

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

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

1a Type of work ☒ DRILL ☐ REENTER		5 Lease Serial No NMNM89819
1b Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		6 If Indian Allottee or Tribe Name
1c Type of Completion ☐ Hydraulic Fracturing ☒ Single Zone ☐ Multiple Zone		7 If Unit or CA Agreement Name and No
2 Name of Operator OXY USA Inc.		8 Lease Name and Well No Palladium MDP1 7-6 Federal Com 3Y
3a Address P.O. Box 50250 Midland, TX 79710	3b Phone No. (include area code) 432-685-6717	9 API Well No 30-015-44457
4 Location of Well (Report location clearly and in accordance with any State requirements *) At surface 169 FNL 2225 FWL NENW (C) Lat 32.2241283 Long -103.8184714 Sec 18 At proposed prod zone 180 FNL 2200 FWL Lot 3 Lat 32.2531590 Long -103.8186260 Sec 6		10 Field and Pool, or Exploratory Cotton Draw Bone Spring
11 Sec, T R M or Blk and Survey or Area Sec 18 T24S R31E NMP		12 County or Parish Eddy
13 State NM		14 Distance in miles and direction from nearest town or post office* 15 miles
15 Distance from proposed* location to nearest property or lease line. ft (Also to nearest drig unit line, if any) 50'	16 No of acres in lease 647.88	17 Spacing Unit dedicated to this well 320
18 Distance from proposed location* to nearest well drilling completed, 60' applied for on this lease ft	19 Proposed Depth 9996'V / 20074'M	20 BLM/BIA Bond No in file Fed. ESB000226
21 Elevations (Show whether DF, KDB, RT, GL, etc) 3534'	22 Approximate date work will start* 10/10/2017	23 Estimated duration 20days

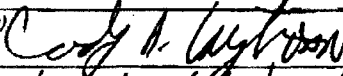
24. Attachments

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 	Name (Printed/Typed) David Stewart	Date 09/28/2017
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Title Sr Regulatory Advisor	david_stewart@oxy.com
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Approved by (Signature) 	Name (Printed/Typed) Cody L Layton	Date 9/28/17
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Title RFM - Lands & Minerals	Office CFO
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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

NM OIL CONSERVATION
ARTESIA DISTRICT

MAR 16 2018

RECEIVED

District I
 1435 N. Francis Dr., Hobbs, NM 88240
 Phone: (505) 393-4161 Fax: (505) 393-0720
 District II
 811 S. First St., Arroyo, NM 88210
 Phone: (505) 748-1283 Fax: (505) 748-9720
 District III
 1000 Rio Grande Road, Aztec, NM 87410
 Phone: (505) 334-6178 Fax: (505) 334-6170
 District IV
 1230 S. St. Francis Dr., Santa Fe, NM 87501
 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 30015-44457	Pool Code 13367	Pool Name Cotton Draw Bone Spring
Property Code 37687	Property Name PALLADIUM MDP1 "7-6" FEDERAL COM	Well Number 3Y
OGRID No 16696	Operator Name OXY USA INC.	Elevation 3534.0'

Surface Location

UL or lot no	Section	Township	Range	Lot Ids	Feet from the	North/South line	Feet from the	East/West line	County
C	18	24 SOUTH	31 EAST, N M P M		169'	NORTH	2225'	WEST	EDDY

Bottom Hole Location if Different From Surface

UL or lot no	Section	Township	Range	Lot Ids	Feet from the	North/South line	Feet from the	East/West line	County
3	6	24 SOUTH	31 EAST, N M P M		180'	NORTH	2200'	WEST	EDDY

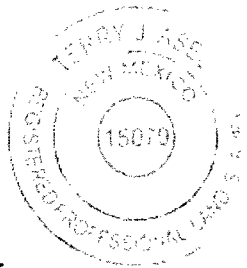
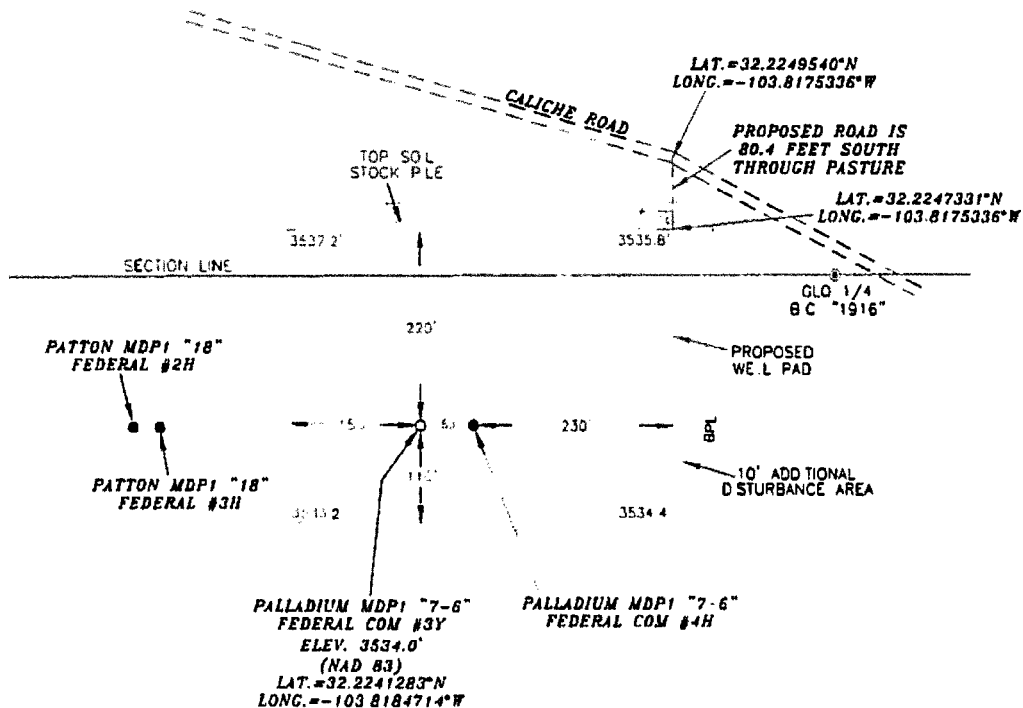
Dedicated Acres	Joint or Infill	Consolidation Code	Order No
320	Y		

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief and that the organization under review is a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill the well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order. hereby certified by the division: <i>David Stewart</i> 9/28/17 Signature Date David Stewart Sr. Reg. Adv. Printed Name david.stewart@oxy.com E-mail address SURVEYOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief and that the same is true and correct to the best of my knowledge. <i>Terry J. Hall</i> 9/23/2017 Signature Date Terry J. Hall Printed Name 15079 Professional Surveyor WOF 160602WL-a (Rev B) (KA)
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OXY USA INC. PALLADIUM MDP1 "7-6" FEDERAL COM #3Y SITE PLAN

FAA PERMIT: NO



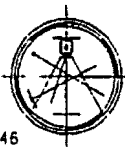
SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND MEETS THE "MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS.

