirtland		0.00	
1329	1316	Fruitland		0.00	
1675	1648	Picture Cliffs		0.00	
1899	1864	Lewis		0.00	
2502	2444	Chacra		0.00	
3301	3212	Menefee		0.00	
4191	4068	Point Lookout		0.00	
4395	4264	Mancos		0.00	
4738	4594	Mancos Silt		0.00	
5229	5049	Gallup A		0.00	
5283	5091	Gallup B		0.00	
5410	5179	Gallup C		0.00	
5854	5323	Target		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4778	4633	1037	291	KOP
5644	5290	880	721	Top of liner



DJR Operating

Betonne Tsoie Unit

I10 2308

731H

Original drilling

APD

Anticollision Report

01 May, 2019

Anticollision Report

Company:	DJR Operating	Local Co-ordinate Reference:	Well # 731H
Project:	Betonnie Tsoie Unit	TVD Reference:	RKB @ 6947ft (RIG TBD)
Reference Site:	I10 2308	MD Reference:	RKB @ 6947ft (RIG TBD)
Site Error:	0 ft	North Reference:	True
Reference Well:	# 731H	Survey Calculation Method:	Minimum Curvature
Well Error:	0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original drilling	Database:	EDM
Reference Design:	APD	Offset TVD Reference:	Offset Datum

Reference	APD		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000 ft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

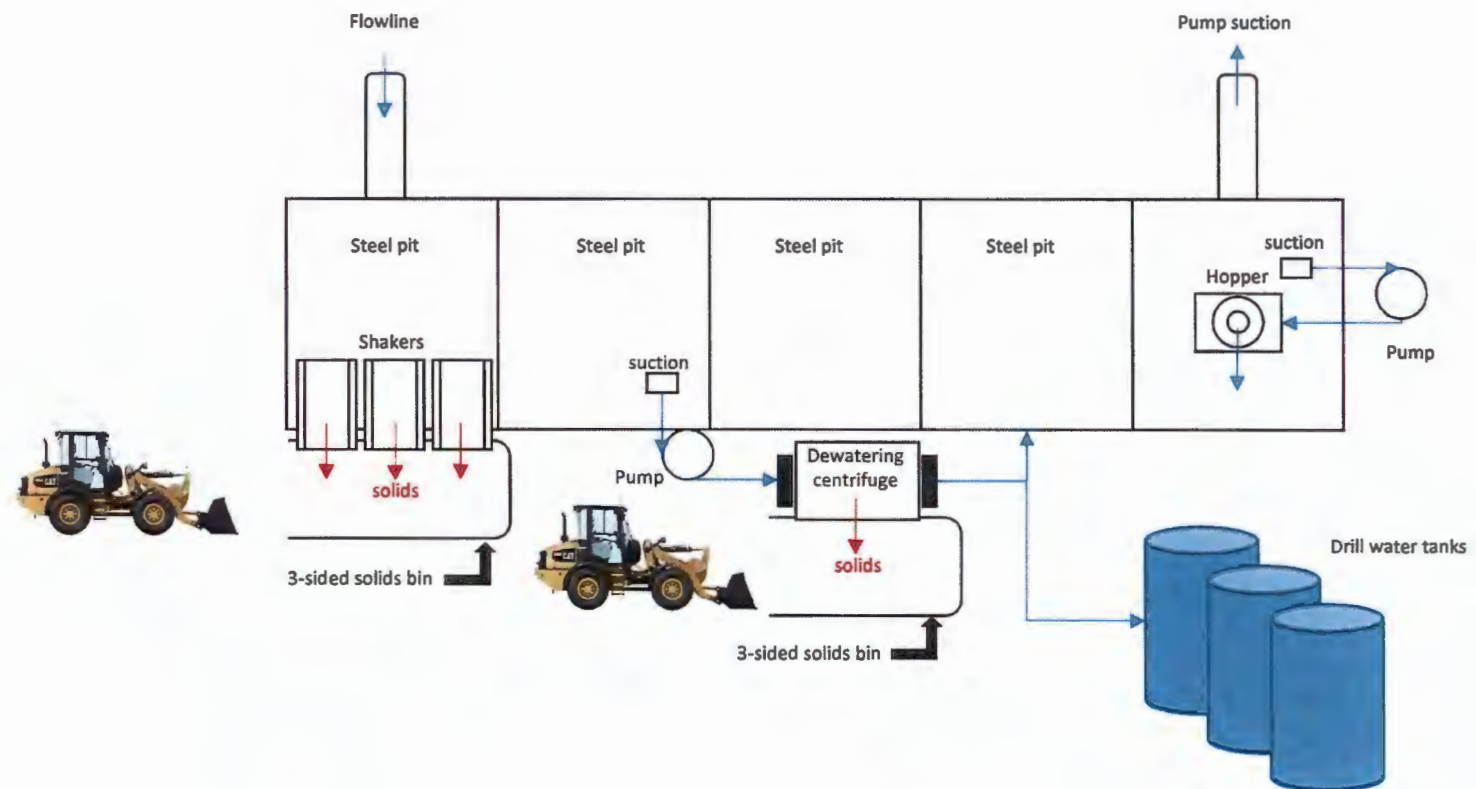
Survey Tool Program		Date	5/1/2019		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0	18,084	APD (Original drilling)	MWD+IGRF	OWSG MWD + IGRF or WMM	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
I10 2308						
# 110H - Original drilling - APD	450	450	60	57	21.308	CC, ES
# 110H - Original drilling - APD	16,900	15,685	1188	627	2.116	SF

