

## WELL SUMMARY

page 1 of 4Location ID: BLM-24-565 Field Representative(s): M. Canavan, D. MenzieDate Started: 07/13/90 Date Completed: 01/07/91Northing: 231861.46 Easting: 410062.79Brass Cap: 4713.84 Outer Casing: 4715.28 Inner Casing: 4715.77Drilling Method: Mud/air Foam Rotary Drilling Contractor: Larjon Drilling Co.Driller: D. Sanchez(0'-40'), J. Gower(40'-TD)Total Depth Borehole: 605' Total Depth Well Casing: 590.31' G.L.Total Depth Surface Casing: 80'Diameter Well Casing: 4" Diameter Surface Casing: 10"Length of Bottom Blank: 5.33'Type of Screen: extra strength S.S. 0.02 slotScreen Interval: 564.85' to 584.88'Water First Detected: not detected while drilling Water Level Open Borehole: 435.64'(09/20/90)Water Level Cased Borehole: 341.99' (12/31/91)Quik-Foam Use: 8 gallons

Estimated Water Use: 9,900 gallons

Well Casing:

4in x 3ft SCD 40 PVC:  
 4in x 5ft SCD 40 PVC:  
 4in x 10ft SCD 40 PVC:  
 4in x 20ft SCD 40 PVC:  
 Total SCD 40 PVC pipe:     ft

stock SS centralizers:  
 custom SS centralizers: 1  
 4"x2' SS locking riser: 1 x 1.97 ft  
 4" SS locking cap: 1  
 4" SS female cap: 1 ft  
 ASTM male adaptor: 1

4in x 3ft SCD 5 SS pipe:  
 4in x 5ft SCD 5 SS pipe:  
 4in x 10ft SCD 5 SS pipe:  
 4in x 20ft SCD 5 SS pipe: 20  
 Total SCD 5 SS pipe: 400 ft

4in x 5ft SCD 10 SS pipe: 2 (10')  
 4in x 10ft SCD 10 SS pipe:  
 4in x 20ft SCD 10 SS pipe: 8 (160')  
 Total SCD 10 SS pipe: 170 ft

Well Completion:

100# bags 16/40 sand:	25¼	bags
100# bags 10/20 sand:		bags
100# bags 8/14 sand:		bags
100# bags 8/20 sand:	33	bags
94# bags cement:	130	bags
5 gal. buckets bentonite:		buckets
50# bentonite powder:	13	bags
Benseal:		bags

Surface Casing:

94# bags cement:	40	bags
50# bags bentonite powder:	4	bags
Grout:		bags

Pertinent Field Notes:

08/15/90 Mobilize to BLM-24. - Canavan

08/16/90 Spud BLM-24. Drill pilot hole to 40'. - Canavan

08/17/90-  
08/21/90 Larjon making repairs to mud pump. - Canavan

08/22/90 Drill pilot hole 40' to 80'. Ream borehole to 16" x 35'. - Canavan

08/23/90 Ream 35'-80'. Install and grout surface casing. - Canavan

08/27/90 Drill air foam rotary 80'-265'. - Canavan

08/28/90 Drill air foam rotary 265'-295'. Problems with BE hydraulic system. Took rig into town. - Canavan

09/04/90 Attempted to take water level. No water in borehole. - Canavan

09/05/90 Drilled 295'-455'. No indication of water. Bedrock (tuff) at 320'. - Canavan

09/06/90 Drilled 455'-530'. No indication of water. - Canavan

09/07/90 Drilled air foam rotary 530'-605'. No indication of water while drilling. - Canavan

09/08/90 Measured water level at 587.40'(TOSC). - Kirby

09/10/90 Measured water level at 560.45' (TOSC). - Canavan

09/11/90 Measured water level at 550.43' (TOSC) and sounded bottom of hole at 600.20' (TOSC). - Canavan

09/12/90 Measured water level at 533.16' (TOSC). - Menzie

09/13/90 Measured water level at 524.34' (TOSC). - Canavan

09/14/90 Measured water level 515.96' (TOSC) and sounded bottom of hole at 597.50' TOSC. Southwest Surveys ran full suite of geophysical logs. - Menzie

09/17/90 Measured water level at 487.34 (TOSC). - Menzie

09/18/90 Measured water level at 479.63 (TOSC) and sounded bottom of hole at 595.08' TOSC. - Canavan

09/19/90 Measured water level at 472.87' (top of tremie) and sounded bottom of hole at 593.92' (TOSC). Ran 592.75' of 4" SS casing with 20' screen and installed gravel pack and pumped top benseal plug. - Menzie

09/20/90 Install filler sand to 10' above water level. Pour first load of grout and bail to check for grout invasion. No grout invasion. - Canavan

09/21/90 Pour second load of grout and bail well dry to begin development (see development sheet for details. Well head ready for concrete pad and brass cap. - Menzie

10/01/90 Measured water level. Recovered to 459.25'. - Canavan

10/02/90 Unable to take reliable water level. Surged and bailed well (17 full bailers and 4 partial bailers). Approximately 95 gallons removed from well. - Canavan

10/05/90 Surged and bailed well nine times (6 full, 3 partial bailers) water still silty and soapy. Approximately 40 gallons removed from well. - Canavan

10/09/90 Measured water level at 563.32' (TOC). - Menzie

10/10/90 Measured water level at 555.06' (TOC). - Menzie

10/11/90 Measured water level at 545.58' (TOC). - Menzie

10/12/90 Measured water level at 536.52' (TOC). - Menzie

10/15/90 Measured water level at 515.35' (TOC). - Canavan  
10/16/90 Measured water level at 510.68'. - Menzie  
10/17/90 Bailed well eleven times. Removed approximately 66 gallons from well. - Kirby  
10/25/90 Turned well over to Lockheed for development.  
10/25/90 -  
01/07/91 Lockheed removed approximately 450 gallons of water from well. Well developed.