Terry J. Asel 9/27/2017
Terry J. Asel, N.M. R.P.L.S. No. 15079

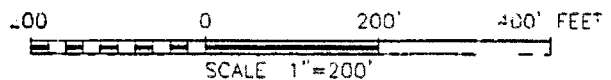
Asel Surveying

P.O. BOX 393 310 W TAYLOR
HOBBS, NEW MEXICO 575 393-9146



LEGEND

- DENOTES PROPOSED WELL PAD
- - - DENOTES PROPOSED ROAD
- DENOTES STOCK PILE AREA



OXY USA INC.

PALLADIUM MDP1 "7-6" FEDERAL COM #3Y
LOCATED AT 169 FNL & 2.25' FWL N
SECTION 18, TOWNSHIP 24 SOUTH, RANGE 31
EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO

Survey Date: 06/02/16	Sheet 1 of 1 Sheets
W.O. Number: 160602WL-a (Rev B)	Drawn By: KA Rev: B
Date: 09/27/17	160602WL-a Scale: 1"=200'

OXY USA Inc. - Palladium MDP1 7-6 Federal Com #3Y

1. Geologic Formations

TVD of target	9996'	Pilot Hole Depth	N/A
MD at TD:	20074'	Deepest Expected fresh water:	591'

Delaware Basin

Formation	TVD - RKB	Expected Fluids
Rustler	591	
Salado	951	
Castile	2861	
Lamar/Delaware	4282	Oil/Gas
Bell Canyon*	4327	Water/Oil/Gas
Cherry Canyon*	5109	Oil/Gas
Brushy Canyon*	6422	Oil/Gas
Bone Spring	8103	Oil/Gas
1st Bone Spring	9133	Oil/Gas
2nd Bone Spring	9423	Oil/Gas
3rd Bone Spring	10319	Oil/Gas

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	SF	SF	Buoyant	Buoyant
	From (ft)	To (ft)					Collapse	Burst	Body SF Tension	Joint SF Tension
17.5	0	641	13.375	54.5	J55	BTC	1.125	1.2	1.4	1.4
12.25	0	4332	9.625	36	J55	BTC	1.125	1.2	1.4	1.4
8.5	0	20074	5.5	20	P-110	DQX	1.125	1.2	1.4	1.4
SF Values will meet or Exceed										

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	

OXY USA Inc. - Palladium MDP1 7-6 Federal Com #3Y

Is well located in SOPA but not in R-111-P?	Y
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	Y
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2 nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. (lb/gal)	Yld (ft ³ /sack)	H ₂ O (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface	552	14.2	1.68	6.53	6:50	Class C Cement, Accelerator
Intermediate Casing	1139	12.9	1.74	8.67	15:07	Pozzolan Cement, Retarder
	156	14.8	1.326	6.34	6:31	Class C Cement, Retarder, Dispersant, Salt
Production Casing 1st Stage	311	10.2	2.6	11.58	15:00	Class C Cement
	2242	13.2	1.38	6.65	3:49	Class H Cement, Retarder, Dispersant, Salt
Production Casing 2nd Stage	873	13.5	1.66	8.86	12:09	Class C Cement
	356	14.8	1.35	6.38	7:00	Class H Cement, Retarder, Dispersant, Salt

Casing String	Top of Lead (ft)	Bottom of Lead (ft)	Top of Tail (ft)	Bottom of Tail (ft)	% Excess Lead	% Excess Tail
Surface	N/A	N/A	0	641	N/A	100%
Intermediate Casing	0	3832	3832	4332	75%	20%
Production Casing 1st Stage	6461	8128	8128	20074	20%	20%
Production Casing 2nd Stage	0	4711	4711	6461	0%	20%

*OXY respectfully requests to pump a two stage production cement job with the first stage being pumped conventionally and the second stage performed as a bradenhead squeeze. First stage cement will be pumped up to a known lost returns zone. The second stage will be pumped down to the lost returns zone and will maintain SOPA top of cement requirements being 500' inside intermediate casing shoe.

OXY USA Inc. - Palladium MDP1 7-6 Federal Com #3Y

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12.25" Hole	13-5/8"	5M	Annular	✓	70% of working pressure
			Blind Ram	✓	250/5000psi
			Pipe Ram		
			Double Ram	✓	
			Other*		

*Specify if additional ram is utilized.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
Y	Are anchors required by manufacturer?
	A multibowl or a unionized multibowl wellhead system will be employed. The wellhead and connection to the BOPE will meet all API 6A requirements. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. We will test the flange connection of the wellhead with a test port that is directly in the flange. We are proposing that we will run the wellhead through the rotary prior to cementing surface casing as discussed with the BLM on October 8, 2015. See attached schematics.

OXY USA Inc. - Palladium MDP1 7-6 Federal Com #3Y

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From (ft)	To (ft)				
0	641	Water-Based Mud	8.4-8.6	40-60	N/C
641	4332	Brine	9.8-10.0	35-45	N/C
4332	20074	Oil-Based Mud	8.2-9.0	35-50	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

What will be used to monitor the loss or gain of fluid?	PVT/MD Totco/Visual Monitoring
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6. Logging and Testing Procedures

Logging, Coring and Testing.	
Yes	Will run GR from TD to surface (horizontal well - vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
No	Logs are planned based on well control or offset log information.
No	Drill stem test? If yes, explain
No	Coring? If yes, explain

Additional logs planned		Interval
Yes	Quad Combo with Spectral Gamma Ray and Dipole Sonic	KOP - Top Bone Spring
Yes	Triple Combo with Spectral Gamma Ray	Top Bone Spring - Top Delaware
No	CBL	
Yes	Mud log	SCP - TD
No	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4991 psi
Abnormal Temperature	No
BH Temperature at deepest TVD	160°F

OXY USA Inc. - Palladium MDP1 7-6 Federal Com #3Y

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N	H2S is present
Y	H2S Plan attached

8. Other facets of operation

	Yes/No
Will the well be drilled with a walking/skidding operation? If yes, describe. We plan to drill the two well pad in batch by section: all surface sections, intermediate sections and production sections. The wellhead will be secured with a night cap whenever the rig is not over the well.	Yes
Will more than one drilling rig be used for drilling operations? If yes, describe. Oxy requests the option to contract a Surface Rig to drill, set surface casing, and cement for this well. If the timing between rigs is such that Oxy would not be able to preset surface, the Primary Rig will MIRU and drill the well in its entirety per the APD. Please see the attached document for information on the spudder rig.	Yes

Total estimated cuttings volume: 1833.6 bbls.