Offset Design		I10 2308 - # 110H - Original drilling - APD										Offset Site Error:		0 ft
Survey Program:		0-MWD+IGRF										Offset Well Error:		0 ft
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Footface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation		Separation Factor	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(")	(ft)	(ft)	(ft)	(ft)	(ft)			
0	0	0	0	0	0	151.55	-53	29	60					
100	100	100	100	0	0	151.55	-53	29	60	60	0.31	194.741		
200	200	200	200	1	1	151.55	-53	29	60	59	1.03	58.558		
300	300	300	300	1	1	151.55	-53	29	60	58	1.74	34.460		
400	400	400	400	1	1	151.55	-53	29	60	58	2.46	24.414		
450	450	450	450	1	1	151.55	-53	29	60	57	2.82	21.308	CC, ES	
500	500	499	499	2	2	135.93	-53	29	61	58	3.17	19.171		
600	600	597	597	2	2	136.38	-55	32	66	62	3.86	17.126		
700	700	695	694	2	2	137.07	-58	38	77	72	4.56	16.855		
800	799	792	791	3	3	137.83	-63	46	93	88	5.28	17.618		
900	898	890	888	3	3	139.23	-68	55	112	106	6.01	18.886		
1000	897	887	885	3	3	141.08	-73	65	134	128	6.75	19.889		
1100	1094	1084	1081	4	4	143.09	-78	74	159	152	7.51	21.200		
1200	1191	1180	1176	4	4	145.08	-84	83	187	179	8.27	22.601		
1245	1235	1222	1219	5	4	145.95	-86	67	200	192	8.62	23.250		
1300	1288	1275	1271	5	5	147.09	-89	92	217	208	9.04	24.035		
1400	1384	1369	1365	6	5	148.77	-94	101	248	238	9.81	25.306		
1500	1480	1464	1460	6	5	150.09	-99	110	279	269	10.58	26.396		
1600	1576	1559	1554	7	6	151.14	-104	119	310	299	11.36	27.340		
1700	1672	1654	1648	7	6	151.99	-109	128	342	330	12.13	28.164		
1800	1769	1749	1743	8	6	152.71	-114	137	373	360	12.91	28.887		
1900	1865	1844	1837	8	7	153.31	-119	146	404	391	13.69	29.528		
2000	1961	1939	1931	9	7	153.63	-124	155	436	421	14.48	30.098		
2100	2057	2034	2025	10	8	154.28	-130	164	467	452	15.26	30.609		
2200	2153	2129	2120	10	8	154.67	-135	172	499	482	16.04	31.069		