9. Company Personnel

Name	Title	Office Phone	Mobile Phone
Philippe Haffner	Drilling Engineer	713-985-6379	832-767-9047
Diego Tellez	Drilling Engineer Supervisor	713-350-4602	713-303-4932
Simon Benavides	Drilling Superintendent	713-522-8652	281-684-6897
John Willis	Drilling Manager	713-366-5556	713-259-1417

Schlumberger

Oxy Palladium MDP1 7-8 Federal Com 3Y REV0 LBN 27Sep17 Proposal Geodetic Report (Def Plan)



Report Date: September 27 2017 02:18 PM
Client: OXY
Field: NM Entry County (RAD 83)
Structure / Block: Oxy Palladium MDP1 7-8 Federal Com 3Y / Oxy Palladium MDP1 7-8 Federal Com 3Y
Well: Oxy Palladium MDP1 7-8 Federal Com 3Y
Borehole: Original Borehole
UW / APIS: Unknown / Unknown
Survey Name: Oxy Palladium MDP1 7-8 Federal Com 3Y REV0 LBN 27Sep17
Survey Date: September 27 2017
Tert / AMD / DDI / BLD Ratio: 10 S70 / 1037E 034 R 6 321 / 1 050
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone US Feet
Location Lat / Long: N 32° 13' 26.84" W 103° 46' 0.47" W
Location Grid N/E Y/X: N 445851 121 8125 E 700552 234 8125
CRS Grid Convergence Angle: 0.2748
Grid Scale Factor: 0.99993812
Version / Patch: 2 10 544 8

Survey / OLS Computation
Vertical Section Azimuth: 358 622 (Grid North)
Vertical Section Origin: 6 008 8 6 008 8
TVD Reference Datum: RLS+26.5'
TVD Reference Elevation: 3580 000 R above MSL
Seabed / Ground Elevation: 2534 000 R above MSL
Magnetic Declination: 6 943
Total Gravity Field Strength: 994 4278m/s² (9 80665 Standard)
Gravity Model: GGM
Total Magnetic Field Strength: 49044 883 nT
Magnetic Dip Angle: 59.983
Destination Date: September 27 2017
Magnetic Declination Model: NODM 2017
North Reference: Grid North
Grid Convergence Used: 0.2748
Total Corr Mag North-Grid North: 6 8823
Local Coord Referenced To: Well Head

Comments	MD	Inc	Asht Grid	TVD	VBEC	RS	RW	OLS	Northings	Eastings	Latitude	Longitude
SPL	m	°	m	m	m	m	m	m (711000)	m (702500)	m (700500)	N/E (°/m)	W/E (°/m)
0.00	0.00	0.00	343.18	5.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
100.00	0.00	0.00	343.18	105.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
200.00	0.00	0.00	343.18	205.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
300.00	0.00	0.00	343.18	305.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
400.00	0.00	0.00	343.18	405.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
500.00	0.00	0.00	343.18	505.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
600.00	0.00	0.00	343.18	605.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
700.00	0.00	0.00	343.18	705.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
800.00	0.00	0.00	343.18	805.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
900.00	0.00	0.00	343.18	905.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
1000.00	0.00	0.00	343.18	1000.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
1100.00	0.00	0.00	343.18	1100.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
1200.00	0.00	0.00	343.18	1200.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
1300.00	0.00	0.00	343.18	1300.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
1400.00	0.00	0.00	343.18	1400.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
1500.00	0.00	0.00	343.18	1500.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
1600.00	0.00	0.00	343.18	1600.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
1700.00	0.00	0.00	343.18	1700.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
1800.00	0.00	0.00	343.18	1800.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
1900.00	0.00	0.00	343.18	1900.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
2000.00	0.00	0.00	343.18	2000.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
2100.00	0.00	0.00	343.18	2100.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
2200.00	0.00	0.00	343.18	2200.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
2300.00	0.00	0.00	343.18	2300.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
2400.00	0.00	0.00	343.18	2400.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
2500.00	0.00	0.00	343.18	2500.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
2600.00	0.00	0.00	343.18	2600.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
2700.00	0.00	0.00	343.18	2700.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
2800.00	0.00	0.00	343.18	2800.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
2900.00	0.00	0.00	343.18	2900.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
3000.00	0.00	0.00	343.18	3000.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
3100.00	0.00	0.00	343.18	3100.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
3200.00	0.00	0.00	343.18	3200.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
3300.00	0.00	0.00	343.18	3300.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
3400.00	0.00	0.00	343.18	3400.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
3500.00	0.00	0.00	343.18	3500.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
3600.00	0.00	0.00	343.18	3600.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
3700.00	0.00	0.00	343.18	3700.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
3800.00	0.00	0.00	343.18	3800.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
3900.00	0.00	0.00	343.18	3900.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
4000.00	0.00	0.00	343.18	4000.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
4100.00	0.00	0.00	343.18	4100.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
4200.00	0.00	0.00	343.18	4200.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
4300.00	0.00	0.00	343.18	4300.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
4400.00	0.00	0.00	343.18	4400.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
4500.00	0.00	0.00	343.18	4500.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
4600.00	0.00	0.00	343.18	4600.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
4700.00	0.00	0.00	343.18	4700.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
4800.00	0.00	0.00	343.18	4800.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
4900.00	0.00	0.00	343.18	4900.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
5000.00	0.00	0.00	343.18	5000.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
5100.00	0.00	0.00	343.18	5100.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
5200.00	0.00	0.00	343.18	5200.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
5300.00	0.00	0.00	343.18	5300.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
5400.00	0.00	0.00	343.18	5400.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
5500.00	0.00	0.00	343.18	5500.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
5600.00	0.00	0.00	343.18	5600.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
5700.00	0.00	0.00	343.18	5700.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
5800.00	0.00	0.00	343.18	5800.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
5900.00	0.00	0.00	343.18	5900.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
6000.00	0.00	0.00	343.18	6000.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
6100.00	0.00	0.00	343.18	6100.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
6200.00	0.00	0.00	343.18	6200.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
6300.00	0.00	0.00	343.18	6300.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
6400.00	0.00	0.00	343.18	6400.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
6500.00	0.00	0.00	343.18	6500.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
6600.00	0.00	0.00	343.18	6600.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
6700.00	0.00	0.00	343.18	6700.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
6800.00	0.00	0.00	343.18	6800.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
6900.00	0.00	0.00	343.18	6900.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
7000.00	0.00	0.00	343.18	7000.00	0.00	0.00	0.00	0.00	49044.883	700552.23	N 32° 13' 26.84"	W 103° 46' 0.47"
7100.00	0.00	0.00	343.18									