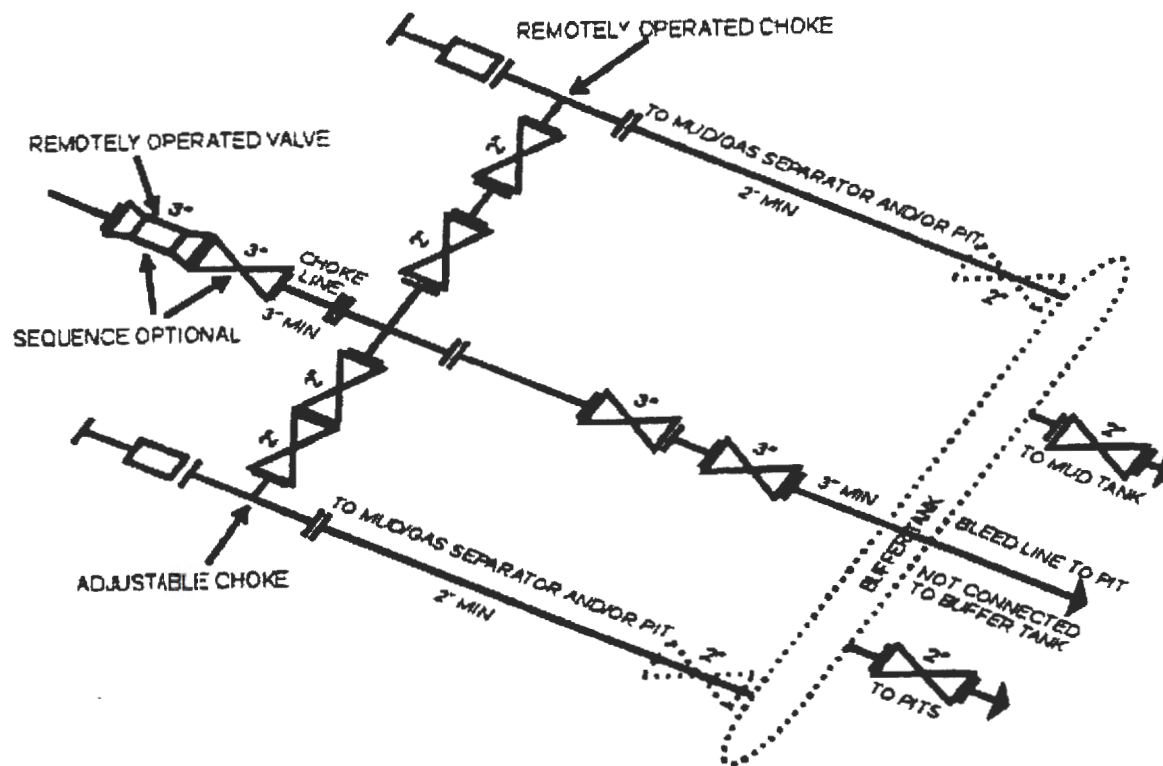
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Closed Loop Mud System