Comments	MB #	Incl #	Asm Bolt	TVD ft	VMEC ft	MS ft	EW ft	DLS ft	Northing ft	Easting ft	Latitude N	Longitude W
Hold Target	7700 00	1.20	343 18	7700 00	4 20	4 20	-1.20	2 00	443653 00	700530 84	N 32 13 28.83 W 103 48 0 48	
	7800 00	1.20	343 18	7700 00	11 31	11 31	-3.42	2 00	443652 91	700540 82	N 32 13 28 05 W 103 48 0 51	
	7900 00	1.20	343 18	7700 00	21 00	21 02	-0.54	2 00	443652 74	700545 80	N 32 13 27 06 W 103 48 0 50	
	7940 00	0.00	343 18	7830 70	20 74	20 60	-0.08	2 00	443677 00	700544 18	N 32 13 27 11 W 103 48 0 50	
	8000 00	0.00	343 18	7830 72	34 75	34 63	-10.50	0 00	443685 00	700541 71	N 32 13 27 10 W 103 48 0 50	
	8100 00	0.00	343 18	8037 16	48 00	48 00	-14.53	0 00	443690 12	700537 71	N 32 13 27 22 W 103 48 0 54	
	8200 00	0.00	343 18	8190 17	81 44	81 32	-18.06	0 00	443712 43	700533 68	N 32 13 27 43 W 103 48 0 60	
	8300 00	0.00	343 18	8293 20	74 70	74 64	-22.59	0 00	443725 75	700529 84	N 32 13 27 38 W 103 48 0 73	
	8400 00	0.00	343 18	8384 25	101 40	101 28	-20.02	0 00	443739 87	700525 81	N 32 13 27 71 W 103 48 0 78	
	8500 00	0.00	343 18	8502 25	114 83	114 60	-30.00	0 00	443752 20	700521 58	N 32 13 27 85 W 103 48 0 82	
	8600 00	0.00	343 18	8691 31	125 17	127 92	-34.00	0 00	443770 03	700518 52	N 32 13 28 11 W 103 48 0 82	
	8700 00	0.00	343 18	8889 31	141 32	141 24	-42.75	0 00	443792 26	700509 49	N 32 13 28 37 W 103 48 0 86	
	8800 00	0.00	343 18	9089 30	154 87	154 86	-48.78	0 00	443805 87	700505 45	N 32 13 28 57 W 103 48 0 91	
	8900 00	0.00	343 18	9289 30	168 21	167 68	-50.61	0 00	443818 99	700501 42	N 32 13 28 51 W 103 48 0 95	
	9100 00	0.00	343 18	9489 30	181 30	181 20	-54.83	0 00	443832 31	700497 38	N 32 13 28 64 W 103 48 0 98	
	9200 00	0.00	343 18	9689 30	194 31	194 32	-58.88	0 00	443845 63	700493 36	N 32 13 28 77 W 103 48 0 98	
	9300 00	0.00	343 18	9889 30	207 32	207 34	-62.91	0 00	443858 95	700489 33	N 32 13 28 90 W 103 48 0 98	
	9400 00	0.00	343 18	10089 30	220 33	221 10	-66.94	0 00	443872 27	700485 30	N 32 13 28 83 W 103 48 0 98	
	9480 40	0.00	343 18	10473 11	233 34	233 08	-70.35	0 00	443884 19	700481 26	N 32 13 28 15 W 103 48 0 98	
	9500 00	0.00	345 40	10483 31	233 04	234 58	-70 07	18 00	443898 69	700481 27	N 32 13 28 17 W 103 48 0 98	
	9600 00	10 78	354 50	10580 47	230 72	230 23	-74 47	18 00	443904 34	700477 77	N 32 13 28 40 W 103 48 0 98	
	9700 00	20 71	357 57	10671 90	230 06	230 30	-77 01	18 00	443910 01	700475 73	N 32 13 28 00 W 103 48 0 98	
Build 10°/100'	9800 00	30 06	356 11	10754 99	230 26	231 73	-79 32	18 00	443920 04	700473 72	N 32 13 28 35 W 103 48 0 98	
	9843 36	45 00	356 77	10802 18	230 51	230 00	-79 02	18 00	443927 00	700473 32	N 32 13 28 36 W 103 48 0 98	
	9900 00	48 00	356 77	10827 24	231 21	232 70	-79 02	18 00	443932 00	700473 32	N 32 13 21 83 W 103 48 0 98	
	10000 00	50 00	356 77	10848 42	231 67	232 40	-79 35	18 00	443937 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	10100 00	54 00	356 77	10869 73	232 17	232 40	-79 71	18 00	443942 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	10200 00	58 00	356 77	10890 85	232 67	232 40	-80 00	18 00	443947 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	10300 00	62 00	356 77	10911 97	233 17	233 40	-80 36	18 00	443952 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	10400 00	66 00	356 77	10933 09	233 67	233 40	-80 72	18 00	443957 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	10500 00	70 00	356 77	10954 21	234 17	234 40	-81 08	18 00	443962 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	10600 00	74 00	356 77	10975 33	234 67	234 40	-81 44	18 00	443967 00	700472 80	N 32 13 21 82 W 103 48 0 98	
Landing Point	10700 00	78 00	356 77	10996 45	235 17	235 40	-81 80	18 00	443972 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	10800 00	82 00	356 77	11017 57	235 67	235 40	-82 16	18 00	443977 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	10900 00	86 00	356 77	11038 69	236 17	236 40	-82 52	18 00	443982 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	11000 00	90 00	356 77	11059 81	236 67	236 40	-83 28	18 00	443987 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	11100 00	94 00	356 77	11080 93	237 17	237 40	-83 64	18 00	443992 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	11200 00	98 00	356 77	11102 05	237 67	237 40	-84 00	18 00	443997 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	11300 00	102 00	356 77	11123 17	238 17	238 40	-84 36	18 00	444002 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	11400 00	106 00	356 77	11144 29	238 67	238 40	-84 72	18 00	444007 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	11500 00	110 00	356 77	11165 41	239 17	239 40	-85 08	18 00	444012 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	11600 00	114 00	356 77	11186 53	239 67	239 40	-85 44	18 00	444017 00	700472 80	N 32 13 21 82 W 103 48 0 98	
Turn 2°/100'	11700 00	118 00	356 77	11207 65	240 17	240 40	-85 80	18 00	444022 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	11800 00	122 00	356 77	11228 77	240 67	240 40	-86 16	18 00	444027 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	11900 00	126 00	356 77	11249 89	241 17	241 40	-86 52	18 00	444032 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	12000 00	130 00	356 77	11270 93	241 67	241 40	-86 88	18 00	444037 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	12100 00	134 00	356 77	11291 05	242 17	242 40	-86 24	18 00	444042 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	12200 00	138 00	356 77	11312 17	242 67	242 40	-86 60	18 00	444047 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	12300 00	142 00	356 77	11333 29	243 17	243 40	-86 96	18 00	444052 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	12400 00	146 00	356 77	11354 41	243 67	243 40	-87 32	18 00	444057 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	12500 00	150 00	356 77	11375 53	244 17	244 40	-87 68	18 00	444062 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	12600 00	154 00	356 77	11396 65	244 67	244 40	-88 04	18 00	444067 00	700472 80	N 32 13 21 82 W 103 48 0 98	
Hold	12700 00	158 00	356 77	11417 77	245 17	245 40	-88 40	18 00	444072 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	12800 00	162 00	356 77	11438 89	245 67	245 40	-88 76	18 00	444077 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	12900 00	166 00	356 77	11459 01	246 17	246 40	-89 12	18 00	444082 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	13000 00	170 00	356 77	11480 13	246 67	246 40	-89 48	18 00	444087 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	13100 00	174 00	356 77	11501 25	247 17	247 40	-89 84	18 00	444092 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	13200 00	178 00	356 77	11522 37	247 67	247 40	-90 20	18 00	444097 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	13300 00	182 00	356 77	11543 49	248 17	248 40	-90 56	18 00	444102 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	13400 00	186 00	356 77	11564 61	248 67	248 40	-91 32	18 00	444107 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	13500 00	190 00	356 77	11585 73	249 17	249 40	-91 68	18 00	444112 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	13600 00	194 00	356 77	11606 85	249 67	249 40	-92 04	18 00	444117 00	700472 80	N 32 13 21 82 W 103 48 0 98	
Turn 2°/100'	13700 00	198 00	356 77	11627 97	250 17	250 40	-92 40	18 00	444122 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	13800 00	202 00	356 77	11649 09	250 67	250 40	-92 76	18 00	444127 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	13900 00	206 00	356 77	11670 21	251 17	251 40	-93 12	18 00	444132 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	14000 00	210 00	356 77	11691 33	251 67	251 40	-93 48	18 00	444137 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	14100 00	214 00	356 77	11712 45	252 17	252 40	-93 84	18 00	444142 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	14200 00	218 00	356 77	11733 57	252 67	252 40	-94 20	18 00	444147 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	14300 00	222 00	356 77	11754 69	253 17	253 40	-94 56	18 00	444152 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	14400 00	226 00	356 77	11775 81	253 67	253 40	-95 32	18 00	444157 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	14500 00	230 00	356 77	11796 93	254 17	254 40	-95 68	18 00	444162 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	14600 00	234 00	356 77	11818 05	254 67	254 40	-96 04	18 00	444167 00	700472 80	N 32 13 21 82 W 103 48 0 98	
Hold	14700 00	238 00	356 77	11839 17	255 17	255 40	-96 40	18 00	444172 00	700472 80	N 32 13 21 82 W 103 48 0 98	
	14800 00	242 00	356 77	11860 29	255 67	255 40	-96 76	18 00	444177 00	700472 80	N 32 13 21 82 W 103 48 0 98	

Comments	MD (ft)	Tool (ft)	Asin Grid (ft)	TVD (ft)	VSEC (ft)	NA (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (deg ° ' ")	Longitude (deg ° ' ")
	17200.00	89.82	258.77	9888.79	7688.48	7688.28	58.90	0.00	453334.89	700482.24	N 32 14 42.00 W 103 49 8.72	
	17300.00	89.82	258.77	9887.14	7704.47	7704.20	-58.41	0.00	453434.88	700483.82	N 32 14 43.89 W 103 49 8.72	
	17400.00	89.82	258.77	9887.43	7694.47	7694.20	-58.81	0.00	453534.87	700485.42	N 32 14 44.88 W 103 49 8.72	
	17500.00	89.82	258.77	9887.73	7684.47	7684.20	-59.22	0.00	453634.87	700487.02	N 32 14 45.87 W 103 49 8.72	
	17600.00	89.82	258.77	9888.07	7674.47	7674.20	-59.63	0.00	453734.86	700488.61	N 32 14 46.86 W 103 49 8.71	
	17700.00	89.82	258.77	9888.38	7664.47	7664.20	-60.03	0.00	453834.85	700490.20	N 32 14 47.85 W 103 49 8.71	
	17800.00	89.82	258.77	9888.71	7654.47	7654.20	-60.44	0.00	453934.84	700491.80	N 32 14 48.84 W 103 49 8.71	
	17900.00	89.82	258.77	9889.05	7644.47	7644.20	-60.85	0.00	454034.83	700493.39	N 32 14 49.83 W 103 49 8.71	
	18000.00	89.82	258.77	9889.35	7634.47	7634.20	-61.26	0.00	454134.83	700495.00	N 32 14 51.81 W 103 49 8.71	
	18100.00	89.82	258.77	9889.67	7624.47	7624.20	-61.68	0.00	454234.82	700496.59	N 32 14 52.80 W 103 49 8.71	
	18200.00	89.82	258.77	9889.99	7614.47	7614.20	-62.07	0.00	454334.81	700498.17	N 32 14 53.78 W 103 49 8.71	
	18300.00	89.82	258.77	9890.31	7604.47	7604.20	-62.48	0.00	454434.81	700499.76	N 32 14 54.77 W 103 49 8.71	
	18400.00	89.82	258.77	9890.63	7594.47	7594.20	-62.88	0.00	454534.80	700501.35	N 32 14 55.76 W 103 49 8.71	
	18500.00	89.82	258.77	9890.95	7584.47	7584.20	-63.29	0.00	454634.79	700502.94	N 32 14 56.75 W 103 49 8.71	
	18600.00	89.82	258.77	9891.27	7574.47	7574.20	-63.70	0.00	454734.78	700504.54	N 32 14 57.73 W 103 49 8.71	
	18700.00	89.82	258.77	9891.59	7564.47	7564.20	-64.10	0.00	454834.77	700506.13	N 32 14 58.73 W 103 49 8.70	
	18800.00	89.82	258.77	9891.91	7554.47	7554.20	-64.51	0.00	454934.77	700507.72	N 32 14 59.72 W 103 49 8.70	
	18900.00	89.82	258.77	9892.23	7544.47	7544.20	-64.92	0.00	455034.76	700509.31	N 32 15 0.71 W 103 49 8.70	
	19000.00	89.82	258.77	9892.55	7534.47	7534.20	-65.32	0.00	455134.75	700510.90	N 32 15 1.70 W 103 49 8.70	
	19100.00	89.82	258.77	9892.87	7524.47	7524.20	-65.73	0.00	455234.74	700512.49	N 32 15 2.69 W 103 49 8.70	
	19200.00	89.82	258.77	9893.19	7514.47	7514.20	-66.14	0.00	455334.74	700514.08	N 32 15 3.68 W 103 49 8.70	
	19300.00	89.82	258.77	9893.51	7504.47	7504.20	-66.55	0.00	455434.73	700515.67	N 32 15 4.67 W 103 49 8.70	
	19400.00	89.82	258.77	9893.83	7494.47	7494.20	-66.95	0.00	455534.72	700517.26	N 32 15 5.66 W 103 49 8.70	
	19500.00	89.82	258.77	9894.15	7484.47	7484.20	-67.36	0.00	455634.71	700518.85	N 32 15 6.65 W 103 49 8.70	
	19600.00	89.82	258.77	9894.47	7474.47	7474.20	-67.77	0.00	455734.70	700520.44	N 32 15 7.64 W 103 49 8.70	
	19700.00	89.82	258.77	9894.79	7464.47	7464.20	-68.17	0.00	455834.69	700522.03	N 32 15 8.63 W 103 49 8.70	
	19800.00	89.82	258.77	9895.11	7454.47	7454.20	-68.58	0.00	455934.68	700523.62	N 32 15 9.62 W 103 49 8.69	
	19900.00	89.82	258.77	9895.43	7444.47	7444.20	-68.99	0.00	456034.67	700525.21	N 32 15 10.61 W 103 49 8.69	
	20000.00	89.82	258.77	9895.75	7434.47	7434.20	-69.39	0.00	456134.67	700526.80	N 32 15 11.61 W 103 49 8.69	
Palladium MDP1 7-6 Federal Com 3Y REV0	20077.42	89.82	258.77	9896.00	10542.87	10542.64	-89.71	0.00	456214.90	700482.53	N 32 15 11.37 W 103 49 8.69	

Survey Type: Del Plan

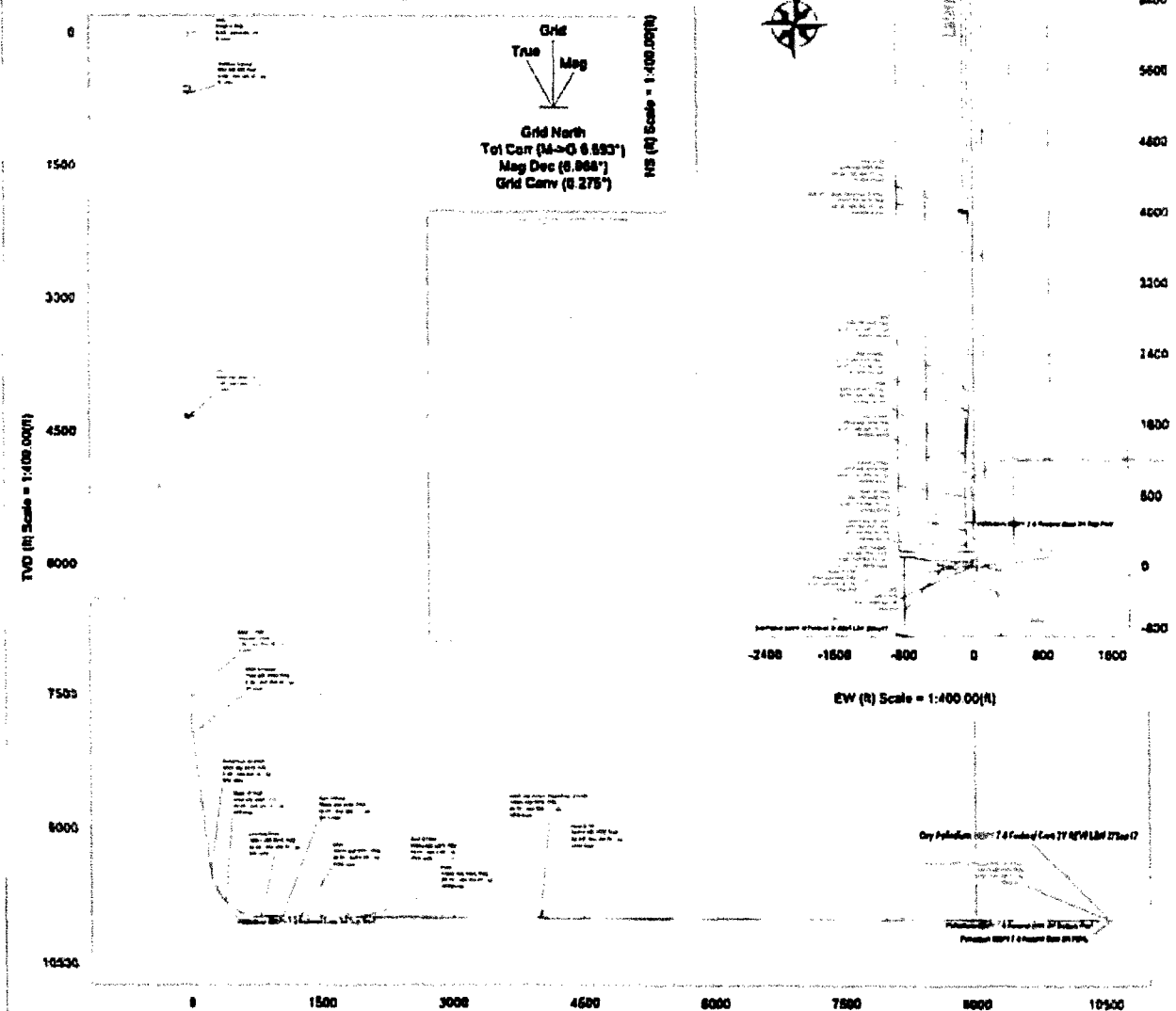
Survey Error Model: ISCV6A Rev 6 --- 3-D 95 000% Confidence 2 7855 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	SON Freq (Hz)	Hole Size Coating Diameter (in)	Expected Max Disturbance (mm)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	11100.000	30.000	30.000	NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Oxy Palladium MDP1 7-6 Federal Com 3Y REV0 LBN 27Sep11
	1	26.500	20077.422	11100.000	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Palladium MDP1 7-6 Federal Com 3Y REV0

H&P 656 (RKB=26.5ft)



Oxy Palladium MDP1 7-6 Federal Com JV

[illegible][illegible]

Vertical Section (N) Azim = 359.82° Scale = 1.400 00(N) Origin = 0N/5. 0E/4W



Oxy Palladium MDP1 7-6 Federal Com 3Y REV0 LBN 28Sep17 Anti-Collision Summary Report

Analysis Date/Time: September 28, 2017 - 10:02
 Client: OXY
 Field: NM Esby County (IAD 83)
 Structure: Dry Palladium MDP1 7-6 Federal Com 3Y
 Plot: Dry Palladium MDP1 7-6 Federal Com 3Y
 Well: Dry Palladium MDP1 7-6 Federal Com 3Y
 Borehole: Original Borehole
 Scan MD Range: 0.001 - 20073.51h

Analysis Method: 3D Local Distance
 Reference Trajectory: Dry Palladium MDP1 7-6 Federal Com 3Y REV0 LBN 28Sep17 (Def Plan)
 Depth Interval: Every 10.00 Measured Depth (ft)
 Rule Set: NAL Procedure - DAM Anti-Collision Standard 5002
 Min Pst: All total intervals indicated
 Version / Patch: 2.10.544.0
 Database / Project: o11133sep17 on site concerning NM Esby County 2.18

Intercept Error Model: ISCWSAS 3-D 85.800% Confidence 2.7853 segment, for subject well. For offset wells, error model version is specified with each well respectively.

Offset Trajectories Summary

Offset Selection Criteria:
 Wellhead Distance: 100 ft
 Selection: None

Not performed:
 Derivative Surveys - Derivative Plans - Derivative surveys exclude derivative plans
 - All Non-Def Surveys when no Def Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

Offset Trajectory	Sorption			Alert	Sep. Foot.	Controlling Rate	Reference Trajectory		Risk Level			Alert	Status
	CH (ft)	MAS (ft)	EDU (ft)				Minor	Major	Minor	Major			

Dry Palladium MDP1 7-6 Federal Com 3Y MWD Update Plan-Def Survey

CH (ft)	MAS (ft)	EDU (ft)	Alt (ft)	Seg. Post.	Controlling Rule	Reference Trajectory MD (ft)	Reference Trajectory TVD (ft)	Alert	Risk Level	Alert	Status
30.00	34.50	37.50	39.00	N/A	MAS = 7.47 (m)	0.00	0.00	CH=+13.00		Enter Alert	Full Map
30.00	34.50	37.50	39.00	N/A	MAS = 7.47 (m)	38.00	38.00			Minor	
30.00	34.50	37.50	39.00	23.80	MAS = 7.47 (m)	80.00	80.00			Minor	
30.00	34.50	37.50	39.00	120.80	MAS = 7.47 (m)	80.00	80.00			Minor	
30.00	34.50	37.50	39.00	6.00	MAS = 7.47 (m)	1070.00	1070.00			Minor	
30.00	34.50	37.50	39.00	4.30	MAS = 7.47 (m)	1500.00	1500.00			Minor	
30.00	34.50	37.50	39.00	2.00	MAS = 7.47 (m)	2110.00	2110.00			Minor	
30.00	34.50	37.50	39.00	2.10	MAS = 7.47 (m)	2380.00	2380.00			Minor	
30.00	34.50	37.50	39.00	1.80	MAS = 7.47 (m)	2780.00	2780.00			Minor	
30.00	34.50	37.50	39.00	1.50	OSF 1.50	4230.00	4230.00		OSF +1.50	Enter Alert	
30.00	34.50	37.50	39.00	1.37	OSF 1.50	4530.00	4530.00			Minor	
30.00	34.50	37.50	39.00	1.24	OSF 1.50	4830.00	4830.00			Minor	
30.00	34.50	37.50	39.00	1.00	OSF 1.50	5170.00	5170.00		OSF +1.50	Enter Alert	
30.00	34.50	37.50	39.00	0.80	OSF 1.50	5570.00	5570.00			Minor	
30.00	34.50	37.50	39.00	0.62	OSF 1.50	5970.00	5970.00			Minor	
30.00	34.50	37.50	39.00	0.78	OSF 1.50	7330.00	7330.00			Minor	
30.00	34.50	37.50	39.00	0.77	OSF 1.50	7470.00	7470.00			Minor	
30.00	34.50	37.50	39.00	0.77	OSF 1.50	7480.00	7480.00			Minor	
30.00	34.50	37.50	39.00	0.60	OSF 1.50	7770.00	7770.00		OSF +1.50	Enter Alert	
30.00	34.50	37.50	39.00	1.47	OSF 1.50	7880.00	7880.00		OSF +1.50	Enter Alert	
30.00	34.50	37.50	39.00	4.80	OSF 1.50	8820.00	8820.00		OSF +1.50	Enter Alert	
30.00	34.50	37.50	39.00	1.11	OSF 1.50	9430.00	9430.00			Minor	
30.00	34.50	37.50	39.00	4.80	OSF 1.50	9810.00	9810.00		OSF +1.50	Enter Alert	
30.00	34.50	37.50	39.00	1.40	OSF 1.50	10210.00	10210.00		OSF +1.50	Enter Alert	
30.00	34.50	37.50	39.00	1.80	OSF 1.50	10730.00	10730.00		OSF +1.50	Enter Alert	
30.00	34.50	37.50	39.00	0.96	OSF 1.50	10830.00	10830.00		OSF +1.50	Enter Alert	
30.00	34.50	37.50	39.00	1.36	OSF 1.50	10870.00	10870.00		OSF +1.50	Enter Alert	
30.00	34.50	37.50	39.00	4.80	OSF 1.50	10780.00	10780.00		OSF +1.50	Enter Alert	
30.00	34.50	37.50	39.00	1.37	OSF 1.50	10770.00	10770.00			Minor	

Dry Palladium MDP1 10 Federal Com 3Y REV0 LBN 22Sep17 (Def Plan)

287.24	32.81	35.74	38.43	N/A	MAS = 10.00 (m)	0.00	0.00			Surface
287.24	32.81	35.74	38.43	N/A	MAS = 10.00 (m)	28.50	28.50			Minor
193.38	39.58	120.02	131.21	+ 0.00	OSF 1.50	8430.00	8430.00	OSF +5.00		Enter Alert
88.66	39.58	71.01	- 0.46	1.40	OSF 1.50	7330.00	7330.00		OSF +1.75	Enter Minor
88.66	39.58	10.08	- 3.76	1.41	OSF 1.50	7430.00	7430.00			Minor
88.66	39.58	15.04	- 3.83	1.41	OSF 1.50	7440.00	7440.00			Minor
88.66	39.58	18.81	- 1.30	+ 0	OSF 1.50	7450.00	7450.00			Minor
88.66	39.58	22.62	- 0.17	1.40	OSF 1.50	7460.00	7460.00		OSF +1.00	Enter Minor
348.48	76.43	138.87	172.03	4.98	OSF 1.50	8730.00	8740.00	OSF +5.00		Enter Alert
10482.33	83.73	10438.59	10438.55	193.73	OSF 1.50	20378.61	20388.00			Alert

Offset Trajectory	Separations			Sep. Fact.	Controlling Rate	Reference Trajectory		Risk Level			Alert	Status
	CH2 (ft)	MAS (ft)	EDU (ft)			MD (ft)	TVP (ft)	Alert	Minor	Major		
Dry Padlock MDP1 7-6 Federal Com 01 REV LBN 17Aug17 (Std Plan)	57.12	32.81	32.72	3.6	1.2	0.0	0.0					
	57.23	32.81	32.72	3.6	1.2	0.0	0.0					
	57.34	32.81	32.72	3.6	1.2	0.0	0.0					
	57.45	32.81	32.72	3.6	1.2	0.0	0.0					
	57.56	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal Com 01 REV LBN 17Aug17 (Std Plan)	57.67	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	57.78	32.81	32.72	3.6	1.2	0.0	0.0					
	57.89	32.81	32.72	3.6	1.2	0.0	0.0					
	58.00	32.81	32.72	3.6	1.2	0.0	0.0					
	58.11	32.81	32.72	3.6	1.2	0.0	0.0					
	58.22	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	58.33	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	58.44	32.81	32.72	3.6	1.2	0.0	0.0					
	58.55	32.81	32.72	3.6	1.2	0.0	0.0					
	58.66	32.81	32.72	3.6	1.2	0.0	0.0					
	58.77	32.81	32.72	3.6	1.2	0.0	0.0					
	58.88	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	58.99	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	59.10	32.81	32.72	3.6	1.2	0.0	0.0					
	59.21	32.81	32.72	3.6	1.2	0.0	0.0					
	59.32	32.81	32.72	3.6	1.2	0.0	0.0					
	59.43	32.81	32.72	3.6	1.2	0.0	0.0					
	59.54	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	59.65	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	59.76	32.81	32.72	3.6	1.2	0.0	0.0					
	59.87	32.81	32.72	3.6	1.2	0.0	0.0					
	59.98	32.81	32.72	3.6	1.2	0.0	0.0					
	60.09	32.81	32.72	3.6	1.2	0.0	0.0					
	60.20	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	60.31	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	60.42	32.81	32.72	3.6	1.2	0.0	0.0					
	60.53	32.81	32.72	3.6	1.2	0.0	0.0					
	60.64	32.81	32.72	3.6	1.2	0.0	0.0					
	60.75	32.81	32.72	3.6	1.2	0.0	0.0					
	60.86	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	60.97	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	61.08	32.81	32.72	3.6	1.2	0.0	0.0					
	61.19	32.81	32.72	3.6	1.2	0.0	0.0					
	61.30	32.81	32.72	3.6	1.2	0.0	0.0					
	61.41	32.81	32.72	3.6	1.2	0.0	0.0					
	61.52	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	61.63	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	61.74	32.81	32.72	3.6	1.2	0.0	0.0					
	61.85	32.81	32.72	3.6	1.2	0.0	0.0					
	61.96	32.81	32.72	3.6	1.2	0.0	0.0					
	62.07	32.81	32.72	3.6	1.2	0.0	0.0					
	62.18	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	62.29	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	62.40	32.81	32.72	3.6	1.2	0.0	0.0					
	62.51	32.81	32.72	3.6	1.2	0.0	0.0					
	62.62	32.81	32.72	3.6	1.2	0.0	0.0					
	62.73	32.81	32.72	3.6	1.2	0.0	0.0					
	62.84	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	62.95	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	63.06	32.81	32.72	3.6	1.2	0.0	0.0					
	63.17	32.81	32.72	3.6	1.2	0.0	0.0					
	63.28	32.81	32.72	3.6	1.2	0.0	0.0					
	63.39	32.81	32.72	3.6	1.2	0.0	0.0					
	63.50	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	63.61	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	63.72	32.81	32.72	3.6	1.2	0.0	0.0					
	63.83	32.81	32.72	3.6	1.2	0.0	0.0					
	63.94	32.81	32.72	3.6	1.2	0.0	0.0					
	64.05	32.81	32.72	3.6	1.2	0.0	0.0					
	64.16	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	64.27	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	64.38	32.81	32.72	3.6	1.2	0.0	0.0					
	64.49	32.81	32.72	3.6	1.2	0.0	0.0					
	64.60	32.81	32.72	3.6	1.2	0.0	0.0					
	64.71	32.81	32.72	3.6	1.2	0.0	0.0					
	64.82	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	64.93	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	65.04	32.81	32.72	3.6	1.2	0.0	0.0					
	65.15	32.81	32.72	3.6	1.2	0.0	0.0					
	65.26	32.81	32.72	3.6	1.2	0.0	0.0					
	65.37	32.81	32.72	3.6	1.2	0.0	0.0					
	65.48	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	65.59	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	65.70	32.81	32.72	3.6	1.2	0.0	0.0					
	65.81	32.81	32.72	3.6	1.2	0.0	0.0					
	65.92	32.81	32.72	3.6	1.2	0.0	0.0					
	66.03	32.81	32.72	3.6	1.2	0.0	0.0					
	66.14	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	66.25	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	66.36	32.81	32.72	3.6	1.2	0.0	0.0					
	66.47	32.81	32.72	3.6	1.2	0.0	0.0					
	66.58	32.81	32.72	3.6	1.2	0.0	0.0					
	66.69	32.81	32.72	3.6	1.2	0.0	0.0					
	66.80	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	66.91	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	67.02	32.81	32.72	3.6	1.2	0.0	0.0					
	67.13	32.81	32.72	3.6	1.2	0.0	0.0					
	67.24	32.81	32.72	3.6	1.2	0.0	0.0					
	67.35	32.81	32.72	3.6	1.2	0.0	0.0					
	67.46	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	67.57	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	67.68	32.81	32.72	3.6	1.2	0.0	0.0					
	67.79	32.81	32.72	3.6	1.2	0.0	0.0					
	67.90	32.81	32.72	3.6	1.2	0.0	0.0					
	68.01	32.81	32.72	3.6	1.2	0.0	0.0					
	68.12	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	68.23	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	68.34	32.81	32.72	3.6	1.2	0.0	0.0					
	68.45	32.81	32.72	3.6	1.2	0.0	0.0					
	68.56	32.81	32.72	3.6	1.2	0.0	0.0					
	68.67	32.81	32.72	3.6	1.2	0.0	0.0					
	68.78	32.81	32.72	3.6	1.2	0.0	0.0					
30-015-30000 Padlock 7 Federal 01 (Std) INC ONLY 0-9-000 (Non-Std Survey)	68.89	32.81	32.72	3.6	1.2	0.0	0.0					
Dry Padlock MDP1 18 Federal 3M OpenWAG 0-10000 (Non-Std Survey)	68.99	32.81	32.72	3.6	1.2	0.0	0.0					
	69.10	32.81	32.72	3.6	1.2	0.0	0.0					
	69.21	32.81	32.72	3.6	1.2	0.0	0.0					
	69.32	32.81	32.72	3.6	1.2	0.0	0.0					
	69.43	32.81	32.72	3.6	1.2							

Offset Trajectory	Separation			Allow Dev. (ft)	Sep. Fact	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Cl-Cl (ft)	MAS (ft)	EDU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		

SC018-323 RE Palladium 7
Federal 05 (Class) REC ONLY D
5.3037 (non-Old Survey)

3477.94	32.81	3476.84	3446.33	N/A		MAS = 10.00 (ft)	0.00	0.00					Surfnet
3478.73	32.81	3476.18	3443.81	0.0017 (ft)		MAS = 10.00 (ft)	35.30	28.50					North O-SF
3383.03	516.74	3337.70	2988.34	0.00		O-SF 1.50	4019.00	8923.15					North O-SF
3378.64	514.64	3333.87	2943.81	0.00		O-SF 1.50	8678.00	8881.88					North O-ADP
3378.71	514.61	3333.88	2982.24	0.00		O-SF 1.50	8640.00	8871.88					North O-EDU
3378.64	512.75	3333.12	2982.71	0.00		O-SF 1.50	8720.00	8711.11					North O-CG
3367.98	367.81	2121.80	3333.18	0.71		O-SF 1.50	11355.00	9871.83					North O-SF
1738.82	142.75	1840.82	1849.13	18.25		O-SF 1.50	12988.00	9873.72					North O-ADP
1731.81	113.81	1834.74	1787.94	23.83		O-SF 1.50	12988.00	9874.18					North O-CG
1731.90	113.82	1834.74	1787.94	23.81		O-SF 1.50	12988.00	9874.20					North O-EDU
1738.17	144.85	1842.78	1833.34	18.20		O-SF 1.50	12988.00	9874.85					North O-ADP
3383.36	367.15	2114.71	1783.21	0.70		O-SF 1.50	14810.00	8878.51					North O-SF
7229.31	359.14	6387.72	6780.17	21.75		O-SF 1.50	33279.51	8626.00					TD