Choke Manifold

Actual system to conform with Onshore Order 2



Proposed BOP stack
11" 3M RRA



Double gate with integral choke/kill outlets

Kill line
2" minimum diameter

Choke line
3" minimum diameter

Low pressure rotating head

Flowline

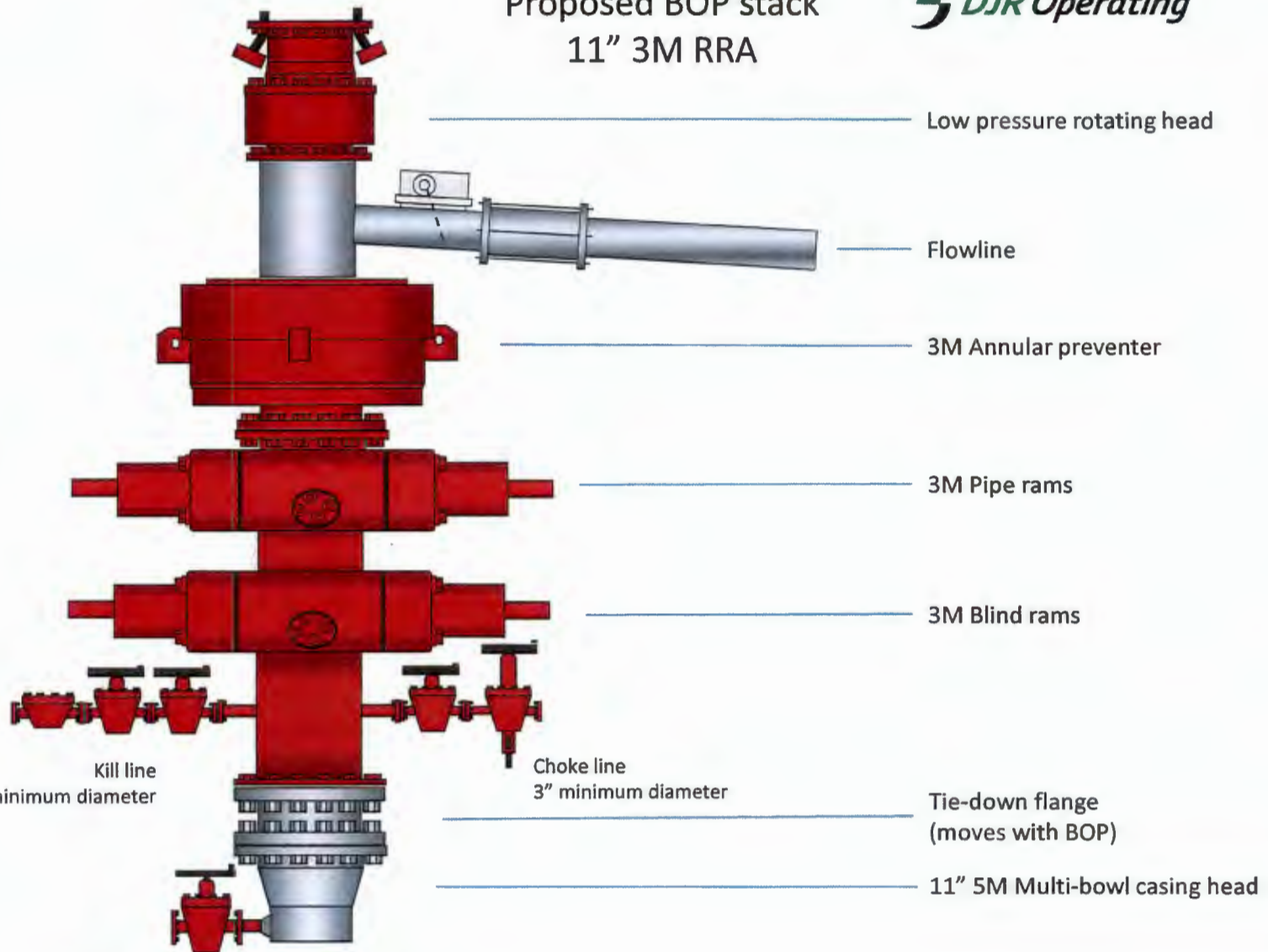
3M Annular preventer

3M Pipe rams

3M Blind rams

Tie-down flange
(moves with BOP)

11" 5M Multi-bowl casing head



District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

Date: 4/18/2019

☒ Original

Operator & OGRID No.: **DJR Operating LLC. ; 371838**

☐ Amended - Reason for Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Betonne Tsoie Wash Unit 110H		NESE, Section 10, T23N, R8W	2438' FSL, 480' FEL	1450	Flared	
Betonne Tsoie Wash Unit 731H		NESE, Section 10, T23N, R8W	2490' FSL, 508' FEL	1450	Flared	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to **Enterprise Field Services, LLC (Enterprise)** and will be connected to **Enterprise's** low/high pressure gathering system located in **Sandoval** County, New Mexico. It will require approximately **3996'** of pipeline to connect the facility to DJR Operating LLC. low/high pressure Existing Pipeline in **Sec. 11, T23N, R8W** which ties into **Enterprise's** existing pipeline in **Section 25, T23N, R7W**. **DJR Operating LLC.** provides (periodically) to **Enterprise** a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, **DJR Operating LLC.** and **Enterprise** have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at the **Chaco Processing Plant** located in **Sec. 16, Twn 26N, Rng 12W, San Juan** County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on **Enterprise** system at that time. Based on current information, it is **DJR Operating LLC.'s** belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines